[Shoreline evaluations, 1991].

Prince William Sound EV-06 to EV-17

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-06

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-06 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6V Recreation: Anchorages (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 uncoiled biota and substrate. Stream not listed in anadromous catalogue (USGS Seward A-3 Revision 12/89).

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1299 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 Snares (pom poms)
___ Absorbents (pads, rolls, etc)
___ Spot Washing: ___ Wands
___ Beach Cleaner
___ Other (see comments)

COMMENTS: _______________________________________________________

TAG COMMENTS: ___________________________________________________

TAG APPROVAL DATE: ______
ADEC ______________________ FOSC: ______ DATE: ______
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
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)

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)

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 9/30)

7HH
Finfish harvesting

7II
Deer harvesting (8/15 to 2/25)

7JJ
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST/ EV-6

NOAA
NAME GARY SHIGENAKA
SIGNATURE Gary Shigemah

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT CONSISTED OF ROCKY SHORELINE, SOMETIMES WITH VERTICAL ROCK WALLS. AN EAGLE NEST AND AT LEAST ONE ANADROMOUS STREAM WERE INCLUDED IN THE AREA SURVEYED.
NO EVIDENCE OF OILING WAS OBSERVED IN THIS SEGMENT.

ADEC
NAME John Hoyez
SIGNATURE Hoyez

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
No oil was observed on this segment.

LND MANAGER
NAME James A. Barker
SIGNATURE James A. Barker

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS NO OIL OBSERVED ON THIS BEACH SEGMENT
**SHORELINE OILING SUMMARY**

**SHORELINE OILING SUMMARY**

**OIL** Mike Foget
**NOAA**
**BIO** Richard Ambrose
**LAND REP** James A. Carrier
**SUBDIVISION** A

**EXXON** Larry Olsen
**ADEC** John Leger

**TIME** 8:45 to 9:30

**TIDE LEVEL** 3.0 to 5.6
**DATE** 4/17/90

**TEAM NO:** 1

**EST. SUBDIVISION LENGTH** 1810 m

**UPLANDS DESCRIPTION**
- Grass
- Forest
- Rock
- Rocky backshore w/ snow in supra 72

**SURVEYED FROM**
- Foot
- Boat
- Helo

**WORKING DIRECTION** N to S
**SURFACE SEDIMENTS**
- R 50%
- B 25%
- C 15%
- P 5%
- G 5%
- S 2%
- M 2%
- V 2%
- O 2%

**SLOPE**
- Lang 20%
- Hang 50%
- Vert 50%

**WAVE EXPOSURE**
- Low
- Med
- High

**OIL CATEGORY LENGTH**
- W 170 m
- M 70 m
- N 10 m
- V 10 m
- L 0 m
- N 1810 m

### SURFACE OIL

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<th>DISTRIBUTION</th>
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<th>IMPACTED ZONES</th>
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**PAVEMENT:** H F S O sq. m by O cm
**PATTIES / TARBALLS:** O BAGS

**NEAR SHORE SHEEN?** O BR RW SL TL

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

**DEBRIS COLLECTED**
- O YES
- X NO

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

**TYPE O**

**#BAGS O**

**Photographs:**
- Roll No.
- Frames O

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (CM-CM)</th>
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<th>OIL / FILM COLOR</th>
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**COMMENTS**

No oil was observed in this segment of the shore zone mostly bedrock / boulders w/ a few small pocket cobble / pebble beaches. These beaches had snow in the supra 72.

**REVIEWED**

**DATE** 4/19/90

Page 1 of
## Subsurface Oil (Continued)

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<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
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### Comments
SHORELINE ECOLOGICAL SUMMARY

Segment ST / Ev006 Subdivision A Date (mo/day/yr) 4/7/90
Time (24 hr) 0850hrs Biologist Ambrose

(A) Substrate type and % of segments:

(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);
juveniles/adults (X), new settlement (θ)

BARNACLES

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FUCUS

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Wildlife Observations/General Comments:
- Eagles (see below), 2 otters, 4 gulls, 2 Canada geese, 4 mergansers, 2 Least grebes.
- Moderate cover on high-angle beaches; moderate barnacles and limuines on
  cobbles in pocket beaches, but no Fucus or Mytilus.

Ecological Considerations:
- 6V, 711, 5T-2: One pair of mature bald eagles is nesting nearby.
- One anadromous stream occurs in segment (Salmon bones found on
  bank & stream). No oil found nearby.

*Note: part surveyed by boat.
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6V  Recreation: Anchorages (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. Stream not listed in anadromous catalogue (USGS Seward A-3 Revision 12/89).

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: __________________________ DATE: 4/20/90

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 0 m; V.Light 0 m; No Oil 1299 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 Snares (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: ____ Wands
____ Beach Cleaner
____ Other (see comments)

COMMENTS: _____________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

TAG COMMENTS: _____________________________________________
________________________________________________________________
________________________________________________________________

TAG APPROVAL DATE: 4/20/90
ADEC Art Weiner, Dir. Resource
EXXON Away 100
NOAA Bill Westcott
USCG Kenneth Keane
FOSC: __________ DATE: 5-1-90
OILING LENGTHS
TO BE PROVIDED
AT A LATER DATE
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-07

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/EV-07 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16550, 16557, 16561, 16559, 16563.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6Y Recreation: Special use destination
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. If treatment is planned, avoid damage to mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ___________________ DATE: ___________________

OILING CATEGORIZATION:
Wide____ m: Medium____ m: Narrow____ m: V.Light____ m: No Oil____ 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:

________________________________________________________________________
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TAG APPROVAL DATE: ____________
ADEC ________________________ FOSC: ____________ DATE: ____________
EXXON ________________________
NOAA ________________________
USCG ________________________
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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 (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.

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 (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. 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 8/1)
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
7JI 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.
FIELD SHORELINE COMMENT SHEET

SEGMENT 97/ EV-7        SUBDIVISION:  DATE 4/7/90

NOAA
NAME GARY SHIGENAKA   SIGNATURE GARY SHIGENAKA

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT CONSISTED OF A LARGE ROCKY SHORELINE OCCASIONALLY INTERRUPTED BY POCKET BEACHES, ON THE NORTHERN END OF EVANS ISLAND. LITTLE EVIDENCE OF OILING WAS ENCOUNTERED ON THIS SEGMENT. AT THE FIRST POCKET BEACH FOUND AT THE SOUTH END OF THE SEGMENT, A VERY LIGHT SHEEN WAS FOUND IN ONE PIT DOG INTO THE FEBBLE BEACH, BUT NO OTHER OIL OR OIL WAS FOUND IN THIS PIT OR ANY OTHER. THE ONLY OTHER OILING SEEN IN THE SEGMENT WAS A BAND OF ASPHALT IN THE UPPER INTERTIDAL ZONE BETWEEN TWO AWDOROUS STEAMS, MEASURING APPROXIMATELY 1 M Wide BY ABOUT 50M IN LENGTH. THE NATURE OF THE DISTRIBUTION WAS DISCONTINUOUS, AND VARIED FROM WEATHERED STAIN TO COUSE.
MUCH OF THE SUPERTIDAL ON BEACHES OF THE SEGMENT WAS COVERED BY SNOW.

ADEC
NAME John Hayes   SIGNATURE

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
OILING OBSERVED ON THIS SEGMENT CONSISTED OF AN ASPHALT BAND 1-50M. THIS BAND WAS BETWEEN TWO AND SIX STREAMS (WIRING IN Streams) ALONG IT WAS UP TO 10-60M FROM STREAM BANKS. NO SURFACE OR SUBSURFACE CARTRIDGE WAS FOUND IN OR AROUND STREAMS. IF THE AND-SERT TEAM IS IN THIS AREA, THESE STREAMS SHOULD BE ASSURED AS OILING, ALTHOUGH PIGGED IN WITH ROPE. ALSO OBSERVED WAS A VERY LIGHT TREATMENT WHEN IN THE RUBBLES ON ONE OF THE POCKET BEACHES, THIS WAS ISOLATED OR NEARLY ISOLATED FROM OTHERS.
TREATMENT SUGGESTED IS TO HAVE A AND-SERT LOOK AT STREAMS AND MAKE RECOMMENDATIONS ALTHOUGH THIS IS NOT A PRIORITY AREA.

LAND MANAGER
NAME James A. Barker   SIGNATURE

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
TEAM OBSERVED INTERMITTENT BATTERIES AND ASPHALT BAND 1-3CM DEEP, NEAR STREAM BANKS. DUE TO THE SENSITIVITY OF THESE STREAM BANKS, SHOVELS SHOULD BE USED AS CLEAN UP AGENT. NOTE THAT A AND-SERT SHOULD MAKE RECOMMENDATION CONCERNING DECONTAMINATION.
**SHORELINE OILING SUMMARY**

**BIO:** Richard Ambrose  
**LAND REP:** James A. Dolan  
**EXXON:** Larry Olson  
**ADEC:** John Bailey  

**TIME:** 16:30 to 17:30  
**DATE:** 4/17/90  
**REVISION NO.:** 03/22/90

**TEAM NO.:** 11  
**TIDE LEVEL:** 6.5 to 1.0  
**EST. SUBDIVISION LENGTH:** 5494 m  
**SURFACE DESCRIPTION:** ☑ Grass ☑ Forest ☑ Rock ☑ Snow  
**SURVEYED FROM:** ☑ Foot ☑ Boat ☑ Helo  
**WORKING DIRECTION:** 10 N  
**SURFACE SEDIMENTS:** R 60% B 20% C 10% P 5% G 5% S ☑ % ☑ % ☑ % ☑ %  
**SLOPE:** Lang 15% Hang 25% Vert 60%  
**WAVE EXPOSURE:** ☑ Low ☑ Med ☑ High  
**OIL CATEGORY LENGTH:** W 8 m M 0 m N 0 m VL 30 m NO 5494 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>
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<td>PATTIES</td>
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<td>TARBALLS</td>
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</tr>
<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
<td>☑ ☑ ☑</td>
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</table>

**PAVEMENT:** H F ☑ Z sq. m by ☑ cm  
**PATTIES / TARBALLS:** ☑ 0 BAGS  
**NEAR SHORE SHEEN:** ☑  

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

**DEBRIS COLLECTED:** ☑ 0  
**TYPE:** ☑  
**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</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>OIL / FILM COLOR</th>
<th>PITH ZONE</th>
<th>ANA</th>
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<td>y</td>
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<td>y</td>
<td>X</td>
<td>M (H_2O @ 10cm)</td>
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<td>y</td>
<td>X</td>
<td>P, S, M</td>
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**COMMENTS:**  
Most of the segment was clean with the exception of a 1m x 30cm CT/5 asphalt patties distribution in the 1:2 to 5:1 scale map. This is located on a low angle D/C beach. The bottom of the segment consists of interbedded Bedrock/Boulders with some low angle Pocket Cobble beaches.

**REVIEWED:** ☑  
**DATE:** 4/13/90
## Subsurface Oil (Continued)

<table>
<thead>
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<td>15</td>
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<td>P, G (H₂O @ 10 cm)</td>
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<td>P, G</td>
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<tr>
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<tr>
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<td>G, M (H₂O @ 5 cm)</td>
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Comments

Reviewed by: [Signature] Date: 4/13/98
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST, Subdivision A**

**Time (24 hr) 1545 hrs Biologist Ambrose**

**Date (mo/day) 4/7/90**

**A**  Substrate type and % of segments:
- Bedrock (6)
- Boulder (2)
- Cobble (10)
- Pebble (10)
- Sand (5)
- Silt (6)

**B**  Overall % cover of biota (% of segment):
- Dense (15)
- Moderate (45)
- Low (50)

**C**  Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Juveniles/adults (X), new settlement (3)
- Photographs:
  - Roll No.
  - Frames

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### BARNACLES

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**Wildlife Observations/General Comments:**
- 1 otter, deer (plus deer tracks),
- 13 Barrow's goldenerges, 6 Harlequin ducks, 2 cormorants,
- Many sections (esp. high angle beaches and walls) have moderate density,
- but cover is sparse on cobble beaches.

**Ecological Considerations:**

**13, 711, 6V:** 3 (possibly four) anemones streams (see next page)

*Note: part surveyed by boat.*
Three anadromous streams are in EV007A, as identified by salmon bones found in or nearby the streams.

At the first stream, there was an extensive beach comprised of cobbles and pebbles. There were some barnacles on cobbles, and Fucus has accumulated (as drift) near the mouth of the stream, but the beach was mostly barren. No oil was found nearby.

Two (and possibly three) anadromous streams were in one cove, as noted below. A band of asphalt was found 40m from one stream, with a scattered mussel bed below.
EV-07

Wide
Medium
Narrow
Very Light
No Oil

ADEC Segment Length: 5439m

Map Key: PWS-269e
Name: Mike Ford
Date: 4/7/90
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ EV-07 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16550, 16557, 16561, 16559, 16563.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6Y Recreation: Special use destination
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. If treatment is planned, avoid damage to mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: Charles T. Jones DATE: 4/29/90

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 0 m; V.Light 83 m; No Oil 5603 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: Wander
____ Tarmat: Breakup Beach Cleaner
____ Removal Other (see comments)

COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE: 6/26/90
ADEC Dean K. Pearson 50th
EXXON
NOAA
USCG

FOSC: DATE: 5-12-90
LEGEND

1 △
Pit - No Subsurface Oil

2 △
Pit - Subsurface Oil

Continuous Distribution
CT/C

Broken Distribution
CT/B

Patchy Distribution
CT/P

Splashed Distribution
CT/S

Oiled Vegetation

Photo location, direction, and number

SKETCH MAP

Legend

OIL CHARACTER LENGTH (M): AP -- PO -- CV -- CT -- ST -- MS -- PT 30 -- TB -- FL -- NO 5404
EV-07

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

EV-7

ADEC Segment Length: 5439m

Map Key: PWS-269c
Name: Mike Fogel
Date: 4/7/90

Data Entered:
1991 MAYSAP EVALUATION

SEGMENT: EV 007  SUB: A  REGION: FWS  SURVEY DATE: 4/26/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details)  Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ____________________

RECOMMENDATIONS:

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<th>INITIAL</th>
<th>TAG</th>
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COMMENTS:

INITIAL: __________________________________________

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TAG APPROVAL DATE: __________________ FOSC APPROVAL DATE: ____________

ADEC________________________________________ FOSC __________________

EXXON________________________________________

USCG__________________________________________

NOAA__________________________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-7 SUBDIVISION A DATE 4/26/91

ADEC
NAME John Hayes SIGNATURE

☐ NTR Surveyed portion of segment identified as previously having light oiling. Survey team identified 1 TB that was picked up. No further treatment recommended at this time.

EXXON
NAME Mantum N.J. SIGNATURE

☒ NTR No treatable or recoverable oil. Team recommends a few scattered asphalt patties. No further treatment recommended.

LANDMANAGER
NAME Steve Ward OF CUC SIGNATURE

☒ NTR The asphalt that was present as patties was picked up. No sub-surface oil present. This area needs no further treatment.

USCG/NOAA
NAME DEHNER/NOIDES SIGNATURE

☒ NTR The tar patties found were recovered. No further oil found and no indication of subsurface oil.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 5  
**OG** CHANEY  
**BIO** CRANK  
**ADEC** HAYES  
**EXXON** MARTINEZ  
**SEGMENT** EV-7  
**SUBDIVISION** A  
**LANDMANAGER** WARD  
**DREHER/HODGES**  
**DATE** Apr 12, 91

**TIME** 06:14 to 06:50  
**TIDE LEVEL** 0 ft to -1 ft  
**ENERGY LEVEL**  
**SURVEYED FROM** FOOT  
**WEATHER** SUN, CLOUDS  
**TOTAL LENGTH SHORELINE SURVEYED** 475 m  
**NEAR SHORE SHEEN**  
**EST. OIL CATEGORY LENGTH** W 0 m, M 0 m, N 0 m, S 1 m, NOS 474 m, US 520 m

<table>
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<th>L</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
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**NOTES**

**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 71-80%; S = 61-70%; T = <60%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSAP:** 5 - 2 FRAMES 1-5

<table>
<thead>
<tr>
<th>PIT</th>
<th>PIT DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
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**SHEEN COLOR:** B = BROWN; R = RAINBOW; S = SILVER; N = NONE

**OG COMMENTS:** ONE TAR PATTIE RECOVERED. 20 cm DIAMETER PATCH OF SOR (MEDIUM) REMAINING.

Reviewed: F.W. 5/3/91  
Revised: N.C. 5/7/91
COMMEN Comments/Observations: (to be completed in oiled subdivisions only):

Area is located low in UITZ, approximately 15 m north of stream bed.

Race barnacles located at site. No other biota in immediate vicinity. Five meters
South of site there is a sparse Fucus and tar-spot algae patch. AP patches were
picked up without disturbance to the biota.

LITZ is a dense clam bed utilized by otters (digs were present). Clam species
present include: Prototrochus, Saxidomus, Hutella, Tresas (near clams) and Marenne (on mussel).

Continuous moderate barnacles along the bed in LITZ. Rare barnacles in the UITZ
Site present. Sparse intertidal mussel bed in the UITZ. Sparse Fucus in LITZ and rare patches in MITZ.

Increasing to moderate density along stream bed. Crenophilic just beginning to
show sign of maturity. Sparse concentration of Lithosira and Limnias, rare Nucella and
eggs present. Illva present in LITZ. Scytalesiorshape is present in LITZ and MITZ.

Two sunfish seen (Percosidae) were present in LITZ.

Seagrass beds begin ~ 2’ tide level. Deer skeleton found in UITZ.

The clam bed and seagrass bed makes this area sensitive to both foot and boat
traffic. Intertidal biota appears to be healthy.

Wildlife Observations:

To be completed in all subdivisions

Birds

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<td>Shorebirds</td>
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<td>Corvids</td>
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<td>Other Birds</td>
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<table>
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<th>Marine Mammals</th>
<th># Observed</th>
<th>Species</th>
<th># Observed</th>
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<tr>
<td>Sea Otters</td>
<td></td>
<td>River Otter</td>
<td>1</td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td>River Otter</td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td>River Otter</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: EV 007  SUB: A  REGION: PWS  SURVEY DATE: 4/26/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details)  Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: Charles W. Holmes  Date: 5/10/91

RECOMMENDATIONS:  INITIAL  TAG  FOSC

TREATMENT REQUIRED (Y or N)  N   ____   ____

Manual Pickup (Check as Req.)  ____   ____   ____
Spot Washing  ____   ____   ____
Bio-Customblen Only  ____   ____   ____
Bio-Inipol/Customblen  ____   ____   ____
Other  ____   ____   ____
Other  ____   ____   ____

COMMENTS:
INITIAL:

______

______

______

______

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______

______

______

TAG:

______

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FOSC:

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TAG APPROVAL DATE: 5/10/91  FOSC APPROVAL DATE: 5/15/91

ADEC  [Signature]  FOSC  [Signature]

EXXON  [Signature]  E. E. PAGE, CDR, USCG

USCG  [Signature]  CHIEF OF STAFF, FOSC

NOAA  [Signature]
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USFWS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
ADEC
NAME: John Heye
SIGNATURE

☑ NTR
Sweep portion of segment identified as previously having light oiling. Survey team identified 1 TB that was picked up. No further treatment recommended at this time.

EXXON
NAME: Martin A. Jr.
SIGNATURE

☒ NTR
No treatable or recoverable oil. Team removed a few scattered asphalt patches. No further treatment recommended.

LANDMANAGER
NAME: Steve Ward of CUC
SIGNATURE

☑ NTR
The asphalt that was present as patches was picked up. No sub-surface oil present. This area now has no further treatment.

USCG/NOAA
NAME: Dreher/ Hodges
SIGNATURE

☒ NTR
The tar patches found were recovered. No further oil found and no indication of subsurface oil.
**MAYSAP SHORELINE OILING SUMMARY**

**TIME:** 06:14:____ to 06:50

**TIDE LEVEL:** 0 ft. to -1 ft.

**ENERGY LEVEL:** □ H □ M □ W

**SURVEYED FROM:** □ FOOT □ BOAT □ HELO

**WEATHER:** □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 475 m

**NEAR SHORE SHEEN:** □ BR □ RB □ SL □ NONE

**EST. OIL CATEGORY LENGTH:** W 0 m, M 0 m, N 0 m, VL 1 m, NO 474 m, US 5210 m

---

**LOC** | **SURFACE OIL CHARACTER** | **SURFACE SEDIMENT TYPE** | **SHORE SLOPE** | **AREA** | **ZONE** | **NOTES**
---|---|---|---|---|---|---
A | C | G | L | 0.3 | 0.3 | √

---

**PIT NO.** | **PIT OIL CHARACTER** | **OILED ZONE** | **CLEAN BELOW** | **H2O LEVEL** | **SHEEN COLOR** | **PIT ZONE** | **SURFACE-SUBSURFACE SEDIMENTS** | **NOTES**
---|---|---|---|---|---|---|---|---
1 | 25 | ☑ | - | - | - | - | GP-GP | 
2 | 30 | ☑ | - | - | - | - | GP-GP | 
3 | 20 | ☑ | - | - | - | - | GP-GP | 

**DISTRIBUTION:** C = 91-100%; B = 81-95%; P = 71-80%; S = 1-10%; T = <1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

---

**OG COMMENTS:** ONE TAR PATTIE RECOVERED. 20 cm DIAMETER PATCH OF SOR (MEDIUM) REMAINING.

---

**Reviewed:** F. W. 5/2/91
**Reviewed:** M.C. 5/2/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #: 5  DATE: 27 Apr '91
SEGMENT #: EV-7  TIDAL HEIGHT (Range) ~0~1
SUBDIVISION: A  BIOLOGIST: Crank
SEA STATE: 0  WIND SPEED/DIRECTION: 0
PHOTOGRAPhS: ROLL #:  FRAME:

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located low in U1TZ, approximately 15 m north of stream bed.

Barnacles located at site. No other biota in immediate vicinity. Five meters
south of site there is a sparse Fucus and tar-spot algae patch. AP patches were
picked-up without disturbance to the biota.

L1TZ is a dense clam bed utilizes by oters (digs were present). Clam species
present includes: Prochthea, Saxidomus, Hastellia, Trespa (horn clam) and Macoma (roots).

Continuous moderate barnacles along cobbles in L1TZ. Size in M1TZ, dense barnacles in the U1TZ
(1st present). Sparse intertidal mussel bed in the M1TZ. Sparse Fucus in L1TZ with rare patches in M1TZ
increasing to moderate density along stream beds. Conchtiopidae just beginning to
show signs of maturation, sparse concentration of Littorina, and Timpeia, rare Nucella and
eggs present. Small present in L1TZ. Scytopecten is present in L1TZ and M1TZ.

Two sunflower starfish (Asteropedia) were present in L1TZ.

Eelgrass beds begin 1-2' tidal level. Deer skeleton found in U1TZ.

The clam bed and eelgrass bed make this area sensitive to both foot and boat
traffics. Intertidal biota appears to be healthy.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS  # OF SPECIES  TOTAL BIRDS  FISH OBSERVED
          SPECIES PRESENT

Eagles
Seabirds
Waterfowl
Gulls/kittiwakes
Shorebirds
Corvids
Other Birds

MARINE MAMMALS  # OBSERVED  SPECIES  # OBSERVED

Sea Otters
Pinnipeds (specify)
Whales (specify)

LAND MAMMALS

River Otter 1

Shoreline subdivision map showing important biological features attached.
SEGMENT ST/ EV-07__ STREAM NO: 226-40-16559 __ DATE _4/22/90_

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream no's: 226-40-16550 (P, 12/89), 226-40-16563 (Ps, 12/89),
226-40-16557 (Ps, 12/89), 226-40-16561 (Ps, 12/89)
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)
6V Recreation: Anchorages (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. Subject stream is located within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ___________________________ DATE: 5/8/90

Subsurface Oil Observed: Yes_____ No____ X Maximum Depth_______

RECOMMENDATIONS:
X No Treatment Recommended ______Snare/Absorbent Booms
_____Treatment Recommended ______Oil Snares (pom poms)
_____Manual Pickup ______Absorbs (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 Weissman Art (C) 1990 FOSC: [Signature] DATE: 5/15/90
EXXON[Signature] 
NOAA[Signature] 
USCG[Signature]
Recommendations: No treatment required.

I agree with recommendations. A. M. Farhat

46. Oil Distribution Diagram

3-4 tar splatters (maximum diameter 10 cm) found in entire intertidal zone.
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-07

STREAM NO: 226-40-16559
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/EV-07 STREAM NO: 226-40-16559 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream no's: 226-40-16550 (P, 12/89), 226-40-16563 (Ps, 12/89), 226-40-16557 (Ps, 12/89), 226-40-16561 (Ps, 12/89)
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)
6V Recreation: Anchorages (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 ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ___________________________ DATE: ___________________________

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
____ Tarimat Removal ______ Beach Cleaner
____ Other (see comments)

COMMENTS: __________________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________

TAG COMMENTS: ______________________________________
_____________________________________________________
_____________________________________________________
_____________________________________________________

TAG APPROVAL DATE: ______________

ADEC ______________________________ FOSC: ___________ DATE: __________

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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpilp 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

1C Salmon fry nursery area (6/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpilp 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)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpilp 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

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 Srt 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 inpilp 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 unotted Intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inpilp 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 Harbor seal and sea lion pupping (5/15 to 7/1)
3O 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 inpilp 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 556-7235 ADF&G Don Callins 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/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 Pothly 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

6U Recreation: Tont sites (6/1 to 9/15)
6W 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 Deer harvesting (6/15 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 inpilp 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 Fiall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT 16D 007  SUBDIVISION: 16 55 7  DATE 4/22/90

USCG NAME: McMAHON  SIGNATURE: [Signature]

☑️ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME: [Name]  SIGNATURE: [Signature]

☑️ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

[Additional comments]
ASC #: 226-40-16559
Segment: EV-007

Observations: The only observed oil impacts at this site were 3 to 4 widely scattered tar splatters and one asphalt chunk 8 cm in diameter.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.
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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<tbody>
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<td>Pooling</td>
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<td>Cover</td>
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<td></td>
</tr>
<tr>
<td>Mousse</td>
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</tr>
<tr>
<td>Patties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Film</td>
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<td></td>
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<tr>
<td>No Oil</td>
<td>NONE</td>
<td>XX XX</td>
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</tr>
</tbody>
</table>

PAVEMENT H F S. 0 sq. m by 0
PATTIES/TARBALLS. 0 BA
NEAR SHORE SHEEN? NO BR RW SL

OILED DEBRIS

Did You Collect Debris
- Yes
- No

TYPE

OILED DEBRIS
- Logs
- Vegetation
- Trash
- Debris

Photographs:
- Roll No.
- Frames

COMMENTS
Segment EV 007
Stream 226-40-16559

4/22/90
Michael Fawcett

Ecological Summary

This small stream has vertical bedrock walls at the mouth on the east side, and a boulder/cobble/gravel beach on the west side. There are very dense barnacle populations on the bedrock from LTZ to UTZ and on the cobbles and boulders in LTZ. Two harbor seals swimming nearby.

No cleanup needed.

Michael Fawcett
EV-07

Wide

Medium

Narrow

Very Light

No Oil

ADEC Segment Length: 5439 m

Map Key: PWS-269c

Name: Mike Fogel

Date: 4/7/90

Data Entered:
EV-06

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

EV-7

Bald Eagle Nest

ADEC Segment Length: 5439m

Map Key: PWS-269e
Name: Mike Fogel
Date: 4/7/90
Data Entered:
ADF&G MULTI-ASSESSMENT DATA FORM

1. SURVEY TYPE: 88 55 55 18 55 55 55 55 PTA
2. REGION: F3 X, G3 X, P3 X
3. METHOD: Aerial
4. DATE: 4/22/90
5. START TIME: 16:50
6. STOP TIME: 17:05
7. SEGMENT #: EV-007
8. STATION #: 226-40-1500
9. X-UNIT: Ebb, Slack, Flood, Slack
10. STAT AREA: USCG QUAD SEWARD A3
11. LAT.: 11
12. LONS: 11
13. LOCATION: IKTUA BAY, WEST SIDE EVANS IS.
14. DESCRIPTION: EXTENT OF OIL

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<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
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<tr>
<td>L</td>
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</tr>
<tr>
<td>100</td>
<td>60</td>
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</table>

15. CATALOGED ANAD. FISH STREAM: Y
16. CATALOG #: 226-40-1500
17. STREAM NAME:
18. SURFACE COVERAGE
19. SURFACE THICKNESS
20. PENETRATION
22. OIL TYPES: Pooled, Mousse, Tar, Asphalt, Sticky State
23. OILED DEBRIS: Y
24. SHORELINE TYPES: Headland, Low-lying Rocks, Beach, Cove
25. HIGH EXPOSURES: High, Moderate, Low
26. SUBSTRATE TYPES: Bedrock, Boulder, Gravel, Sand, Mud/silt
27. OIL IN STREAM BED: Y
28. OIL ON STREAM BANKS: Y
29. OIL ON BEACH ADJACENT TO HUMIDITY: Y
30. OIL WITHIN 1 MILE OF STREAM: Y
31. ANADROMOUS FISH PRESENT: Y
32. ANADROMOUS FISH OBSERVATION: Species, Aerial, Ground

COMMENTS:
3 - 4 TAR SPLATTERS WIDELY SCATTERED
THROUGH INTERTIDAL ZONE. EXTREMELY LOW IMPACT OBSERVED.
Recommendations: No treatment required.
I agree with recommendations.

46 Oil Distribution Diagram

2-4 tar splatters (maximum diameter 10 cm) found in entire intertidal zone.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-08

SUBDIVISIONS: A (1 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION A (1 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16543, Ps, 12/89 & 226-40-16545, Ps, 12/89

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6V Recreation: Anchorages (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. Salmon stream 226-40-16545, Ps, 12/89 located near boundary of EV-08 B. Eagle nests located across embayment.

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: __________________________ DATE: ______________________

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 462 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 Removal ____ Beach Cleaner
____ Other (see comments)

COMMENTS:

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

TAG COMMENTS:

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

TAG APPROVAL DATE: __________

ADEC _______________________________ FOSC: __________ DATE: __________

EXXON _______________________________ NOAA _______________________________

USCG _______________________________
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 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 or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G's 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 Inpil 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

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)
Canyon 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 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: ADF&G Evelyn Biggs 424-3235

Gil 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 site (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 boat 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

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 unveiled 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

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. 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 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 786-3377
ADF&G Tom Roth 267-2206

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

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:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabin (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use designation

Subsistence areas: Salmon harvesting (6/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 10/28)
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 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 267-2359
SEGMENT STI 5U08 SUBDIVISION: A DATE 4/23/70

USCG
NAME: SHAWN MARS SIGNATURE: [Signature]

X NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

NO FURTHER OILS FOUND ON BEACH. TARBALLS FOUND WERE REMOVED BY SSAT TEAM. NO SUBSURFACE OILS NOTED IN THIS SUBDIVISION.

ADEC
NAME: DAVE SAIL SIGNATURE: [Signature]

□ NO TREATMENT RECOMMENDED  X TREATMENT SUGGESTED

TO VERIFY ALL TAN WAS REMOVED

Tax patties found on beach were picked up by SSAT team, so there may not be any need for work here, treatment would simply require verifying that all tan was picked up and removed while cleanup crews are picking up subdivision B.

LAND MANAGER
NAME: DON HAMPTON JR SIGNATURE: [Signature]

□ NO TREATMENT RECOMMENDED  X TREATMENT SUGGESTED

□
SHORELINE OILING SUMMARY

OG: R. Martly  
USCG: J. D. Mass  
BIO: D. L. Lemen  
LAND REP: D. Houghton  
SEGMENT ST: EV-08  
SUBDIVISION: A (A OF B)  
EXXON: J. C. CMNTHAKI  
ADEC: D. J.  
TEAM NO: 19  
TIDE LEVEL: +1.01 m  
DATE: 20 APRIL 90  
EST. SUBDIVISION LENGTH: 302 m  
SURVEYED FROM:  
UPLANDS DESCRIPTION:  
SURFACE SEDIMENTS: R: 10 % B: 20 % C: 50 % P: 15 % G: 0 % S: 0 % M: 0 % V: 0 %  
SLOPE: Lang: 100 % Hang: 0 % Vert: 0 %  
OIL CATEGORY LENGTH: W: 0 m M: 0 m N: 0 m V: 0 m

SURFACE OIL

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PAVEMENT H F S M D sq:m by cm

PATTIES / TARBALLS * 15 BAGS
* All patties and balls removed.
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT
Logs X
Vegetation X
Trash X
Debris X

DID YOU COLLECT DEBRIS?
YES X: NO O

TYPE TB

#BAGS 2

Photographs:
Roll No: ST/10/13
Frames: 23, 24

SUBSURFACE OIL

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<tr>
<th>PIT NO</th>
<th>PIT DEPTH (cm)</th>
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COMMENTS: Tar patties become concentrated at south end of segment. The segment is primarily a low angle beach front with local shallow peat. All detected oil was removed.

2 of 59

REVIEWED JH 4/25/90

DATE
SHORELINE ECOLOGICAL SUMMARY
Segment ST/EV-8 Subdivision A Date (mo/day/yr) 4/20/90
Time (24 hr) 1930-1930 Biologist Lemon Clear, calm, no seas

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

(B) Overall % cover of biota (% of segment): Dense Moderate 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 (G)
Photographs:
Roll No. ST/01/3
Frames 23, 24

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Wildlife Observations/ General Comments:
6 gulls 2 scolopacidae sandpipers
1 Steller's jay
2 waterfowl

Ecological Considerations: This low energy, shallow, subtidal substrate bay head probably is greatly influenced by freshwater, perhaps limiting the diversity and density of marine animals - the water appeared cleaner here than outside the bay and was less bloom time anchored during our survey. Subsistence deer hunting also takes place here. Another stream 226-440-16545 flows through here, though not formally documented. Protobasidiella, actinomycetes, clam shells are abundant on the beach indicating rich beds nearby. Subsistence, recreation or commercial value.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-08

SUBDIVISIONS: B (2 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION_B (2 OF 3) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16543, Ps, 12/89 and 226-40-15545, Ps, 12/89

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6V Recreation: Anchorages (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. Salmon stream 226-40-16545, Ps, 12/89 located at boundary of EV-08A, and 226-40-16543 located within subdivision. 5T(2) 1 nest located within subdivision, another <400 M in subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:

Wide 0 m: Medium 263 m: Narrow 0 m: V.Light 451 m: No Oil 174 m
Subsurface Oil Observed: Yes 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 Removal ______ Beach Cleaner
________Other (see comments)

COMMENTS: Recommend removal of asphalt mats where indicated on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: ______________________

TAG APPROVAL DATE: ____________

ADEC ______ EXXON ______ FOSC: ________ DATE: ____________
NOAA ______ USCG ______
SEGMENT ST1 EV08  SUBDIVISION:  B  DATE: April 23 1990

SCG NAME: SHAWN MEAD  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENETS

MANUAL REMOVAL OF ASPHALT/PAVEMENT RECOMMENDED FOR THIS SUBDIVISION. ALSO A REINSPECTION OF SUPRATIDAL. SNOW COVERED MUCK AND MOSS OILS FOUND IN UPPER INTERTIDAL. NO SUBSURFACE OILS NOTED.

ADEC NAME: DAVE  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENETS

MANUAL REMOVAL OF TAR PATTIES AND TAR BUSH (AT HIGH TIDE)

☐ REMOVE ANY OILS FOUND IN SUPRATIDAL WE WERE UNABLE TO VIEW BECAUSE OF SNOW.

LAND MANAGER NAME: DON NORMAN  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

160° 59
COMMENT: A low angle pebble, cobble, gravel beach. Initial oiling was in the form of mousse patches which are now changing to tar. There is no evidence of any oil below about 20 cm depth. Tar mats are quite soft and are easily removed. No evidence for any oiling in STZ, but area was snow covered.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/EV-09 Subdivision B Date (mo/day/yr) 4/20/90
1995-2015 Time (24 hr) 0700 - 0830 Biologist Lema clear, calm, no seas

(A) Substrate type and % of segments:
(1) Bedrock 0 (2) Boulder 5 (3) Cobble 40 (4) Pebble 40 (5) Sand 15 (6) Silt 0

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

Photographs:
Roll No. ST/10/13
Frames 25 - 26

BARNACLES

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Wildlife Observations/General Comments:
10 waterfowl
2 alcids
2 oystercatchers
1mm barnacles in mid zone
Clam digging holes low zone; empty shells 10, mostly
Sea Anemones - lots of fresh water coming into this bay

Ecological Considerations: this area used for deer hunting, boat anchorages and lies
between 2 substantial streams w 226-40 16E 43
230-40 16E 45

10 of 59
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 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

1D  Esther Hatchery release (4/15 to 6/15)
1E  Main Bay Hatchery release (4/20 to 6/15)
1F  Seward Bay Hatchery release (4/15 to 6/1)
1G  Cannery Creek Hatchery release (4/21 to 6/1)
1H  Parental 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

1L  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 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 (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unooled 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

3O 0Q  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. 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
ADFG  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  786-3377

5S  Shorebird/batrachofowl 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
ADFG  Tom Rothy  267-2206

5T  All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict all 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

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)
7ZH  Finfish harvesting
7HH  Deer harvesting (8/15 to 2/28)
7JU  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
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-08

SUBDIVISIONS: C (3 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION C (3 OF 3) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- ADF&G anadromous stream no. 226-40-16543, Ps, 12/89 & 226-40-16545, Ps, 12/89
  1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
  1B Salmon stream mouth - spawning (7/10 to 8/31)
  5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
  6V Recreation: Anchorages (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. 5T (2) located proximal to boundary with Subdivision B and with Subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:
- Wide 0 m; Medium 0 m; Narrow 0 m; V.Light 0 m; No Oil 635 m
Subsurface Oil Observed: Yes____ No X____ Maximum Depth_____

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

COMMENTS: ______________________________________________________
_________________________________________________________________
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TAG COMMENTS: __________________________________________________
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TAG APPROVAL DATE: ________
ADEC _______________
EXXON _______________
NOAA _______________
USCG _______________
FOSC: _______________ DATE: __________
Salmon stream mouth - fish 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 of 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 Inrip 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

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 Inrip 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 consultation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 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 Inrip 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

PWS Aquaculture Association John McMillan or Bruce Suzumoto 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 (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 Inrip 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

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 unripe intersidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inrip 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 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 Inrip 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

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

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

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 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:
Tent sites (6/1 to 8/15)
Anchorages (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 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 Inrip which might affect intersidal 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
SEGMENT ST. EUNOS SUBDIVISION: C DATE 4/23/80

USCG NAME Shauw MAAS SIGNATURE C. Shauw MAAS

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

PARTIES FOUND WERE REMOVED BY SSAB TEAM
NO FURTHER OILS NOTED
NO SUBSURFACE OILS NOTED

ADEC NAME DAVE SPILE SIGNATURE Don Tomka

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS...EXCEPT VERIFICATION BY TREATMENT TEAMS THAT
ALL THE PARTIES ARE GONE.

No oil was found on this subdivision, except for
some tar parties that were removed.

LAND MANAGER NAME Don Hopkoff, Jr. SIGNATURE Donald P. Hopkoff, Jr.

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

27F59
**SHORELINE OILING SUMMARY**

- **Ogilvie** USCG 5-09
- **Bio** S. Lamon
- **Land Rep** C. Hennepin (CIC) subdivisions: C (E of C)
- **Exxon** J. Giannini ADEC D. Zalk
- **Time** 10:49 AM
- **Team No.** 10
- **Tide Level** +0.48 m
- **Date** 28/04/90
- **EST. SUBDIVISION LENGTH:** 856 m
- **SURFACE SEDIMENTS:** 20% Grass, 5% Rock
- **SURVEYED FROM:** Foot
- **WORKING DIRECTION:** N 15° S
- **SLOPE:** Land 100%, Hang 10%, Vert 0%
- **WAVE EXPOSURE:** Low
- **OIL CATEGORY LENGTH:** W 0 m, M 60 m, N 0 m

### 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>Mousse</td>
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<td>Patties *</td>
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<td>Tarballs</td>
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*Note: all noticeable Patties were removed*

- **PAVEMENT** H.F. S
- **PATTIES/TARBALLS** 0 BAGS
- **NEAR SHORE SHEEN?** No
- **Roll No.** 5-10/14
- **Frames** 9, 10

### 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 OILED</th>
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- **OILED DEBRIS** NO
- **AMOUNT**
- **TYPE** Tar balls
- **NO BAGS:** 0

**Photographs:**
- Roll No. 5-10/14
- Frames 9, 10

**COMMENTS**

17959

**REVIEWED** Y J W 4/25/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/EV-08  Subdivision C  Date (mo/day/yr) 23 Apr 90

(A) Substrate type and % of segments:
   (1) Bedrock 10%  (2) Boulder 10%  (3) Cobble 40%  (4) Pebble 20%  (5) Sand 20%  (6) Silt 0%

(B) Overall % cover of biota (%) of segment:
   Dense   Moderate 35%  Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
   Photographs:
   Roll No. 5/10/94
   Frames 9, 10

BARNACLES

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Wildlife Observations/General Comments:
Bedded clams, Lithodes spp., Fucus is reproductive and dead eelgrass (Zostera) good fish, pippins. Has sporings on bedrock. Bedrock did not extend into lower.

Ecological Considerations:
Exclusion could not be confirmed; no eagles seen 23 Apr 90. Good anchorage and clear harvest area. Uplifted clam beds may indicate never beds below. Another stream in this area may also be a spawning.
ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details) Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: _____________ Date: _____________

RECOMMENDATIONS:

<table>
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<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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Manual Pickup (Check as Req.) _____________ _____________ _____________
Spot Washing _____________ _____________ _____________
Bio-Custombлен Only _____________ _____________ _____________
Bio-Inipol/Custombлен _____________ _____________ _____________
Other _____________ _____________ _____________
Other _____________ _____________ _____________

COMMENTS:

INITIAL:

_________________________________________________________________

_________________________________________________________________

TAG:

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_________________________________________________________________

FOSC:

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_________________________________________________________________

TAG APPROVAL DATE: _____________ FOSC APPROVAL DATE: _____________

ADEC _____________ FOSC _____________
EXXON _____________
USCG _____________
NOAA _____________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USFWS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
ADEC
NAME: John Hoyar
SIGNATURE: [Signature]

[X] NTR
Only trace oily observed on the northern portion of the segment that we surveyed. No further treatment recommended at this time.

EXXON
NAME: Martinez Md.
SIGNATURE: [Signature]

[X] NTR
No oiling, no treatment.

LANDMANAGER
NAME: Steve Wingo
SIGNATURE: [Signature]

[X] NTR
No oil in Sub-pits - Small patches of asphalt located were picked up as we surveyed. No further treatment at this time.

USCG/NOAA
NAME: Dyer, W. J. Nagy, G. Cues
SIGNATURE: [Signature]

[X] NTR
No oil observed. Lush flames/burners in lower tidal zone. This bench segment (as well as EV-88) had increased signs of animal predation (oyster, fish, deer bones).
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 5

**OG** CHANEY       **BIO** CRANK

**ADEC** HAYES       **LANDMANAGER** WARD       **SUBDIVISION** C

**EXXON** MARTINEZ    **USCG/NOAA** DREHER/HODGES

**TIME** 08:15 to 08:45

**TIDE LEVEL** -0.5 ft. to 0 ft.

**ENERGY LEVEL**

**SURVEYED FROM**

**WEATHER**

- **FOOT**
- **BOAT**
- **HELO**
- **SUN**
- **CLOUDS**
- **FOG**
- **RAIN**
- **SNOW**

**TOTAL LENGTH SHORELINE SURVEYED**:

<table>
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<tr>
<th>L</th>
<th>340 m</th>
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**NEAR SHORE SHEEN**

- **BR**
- **RB**
- **SL**
- **NONE**

**EST. OIL CATEGORY LENGTH**

<table>
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**SURFACE OIL CHARACTER**

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**SURFACE SEDIMENT**

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<th>H</th>
<th>M</th>
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**SUBSURFACE OIL CHARACTER**

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<th>DEPTH (cm)</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>HYDRO COLOR</th>
<th>PIT S</th>
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**SUBSURFACE SEDIMENTS**

<table>
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<th>SUBSURFACE SEDIMENTS NOTES</th>
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<tbody>
<tr>
<td>BC-BGC</td>
</tr>
<tr>
<td>BGP-BPG</td>
</tr>
<tr>
<td>PG-PEK</td>
</tr>
</tbody>
</table>

**SHEEN COLOR**

- **B** = BROWN
- **R** = RAINBOW
- **S** = SILVER
- **N** = NONE

**OG COMMENTS:**

No oil observed on south half of segment.
SSAT report did not indicate any further oil on the segment.

**Reviewed:** MC 5/14/91
**Reviewed:** F.W. 5/14/91
No oil present / No intertidal observations made.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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</thead>
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<tr>
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<tr>
<td>Waterfowl</td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
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<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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<td>Other Birds</td>
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LAND MAMMALS

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<tr>
<th>MARINE MAMMALS</th>
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<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td>2</td>
<td>(Deer)</td>
<td>(Partial skeletons &amp; animals)</td>
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<tr>
<td>Pinnipeds(specific)</td>
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<td></td>
</tr>
<tr>
<td>Whales(specific)</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-8 SUBDIVISION B (2 of 3)

WORK WINDOW
Tarmat Removal OPEN

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream
ADFG catalogued anadromous stream (226-40-16543) is located in this subdivision. No constraint to tarmat removal.

5T Bald Eagle Nest
NO CONSTRAINT. Work area is more than 400m from nest.

7II Subsistence: Deer Harvesting
No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS
No disturbance of stream bed or banks. 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.

TAG APPROVAL DATE 5/29/90
ADEC AEC West Interagency FOSC
EXXON NOAA USCG Licensed			
Prepared By: Andrew Morgen Date 5/24/90
MAY 29 1990
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION B (2 OF 3) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16543, Ps, 12/89 and 226-40-15545, Ps, 12/89
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6V Recreation: Anchorages (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. Salmon stream 226-40-16545, Ps, 12/89 located at boundary of EV-08A, and 226-40-16543 located within subdivision. 5T(2) 1 nest located within subdivision, another <400 M in subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/3/80

OILING CATEGORIZATION:
Wide 0 m: Medium 263 m: Narrow 0 m: V.Light 451 m: No Oil 174 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommend removal of asphalt mats where indicated on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints. See Constraint Addendum 5/24/90

TAG COMMENTS: Monitor to assess Suitz current treatment

TAG APPROVAL DATE: 5/3/82
ADEC [Signature] DATE: 5/18/80
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5/18/80

[Signature] [Signature] Date: 5/24/90

Notify CVC 2 weeks in advance of work.
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION A (1 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16543, Ps, 12/89 & 226-40-16545, Ps, 12/89
1A Salmon stream mouth - fry outmig (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6V Recreation: Anchorages (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. Salmon stream 226-40-16545, Ps, 12/89 located near boundary of EV-08 B. Eagle nests located across embayment.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: [Signature] DATE: 3/3/90

OILING CATEGORIZATION:

Wide O m: Medium O m: Narrow O m: V.Light O m: No Oil 462 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 Removal ______ Beach Cleaner
______ Other (see comments)

COMMENTS:


TAG COMMENTS: MONITORS TO CHECK SUITZ LIFE IN THE VICINITY

TAG APPROVAL DATE: 5/3/90

ADEC [Signature] [Date]

NOAA [Signature] [Date]

USCG [Signature] [Date]

FOSC: [Signature] DATE: 5-18-90
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION B (2 OF 3) DATE 4/23/90

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-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6V Recreation: Anchorages (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. Salmon stream 226-40-16545, Ps, 12/89 located at boundary of EV-08A, and 226-40-16543 located within subdivision. 5T(2) 1 nest located within subdivision, another <400 M in subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/3/80

OILING CATEGORIZATION:

- Wide 0 m: Medium 263 m: Narrow 0 m: V.Light 451 m: No Oil 174 m
- Subsurface Oil Observed: Yes [ ] No [X] Maximum Depth [ ]

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of asphalt mats where indicated on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: MONITOR TO ASSESS SUITABILITY DURING TREATMENT

TAG APPROVAL DATE: 5/3/82

ADEC [Signature] EXXON [Signature] NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5/18/80

ACCESS REAL FOR BIOREMEDIATION FOLLOWING TARMAT REMOVAL.
NOTIFY CVC 24 HRS. IN ADVANCE OF WORK.
ECCLOGICAL MAP

No. 1.7° 255m 180m
V.L. 0.9° 135m 182m
No. 1.2° 180m 176m
V.L. 2.3° 345m 338m
No. 1.7° 235m 295m
V.L. 2.5° 555m 544m
1980 1910 m

V-08

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

Map Key: PWS-273
Name: L. Marty
Date: 23 April 1990
Date Entered:
XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

EV-8

ADEC Segment Length: 1910m

Map Key: PWS-273
Name: L. Marty
Date: 23 April 1990
Date Entered:

PWS
SHORELINE EVALUATION

SEGMENT ST/ EV-08 SUBDIVISION C (3 OF 3) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- ADF&G anadromous stream no. 226-40-16543, Ps, 12/89 & 226-40-16545, Ps, 12/89
  1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
  1B Salmon stream mouth - spawning (7/10 to 8/31)
  5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
  6V Recreation: Anchorages (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. 5T (2) located proximal to boundary with Subdivision B and with Subdivision C.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

- Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 635 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:


TAG COMMENTS:


TAG APPROVAL DATE: 5/3/90
ADEC [Signature] DATE: 5-18-90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
V-08

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

EV-8  ADEC Segment Length: 1910m

Map Key: PWS-273
Name: L. Marty
Date: 23 April 1990
Data Entered:

26 of 59
1991 MAYSAP EVALUATION

SEGMENT: EV 008  SUB:  B  REGION: PWS  SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: [Signature] Date: 5/8/91

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inpol/Customblen
Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: 5/8/91  FOSC APPROVAL DATE: 5/13/91

ADEC

EXXON

USCG

NOAA

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC
Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence, Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC
NAME John Hayes
SIGNATURE

☑️ NTR Survey crew walked segment and oiling observed

Consisted of 2 small bands of AP and 1 isolated tarball.

Vero crew recovered oiling identified. Remaining oiling here
is CV/soil and stain. No further treatment recommended at this
site.

EXXON
NAME Martinez N.J.
SIGNATURE

☑️ NTR Found very little oiling, a few scattered asphalt patties were picked up by the
team. Recommended no further treatment.

LANDMANAGER
NAMEt Steele Ward
OF CVC
SIGNATURE

☑️ NTR No Advisory or Sub-surface oil. Very Weak Shaved Intermediate Particles
or asphalt which were removed during survey. No Surface or Sub-surface oil
present. No Further treatment recommended at this time.

USCG/NOAA
NAME Hughes/Dreher
SIGNATURE CWO Koehler

☑️ NTR Tar patties were found and were picked up. No indications of
subsurface oil. No further treatment required.
### MAYSAP SHORELINE OILING SUMMARY

**TEAM NO.:** 5  
**SEGMENT:** EV-8  
**SUBDIVISION:** B  
**DATE:** April 27, 1991

**TIME:** 07:30 to 08:15  
**TIDE LEVEL:** -1 ft. to -0.5 ft.  
**ENERGY LEVEL:** □ H □ M □ L  
**WEATHER:** □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW  
**SURVEYED FROM:** □ FOOT □ BOAT □ HELO  
**TOTAL LENGTH SHORELINE SURVEYED:** 887 m  
**NEAR SHORE SHEEN:** □ BR □ RB □ SL □ NONE  
**EST. OIL CATEGORY LENGTH:** W 0 m M 0 m N 55 m VL 2 m NO 0 m US 0 m

#### SURFACE OIL CHARACTER

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<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>SB</th>
<th>SE</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>SURFACE OIL CHARACTER</th>
<th>S</th>
<th>UI</th>
<th>MI</th>
<th>LI</th>
<th>ZONE</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>A</td>
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<td></td>
<td>OCG L 0.5 0.4</td>
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<td>~20 Patties Recovered</td>
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<td>C</td>
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<td>PATLIE RECOVERED</td>
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<td>D</td>
<td>P</td>
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<td>P L 0.3 0.5</td>
<td>I</td>
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</table>

#### DISTRIBUTION:

- C = 91-100%  
- B = 51-90%  
- P = 11-50%  
- S = 1-10%  
- T = <1%

**SLOPE:** V = VERTICAL  
**H = HIGH ANGLE  
**M = MEDIUM ANGLE  
**L = LOW ANGLE  

**PHOTO ROLL #:** MAYSAP-5  
**FRAMES:** 11 to 15

#### PIT SUBSURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
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<tr>
<td>1</td>
<td>30</td>
<td>OP HOR MOR LOR OF TR NO</td>
<td>cm-cm</td>
<td>Y/N (cm)</td>
<td>B R S N</td>
<td>S UI MI LI</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>□</td>
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<td>□</td>
<td>□</td>
<td>GP-GP</td>
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<td>3</td>
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<td>4</td>
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<td>□</td>
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<td>GC-GC</td>
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</tbody>
</table>

**SHEEN COLOR:** B = BROWN  
**R = RAINBOW  
**S = SILVER  
**N = NONE

#### OG COMMENTS:

[Blank Space]
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 27 Apr '91
SEGMENT # EV-8  TIDAL HEIGHT (Range) ~ -1 → 0
SUBDIVISION B  BIOLOGIST Crank
SEA STATE 0  WIND SPEED/DIRECTION 0
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is located high in the UITZ. Rare barnacles, isopods and sparse pockets of
Litorina, found under small boulders. Two meters down beach there are sparse
adult barnacles, sparse Litorina, and rare Fucus.

(B) Area is located in the UITZ. In the immediate there is sparse Fucus with conceptacles
just beginning to mature; sparse healthy barnacles below area in the MITZ and
LITZ is a dense clam bed with sparse barnacles; moderate Codium (algae);
sparse Fucus with sporelings present; sparse Ulva (algae); rare mussels and
Scolymus (algae). Rich eelgrass bed present. Tar patches were removed without
disturbing sensitive benthos.

(C) Area is in the UITZ. Recently-hatched Litorina and juvenile limpets present within area.
Ten meters below area there are sparse to moderate barnacles and a patch of Fucus Amphipods
present.

(D) Area is low in UITZ. There is sparse Fucus and sparse barnacles within the area. Five meters below:
Fucus is dense, sporelings are present. There are sparse Litorina and limpets. Rare mussels (majorly
juvenile) present under small boulders and cobbles. There is an intertidal mussel bed (majorly adults)
in the LITZ as well as a rich clam bed. Eelgrass bed and Ulva are present at approx 1' tide level.

EV-8 #1 located in same cove with similar biota coverage. LITZ sensitive due to clam and eelgrass
beds. Subdivision has recruitment occurring in the Litorina / Fucus population.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
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<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Waterfowl</td>
<td>(1)</td>
<td>(45/Sea bird at MEV-A)</td>
<td></td>
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<tr>
<td>Gulls/kittiwakes</td>
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<tr>
<td>Shorebirds</td>
<td>(1/oystercatchers)</td>
<td>2</td>
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</tr>
<tr>
<td>Corvids</td>
<td></td>
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<tr>
<td>Other Birds</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>LAND MAMMALS</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td>1 Skull/white teeth</td>
<td>Deer legs</td>
<td>2</td>
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</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
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</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION


ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: [Signature]  Date: 5/18/91

RECOMMENDATIONS: INITIAL TAG FOSC

TREATMENT REQUIRED (Y or N) N __ __ P

Manual Pickup (Check as Req.) ___ ___ ___
Spot Washing ___ ___ ___
Bio-Customblen Only ___ ___ ___
Bio-Inipol/Custmblen ___ ___ ___
Other ___ ___ ___
Other ___ ___ ___

COMMENTS:
INITIAL:

________________________________________________________________________

________________________________________________________________________

TAG:

________________________________________________________________________

________________________________________________________________________

FOSC:

________________________________________________________________________

________________________________________________________________________

TAG APPROVAL DATE: MAY 8 1991
ADEC [Signature]
EXXON [Signature]
USCG [Signature]
NOAA [Signature]

FOSC APPROVAL DATE: 5/13/91
E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 5

OG CHANEY

BIO CRANK

ADEC HAYES

LANDMANAGER WARD for CUC

EXXON MARTINEZ

USCG/NOAA DREHER/HODGES

SEGMENT EV-8

SUBDIVISION A

DATE April 27, 1991

TIME 07:05 to 07:30

TIDE LEVEL -1 ft. to -1 ft.

ENERGY LEVEL: [ ] H [ ] M [ ] L

SURVEYED FROM: [ ] FOOT [ ] BOAT [ ] HELO

WEATHER: [ ] SUN [ ] CLOUDS [ ] FOG [ ] RAIN [ ] SNOW

TOTAL LENGTH SHORELINE SURVEYED: 462 m

NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 40 m V 0 m NO 422 m US 0 m

<table>
<thead>
<tr>
<th>L O</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>AREA LENGTH</th>
<th>ZONE S</th>
<th>ZONE U</th>
<th>ZONE M</th>
<th>ZONE L</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>P</td>
<td>PG</td>
<td>L 0.3</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>~30 2cm patch ex.</td>
</tr>
<tr>
<td>B</td>
<td>P</td>
<td>PG</td>
<td>L 0.2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL: MAYSAP 5 - 2 FRAMES 7-10

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>PG</td>
<td></td>
<td></td>
<td></td>
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<td>2</td>
<td>30</td>
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<td>PG</td>
<td></td>
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</tr>
</tbody>
</table>

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:
TEAM # 5  DATE 27 Apr '91
SEGMENT # EV-8  TIDAL HEIGHT (Range) ~ 1
SUBDIVISION A  BIOLOGIST Crank
SEA STATE @  WIND SPEED/DIRECTION 0
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is a band of tar patches in the low UITZ: high MITZ. Barnacles are sparse on the cobble, they tightly close their under plates when stimulated. Littorina and limpets are sparse. Fucus within the area is rare; 4 m below area concentrations increase to sparse. Ten meters below site there is a stream mouth with eelgrass Ulva, a dense clean bed, oyster beds, and dense Littorina. Five Sunflower stars (Pycnopodia) were present in the MITZ below area. Patches were removed with disturbance to lower zones.

(B) Area is located in the MITZ adjacent to anadromous stream. Sparse barnacle and Systosiga (algae) coverage. Mussels are rare. Littorina and limpets are sparse. Patches were removed without disturbance to biota.

Site is a low energy cobble beach with continuous sparse barnacles on cobble. In MITZ, sparse continuous Fucus with pockets of moderate concentration. Littorina and limpets are sparse and mussels are rare. The MITZ is a rich clam bed utilized by otters (digs present). Filamentous green algae and Ulva present. Eelgrass bed begins ~ 1' tide level.

The clam bed and eelgrass bed makes this area sensitive to both foot and boat traffic. Intertidal biota appears to be healthy.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>seabirds</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Culls/kittiwakes</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>LAND MAMMALS</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td>Deer Tracks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td>Harbor Seal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: EV_006 SUB: B REGION: PWS SURVEY DATE: 4/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td>___</td>
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<tr>
<td>Spot Washing</td>
<td>___</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Customblen Only</td>
<td>___</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Inipol/Customblen</td>
<td>___</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
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<td></td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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COMMENTS:
INITIAL: ____________________________

__________________________________________________________________________

TAG: ___________________________

__________________________________________________________________________

FOSC: ___________________________

__________________________________________________________________________

TAG APPROVAL DATE: _____________ FOSC APPROVAL DATE: ________________

ADEC __________________________

EXXON _________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence, Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC
NAME John Hayes
SIGNATURE

☑ NTR Survey crew walked segment and oiling observed
Consisted of 2 small bands of AP and 1 isolated tarball.
Vevo crew recovered oiling identified. Remark, oiling here
is CV/soe or stain. No further treatment recommended at this
site.

EXXON
NAME Martenew N.J.
SIGNATURE

☑ NTR Found very little oiling, a few scattered
asphalt patches were picked up by the
team. Recommended no further treatment.

LANDMANAGER
NAME Searle WACD
OF CVC
SIGNATURE

☑ NTR No APT or Sub Junk oil. Area walked showed Intermediate patches
of asphalt which were removed daily. Enemy no Suburce on Subsame oil
present. No further treatment recommended at this time.

USCG/NOAA
NAME Hospers/REHER
SIGNATURE CWO 1st Class

☑ NTR Tar patches were found and were picked up. No indications of
subsurface oil. No further treatment required.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 5

OG CHANEY BIO CRANK

ADEC HAYES LANDMANAGER WARD for CVC

EXXON MARTINEZ USCG/NOAA DREHER/HODGES

SEGMENT EV-8

SUBDIVISION B

DATE April 27, 1991

TIME 07:30 to 08:15

TIDE LEVEL -1 ft. to -0.5 ft.

ENERGY LEVEL: ☑ H ☑ M ☑ L

SURVEYED FROM: ☑ FOOT ☑ BOAT ☑ HELO

WEATHER: ☑ SUN ☑ CLOUDS ☑ FOG ☑ RAIN ☑ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 387 m

NEAR SHORE SHEEN: ☑ BR ☑ RB ☑ SL ☑ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 55 m V/L 2 m N/O 830 m US 0 m

<table>
<thead>
<tr>
<th>L.O.</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
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<tbody>
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<tr>
<td>C D</td>
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</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP - 5 - 2 FRAMES 11 to 15

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O CONTENT</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>30</td>
<td></td>
<td>Y</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>GP-GP</td>
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</tr>
<tr>
<td>2</td>
<td>25</td>
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<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>GP-GP</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>GP-GP</td>
<td></td>
</tr>
</tbody>
</table>

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

REVIEWED: F.W. 5/2/91
REVIEWED: RL 5/2/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5     DATE 27 Apr '91
SEGMENT # EV-8     TIDAL HEIGHT (Range) ~ -1 -> 0
SUBDIVISION # 8     BIOLOGIST Crank
SEA STATE 0     WIND SPEED/DIRECTION 0
PHOTOGRAPHS: ROLL #     FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located high in the UITZ. Sparse barnacles, isopods and sparse pockets of
    Lithoninae found under small boulders. Two meters down beach there are sparse
    adult barnacles, sparse Lithoninae and rare Fucus.

(B) Area is located in the UITZ. In the immediate there is sparse Fucus with conceptacles
    just beginning to mature, sparse healthy barnacles. Below area in the MITZ and
    LITZ, is a dense clam bed with sparse barnacles: moderate Odontolina (algae),
    sparse Fucus with sporocysts present; sparse Ulva (algae); rare mussels and
    Sphaerocystis (algae). Rich eelgrass bed present. Tar patties were removed with out
    disturbing sensitive biota.

(C) Area is in the UITZ. Recently hatched Lithoninae and juvenile limpets present within area.
    Ten meters below area there are sparse to moderate barnacles and a patch of Fucus. Amphibians
    present.

(D) Area is low in UITZ. There is sparse Fucus and sparse barnacles within the area. Five meters below:
    Fucus is dense, sporocysts are present. There are sparse Lithoninae and limpets. Rare mussels (majority
    are juvenile) present under small boulders and cobble. There is an intercalated mussel bed (majority adults)
    in the LITZ as well as a rich clam bed. Eelgrass bed and Ulva are present at approx. 1' tide level.

EV-8A & B located in same area with similar biota coverage LITZ sensitive due to clam and eelgrass
beds. Subdivision has recruitment occurring in the Lithoninae, Fucus population.

Otter skull with teeth in slough—reported by ADEC.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td>1 dead Herring</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td>Salmon vertebrae</td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>45 (Seabirds &amp; Kitiwakes)</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1 (unidentified)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
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<td></td>
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<table>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>1 skull with teeth</td>
<td>Otter</td>
<td>1 log</td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td>2 Harbor Seals</td>
<td></td>
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<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
MAYBAP 1991
OG SKETCH MAP Bio Sketch Map
GREG CHANEY & CRANK
TEAM 5
SEGMENT: EV-08 B
DATE: APRIL 27 1991
AIR P. #: PIMC 005 374

LEGEND

<table>
<thead>
<tr>
<th>BEDROCK</th>
<th>Boulders</th>
<th>Fine Bed.</th>
<th>Drift Log</th>
<th>Grabb</th>
<th>Brush</th>
<th>Oiled Pit</th>
<th>No Oil Pit</th>
<th>Photo</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>□</td>
<td>☉</td>
<td>☉</td>
<td>☉</td>
<td>☐</td>
<td>▲</td>
<td>▼</td>
<td>▲</td>
</tr>
</tbody>
</table>

SCALE

1 cm = 100 m

15 Pattie PU 10 to 30 cm dia.
20 Pattie PU 12 cm dia.
2 Pattie PU 10 cm dia.

Other shells location approximate

Forest

Salmon stream

(Other features, symbols, and annotations on the map are not clearly legible.)
1991 MAYSAP EVALUATION


ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) None

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ___________________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
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<th>FOSC</th>
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<tr>
<td>N</td>
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Manual Pickup (Check as Req.) ____ Spot Washing ____ Bio-Customblen Only ____ Bio-Inipol/Customblen ____ Other______________ ____ Other______________

COMMENTS:

INITIAL: ______________________________________________________

_________________________________________________________________

TAG: __________________________________________________________

_________________________________________________________________

FOSC: _________________________________________________________

_________________________________________________________________

TAG APPROVAL DATE: _______ FOSC APPROVAL DATE: _______

ADEC __________________ FOSC __________________

EXXON________________________

USCG_________________________

NOAA________________________
<table>
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<tr>
<th>ADEC</th>
<th>NAME: John Hoyer</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>Survey team notified AP both East of Stream Sites A+B. This oil was removed by crew. No further treatment recommended here at this time. Entire segment was walked by survey team.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME: Mark Mullen</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>Not enough oil to warrant any work, it would be for environmental benefit.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME: Steven Ward</th>
<th>OF: CVC</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>No Sub-Surface oil found. No History of Sub-oil. All asphalt located was manually removed during survey. No further treatment required.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: Hodges/Dreher</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>Tar patties observed in area (upper) inner tidal zone ranging from 4cm to 10 cm in diameter. All patties removed. Ribs showed no oil or sheen.</td>
<td></td>
</tr>
</tbody>
</table>
**MATSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

OG: CHANEY  
BIO: CRANK  
ADEC: HAYES  
USCG/NOAA: MARTINEZ

**SEGMENT**

EV-2

**SUBDIVISION**

A

**DATE**

April 27, 1991

**TIME** 07:05 to 07:30

**TIDE LEVEL**

-1 ft. to -3 ft.

**ENERGY LEVEL**

☐ H  ☑ M  ☑ L

**SURVEYED FROM**

☑ FOOT  ☑ BOAT  ☑ HELO

**WEATHER**

☐ SUN  ☐ CLOUDS  ☐ FOG  ☐ RAIN  ☐ SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 462 m  

**NEAR SHORE SHEEN:** ☐ BR  ☐ RB  ☐ SL  ☐ NONE

**EST. OIL CATEGORY LENGTH:** W 0 m  M 0 m  N 10 m  V 0 m  L 0 m  NO 422 m  Us 0 m

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<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SLOPE</th>
<th>AREA WIDTH</th>
<th>ZONE LENGTH</th>
<th>ZONE NOTES</th>
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<tbody>
<tr>
<td>A</td>
<td></td>
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<td>L 0.3</td>
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<td>B</td>
<td></td>
<td></td>
<td></td>
<td>L 0.2</td>
<td></td>
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</tr>
</tbody>
</table>

~30 20mm patches

---

**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 61-80%; S = 1-10%; T = <1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSAP: 5-2**

**FRAMES 7-10**

---

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SEDIMENT NOTES</th>
<th>NOTES</th>
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<tr>
<td>1</td>
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<td>PG - PG</td>
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<tr>
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<td></td>
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<td></td>
<td>PG - PG</td>
</tr>
</tbody>
</table>

**SHEEN COLOR:** B = BROWN; R = RAINBOW; S = SILVER; N = NONE

---

**OG COMMENTS:**

---

**REVIEWED:** M.C. 5/1/91

**REVIEWED:** F.W. 5/1/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT # EV-8
SUBDIVISION A
SEA STATE 0
PHOTOGRAPHS: ROLL #

DATE 27 Apr '91
TIDAL HEIGHT (Range) ~ -1
BIOLOGIST Crank
WIND SPEED/DIRECTION 0

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is a band of tar patties in the low MITZ, high MITZ.
   Barnacles are sparse on the cobbles, they tightly closed their inner plates when
   stimulated. Littorina and limpets are sparse. Fish within the area is rare.
   4 m below area concentrations increase to sparse. Ten meters below site there is
   a stream mouth with eelgrass, Ulva, a dense clam bed, other digs and
   dense Littorina. Five Sunflower stars (Pisaster) were present in the MITZ below area.
   Patches were removed without disturbance to lower zones.

(B) Area is located in the MITZ adjacent to anadromous stream. Sparse barnacle and
   Scatopside (clay) coverage. Mussels are rare. Littorina and limpets are sparse.
   Patches were removed without disturbance to oysters.

Site is a low energy cobble beach with continuous sparse barnacles
on cobbles. In MITZ Sparsely continuous. Fish with pockets of moderate
concentration. Littorina and limpets are sparse and mussels are rare.
The MITZ is a rich clam bed utilized by others (clays present). Filamentous
green algae and Ulva present. Eelgrass bed begins ~ 1' tide level.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
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<tbody>
<tr>
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<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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FISH OBSERVED
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<tr>
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LAND MAMMALS

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<td>Tracks</td>
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MARINE MAMMALS

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<tr>
<td>Pinnipeds (specify)</td>
<td>10-Harbor Seal</td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
</tr>
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</table>

Shoreline subdivision map showing important biological features attached.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-09

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/EV-09 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5ST-1 All bald eagle nests (3/1 to 6/1) — Active eagle nests (3/1 to 9/1)
Eagle nest within 400 M of segment
6V Recreation: Anchorages (6/1 to 9/15)
7III 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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ____________________ DATE: ____________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 347 m: No Oil 257 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

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

COMMENTS: Recommend manual pickup of scattered tar patties and removal of tarmats as shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: _______________________________________________________

TAG APPROVAL DATE: ______
ADEC ___________________________ FOSC: __________________ DATE: ______
EXXON ___________________________ NOAA ________________________
NOAA ___________________________ USCG ________________________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 6/31)

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 inlip 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 Aquaculture Association for confirmation and authorization.

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 inlip 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)
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 inlip 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  
PWS Aquaculture Association  John McMillan or Bruce Suzumoto  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 (6/11 to 7/29)

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 inlip 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 uncolded intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inlip 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)
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 inlip 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

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

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

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:

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 2/5)
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 inlip 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 ST1  EVO 9  SUBDIVISION:  A  DATE  4/23/99

NAME  SHAWN-MAAS  SIGNATURE  DC  Peluso & Biss

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

MANUAL REMOVAL OF TARBALLS AND ASPHALT/PAVEMENT IN POCKET BEACHES DETAILED ON DRAWINGS.

NUT ON COVER WHICH IS SPORADIC AND ON VERTICAL ROCK FACE.

ADEC

NAME  DAVE SAPI  SIGNATURE  Dave M. Sapi

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

SPATTER ON HI-ANGLE ROCKS PROBABLY NOT REMOVABLE.

2) ALL ASPHALT AND TAR PATIES SHOULD BE REMOVED MANUALLY AND ANY PENETRATION INTO SEDIMENTS BY MORE THAN UNDERSIDES OF PATIES & ASPHALT.

LAND MANAGER

NAME  DON KOMPKOFF JR  SIGNATURE  Donald J. Kompkoff Jr

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

37059
SHORELINE OILING SUMMARY

SEGMENT ST/ EV-09

TIME: 10:30 to 10:47

DATE: 23 April 90

EST. SUBDIVISION LENGTH: 347 m

SURFACE SEDIMENTS: R 40%, B 24%, C 13%, P 9%, G 5%, S 4%, M 2%, V 1%

SLOPE: Lang 40%, Hang 36%, Vert 10%

WAVE EXPOSURE: Low

PLANT DESCRIPTION: Grass, Sun, Clouds, Fog, Rain, Snow

UPLANDS DESCRIPTION: Grass, Forest, Rock

SURFACE CONDITIONS: Dry

WORKING DIRECTION: S to N

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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<tr>
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PAVEMENT H F 6 sq. m by 3 cm

PATTIES/TARBALLS: 1 BAGS

NEAR SHORE SHEEN? NO

BR RW SL TL

OILED DEBRIS AMOUNT

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DID YOU COLLECT DEBRIS?

YES □ NO □

TYPE OF OIL:

Photographs:

Roll No. 57/10/14
Frames: 1, 2

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED MATERIAL BELOW</th>
<th>OIL / FILM COLOR</th>
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<th>A SHEEN (VAM)</th>
<th>Y SURFACE SUBSURFACE SEDIMENT</th>
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</tbody>
</table>

COMMENTS

Note: All observed oil removed (except very widely spaced splatters) from S half of segment (see map).

A few areas of tar mat remain in the northern half of the segment (as mapped).

28/59

REVIEWS: 25 Apr 90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/6v-09 Subdivision A Date (mo/day/yr) 23/90

Time (24 hr) 0930-1030 Biologist Lemon

(A) Substrate type and % of segments:
1) Bedrock 52 2) Boulder 30 3) Cobble 20 4) Pebble 5 5) Sand 5 6) Site

(B) Overall % cover of biota (% of segment): Dense ___ Moderate ___ 50% 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)

Photographs: Roll No. 591044
Frames 51, 52

<table>
<thead>
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<td>2 3 5</td>
<td>2 4 6</td>
<td>2 3 5</td>
<td>2 3 5</td>
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</tbody>
</table>

Wildlife Observations/ General Comments: many dead bodded clams, Fucus covered with sea anemones.

Ecological Considerations: Eagle nest was not confirmed 23 Apr 90, no eagles seen. Our research was done earlier and may have disturbed eagles.

298/59
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-9 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal
OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K Purse Seine Hook-off
No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest
NO CONSTRAINT. Work areas are more than 400m from nest.

7II Subsistence: Deer Harvesting
No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unlined biota and substrate.

TAG APPROVAL DATE 5/28/90
ADEC Art Weiner Date Weiner
EXXON AW7 764Z
NOAA B7559t 86148
USCG G. A. Reiter G. B. Reiter
Prepared By: Andrea Meyer Date 5/27/90

DATE MAY 29 1990
SHORELINE EVALUATION

SEGMENT ST/ EV-09 SUBDIVISION A (1 OF 1) DATE 4/25/90

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)
Eagle nest within 400 M of segment
6V Recreation: Anchorages (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 uncoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 347 m: No Oil 257 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)
__ Bioremediation _ Spot Washing: _ Wands
X Tarmat Removal _ Beach Cleaner
__ Other (see comments)

COMMENTS: Recommend manual pickup of scattered tar patties and removal of tarmats as shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90

ADEC A. Weiner Oilwire
EXXON
NOAA
USCG

FOSC: __________ DATE: 5-14-90

Garage need for bioremediation following tarmat removal
Notify CVC 24 hrs. in advance of work.
SHORELINE EVALUATION

SEGMENT ST/ EV-09 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5ST-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
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OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 347 m: No Oil 257 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)
_____ Bioremediation _____ Spot Washing: _____ Wands
_____ X Tarmat Removal _____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommend manual pickup of scattered tar patties and removal of tarmats as shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC Art Weiner
EXXON
NOAA Gayle Green
USCG
FOSC: 5/14/90
Notify CVC 24 hrs. in advance of work
ENVIRONMENTAL SENSITIVITIES:
Work Window(s) _ RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) _ Eagle nest,
Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: __________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOsc</th>
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<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Manual Pickup (Check as Req.)  |         |     |     |
Spot Washing                  |         |     |     |
Bio-Customblelen Only         |         |     |     |
Bio-Inipol/Customblelen       |         |     |     |
Other                        |         |     |     |
Other                        |         |     |     |

COMMENTS:
INITIAL:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG: __________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

FOsc: __________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG APPROVAL DATE: ____________ FOsc APPROVAL DATE: ____________

ADEC __________________________ FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC
NAME John Heyer
SIGNATURE

NTR
Armed TBs were observed and removed by deck crew. Our
team surveyed the northern half of this segment as the
only remaining oil is SOR + trace oiling. No treatment
recommended at this time.

EXXON
NAME Martinez M.J.
SIGNATURE

NTR
No oil observed. No treatment needed.

LANDMANAGER
NAME Steve Warden of CUC
SIGNATURE

NTR
No Sub-Surface oil found. Slight stain with sparse needle was
present on rock faces. Not present in any sizable manner. Small patches
were removed. No treatment recommended at this time.

USCG/NOAA
NAME Hodges/Dreher
SIGNATURE

NTR
No oil observed.
**MAYSAP SHORELINE OILING SUMMARY**

**Team No.:** 5  
**OOG:** CHANEY  
**BIO:** CRANK  
**ADEC:** HAYES  
**EXXON:** MARTINEZ  
**Land Manager:** WARD  
**USCG/NOAA:** DREHER/ HODGEB

**Segment:** EV-9  
**Subdivision:** A  
**Date:** April 27, 1991

**Time:** 09:00 to 09:30  
**Tide Level:** +1 ft. to +2.5 ft.  
**Energy Level:** □ H  □ M  □

**Surveyed From:** □ Foot  □ Boat  □ Helo

**Weather:** □ Sun  □ Clouds  □ Fog  □ Rain  □ Snow

**Total Length Shoreline Surveyed:** 250 m  
**Near Shore Sheen:** □ Br  □ Rb  □ Sl  □ None

**Est. Oil Category Length:** W _m_  M _m_  N _10_m  V _1_m  NO _239_m  US _478_m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>V</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>H</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td></td>
</tr>
</tbody>
</table>

- **Surface Oil Character:** C - Clean  
- **Surface Sediment:** L - Low  
- **Shore Slope:** V - Very  
- **Area:** M - Medium  
- **Notes:** Patty AP recovered

**Distribution:** C = 01-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

**Slope:** V = Vertical  
H = High Angle  
M = Medium Angle  
L = Low Angle

**Photo Roll # Maysap:** 5 - 2  
**Frames:** 18-22

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>HYDRO LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.0</td>
<td>G - G</td>
<td></td>
<td>C - CM</td>
<td></td>
<td></td>
<td></td>
<td>G - G</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.0</td>
<td>G - G</td>
<td></td>
<td>C - CM</td>
<td></td>
<td></td>
<td></td>
<td>C - CM</td>
<td></td>
</tr>
</tbody>
</table>

- **Pit No.**  
- **Depth:** (cm)  
- **Subsurface Oil Character:** G - Gray  
- **Oiled Zone:** cm-cm  
- **Clean Below:** cm-cm  
- **Hydro Level:** m  
- **Sheen Color:** B - Brown  
- **Pit Zone:** m  
- **Surface-Subsurface Sediments:** S - Sandy  
- **Notes:**

**Sheen Color:** B - Brown  
R - Rainbow  
S - Silver  
N - None

**OG Comments:**

Reviewed: F.W. 5/3/91  
Revised by: M.C. 5/4/91
MAYBAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-9-A
DATE: April 27 1991
AIR P.H.: None

LEGEND

BEDROCK
BOULDER
FINE BED
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE

FISHING SIGN
Clam Bed
LOW ROCK
22 Holy Bed in Silt
Rock Bench 790% biota
cores
PU
10 patties
20 days

LOW ROCKS
TEAM #5
SEGMENT # EV-9
SUBDIVISION A
SEA STATE 0

DATE 27 Apr
TIDAL HEIGHT (Range) +1.5 to +3.0

BIOLoGIST Crank
WIND SPEED/DIRECTION 0

PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is high in UITZ located 3m behind a rock bench. In the angular cobble and gravel there are sparse barnacles. Littorina and limpets. Mussels are rare. Three meters SE of area barnacles are moderate. Fucus sporlings are rare and mussels are sparse.

(B) Area is in theUITZ consisting of angular small boulders and cobble. Rare barnacles and limpets are present within the area. One meter below, barnacles, mussels, limpets and limpets are sparse. Five meters below there are patches of Fucus and Skaptosiphon.

This is a rich, diverse and healthy intertidal (kelp) beds. Subtidal Laminaria (kelp) beds begin just offshore. There are clam beds in the UITZ with at least 4 species (Podotrocha, Tapes, Macoma, Sagartia). scallop and oyster shells were also present. Barnacles were moderate in the UITZ; HUTZ decreased to sparse in the UITZ. Mussels were sparse on the beach. Littorina juveniles were moderate and adults sparse. There is a rock bench approx. 5m east of area A with >90% bioe coverage including Ulva obtuata, Skaptosiphon (algae), moderate mussels, Fucus, barnacles, littorina, limpets. Oystercatchers were feeding in UITZ and other seal found in UITZ.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>2</td>
<td>4</td>
<td>Juvenile 2-13</td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>2</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>7</td>
<td>Deer</td>
<td>1 - also hares</td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td>2</td>
<td>Harbor Seals in H20</td>
<td>1, Seals</td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
### ASAP TAG REVIEW SHEET

**Segment:** EV12  
**Subd:** A  
**Site:** 1  
**Date:** PRE-Review 11/6/90

**Priority For Addressing In 1990**
- [ ] HIGH  
- [ ] MEDIUM  
- [ ] LOW  
- [ ] NTR

**Treatment Recommended:** MANUALLY REMOVE POOLED OIL / AP / SOR

**NO OG SHEET PROVIDED**

### Priority Site For Reassessment In 1991

<table>
<thead>
<tr>
<th>YES</th>
<th>CG</th>
<th>NO</th>
<th>YES</th>
<th>ADEC</th>
<th>NO</th>
<th>YES</th>
<th>EXXON</th>
<th>NO</th>
<th>YES</th>
<th>LAND MGR</th>
<th>NO</th>
</tr>
</thead>
</table>

**TAG 13 AUG 90**

**Access AP/OP/HOR & BIO**

**See sketch**
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed: On west side of stream is an area of SAP, for left after Summer '89 treatment. On east side, HN10 is an area approx. 15m x 3m of SAP and PR/PR, from 15m to surface penetration.

Followup Recommendations: ASAP Survey crew recommends the removal of surface SAP and subsurface PR and passage of a depth up to 30cm. Area on east side of stream should be thoroughly tilled and disinfected as should area requiring manual removal.

Completed by Pickup Crew: NO

Priority for Addressing in 1990: High

ADEC

Comments: For area east of stream the mechanical removal of small quantities of residue of OP and PR sediments would greatly facilitate treatment.

Exxon

Comments: Previous work in area rather intensive, re-digging source seems to be under large cobble/small boulders. Manual crew should be able to roll rocks adequately to remove the source and Bio remediate.

USCG

Comments: Manual removal of Diba material in effects area by work crew with water response in pit. ASAP team should call night before reapplication of Bio. Follow manual work program.

Land Rep.

Comments: Agree with ADEC County Wide Recommendations above.
SEGMENT AS / EV-012, SUBDIVISION: A
SITE: 1
DATE 8-7-90

USCG

[Signature]

**REASON:**
Area to east of stream was broken up by ASAP crew and contains little free oil. In contrast, a 3x15m area to the west of the stream contains a large amount of mobile oil despite earlier work efforts. This area should be treated (manual removal, bio, raking) in 1990 and checked in 1991.

ADEC
NAME: Bob McLeod
SIGNATURE: [Signature]

**REASON:**
An area east of stream approx. 3m x 20m, light oil and OR oil requires treatment: tilling, dissipating, shore/beach, and bio remediation.
An area west of stream requires manual removal, puncture, AP and subsurface oil to 20cm followed by storage, tilling, and bio remediation. ASAP follow-up recommendations for was submitted calling for these treatment recommendations.

MANAGER
NAME: [Signature]
SIGNATURE: [Signature]

**REASON:**
Enough oil west of the stream to need more manual in 90. Check Sub SWARK, oil.

XXON
NAME: John Dean
SIGNATURE: [Signature]

**REASON:**
The area west of stream justifies additional work in '90 per "ASAP follow-up recommendations" and reassessment in '91.
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/EV-12  Subd.: A(Aver.)  Site:  Date: 8-17-90  1990

Conditions Observed:  On west side D stream is an area JP, 508 left after Summer '89 treatment.  On east side JP is on and across 15m x 3m of JP and DP/DR from 15m-30m surface penetration.

Followup Recommendations: ASAP/Survey crew recommends the annual removal of surficial JP and entrapped JP and leaving area to a depth of 20m-25m.  Area on west side D stream should be thoroughly tilled and disinfected as should area requiring manual removal.

Completed by Pickup Crew:  YES  NO

Priority for Addressing in 1990:  High  Mod.  Low

ADEC:  Bob McCraney  Robert B. McCraney

Exxon:  John Dewar  Andrew

USCG:  Don Davis  

Land Rep.:  John Mund CWC  

Comments:  Previous work in area rather intensive.  Re-working of Source Seen To Be Under Large Cobble/Small Boulders. Manual crew should be able to roll rocks adequately to remove these covey and bio aggregates.

Comments:  Maintenance removal of icebergs in affected area by work crew. Water excess to put over by ASAP team should not flow into open area. Re-establishment of "bio" following manual water releases.

Comments:  Agree with ADEC comments and recommendations.  Initial
GENERAL DATA

SEG ID: EVD12  SBDV: 14  SITE: 1  TEAM: 3  DATE: 8/7/90
SITE LETH: 667  OIL CATEGORIES: W — M L S N — VL M S NO 632 U —

SURFACE DATA

CHAR #1: OIL CHAR: SOB  OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI X MI____ LI____

CHAR #2: OIL CHAR: CV  OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI X MI____ LI____

CHAR #3: OIL CHAR: ST  OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI X MI____ LI____

CHAR #4: OIL CHAR: NO  OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #5: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #6: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #7: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #8: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #9: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #10: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____

CHAR #11: OIL CHAR: ______ OIL DIST: CONT ______ BRKN ______ PTCH ______ SPLH ______
TIDAL ZONE: SU____ UI____ MI____ LI____
SUBSURFACE DATA

SEGMENT ID: EU612  SUBDIV: A  SITE: 1

PIT # 1  PIT DEPTH 20  OIL CHARACTER OR OIL INTVAL: FROM 0 TO 7
CLEAN BELOW: Y  PIT ZONE: SU Ui X MI Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN X SAN X MUD VEG

PIT # 2  PIT DEPTH 20  OIL CHARACTER OR OIL INTVAL: FROM 0 TO 17
CLEAN BELOW: Y  PIT ZONE: SU Ui X MI Li
SUBSURF SEDIMENT: BRK BLD COB X PEB X GRN X SAN X MUD VEG

PIT # 3  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 4  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 5  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 6  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 7  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 8  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 9  PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 10 PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 11 PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 12 PIT DEPTH  OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU Ui Mi Li
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG
### Surface Oil

<table>
<thead>
<tr>
<th>Site 1</th>
<th>Site 2</th>
<th>Site 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Character</strong></td>
<td><strong>Distribution</strong></td>
<td><strong>Oiled Zones</strong></td>
</tr>
<tr>
<td>Asphalt</td>
<td>/C/</td>
<td>/S/</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>/B/</td>
<td>/I/</td>
</tr>
<tr>
<td>Pooled</td>
<td>/P/</td>
<td>/S/</td>
</tr>
<tr>
<td>Cover</td>
<td>/S/</td>
<td>/I/</td>
</tr>
<tr>
<td>Coat</td>
<td>/S/</td>
<td>/I/</td>
</tr>
<tr>
<td>Stain</td>
<td>/S/</td>
<td>/I/</td>
</tr>
<tr>
<td>Mousse</td>
<td>/S/</td>
<td>/I/</td>
</tr>
<tr>
<td>Patties/T.B.</td>
<td>/S/</td>
<td>/I/</td>
</tr>
<tr>
<td>Film</td>
<td>/S/</td>
<td>/I/</td>
</tr>
<tr>
<td>No Oil</td>
<td>/S/</td>
<td>/I/</td>
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<tr>
<td><strong>Est. Site Length</strong></td>
<td>66.7 m</td>
<td>66.7 m</td>
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</table>

### Subsurface Oil

<table>
<thead>
<tr>
<th>Pit</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Material</th>
<th>Clean Below (Y/N)</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.0</td>
<td>/S/</td>
<td>/B/</td>
<td>Y</td>
<td>p/6/5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.0</td>
<td>/S/</td>
<td>/B/</td>
<td>Y</td>
<td>p/6/5</td>
<td></td>
</tr>
</tbody>
</table>

### Comments

Consisting of C/U/SOR was located on both sides of the stream. The SOR was loose, granular material that was broken in the field by the crew. The C/U was set in boulders in the SE portion of the site. This area show signs of previous treatment. The stream was not contained as per the Area Management Form.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-10

SUBDIVISIONS: A (1 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ EV-10 SUBDIVISION A (1 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
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. 5T within 400M.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:________________________ DATE:____________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 121 m: V. Light 58 m: No Oil 161 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: _____ Wands
_____ Tarmat Removal  _____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommend manual pickup of debris, tarballs and patties. Work should be conducted between 7/1 and 8/15 based on above listed constraints.

TAG COMMENTS:________________________________________________________

TAG APPROVAL DATE:___________

ADEC EXXON NOAA USCG  FOSC:__________ DATE:__________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
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 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 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 Inpil 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

Esther Hatchery release (4/15 to 6/15)
Main Bay Hatchery release (4/20 to 6/15)
Sawmill Bay Hatchery release (4/16 to 6/1)
Canery Creek Hatchery release (4/21 to 6/1)
Pamorte 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: ADF&G Larry Peitz 424-3214

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 7/23)
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 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

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 unooled intertidal and subtidal algae and sea grasses. 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

Herring egg and sea lion pupping (5/15 to 7/1)
Herring egg 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 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 257-2403

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 736-3377

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 736-3377
ADF&G Tom Rohey 257-2206

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 736-3377

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)
Finnish harvesting
Deer harvesting (8/15 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. No subsistence harvesting. 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 267-2359
SEGMENT ST 1 EV10  
SUBDIVISION: A  
DATE 1/3/90

USCG  
NAME: Shawn MAAS  
SIGNATURE:  
☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
MANUAL REMOVAL OF PATTIES AND TAR BALLS AND OILED DEBRIS.
BIOREMEDICATION OF THICKER COVER.

NO SUBSURFACE OILS NOTED

ADEC  
NAME: Dave Sale  
SIGNATURE:  
☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
1. REMOVE HEAVIEST COAT FROM HI-ANGLE ROOSE FACES
2. REMOVE MANUALLY ALL TAR BALLS, TAR MAT AND/OR ASPHALT FROM SHELVES ON HIGH ANGLE ROCK, AND LOW-ANG BEACHES WHERE OIL O24000 INTERSECTS.
3. REMOVE OILED DEBRIS, LOGS AND GRASSES IN SUPRALITIONAL ZONE
4. REMOVE OR TURN OVER ANY SEGMENTS CONTACTED WITH OIL

LAND MANAGER  
NAME: Dom Bongiorno Jr.  
SIGNATURE:  
☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

45 of 51
SHORELINE OILING SUMMARY

OG  R. Marty  USCG  S. Mosh  SEGMENT ST/ EV-10
BIO  S. Lemen  LAND REP  D. Komerski  SUBDIVISION A (AOFT)
EXXON  L. Caimo  ADEC  D. Sals  TIME/16.15/10/1985
TEAM NO. 10 TIDE LEVEL F/6m o t o/0/2m DATE 23 April/90
EST. SUBDIVISION LENGTH: 3.45 m
TIDE: Sun E Clouds P Fog Rain Snow
UPLANDS DESCRIPTION: Grass Forest Rock
SURVEYED FROM: Foot B Boat S Helo
WORKING DIRECTION: W to S
SURFACE SEDIMENTS: R 20 % E 20 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 30 % Hang 30 % Vert 40 % WAVE EXPOSURE: Low Med High
OIL CATEGORY LENGTH: W 0 m M 0 m N 44 m VL 32 m NO 20 m

SURFACE OIL

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<td>TARBALLS</td>
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PAVEMENT H F S None  sq m by 0 cm
PATTIES/TARBALLS 5-20 BAGS
NEAR SHORE SHEEN? No BR RW SL TL
OILED DEBRIS AMOUNT SM MD LG
DID YOU COLLECT DEBRIS? Yes No
Logs X
Vegetation
Trash X
Debris X

Photographs:
Roll No. ST/10/14
Frames 13

SUBSURFACE OIL

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COMMENTS: Tar patties are quite abundant in this subsegment. During the survey, 53 bags of debris and tar were removed, but additional patties remain. The 512 was snow covered on the pocket beaches during the survey and may contain additional debris and/or tar patties.

38/659
4/25/90

REVIEWED DATE
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/EV-10 Subdivision A Date (mo/day/yr) 4/23/90

Time (24 hr) 5:00-17:00 Biologist Lemon cloudy, wind 0

(A) Substrate type and % of segments:
- Bedrock 50%
- Boulder 25%
- Cobble 10%
- Pebble 10%
- Sand 5%
- Silt 0%

(B) Overall % cover of biota (% of segment):
- Dense
- Moderate 50%
- 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 (G)

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Wildlife Observations/General Comments:
- Reproductive Fucus
- Egg cluster unknown fish origin
- Oligochaete worms living with oil at pit 1
- Cormorant

Ecological Considerations: Deer harvest area.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-10

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ EV-10 SUBDIVISION B (2 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
(one eagle nest within 400 M)
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. (1 eagle nest within 400M)

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: __________________________ DATE: __________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 104 m: V.Light 1354 m: No Oil 808 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 Removal ___Beach Cleaner
___Other (see comments)

COMMENTS: _____________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

TAG COMMENTS: __________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

TAG APPROVAL DATE: ____________

ADEC ___________________________ FOSSC: __________________ DATE: ____________

EXXON ___________________________ NOAA ___________________________

USCG ___________________________
Salmon stream mouth - fry outmigrating (6/1 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 inpool 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 inpool 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

Estuary 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)

Reno site release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inpool 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

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)

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 the essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inpool 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

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 uncolled Intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inpool 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

Seal and sea lion pupping (6/15 to 7/1)

Seal and sea lion molting (8/15 to 9/15)

Restrict air and boat traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inpool within 2 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 936-7235

ADF&G Don Calkins 267-2403

Seabird colony (6/1 to 9/11)

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

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

All 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 (6/1 to 9/30)

Finish harvesting

Deer harvesting (8/15 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 inpool 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
SEGMENT ST LEU/LO SUBDIVISION: B DATE 4/23/90

USCG

NAME: Shawn Maas SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS:

Cover is patchy sporadic along vertical rock face. Hard to get at.

No subsurface oils noted.

ADEC

NAME: Dave Sale SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS:

There is a stain/cover on hi-angle rocks that is spotty and firmly
cannot be cleaned off. Some tarry cover remains in bank.

LAND MANAGER

NAME: Donald Kumpfke Jr. SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

588 59
**SHORELINE OILING SUMMARY**

**OG** R. Marty  
**USCG** J. Mears  
**BIO** B. Lande  
**LAND REP.** D. Kuempel  
**EXXON** J. Caramazza  
**ADEC** R. Sine  
**SEGMENT ST/ SUBDIVISION** EV-10  
**TIME** 16:15 10/18 90  
**DATE** 33 April/90  
**TEAM NO.** 10  
**TIDE LEVEL** 1.0tide  
**SURVEYED FROM** Foot/Boat  
**SURFACE SEDIMENTS**  
- R 60%  
- B 10%  
- C 10%  
- P 5%  
- G 5%  
- S 5%  
- O 0%  
- M 0%  
- V 0%  
**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 S (m) sq. m by (cm)  
**PATTIES/TARBALLS** 5 BAGS  
**NEAR SHORE SHEEN?** (NO) BR RW SL TL  
**OILED DEBRIS**  
- Logs  
- Vegetation  
- Trash  
- Debris  
**DO YOU COLLECT DEBRIS?** YES NO  
**TYPE** Misc.  
**Photographs:**  
- Roll No. none  
- Frames  

**SUBSURFACE OIL**

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**COMMENTS:** Oiling consists of a very few splatters (becoming more to the north) and a few tar balls (not collected). The splatters, when present, and as a cover and are quite furry. There is quite a bit of older, friable tar on the beach which was in place prior to the Exxon Valdez incident. This older tar is, in places, almost as abundant as the newer, softer 'Exxon' tar.

**REVIEWED** JW  
**DATE** 4/25/90  
**PAGE** 46 of 59
SHORELINE ECOLOGICAL SUMMARY

Segment ST/E610 Subdivision 8 Date (mo/day/yr) 4/23/90

(A) Substrate type and % of segments:
   (1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense___ Moderate 50% 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)

Photographs:
   Roll No. none
   Frames

BARNACLES

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Wildlife Observations/General Comments:
- Littering eggs, Mytilus (clam shells), Fucus is reproductive
- 1B gulls & 1 raven
- 4 sea otters including pup
- Eagles sound/monetary

Ecological Considerations:
- Islands had lots of shell fish & bird droppings
- Sesidomus shells & diggers abundant in places
- School of "minnows"
- Reported eagle nest & plumbing target could not be confirmed 23 April
- However an eagle was heard during the survey. The largest offshore rock appeared to be developing a gull nesting area.

This is a subsistence deer hunting area.

476159
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-10 SUBDIVISION A (1 of 2)

WORK WINDOW

Manual Pickup OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N, O, P, Q Harbor Seal & Sea Lion NO TIME CONSTRAINT. Authorized per Pupping and Molting memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

5T Bald Eagle Nest NO CONSTRANT. Work area is more than 400m from nest.

1K Purse Seine Hook-off No constraint to manual pickup.

7ll Subsistence: Deer Harvesting No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. 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 unrolled biota and substrate. Restrict air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests.

TAG APPROVAL DATE 5/24/90

ADEC A. K. Weaver

EXXON H. R. Morehouse

NOAA B. B. Blisard

USCG G. R. Thayer

FOSC G. Truex

Prepared by Andrew Meg Date 5/24/90
SHORELINE EVALUATION

SEGMENT ST/ EV-10 SUBDIVISION A (1 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
9N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
30, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-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. 5T within 400M.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]
DATE: 5/3/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 121 m: V. Light 58 m: No Oil 161 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommend manual pickup of debris, tarballs and patties. Work should be conducted between 7/1 and 8/15 based on above listed constraints.

TAG COMMENTS: Monitor to check Suits on pocket beaches and oiled couches

TAG APPROVAL DATE: 5/3/90

FOSC: [Signature] DATE: 5/14/90

NOAA [Signature] USCG [Signature]

[Handwritten note: Notify CVC 24 hrs. in advance of work]
SHORELINE EVALUATION

SEGMENT ST/ EV-10  SUBDIVISION A (1 OF 2) DATE  4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P  Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q  Harbor seal and sea lion molting (8/15 to 9/15)
5T-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. 5T within 400M.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]  DATE: 5/3/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 121 m: V.Light 58 m: No Oil 161 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommend manual pickup of debris, tarballs and patties. Work should be conducted between 7/1 and 8/15 based on above listed constraints.

TAG COMMENTS:  Monitor to check suits on pocket beaches and oiled coasts.

TAG APPROVAL DATE:  5/3/90
ADEC  ART WEAVER  Art Cleaver
EXXON  Andy Test  Paul
NOAA  Gene Price  Robert
USCG  Martin Weimer  Charlotte

FOSC:  ___  DATE:  5/15/90

Notify CVC 24 hrs. in advance of work.
SHORELINE EVALUATION

SEGMENT ST/ EV-10 SUBDIVISION B (2 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-2 All bald eagle nests (3/1 to 6/1) Active eagle nests (3/1 to 9/1)
(one eagle nest within 400 M)
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. (1 eagle nest within 400M)

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 104 m: V. Light 1354 m: No Oil 808 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

Snare/Absorbent Booms

Oil Snares (pom poms)

Manual Pickup

Absorbents (pads, rolls, etc)

Bioremediation

Spot Washing

Tarmat Removal

Wands

Beach Cleaner

Other (see comments)

COMMENTS: MANUAL PICKUP OF TARPED + DEBRIS

SEE SKETCH ATTACHED TO EV-10-A

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90

ADEC Act

FOSC:

EXXON

DATE: 5-6-90

NOAA

NOTIFY A/C 24 HRS PRIOR TO WORK

USCG

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

EV-10

Map Key: PWS-177b
Name: R. Marty
Date: 23 April 1990
Date Entered: 54/59

W Meters
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K  Purse Seine Hook-off  No constraint to manual pickup.
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 6/1/90 map indicates no active nest within 400m of Subdivision B work site.
7II Subsistence: Deer Harvesting  No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. 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.
SHORELINE EVALUATION
SEGMENT ST/ EV-10 SUBDIVISION A (2 OF 2) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
(one eagle nest within 400 m)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (1 eagle nest within 400 m)

ARCHAEOLOGICAL CONSTRAINTS: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]
DATE: 5/8/90

OILING CATEGORIZATION:
White_0 m; Medium_0 m; Narrow_104 m; V.Light_1354 m; No Oil_808 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Manual Acre or TARMATS 
See sketch attached to EV-10-A
See Addendum dated 6/7/90 AP

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC ART WEBER APPLICANT FOSC: __ DATE: 5-6-90
EXXON Amy Gat DATE: 5-6-90
NOAA Gary Price NOTIFY 911 IN ADVANCE TO WORK
USCG Kenneth Kinnix
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-11

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-11 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)
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. Bald eagle nest in adjacent segment.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: __________________________ DATE: __________________________

OILING CATEGORIZATION:

Wide_0 m: Medium_0 m: Narrow_0 m: V.Light_26 m: No Oil_223 m
Subsurface Oil Observed: Yes__ No_X Maximum Depth_____ 

RECOMMENDATIONS:

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

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

COMMENTS: ____________________________________________________________
_____________________________________________________________________
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TAG COMMENTS: _______________________________________________________
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TAG APPROVAL DATE: __________________________________________
ADEC _________________ FOSC: _______________ DATE: __________ 
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 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

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 6/1)
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  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

1I  Gill net area (6/7 to 9/31)
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 inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3236

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 uncult 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

3Q  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. 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 786-3377

5S  Shorebird/birdwaterfowl 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 Raths 267-2208

5T  All 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 786-3377

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

7Z  Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 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
NOAA
NAME Michael Buchman
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Majority of this segment (~90%) is a vertical rock wall with focus covered boulders at water line. Very light stain/splatters were seen from boat in this area. The small pocket beach of boulders/cobbles also had a band of light staining. (This beach was walked.)

ADEC
NAME John Hoyer
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Light fur stain + random for splashes observed on this segment. Segment is very lightly oiled no treatment recommended.

LAND MANAGER
NAME Steve Wygod chesca Corp
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Above information is accurate. I agree with above comments.

REVISION NO. 03/21/90
**SHORELINE OILING SUMMARY**

**Team:** 11
**Tide Level:** 2.7
**Date:** 4/29/90

**SEGMENT ST:** EU-11

**Shoreline Oil Character:**
- Asphalt Pavement
- Pooled
- Cover
- Coat
- Stain
- Mousse
- Patties
- Tarballs
- Film
- No Oil

**Oil/Film Color:**
- Impact Zones:
  - TV
  - VI
  - UF

**Surface Sediments:**
- R 70%
- B 25%
- C 5%
- P 0%
- G 0%
- S 0%
- O 0%
- M 0%
- V 0%

**Surface Oils:**
- Paving: 0 sq. m by 0 cm
- Patties/Tarballs: 0 bags
- Nearshore Sheen?
  - BR
  - RW
  - SL
  - TL

**Subsurface Oil:**

**Pit No.**
- Subsurface Oil Character
- Oiled Layer

**Below Oil/Film Color:**
- Impact Zones:
  - TV
  - VI
  - UF

**Surface Subsurface Sediments:**

**Notes:**
- No pits were excavated due to the nature of the shore zone.
- Only some very light staining was observed in the H272 among the rock face.
- No oil was observed underneath the cobble.
- Shore zone consists mostly of vertical rock face w/ a small pocket of beach at the southern end of the segment.

**Reviewed:** 4/23/90
scale

100 m

Legend

/// - very rock cliff
- Large Boulder
- trees

Note:

Very rock cliff with some Large Boulders and 1m x 10m ST/S in the HITZ on the rock face.

Low angle O/C Beach
1m x 10m ST/S staining in the HITZ.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST, Subdivision A (1 or 1), Date (mm/dd/yy) 4/20/90

**Time (24 hr) 1812**, Biologist **KATHLEEN CONLAN**

(A) Substrate type and % of segments:
- Bedrock: 70%
- Boulder: 25%
- Cobble: 5%
- Pebble: 0%
- Sand: 0%
- Silt: 0%

(B) Overall % cover of biota (% of segment):
- Dense: 90%
- Moderate: 10%
- 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)
- Photographs:
  - Roll No. ______
  - Frames ______

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Wildlife Observations/General Comments:

- 3 BALD EAGLES

Ecological Considerations:
SHORELINE EVALUATION

SEGMENT ST/ EV-11  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)
711  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 uncollected biota and substrate. Bald eagle nest in adjacent segment.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: [Signature]  DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 223 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 Removal  _____ Beach Cleaner
____ Other (see comments)

COMMENTS:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

TAG COMMENTS:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

TAG APPROVAL DATE: 5/2/90

ADEC [Signature]  DATE: 6-19-80

EXXON [Signature]  DATE: 6-19-80

NOAA [Signature]  DATE: 6-19-80

USCG [Signature]  DATE: 6-19-80
Sketch Map

Scale

Legend

/// - very rock cliff
○ - large boulder
△ - trees

Vector rock cliff with some large boulders and a 1m x 1m strata in the HIZ on the rock face.

Low angle O/C Beach
1m x 1m strata staining in the HIZ.

Oil Character Length (m): AP: 0 PO: 0 CV: 0 CT: 0 ST: 20 MS: 0 PT: 0 TB: 0 FL: 0 NO: 365
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-12

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-12 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
772 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. Stream in segment not in ADF&G anadromous catalogue (USGS Seward A-3; Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:
Wide 147 m: Medium 47 m: Narrow 71 m: V.Light 30 m: No Oil 361 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 15 cm

RECOMMENDATIONS:
X 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
X Tarmat: X Removal ___ Beach Cleaner
X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tar mat removal, 2) manual pick up of mousse and oiled pom pom, 3) bioremediation of cover and subsurface oil in areas around pit locations 1 and 2, 4) do not bioremediate around pits 4 and 5 due to the proximity to the stream unless approved by ADF&G and, 5) *Remove oiled logs if >10% coverage or burn in place if too numerous to remove. No specific time constraints identified.

TAG COMMENTS: _____________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________

TAG APPROVAL DATE: __________________
ADEC EXXON NOAA USCG
FOSC: __________ DATE: __________
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 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 (6/15 to 7/1)
3Q, 3R 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 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
7II 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.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST  EV-12  SUBDIVISION:  ___________________________  DATE  4/7/90

USCG  NAME  R. Hubbard  SIGNATURE  [Signature]

☐  NO TREATMENT RECOMMENDED  ☑  TREATMENT SUGGESTED

COMMENTS

I feel something of more cleanup be done to remove spilled oil pocket.

ADEC  NAME  J. Lynn Martin  SIGNATURE  [Signature]

☐  NO TREATMENT RECOMMENDED  ☑  TREATMENT SUGGESTED

COMMENTS

AGREE with Exxon ops recommendation for manual removal of asphalt and pooled mouse areas. Due to the size of beach I would also suggest manual removal of subsurface oil on east side of stream. Stream should also be reviewed by ADEC scat. Super tidal should be reviewed after snow melt.

LAND MANAGER  NAME  [Signature]  ☐  NO TREATMENT RECOMMENDED  ☑  TREATMENT SUGGESTED

COMMENTS

Agree with ops
### SHORELINE OILING SUMMARY

**SEGMENT:** EV-12  
**TEAM NO.:** 76  
**DATE:** 4/7/90

**EST. SUBDIVISION LENGTH:** 54.2 m  
**TIDE LEVEL:** +0.5 m  
**TIME:** 18:30  
**SURVEYED FROM:** Foot

**SURFACE OIL**

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<th>DISTRIBUTION</th>
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<td>/ / / / X</td>
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**OILED DEBRIS**

- **Logs:** X
- **Vegetation:** X
- **Trash:** X
- **Debris:** X

**DEBRIS COLLECTED**

- **TYPE:**  
- **#BAGS:**

**PAVEMENT:** H F g 10 sq. m by 3 cm

**PATTIES / TARBALLS:** 1 BAGS

**NEAR SHORE SHEEN:** NO BR RW SL TL

**SURFACE SEDIMENTS:**

- **R:** 10%  
- **B:** 20%  
- **C:** 20%  
- **P:** 10%  
- **G:** 10%  
- **S:** 5%  
- **S:** 5%  
- **M:** -%  
- **V:** -%

**OIL CATEGORY LENGTH:**

- **W:** 50 m  
- **M:** 15 m  
- **N:** 20 m  
- **VL:** 25 m  
- **NO:** 32 m

### SUBSURFACE OIL

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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED INTERVAL (cm/cm)</th>
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**COMMENTS:**

Small pocket beach with rock headland on either side and freshwater stream in center of bay. Sporadic oil seen on rock headland on east side of stream. Asphalt mats along east rocky cliff in upper/super tidal zone and on beach front to mouth of stream. A sporadic coat of oil was found across most of beach (3-10%) in mid-upper tidal zone. From pit observations, oiling is heavier on inner east side of stream. This subsurface oil appears to contact with asphalt along rocky cliffs.

**REVIEWED:**  
**DATE:** 4/11/90  
**Page 1 of 6**
SHORELINE EVALUATION

SEGMENT ST/ EV-12  SUBDIVISION A (1 OF 1) DATE 4/7/90

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 uncoiled biota and substrate. Stream in segment not in ADF&G anadromous catalogue (USGS Seward A-3; Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]  DATE: 4/25/90

OILING CATEGORIZATION:
Wide 147 m: Medium 47 m: Narrow 71 m: V.Light 30 m: No Oil 361 m
Subsurface Oil Observed: Yes X No  Maximum Depth 15 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: Wands
X Tarmat: X Removal  X Beach Cleaner
X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of mousse and oiled pom pom, 3) bioremediation of cover and subsurface oil in areas around pit locations 1 and 2, 4) do not bioremediate around pits 4 and 5 due to the proximity to the stream unless approved by ADF&G and, 5) *Remove oiled logs if >10% coverage or burn in place if too numerous to remove. No specific time constraints identified.

TAG COMMENTS: ADF&G Approves Bio in Area of Pit 4 & 5 and up to the Stream

TAG APPROVAL DATE: 4/25/90
ADEC  [Signature]  DATE: 5-4-90
EXXON  [Signature]  DATE: 5-4-90
NOAA  [Signature]  DATE: 5-4-90
USCG  [Signature]  DATE: 5-4-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ EV12  Subdivision  ---  Date (mo/day/yr)  4/7/90

Time (24 hr)  1930  off  Biologist  TONY ZAMORA

(A) Substrate type and % of segments:
- Bedrock 10
- Boulder 20
- Cobble 24
- Pebble 25
- Sand 5
- Silt 5

(B) Overall % cover of biota (% of segment):
- Dense 5
- Moderate 15
- Low 70

(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 4 OTTERS, 1 CORVARIANT
- EGGS, CASTOR UNID. IN AL, POLLIANIES EGG CASE
- LGR CLAM SHELLS, ARN, PILOCERIA IN LI

Ecological Considerations: 7/21, 7/35, 1/4/93

(WAP ON REVERSE)
CHECKLIST

- N Acre
- Approx. Scale
- Seg/Sub Entity
- Oil Dist.
- Weight
- Length
- Coverage
- Subsurface Character
- Est. HWL/TL
- SSL
- Profile Location(s)
- Pocket(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 A
- Pit - No Subsurface Oil

2 A
- Pit - Subsurface Oil

CTC
Continuous Distribution

CTB
Broken Distribution

CTP
Patchy Distribution

CTS
Splashed Distribution

Oiled Vegetation

1
- Photo location, direction, and number

Oil Character Length (m): AP 8 PO CV 105 CT ST MS 25 PT TB FL NO 332
EU-12

PHOTO LOCATIONS

N

DENSE FUCUS

CLAM HABITAT

MUSSLES

SAND/PEBBLE

BLIND ROCKS

ANAD SPRAWN
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-12 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal
Oiled Log Removal/Burning

OPEN

Bioremediation Over 100m From Stream
WORK PRIOR TO 7/25

Bioremediation Less Than 100m From Stream
PERMIT REQUIRED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream
ADFG uncataloged anadromous stream is present in Subdivision A. Subdivision is closed to bioremediation less than 100m from stream without ADFG authorization. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup, tarmat removal, and oiled log removal/burning.

1K Purse Seine
Hook-off

7HII Subsistence:
Deer Harvesting
No constraint to manual pickup, tarmat removal, and oiled log removal/burning; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance of stream bed or banks. No flushing of pollutants or sediments into stream drainage. Restrict boat and air traffic to essential minimum after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (SEGMENT EV-12)
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG ADDENDUM DATE 5/24/90
ADEC Art Weller
EXXON
NOAA
USCG
FOSG

DATE 5-34-90

Prepared by: Andrea Meyer
Date: 5/22/90
SHORELINE EVALUATION

SEGMENT ST/ EV-12 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

II 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. Stream in segment not in ADF&G anadromous catalogue (USGS Seward A-3; Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 4/28/90

OILING CATEGORIZATION:
Wide 147 m: Medium 47 m: Narrow 71 m: V.Light 30 m: No Oil 361 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:
___ No Treatment Recommended
X__ Treatment Recommended
X__ Manual Pickup
X__ Bioremediation
X__ Tarmat: X__ Removal

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

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of mouse and oiled pom pom, 3) bioremediation of cover and subsurface oil in areas around pit locations 1 and 2, 4) do not bioremediate around pits 4 and 5 due to the proximity to the stream unless approved by ADF&G and, 5) *Remove oiled logs if >10% coverage or burn in place if too numerous to remove. No specific time constraints identified.

TAG COMMENTS: ADF&G Approves Pro. in area of pits 4 & 5 and up to
TAG APPROVAL DATE: 4/25/90

ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5-4-90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-12 SUBDIVISION A

WORK WINDOW

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</tr>
<tr>
<td>Bioremediation More Than 100m From Stream</td>
<td>WORK PRIOR TO 7/25</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 uncatalogued anadromous stream is present 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, tammat removal, and oiled log removal/burning.

1K Purse Seine Hook-off  
No constraint to manual pickup, tammat removal, and oiled log removal/burning; closed to bioremediation after 7/25.

7II Subsistence: Deer Harvesting  
No constraint to manual pickup, tammat removal, and oiled log removal/burning; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage. Restrict boat and air traffic to essential minimum after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (SEGMENT EV-12) FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE 6/04/90
ADEC
EXXON
NOAA
USCG

Prepared by 6/3/90

FOSCAR
SHORELINE EVALUATION

SEGMENT ST/ EV-12 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
II 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. Stream in segment not in ADF&G anadromous catalogue (USGS Seward A-3; Rev. 12/89).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 4/25/90

OILING CATEGORIZATION:
Wide 147 m: Medium 47 m: Narrow 71 m: V.Light 30 m: No Oil 361 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:
X No Treatment Recommended X 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
X* Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of mousse and oiled pom pom, 3) bioremediation of cover and subsurface oil in areas around pit locations 1 and 2. 4) do not bioremediate around pits 4 and 5 due to the proximity to the stream unless approved by ADF&G and. 5) *Remove oiled logs if >10% coverage or burn in place if too numerous to remove. No specific time constraints identified.

TAG COMMENTS: ADF&G Approves PRO IN AREA OF PITS 4-5 AND UP TO TAG APPROVAL DATE: 4/25/90

TAG APPROVAL DATE: 4/25/90
ADEC [Signature] FOS: [Signature] DATE: 5-4-90
EXXON [Signature] NOAA [Signature]
NOAA [Signature] USCG [Signature]
SEGMENT
CH-09 B Site 1 Manual pickup of tarrets, rake and bioremediation* H.P.
Site 2 Manual pickup of tarrets, rake and bioremediation* H.P.
EL-52 B NTR
EL-55 A Manual till - mop up mobile oil with snare and bioremediation - low priority
EL-56 C Storm berm relocation (mechanical if necessary)
EL-58 C NTR - Reassessment in '91
EL-58 D Customblen application and reassessment in '91
ER-07 A Site 1 NTR
Site 2 Manual pickup of tarmat and bioremediation (low priority)
EV-05 A Limited manual pickup followed by bioremediation - Customblen (low priority)
EV-05 B Manual pickup of mousse/AP followed by bioremediation. Manual till in heaviest areas if necessary (H.P.)
EV-12 A Access and remove heaviest concentration of AP/OP/HOR manual removal followed by bioremediat
EV-26 A Manual removal of AP and bioremediat (M.P.)
EV-37 A Manual pickup of OP/HOR sediments (relocate armor to access)
EV-39 A Bioremediat
FL-01 A NTR - work done
GR-301 B Site 1 Manual pickup of mousse (H.P.)
Site 2 NTR
Site 3 NTR
GR-301 B New Site Manual pickup of mousse (H.P.)
KN-07 A Manual pickup of AP/OP/mousse and bioremediation (H.P.) both areas
KN-08 A Manual pickup followed by bioremediation (L.P.)
KN-201 A Manual removal of AP followed by bioremediation (M.P.)
KN-211 E Site 1 Manual pickup of oiled debris at stream mouth next to small pool, use chain saw as necessary to access.
Site 2 NTR
Site 3 NTR
Site 4 NTR
KN-400 A Site 1 Manual removal of accessible AP followed by rake and bioremediation (L.P.)
Site 3 NTR
KN-404 A Bioremediat and assessment in '91
KN-405 A Further TAG evaluation - bioremediat and assessment in '91
NK-02 A Manual pickup AP/mousse - bioremediation (M.P.)
PD-04 A Manual pickup of mousse patties and bioremediation, Inipol and Customblen (M.P.)
PN-01 A Manual pickup of AP and bioremediation (L.P.)

* ANADROMOUS STREAM CONSTRAINT

TAG
EXXON Andy Terz
ADEC
USCG
NOAA Bullwescott

DATED Aug 15 1990
(See attached Archaeological Constraint sheet) 8/14/90
FOSC 12 August 1990
Work with land manager in effecting above
ASAP FOLLOW-UP RECOMMENDATIONS
TAG RECOMMENDATIONS AUGUST 13, 1990
ARCHAEOLOGICAL CONSTRAINTS

EL-56C Addition of: storm berm relocation (mechanical if necessary).

SHPO  Rolf Buzget  DATE  8/6/90

ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

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

EV-12A Addition of: access and remove heaviest concentrations of AP/OP/HOR manual removal followed by bioremediation.

SHPO  Rolf Buzget  DATE  8/6/90

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).


SHPO  Rolf Buzget  DATE  8/6/90

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).


SHPO  Rolf Buzget  DATE  8/6/90

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).
1991 MAYSAP EVALUATION

SEGMENT: EV 012  SUB: A  REGION: FWS  SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Fish harvest stream, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ___________________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Manul Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other
Other

COMMENTS:

INITIAL: __________________________

TAG: __________________________

FOSC: __________________________

TAG APPROVAL DATE: ____________  FOSC APPROVAL DATE: ____________

ADEC__________________________ FOSC __________________________

EXXON__________________________

USCG__________________________

NOAA__________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
Treatment Recommended

Anadromous Fish Stream, Commercial Tourism

The areas in need of treatment at this site are A & C, the heavier contaminated sediments being located in C. Located in a somewhat protected area of the beach, the oil is still in a liquid state and slopes generally down towards the stream. Approximately 50% of the sorb was removed. The remaining heavily oiled sediments should be manually removed & lighter oiled sediments filled.

□ NTR

Oil conditions on this subdivision have improved significantly this year. 1990 treatment and weathering have had an effect.

Vegetated surface oiling conditions through collection and dispersing the surface. Low concentrations in small oiled & areas warrant no further treatment. Areas of AP that previously existed have been reduced to resolve. This medium energy zone exhibits healthy flora throughout the beach face.

□ NTR

Observed oil in test pits along side of stream and shore line. Also a lot of tar balls was noticed in the heavier rocks. Oily debris on storm beam should be picked up manually (at the mouth of stream). It is my recommendation that this area be more thoroughly cleaned-up.

□ NTR

Small patches of remaining asphalt in the upper intertidal were picked up, leaving some surface oil residue that should weather fine naturally. No oil was found near the anadromous stream.
## May Sap Shoreline Oil Spill Survey

**Team No.**:
- OG: B. L. Little
- BIO: Tom Schreiber
- ADEC: Tom Crow / John Snow
- USCG/NOAA: CWO Spurr / Rebecca Hoff

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

**Time:** 07:45 to 08:45

**Tide Level:** 3.5 ft. to 1 ft.

**Energy Level:**
- H
- L

**Surveyed From:**
- Sun
- Clouds
- FOG
- Rain
- Snow

**Total Length Shoreline Surveyed:** 66.7 m

**Near Shore Sheen:**
- BR
- RB
- SL
- X: None

**Est. Oil Category Length:**
- W: m
- M: m
- N: 6 m
- V: 21 m
- L: 4 m
- US: m

### Oil Spill Survey Table

<table>
<thead>
<tr>
<th>Pit No</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oil Spill Zone</th>
<th>Clean Below</th>
<th>H2O Level</th>
<th>Sheen Color</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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<td>7</td>
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<tr>
<td>8</td>
<td>25</td>
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<td></td>
<td>Y</td>
<td>N</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sheen Color:**
- B = Brown
- R = Rainbow
- S = Silver
- N = None

**OG Comments:**

Surface oil detailed on map was almost all treated during the survey—typically AP was reduced to SOR or less. Only in location B on the eastern point was there a very small patch which was not picked up.

No subsurface oil was observed in B logged pits and numerous shallow "scrapes."
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
SEGMENT E 0 - 012
SUBDIVISION A
SEA STATE 1-2 ft. chop
TIDAL HEIGHT (Range) +4 3/4 ft & +1 ft
PHOTOGRAPHS: ROLL #

DATE 5/2/91
BIOLOGIST T.R. Schroeder
WIND SPEED/DIRECTION E - 15 mph

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A, C & D) = Intertidal area around and below these areas were very clean and unpolluted.thag sand/wate
self probably is in continual shifting mode
during eady, major, weather/strides.

(B) = Extreme western end of this section has a very
rich flax growth off fines herb and aquatic
algae. Barnacles were found, small quadruped
animals are abundant in this area. Large
more stable rocks and protecting reefs are
providing an excellent shelter for numerous
animals.

In general this beach is one of the best producing
subdivisions to date. This might not be due to the
suitable composed of stable fine Silva beach sand
that does not provide a stable environment.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
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<td>12 sea lions</td>
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<td>Seabirds</td>
<td></td>
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<td>7</td>
<td>2 cock plovers</td>
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<td>Waterfowl</td>
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</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td></td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
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</tr>
<tr>
<td>Corvus</td>
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<tr>
<td>Other Birds</td>
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<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<td>Pinnipeds(specify)</td>
<td>(deadr)</td>
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<tr>
<td>Mars(specify)</td>
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LAND MAMMALS

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<tr>
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<th># OBSERVED</th>
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<tbody>
<tr>
<td></td>
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</table>

Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: EV 012  SUB: A  REGION: PWS  SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details)_Fish harvest stream, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: Ronald A. Dee  Date: 5/17/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC
N  N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Custombleen Only
Bio-Inpol/Custombleen
Other
Other

COMMENTS:

INITIAL:

TAG:

FOSC:


ADEC  EXXON  USCG  NOAA

E. E. Page, CDR, USCG CHIEF OF STAFF, FOSC

The state will evaluate the need for further treatment.
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
Treatment Recommended  Anadromous Fish Stream, Commercial Tourism
The areas in need of treatment at this site are A & C, the heavier contaminated sediment
being located in C. Located in a somewhat protected area of the beach, the oil is still
in a liquid state. Slopes generally down towards the stream. Approximately 50%
of the sorch was removed. The remaining heavily oiled sediments
should be manually removed & lighter oily sediments filled.

Oiling conditions on this subdivision have improved significantly
This year, 1990 treatment and weathering have had an effect.
Vegetated surface oiling conditions through collection and dispersing
the surface. Low concentrations in small oily stock areas warrant
no further treatment. Areas of AP that previously existed have been
reduced to resolve. This medium energy zone exhibits healthy sea
throughout the beach face.

Observed oil in test pits along side of stream and
shore line. Also a lot of tar balls was noticed in the
heavier rocks. Oily debris on storm beach should be picked
up manually (at the mouth of stream). It is my recommendation
that this area be more thoroughly cleaned up.

Small patches of remaining asphalt in the upper intertidal were picked
up, leaving some surface oil residue that should weather fire
naturally. No oil was found near the anadromous stream.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 6

**OG** 6.1 - LITTLE

**ADEC**  TOM CROWE/ROBERT BEYERMAN

**OXON** RANDY ROYER

**BIO** TOM SCHROEDER

**LANDMANAGER** CHARLES SELKONOFF for CVC

**USCG/NOAA** CWO SPURR/REBECCA HOFF

**DATE** 05/02/1991

**TIME** 07:45 to 08:45

**TIDE LEVEL** 3.5 ft to 1 ft

**ENERGY LEVEL** □ H □ M □ L

**SURVEYED FROM:** ❌ FOOT □ BOAT □ HELO

**WEATHER:** □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 667 m

**NEAR SHORE SHEEN:** □ BR □ RB □ SL □ NONE

**EST. OIL CATEGORY LENGTH:** W___m M___m N 6__m V__21m NO 64__m US___m

### SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>BC PG M 1 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>BC PG M 0.1 0.1</td>
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<tr>
<td>C</td>
<td>CP L 0.1 0.5</td>
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</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**NOTES**
- Pu leaving (L) SOR
- Pu leaving (H) SOR
- Pu

### DISTRIBUTION:
- C = 91-100%
- B = 61-90%
- P = 11-60%
- S = 1-10%
- T = <1%

### SLOPE:
- V = VERTICAL
- H = HIGH ANGLE
- M = MEDIUM ANGLE
- L = LOW ANGLE

### PHOTO ROLL: MAYSAP-6-05 FRAMES 1-4

### SURFACE-SUBSURFACE SEDIMENTS

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
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<tbody>
<tr>
<td>1</td>
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<td>N</td>
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<tr>
<td>8</td>
<td></td>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SHEEN COLOR:**
- B = BROWN
- R = RAINBOW
- S = SILVER
- N = NONE

### OG COMMENTS:

Surface oil detailed on map was almost all treated during the survey—typically AP was reduced to SOR or less. Only in location B on the eastern point was there a very small patch which was not picked up.

No subsurface oil was observed in 8 logged pits and numerous shallow "scapes"
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6
SEGMENT #: E 0 - 012
SUBDIVISION A
SEA STATE 1-2 ft. chop
PHOTOGRAPHS: ROLL # FRAME #

TIDAL HEIGHT (Range) +4' 6" B +1' 4"
BIOLOGIST T.K. Schroeder
WIND SPEED/DIRECTION E - 15 mph

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A, C + D) = Habitat area above and below these areas very clean and unproductive black sand/tide
debris probably it is in continual shifting mode
during rough major storms.

(B) = Extensive eastern end of this section has a very
thick lush growth of trees, kelp, and eelgrass
algae. Barnacles, sand gapers, small and small
shrimps are abundant in this area. Large,
more stable rocks and protective reef shelf providing an excellent habitat for numerous
animals.

In general, this beach is one of the least productive
areas surveyed to date. This likely due to the
substrate consisting of shellfish, fine black sand
that does not provide a stable environment.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>SPECIES OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td>12 Seal Finns</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td>7</td>
<td>3-rock clams</td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
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<tr>
<td>Other Birds</td>
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<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
<th>SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>1 dead</td>
<td>Lots of deer tracks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

REVIEWED: TWC 5/19/91
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-12  STREAM NO: UNCATALOGUED  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)
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]  DATE: 5/8/90
Subsurface Oil Observed: Yes X  No  Maximum Depth 10 cm

RECOMMENDATIONS:
X  No Treatment Recommended
X  Treatment Recommended
X  Manual Pickup
X  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 pickup of tar patties and debris, 2) bioremediation of areas of surface and subsurface oil shown on attached sketch map. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: In area indicated on sketch: Manual skimming surface material to expose subsurface mousse. Manually remove mousse in this area. Follow up with bioremediation.

TAG APPROVAL DATE: 5/1/90
ADEC  [Signature]  DATE: 5/15/90
EXXON  [Signature]  DATE: 5/15/90
NOAA  [Signature]  DATE: 5/15/90
USCG  [Signature]  DATE: 5/15/90
Recommendations: Manual removal of surface tar mats. Manually remove blurred mousse lens (remove only oiler lens, not clean overburden).

I agree with recommendations.

L. B. Ewing
ANADROMOUS FISH STREAM EVALUATION ADDENDUM
CONSTRAINTS FOR STREAM NO. UNCATALOGUED
SEGMENT EV-12 SUBDIVISION A

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation and Manual Raking</td>
<td>WORK PRIOR TO 7/10</td>
</tr>
<tr>
<td>Less Than 100m From Stream</td>
<td>(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

An ADF&G uncatalogued anadromous stream 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.

1K  Purse Seine Area

Closed to bioremediation and manual raking after 7/25. No constraint to manual pickup.

7II  Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow in-pool 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 7/20. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-12A FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date 6/14/90

Prepared by

Date 6/14/90
ECOLOGY MAP
SEGMENT EV-12
SUBDIVISION A (___ of ___)

EXxon Company, USA
Map Key: PNG-EV-12
June 04, 1990

Seabird Colony
Active Eagle Nest
Inactive Eagle Nest

ANADROMOUS STREAM
EVALUATION

WORK AREA
UNCATALOGED STREAM
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: EV-12
STREAM NO: UNCATALOGUED
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-12  STREAM NO: UNCATALOGUED  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)
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:_________________________ DATE:_________________________

Subsurface Oil Observed: Yes X  No____  Maximum Depth 10 cm

RECOMMENDATIONS:
_____No Treatment Recommended  _____Snare/Absorbent Booms
_____Manual Pickup  _____Oil Snare (pom poms)
X  Manual Pickup  _____Absorbents (pads, rolls, etc)
X  Bioremediation  _____Spot Washing: _____Wands
_____Tarmat Removal  _____Beach Cleaner
_____Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of tar patties and debris, 2) bioremediation of areas of surface and subsurface oil shown on attached sketch map. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:


TAG APPROVAL DATE:__________
ADEC ______________________  FOSC:__________ DATE:__________
EXXON ______________________
NOAA ______________________
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 bioremediation or other chemical application within 100m of stream without authorization from ADF&G. All use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or injection application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and 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 (4/21 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or injection 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

Ester 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 injection 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 and/or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
PWS Aquaculture Association John McMillan or Bruce Suzumoto 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 (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 injection 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

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 injection 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 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 injection 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
USFWS Don Calkins 267-2403

Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 500m. 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 coocentration (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

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

7Z Subsistence area: Salmon harvest (5/1 to 8/30)
Finfish harvesting (9/15 to 2/28)

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 injection 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  EV 012  SUBDIVISION: NO ASCII  DATE 4/22/90

USCG NAME: J. MAES  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS:
1. MANUAL CLEAN-UP: Removal the balls + asphalt.
2. Bioremediation of left beam (coating on shore)

ADEK NAME: M. WIEDEMANN  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS: Bioremediation not suggested.

LAND MANAGER
NAME: [Name]  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
**SHORELINE OILING SUMMARY (ANAD.) 19/55**

**DATE:** 7-2-1990

**LOCATION:** Exxon CMD Cordova

**TEAM:** 15

**TIDE LEVEL:** Z.F.

**EST. SUBDIVISION LENGTH:** 60 m

**UPLANDS DESCRIPTION:** Grass, Forest, Rock

**SURVEYED FROM:** Foot, Boat, Helo

**SURFACE SEDIMENTS:**
- 8% Soil
- 25% Gravel
- 25% Sand
- 18% Mud
- 5% V mixed

**SLOPE:** 90% Lang, 10% Hang, 0% Ven

**WAVE EXPOSURE:**
- Low
- Med
- High

**OIL CATEGORY LENGTH:**
- W: 0 m
- M: 0 m
- N: 50 m
- V: 0 m

**PAVEMENT:**
- H: 0
- F: 0
- S: 0

**NEAR SHORE SHEEN?** No

**OILED INTERVAL < 5 cm:** Pit S does not constitute subsurface oil

### SURFACE OIL

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

### PAVEMENT

- H: 0
- F: 0
- S: 0

### OILED DEBRIS

- Logs
- Vegetation
- Trash
- Debris

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)</th>
<th>Subsurface Oil Character</th>
<th>Below</th>
<th>Oil/Film Color</th>
<th>Pit Zone</th>
<th>ANA</th>
<th>Sediment</th>
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<tr>
<td>1</td>
<td>35</td>
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<td>5-10</td>
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<td>P/IG/C</td>
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<td>P/IG</td>
</tr>
</tbody>
</table>

**COMMENTS**

**REVIEWED:** [Signature] DATE: 4-26-96
SKETCH MAP

CHECKLIST

1. Areas
   a. Approx. Size
   b. Map Scale
   c. Unit
   d. Width
   e. Length
   f. Cover
   g. Habitat Character
   h. Est. HIRL=""W""
   i. B. B.
   j. Profile Location(s)
   k. Profile(s)
   l. Plot Location(s)
   m. Photo Location(s)

LEGEND

1. A
   a. P1 - No Subsurface Oil

2. A
   a. P1 - Subsurface Oil

- C/F
   a. C/F One-Way Distribution
   b. C/F Other Distribution

- S
   a. S Pathway Distribution
   b. S Spillway Distribution

- E
   a. Other Vegetation

- N
   a. Photo location, direction, and number

Oil Character Length (m): AP PO CV OT ST NS PT TB FL NO
APR-23-1990 18:58 FROM EXXON CMD CORDOVA TO SCAT TEAM P.16

17/55

ADPEC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: DE M C T A VS HQM FTA

METHOD: Aerial Ground Boat

3 DATE: 4/22/90

10 HIGH TIDE TIMES: 1205 - 21 TEAM RECORDER: M. WISEMAN

4 START TIME: 1645

11 HIGH TIDE HT: 10:01 - 22 OBSERVERS: J. CROWE

5 STOP TIME: 1710

12 LOW TIDE TIMES: 0609 1814

13 AGENCY: ADPE

8 SEGMENT #: EV-012

24 PHOTOS TAKEN: Y

7 STATION #: EV-012A

25 VIDEO TAKEN: Y

14 DESCRIPTION: (مسجد) 

26 TAPE: 

8 K-UNIT:______

27 VIDEO TAKEN: ______

9 STAT AREA:__________

28 VIDEO TAKEN: ______

10 LAT:_________

29 SAMPLES TAKEN: Y

11 LONG:_________

30 SAMPLES TAKEN: Y

12 SOURCE: KAP Lorem

31 SAMPLING: _______

13 LOCATION: NORTHWEST END, LASTER EVANS K.

32 SAMPLING: _______

14 DESCRIPTION: _______

33 SAMPLING: _______

EXTENT OF OIL

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
</tr>
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<tbody>
<tr>
<td>L</td>
<td>Y</td>
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<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>100</td>
<td>75</td>
</tr>
</tbody>
</table>

27 SURFACE COVERAGE

28 SURFACE THICKNESS

PEG: 5mm 5mm 0mm 000

29 PENETRATION

PEG: 5cm 5cm 10cm 000

30 OVERALL OIL IMPACT

31 OIL TYPES: Pooled Masses Tar Asphalt Sticky Stain

32 OILED DEBRIS

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Core

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock Boulder Cobble 25

36 SUBSTRATE TYPE: 50 Sand 25 Mud/allite

SHORELINES: PREDOMINANTLY FINE-GRANULED SUBSTRATION LOW EXPOSURE BEACH, TAR MATS 20m x 2m N.W. OF STREAM.

BURNED HOUSE: LEADS (5-15 cm below surface) 6-10 cm THICK

600 STREAM (25m x 1m). TAR MATS IN SMALL GROVE.
RECOMMENDATIONS: MANUAL REMOVAL OF SURFACE TARP MATS. MANUALLY REMOVE OILED HOLLOW LENS (REMOVE ONLY OILED LENS, NOT CLEAN OVERBURDEN).

Agree with recommendations. MK Farris

OIL DISTRIBUTION DIAGRAM

TAR MAT TO 10 CM

Stream Delta

Mousseiran
Segment EU 012

no stream number

Ecological Summary

This small stream enters via a biologically barren boulder/cobble/pebble/gravel beach in a small cove. More stable sediments and boulders on either end of cove have healthy community of Fucus, barnacles, mussels, etc. Two or three harbor seals were hauled out on rocky point at east end of cove when we arrived. One sea otter and a pair of red-breasted mergansers were also seen.

No ecological constraints re: cleanup procedures
REGION: PRINCE WILLIAM SOUND
SEGMENT: ST/EV-014
SUBDIVISIONS: A (1 OF 1)
SEGMENT ST/ EV-014 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream mouth no. (226-40 #16640)
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 nest (3/1 to 6/1) - Active eagle nest (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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ____________________ DATE: ____________________

OILING CATEGORIZATION:
Wide 0 m: Medium 98 m: Narrow 48 m: V.Light 39 m: No Oil 591 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Bioremediation of area shown on attached sketch map, 2) Removal of tarmat along stream (see map) and, 3) Manual pick up of oiled vegetation. Treatment activities should be conducted 5/15 to 7/10 based on above anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: __________
ADEC ___________________________ FOSC: __________ DATE: __________
EXXON __________________________
NOAA __________________________
USCG __________________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 5V-14  SUBDIVISION:  DATE 4-6-90

USCG  NAME: Randal Hubbard  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

1. Area appears to be fairly free of oil damage, maybe in small spot where oil stain occurred I believe natural environment will decay most substance remaining.

ADEC  NAME: J. Lynn Martin  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Agree with Exxon ops. recommendation to only use manual cleanup techniques around stream bed to remove tarmats and oil coated grass.
No treatment recommended for light bands of oil found in supertidal Neer to be cooked at after snow melt.

LAND MANAGER  NAME: [signature]  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Because oil was found so far up the stream, I would recommend the supertidal zone be removed and overwacht.
If oil is found, I would reconsider my recommendation decision.

It is a sensitive salmon creek.
**SHORELINE OILING SUMMARY**

**OG Reiner** USCG Hubbard  
**BIO Zamos** LAND REP Selanoff  
**EXXON Garcia** ADEC Martin  
TIME  17:17 to 18:25  
DATE  4/6/90

SEGMENT ST / EV-14

TEAM NO.: 16  
TIDE LEVEL: +1 to +2.5

EST. SUBDIVISION LENGTH: 2.62 m  
UPLANDS DESCRIPTION: Grass  
SURVEYED FROM: Foot  
SURFACE SEDIMENTS: R 30 % B 20 % C 10 % P 20 % G 15 % M 5 % V 5 %

SLOPE: Long 30 % Hang 20 % Vert 20 %

OIL CATEGORY LENGTH: W 0 m  
MAX m  
N 0 m  
V 0 m  
NO 192 m

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
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**PAVEMENT:** H  
**PATTIES/TARBALLS:** 0  
**NEAR SHORE SHEEN?:** NO

**OILED DEBRIS:** AMOUNT

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**Photographs:**

- Roll No: 5T-16-5  
- Frames: 32-36

**SUBSURFACE OIL**

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<th>OILED INTERVAL (cm-cm)</th>
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**COMMENTS:**

Pocket beach with rocky headlands on either side, wide tidal flat or stream mouth. Broken oil cover under and around boulders and rock in the east and west side of segment along 012. Small (1x3m x 1cm) pavement patch in 012 along east side of stream, oiled grass along sides of stream in the beachfront. No oil was found on the tidal flats. Super-tidal currents with energy.
## 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-cm)</th>
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### Comments

REVIEWED: [Signature]  DATE: 4/9/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST-14 Subdivision __________________ Date (mo/day/yr) 4/16/90

Time (24 hr) 1825 Off Biologist TONY ZAMORA

(A) Substrate type and % of segments:
   (1) Bedrock 10 (2) Boulder 20 (3) Cobble 20 (4) Pebble 25 (5) Sand 15 (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 Observations/ General Comments:

- **BEDROCK OVERALL ALGA COVERING IS DENSE, FUCUS ~50% WITH PALMARIA, FIL. GRN. (FLUORESCENT GREEN ALGA)**
- **BIOTA DENSE ONLY ON ROCKY POINTS BORDERING SAND/PEBBLE BEACH**
- **LITTLE GREEN ON BEACH EXCEPT FOR LIMPET DISTRIBUTED THROUGHOUT IN WOOD AND BARNACLES ON U. PEBBLE.**
- **30% MORTALITY OBSERVED OF OIL COATED BARNACLES**
- **UNDER COBBLE IN LOW ZONE: LIMpets, URCHIN, ACARIIDS, BRYOANS, GI SPiROSTIDS, GLICIOCHITAE, NEUMANTHAE, AMPHIPODS**

**WILDLIFE:** SEA LION.

**ECOLOGICAL CONSIDERATION:** [A] [B]: 75 [C]:
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)

Esther 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 unCLOSEd 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 - (4/4 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 2/28)

Invertebrate harvesting

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

SEGMENT ST/ EV-014  SUBDIVISION A (1 OF 1) DATE  4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream mouth no. (226-40 #16640)
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 nest (3/1 to 6/1) - Active eagle nest (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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:  \[Signature\]  DATE:  4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 98 m: Narrow 48 m: V.Light 39 m: No Oil 591 m
Subsurface Oil Observed:  Yes   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: The recommended treatment activities are as follows: 1) Bioremediation of area shown on attached sketch map, 2) Removal of tarmat along stream (see map) and, 3) Manual pick up of oiled vegetation. Treatment activities should be conducted 5/15 to 7/10 based on above anadromous stream constraints.

TAG COMMENTS:
AT TIME OF TREATMENT MONITORS TO ASSESS SUITZ.

TAG APPROVAL DATE:  4/17/90

ADEC  ______________  DATE:  5/1-90
EXXON  ______________  FOSSC:  ______________
NOAA  ______________  ______________
USCG  ______________  ______________

\[Signature\]  ______________  ______________
1991 MAYSAP EVALUATION

SEGMENT: EV 014 SUB: A REGION: PWS SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Fish harvest area, Anadromous stream, Subsistence - Deer harvesting

ARCHEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: __________________________ Date: __________________________

RECOMMENDATIONS:

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<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
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Manual Pickup (Check as Req.) _______ _______ _______
Spot Washing _______ _______ _______
Bio-Customblen Only _______ _______ _______
Bio-Inipol/Customblen _______ _______ _______
Other___________________________ _______ _______
Other___________________________ _______ _______

COMMENTS:

INITIAL: ____________________________________________

____________________________________________________

TAG: ________________________________________________

____________________________________________________

FOSC: ______________________________________________

____________________________________________________

TAG APPROVAL DATE: __________ FOSC APPROVAL DATE: __________

ADEC________________________ FOSC________________________

EXXON______________________

USCG_______________________

NOAA______________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC/ADFF&G
NAME Aimee Weseman
SIGNATURE Aimee Weseman

☐ NTR  Treatment Recommended
Anadromous Fish Stream, Commercial Tidewaters
The problem oiled area on this site is located 10m from the stream channel. Site B-4 contains HSOR sediment. Though 2 bags of oily material were removed during the survey, enough remains to pose a threat to both salmon eggs and fry should the oil migrate to the stream or the stream wander into the oil. Recommended treatment is the manual removal of HSOR sediments followed by thorough manual tilling.

EXXON
NAME Randall K. Boyer
SIGNATURE Randall K. Boyer

☒ NTR  Areas of AP (between large boulders) and highest concentrations of surface residual oiling were addressed by the Vego Pick-up Crew. Refer to the OS sketch, Area B, highest concentrations of residual oiling and AP were collected. The remainder of the oiling in Area B was disrupted by tilling (mainly) the minor oiling that remains would not achieve any environmental or economic benefit to retreat. Re-treat tracts were noted on the subdivision and fence line was active.

NDMANAGER
NAME Charles Selanoff, Of Chenega Bay
SIGNATURE Charles Selanoff

☐ NTR  Due to the oiling near the stream, it poses a threat to the salmon eggs and fry. This area should be worked over manually and mechanically. More emphasis on other team members should be more positive. Treatment is recommended.

USCG/NOAA
NAME Eno K. Snow / Rebecca Hoffman
SIGNATURE Eno K. Snow / Rebecca Hoffman

☐ NTR  One small problem area remains at this site with surface and some subsurface oil (Area B). This area could potentially impact the anadromous stream, though most toxic components in the oil have likely weathered by now, and this risk is low. If deemed necessary, area B could be turned over manually to promote degradation of the subsurface oil. No other areas in the segment indicate a need for further treatment.
**SHORELINE OILING SUMMARY**

**TEAM NO.**: P

**OG**: D. L. Little

**BIO**: Tom Schweder

**ADEC**: Tom Crowe

**LANDMANAGER**: Charles Selanoff

**USCG/NOAA**: WO Sparke, Rebecca Hoff

**TIME**: 09:10 to 10:15

**TIDE LEVEL**: 0 ft. to -0.5 ft.

**ENERGY LEVEL**: □ H □ M □ L

**SURVEYED FROM**: □ FOOT □ BOAT □ HELO

**WEATHER**: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

**TOTAL LENGTH SHORELINE SURVEYED**: 777 m

**NEAR SHORE SHEEN**: □ BR □ RB □ SL □ NONE

**EST. OIL CATEGORY LENGTH**: W ___ m M ___ m N 10 m V ___ m

**SURFACE OIL CHARACTER**

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**NOTES**

- A - Debris in water
- B - Heavy SOR, Pu < 50%
- C - Sparse needles
- D - (H) Sor remaining
- E - Tar splash

**DISTRIBUTION**: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

**SLOPE**: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSP**: 6 - 05 FRAMES 5-K

**PIT NO.**

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<th>SUBSURFACE OIL CHARACTER</th>
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<td></td>
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<td>N</td>
<td>X</td>
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<td>Y</td>
<td>R</td>
<td>X</td>
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<tr>
<td>4</td>
<td>20</td>
<td></td>
<td>0-10</td>
<td>Y</td>
<td>15 N</td>
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<td>Y</td>
<td>N</td>
<td>X</td>
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</tr>
</tbody>
</table>

**SHEEN COLOR**: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

**OG COMMENTS**:

Surface oil was restricted to three locations, one of which was completely picked up (A), two of which were not reconnable, but extremely minor (C and E) and the remaining two which were manually retrieved. Location B was probably less than half retrieved. However, the heavy SOR still visible at the surface. Location D consisted of AP which when retrieved had (H) SOR deposits.

Subsurface oil was found at (and around) one logged pit (#3) and was <10 cm in depth and about 12 m² in area.

**REVISED**: 5/8/91

**BIOGRAPHY**: Robert J. H.
TEAM #: 6
SEGMENT #: EU-014
SUBDIVISION: 4
SEA STATE: 1-2 foot chop
PHOTOGRAPHS: ROLL #
DATE: 5/2/91
TIDAL HEIGHT (Range): +3 7/8 - 3 1/2 ft
BIOLOGIST: T. R. Schroeder
WIND SPEED/DIRECTION: E - 10-15 mph

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):

Bank is composed of dark shale and fine sand. Area is quite unproductive throughout the majority of the beach due to the unstable surface. This is further evidenced by the seaweed on the beach.

Only two areas contain productive biological communities. One is in the large beach on the western point of the subdivision and the second is the rush grass growth on the eastern portion of the subdivision. Oil present in B does not appear to be affecting vegetation or animals in this area.

Oil present in B is located in a non-productive portion of the beach. Site below the location is also not productive. A portion of B has been classified as subsurface (non). No actual communities would be affected by any treatment procedure or method decided upon.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>3</td>
<td>1 - Rock Blenny</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>3</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>1</td>
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MARINE MAMMALS

<table>
<thead>
<tr>
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<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td>Deer tracks &amp; droppings</td>
</tr>
<tr>
<td>Seals(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Anadromous Stream

Turbidity:
- 0.5 x 20 m
- 0.1 x 0.1
- 0.1 x 0.1
- 0.01 x 0.01

Water Quality:
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m

Rock Outcrops:
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m

Swash Bemrs:
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m

Mussel Growth:
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m

Reef and Spawning:
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m

Dense Forests and Spawning Growth:
- 1.0 x 2.0 m
- 1.0 x 2.0 m
- 1.0 x 2.0 m
1991 MAYSAP EVALUATION

SEGMENT: EV 014  SUB: A  REGION: PWS  SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details)  Fish harvest area, Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Field Date: 5/17/91

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Manual Pickup (Check as Req.)
Spot Washing
Bio-Custombien Only
Bio-Inpol/Custombien
Other Manual Till
Other

COMMENTS:

INITIAL:

TAG: MANUAL PICKUP OF HSB R AT LOCATIONS B + O
Rake/Till AREA OF PIT #3

FOSC:

TAG APPROVAL DATE: MAY 17 1991  FOSC APPROVAL DATE: 5/17/91

ADEC
EXXON
USCG
NOAA

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bio remediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
**ADEC/ AOS 46**

**NAME** Aimee Weseman  
**SIGNATURE** Aimee Weseman

- **NTR**  
  Treatment Recommended
  
  *Anadromous Fish Stream, Commercial Tuition*
  
  The problem oiled area on this site is located 10m from the stream channel. Site B, if contains HSOR + MOR sediments. Though 2 bags of oily material were removed during the survey, enough remains to pose a threat to both salmon eggs and fry should the oil migrate to the stream or the stream wander into the oil. Recommended treatment is the manual removal of HSOR sediments followed by a thorough manual tilling.

---

**EXXON**

**NAME** Randall K. Boyer  
**SIGNATURE** Randall K. Boyer

- **NTR**  
  *Areas of AP (between large boulders) and highest concentrations of surface residual oiling were addressed by the Veeco Pickup Crew. Referring to the OG sketch, area B, highest concentrations of residual oiling and AP were collected. The remainder of the oiling in area B was disrupted by tilling (manual). The minor oiling that remains would not achieve any environment or economic benefit to retreat. Deer tracts were noted on the subdivision and Fucus beds were prolific.*

---

**LANDMANAGER**

**NAME** Charles Selanoff  
**SIGNATURE** Charles Selanoff

- **NTR**  
  *Due to the sifting near the stream, it poses a threat to the salmon eggs and fry. This area should be worked over manually and mechanically. More emphasis on other team members should be more positive. Treatment is recommended.*

---

**USCG/NOAA**

**NAME** Judy Spark  
**SIGNATURE** Rebecca Hoff

- **NTR**  
  *One small problem area remains at this site with surface + some subsurface oil (Area B). This area could potentially impact the anadromous stream, though most toxic components in the oil have likely weathered by now, and this risk is low. If deemed necessary, area B could be turned over manually to promote degradation of the subsurface oil. No other areas in the segment indicate a need for further treatment.*
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 6  
**OG** D. L. LITTLE  
**ADEC** Tom Cunliffe / Myron Wessman  
**BIO** Tom Schroeder  
**LANDMANAGER** Charles Selinoff  
**USCG/NOAA** C. O. Smith / Rebecca Hoff  
**TIME** 09:10 to 10:15  
**TIDE LEVEL** 0.0 ft. to -0.5 ft.  
**ENERGY LEVEL** H M L  
**SURVEYED FROM:** FOOT  
**WEATHER:** SUN CLOUDS FOG RAIN SNOW  
**SURVEYED FROM**: FOOT  
**TOTAL LENGTH SHORELINE SURVEYED:** 777 m  
**NEAR SHORE SHEEN:** BR RB SL N  
**EST. OIL CATEGORY LENGTH:** W m M m N 10 m V m  

**L**  
**LOC**  
**SLOPE**  
**AREA**  
**ZONE**  
**NOTES**

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>T</td>
<td>Veg. 9 M</td>
<td>O-1</td>
<td>0.1</td>
<td>X</td>
<td></td>
<td>on debris in surf</td>
</tr>
<tr>
<td>B</td>
<td>S</td>
<td>P C M</td>
<td>2</td>
<td>4</td>
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<td></td>
<td>Heavy SOR, R &lt; 50%</td>
</tr>
<tr>
<td>C</td>
<td>T</td>
<td>R B C H</td>
<td>0.5</td>
<td>20</td>
<td>X</td>
<td></td>
<td>Space needles</td>
</tr>
<tr>
<td>D</td>
<td>S</td>
<td>B C P M</td>
<td>2</td>
<td>10</td>
<td>X</td>
<td></td>
<td>R - H/SOR remaining</td>
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<tr>
<td>E</td>
<td>T</td>
<td>Rock M</td>
<td>0.1</td>
<td>0.1</td>
<td>X</td>
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<td>Tar splash</td>
</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 91-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%  
**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE  
**PHOTO ROLL # MAYSAP- 6-05 FRAMES 5-8**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE cm-cm</th>
<th>CLEAN BENELOW cm</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
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<td></td>
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<tr>
<td>2</td>
<td>35</td>
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<tr>
<td>3</td>
<td>20</td>
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<td>0-10 Y - N</td>
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<tr>
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<td>- Y - N</td>
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<td></td>
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<tr>
<td>5</td>
<td>25</td>
<td></td>
<td>- Y - N</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td></td>
<td>- Y - N</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>30</td>
<td></td>
<td>- Y - N</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**SHEEN COLOR:** B = BROWN; R = RAINBOW; S = SILVER; N = NONE

**OG COMMENTS:**

Surface oil was restricted to three locations, one of which was completely picked up (A), two of which were not recoverable, but extremely minor (C and E) and the remaining two which were manually removed. Location B was probably less than half removed, however, the heavy SOR still visible at the surface. Location D consisted of AP which when removed left a thin SOR deposit. Surface oil was found at (and around) one logged pit (4#3) and was <10 cm in depth and about 12 m² in area.

**REVIEWED:** 5/17/91

**REVISED:** 5/18/91
TEAM # 6  DATE 5/2/91
SEGMENT EU-014  TIDAL HEIGHT (Range) 34-30 feet
SUBDIVISION A  BIOLOGIST T.R. Schroeder
SEA STATE 1-2 foot chop  WIND SPEED/DIRECTION E - 10-15 mph
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

Beach is composed of clean shale and fine sand. This area is quite productive throughout majority of the beach, due to the unstable surface. This is further evidenced by the beach terns in the area.

Only two areas contain productive biological communities, one in the large pocket on the eastern point of the subdivision, and the second in the heaviest growth on the center portion of the subdivision. Oil present in (B) does not appear to be affecting vegetation or animals in the area.

Oil present in (B) is located in a non-productive portion of the beach. Due to the location of the oil, it has not been classified as subject to (A) or (B). No biological communities would be affected by any treatment procedures or methods decided upon.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>SPECIES PRESENT</th>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>3</td>
<td>1 - Rock Blenev</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Waterfowl</td>
<td>3</td>
<td>4.6</td>
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<tr>
<td>Gulls/kittiwakes</td>
<td>1</td>
<td>5</td>
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<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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</tr>
<tr>
<td>Other Birds</td>
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<td>3</td>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
<th>LAND MAMMALS</th>
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<tbody>
<tr>
<td>Sea Otters</td>
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<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td>Deer Tracks &amp; Droppings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mes(specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Rocks and uplands vegetation: Clay, boulders, but not thick, ferns are abundant. Lithic
knolls, and egg mussels present. Small mussel growth.

- Dense forest and shrubbery growth. Mussel growth good on bank sides of roads, with
  corals, littorina snails and termites crabs abundant.

1. AP 2.410
2. SU - 10%
3. Rock outcropping
4. T Spank 21%
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-14 STREAM NO: 226-40-16640 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)
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. Subject stream located in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________ DATE: 5/8/90

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 tarnats as indicated on sketch map. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC
EXXON
NOAA
USCG

FOSC: DATE: 5/1-28

Access needs for control following tarnat removal. Notify CVC
24 hrs. prior to work.
Recommendations: Manual removal of all tar patties and mats.

I agree with recommendations.

Scatteret tar patties

Some scattered cobbles and tar mats.
SUBJECT
ANADROMOUS
STREAM
IN EV-14-A (1of1)
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16640
SEGMENT EV-14 SUBDIVISION A

WORK WINDOW

Tarmac Removal OPEN

Bioremediation Less Than 100m From Stream WORK PRIOR TO 7/10*
(ADF&G MONITOR REQ.)

*Assess need for custom blend following tarmac removal (FOSC comment)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream ADF&G catalogued anadromous stream (226-40-16640) 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 tarmac removal.

1K Purse Seine Area No constraint to tarmac removal.

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 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 unoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-14A FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC 6/14/90
Prepared by 6/14/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-14  STREAM NO: 226-40-16640  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)
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 in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:   [Signature]
DATE:  5/1/90

Subsurface Oil Observed:  Yes____ No____ X____ Maximum Depth____

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

COMMENTS:  Recommend manual removal of tarmats as indicated on sketch map. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG APPROVAL DATE:  5/7/90
ADEC  ACT 1990  AFF  ATTEST
EXXON  1990  AFF  ATTEST
NOAA  1990  AFF  ATTEST
USCG  1990  AFF  ATTEST

TAG COMMENTS:

DATE:  5/1/90
FOSC:  [Signature]

Follows removal procedure. Notify CVC 24 hrs. prior to work.
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-14

STREAM NO: 226-40-16640
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-14  STREAM NO:  226-40-16640  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)
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. Subject stream located in Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________  DATE: ______________________

Subsurface Oil Observed:  Yes  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 Removal  _____ Beach Cleaner
_____ Other (see comments)

COMMENTS:  Recommend manual removal of tarmats as indicated on sketch map. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: ____________________________________________________________

__________________________________________________________________________

TAG APPROVAL DATE: ____________
ADEC  EXXON  NOAA  USCG  FOSC:  ____________  DATE:  ____________
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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Injop 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 Injop 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 Seawmill 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 Injop 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
AGENCY CONTACT PERSON: 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I Gill net area (6/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine boat-off (7/20 to 9/30)
1L Set net site (8/11 to 7/29)
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 Injop 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 uncollected intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Injop application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3236

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. No application of Injop 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
AGENCY CONTACT PERSON: 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
AGENCY CONTACT PERSON: 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 (6/1 to 9/15)
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 (6/1 to 9/30)
Finfish harvesting
Dear harvesting (8/15 to 2/20)
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 Injop 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 EV 014 SUBDIVISION: 16640 DATE 9/22/90

USCG NAME: JOE McMAHON SIGNATURE: ________________

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
1. MANUAL CLEAN-UP: REMOVE ASPHALT AT RED STAKE.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

ADFG DEC: MICHAEL WIEDMEN SIGNATURE: ________________

(SEE DIAGRAMS AND ADF&G OBSERVATIONS AND RECOMMENDATION TREATMENT SUMMARY)

LAND MANAGER NAME: NO TEAM MEMBER SIGNATURE: ________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
ASC #: None
Segment: EV-012

Observations: The intertidal zone surrounding the stream channel consists mostly of small-grained material. The site has low exposure to wind and waves. Northwest of the channel, in the upper-intertidal zone, tar mats are scattered within a 20 m x 2 m area. East of the channel, a 25 m x 1 m lens (5 - 10 cm thick) of mousse is buried beneath 5 - 15 cm of clean sand.

Treatment Recommendations: Manually remove surface tar mats. Uncover subsurface mousse lens and remove oiled sand. Do not remove clean overburden above subsurface lens.

ASC #: 226-40-16640
Segment: EV-014

Observations: This is a well-protected, sandy, gravelly beach. Northwest of the stream channel in the upper-intertidal zone are scattered tar patches. Tar mats and patties are scattered on the east bank of the stream, within the extreme upper-intertidal zone. At this point, there are some oiled gravels and cobbles within the submerged portion of the stream channel. No buried oil was observed.

Treatment Recommendations: Manually remove all tar mats and patties from the beach adjacent to the channel, from the stream bank, and from the stream channel.

ASC #: 226-40-16590
Segment: EV-005

Observations: This site is a small pocket cove confined on either side by bedrock walls. Tar patties are scattered in a ring around the high tide line on either side of the channel. The bedrock outcrop at the western entrance to the cove has significant surface coverage of tar. Some living biota remains or has re-invaded these areas, although in lower concentrations than in nearby clean areas.

Treatment Recommendations: Manual removal of tar mats on the high tide line. No treatment is recommended for the bedrock outcrop.
### SHORELINE OILING SUMMARY (ANAD.) 35/55 WS

**DATE:** 4-23-1990 19:07

**FROM:** EXXON CMD CORDOVA

**TO:** SCOT TEAM

**PIT NO.** 15

**TIDE LEVEL:** 44.0

**DATE:** 2-2-90

**WEATHER:** 42F, 10900

**LAND REP.** T.G. SAWC

**ADFG:** Mike Dukoff

**EXXON LAND REP.** G. Garcia

**SEGMENT:** 5th

**TIE IN:** EVO14

**TIME:** 12:25P, 12:50

---

**SURFACE OIL**

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<tr>
<th>CHARACTER</th>
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<th>IMPACTED ZONES</th>
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</table>

**PAVEMENT**

- H F S
- 0 sq. m

**NEAR SHORE SHEEN?**

- NO

**OILED DEBRIS**

- Logs
- Vegetation
- Trash
- Debris

**OIL CATEGORY LENGTH:**

- W x m
- M x m
- N x m

---

**SUBSURFACE OIL**

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<td>35</td>
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**COMMENTS**

---

**REVIEWED:** JW

**DATE:** 4-24-90
**Adpec Multi-Assessment Data Form**

1. **Survey Type**: E or S
2. **Region**: P or K, C1, K, A

3. **Date**: 4/22/90
4. **Start Time**: 13:30
5. **Stop Time**: 17:55
6. **Segment**: EV-014
7. **Station**: 226-40-1640

**High Tide Times**
- 12:06

**Low Tide Times**
- 06:03

**Tide Height**
- 0.78

**Photo Tagging**: Y

**Video Tagging**: Y

**Sample Tagging**: Y

**Location**: North end Evans Is.

**Description**

**Extent of Oil**

<table>
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<tbody>
<tr>
<td>L</td>
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<tr>
<td>&lt;</td>
<td>200</td>
</tr>
<tr>
<td>3</td>
<td>&lt;</td>
</tr>
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</table>

**Surface Coverage**

| L | Y |
| 100 |

**Surface Thickness**

- Low: 1
- Medium: 1

**Penetration**

- Low: 1 cm
- Medium: 2 cm

**Overall Oil Impact**

- No

**Oil Type**

- Pooled

**Oil Description**

- Date

**Wave Exposure**

- Low

**Substrate Type**

- Bedrock
- Boulder
- Cobble
- Gravel
- Sand

**Predominantly Small-Grained Sheltered Cove**

**Scattered Tar Patches 20 m N.W. of Channel**

**Upper-Mid Intertidal (20 m x 4 m)**

**Band of Tar Mats**
Recommendations: Manual removal of all tar patties and mats.

I agree with recommendations. [Signature]

Oil Distribution Diagram

Scattered tar patties

25 ft

Scattered cobblestones and tar mats.
Segment EV 014
Stream 226-40-16620
Ecological Summary

This stream enters the sea in a small cove similar to EV 012 - sand/pebble/cobble beach with larger boulders at each end of cove. Patches of Eucalyptus, mussels, and barnacles occur on cobble around the stream mouth and are more dense on boulders at either end of cove. Tar mats were found in UTZ on East and West sides of stream, manual removal recommended. No ecological constraints re: intertidal biota.

Michael Fawcett
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-15

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-15  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)
(an eagle nest located in adjacent segment)
6V  Recreation: Special use destination
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ___________________ DATE: ___________________

OILING CATEGORIZATION:

Wide 0 m: Medium 66 m: Narrow 62 m: V.Light 43 m: No Oil 884 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation in areas shown on sketch map (difficult access - safety concerns). Work should be conducted after 6/1 and with USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

________________________________________________________________________

TAG APPROVAL DATE: ____________

ADEC ___________________ FOSC: ____________ DATE: ____________
EXXON ___________________
NOAA ___________________
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 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 Morgan 267-2324

Salmon fry nursery areas (7/31 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 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

Estaver 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 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: ADF&G Larry Peltz 424-3214

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)

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 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

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 unweeded 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

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. 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 566-7235

ADF&G Don Calcine 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 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

ADF&G Tom Roth 267-2206

All Bald Eagle nests (3/1 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. 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 cabin (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

Duck harvesting (8/15 to 2/28)

Invertebrate harvesting

Contact ADF&G and appropriateNative 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 Pail 267-2359
NOAA
NAME Michael Buchman
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
NORTHERN Tip & around toward SE is uplifted slate outcrop with very slight splatter. Rock walls on either side of Northern pocket beach had a band of partly coating. Pocket beach had winter storm barn. No oil observed there. Eastern side of segment is rounded pebble, lo angle beach covered by wetted rock wall. Winter storm barn here too. No surface oil observed. Rock fissure of tilted shale at Southern end had 3 band of coating. A 1g rock outcrop just south of that had coating of oil on beachside. At very Southern end, 2 small pockets of 1g slate slabs over border & cobble separated by a outcrop had a coat to cover of oil on surface. Cracks & fissures had greater oiling. Asphalt patches were seen in underlying gravel. Silver to Rainbow sheen was seen in tide pools. Southern pocket had numerous patches of mosses at bottom of cracks.

ADEC
NAME John Hayer
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Most of segment is light to no oiling.

Two pocket beaches at Southern end of segment need treatment. Oil is down below boulders & will be difficult to remove.

1. Pum-poms, shovels, trays, sorbent pads & etc. for treatment on pocket beaches. See sketch map #2

LAND MANAGER
NAME Last Name First Name
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Magnum clean up? Hardly likely.
## SHORELINE OILING SUMMARY

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<th>NOAA</th>
<th>Michael Buchanan</th>
<th>SEGMENT ST</th>
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<tr>
<td>BLM</td>
<td>Kathleen Cohn</td>
<td>LAND REP</td>
<td>STEVE LAVIT</td>
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<td>LARRY Olson</td>
<td>ADEC</td>
<td>John Hayes</td>
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### SURFACE OIL

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**PAVEMENT H** 6 S. 2 sq. m by 10 or
**PATTIES/TARBALLS** 0 **BAGS**

**NEAR SHORE SHEEN?** NO 8R RW SL TL

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<th>AMOUNT</th>
<th>DID YOU COLLECT DEBRIS?</th>
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**Photographs:**
- Rail No.____________________
- Frames_____________________

### SUBSURFACE OIL

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<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<td>C,P,C</td>
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**COMMENTS**

Some stain and coating occurred near the 1st beach located at the North Western end of the segment. An X20m CT/P coat was observed along a rock wall on the Southern end of the 1st beach. No oil was observed for a majority of the segment. The shore zone consisted mostly of high angle rock, boulder face with some low angle boulder/cobble beaches. The Southern end of the segment (South eastern) contained some substantial oiling. This area consisted of 3-5 pockets of CO/C beaches, the Northern most of these beaches had a 5m x 5m CT/P coat among the R/H in the HLTZ. On the N. Side of the beach, reviewed 4/23-90.
### Subsurface Oil (continued)

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<th>PIT NO.</th>
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**Comments**

The other two pocket beaches (map 2) had some substantial oiling. They consisted of two boulder pocket coves separated by a 20m rocky headland. Both coves have a CT1P tar coat on the exposed boulder face but in the crevasses between the boulders are asphalt patches, hardened mousse and tar cover. One cove has a 15m x 20m affected area, the other a 10m x 20m area. The rocky headland which separates the two coves has a 1m x 20m CT1P stain in the H21Z.

**Reviewed by:** [Signature]  **Date:** 9-23-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST1 EV-15 Subdivision A (1 of 1) Date (mo/day/yr) 04/20/90

Time (24 hr) 1650- 1800 Biologist Kathleen Connors

(A) Substrate type and % of segments:
1. Bedrock 60%
2. Boulder 20%
3. Cobble 15%
4. Pebble 5%
5. Sand 0%
6. Silt 0%

(B) Overall % cover of biota (% of segment):
Dense 80%
Moderate 20%
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)

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<tr>
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Wildlife Observations/General Comments:
- DEPOT SCULPIN ABUNDANT 2 SEA OTTERS
- 3 SHORE BIRDS
- BALD EAGLE

Ecological Considerations:
BALD EAGLE NEST ≤ 400M OF SEGMENT AS SHOWN.

Map Key: PWS-183
Name: K. CONLAN
Date: 30 APRIL 1990
Data Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-15 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>
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<td>WORK BEFORE 7/25</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K Purse seine Hook-off
Closed to bioremediation after 7/25. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest
NO CONSTRAINT. Work area is more than 400m from nest.

7II 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 to essential minimum after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unripped biota and substrate.

TAG APPROVAL DATE 5/21/90
ADEC Art Witten Auth 1st
EXXON Mary Far
NOAA R. J. Katsoulis
USCG C. H. Deakins 2nd

Prepared By: Andrew Meyer
Date 5/27/90

FOSCO'S

DATE MAY 29 1990
SHORELINE EVALUATION

SEGMENT ST/ EV-15 SUBDIVISION A (1 OF 1) DATE 4/20/90

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) (an eagle nest located in adjacent segment)
6Y Recreation: Special use destination
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m; Medium 66 m; Narrow 62 m; V.Light 43 m; No Oil 884 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation in areas shown on sketch map (difficult access - safety concerns). Work should be conducted after (6/1) and with USFWS approval regarding eagle nest constraint.

TAG COMMENTS: Manual Pickup of Asphalt + Moose from shoreline

TAG APPROVAL DATE: 5/3/90
ADEC ART WEEG DATE:
EXXON ANGEL DATE:
NOAA DATE:
USCG DATE:
FOSC DATE:

See Constraint Addendum 5/21/90

BALANCED IF FEASIBLE PRIOR TO ERO
SHORELINE EVALUATION

SEGMENT ST/ EV-15 SUBDIVISION A (1 OF 1) DATE 4/20/90

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) (an eagle nest located in adjacent segment)
6Y Recreation: Special use destination
7III Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

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Wide 0 m: Medium 66 m: Narrow 62 m: V Light 43 m: No Oil 884 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X Treatment Recommended

No Treatment Recommended

Snare/Absorbent Booms

Oil Snare (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommend bioremediation in areas shown on sketch map (difficult access - safety concerns). Work should be conducted after 6/1 and with USFWS approval regarding eagle nest constraint.

TAG COMMENTS: Manual Pickup of ASPHALT & MUD FROM IN BETWEEN
BEGINS IF FEASIBLE PRIOR TO ED0

TAG APPROVAL DATE: 5/3/90

ADEC Art Weber DATE: 5-18-90

EXXON

NOAA

USCG

DATE: 5-18-90
KETCH MAP

Pocket D/C Beach w/ Pebbly Storm Berm
1m x 20m ST/SP on Rock in HTZ

Pocket D/C Beach
w/ Pebble Storm Berm
1m x 20m CT/SP on Rock in HTZ on Southern End of Beach

Legend

III - steep Boulder/ Rock Shore Zone

A - Trees

O - Boulders

Low angle R/D shore
1m x 10m ST/SP in the SW HTZ

Pocket D/C High angle Beach
15m x 20m CT/SP
10m x 20m CT/SP

Oil Character Length (m): AP 5 PO 0 CV 5 CT 10 ST 40 MS 10 PT 0 TB 0 ER 0 NO 925
1991 MAYSAP EVALUATION

SEGMENT: EV 015  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details)  Eagle nest, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
if treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHIP Signature: ___________________________  Date: ______________________

RECOMMENDATIONS:

<table>
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<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
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Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inpol/Customblen
Other______________________
Other______________________

COMMENTS:

INITIAL:


TAG:


FOSC:


TAG APPROVAL DATE: ___________  FOSC APPROVAL DATE: ___________

ADEC
EXXON
USCG
NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO.** 5  **SEGMENT** EV-15  **SUBDIVISION** A  **DATE** 4/30/91

### ADEC

**NAME** John Heyer  
**SIGNATURE**  
**Objective:** Oil spill observed on portion of segment surveyed. Oil covered with a brown, tar-like substance, difficult to access from A+B's. Subsurface oiling in the U1FE area H08 ranging from 10-20 cm. Debris should be watched for sheen and formation of tar from near surface contamination. This beach would be feasible for debris clean up. Work picking up surface oil from present.

### EXXON

**NAME** Martin W. J.  
**SIGNATURE**  
**Objective:** Numerous large rocks + bedrocks. Will be hard to pick up.

### LANDMANAGER

**NAME** Steve Wald  
**SIGNATURE**  
**Objective:** This area contains numerous sites of oily deposits in pocket beaches. The oil is high in tar and difficult to retrieve. Possible CLR Project. Subsurface oil is present and should be watched for sheen. Worked this summer to see if sheen is occurring in winter. Work needs to be done and should be followed up.

### USCG/NOAA

**NAME** B.D. Hedges  
**SIGNATURE**  
**Objective:** Small deposits of oiled sediments would be too labor intensive to remove. Some scattered tar patches and most of oiled sediment in crevices. One meter band of oil coat/coverage w/pine needles or some large rocks.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 5

CHANEY
BIO CRANK

HAYES
LANDMANAGER WARD for CVC

MARTINEZ
USCG/NOAA DREHER/HODGES

TIME 07:25 to 08:28
TIDE LEVEL +0.5 ft. to -15 ft.
ENERGY LEVEL: ☑️ N ☑️ M ☑️ L

SURVEYED FROM: ☑️ FOOT ☑️ BOAT ☑️ HELO
WEATHER: ☐️ SUN ☑️ CLOUDS ☑️ FOG ☑️ RAIN ☑️ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 146 m
NEAR SHORE SHEEN: ☑️ BR ☐️ RB ☑️ SL ☐️ NONE
EST. OIL CATEGORY LENGTH: W 0 m M 38 m N 13 m V 0 m NO 95 m US 909 m

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<tr>
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<th>MB</th>
<th>TB</th>
<th>SOR</th>
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DISTRIBUTION: C = 01-100%; B = 01-50%; P = 11-50%; M = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAP: 5 - 5 FRAMES 1 - 6

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<tr>
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<td>CP-R</td>
<td>BEDROCK CRACK</td>
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SHEEN COLOR: B = BROWN; R = RAINBOW; G = SILVER; N = NONE

OG COMMENTS:
Oil is concentrated behind bedrock outcrops under large angular boulders. Patches of CT & CV on lee side of protected boulders.

This survey was conducted in driving rain, making light oiling types difficult to distinguish.
NOTE: OILING CONDITIONS ARE PRESENTED AS THEY LOOKED AFTER OUR MANUAL PICKUP.

LEGEND

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<th>BOULDERS</th>
<th>FINE BED</th>
<th>DRIFT LOG</th>
<th>OILED PIT</th>
<th>FOREST</th>
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<td>L</td>
<td>D</td>
<td>G</td>
<td>E</td>
<td>F</td>
<td>H</td>
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SCALE

ROUGHLY 50 Meters

- A: AP-TRACK CV 10% CT 10% 2x4 m
- B: AP 5% CV 10% CT 10% DRIFT SEAWEED ON ANGULAR BOULDER 2 m x 9 m
- C: AP 5% CV 20% CT 20% 5 x 20 m
- D: 4 x 10 m AP 10% CV 40% CT 10%
- E: 5 x 8 m AP 10% CV 40% CT 10%
- F: AP 15 x 30 cm PU'S PATCHES
- G: AP 20 x 20 cm PU'S PATCHES
- H: LOW JAGGED ROCKS

NOTE: AREAS D & E ARE SMALL FISSURE COVES WHICH CONTAIN LARGE ANGULAR BOULDERS

MAYBAP 1991
06 SKETCH MAP
GREG CHANEY
TEAM S
SEGMENT: EV-15-A
DATE: APRIL 30 1991
AIR P.N.: PIM-E-006-14

KNIGHT ISLAND PASSAGE
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT # EV-15
SUBDIVISION A
SEA STATE 1-2 F+
PHOTOGRAPHS: ROLL # MAYSAP 5

DATE 30 April 1991
TIDAL HEIGHT (Range) +0.5 - 1.5
BIOLeST Crank
WIND SPEED/DIRECTION 10-20 knots /N

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located high is the UITZ in a Boulder field and on bedrock in the driftline. There is freshwater runoff. In and near runoff there is filamentous green algae. No other macro-benthos observed within site. Three meters below side, there are race Forss speccings and moderate barnacles. Approx. 50% of barnacle shells are empty. Live animals tightly sealed their inner plates when stimulated. Lithobranchs and limpets are rare. Eight meters below site, there is a rock outcrop with ~40% benthos cover on protected side (facing side) and ~30% cover on exposed side. Fucus in the dominant species. Sparse juvenile mussels (~1yr) are found in cracks and crevices. In tidepools, Coraline algae and moderate Lithobranchs are present.

(B) Area is located in UITZ between rock outcrop and cliff. Near top of sediments are white lichen and moss with fruiting bodies. Filamentous green algae is found on sides and bottoms of sediments. Below this area is a high energy cobble/gravel bench with little benthos. Five meters north a Boulder field begins with 50% algae cover dominated by Fucus and filamentous greens.

(C) Area is located high in UITZ and SUPRA in the lee of a rock bench. White lichen, mosses, with fruiting bodies and filamentous green algae is present. Extremely slippery. No other macro-benthos observed in area.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

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<tr>
<td>Waterfowl</td>
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<tr>
<td>Gulls/Kittiwakes</td>
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<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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MAMMALS

<table>
<thead>
<tr>
<th>MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tr>
<td>Sea Otters</td>
<td>1</td>
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<tr>
<td>Pinnipeds (specify)</td>
<td>3 - 6</td>
<td>Family Harpidae</td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td>1</td>
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<td></td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Communications (cont.)

(D) Area is located in the UITZ in the sector 10.5 +/-. 0.5 m below the 1.6 m SLW. Less than 1% benthic cover with a 7% algal site including rare *Fucus spiralis* and rare barnacles with 20% empty shells. Barnacle scars are present. Three barriers tightly sealed their area but were uncharacterized. Ten meters offshore, barnacles are sparse and *Fucus* is sparse on rocks near reef base. There is ~20% benthic cover; cover increases to ~30% @ -1.0 m sublittoral.

(E) Area is ~10 m SE of (D) in the high UITZ. Filamentous green algae and rare barnacles only (<1% benthic cover. Below 1 m the boulder field MITZ; UITZ benthic cover is ~20% with barnacles dominant in MITZ; a new set is present. *Fucus* is dominant in the LITZ with Ulva and filamentous red algae present. Ulva (sea lettuce) and Scytosiphon (algae) also present.

Subdivision is a pocket near boulder area covered in barnacle scars.

Each is high energy with cobble/gravel in UITZ, cobble in MITZ and small boulders in LITZ. UITZ and MITZ substrate not expected to support much intertidal life. There are rare patches of filamentous green algae (more common in freshwater includes), Scytosiphon (algae), *Fucus*, barnacles, *Littorina* and more. In the boulder fields and rock outcrops there is ~50% algal cover dominated by *Fucus* and filamentous greens; bladed reds also present; Ulva (sea lettuce), Scytosiphon and Gloiopeltis are present. Barnacles are moderate in MITZ (new set present) and sparse in LITZ. *Littorina* and limpets are rare. Bivalves are present, various age classes. Eagle nest not located.
May 1991
Note: Oiling conditions are presented as they looked after our manual pickup.

Segment: EV-15-A
Date: April 30, 1991
Air P.#: PM-2-006-14

Legend:
- Bedrock
- Boulder
- Fine bed
- Drift log
- Grabs
- Brush
- Forest
- Oiled pit
- No oil pit
- Photo

Scale: Roughly 50 meters

Notes:
- Layer of hor ~ 4 x 10 m under large angular boulders
- Drift seaweed on angular boulders 9 x 2 m
- Small cobble beach - low biota cover - high energy net expected to support much life
- Approx. 50% algae cover in boulder fields and rock outcrops
- Small stream
- Low jagged rocks
- Covered with filamentous algae very thin

Areas D & E are small fissure coves which contain large angular boulders
ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: [Signature] Date: 5/10/91

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other
Other

COMMENTS:
Initial:

TAG:

FOSC:

TAG APPROVAL DATE: 5/10/91  FOSC APPROVAL DATE: 5/20/91

ADEC
EXXON
USCG
NOAA

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO.** 5  
**SEGMENT** EV-15  
**SUBDIVISION** A  
**DATE** 4/13/91

### ADEC

**NAME** John Hever  
**SIGNATURE**

- **NTR** Oily observed on parade. A segment surveyed was a brown band of AP + SCU along the pocket beaches difficult to access from A + B's. Subsurface oiled in the UBER was 1/28 g/y from 10-20cm. 
- **NTR** Beach should be watched for sheen and formation of AP from near surface contamination. This beach would be feasible for debris crew to do touch up work picking up surface oily present.

### EXXON

**NAME** Martinez, N.J.  
**SIGNATURE**

- **NTR** Some AP in gravel - large rocks  + bedrocks. Will be hard to pick up  
Possible CVC project.

### LANDMANAGER

**NAME** Steve Ward  
**SIGNATURE**

- **NTR** This area contains numerous sites of oily deposits in pocket beaches. 
The oil is present under and between cobble, hard to retrieve but  
possible CLR project. Subsurface oil is present and should be watched this summer to see if sheeny is occurring in water. 
Now needs more good and should be followed up.

### USCG/NOAA

**NAME** Dreher/Hodges  
**SIGNATURE**

- **NTR** Small deposits of oily sediments would be too labor intensive to remove. 
Some scattered tar patches and areas of oiled sediment in crevices. One  
meter band of oil coat/coverage w/pine needles on some large rocks.
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT:** EV-15  
**SUBDIVISION:** A  
**DATE:** April 130, 91

**TEAM NO:** 5  
**OG:** CHANEY  
**BIO:** CRANK  
**ADEC:** HAYES  
**LANDMANAGER:** WARD  
**USCG/NOAA:** DREHER/HODGES

**TIME:** 07:25 to 08:28  
**TIDE LEVEL:** +0.5 ft to -15 ft  
**ENERGY LEVEL:** [ ] H [ ] M [ ] L  
**SURVEYED FROM:** [ ] FOOT [ ] BOAT [ ] HELO

**TOTAL LENGTH SHORELINE SURVEYED:** 146 m  
**NEAR SHORE SHEEN:** [ ] BR [ ] RB [ ] SL [ ] NONE

**EST. OIL CATEGORY LENGTH:** W 0 m M 38 m N 13 m VL 0 m NO 95 m US 909 m

### SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>B</td>
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<td>C</td>
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<td>D</td>
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<tr>
<td>E</td>
<td></td>
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</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = <1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSAP:** 5 - 5 FRAMES 1-5

<table>
<thead>
<tr>
<th>PIT NO</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td></td>
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<tr>
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<td></td>
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<td>3</td>
<td>10</td>
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</table>

**OG COMMENTS:**

Oil is concentrated behind bedrock outcrops under large angular boulders. Patches of CT & CV on lee side of protected boulders.

This survey was conducted in driving rain, making light oiling types difficult to distinguish.

**REVISED:** F.W. 5/4/91  
**REVIEWED:** M.C. 5/4/91
Note: Oiling conditions are presented as they looked after our manual pickup.

Layer of hor ~ 4x10m under large angular boulders.

AP 5% CV 10% CT 10% drift seaweed on angular boulders 2m x 9m.

AP 15x30 cm pu patches.

AP 20x20 cm pu + patches.

AP 5% CT 20% CV 20% 5x20 cm.

AP 20x30 cm pu.

Layers of small pebble cobble beach.

No field data. Assume: 2x2m hor.

Areas D & E are small fissure coves which contain large angular boulders.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT # EV-15
SUBDIVISION A
SEA STATE 1-2 ft

DATE 30 April 1991
TIDAL HEIGHT (Range) +0.5 → -1.5
BIOPHYSICIST C. Rank
WIND SPEED/DIRECTION 10-20 knots/N
PHOTOGRAPHERS: ROLL # MAYSAP 5 FRAME # 6

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located high in the UTVZ, in a boulder field and on bedrock in the driftline. There is freshwater runoff. In and near runoff there is filamentous green algae. No other macro-biota observed within UTVZ. Three meters below site, there are rare Fucus sporelings and moderate barnacles. Approx. 50% of barnacle shells were empty; live animals tightly sealed their inner plates when stimulated. Littorina and limpets are rare. Eight meters below site, there is a rock outcrop with ~40% biota cover on protected side (facing site) and ~70% cover on exposed side. Fucus is the dominant species. Sparse juvenile mussels (~1yr) are found in cracks and crevices. In tidepools, Corallina algae and moderate Littorina are present.

(B) Area is located in UTVZ between rock outcrop and cliff. Near top of sediment are white lichen and moss with fruiting bodies. Filamentous green algae is found on sides and bottoms of sediments. Below this area is a high energy cobble/gravel bench with little biota. Five meters north a boulder field begins with 30% algae cover dominated by Fucus and filamentous greens.

(C) Area is located high in UTVZ and SUPRA in the lee of a rock bench. White lichen, mosses with fruiting bodies and filamentous green algae is present. Extremely slippery. No other macro-biota observed in area. In a small tidepool in the rockbench with moderate corallina algae and many anemones. Rock bench has moderate barnacles with a new set present. Fucus with mature cones and sporulation is present. Epiphytic plants are present on a small number of Fucus plants. In low part of UTVZ the alga Palmaria is prominent (~1'-1 tide level). One black chironomid (Kathrine) found.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
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<tr>
<th></th>
<th># OF SPECIES</th>
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<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<td>Seabirds</td>
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<td>Waterfowl</td>
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<td>Shorebirds</td>
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<td>3</td>
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<td></td>
</tr>
<tr>
<td>Corvids</td>
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<td>3</td>
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<td>Other Birds</td>
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MARINE MAMMALS

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<td>Sea Otters</td>
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<td>Pinnipeds</td>
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<td>Seals</td>
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<td>Whales</td>
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LAND MAMMALS

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<tbody>
<tr>
<td>Seals</td>
<td></td>
</tr>
<tr>
<td>Elephant Seal</td>
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</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Comments (cont.)

(D) Area is located in the UITZ in 10 m SE and ~10 m SW. Water depth approx. 30 m SE ~ 10 m SW. Less than 1% biotic cover within the site including rare Fucus sporelings. Barnacles with ~5% empty sea urchin scars are present. Barnacles tightly seal their inner crown when disturbed. Ten meters offshore, site, barnacles are sparse and Fucus is sparse on boulders and rockface.

There is ~20% biotic cover; cover increases to ~30% at ~1.0' tide level.

(E) Area ~30 m SW of (D) in ~10 m SE of (D) in the high UITZ. Filamentous green algae and rare barnacles only ~1% biota cover. Below E) the boulder field MITZ; MITZ biota cover is ~5% with barnacles dominant in MITZ: a new set is present. Fucus is dominant in the LITZ; with bladed and filamentous red algae present. Ulva (sea lettuce) and Scytosiphon (algae) also present.

Subdivision is a forested beach bordered by boulder field and rock outcrops. Fucoid is high energy with cobble/gravel in UITZ, cobbles in MITZ and small boulders in LITZ. UITZ and MITZ substrate not expected to support much intertidal life. There are rare patches of filamentous green algae in boulders (in freshwater runoff), Scytosiphon (algae), Fucus, barnacles, Littorina and mussels. In the boulder fields, and rock outcrops there is ~50% algae cover dominated by Fucus and filamentous greens; bladed reds also prominent. Ulva (sea lettuce), Scytosiphon and Gloiopeltis are present. Barnacles are moderate in MITZ (new set present) and sparse in LITZ. Littorina and limpets are rare. Mussels are present, various age classes. Eagle nest not located.
NOTE: OILING CONDITIONS ARE PRESENTED AS THEY LOOKED AFTER OUR MANUAL PICKUP.

SEGMENT: EV-15-A
DATE: APRIL 30 1991
AIR P.H.: FPM-2-106-14

NOTE: AREAS D & E ARE SMALL FISSURE COVES WHICH CONTAIN LARGE ANGULAR BOULDERS.
ASAP TAG REVIEW SHEET

Segment: EUIS  Subd: A  Site:  Date  PRE-Review 11 Aug

Priority For Addressing In 1990

HIGH  MEDIUM  LOW  NTR

Treatment
Recommended: WAve Action → med.

NTR

PATCH MOUSE NOT WOR

NTR

Priority Site For Reassessment In 1991

YES NO   YES NO   YES NO   YES NO

CG  X  ADEC  X  EXXON  X  LAND MGR

TAF 1340690

Manual Remove Accessible Mouse.

9  B1O
Conditions Observed: Aspg in two shoulders varies sides. Several large areas of ms, ap, and dp and or subsurface oil are located.

Followup Recommendations: Recommend sampling, ms, ap, and dp and or oil using tanks and schedule to be followed by removal taking where possible and treating.

Completed by Pickup Crew: YES [ ] NO [ ]
Priority for Addressing in 1990: [ ] High [ ] Mod. [ ] Low

ADBC [ ]
(name) [ ] McCarter [ ]
(signature) [ ]

Comments:

Exxon [ ]
(name) [ ] Dean [ ]
(signature) [ ]

Comments: 1 Area of Recommendations

USCG [ ]
(name) [ ] Davis [ ]
(signature) [ ]

Comments: None. Initial comments.

Land Rep. [ ]
(name) [ ] Ward [ ]
(signature) [ ]

Comments: Inadequate manual in 90 to 9090. We had out the oil at
the chase in 91. Your recommendations good.
Oiling is pervasive in two small pocket beaches, with heavy accumulations buried between large boulders and in bedrock cracks. Recommend additional treatment in 1990 and reassessment in 1991.

A substantial amount of MS, AP, and OP oil or subsurface oil remains on two boulder pocket beaches. Summer cleanup crews ('90) have been on site, but large amounts of gross contamination remain. An ASAP follow-up recommendation form has been submitted calling for the removal of all mounds, AP, and OP oil or

Lots of oil remaining to pick up in '91. Check subsurface carefully in '91.

Candidate for early '91, high priority assessment. See follow-up recommendation for '91.
## Surface Oil

**Site 1**

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oiled Zones</th>
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</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>C/B/P/S</td>
<td>SU/UI/MI/UL</td>
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<td>S.O.R.</td>
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<tr>
<td>Pooled</td>
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<tr>
<td>Cover</td>
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<tr>
<td>Coat</td>
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<td>Stain</td>
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<tr>
<td>Mousse</td>
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<td>Patties/T.B.</td>
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<tr>
<td>No Oil</td>
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**Site 2**

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<th>Oiled Zones</th>
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<td>SU/UI/MI/UL</td>
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**Site 3**

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Oiled Zones</th>
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</thead>
<tbody>
<tr>
<td>C/B/P/S</td>
<td>SU/UI/MI/UL</td>
</tr>
</tbody>
</table>

---

### Subsurface Oil

- **Pit No.**
- **Pit Depth (cm)**
- **Subsurface Oil Character**
- **Oiled Interval**
- **Clean Below (Y/N)**
- **Pit Zone**
- **Surface Subsurface Sediments**

- Photographs
  - Roll No. 15
  - Frames

---

**Comments:**

- Two small, pocket beaches are oiled with 
  - Small patches ranging from patchy to broken. Most of the oil is deposited on 
  - Large boulders approximately 15 cm in 

- Angular
GENERAL DATA

SEG ID: EU015 SBDV: A SITE: 1 TEAM: 3 DATE: 8/1990
SITE LOTH: OIL CATEGORIES: W M DROM VLO M31

SURFACE DATA

CHAR #: 1 OIL CHAR: CT OIL DIST: CONT BRKN 20 PTCH 10 SPLH
TIDAL ZONE: SU X MI LI

CHAR #: 2 OIL CHAR: ST OIL DIST: CONT BRKN 20 PTCH 10 SPLH
TIDAL ZONE: SU X MI LI

CHAR #: 3 OIL CHAR: MS OIL DIST: CONT BRKN PTCH 30 SPLH
TIDAL ZONE: SU X MI LI

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X MI LI

CHAR #: 5 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X MI LI

CHAR #: 6 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X MI LI

CHAR #: 7 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
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CHAR #: 16 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X MI LI
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<thead>
<tr>
<th>SEGMENT</th>
<th>B Site 1</th>
<th>Manual pickup of tarmats, rake and bioremediate* A.P.</th>
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</thead>
<tbody>
<tr>
<td>EL-52</td>
<td>B</td>
<td>NTR</td>
</tr>
<tr>
<td>EL-55</td>
<td>A</td>
<td>Manual till - mop up mobile oil with snare and bioremediate - low priority</td>
</tr>
<tr>
<td>EL-56</td>
<td>C</td>
<td>Storm berm relocation (mechanical if necessary)</td>
</tr>
<tr>
<td>EL-58</td>
<td>C</td>
<td>NTR - Reassessment in '91</td>
</tr>
<tr>
<td>EL-58</td>
<td>D</td>
<td>Customblen application and reassessment in '91</td>
</tr>
<tr>
<td>ER-07</td>
<td>A Site 1</td>
<td>NTR</td>
</tr>
<tr>
<td>Site 2</td>
<td></td>
<td>Manual pickup of tarmat and bioremediation (low priority)</td>
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<tr>
<td>EV-05</td>
<td>A</td>
<td>Limited manual pickup followed by bioremediation - Customblen (low priority)</td>
</tr>
<tr>
<td>EV-05</td>
<td>B</td>
<td>Manual pickup of mousse/AP followed by bioremediation. Manual till in heaviest areas if necessary (H.P.)</td>
</tr>
<tr>
<td>EV-12</td>
<td>A</td>
<td>Access and remove heaviest concentration of AP/OP/HOR manual removal followed by bioremediate</td>
</tr>
<tr>
<td>EV-26</td>
<td>A</td>
<td>Manual removal of AP and bioremediation (M.P.)</td>
</tr>
<tr>
<td>EV-37</td>
<td>A</td>
<td>Manual pickup of OP/HOR sediments (relocate armor to access)</td>
</tr>
<tr>
<td>EV-39</td>
<td>A</td>
<td>Bioremediate</td>
</tr>
<tr>
<td>FL-01</td>
<td>A</td>
<td>NTR - work done</td>
</tr>
<tr>
<td>GR-301</td>
<td>B Site 1</td>
<td>Manual pickup of mousse (H.P.)</td>
</tr>
<tr>
<td>Site 2</td>
<td></td>
<td>NTR</td>
</tr>
<tr>
<td>Site 3</td>
<td></td>
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<tr>
<td>GR-301</td>
<td>B New Site</td>
<td>Manual pickup of mousse (H.P.)</td>
</tr>
<tr>
<td>KN-07</td>
<td>A</td>
<td>Manual pickup of AP/OP/mousse and bioremediation (H.P.) both areas</td>
</tr>
<tr>
<td>KN-08</td>
<td>A</td>
<td>Manual pickup followed by bioremediation (L.P.)</td>
</tr>
<tr>
<td>KN-201</td>
<td>A</td>
<td>Manual removal of AP followed by bioremediation (M.P.)</td>
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<tr>
<td>KN-211</td>
<td>E Site 1</td>
<td>Manual pickup of oiled debris at stream mouth next to small pool, use chain saw as necessary to access.</td>
</tr>
<tr>
<td>Site 2</td>
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</tr>
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<td>Site 3</td>
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<tr>
<td>Site 4</td>
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<tr>
<td>KN-400</td>
<td>A Site 1</td>
<td>Manual removal of accessible AP followed by rake and bioremediation (L.P.)</td>
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<tr>
<td>Site 3</td>
<td></td>
<td>NTR</td>
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<tr>
<td>KN-404</td>
<td>A</td>
<td>Bioremediation and assessment in '91</td>
</tr>
<tr>
<td>KN-405</td>
<td>A</td>
<td>Further TAG evaluation - bioremediation and assessment in '91</td>
</tr>
<tr>
<td>NK-02</td>
<td>A</td>
<td>Manual pickup AP/mousse - bioremediation (M.P.)</td>
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<tr>
<td>PD-04</td>
<td>A</td>
<td>Manual pickup of mousse patties and bioremediation, Inipol and Customblen (M.P.)</td>
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<tr>
<td>PN-01</td>
<td>A</td>
<td>Manual pickup of AP and bioremediation (L.P.)</td>
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</table>

* ANADROMOUS STREAM CONSTRAINT

TAG | DATED | 
---|------| 
EXXON | Aug 15 1990 | 
ADEC | (See attached Archaeological Constraint sheet) | 
USCG | | 
NOAA | | 

17 August 1990

Walk with land manager in effecting the above
ASAP FOLLOW-UP RECOMMENDATIONS
TAG RECOMMENDATIONS AUGUST 13, 1990
ARCHAEOLOGICAL CONSTRAINTS

EL-56C Addition of: storm berm relocation (mechanical if necessary).

SHPO: [Signature]
DATE: 8/16/90
ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

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

EV-12A Addition of: access and remove heaviest concentrations of AP/OP/HOR manual removal followed by bioremediation.

SHPO: [Signature]
DATE: 8/16/90
ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).


SHPO: [Signature]
DATE: 8/16/90
ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).


SHPO: [Signature]
DATE: 8/16/90
ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-16

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-16    SUBDIVISION A (1 OF 1) DATE 4/20/90

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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:____________________ DATE:____________________

OILING CATEGORIZATION:

Wide_0_m: Medium_141_m: Narrow_0_m: V.Light_742_m: No Oil_0_m
Subsurface Oil Observed:  Yes X  No___  Maximum Depth 45 cm

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 Removal  Beach Cleaner
* Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of patties, 2) rake down storm berm and, 3) bioremediation per sketch map. Work should be conducted after 6/1 with USFWS approval based on eagle nest constraints.

TAG COMMENTS:_____________________________________________________

____________________________________________________________________

TAG APPROVAL DATE:___________
ADEC _________________________  FOSC: ___________ DATE:___________
EXXON _________________________
NOAA _________________________
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 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 inlip 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 Morson 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 inlip 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

Esthaur Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 6/10)
Smurial 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 inlip 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

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 areas (6/11 to 7/26)
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 inlip 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 uncilled intertidal and subtidal algaes and seagrass. If plans for treatment include methods such as hot water wash or inlip 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 (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 inlip 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

Seabird colony (6/1 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

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

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

Recreation:
Tent sites (6/1 to 9/15)
Anchorage (8/1 to 9/15)
Forest Service cabins (6/1 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
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 inlip 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
SEGMENT ST1 EV-16 SUBDIVISION: A (10F1) DATE 4-20-90

NOAA NAME Michael Buchanan SIGNATURE M. Buchanan

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS Entire Segment Alternates from rock walls to pocket beaches. All rock walls and beds of stone or cobbles. Beaches to the south were made of more angular cobbles or pebbles (lower exposure), while those to north were more rounded. All beaches had light staining on cobbles. Several had occasional asphalt patches. All beaches had significant winter storm waves at Sopra 272. (Above current drift line). One beach was found to have a significant layer of relatively unweathered oil in pits dug in the center storm bar. The storm bar at these pits was 25-30 cm thick.

ADEC NAME John Heyes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

1. Manual pick up of asphalt patches (small) on boulder/cobble pocket beaches. Also mop up of recoverable oil in beds with asphalt patches.

   Three ones noted on sketch map N 45' 9x30m Band

   5x60m Band 6x40m Band.

   The rest of segment is stain & VL oIl. NTR

LAND MANAGER NAME Shell Western Canada SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Manual pick up.

ADEC One pocket beach had subsurface OP oIlng in a 5cm lens below 30cm at storm bar. Oil was mousse that had not
**SHORELINE OILING SUMMARY**

OG Mike Foget
M. Michael Bushman SEGMENT ST1 EV-16

BIO: Kathleen Collin LAND REP: Stan Laron

EXXON Larry Olson ADEC: Tony Hoyes

TEAM NO. 11 TIDE LEVEL: + 2.6

EST. SUBDIVISION LENGTH: 826 m □ Sun □ Clouds □ Fog □ Rain □ Snow

UPLANDS DESCRIPTION: □ Grass □ Forest □ Rock □ Vertical Cock Rockshore □ same as forees

SURVEYED FROM: □ Foot □ Boat □ Helo

WORKING DIRECTION: S to N

SURFACE SEDIMENTS: R: 50% B: 20% C: 25% P: 15% G: 10% S: 0% M: 0% V: 0%

SLOPE: Land 50% Hang 20% Vert 30%

WAVE EXPOSURE: □ Low □ Med □ High

OIL CATEGORY LENGTH: W: 0 m M: 190 m N: 0 m VL: 686 m NO: 0 m

**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>Tarballs</td>
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<td>No Oil</td>
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</table>

**PAVEMENT**

| H | 3 sq. m by 2 cm |

**NEAR SHORE SHEEN?**

| NO | BR | RW | SL | TL |

**OILED DEBRIS**

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<th>AMOUNT</th>
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<td>Vegetation</td>
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<td>Trash</td>
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<td>Debris</td>
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**PHOTOGRAPHERS**

| 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)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
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<td>Y N</td>
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<td></td>
<td>X</td>
<td></td>
<td>Y N</td>
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**COMMENTS**

The shore zone consists of bedrock/boulder at some Pocket O/C area that have pebble storm berms. The most southern Pocket O/C beach has a 6m x 40m berm on some asphalt patches on the O/C outcrop. The northern end of the beach. The next Pocket Beach contains a 2m x 40m pebble storm berm with a moderate amount of drift logs to the South.

Reviewed: [Signature] Date: 4-23-96
**SHORELINE OILING SUMMARY (PAGE 2)**

SEGMENT ST7/VN-16  SUBDIVISION A  (1 OF 1)

### SUBSURFACE OIL (CONTINUED)

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<th>% F</th>
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<td>N - C, P, C</td>
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</table>

**COMMENTS**

At the northern end of this pocket beach is a B/C outcrop which has a 5m x 60m CT/P degree of oiling with some asphalt patties. The rest of the shore zone has a ST/S distribution of stain in the 1-2T2.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST/EU-16**  
**Subdivision A (1 of 1)**  
**Date (mo/day/yr) 09/20/90**  
**Time (24 hr) 1438 - 1645**  
**Bioligst KATHERINE CONLON**

(A) **Substrate type and % of segments:**  
1. Bedrock - 30%  
2. Boulder - 20%  
3. Cobble - 25%  
4. Pebble - 15%  
5. Sand - 10%  
6. Silt - 0%

(B) **% cover of biota (% of segment):**  
- Dense: 10%  
- Moderate: 90%  
- 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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**Wildlife Observations/General Comments:**
- 2 SHOREBIRDS; EULABELE, AMPHIBIANS AMONGST PEBBLES & COBBLES AT MID-TIDE LEVEL

**Ecological Considerations:**
ADDENDUM: SUBDIVISION CONSTRAINTS

-SEGMENT EV-16 SUBDIVISION A (1 of 1)

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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, manual raking, and bioremediation within 400m of active nest.

711 Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC [Signature] DATE 6-10-90

Prepared By: [Signature] Date 6/9/90
SHORELINE EVALUATION

SEGMENT ST/ EV-16 SUBDIVISION A (1 OF 1) DATE 4/20/90

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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. Don DATE: 5/3/90

OILING CATEGORIZATION:
Wide 0 m; Medium 141 m; Narrow 0 m; V. Light 742 m; No Oil 0 m
Subsurface Oil Observed: Yes X 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: _____ Wands
___ Tarmac Removal _____ Beach Cleaner
___ * Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of patties, 2) rake down storm berm and, 3) bioremediation per sketch map. Work should be conducted after 6/1 with USFWS approval based on eagle nest constraints.

TAG COMMENTS: 

TAG APPROVAL DATE: 5/3/90
ADEC Art Werner DATE: 5/15/90
EXXON Nancy Thomas
NOAA John Bates
USCG
SHORELINE EVALUATION

SEGMENT ST/ EV-16     SUBDIVISION A (1 OF 1)   DATE  4/20/90

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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]   DATE: 5/3/80

OILING CATEGORIZATION:

Wide 0 m; Medium 141 m; Narrow 0 m; V.Light 742 m; No Oil 0 m
Subsurface Oil Observed: Yes X   No No Maximum Depth 45 cm

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 Removal   Beach Cleaner
X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of patties, 2) rake down storm berm and, 3) bioremediation per sketch map. Work should be conducted after 6/1 with USFWS approval based on eagle nest constraints.

TAG COMMENTS:


TAG APPROVAL DATE: 5/3/80
ADEC ACT WEAHER  A. O. DESIGN
EXXON   Amy Rohr
NOAA   Centro Marine
USCG   Kenworth Whaley
1991 MAYSAP EVALUATION

SEGMENT: EV 017  SUB:  A  REGION: PWS  SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s): OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details)  Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature:    Date: 5/17/91

RECOMMENDATIONS:  INITIAL  TAG  FOSC

TREATMENT REQUIRED (Y or N)    N    N    N

Manual Pickup (Check as Req.)    
Spot Washing    
Bio-Customblen Only    
Bio-Inpol/Customblen    
Other    
Other

COMMENTS:
INITIAL:  

TAG:  

FOSC:  


ADEC  FOSC  USCG
EXXON  
USCG  
NOAA

The signature of the Chief of Staff, FOSC, indicates further treatment.
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC / ADP & G
NAME Aimee Weesman
SIGNATURE Aimee Weesman

☐ NTR ☑ Treatment Recommended. Anadromous Fish Stream, Commercial Tourism. Of the 3 streams in this subdivision, only 1 requires further treatment. ASC# 296-40-16630. An oiled area, sites B & B1 on the west bank of the stream, extends up to the water’s edge & produces a steady sheen into the stream when agitated. A small amount of the oiled material was removed. The potential oil contamination of developing salmon eggs Fry exists if this material remains on the bank, or if the stream diversifies into the oil patch. Treatment should consist of the manual removal of the AP/HSOR area through manual filing. Surface run-off has not removed oil to date, little or no adverse impacts to tidal or intertidal zones would occur. Stream area would be returned to healthy state.

EXXON
NAME Randall K. Boyer
SIGNATURE Randall K. Boyer

☒ NTR
Area of AP - 1 x 4 m - B1 was collected by the Veco crew.

The area B - 506 was not of concentrations that would warrant pickup. The surface was disturbed to allow natural weathering. The two small areas of AP near the middle stream were collected along with the 1 meter x 1 meter patch or AP near the west host stream. No subsurface oiling was detected. Overall, the subdivision looks healthy with minimal oiling. No further assessment is necessary.

LANDMANAGER
NAME Charles Selanoff
SIGNATURE Charles Selanoff

☐ NTR
Oil sheen was seen in the stream with tar balls approximately sixty feet from both sides. Just walking on it produced a sheen. Scraping the gravel showed a visible trace of oil. Did not want to dig any farther for fear of disturbing the terrain. I strongly recommend this area be worked over manually and thoroughly tilled.

USCG/NOAA
NAME Rebecca Hoff
SIGNATURE Rebecca Hoff

☒ NTR
Small patches of asphalt in the upper intertidal were picked up, and remaining surface oil should weather quickly. Area B on map in the mid intertidal should also be left to weather naturally. This area has lots of freshwater runoff which should promote weathering. No physical disturbance of the sediments should be done in B since bits in mid & lower intertidal zones would be adversely impacted.
**MAYSAP SHORELINE OILING SUMMARY**

TEAM NO. 6  
OG D. I. LITTLE  
ADEC Tom Crowe/A. Wiedeman  
Xxon Randy Boyer  
BIO Tom Schroeder  
LANDMANAGER Charles Selanoff for CVC  
USCG/NOAA CWO Spicer/Rebecca Hoff  
SEGMENT EV-01  
SUBDIVISION A  
DATE 05/02/91

TIME 10:30 to 12:30  
TIDE LEVEL 0.5 ft to 2.5 ft  
ENERGY LEVEL: H M L  
SURVEYED FROM: □ FOOT □ BOAT □ HELO  
WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1500 m  
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH: W_ _ m M_ _ m N_ _ m L_ _ m V_ _ m VL_ _ m NO_ _ m US_ _ m

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<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SLOPE</th>
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**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 71-80%; S = 61-70%; T = < 60%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

---

**OG COMMENTS:**

Most surface oil was found in MITZ to UTTZ as AP and SOR deposits. These were picked up and removed, leaving only a light oil residue. Outside of these areas, occasional patches were found (locations A, C, E, H), usually in high UTTZ/SUTZ. These deposits of surface oil did not extend below 5 cm in depth, thus no sub-surface oil was logged.

---

**REVISED:** MC 5/19/91  
**REVISED:** 5/18/91 KC
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #  6  DATE 5/3/91
SEGMENT # EU-017  TIDAL HEIGHT (Range) - 3' 5" + 2' 2"
SUBDIVISION A  BIOLOGIST T. A. Schroeder
SEA STATE 2 foot chop  WIND SPEED/DIRECTION N.E. 20 mph +
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A, B, & C) = Most of beach area is very unproductive. Small rock
and gravel provide unstable substrate for plants.
and other life forms. Short healthy fucus and mussel
beds are located in the MITZ to KITZ behind seaweed.
beside. Some oiled but do not appear to be affected.
Any treatment should be the least intrusive possible to protect these beds.

(D, E, F) = One large area of fucus, mussels and mussels
is thinned below that concentrations of oil.
Remainder of beach area is very low in productivity
and existing flora.

(G & H) = Scattered fucus and mussels present throughout
beach but not thick. Very few mussels present.

In general, most of this subdivision is very low in productivity
due to shifting, shallow water, sand and gravel and the
overall exposure to surf. Shallow, extremely low productivity
areas are behind seaweed beds and along protective reef
or rock outcroppings.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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<td>Waterfowl</td>
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<td>Other Birds</td>
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Shoreline subdivision map showing important biological features attached.
SHORELINE EVALUATION

SEGMENT ST/ EV-17  SUBDIVISION A (1 OF 1) DATE  4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADFG anadromous stream no. 226-40-16620, 16630.
1A Salmon stream mouth – fry outmigration (3/1 to 5/15)
1B Salmon stream mouth – spawning (7/10 to 8/31)
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:  [Signature]  DATE:  4/23/90

OILING CATEGORIZATION:
Wide 74 m: Medium 0 m: Narrow 88 m: V.Light 773 m: No Oil 679 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ cm

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

COMMENTS:  Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of oiled debris, 3) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 5/15 and 7/10 based on salmon constraints. No bioremediation within 100m of stream without permit from ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE:  4/23/90
ADEC  Art Weiner  Art Chinnis  FOEC:  [Signature]  DATE:  5-1-90
EXXON  Don Park  [Signature]  USCG  Kenneth Kroc
NOAA  Josefa Talbot  [Signature]  Do not bioremediate from twin diesel.
SEGMENT ST/ EV-17
SUBDIVISION A
DATE 4/9/90

CHECKLIST
- Oil Source
- Appearance, Bicarbonate
- Oil Distribution
- Visible
- Length
- Cover
- Subsurface Character
- SW. NW. NW.
- Fence Location(s)
- Drain(s)
- Field Location(s)
- Photo Location(s)

LEGEND
1 A
A - No Subsurface Oil
2 A
A - Subsurface Oil

Legend Details:
- CT/C: Continuous Distribution
- CT/B: Broken Distribution
- ET/C: Partly Distribution
- CT/B: Splayed Distribution
- Oiled Vegetation
- Photo location, direction, and number

Oil Character Length (m): AP 27 PO - CV 160 OT 300 BT 25 MB - PT 35 TB - FL - NO 413
1991 MAYSAP EVALUATION

SEGMENT: RV 017  SUB: A  REGION: PWS  SURVEY DATE: 5/2/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details)  Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ________________________ Date: ________________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N

Manual Pickup (Check as Req.)  
Spot Washing  
Bio-Custombleen Only  
Bio-Inipol/Custombleen  
Other ____________________________  
Other ____________________________

COMMENTS:
INITIAL:  

TAG:  

FOSC:  

TAG APPROVAL DATE:  
ADEC  
EXXON  
USCG  
NOAA  

FOSC APPROVAL DATE:  


ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
Treatment Recommended: Anomalous Fish Stream, Commercial Tourism. Of the 3 streams in this subdivision, only 1 requires further treatment. 15601 36-40-166 30. An oiled area sites B-81 on the west bank of the stream; extends up to the water edge; produces a steady sheen into the stream when agitated. A small amount of the oiled material was removed. The potential oil contamination of developing salmon eggs fry exists if this material remains on the bank, or if the stream diverts into the oil patch. Treatment should consist of the manual removal of the AP/HSOR area. Thorough manual filling of surface runoff has not removed oil to date; little or no adverse impacts to mid-intertidal zones would occur. Stream area would be returned to healthy state.

Area of AP -1x4m -81 was collected by the Veco Crew. The Area B -806 was not of concentrations that would warrant pick-up. The surface was disrupted to allow natural weathering. The two small Areas of AP near the middle stream were collected along with the 1 meter x 1 meter patch of AP near the west most stream. No sub surface oiling was detected. Overall, the subdivision looks healthy with minimal oiling. No future assessment is necessary.

Oil sheen was seen in the stream with tar balls approximately sixty feet from both sides. Just walking on it produced a sheen. Scraping the gravel showed a visible trace of oil. Did not want to dig any further for fear of disturbing the terrain. I strongly recommend this area be worked over manually and thoroughly tilled.

Small patches of asphalt in the upper intertidal were picked up, and remaining surface oil should weather quickly. Area B on map in the mid intertidal should also be left to weather naturally. This area has lots of freshwater runoff which should promote weathering. No physical disturbance of the sediments should be done in B area. Work in mid & lower intertidal zone would be adversely impacted.
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**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = <1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSAP-** 6 - 05  FRAMES 9-15

**OG COMMENTS:**
Most surface oil was found in MRT2 to URT2 as AP and SOR deposits, there were picked up and removed, leaving only a light oil residue. Outside of these areas occasional patches were found (locations A, C, E, H), usually in high URT2/sut2. These deposits of surface oil did not extend below 5 cm in depth, thus no subsurface sediment was logged.

**REVISED:** MC 5/19/91

**REVISED:** 5/15
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6  DATE 5/2/91
SEGMENT # EU-017  TIDAL HEIGHT (Range) - 34 5 + 25 feet
SUBDIVISION B  BIOLOGIST T. A. Schroeder
SEA STATE 2, Foot Chop  WIND SPEED/DIRECTION N.E. 20 mph
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):

(A, B, C, D, E, F) = Trail of beach area is very unproductive, small and
as ground provides unstable substrate for algae
and other flora forms. Two healthy, large, and most
mussels are located in the MITZ to MITZ behind most
kelp, kelp line and surf. do not appear to be affected
any treatment should be the least intrusive.
possible to protect these sites.

(C, D, E, F) = One large area of kelp, mussels and mussels
is thriving below these concentrations of oil,
remainder of beach area is very low in productivity
and existing kelp.

(H, G) = Mussels, kelp, and mussels present throughout
beach but not thick. Only few mussels present.

In general most of this subdivision is very low in productivity
but shifting with the wind and water and the
mussels are sparse in most of this area, stumps, primary productive
areas are behind some the kelp and along protective reef
at rock outcropping.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td>Rock, Rock, Sculpin</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>2</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td>1</td>
<td>Harbor Sea</td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
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LAND MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harbor Seals</td>
<td>1</td>
</tr>
</tbody>
</table>

Shoreline subdivisions map showing important biological features attached.

Reviewed: MC 5/7/91
Revised: MC 5/18/91
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-17

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-17 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16620, 16630.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________ DATE: __________________

OILING CATEGORIZATION:
Wide 74 m: Medium 0 m: Narrow 88 m: V.Light 773 m: No Oil 679 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ 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 Beach Cleaner
X Removal Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of oiled debris, 3) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 5/15 and 7/10 based on salmon constraints. No bioremediation within 100 m. of stream without permit from ADF&G.

TAG COMMENTS:


TAG APPROVAL DATE: ______________
ADEC EXXON FOSC: ______________ DATE: ______________
NOAA USCG
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 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)

Esther 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 unciled 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 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 (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)

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.
TREATMENT SUGGESTED

2. Later decide to note process.

ADEC
NAME: J. Lynn Martin
SIGNATURE: [signature]

TREATMENT SUGGESTED

AGREE WITH EXXON OILS RECOMMENDATION FOR MANUAL REMOVAL OF ASPHALT AREAS THROUGHOUT SEGMENT.
ALSO AGREE WITH RECOMMENDATION FOR NO CLEAN UP ON NORTH END OF SEGMENT DUE TO ACCESSIBILITY OF AREA.
ON EAST SIDE OF BAY (SEGMENT) THE LIGHT SURFACE OIL AND HEAVY SUBSURFACE OIL SHOULD BE FURTHER REVIEWED AND MAP SHOT DUE TO ITS LOCATION TO A ACTIVE STREAM.

LAND MANAGER
NAME: Patrick Schwab
SIGNATURE: [signature]

TREATMENT SUGGESTED

Refer to attached ADEC form.
# SHORELINE OILING SUMMARY

**OG Reimers** | **USCG Hwy** | **SEGMENT ST/** | **EV-1**
---|---|---|---
**BIO Zamora** | **LAND REP Vanhatt (EC)** | **SUBDIVISION** | **A** *(219)*
**EXXON Gins** | **ADEC Martin** | **TIME/DATE** | **1996-04-09**
---|---|---|---
**TEAM NO:** | **12** | **DATE:** | **1996-04-09**
**TIDE LEVEL:** | **+2 to +2** | **TIME/DAY:** | **12:00 to 13:00**
---|---|---|---
**FOOT:** | **Sun** | **DATE:** | **9/4/90**
**BEAT:** | **Clouds** | **EST. SUBDIVISION LENGTH:** | **80 m**
**HELO:** | **Fog** | **TIDE LEVEL:** | **+5 to +2**
---|---|---|---
**Fog:** | **Rain** | **SURVEYED FROM:** | **Foot**
**Rain:** | **Snow** | **TIDE LEVEL:** | **+3 to +2**
---|---|---|---
**SURFaced DESCRIPTION:** | **Grass** | **WORKING DIRECTION:** | **West to East**
**Grass:** | **Forest** | **SURFaced DESCRIPTION:** | **Rock**
**Forest:** | **Snow** | **SLOPE:** | **65%**
---|---|---|---
**Rock:** | **Snow** | **WAVE EXPOSURE:** | **Low**
**Snow:** | **Med** | **OIL CATEGORY LENGTH:** | **W 7.5 m**
---|---|---|---
**Med** | **High** | **OIL CATEGORY LENGTH:** | **M 2.0 m**
**High** | **N 2.0 m** | **VL 381 m**
---|---|---|---
**OIL CATEGORY LENGTH:** | **NO 413 m** | **OIL CATEGORY LENGTH:** | **NO 413 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>PATTIES</td>
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<tr>
<td>TARBALLS</td>
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</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

## PAVEMENT

**H 8.2 m by 4 cm**

**PATTIES / TARBALLS** | **2 BAGS**

## NEAR SHORE SHEEN

**NO BR RW SL TL**

## OILED DEBRIS

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<th>AMOUNT</th>
<th>DEBRIS COLLECTED</th>
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| Debris | | | | |}

## PHOTOGRAPHS

**Roll No.: ST-16-78**

**Frames: 31-37, 1-18**

## 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>OIL / FILM COLOR</th>
<th>OIL / FILM COLOR</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>1</td>
<td>26</td>
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<td>X</td>
<td>-</td>
<td>X</td>
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<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>PG C</td>
</tr>
</tbody>
</table>

## COMMENTS

Serves as a fresh water stream and tidal intertidal slack. Separated by rocky headlands.

Tidal slacks are generally covered with pebbles, gravel, and scattered shells. Rocky shores typically have fewer shellfish with shells and boulders. The majority of this segment has no tidal

Light oiling in the form of scattered dots or small riverine and under boulders on shore

Intertidal beaches. They are also areas where have prevalent, one of those which extend under the

Snow and shellfish further investigated. The only visible oiling is along the eastern shore of

The only visible oiling is along the eastern shore of the segment where pits show a suspected and 20 m up. Stream beds appear clean.

---

Page 1 of ___

**REVIEWED:** <br>**DATE:** 4/29/98
### SHORELINE OILING SUMMARY (PAGE 2 of 2)

**SEGMENT**: EV-17  **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</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>U</td>
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<td>U</td>
<td>P F</td>
</tr>
<tr>
<td>8</td>
<td>45</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>U</td>
<td>U</td>
<td>PG</td>
</tr>
<tr>
<td>9</td>
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<td>X</td>
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<td>X</td>
<td>P C C</td>
<td>U</td>
<td>P C C</td>
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<tr>
<td>10</td>
<td>35</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P G</td>
<td>U</td>
<td>P G</td>
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<tr>
<td>11</td>
<td>45</td>
<td>X</td>
<td>X</td>
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<tr>
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<td>P C</td>
<td>U</td>
<td>P C</td>
</tr>
</tbody>
</table>

**COMMENTS**

**REVIEWED**: J W **DATE**: 4/14/90
SEGMENT ST/EV-17
SUBDIVISION A
DATE 4/9/90

CHECKLIST
- Map Scale
- Azimuth

Legend
- Pit: No Subsurface Oil
- Pit: Subsurface Oil

CT/C - Continuous Distribution
CT/B - Broken Distribution
CT/P - Paddy Distribution
CT/WS - Spherical Distribution

C1d Vegetation

Oil Character Length (cm): AP 27 PO CV 150 ST 300 BT 25 MS 35 TB FL NO 413
Biology Schematic
With
Photo Locations

- Deuse Rocks
- mussel
- New Barnacle Settlement (Cypria)
- Deuse Rocks
- Barnacle Shells
- Barrocks
- Possibly Anadromous
- Fish Stream
- Barnacle
- Possibly Anadromous
- Fish Stream
- Dead Otter
- Barnacle Shells
- Deuse Rocks
- barnacle
- Mussel
### Wildlife Observational General Comments:

- Dense, well-represented, moderate to high abundance during crepuscular hours.
- Some species, such as Fucus, are more abundant during low tide.
- Overall, the area of interest contains a diverse ecosystem.

### Table: Ecological Observations

<table>
<thead>
<tr>
<th>Wildlife</th>
<th>Abundance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fucus</td>
<td>Moderate</td>
<td>High density during low tide.</td>
</tr>
<tr>
<td>Barnacles</td>
<td>Sparse</td>
<td>Low abundance primarily during high tide.</td>
</tr>
<tr>
<td>Mytilus</td>
<td>Sparse</td>
<td>Minimal presence with no significant densities observed.</td>
</tr>
</tbody>
</table>

### Substrate Type and % of Segments:

- (1) Boulder: 50%
- (2) Cobble: 20%
- (3) Gravel: 20%
- (4) Shell: 10%

### Overall % of Cover of Biota (% of Segment):

- Dense: Moderate: Low: 10%

### Overall Substrate Preference:

- (Upper): (Mid): (Low): (New settlement): 10%

### Photograph:

- Roll No: 57-14-46-18
- Frames: 31-37-49-51

### Data Collection Details:

- Date: June 26, 1970
- Time: 24:00
- Subdivision: East Coast
- Biologist: Tony Anderson

---

**Note:** The table and comments provide a detailed ecological assessment of the area, focusing on the distribution and abundance of various biota species and substrate preferences. The data collection is comprehensive, covering a range of environmental conditions and substrate types.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-17 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal
OPEN

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream
Two ADF&G catalogued anadromous streams (226-40-16620 and 226-40-16630) are in Subdivision A. No constraint to manual pickup and tarmat removal.

7II Subsistence: Deer Harvesting
No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS
No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unlined biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NOS. 226-40-16620 and 226-40-16630) FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE 6/1/90
ADEC Rad Moncrief
EXXON FOSC O. A. Reine, COB, USCG DATE 6/2/90
NOAA
USCG

Prepared By: Jackson Map Date 5/31/90
Incorporates information from USFWS bald eagle surveys 5/12 & 5/26/90.

ECOLOGY MAP
SEGMENT EV-17
SUBDIVISION A (of L)
METERS

1 inch = 1356 feet

Seabird Colony
Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ EV-17 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADFG anadromous stream no. 226-40-16620, 16630.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 4/23/90

OILING CATEGORIZATION:
Wide 74 m: Medium 0 m: Narrow 88 m: V.Light 773 m: No Oil 679 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ 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
X Tarmat: _____Breakup _____Beach Cleaner
_____Removal _____Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal. 2) manual pick up of oiled debris. 3) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 5/15 and 7/10 based on salmon constraints. No bioremediation within 100m of stream without permit from ADFG.

TAG COMMENTS: See Constraint Addendum Dated 5/3/90

TAG APPROVAL DATE: 4/23/90.
ADEC ART WENSE Art Wnesia FOSC: DATE: 5-1-90
EXXON Andy Threlfall
NOAA Joseph Talbot
USCG Kenneth Knutson
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16620
SEGMENT EV-17 SUBDIVISION A

WORK WINDOW

Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B  Salmon Stream  ADF&G catalogued anadromous streams (226-40-16620 and -16630) are in Subdivision A. No constraint to tarmat removal.

7II  Subsistence: Deer Harvesting  No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM  EV-17A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/1/90
ADEC  NOAA  USCG  Prepared By:  ANDREW HAY
EXXON  5/3/90

FOSCO  DATE 6/2/90
Incorporates information from USFWS bald eagle surveys 5/12 & 5/26/90.

ECOLOGY MAP
SEGMENT EV-17

EXXON

Exxon Company, USA
Map Key: PMG-EV-17
Nov 11, 1990

METERS

Seabird Colony

Eagle Nest

1 inch = 1356 feet
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-17 A STREAM NO: 226-40-16620 DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two anadromous streams are in EV-17: 226-40-16620, 226-40-16630.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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. Subject stream is located in Subdivision A (1 of 1). No ecological constraints re: intertidal biota.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/10/90
Subsurface Oil Observed: Yes __ No X Maximum Depth ____

RECOMMENDATIONS:

- X Treatment Recommended
- 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 manual removal of small tarmat as indicated on sketch map. Work should be conducted between 5/15 and 7/10 based on above listed constraints.

TAG APPROVAL DATE: 5/10/90
ADEC [Signature] DATE: 5/15/90
EXXON [Signature] FOSC: DATE: 5/15/90
NOAA [Signature] Arrangements for controlled following items
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-17 A STREAM NO: 226-40-16620 DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two anadromous streams are in EV-17: 226-40-16620, 226-40-16630.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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 is located in Subdivision A (1 of 1). No ecological constraints re: intertidal biota.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________ DATE: 5/10/90
Subsurface Oil Observed: Yes 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 Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS: Recommended treatment includes manual removal of small tar-
mat as indicated on sketch map. Work should be conducted between 5/15
and 7/10 based on above listed constraints.

TAG COMMENTS: ___________________________

TAG APPROVAL DATE: 5/10/90
ADEC 1st Review 7/10/90
EXXON FOS C
NOAA Date 8/07
USCG 8/28/90
DATE: 5/14/90
FOSC: ___/___/___

Pit dug by previous survey. Buried oil (pit outside anadromous stream zone).

Scattered stained boulders/cobbles.

Vegetation.

Band of tar mats (surface to 4 cm).

Pit (tar surface to 4 cm).

Vegetation.

Max. width of intertidal zone as drawn ~ 100 m.

11:53  SCAT TEAM  P. 46
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: EV-17 A
STREAM NO: 226-40-16620
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-17 A  STREAM NO: 226-40-16620  DATE  4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two anadromous streams are in EV-17: 226-40-16620, 226-40-16630.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
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. Subject stream is located in Subdivision A (1 of 1). No ecological constraints re: intertidal biota.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:_________________________ DATE:_________________________

Subsurface Oil Observed: Yes____ 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 Removal  ____ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommended treatment includes manual removal of small tar-
mat as indicated on sketch map. Work should be conducted between 5/15
and 7/10 based on above listed constraints.

TAG COMMENTS:________________________________________________________

TAG APPROVAL DATE:__________
ADEC ________________________ FOSC:_____________ DATE:__________
EXXON _______________________
NOAA _______________________
USCG _______________________
Salmon stream mouth - fry outmigratian (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 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 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 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

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 Release site
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: 1E ADF&G Larry Peltz 424-3214 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzemoto 424-7511

1L 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 (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 inipool 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. Restirct boat traffic to essential minimum. Avoid damage to unced

3N, 3P, 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. 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

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/kestrel 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

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:
6V Tent sites (6/1 to 6/15)
6W Anchorage (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 6/15)
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
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
FIELD SHORELINE COMMENT SHEET

EGMENT ST: EV017  SUBDIVISION: 16620  DATE 4/21/90

USCG  NAME: McMAHON  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. MANUAL REMOVAL OF TAR MATS (ASPHALT)

ADFG  NAME: WEINER  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

REFER TO ADFG OBSERVATIONS AND
RECOMMENDATIONS FOR THIS DATE.

LAND MANAGER

NAME: [Name]  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
**OILING SUMMARY (ANAD.)*

- **OG:** William Reid  
- **USCG:** McMahon
- **BIO:** Michael Faustett  
- **LAND REP:** Tom McGee
- **EXXON:** Gus Garcia  
- **ADFG:** Mike Widdner
- **TEMA NO.** 15  
- **TIDE LEVEL:** +1 ft
- **EST. SUBDIVISION LENGTH:** 650 m
- **UPLANDS DESCRIPTION:** ☑️ Grass
- **SURVEYED FROM:** ☑️ Foot  
- **SURFACE SEDIMENTS:** R  
- **SLOPE:** Long  
- **OIL CATEGORY LENGTH:** W
- **OILS & FILM COLOR:**
  - Asphalt PAVEMENT
  - POOLED
  - COVER
  - COAT
  - STAIN
  - Mousse
  - Patties
  - Tarballs
  - Film
  - NO OIL

**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></td>
<td></td>
<td></td>
<td>X X X</td>
</tr>
</tbody>
</table>

- **PAVEMENT:** H  
- **PATTIES/TARBALLS:** ☑️
- **NEAR SHORE SHEEN?:** ☑️

**OILED DEBRIS**:  
- Log
- Vegetation
- Trash
- Debris

**AMOUNT**:  
- SM
- MD
- LG

**SURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED DEBRIS</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SHEEN</th>
<th>SURFACE SUBSURF. SEDIMENT</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
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<td>N</td>
<td>PG/C</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>N</td>
<td>N</td>
<td>G/PC</td>
</tr>
</tbody>
</table>

- **COMMENTS:**  
  - *OILED INTERVAL < 5 cm IN PIT NO. 1 DOES NOT CONSTITUTE SUBSURFACE OIL*

---

**REVIEWED:** JW  
**DATE:** 4-23-90
ADPAG MULTI-ASSESSMENT DATA FORM

SURVEY TYPE: DS GS AVS SHA KPH PTA
METHOD: Aerial Ground Boat

DATE: 4/21/90
START TIME: 17:20
STOP TIME: 17:48
SEGMENT #: EV-017
STATION #: 226-40-16620
USGS QUAD: SEWARD A3

LAT: 11
LNG: 11
SAMPLES TAKEN: Y

DESCRIPTION:

EXTENT OF OIL

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>N</td>
</tr>
</tbody>
</table>

CATALOGED ANAD. FISH PRESENT: Y

CATALOG #: 226-40-16620
STREAM NAMES:

OIL IN STREAM BED: Y
OIL ON STREAM BANKS: Y
OIL ON BEACH ADJACENT TO STUDY AREA (within 50 meters): Y
OIL WITHIN 1 MILE OF STREAM: Y

OIL TYPE: Pooled
OIL DEBRIS: Y
SHORELINE TYPE: Headland
WAVE EXPOSURE: High
SUBSTRATE TYPE: Bedrock

COMMENTS:
TAR HAT BAND ALONG E. SIDE OF STREAM. VERY SPORADIC STAINING OF ESPULUSES AND COBBLES ON W. SIDE OF STREAM.
**Recommendations:** Manual removal of tar mats on east side of stream.

**Oil Distribution Diagram**

- Pit due to previous survey. Buried oil (pit outside anadromous stream zone)
- Scattered stained boulders & cobbles
- Band of tar mats (surface to 4 cm)
- Pit (tar surface to 4 cm)
- Vegetation

Max. width of intertidal zone as drawn ~ 100 m
Segment EV 17
Stream 226-40-16620

Ecological Summary

This stream enters an unstable gravel/pebble beach, with sparse biota (scattered barnacles, mussels, and Fucus). Light oil stains scattered in one area of UZ, and some light surface. Tar mats were found in a 2 x 10m area on NW stream bank. Six Barnes and Moore smolt traps are installed in the stream.

No ecological constraints re: intertidal biota. If manual cleanup of tar mats is conducted, crews should avoid causing stream bank to slump.

Michael Fawcett
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16630
SEGMENT EV-17 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal
OPEN

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,B Salmon Stream

ADF&G catalogued anadromous streams (226-40-16620 and -16630) are in Subdivision A. No
c restraint to manual pickup and tarmat removal.

7ll Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to
esential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncoiled biota and
substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-17A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/10/90
ADEC Ray Moncrief
EXXON Don Pinto
NOAA
USCG

FOSC DA Rome, OEC 0866 DATE 6/2/90

Prepared By: Andrew Hoy Date: 5/31/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-17  STREAM NO: 226-40-16630  DATE  4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two catalogued anadromous streams are in EV-17:
226-40-16630 and 226-40-16620
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
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. Avoid trampling and disturbance below the oiled areas in the dense beds of fucus and mussels.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:  
DATE:  5/6/90

Subsurface Oil Observed:  Yes X  No  Maximum Depth 10 cm

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and debris. Work should be conducted between 5/15 and 7/10 based on salmon constraints.

TAG COMMENTS:  Following manual removal of asphalt & small asphalt patches monitors to assess the need to take in customers for any remaining oiled areas.

TAG APPROVAL DATE:  5/7/90
ADEC:  Art Wetter
EXXON:  Dave Price
NOAA:  Gary LeFever
USCG:  C.A. Keeler  C.A. Keeler

FOSC:  ____ L  DATE:  5/18/90
NOTIFY OUR ZONE HAS IN ADVANCE OF WORK
SEGMENT ST/ EV-17  STREAM NO: 226-40-16630  DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two catalogued anadromous streams are in EV-17:
226-40-16630 and 226-40-16620
1A   Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B   Salmon stream mouth - spawning (7/10 to 8/31)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid trampling and disturbance below the oiled areas in the dense beds of fucus and mussels.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657: 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature]  DATE: 5/19/90

Subsurface Oil Observed: Yes  X  No  Maximum Depth 10 cm

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and debris. Work should be conducted between 5/15 and 7/10 based on salmon constraints.

TAG COMMENTS: FOLLOWING - HANNA - REMOVAL OF ASPHALT & SAND
ASPHALT DITCHES MONITORS TO ASSESS THE NEED TO RAISE
IN CUSTOMBLECH FOR ANY REMAINING-OILED AREAS

TAG APPROVAL DATE: 5/7/90
ADEC  [Signature]  DATE: 5/15/90
EXXON  [Signature]  DATE: 5/15/90
NOAA  [Signature]  DATE: 5/15/90
USCG  [Signature]  DATE: 5/15/90

NOTIFY DUE 24 HRS IN ADVANCE OF WORK
Recommendations: 

Remove surface tar mats where shown in diagram. Bag and remove only oiled substrate smaller than 5 cm. Manually till larger substrate to speed weathering.

48 Oil Distribution Diagram

Permanent Source in Channel

5 cm deep

Tar Mats

10 cm deep

Dense Tar Mats

Maximum Width of Intertidal Zone as Drawn ~ 150 m

Sporadic Stain & Tar Patties

Note taken to frame 6 and 7 direction.
Segment EV 17
Stream 226-40-16630
Ecological Summary

This stream has a fairly broad delta composed of shale cobbles/pebbles/sand, with dense beds of Fucus and mussels near the mouth, with clams and other infauna beneath the mussels in MTZ and LTZ. Splatters, stains, and surface tar mats were found in a wide area of UTZ among boulders and cobbles on SE side of the stream. Other intermittent surface oil and sheen was found among cobbles and sand in the MTZ of the stream delta, on north side of stream, directly above dense Fucus and mussel beds. Two sea otters were seen feeding nearshore.

Manual pickup and bio-remediation recommended, with avoidance of trampling and disturbance below the oiled areas.

Michael Fawcett
Upper points document limits of fish surveys and usually not the extent of fish habitat.
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: EV-17

STREAM NO: 226-40-16630
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-17  STREAM NO: 226-40-16630  DATE  4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Two catalogued anadromous streams are in EV-17:
226-40-16630 and 226-40-16620
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
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. Avoid trampling and disturbance below the oiled areas in the dense beds of fucus and mussels.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________ DATE: ______________________

Subsurface Oil Observed: Yes X  No  Maximum Depth 10 cm

RECOMMENDATIONS:
___No Treatment Recommended  ___Snare/Absorbent Booms
X  Treatment Recommended  ___Oil Snares (pom poms)
___Manual Pickup  ___Absorbents (pads, rolls, etc)
___Bioremediation  ___Spot Washing: ___Wands
X  Tarmat Removal  ___Beach Cleaner
___Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and debris. Work should be conducted between 5/15 and 7/10 based on salmon constraints.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: __________
ADEC  EXXON  FOSC: __________ DATE: __________
NOAA  USCG

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 instream 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

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 instream 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)
1H remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or instream 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

2I 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 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 instream 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 uncultivated intertidal and subtidal algal and seagrass. If plans for treatment include methods such as hot water wash or instream 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)
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 instream 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 586-7225

ADFG Don Celkins 267-2403

5R Seabird colony (6/1 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 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

ADFG 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

6U Recreational: 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 destinations

7Z Subsistence area: Salmon harvesting (6/1 to 9/30)

7H Finfish harvesting

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 instream 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 ST1 EV 017 SUBDIVISION: 16630 DATE 4/21/90

USCG NAME Signature

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

1. Bioremediation (Selected areas per map)

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

ADFG

NAME Signature

☑ Manual removal only. No bioremediation recommended. See ADFG observations and recommendation summary for this date. (Exxon Rep. concurs with ADFG's recommendation)

LAND MANAGER

NAME Signature

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PAVEMENT** M F 6.25 sq. m by 1.0
**PATTIES/TARBALLS** 0
**NEAR SHORE SHEEN?** No

**OILED DEBRIS** AMOUNT

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Did You Collect Debris? Yes No

**TYPE**

**Photographs:**
- Roll No.: A5-15-2
- Frames: 17-26

**SUBSURFACE OIL**

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**OILED INTERVAL**

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**SURFACE OIL**

**COMMENTS**

**REVIEWED** I W **DATE** 4-25-90
This is a large intertidal zone with widely distributed patches of oiled substrate. The oil that remains is predominantly tar-soaked gravels and sand underneath and between relatively clean cobbles and boulders. Treatment at this site will be disking and containment of oil is
Recommendations:
1. Remove surface tar mats where shown in diagram. Rag and remove only oiled substrate smaller than 5 cm. Manually till larger substrate to speed weathering.

Permanent stream channel

5 cm deep

Tar mats

Sporadic stain 1

Tar patch

10 cm deep

Dense tar mats

Maximum width of interior zone as drawn ~ 150 m

Sporadic stain 4

14 taken to frame 6 and 2 exterior.
Segment EV17
Stream 226-40-16630

Ecological Summary

This stream has a fairly broad delta composed of shale cobbles/pebbles/sand, with dense beds of Fucus and mussels near the mouth, with clams and other infauna beneath the mussels in MTZ and LTZ. Splatters, stains, and surface far mats were found in a wide area of UTZ among boulders and cobbles on SE side of the stream. Other intermittent surface oil and sheen was found among cobbles and sand in the MTZ of the stream delta, on north side of stream, directly above dense Fucus and mussel beds. Two sea otters were seen feeding nearshore. Manual pickup and bio-remediation recommended, with avoidance of trampling and disturbance below the oiled areas.

Michael Fawcett
Upper points document limits of fish surveys and usually not the extent of fish habitat.