[Shoreline evaluations, 1990].

EL-105 – ER-29

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ARLIS
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SEGMENT ST/EL-105 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
See attached Ecological Constraint Sheet for specific constraints and contacts.
6Y Special use destination
7II Deer harvest (8/15 to 2/28)

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

SHPO SIGNATURE: DATE: 4/17/90

OILING CATEGORIZATION:
Wide 10 m: Medium 80 m: Narrow 0 m: V.Light 9 m: No Oil 525 m
Subsurface Oil Observed: Yes X No Maximum Depth 50+ 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
____ Removal ______ Other (see comments)

COMMENTS: Recommend bioremediation of coat and subsurface oil areas as shown on attached sketch map. Also rake top 6-8 inches of 10m x 10m area delineated on sketch map prior to bioremediation. Work should be conducted before 8/15 based on above deer harvesting constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC A t t e n t i o n
EXXON
NOAA
USCG
FOSC: DATE: 4-22-90
K o n e c t h K e e n e
PWS, SEWARD AND HOMER ECOCLOGICAL CONSTRAINTS

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

1C Salmon fry nursery area (4/31 to 7/31)
1D 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 5/15)
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 (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

6U 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 1 E1 105
SUBDIVISION: A
DATE 04/04/90

NAME AEC Vandepol
SIGNATURE AEC Vandepol

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I recommend no treatment. This is a
beach that is used to high energy with lots of small mollusks,
smalls, barnacles & algae.

I concur with land manager.

NAME Michele Bass
SIGNATURE

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
In the first E4 B.C. beach, a 5 x 4 M long of patch exists on the
surface layer only, on the main beach, to the left of the freshwater
off (facing the beach), lies an oily film layer beginning 4 cm down for
2 cm. This area is approximately 6 M wide x by 6 M long. The area
is B.C. with bedrock underneath. This area is a high energy beach
and the oil is primarily surface. I would recommend these patches be
removed to high wave energy of the area. In the U1T2, behind the R headland
lies a 10 x 10 M section A pit #5 in this area revealed or beginning a 9 cm
and continuing to 90 cm with 80 and the water obstructing further.
In the R.C. area following the E.PG, 4.3 beach lies a 6 x 3 M wide / 6
south. This is under a large B and difficult to access. On the remaining areas,
there is a 3 x 60M B.0.2 to these patches would occur by the areas under the B0.2's.

LAND MANAGER
NAME Dan Logan
SIGNATURE

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I recommend an fertilizer application to the UHM x 5 M, 6 M x 4 M,
5 x 3 M, and 3 x 60 M patches indicated on sketch map. This will
oil decomposition of this high energy beach

24
### SHORELINE OILING SUMMARY

**CG J. Springer** USCG R. Vandeveels SEGMENT STI EL: 105

**BIO P. Czepik** LAND REP D. Logan (F3) SUBDIVISION A (AF1)

**EXXON T. Tempin** ADEC M. Baer TIME 13:30 to 15:00

TEAM NO.: 5 TIDE LEVEL: + 5 to + 2 DATE 04/04/90

EST. SUBDIVISION LENGTH: 751 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☑ Rock ☐ Pillow La Va; Schist

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

SURFACE SEDIMENTS: R 30 % B 45 % C 10 % P 10 % Q 3 % S 2 % M 0 % V 0 %

SLOPE: Lang 50 % Hang 45 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High

OIL CATEGORY LENGTH: W 70 m M 50 m N 50 m VL 5 m NO 655 m

### SURFACE OIL

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<tr>
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### SUBSURFACE OIL

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### COMMENTS

Pomprn picked up by Prince William Sound Conservation Alliance personnel.

**REVIEWED** JW DATE 4/10/91
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COMMENTS
### Shoreline Ecological Summary

**Segment:** ST/L105  **Subdivision:** A  **Date (mo/day/yr):** 4/4/90  

**Time (24 hr):** 1310 - 1510  **Biolagist:** Crank  

- **Tide Height:** -2.5'  
- **Length:** 751 m  

(A) 

**Substrate type and % of segments:**
- (1) Bedrock  
- (2) Boulders  
- (3) Cobble  
- (4) Pebble  
- (5) Sand  
- (6) MSL  

(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 (G):**

### Barnacles

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### Mytilus

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### Gastropods

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Wildlife Observations/General Comments:
- "Dozens of people left Nisqually Bay in AM as fishing fleet were entering bay (reported by Coastguard)"
- Eagle heard over tracks in snow
- Bald Eagle - adult in tree, 3 flying (2 adults, 1 immature)

LITZ unexposed for most of segment.

Ecological Considerations:
- WY - Special Use Destination
- 711 - Deer Harvesting
<table>
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Drift included Laminaria spp. and pieces of Zostera.
Comments

- Mussel concentrations increase near and in fresh H2O drainage
- Vertical rock wall surveyed by boat; Fucus sporing observations may be low and unable to obs. gastropods
- Recruitment for segment mod + low with an occasional high Barnacle recruited boulder.
- In the angular cobble recruitment is high for littorinas. Barnacle recruitment higher but still moderate.
- Porphyra and Filamentous greens are dense on boulders and cobble.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony Closed to all activities; work site is less than 800m from seabird colony.

7II Subsistence: Deer Harvesting Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC  
Prepared by

Date 6/28/90  Date 6/14/90
ECOLOGY MAP
SEGMENT EL-105

Exxon Company, USA
May 11, 1990

Map Key: KN1-EL-105

METERS

1 inch = 1205 feet

EL-105

EL-58

EL-106

Seabird Colony
From NOAA Map

Work Area

Seabird Colony

Eagle Nest
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R  Seabird Colony

NO CONSTRAINT

Closed to all activities; work site is less than 800m from seabird colony.

711  Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.
SEGMENT ST/EL-106 SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
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.

SHPO SIGNATURE: DATE: 4/25/90

OILING CATEGORIZATION:
Wide_0 m: Medium_0 m: Narrow 40 m: V.Light_380 m: No Oil 6731 m
Subsurface Oil Observed: Yes X No__ Maximum Depth 35+ cm

RECOMMENDATIONS:
X No Treatment Recommended _____Snare/Absorbent Booms
T Treatment Recommended _____Oil Snares (pom poms)
_____Manual Pickup _____Absorbents (pads, rolls, etc)
X Bioremediation _____Spot Washing: _____Wands
_____Tarmat: _____Breakup _____Beach Cleaner
_____Removal _____Other (see comments)

COMMENTS: Recommend bioremediation of area shown on attached sketch map. [c/p pocket beach] Work should be conducted before 5/15 or between 7/1 and 8/15 due to eagle nesting constraints. Contact USFWS before conducting treatment.

TAG COMMENTS: Monitors to check suitz - snow covered during survey.

TAG APPROVAL DATE: 4/24/90
ADEC 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. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
Estuary Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Seward 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 uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 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 9/1)
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 (5/1 to 9/15)
Special use destination

Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (6/15 to 2/20)
Invertebrate harvesting

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

SEGMENT ST / EL-106-A SUBDIVISION: A DATE 4/6/90

USCG NAME DAVID A. SCHMIDT SIGNATURE David A. Schmidt

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no immediate treatment along this subdivision. Majority of discernable impact consists of a very light to light patchy stain along the UI/2 and high tide line. Site of extensive cobble pebble beach should be reassessed after the snow melts. This entire subdivision is exposed to high energy wave action.

ADEC NAME Peter Montesano SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED N/A

COMMENTS This is mostly an area of Vertical Cliffs not requiring treatment. However, the beach (Pt1) was severely oiled last summer and little was uncovered during our assessment. The Super tidal was undersnow and requires reassessment. If any oiling is uncovered below the snow, other, deep, pits should be dug at the UI/2 + MITZ.

LAND MANAGER NAME JANET J. BRIGHTMAN SIGNATURE Janet J. Brightman

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I concur with the ADEC comments. This beach has a high recreational value, easy access to the lagoon with access to a fresh water lake. However, this would not be necessarily be a good launching site. Beach appears to be high energy. Recommend reassessment of JUBER when Snow Melts.
### DISTRIBUTION
- **~2~**

### CHARACTER / DIST.

- **CHARACTER**
- **DISTRIBUTION**
- **OIL / FILM COLOR**
- **IMPACTED ZONES**

<table>
<thead>
<tr>
<th>Character</th>
<th>Oil / Film Color</th>
<th>Impacted Zones</th>
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<tr>
<td>Asphalt</td>
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<tr>
<td>Cover</td>
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<tr>
<td>Mousse</td>
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<td>Patties</td>
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<tr>
<td>Tarballs</td>
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<tr>
<td>Film</td>
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</tr>
<tr>
<td>No Oil</td>
<td>Snow or beach only</td>
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</table>

### SURFACE OIL

- **Pavement:** H F S
- **Patties / Tarballs:** Bag
- **Near Shore Sheen?:** No
- **Oiled Debris:** Sm MD LG
- **Debris Collecte:** Yes No
- **Type:** O
- **Photographs:**
  - Roll No.: ST-6-3
  - Frames: 5-7

### SUBSURFACE OIL

<table>
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<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
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<th>Oiled Interval</th>
<th>Below Oil / Film Color</th>
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<td>0.35 X</td>
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### Comments

- **Subdivision** consists of all hang and vert rock with one long, lang cobble/pebble beach. Uitz c/p berm shows evidence of a small, localized patch of oil penetration to an undetermined depth (>35 cm). The Sitz is covered with snow over a storm berm. It is possible this area may be oiled. This entire subdivision has high energy wave exp shown on computer map.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST1 EL106 Subdivision A Date (mo/day/yr) April 2 1990

Time (24 hr) 14:30 Biologist Jim Barry Length 3900

(A) Substrate type and % of segments:
- Bedrock: 6%
- Boulder: 7%
- Cobble: 2%
- Pebble: 4%
- Sand: 5%
- Silt: 6%

(B) Overall % cover of biota (% of segment): Dense 90 Moderate 6 Low 4

(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:
- Glacier crabeater seals - 5
- Brushtail fur seal - 6
- Eagle nest in another subdivision.

Ecological Considerations: 6Y, 711 ST

1) Eagles nests observed in another subdivision of segment. No apparent risk to nest from cleaning operations.
2) Caution advised for boating activities near seal haul-out areas. Avoid these areas if possible.
I. General Comments

The majority of this subdivision is high-angle cliffs with an open exposure to large waves. Recruitment of species in all the major categories (Barnacles, ...) is high on these cliffs. Thus, the winter-intertidal community shows strong evidence of recovery from both the mortality associated with oil contamination and that produced by cleaning procedures. Two factors may control this pattern. First, highly exposed sites are cleaned more rapidly by high wave action. Second, exposed sites often show high recruitment rates of some of the dominant intertidal species. Because most of the surveys were performed by boat, only 4-5 sites along this subdivision were used to infer the distribution of gastropods along the section.

II. Major Species

A. BARNACLES

- 3 species (Balanus glandula, Semibalanus cariosus, Chthamalus dalli) are most abundant on cliff faces and boulder beaches. All 3 species have sport in moderate to high abundance.

B. MUSSELS

- Mussels are particularly dense on boulders and cliff faces in the middle to high intertidal where recruitment of spat is small. Large kelp beds are present lower, too. Cobble beaches have low densities of mussels (but some spat) due to the negative effects of wave disturbance.

C. GASTROPODS

- Littorina (Periwinkles) are highly variable, but often dense in some areas. Moderate densities occurred on the cobble beaches.

D. EELS. Generally dense. Few withered adults observed.

E. A list of major & minor species follows
MAJOR SPECIES

I MARINE PLANTS

A. DIATOMS/BLUE GREEN ALGAE 0123
B. GREEN ALGAE - CHLOROPHYTA
   - Spongymorphia/Acrosporonia D12
   - Ulva m12
   - Ulvora D23
C. Red Algae - Rhodophyta
   - Petrocelis m12
   - Porphyrta D123
   - Rhodomenia laevia m123
   - Rhodymenia palmata m12

D. Brown Algae
   - Alaria pyriformis m12
   - Fucus distichus D123
   - Laminaria spp. m12
   - Holdemandra spp. D12
   - Ralstia spp. m1

II Animals

A. Barnacles
   - Chthamalus dalli O123
   - Balanus glandula D12
   - Semibalanus cariosus D14

B. Hermit Crabs - Paguridae D23

C. Amphipods - Orchestia spp. m23

D. Mussels - Mytilus edulis D123

E. Snails
   - Lithora sectulata D123
   - L. sitana D12
   - Nucella lamellosa m123
   - N. emarginata m12

F. Urops
   - Lotha digitalis D12
   - Textula sectum m23

G. Sea Stars - Pycnopodia m123

* Juveniles present
D = Dense / Abundant
M = Moderate / Common
S = Sparse / Occasional
R = Rare
1 = Bedrock
2 = Boulder
3 = Cobble
4 = Pebble
5 = Sand
II. MINOR SPECIES

B. Animals

1. Worms -
   - *Furunculus* (uncommon, pp. R3)
   - *Polychaetae*  
     - *Spirobranchus* sp. D2 3
     - *Serpula* sp. S1 2
     - *Eisenia fetida* 4 5 1 2

2. Molluscs
   a) Snails/Unicets
      - *Tachyphyxenea* spp. m 1 3
      - *Lottia palmeri* S1 2
      - *Tectura pyramidata* S1 2
   b) Chelons
      - *Katharina similis* D1 3
      - *Tonicella lineata* S1 2
      - *Nepaliaceps* sp. R1 2

3. Scaphiids
   - *Dermasterias* m 1 2
   - *Henricia* R1
   - *Leptasterias* M2 3
   - *Orthasterias* S1 2

4. Scallops
   - *Pododesmus cepheus* S1 2

5. Mussels
   - *Modiolus ramosus* m 1 2

6. Anemones
   - *Anthopleura xanthogrammatica* S1 2
   - *Tealia crassicornis* M1 2
   - *Epactis* sp. m 1 2

7. Pulmonate Snails - *Siphonaria* sp. D1

8. Crabs
   - *Acantholophodes* ? S1 2 3
   - *Pagurus productus* S1 2 3

9. Bryozoans
   - *Schioporella* sp. M2 3

10. Beach Hoppers
    - *Isopoda* S1 2

11. Fish
    - *Pholidae* D2 3
    - *Cottidae* S1

12. Hydrocrad
    - *Styllanthus porphyra* S1 2 3

13. Hydrozoa
    - *Sertulariidae* S2 3

Legend:
- J: Juveniles present
- D: Dense/Abundant
- m: Moderate/Common
- S: Sparse/Occasional
- R: Rare

1. Bedrock
2. Boulder
3. Cobble
4. Pebble
5. Sand
II. MINOR SPECIES

A. MARINE PLANTS

1. GREEN ALGAE - CHLOROPHYTA
   - Cladophora 512
   - Enteromorpha 512

2. RED ALGAE - RHODOPHYTA
   - Ahnfeltia plicata 512
   - Basselia spp. 512
   - Callithamnon spp. 512
   - Corallina spp. 512
   - Endocladi a muricata 512
   - Halosaccion glandiforme 512
   - Iridaea spp. 512
   - Lithothamnum 512
   - Membranophora papyrophylla 512
   - Microcladia / Pterocladia 512
   - Odanthalia 512
   - Plocamium 512
   - Mastocarpus 512

3. BROWN ALGAE
   - Costaria 512
   - Scytothetomon 512

F. General Comments

Oil effects on this substratum are less evident than on some others sites. Coastal beaches show little evidence of oil, and cliffs appear relatively clean (lightly oiled.)

6. WILDLIFE

1. Seals - 8-10 seals at 2 haul out sites - Seals were skittish,
   - 6/8 escaped from the haul out site when ship was within 100 m
   - or more.

2. Bald Eagles - Common
3. Clam jungle spotted seal
4. Ravens
5. Owls
EL-106
3900 m

- EL-106-A

VL patch stain
1-3m wide, S-15m long on high tide line

Photo 5
Large LNG baffle/pebble beach
All Surface sediments un-oiled.

Pit 1 shows what appears to be a localized, subsurface oiled berm area about 2m x 2m on UITZ. Snow covered UITZ may be oiled.

Map Key: PWS-126A
Name: L. Dixon
Date: 4/2/90
Date Entered:

<table>
<thead>
<tr>
<th>Width</th>
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<tbody>
<tr>
<td>XXXX Wide</td>
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</tr>
<tr>
<td>///// Medium</td>
<td>Exxon Segment Length: 6534m</td>
</tr>
<tr>
<td>----- Narrow</td>
<td>ADEC Segment Length: 3078m</td>
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<tr>
<td>TTTT Very Light</td>
<td></td>
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<tr>
<td>0000 No Oil</td>
<td></td>
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</table>
EL-106

EL-106-A: Oil character lengths (m): CT 26 ft 75 ft 75 ft NO. 17 24 235
EL-106-B: NO. 155
EL-106-C: NO. 155

VL patchy stain 1-2m wide x 20m long on high-side line.

--- EL-106-A 3900 m
--- EL-106-B 650 m
--- EL-106-C 974 m

Map Key: PWS-128
Name: C. Dillon
Date: 4/24/90
SHORELINE EVALUATION
SEGMENT ST/ EL-106 SUBDIVISION B (2 OF 3) DATE 4/5/90

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 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
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 ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbing unlisted seal haulouts on north end of EL-106 (A).

SHPO SIGNATURE: DATE: 4/25/90

OILING CATEGORIZATION:
Wide 408 m: Medium 69 m: Narrow 159 m: V.Light 604 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ 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
X Removal ______ _ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
2) manual pick up of oiled debris and logs, 3) bioremediation of areas shown on attached sketch map, 4) manual tilling of areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 due to pinniped constraints after approval by ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: _______ MONITORS TO CHECK LOGS TO DETERMINE ACCUSE OF

TAG APPROVAL DATE: 4/2/90
ADEC JOHN BAKER DATE: 5-3-90
EXXON _______ USCG
NOAA _______ FOSC: 
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. 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 6/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (5/11 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 uncultivated intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

All Bald Eagle nests (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.

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

SEGMENT ST 1 EL-106-B SUBDIVISION: B DATE 4/8/90

USCG NAME DAVID A. SCHNEIDER SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Subdivision B consists of three large and one small boulder/cobble/pebble beaches. Extensive annual clean up will be needed here to improve aesthetics of these sites. Areas of asphaltals should be broken up and removed. Granna and extensive debris should be collected and removed. It is doubtful that bioremediation techniques will be very effective on the larger boulder fields, however I feel that some attempt should be made to treat small sediment pockets on these beaches by utilizing tillage and bioremediation application of bio r agents on boulders may have some positive effect on coating and gross natural cleansing process.

ADEC NAME Peter Montesano SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

Comments: The small cobble pocket by Pit #2 has oiling to be bailed. The peppered oiled area should be pulled down to expose thin oil layer before bailing. The surface is clean to apply fertilizer now.

Area by Pit #1 is filled up on top of some bedrock and can be steam cleaned below that (Pit #4) there is oil of considerable significance below large (cobble and small boulders. This area should have high volume hot water washed (hot steam with high pressure or omni). Surface sediments will not be flipped to reach oil. On the next beach (Pit #5), the oiling is identical, but this beach is only covered by LCV because of rocky shoreline.

The last beach (Good! Map) was washed extensively last summer, the soft asphalt on E side should be removed. Both have a dry sandy surface with DBR below. The E side is bionic and the west side is underlaid by shallow bedrock and is borderline for bio. Both have penetrations of 4ft after the slump, on the whole the complete effectiveness of continued washing is in question, the best dredge and wash scenario may be the last effective method.

LAND MANAGER NAME ANNETTE PRITCHARD SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

Comments: The beach on the north end of this subdivision is pit #4 and provides easy access to the uplands but is not necessarily a good recreation site. The UTV should be pulled down to #4. No steps and gravel are needed. Beach near pit #4 is located and main beaches have areas to by annually of coast #1 removal of water wash. Some absei begun about 10 ft above must be picked up. Beach adjacent to #5 is mostly a sloping grass beach which would provide additional recreational use if access to the uplands. No access on north side this lack of this beach. Water should be pulled up prior to hot water washing. Hot water wash should be utilized to loosen oil and skin biodegradation of the bio areas as recommended.
**TEAM: EST. SUBDM**

**SURVEYED FROM:** Foot, Boat, Helo  
**WORKING DIRECTION:** NE to SW

**SURFACE SEDIMENTS:** R 45%, O 40%, C 10%, P 3%, G 2%, S 1%, M 0%, V 1%

**SLOPE:** Lang 25%, Hang 60%, Ven 15%

**WAVE EXPOSURE:** Low, Med, High

**OIL CATEGORY LENGTH:** W 230 m M 25 m N 30 m Vl 325 m NO 0

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>ASPHALT PAVEMENT</td>
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<td>MOUSSE</td>
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<td>PATTIES</td>
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<tr>
<td>TARBALLS</td>
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<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
<td>Snow on last beach S X</td>
<td></td>
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</table>

**SURFACED OIL DISTRIBUTION**

**OILED DEBRIS**

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

**AMOUNT**

- SM
- MD
- LG

**DEBRIS COLLECTED**

- YES
- NO

**TYPE**

- # BAGS:

**PHOTOGRAPHS**

- Roll No. 35-6-3 and 35-6-4
- Frames 2-4
- Frame 19-19-21-24

**PIT DEPTHS**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED DEBRIS</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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<tr>
<td>1</td>
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<td>P / G</td>
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## SHORELINE ECOLOGICAL SUMMARY

Segment ST/ E-106  
Subdivision  B  
Date (mo/day/yr)  April 6 1990  
Time (24 hr)  1300  
Biologist  Jim Barry  

(A) Substrate type and % of segments:  
- Bedrock 10%  
- Boulder 40%  
- Cobble 10%  
- Pebble 5%  
- Sand  10%  
- Shrub 5%  

(B) Overall % cover of biota (% of segment):  
- Dense 30%  
- Moderate 55%  
- Low 15%  

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:  
- Juveniles/Adults (x), new settlement (g)  
- Roll No.  ST-6-4  
- Frames  18-28  

### BARNACLES

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### GASTROPODS

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### FUCUS

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**Wildlife Observational/ General Comments:**  
- BIRD - 5  
- SEA OTTER - 2  
- PENGUIN - 20  
- SEA LION - 3  
- FLOW GULL - 1  
- KILLER WHALE - 1  

**Ecological Considerations:**  
1. Eagle nest area on island should not be disturbed.  
2. Harpy eagle area on each pass Hicks should not be disturbed.  
3. Sandy beach should not be entered due to active recovery of clam/mussel bed.
I. General Comments

A. Major Habitat Types

1) Cobble Beaches - Exposed

These beaches are found at several sites in subdivision A. All have moderate to high concentration of cobble and low gravel. Cobble sizes in the lower醍 agrees appear to be clean on the surface, but three have oil coating on the undersurface in the intertidal. This oil is most rapidly removed in the intertidal, but is more persistent on the upper areas where flushing and biological activity is lower.

2) Sandy/Pebble Beaches. One beach of this type is present near a small stream (marked on map). A small mussel bed is developing on the pebble beach where it may have eroded before the cleaning activities began. Shell gravel is abundant in shallow water and offshore, as well as along the shore at either location with a sediment bottom. Hard bottom areas have helpings on the rocks.

3) Cobble/boulder shores have moderate concentration of cobble and gravel, and similar characteristics to cobble beaches, but are less exposed and recorded by waves. Bottom is generally more dense on the sites. Clam beds are present and are recovering.

4) High angle cliff faces often have a fairly dense band of mussel beds on the middle to high agree, especially on exposed shores. Protected shores have lower mussel cover. Evidence of oil is rare on these shores.

B. Sensitive Areas

1) The sand flat beach would be as little disturbed as possible, due to the presence of a spencer, but recovery mussel bed and clam bed.

2) Areas where eel grass beds occur should not be heavily disturbed, especially during breeding spawning period.
II Major Species

A Barnacles - Composed of, Balanus crenatus, with loose form of Semibalanus Carinatus (middle intertidal zone) and Chthamalus Delicatula (spat of Chthamalus and Balanus present.

B. Nighting - See above.

C. Carangids - mainly Bettawras, but some moderate densities of lancets.

D. Fishes. Species and dead adults present in high ratio if some blow, apparently due to cleaning operations.

III Other species

A. Species list is found below. Noteworthy comment can be made on a couple of species.

1) Clams - Several species of clams are present as empty shells on most beaches. Live individuals of some species are found, but more generally are spot a young juveniles. The source of the dead, empty shells is unknown, but do not appear related to predation or mortality. Oil contamination and clean up operations may be the cause.

2) Starfish - One juvenile individual of a green mille was found
SEGAM 1TEL-10
Subdivision B
Length: 650 m

CHECKLIST
- N Arrow
- Approx. Scale
- Seg/Sub End
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Ext. HWL/FLW
- SSL
- Profile Location(s)
- Photo(s)
- Pit Location(s)

LEGEND
1
- Pit - Surface Oil
- No Subsurface Oil

2
- CTC - Continuous Distribution
- CT/C - Broken Distribution
- CTP - Patchy Distribution
- CT/S - Specked Distribution

Oil Character Length (m): AP 7, PO 0, CV 55, OT 340, ST 20, MS 0, PT 0, TB 0, FL 0, NO 0
EL-105

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

EL-106 - A
3900m

Map Key: PWS-126c
Name: C. Dillon
Date: 4/2/90
Date Entered:

EXXON Segment Length: 5524m
ABEC Segment Length: 5078m
X X X X Wide
/ / / / Medium
--- Narrow
T T T T Very Light
0 0 0 0 No Oil

EL-106

Map Key: PWS-126b
Name: C. Durnin
Date: 4/2/90
Data Entered:

EL-106-A
3900 m

Photo 5
Large LAMG cobble/pebble beach.
All surface sediments un-oiled.

Pit 1 shows what appears to be a localized subsurface oiled berm area about 2m x 2m on EL106.
Snow covered B1T2 may be oiled.

UT2 3m wide x 25m long
Patchy coat on Boulders

Photo 6
MIT2 5m wide x 25m long
VL sporadic orange stain on back sides of bedrock

VL patch stain
1-2m wide, 5-15m long on high tide line

---
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION B (2 of 3)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>CLOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmat Removal</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation</td>
<td></td>
</tr>
<tr>
<td>Manual Tilling</td>
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</tbody>
</table>

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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 Nests
USFWS bald eagle impact assessments conducted on 5/15/90 and 5/20/90 by Mike Lockhart indicate an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, bioremediation and manual tilling.

5R Seabird Colony
NO CONSTRAINT. Work area is over 800m from nearest seabird colony.

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC Date 6.10.90
A/P FOLLOWUP - IMMEDIATE ACTION

Conditions Observed: There are two (2) oiled stormberms on this site. Pile on southeast side of beach contains "or" Aug. 21 oil in a highly degraded substrate. Pile on southwest side is over lain by a massive log jam of large drift logs. Extent and degree of oiling was not determined. Assessment did reveal a mixture of oil and organic detritus.

Followup Recommendations:
1. Relocate storm berms on southeast side to site.
2. Open up log jam on southwest berm to determine extent of oil impact.
3. Remove + burn oiled logs
4. Remove oiled debris
5. Treat armor + subsurface sediments beneath log jam appropriate to the nature of the revealed impact.

Completed by Pickup Crew: YES [ ] NO [ ]

Priority for Addressing in 1990: [ ] High [ ] Mod. [ ] Low

USCG: PS/ Lee Beredra [Sign]
NOAA: Art Weimer [Sign]

Comments: I highly agree with relocating a storm berm. In addition, I recommend 'Hot Hub' flooding this entire area. This is the only thing that will remove oil. Thus is a tremendous amount of oil present. Log berm needs to be burned and moved to exposed sediments.

John Ebel [Sign]
ASAP TAG REVIEW SHEET

Segment: FL 106  Subd: B  Site: 1  Date  PRE-Review  14 Aug 90

Priority For Addressing In 1990

HIGH  MEDIUM  LOW  X NTR

Treatment Recommended:

NTR

Sketch - show heavy SAR
OG sheet - heavy SAR

Rece. sheet asks for storm beam relocation and removal log.

and TAG VISIT

If work is done on this segment i.e. storm beam removal relocation...
... it will require machinery to move logs. Rece. TAG VISIT.

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO
CG  ADEC  EXXON  LAND MGR

TAG  15 Aug 90

BIO  already scheduled

review 91
SEGMENT AS / 100 SUBDIVISION: B SITE: 1 DATE 8-8-90
SCG/NOAA PS Leo Borralone
NAME / ART WEINER SIGNATURE / Art Weine

☑ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
To evaluate treatment on the two oiled stormbergs.

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☑ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site is severely impacted with exxon valdez oil.
Due to the extent of oiling, I foresee additional
- Mechanical Treatment a must-

LAND MANAGER
NAME John Ebel SIGNATURE John Ebel

☑ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
To evaluate effectiveness of current treatment. This site was recommended for a short
- term relocation and log removal. High priority 90 treatment, multiple
resources (land & water) affected by impact at this site. MARITIME - STR; 31-7
- Concern w/ ADEC

EXXON
NAME Ray Sotelo SIGNATURE Ray Sotelo

☑ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site should be reassessed in '91 to decide what will, if any
should be done - more harm than good scenario.
ASAP FOLLOWUP RECOMMENDATIONS

Event: AS/EL/06  Subj.: B  Sec: 2  Date: 9/8 1992

Conditions Observed: OILED AREA BENEATH DRIFT LOG JAM IN SUZB. A 2X4 METER AREA WAS EXPOSED TO BUCKING COVERS ON BOULDER ARMOR AND A SUBSURFACE PENETRATION OF 'OR' (m) TO 5CM. THE EXTENT OF OILING BENEATH THE REMAINDER OF THE LOG JAM WAS NOT DETERMINED. ASPHALT PAINTED AND COVE WAS FOUND IN THE SUZB+MIZB.

Followup Recommendations: DETERMINE EXTENT OF OILING IN SUZB.
REMOVE + DISPOSE OF OILED LOGS + DEBRIS. APPLY TURPOL TO ALL ACCESSIBLE SURFACES OF BOULDER + COBBLE ARMOR. REMOVE ALL TREES. REAPPLY TURPOL TO ARMS OF SUBSURFACE OIL AND BETWEEN INTERSTICES OF OILED ARMOR.

Completed by Pickup Crown: YES [ ] NO
Priority for Addressing in 1990: [ ] High  [ ] Mod.  [ ] Low

ADEC: Wesley Gholley  Wesley Gholley

Comments: This beach is severely oiled. A extensive clean up operation should be conducted due to environmental sensitive areas.

BSO: Ray Salto  Ray Salto

Comments: My recommendation on this site is to apply control and remove in '92. All work should be done in '92 after a review. The review report will be initiated.

USCG: PS1 Lee Bermaina Lee Bermaina
NOAA: Art Weimer  Art Weimer

Comments: ACCEPT & RECOMMENDATIONS

For: [Signature]  [Signature]

John [Handwritten]  John [Handwritten]

Notes: A concurrence is recommended & priority for training.
ASAP TAG REVIEW SHEET

Segment: EL106   Subd: B   Site: 2   Date: 14AV690

Priority For Addressing In 1990

- HIGH
- MEDIUM
- LOW
- NTR

Treatment Recommended: NTR

As per Recommendation:

OG sheet - NTR

Rec. sheet asks for storm
Repm. Rel. note: op at
Tag name-topo like site?

TAG VISIT

Rec. TAG VISIT

Priority Site For Reassessment In 1991

YES    NO    YES    NO    YES    NO    YES    NO
CG      ADEC    EXXON    LAND MGR

TAG 15AV690

BIO

already sched

next 91
FIELD SHORELINE COMMENT SHEET

SEGMENT ASI ELO Subdivision: B Site: 2 Date 8-8-90
USCG/NOAA PSI Leo Berson Leo Berson
NAME Art Weiner SIGNATURE Art Weiner

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
Evaluate effectiveness of InitPol + CustomBlend
To inspect area under + adjacent to log tram in situ.

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site is severely impacted with Exxon Valdez oil.
Due to the extent of oiling I foresee additional treatment
to site in 1991

LAND MANAGER
NAME John Ebel SIGNATURE John Ebel

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
Sheens and surface oil present hazards to marine intertidal life forms
and all animals using area.
The effects of storm wave action is high priority for reassessment.

EXXON
NAME Ray Soto SIGNATURE Ray Soto

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
We should reassess this site to determine the extent of oiling
after customized and winter storms have worked the area.
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL- 106  Subd:  B  Site:  3  Date:  8-  Y  1990

Conditions Observed:  Tar mats are observed in between kelp beds on N.E side of lge. Sub surface oil present in center of lge to 20-40 ft. N.W side of lge has a huge area (sorption) of heavy or sediment. The OG Survey (SSAT) did not do this area justice it is much worse.

Followup Recommendations:  Mechanical excavation of areas with sub surface oil, expose saturated sediments and remove or pump or/and from beach. Spread custom blended tar mat area in completely. Possible flush system to migrant oil to western side. A custom tar will be needed to contain oil in area.

Completed by Picking Crew:  YES  NO  Priority for Addressing in 1990:  High  Mod.  Low

ADEC  Wesley Glencross  Wesley Glencross

Comments:  This area is a hazard to the environment due to the amount of oil present. Sub surface and high out in area and area in a confined area making cleanup due to the sorption of this brand. This area is also an archaeological area.

USCG  PS1 Leo Bercalona  Art Weiner

Comments:  Manually rake custom blend into impacted area.

Land Rep.  John Ebel  (signature)

Comments:  I concur w/ recommendation. But advise treatment on asphalt pavement. Sticky coats in area will cause seals & serious problems. Action must be taken to prevent further damage to marine mammals.
ASAP TAG REVIEW SHEET

Segment: EL106  Subd: B  Site: 3  Date  PRE-Review 19AUG90

Priority For Addressing In 1990

____ HIGH  X MEDIUM  ____ LOW  ____ NTR

Treatment Recommended: Manual Pickup AP and H. Supply

           & BID

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO

CG  _  ADEC  _  EXXON  _  LAND MGR  _

TAG 15AUG90

BID (already sold)

(Reassess AP Patch then)

(Crusty)
SEGMENT AS/EL 106B SUBDIVISION: B  SITE: 3  DATE 8-8-90

USCG / NOAA P51 Leo Berzalona  Leo Berzalona
NAME  Art Werner  SIGNATURE  Art Werner

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
1. Significant amount of oil remaining.
2. Evaluate custom-built effectiveness.

ADEC
NAME  Wesley Groomley  SIGNATURE  Wesley Groomley

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- Mechanical treatment is a must at this location -
  I foresee additional treatment (follow up) as very
  likely suspect in 1991.

LAND MANAGER
NAME  John Ebel  SIGNATURE  John Ebel

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
Currently this site will damage wildlife, especially mammals, which
Perambulate through the impact zone.
      To evaluate effects of PA treatment.

EXXON
NAME  Ray  SIGNATURE  Ray

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site should be reassessed to determine the effectiveness of
custom-built and impact of winter storms in the area.
ASAP SHORELINE OILING SUMMARY

TEAM NO. 2
EXXON

SEGMENT AS:

OG < LC.10 Subdivision B

DATE: AUG 1990
TIME: 2:20 PM 13:50
TIDE LEVEL: 5.10 ft

TOTAL NO. OF SHORELINE SURVEYED: 275 m
TOTAL NUMBER OF SURVEYED SITES: 3
TOTAL EST LENGTH OF SHORELINE SURVEYED: 275 m

SURVEYED FROM: Foot □ Boating □ Helicopter □ Weather: □ Sun □ Clouds □ Fog □ Rain □ Snow

OIL CATEGORY LENGTH: W 225 m M 10 m N 30 m V 1 m NO — m US 275 m

SURFACE OIL

<table>
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<th>DISTRIBUTION</th>
<th>Oiled Zones</th>
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<td></td>
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<tr>
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</table>

EST. SITE LENGTH

SITE 1: 6.5
SITE 2: 4.5
SITE 3: 16.5

SUBSURFACE OIL

NOT OBSERVED

Pit Depth (cm): 11

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>Oiled Zones</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
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COMMENTS

This subdivision has retained a large amount of oil relative to other beaches in Prince William Sound. The survey was too brief and the tide was too high.
OILING IS VERY SIMILAR TO 1990.
ON THIS MAP, THE PAVER IS THINNER DUE TO MANUAL
SEGMENT 106 TO REMOVAL.
SUBDIVISION B

DATE: 07 APR 90
CHECKLIST
ASAP #2
W/8 1990
MAP FROM SSAT
CHANEY

LEGEND
1 - Photo location.
2 - 8
CT/C, CT/B
Broken Distribution
CT/P
Patch Distribution
CT/7
Mowed Vegetation

00 C.T.s on

5m wide x 50m Long
M-UITZ, Long edge

Pit #5
Pit #4
UP TO 14 m wide
CT/C 10-12m wide
5m long
M-UITZ, full block,
Soft pocked pavement
on UITZ, 3m wide x 10m

SITE 3
Rainbow Sheath

SITE 2
Rainbow Sheath

SOR, UNDER OCS

M-UITZ 2-3m wide,
25m long

CT/C 5m wide,
25m long

M-UITZ 5m wide,
35m long

SCHNEIDER

The Spraddle to M-UITZ

3m wide x 10m long,
Centered to pit, grassed,
or capped.
This survey was conducted at a high stand of tide. The oil extends down to the tide water. Boulder comprise ~45% of surface. CV/B on boulders between boulders SOR & AP - both grade into one another. Area has definitely seen major effort however a thin patchy pavement has formed along with SOR sediments between ...
SHORELINE EVALUATION
SEGMENT ST/ EI-106 SUBDIVISION C (3 OF 3) DATE 4/6/90

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 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
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.

SHPO SIGNATURE: DATE: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 228 m: V.Light 1121 m: No Oil 956 m
Subsurface Oil Observed: Yes X No _ Maximum Depth 40 cm

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

COMMENTS: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints, after approval by ADF&G and USFWS regarding eagle nest.

IF FEASIBLE, TAKE PRIOR TO BIOREMEDIATION IN AREA OF TEST AT 7.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC ART JENKINS
NOAA 1993
USCG M. J. HALL
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

1F
Seward 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 unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

3O, 3Q
Harbor seal and sea lion molting (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 6/1)
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.

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

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 (5/15 to 2/28)

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

SEGMENT ST 1 EL-106 - C SUBDIVISION: C DATE 4/8/30

USCG NAME DAVID A. SCHNEIDER SIGNATURE ___

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

FILLING AND BIOREMEDIATION METHODS SHOULD BE UTILIZED ON THE TWO SMALL COBBLE/PEBBLE BEACHES LOCATED ON THE NORTHERN SHORE OF THIS ISLAND. CONCENTRATION OF CLEAN-UP RESOURCES IN SUBDIVISION B WILL ALLOW FOR EASY ACCESS/LOGISTICS TO THESE TWO BEACHES IN C. SITE OF ISLAND NEEDS TO BE RE-EVALUATED AFTER SNOWMELT.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS refer to map for use directions:

NEW BEACH: UITE with a 70% string, some coat on surface, but surface is too clean to be remediate. And fertilizer would not reach subsurface oiling. The LITE is extended and healthy. At 30 cm in Pit 25, there was a LBR sheen on interstitial water.

NE BEACH: The Supratidal is snow covered and should be maximized to determine extent of oiling. The 1st low energy beach also with an extended LITE. At Pit 27, UITE, there is considerable oil of significance. Any treatment would have to be preceded by filling. After filling a Hotwater (not steam) wash is recommended, possibly to be substituted with bio. This be. is most easily accessed by LCVS at mid to high tides, low tide access is distant and not easy.

LAND MANAGER

NAME: JoAnn Plichta  SIGNATURE: JoAnn Plichta

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC Recommendations. The NE beach has an absorbent bypass which needs to be picked up. If additional debris is found after the Shawmula and a reevaluation of the set tour
**DISTRIBUTION**

- **FILM COLOR**
- **ZONE**
- **PAVEMENT**
- **PATTIES/TARBALLS**
- **NEAR SHORE SHEEN**
- **OIL AMOUNT**
- **COVER DEBRIS**
- **STAIN**
- **MOUSSE**
- **PATTIES**
- **TARBALLS**
- **FILM**

**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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</table>

**OIL DEBRIS**

- Logs
- Vegetation
- Trash
- Debris

**Debris Collected?**

- YES
- NO

**Photograph:**

- Roll No.: ST-6-4
- Frames: 32, 33

**SUBSURFACE OIL**

<table>
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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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**PAVEMENT:**

- H F S

**OIL AMOUNT:**

- SM
- MD
- LG

**OIL AMOUNT:**

- Yes
- No

**SUBSURFACE SEDIMENTS**

- C/P
- C/P/G
- C/Vegetation
- Peat

**REVIEWED:**

- JW
- DATE: 4/10/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ El 106 Subdivision C Date (mo/day/yr) April 6 1990
Time (24 hr) 1200-1445 Biologist 1445-1630

1/5

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

B) Overall % cover of biota (% of segment): Dense 40 Moderate 50 Low 10

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

BARNACLES

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GASTROPODS

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FUCUS

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Wildlife Observations/ General Comments:
Crow 5
Pigeon Guilestrop -2
Pelican Cormorant 1/10 Death -2
Common Loon 1 -1
Seals -2

Ecological Considerations: Killer Whales -1
1) Eagle nest on island should not be disturbed
2) Blowing gulls on island should not be disturbed
3) Seal haul out area at South end of island should not be disturbed.

Photographs:
Roll No. ST-6-4
Frames 28-36

NOT PRESENT
General Comments

I. Habitat Types -
   Similar to 106-B - except there is no sandy beach on this subdivision. See comments for 106-B.

   Most of the subdivision is high angle cliffs with well-defined intertidal section: mussel band is clearly visible below the barnacle zone, with a thick Fucus and other macroalgae zone below.

II. Major Species - See 106-B
III SPECIES LIST

A. MARINE PLANTS

1) DIATOMS/BLUE-GREEN ALGAE

2) GREEN ALGAE - CHOROPHYTA
   SPONGOMORPHA/ACROSIPHONIA MZ 512
   CLADOPHORA 512
   ENTEROMORPHA 512

B) RED ALGAE

PORPHYRA MZ
PETROCLADUS 512
RHODOMELA URUS MZ
RHODYMACA PLUMATA D12
BOSFELLA spp. S12
CALLIARTHROUS S12
CORALLINA S12
ENYOCRINA S12
HALOSACCA MZ 512
IRIDAGA S12
CRYPTOSIPHONIA MZ
MEMBRANOPTERA MZ
MASTOCARPUS S12
MICROCLADIA/PETROCLADIA MZ 512
LITHOTHAMNION S12

C) BROWN ALGAE - PHAEOPHYTA

FUCUS DISTICHUS MZ 512
LAMINARIA D12
HILDERMANIA MZ
RAGESIA MZ
COSTARIA MZ
ALARIA MZ 512
SYTOSIPHON S12

D) THALASSOPHYTA - EEL GRASS - R3

E. ANIMALS

1) BARNACLES
   SEMIBALANUS CONSISTORY MZ 512
   BALANUS GLACIACEUS MZ 512
   CHIHINMANNI O1Z MZ 512

2) PAGURIDAE - HAMIT CRABS MZ 512
   NEMIGRAPUS ORGEBMANNI S23A
   HAPLOGASTRUM. TEL R29 A
   PUGETIA spp. R23A

3) AMPHIPODS -
   ORCHESTRA spp. M23 A

4) MYRIS - MYRIDIUEA. R12A

5) BEACH HOPPERS - NOCTUA S23 A

6) MUSSELS - MYLTHUS EDULIS D12 A
   MODIGILAIOPPO R12

7) LITHORENA B. SCAUTULATA M-0123
   L. SITKANA M-0123
   NUCULA LAMELLOSA S12 A
   N. EMARGINATA S23 A
   SCARLESIA NITA MZ A
   TACHYAKMCGUS S23 A

8) LIMPETS
   TECTA RUA MZ A
   T. CONCRETATA S12 A
   T. LIMON
   LAMINARIA DIGITALIS S12 A
   LE FLORENCE 512
   ACMAEA MZ 512
   ACMAEA MZ 512
   Siphonaria denteata MZ 512 A

9) CHITONS
   TURRICULA LOCALS R23 A
   MYTILUS spp. R12 A
   KARMENIA IRONETA R12 A

10) SEA STARS
    PAGRAGODA HELIANTHOIDES MZ 512
    PAPPANACHUS 52-012
    LEPKOSERRA MZ 512
    ANDRESINUS R23 A
    PIASTOR ECHINUS MZ 512

11) SCALLOPS/CLAMS
    PODODONNOUS S12

12) ANEMONES
    ANTHOPODA ELEGANTISSIMA S12 A
    A. OCEANICUS MZ 512 A
    A. KANTHAROMMA R12 A
    TRachel ORCHITORNO R12 A
    SPINACIS MZ 512 A
13) Worms
- *Sipunculus* - *Phascolosoma* spp.
- *Polychaetae - Nereididae* #9123
- *Arenicola* OR #123
- *Serpulidae* R123
- *Flabellina* CRUCIGERA
- *Spirorbidae* M-D #123
- *Spirorbis* spp.

14) Fish
- *Clupeidae* - 3 spp. - M1/2
- *Pleuronectidae* - 12 spp. - M2/3

15) Hydrozoans - *Stylanthus parphyra*

16) Others
- *Natricula clausa* - moonshell - R2/3A
- *Amphisia columbiana* R2/3A
- *Lamelloderma busca?* M1/2
- *Guemotrophana orogensis* 5/123
- Other limpets - 2 spp.
- *Lepidactis* spp. - R2/3A
- *Schizoporella* spp. 7/123
- *Strongylocentrotus droebachiensis* R2/3A
VL patchy stain
1-2m wide x 20m long
on high tide line.

EL-106-A
3900 m

EL-106-B
650 m

EL-106-C
974 m

EL-106-A: Oil character lengths (m): CT 25 ST 75 NO
EL-106-B: CT 340 ST 525 CT 340 ST 359 NO°

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

Exxon Segment Length: 5524 m
ADCC Segment Length: 5078 m

Map Key: PWS-126a
Name: C. Dixon
Date: 4/2/96
Data Entered: 
EL-106

EL-106-A
3900 m

VL patch stain
1-2 m wide, 5-15 m long on high tide line

Photo 5
Large LNLG cobbles/pebble beach.
All surface sediments unveiled.
Pit 1 shows what appears to be a localized subsurface oiled berm
area about 2 m x 2 m on USITZ.
Snow covered USITZ may be oiled.

UTZ 3 m wide x 30 m long
Patchy coat on boulders

Photo 6
USITZ 5 m wide x 75 m long
VL sporadic dark brown stain on backside of bedrock

EL-106

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

Map Key: PWS-126b
Name: C. Dixon
Date: 4/24/90
Date Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION C (3 of 3)

WORK WINDOW

<table>
<thead>
<tr>
<th>Bioremediation</th>
<th>Manual Raking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>3N,O,P,Q</th>
<th>Harbor Seal &amp; Sea Lion Pupping and Molting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&amp;G to Mark Kuwada/ADF&amp;G</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
</tr>
<tr>
<td></td>
<td>Closed to bioremediation and manual raking after 8/15.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nests</td>
</tr>
<tr>
<td></td>
<td>Closed to bioremediation and manual raking. USFWS bald eagle impact assessment completed on 5/15/90 by Mike Lockhart indicates an active nest within 400m of the work area.</td>
</tr>
<tr>
<td>5R</td>
<td>Seabird Colony</td>
</tr>
<tr>
<td></td>
<td>NO CONSTRAINT. Work area is more than 800m from colony.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unolied biota and substrate.
Incorporated information from USFWS Bald Eagle Survey 5/24/90.

Seabird Colony recorded on NOAA map

ECOLOGY MAP 5/28
SEGMENT EL-106
SUBDIVISION (3 of 3)

METERS

EXXON
Exxon Company, USA
Map Key: KNL-EL-106
May 11, 1990

★ Seabird Colony
▲ Eagle Nest

1 inch = 1767 feet
SHORELINE EVALUATION

SEGMENT ST/EL-107 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use destination (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) Restrict air traffic to essential minimum. Air approach and take off from and to seaward only. Contact USFWS prior to treatment, for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: DATE: 4/17/90

OILING CATEGORIZATION:
Wide 66 m: Medium ___ m: Narrow 233 m: V.Light 338 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 14 cm

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

COMMENTS: Recommend bioremediation of areas shown on attached sketch maps and manual pickup of debris. Treatment activities should be conducted after 6/1 due to above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/6/90
ADEC JOHN NARRA DATE: 4/30/90
EXXON D. KEITZ DATE: 4/30/90
NOAA DATE: 4/30/90
USCG
SEGMENT ST  EL-107  A  SUBDIVISION  A  DATE  4/3/80

NAME  DAVID A. SCHNEIDER  SIGNATURE  David A. Schneider

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

THE SMALL BEACH AT THE NORTH END OF SUBDIVISION 1 SHOULD BE TREATED WITH HOT WATER WASHING ALONG ITS NORTHERN CORNER. MANUAL SCRUBBING AND DEBRIS PICK UP WHERE APPLICABLE. LARGE BOULDER COBBLE ROCK AT SOUTHERN END OF SUBDIVISION 1 WILL REQUIRE EXTENSIVE MANUAL SCRUBBING ALONG FRACURED ROCK AND BOULDER, BOREMEDIANION OF BOULDER/Cobble SURFACE SEDIMENTS, AND DEBRIS PICKUP OF OILED SURFACE BOOMS IN THE SITE. (SITE SHOULD BE REASSESS FOR FURTHER DEBRIS THAT MAY BE BURIED BY SNOW AT THIS TIME.) THIS BEACH IS OF HIGH RECREATIONAL VALUE.

NAME  PETER MONTESANO  SIGNATURE  Peter M. Montesano

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Described as walking from EL106 = 35m from EL106, pocket beach (Pt #1)


NAME  Janette R. Hitchcock  SIGNATURE  Janette R. Hitchcock

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Beach on north end of subdivision is heavily oiled. Recommend hot water wash. Staining seen in 2/12 needs to be removed. 2/12 reassessed after draw is open. Beach on south end of subdivision is heavily oily in C17 and 2/12. Recommend teen manual beaching. Remainder of beach should be put water washed and degumlated. Oilied logs and debris need to be removed. Area is good for beach cleaning.

[Signature]
### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Pavement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poolled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Stain</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mousse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Film</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Oil</td>
<td>Snow on beach</td>
<td>Only S</td>
<td></td>
</tr>
</tbody>
</table>

### PAVEMENT
- H: __sq. m by __
- Patties/Tarballs: __BAG

### NEAR SHORE SHEEN?
- No BR RW SL TL

### OILED DEBRIS
- Logs: X
- Vegetation: X
- Trash: X
- Debris: X

### OILED DEBRIS COLLECTED
- Yes [ ] No [ ]
- Oiled Trash: [ ]
- Unoiled Stills [ ]
- #Bags [ ]

### 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 BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2</td>
<td>X</td>
<td>5 - 9</td>
<td>X</td>
<td>X</td>
<td>P/G</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1/2</td>
<td>X</td>
<td>0 - 12</td>
<td>X</td>
<td>X</td>
<td>C/P</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1/6</td>
<td>X</td>
<td>0 - 10</td>
<td>X</td>
<td>X</td>
<td>C/P</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1/6</td>
<td>X</td>
<td>10 - 14</td>
<td>X</td>
<td>X</td>
<td>P/G</td>
<td></td>
</tr>
</tbody>
</table>

### COMMENTS

---

**Reviewed by:** [Signature]
**Date:** 4-8-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST1 EL107 Subdivision A

Date (mo/day/yr) April 1 1976

Time (24 hr) 1130 - N 1/2

B I o I s t

6 2 5 m

(A) Substrate type and % of segments:
(1) Bedrock 65 (2) Boulder 25 (3) Cobble 7 (4) Pebble 2 (5) Sand 1 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 60 Moderate 35 Low 5

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

<table>
<thead>
<tr>
<th>BARNACLES</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2 U</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2 M</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2 L</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MYTILUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GASTROPODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
3. Pelagic Cormorant 5 Seals 5 White-Winged Scoter
3. Red-Necked Grebes?
2. Eiders 2 Harlequin Ducks
10. Geese

Ecological Considerations: 6/1, 7/1, 5/5-2

Photographs:
Roll No. 3T - 6 - 3 3T - 6 - 4
Frames 23 - 2 1 - 5

SEE ATTACHED SHEETS
Barnacles (Balanus, Chthamalus, Semibalanus) are abundant on cliff faces, but less so on boulder & cobble. Spot (mainly Balanus) is very dense. Cobble beaches were had relatively low abundances.

Mussels are patchy, but generally dense on bedrock, except in the low zone. Spot & small juveniles are present a dense on bedrock, indicating active recruitment.

Cobble & Boulder habitats have few adults or juveniles, but sparse Spot. Wave disturbance probably causes high mortality in cobble areas.

Litorina snails were dense to moderate, and patchy. Mussel beds have moderate to high densities. Cobble areas have moderate densities.

Whelks - primarily found with mussels/barnacles.

Limpets - most abundant in Barnacle zone, but present in moderate densities in low cobble zone.

Some withered Fucus adults in upper zones on bedrock, but little on cobble beaches. Low zones dense.

Habitat Types,

a) Bedrock Cliffs / Headlands

1) Much of E107A is bedrock, occasionally exposed to high waves. Biological communities on the habitats show evidence of intensive recruitment for several species, including

- Mytilus (en masse), barnacles (Pismis spp., Semibalanus cariosus),
- Limpets (Lottia spp., Ficaria spp.), periwinkles (Littorina spp.), whelks (Nucella),
- Chiton (Katharina tramosa), sea urchins, sea anemones, and some clam spp.

This indicates a recovery from the disturbance and mortality caused by the oil spill, clean-up activities, and other factors.

2. Sigel core similarly shows evidence of this trend. Recruitment is strong for Fucus and other species.
IV. SPECIES LIST (cont.)

ANIMALS

POLYPHYTA worms
Spirorbis sp. ? A
Serpula sp. O
Cruciger sp. O

B. Sea Stars
Pycnopodia helianthoides A
Leptasterias sp. ? O
Pisaster ochraceus O
Orthasterias ?p. O
Denasterias A C

C. Bryozoans
? sp.

D. Barnacles
Balanus glandula A A
Semibalanus Cariosus A A
Chthamalus delli A

E. Snails
Litterina sceptrata A A
L. sithana A A
Searlesia diana A A
Nucella lamellosa A C
Tachyryynchus spp. ? A A

F. Limpets
Tectura persiana A A
Ti. setatum A A
Lotka spp. ? C

G. Jingles
Pododesmus cepio O

H. Chitons
Katharina tunicata A C
Tonicella lineata O

I. Mussels
Mytilus edulis A A
Clams
Protothaca staminea R
<table>
<thead>
<tr>
<th>EL07-A</th>
<th>EU07-A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TIME</strong>: 11:20</td>
<td><strong>Rockcut</strong>: Rockcut/Face/Shaft</td>
</tr>
<tr>
<td><strong>START AT</strong>: N</td>
<td><strong>#4 Pit</strong></td>
</tr>
<tr>
<td><strong>SUN</strong>:</td>
<td><strong>Cliffs</strong></td>
</tr>
<tr>
<td><strong>WILDLIFE</strong></td>
<td><strong>Bald Eagle seen</strong></td>
</tr>
<tr>
<td>- Bald Eagle (seen)</td>
<td><strong>.type</strong></td>
</tr>
<tr>
<td>- Hummingbird (gang 2)</td>
<td><strong>Barnacle</strong></td>
</tr>
<tr>
<td>- Eastern Kingbird</td>
<td><strong>Scrub-plant</strong></td>
</tr>
<tr>
<td>- Western Gull</td>
<td><strong>Dried Senna on copper</strong></td>
</tr>
<tr>
<td>- Western Gull</td>
<td><strong>Scrub-plant</strong></td>
</tr>
<tr>
<td>- Western Gull</td>
<td><strong>Seal/skinned</strong></td>
</tr>
<tr>
<td>- Pigeon Cormorant</td>
<td><strong>Viscera</strong></td>
</tr>
</tbody>
</table>

**SECTION 1: Rock Cut**

- *Hue/Sediment, Raw Spot, Moderate* |
- *Flake ray of about (2 needles)* |
- *Adult von kroeh* |
- *225.5 Micron Line* |
- *Lightly nucleated in **(3,5)*** |
- *450 Micron* |
- *Scrub-plant - Lithocarpon scroba, Elder* |
- *Scrub-plant - Lithocarpon scroba, Elder* |

- *#3 Beach 0.7 ft* |
- *Shells 0.1 ft* |
- *Small shellshells* |
- *Small K exped* |
- *Shells* |
- *Small K exped* |
- *Inflated K exped* |
- *Barnacle* |
- *Barnacle* |
- *Barnacle* |
- *Barnacle* |
- *Barnacle* |
- *Ground* |
- *Rock beach, sandstone*
<table>
<thead>
<tr>
<th>EL107-A</th>
<th>EL107-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach 2</td>
<td>Beach 2</td>
</tr>
<tr>
<td>Cobble Boulders</td>
<td>Cobble Boulders</td>
</tr>
<tr>
<td>Heavy current, pumpout</td>
<td>Heavy current, pumpout</td>
</tr>
<tr>
<td>Offshore</td>
<td>Offshore</td>
</tr>
<tr>
<td>17-10-20</td>
<td>17-10-20</td>
</tr>
<tr>
<td>#2 Photo - Panthera</td>
<td>Panthera</td>
</tr>
<tr>
<td>Coated Rock</td>
<td>Coated Rock</td>
</tr>
<tr>
<td>#1-2 Photo - Panthera</td>
<td>#1-2 Photo - Panthera</td>
</tr>
<tr>
<td>Breeding juvenile</td>
<td>Breeding juvenile</td>
</tr>
<tr>
<td>Medium Semilunar</td>
<td>Medium Semilunar</td>
</tr>
<tr>
<td>Large</td>
<td>Large</td>
</tr>
<tr>
<td>2-3 cm</td>
<td>2-3 cm</td>
</tr>
<tr>
<td>25 in 1m² -</td>
<td>25 in 1m² -</td>
</tr>
<tr>
<td>Moderate Bivalve</td>
<td>Moderate Bivalve</td>
</tr>
<tr>
<td>Semi-algae</td>
<td>Semi-algae</td>
</tr>
<tr>
<td>Sponges</td>
<td>Sponges</td>
</tr>
<tr>
<td>Pycnocystis</td>
<td>Pycnocystis</td>
</tr>
<tr>
<td>Polysiphonia Clavata</td>
<td>Polysiphonia Clavata</td>
</tr>
<tr>
<td>Densemod barnacles</td>
<td>Densemod barnacles</td>
</tr>
<tr>
<td>17-10-20</td>
<td>17-10-20</td>
</tr>
<tr>
<td>EL107A</td>
<td>EL107A</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>PHOTO 33</strong></td>
<td><strong>ROCK CLIFF</strong></td>
</tr>
<tr>
<td>Borealis (Bolus) Spat</td>
<td>7th tier</td>
</tr>
<tr>
<td><em>Sartobalanum</em> &amp; hydogen</td>
<td></td>
</tr>
<tr>
<td>Hydogen murale Spat</td>
<td></td>
</tr>
<tr>
<td>3 sets of tube, healthy</td>
<td></td>
</tr>
<tr>
<td><em>Borealis</em> (4)</td>
<td></td>
</tr>
<tr>
<td>4 sets of tube, healthy</td>
<td></td>
</tr>
<tr>
<td><em>Borealis</em> (2)</td>
<td></td>
</tr>
<tr>
<td>3 sets of tube, healthy</td>
<td></td>
</tr>
<tr>
<td>3 sets of tube, healthy</td>
<td></td>
</tr>
<tr>
<td>Letter, lettering</td>
<td></td>
</tr>
<tr>
<td>Upper, middle</td>
<td></td>
</tr>
<tr>
<td>Raw</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td></td>
</tr>
<tr>
<td><em>Sartobalanum</em></td>
<td></td>
</tr>
<tr>
<td>Hydogen?</td>
<td></td>
</tr>
<tr>
<td># Anthopleura xanthogrammica</td>
<td></td>
</tr>
<tr>
<td><em>Sartobalanum</em></td>
<td></td>
</tr>
<tr>
<td>Hydogen?</td>
<td></td>
</tr>
<tr>
<td># Anthopleura xanthogrammica</td>
<td></td>
</tr>
<tr>
<td>7th tier</td>
<td></td>
</tr>
</tbody>
</table>
SEGMENT EL-101
SUBDIVISION A

DATE 01 APR 90

CHECKLIST

- Oil and Water
- Approx. Scale
- Geotechnical Data
- Oil Spill Location
- % Cover
- Water Character
- Est. NWL/AWL
- WL
- Profile Location(s)
- Predominantly Oil Location
- Predicted Not Location

LEGEND

- Oil and Water Oil
- Water
- Oil
- Water Oil
- Water Oil

CT/C
Continuous Distribution

CT/B
Bipolar Distribution

CT/P
Piezometric Distribution

CT/3
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

OIL CHARACTER LENGTH (m): AP PO CV 30 CT 295 ST 300 MS PT TB FL NO

ETCH MAP

SPOT WASH AS REQUIRED
IN AREA OF PIT 1, 2, 3.

SEE ATTACHED SKETCH
FOR BLOW UP VIEW
OF THIS AREA

ILH SHORE ATUILZ

LT6 and Lt Shore
at high tide

LT6 and Lt Shore
Shoreline line

326

SCHREIDER

DEBRIS

5m wide
X 4 m long
Pit 1 here
Photo 4

INLAND
ADDENDUM: SUBDIVISION CONSTRAINTS

"SEGMENT EL-107 SUBDIVISION A (1 of 3)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup More Than 400m From Nest</td>
</tr>
<tr>
<td>Manual Pickup Less Than 400m From Nest</td>
</tr>
<tr>
<td>Spot Washing More Than 400m From Nest</td>
</tr>
<tr>
<td>Spot Washing Less Than 400m From Nest</td>
</tr>
<tr>
<td>Bioremediation More Than 400m From Nest</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest
USFWS bald eagle assessments conducted on 5/15/90 and 5/20/90 by Mike Lockhart indicate an active nest in the adjacent segment EL-106. Subdivision is closed to manual pickup, spot washing and bioremediation within 400m of the active nest.

7II Subsistence: Deer Harvesting
No constraint to manual pickup and spot washing. Closed to bioremediation and after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC Date: 6-10-90
Prepared by: J. Phillips Date: 6/8/90
Eco stogy Map

Segment EL-107

Subdivision A (1 of 3)

Exxon Company, USA
Map Key: KNI-EL-107

METERS

EXON

SEEDMENT EL-107

Subdivision A (1 of 3)

METERS

EXON

SEGMENT EL-107

Subdivision A (1 of 3)

METERS

EXON

ECOLOGY MAP

Segment EL-107

Subdivision A (1 of 3)

METERS

EXON

Seabird Colony

Eagle Nest

Incorporates information from USFWS Bald Eagle surveys 5/15 & 5/20/90.
ASAP FOLLOWUP RECOMMENDATIONS

Document: AS/EL-104
Subd.: A
Site: 1
Date: 8/11/1990

Conditions Observed:
Upon arrival to work site a silver sheen approx. 20x4m was observed in front of beach. Very small sumps thru out area were filled with silver sheen and mobile oil. Due to the area being observed as a sheen, Tag evaluation is recommended for decision tree. A pit was excavated and D/P/ORM was documented 0-15 cm subsurface.

Followup Recommendations:
- Tag evaluation (sheen) per decision tree.
- Small Hot H20 Heads system is recommended to migrate oil to drain line.
- Agitation is also recommended to loosen oil in subsurface. Small suction boom or same boom is recommended to contain and relieve oil.

Completed by Pickup
Crew:
ADBC
(Hand)
[Signature]

Priority for Addressing in 1990:
[X] High
[ ] Mod.
[ ] Low

Comments:
Due to the problem of sheen coming off this work site, it needs immediate attention. I am strongly against only using custom blend on site. It needs Hot H20 and agitation of oil is to be removed.

Signed
Rey Sotelo
(Hand)
[Signature]

Comments:
This site needs TAG evaluation. I don't agree with the recommendations stated above, if any work is done to this site in 90 it should be after TAG removal.

USCG
Pet Leo Borrison
(Hand) NOAA
Art Weimer
(Hand) Art Weimer

Comments:
Residual oil is protected by heavy armor + low energy regime. It will probably persist thru winter and continue to show. It is not accessible to manual removal + probably too concentrated for custom blend to use.

Land Rep.
John Bast
(Hand)
[Signature]

Comments:
From Objection Paper, comments collected throughout the sew-
cold water with Program is not an effective tool to remove oil. Pellets after hot water high. Program is effective. Site condition is hazardous to wildlife and needs immediate treatment.
ASAP TAG REVIEW SHEET

Segment: EL 107  Subd: A  Site: 1  Date PRE-Review 14 APR 89

Priority For Addressing In 1990

HIGH MEDIUM LOW X NTR

Treatment Recommended:
NTR

OG SHEET/SKETCH → NTR

Recommendation sheet - ask for hot water header system, agitation to remove/move subsurface oil & TAG VISIT.

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO

TAG 15 APR 90

Re B10 →
Already scheduled
reasses next year.
SEGMENT AS/EL 107  SUBDIVISION:  A  SITE: 1  DATE 8-11-90
USCG/NOAA  PS1 Leo Berolina  PS1 Leo Berolina
NAME  Art Weiner  SIGNATURE  Art Weiner

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
HEAVY CONCENTRATION OF SUBSURFACE OIL [OPOR: 0-15 cm].
BEACH OBSERVED TO BLEED RAINBOW SHEEN INTO NEARSHORE
WATER & TIDEPOOLS

ADEC
NAME  Wesley Ghorunley  SIGNATURE  Wesley Ghorunley

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- This area appears to be bleeding. A fairly large amount
  of sheen was present upon arrival.
  I recommend work be done on this area in 1990.
  Flood beach with hot H2O to retrieve oil.
- I also highly recommend not allowing this area to go unworked; this
  area will bleed all winter and put oil into the environment.

LAND MANAGER
NAME  John C.  SIGNATURE  John C.

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
IMMEDIATE TREATMENT IS ESSENTIAL FOR THIS SITE, BEYOND TO WILDLIFE.
To evaluate effectiveness of winter conditions on remaining oil after treatment

EXXON
NAME  Rey Sotelo  SIGNATURE  Rey Sotelo

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site should be reassessed in '91 to determine the effects
of bioremediation and winter storm activity.
ASAP FOLLOWUP RECOMMENDATIONS

Condition Observed: Very large beach with numerous logs, large boulders and bedrock. Very heavy oil/soil drips on bedrock/boulders through out work site. Thus, seems to be a tremendous amount of oil present under boulders, logs etc. at the site. Site soils are present on water ports. Subsurface oil is present in 15-25m storm drain 45cm on Northern end of work site. Oiled debris are present in storm drain in the center of work site.

- Work was done on site by 3 man crew but by no means was work complete.

Followup Recommendations: Work was done on site of landa units in 1990 with some improvement on CT/ST on bedrock/boulders. But there is too much of a concentration of oil present in boulders and under logs. For this reason Hot H2O High pressure 2" hoses are recommended. A Cold water/foam system should also be used to engulf oil. Landa units would only push oil deeper into the sediments. Oiled debris should be removed intermixed with logs.

Completed by Pickup
Crew: [ ] YES [ ] NO

Priority for Addressing in 1990: [ ] High [ ] Mod. [ ] Low

ADSC
Wesley Greene [Signature]

Comments: I strongly agree with above recommendations. If landa are the only method employed for this site, I wouldn't even try it. Oil will just be pushed deeper. USE HWHP 2" hoses and a Cold Water/Foam oil.

Exxon
REV: Soto

Comments: I don't agree with the recommendation stated above because hot water/foam will probably have the same effect as a landa unit too. This will only push the oil deeper. My recommendation is to re-apply contamidated sediments.

USCG
[Signature]

Comments: All accessible oil was manually removed. Considerable amount of remaining oil is recalcitrant. HWHP will remove interstitial oil that is too concentrated for removing processes to be effective.

Land Rep.

Comments: Agree w/ HWHP 2" hoses with containment boom and Snap boom for recovery. Why were the HWHP units deployed on sites such as this initially?
ASAP TAG REVIEW SHEET

Segment: EC107  Subd: A  Site: 2  Date
PRE-Review 14/08/90

Priority For Addressing In 1990

___ HIGH  ___ MEDIUM  ___ LOW  X NTR

Treatment Recommended:

NTR

OG/SKETCH - Spontaneous AP/cont = NTR

REC. SHEET - Remove oil debris, clean

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO  YES  NO

CG  ADEC  EXXON  LAND MGR

TAG 15/AUG/90

Re-Blow 2 already done

Reassess next year
FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL107  SUBDIVISION:  A  SITE:  2  DATE 8-11-90
USCG/NOAA  P51  New Berlin  Ted Barlow
NAME  Art Weiner  SIGNATURE  Art Weiner

☐ YES  ☑ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
ALL ACCESSIBLE OIL REMOVED ON 8-11-90

ADEC
NAME  Wesley Ghormley  SIGNATURE  Wesley Ghormley

☐ YES  ☑ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  This is a tremendous amount of oil on this site that I believe needs further attention. It will take a lot of work to make the oil accessible to be cleaned (large will have to be removed), but I feel the amount of work will be rewarded by the large amount of oil that will be removed.
This site will need additional work in 1991.

LAND MANAGER
NAME  John Ebel  SIGNATURE  John Ebel

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  Currently the oil at this site is unstable and poses threat to wildlife. Treatment for '90 is recommended as priority. To evaluate the effectiveness of treatment after winter conditions.

EXXON
NAME  Ray Sotelo  SIGNATURE  Ray Sotelo

☐ YES  ☑ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
All accessible oil was removed by Vero crew on 8-11-90. The site should be assessed as a low priority in '91 to evaluate the effects of customized oil winter storms.
**ASAP SHORELINE OILING SUMMARY**

**TEAM NO.** ASAP #2  
**EXXON** SOTelo  
**SEGMENT AS.** EL 107  
**OG.** Chaney  
**CHORMLEY**  
**DATE** Aug. 11, 1990  
**TIME** 6:45 to 10:40 AM  
**TIDE LEVEL** 2 ft.  
**TOTAL EST. LENGTH OF SHORELINE SURVEYED:** 6.46 m  
**SURVEYED FROM:** USCG/Boat  
**WEATHER:** Sun, Clouds  
**OIL CATEGORY LENGTH:** W204m  
**TOTAL NO. SITES** 2  
**TOTAL NO. SITES** 2  

**SURFACE OIL**

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<th>SITE 3</th>
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<td><strong>DISTRIBUTION</strong></td>
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**SUBSURFACE OIL**

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>CLEAN BELOW (Y/N)</th>
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**COMMENTS**

*CEF NOTES ATTACHED TO MODIFIED SSAT*
ASAP #2
AUGUST 11 1990
FROM SSAT MAP
CHANLEY MAP 1 of 2

SEE ATTACHED NOTES

SITE 1
SEE ATTACHED NOTES

SEGMENT EL-1
SUBDIVISION A
LENGTH = 625 m

SEGMENT STEL-107
SUBDIVISION 9
DATE 01 APR 90

SITE 2
SEE Figure Sketch FOR BROAD UP VIEW OF THE AREA

SPOT WASH AS REQUIRED IN AREA OF PIT 1, 2, + 3

CHAPTER
5m wide
Patchy

CT/C
CT/D
CT/E

Regular Distribution
Patchy Distribution
Scattered Distribution

O8 Character Length [m]: AP PO CV 30 CT 295 ST 300 MS PT TB FL NO
ASOP #2
AUGUST 11 1990
FROM SSAT
MAP
CHANLEY
MAP 2 of 2
Notes for Sketch map.

EL-107-A

SITE 1

"A"
Rainbow sheen near shore. Continuous rainbow film on rocks in the MITZ & LITZ. Thin black drops of oil in pit #1. Oil in the pit was not quite running out under gravity but a great deal of black mobile oil ran into the pit with ground water. No customblen was observed in the area. Although the original SSAT survey indicated CT/B in the area it seems to have weathered to CT/P.

"B"
Along bedrock wall the oiling condition does not seem to have changed since the SSAT survey. Very little film or sheen noted in this area.

SITE 2

Time did not allow for a complete reassessment of SITE 2 but a wide variety of oiling conditions were observed. The SSAT survey does not accurately reflect the current degree of oiling at this site. Since the area received extensive manual treatment this summer, it is likely that additional oiling conditions were exposed. It is also possible that heat from the summer sun has brought more oil to the surface than was present on April 1. Considering the difference between conditions recorded in April and the "fresh" appearance of oil near sheltered sites, it is possible that mobile subsurface oil is still present. Due to the complexity of the site it was not possible to complete a thorough reassessment of this site. Major additional findings are listed below.

"C"
Subsurface oil is present even though it is not indicated on the SSAT sketch map. In the center of the oiled zone an ASAP pit was dug and OR oil was found extending 10 cm. below surficial boulders. Another ASAP pit located in the storm berm revealed OR extending beyond 45 cm. A large percentage of organic material was mixed with oil in the storm berm. Although this site received extensive treatment, it still retains CT/B in the MITZ & UITZ. Customblen is present on the beach. In addition to oil identified by the SSAT, CT/C/U, CV/P/U, SOR/I and soft AP/I/P should be added. This area is sheltered behind a bedrock outcrop and does not recieve direct wave energy.

"D"
At the base of logs in the storm berm a wide variety of oiling conditions exist. Massive boulders retain classic examples of oil stains. Lower boulders retain patchy coats. Some SOR/H sediments were picked up by our VECO crew, however it is probable that some SOR/H remains on site. Oil on the sediments appeared dark and "fresh." It extends from the UITZ to the MITZ. CV/P and ST/P should be added to this area. Continuous sheens were observed in most tidal pools.
SEGMENT ST/EL-107 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use designation (6Y) - 6/1 to 9/15. Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to unoiled substrate and biota.

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:
Wide 16 m: Medium 34 m: Narrow 554 m: V.Light 39 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 12 cm

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

COMMENTS: Recommend manual pickup of mousse and debris and bioremediation of areas shown on attached sketch map. Treatment activities should be conducted after 6/1 based on above constraints.

TAG COMMENTS:
If possible work with the rising tide + rake + oil snare areas of high concentration of oil (test pits 1, 2, 3)

TAG APPROVAL DATE: 4/16/90
ADEC [Signature] DATE: 4-20-90
EXXON [Signature] DATE: 4-20-90
NOAA [Signature] DATE: 4-20-90
USCG [Signature] DATE: 4-20-90
**SURFACE OIL**

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<tr>
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<td>Snow on end of beach</td>
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**SUBSURFACE OIL**

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**COMMENTS**

Photograph:

Ref No: ST-1-3

Frames: 222

Page 1 of 1

Reviewed: 4/4
Date: 4/8/90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/EL-107-13 SUBDIVISION: B DATE 4/3/90

SCG NAME DAVID A. SCHNEIDER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

MANUAL REMOVAL OF MUSSELS AND DEBRIS FROM SMALL BOULDER BEACH IN THE CENTER OF THIS SUBDIVISION. RECOVERY OF OILED DEBRIS ALONG BASE OF VERTICAL BLUFF.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS WORKING SOUTH ALONG "B" - The narrow broken sand along the LHR+Boulders as a Permeation to 10cm in sand, pebbles, and gravel this area is not Biodegradable or filterable, an OMNI at the MIZ would be effective, an OMNI would be effective in the vicinity of Pit #2 along with hand work.

The SW corner of "B" is most indeed of work for this subdivision. This area is covered at the Supral and a submerged LHR at the time of inspection. This area has a 5x4m, 3-4cm surface mousse coating of DBP oil, apparently not previously washed.

I intended a MIZ Pit of op/off saturation of 17cm in fine sediments, orange, thick for Bp, and would be effectively treated by an OMNI after moving some Say.

LATER: Further south is oil trapped in cracks along the Rock face.

LAND MANAGER
NAME JANET A. SCHNEIDER SIGNATURE [Signature]
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/ EL109  Subdivision B  Date (mo/day/yr) April 1, 1990

Time (24 hr) 1445-1510  Biologist Jim Beare  710 m

(A) Substrate type and % of segments:

   (1) Bedrock  (2) Boulder  (3) Cobble  (4) Pebble  (5) Sand  (6) Mud

(B) Overall % cover of biota (% of segment): Dense 76  Moderate 14  Low 10

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

   Juveniles/adults (X); new settlement (S)

Further comments:

**BARNACLES**

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Photographs:

Roll No. ST-6-3

Frames 22-23

Wildlife Observations/General Comments:

Ecological Considerations: 64, 711, 9T2

See attached pages
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<th>EL107-C</th>
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<td><strong>EU07-8</strong></td>
<td></td>
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<tr>
<td>-----------</td>
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<td></td>
</tr>
<tr>
<td><strong>Time:</strong> Pre-1445</td>
<td>Boulder Beach 1</td>
<td></td>
</tr>
<tr>
<td><strong>Cliff:</strong> continued</td>
<td><strong>Facies:</strong> 2 Morass to high Spummi Mytilus</td>
<td></td>
</tr>
<tr>
<td>Low &gt; Fucus</td>
<td>Builders in dune have the Mytilus lit on the cliffs</td>
<td></td>
</tr>
<tr>
<td>Rock Mytilus (3,5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 long/ many sp</td>
<td>Scree line</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>No Neorodexi 'beds offshore'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>223 - Mussel recruitat in areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also dense hunters, littleneck</td>
<td>Blue-green cover and green buffers</td>
<td></td>
</tr>
<tr>
<td><strong>Midzone Por.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corallina,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhodopesma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rasenica</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moss leaf covers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olukna? &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kathania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antedius?</td>
<td></td>
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</tr>
<tr>
<td>Calocera</td>
<td></td>
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<tr>
<td><strong>Upper Por.</strong></td>
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<tr>
<td>Por - Porose</td>
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<tr>
<td>Essentially identical to lower</td>
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<tr>
<td>Scolos</td>
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<td>Scolos</td>
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<tr>
<td>Wildlife</td>
<td>EL107-B</td>
<td>EU07-B</td>
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<tr>
<td>---------------</td>
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<td>-------------------------</td>
</tr>
<tr>
<td>Eagles</td>
<td></td>
<td>Seminala Spot Adeuts</td>
</tr>
<tr>
<td>Sea Birds</td>
<td></td>
<td>Orthodera</td>
</tr>
<tr>
<td>Pelican</td>
<td></td>
<td>All other Naval seafood</td>
</tr>
<tr>
<td>Flatware</td>
<td></td>
<td>Beach 3 - Gritti / Pebbles</td>
</tr>
<tr>
<td>Anharcem</td>
<td></td>
<td>Very Will on Beach</td>
</tr>
<tr>
<td>Falconf</td>
<td></td>
<td>on Sandles</td>
</tr>
<tr>
<td>Pelican 1</td>
<td></td>
<td>20 Species Cullen adult</td>
</tr>
<tr>
<td>Pelican 2</td>
<td></td>
<td>10 Species Cullen</td>
</tr>
<tr>
<td>Pelican 3</td>
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<td>Pelican 4</td>
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<td>Pelican 16</td>
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<td>160 Species Cullen</td>
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<td>Pelican 17</td>
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<td>220 Species Cullen</td>
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<td>Pelican 33</td>
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<td>Pelican 36</td>
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<td>380 Species Cullen</td>
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<td>Pelican 39</td>
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<td>Pelican 40</td>
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<td>400 Species Cullen</td>
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<td>Pelican 41</td>
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<td>Pelican 42</td>
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<td>420 Species Cullen</td>
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<td>Pelican 43</td>
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<td>Pelican 44</td>
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<td>Pelican 45</td>
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<td>Pelican 46</td>
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<td>460 Species Cullen</td>
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<td>Pelican 47</td>
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<td>470 Species Cullen</td>
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<td>Pelican 48</td>
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<td>480 Species Cullen</td>
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<tr>
<td>Pelican 49</td>
<td></td>
<td>490 Species Cullen</td>
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<tr>
<td>Pelican 50</td>
<td></td>
<td>500 Species Cullen</td>
</tr>
</tbody>
</table>

CLIFF A - By Boat
445 p.m.

Normal movements towards
in 6 p.m.
<table>
<thead>
<tr>
<th><strong>L107-B</strong></th>
<th><strong>pp.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gastropods</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>Turritellidae</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>Tachyhyphoea caesius</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>Palmaria</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>Siphonaria tessita</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>Savaglia</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>Pododesmus capro - kungfuhl</strong></td>
<td><strong>L107-B</strong></td>
</tr>
<tr>
<td><strong>End at 1700</strong></td>
<td><strong>L107-B</strong></td>
</tr>
</tbody>
</table>
EL107-B

ADDITIONAL COMMENTS

1) EL107-B IS VERY SIMILAR, WITH REGARD TO HABITAT TYPE, TO EL107-A
   a) Headland & Cliff faced coastlines have similar appearance, and biotic assemblages between A & B
   b) Boulder and cobble beaches too, are similar.

2) MAJOR SPECIES - SEE COMMENT FOR EL107-A

3) OTHER SPECIES - MOST OR ALL OTHER SPECIES WERE DISTRIBUTED AS IN EL107-A - SEE COMMENT (EL107) FOR FURTHER INFO. (SPECIES LISTS, ETC.)

WILDLIFE -

LIST IN EL107-A INCLUDES THOSE FOUND IN EL107-B.
VII. WILDLIFE

3 Pelagic Cormorant
3 Barred Scockes
2 Ravens
10 Crow
5 Seals
2 Red-necked Grebe?
2 Horned Grebe
5 White-winged Scoter

VIII. GENERAL COMMENTS

1) Eel grass (Zostera) is present in patches in the low intertidal. This species is an important spawning substrate for herring. These eel grass beds should not be highly disturbed during clean up operations. Since they are in the low zone, clean up should cause little or no damage.

2) Bald eagle nesting is active nearby. I am not sure that clean up would interfere at all.

3) This stretch of beach appears to be recovering from disturbance.
B. COBBLE BEACHES -
These beaches show evidence of intense disturbance by
winds and storms. Cobble are mostly bare, or have a
film of filamentous green algae in low zones to mid zone,
upper zones are often covered by a thick coat of Porphyra.

VI. Species List

PLANTS
A. Green Algae - CHLOROPHYTA
ULVA spp.
Spongomorpha
Entsro morpha spp.
Urospora

B. Red Algae - RHODOPHYTA
Ahnfeltia plicata
Lithothamnion sp.
Porphyra pertusa
Phaeodera larix
Rhodymenia palmata
Rhodoglossum affine
Calliostomum sp.
Halocassioa glandiforme
Plocamium sp.
Membranoptera platyphylla
Iridaea sp.
Petrocelis

C. Brown Algae - PHAEOPHYTA
Alaria pilaeri
Fucus distichus
Laminaria spp.
Ralfsia
Scytosiphon
Odonthalia
Costaria

D. Higher Plants
Zostera
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-107 SUBDIVISION B (2 of 3)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup</td>
</tr>
<tr>
<td>Bioremediation</td>
</tr>
<tr>
<td>Manual Raking</td>
</tr>
<tr>
<td>Other Approved Treatment</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 5T | Bald Eagle Nest | NO CONSTRAINT. USFWS bald eagle impact assessments conducted on 5/15/90 and 5/27/90 by Mike Lockhart indicate no active nests within 400m of the work area. |
| 7II | Subsistence: Deer Harvesting | No constraint to manual pickup. Closed to bioremediation, manual raking and other approved treatment after 8/15. |

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.
Incorporates information from USFWS bald eagle surveys 5/15 & 5/27/90.

ECOLOGY MAP 5/90
SEGMENT EL-107
SUBDIVISION B (3 of 3)

METERS

0 378 732

1 inch = 1233 feet

Exxon Company, USA
May 11, 1990

Seabird Colony
Eagle Nest
ASAP FOLLOWUP RECOMMENDATIONS

Condition Observed: A 100 SQUARE METER AREA OF HEAVY SUBSURFACE OIL [OP] WITH PENETRATION DOWN TO 20 CM. DENSITY OF OIL-SEDIMENT MATERIAL IS SUCH THAT CUSTOM BLEND WOULD PROBABLY NOT WORK. AREA IS LOCATED IN THE SOUTHERN MOST SECTOR OF THE SITE WHICH ENJOYS PROTECTION FROM HIGH WAVE ENERGIES.

Followup Recommendations: THE PREFERRED AND OBOVIOUSLY MOST EFFECTIVE TREATMENT WOULD BE TOTAL REMOVAL OF ALL OF THE SEDIMENTS FOLLOWED BY CUSTOM BLEND APPLICATION OVER THE 100 CM. DEEP. A LESS DESIRABLE ALTERNATIVE WOULD BE MANUAL TILLING FOLLOWED BY CUSTOM BLEND APPLICATION IN 1990 WITH REMOVAL ON 1981 WHICH WOULD UNDOUBTEDLY LEAD TO A SECOND ROUND OF TILLING AND BIOREMEDIATION.

Completed by Pickup Crew: [ ] YES [ ] NO

Priority for Addressing in 1990: [ ] High [ ] Mod. [ ] Low

ADEC Wesley Graham

Comments: I agree with total removal of oil followed by custom blend. In addition, this is also oily debris in the site mixed with logs that need to be removed.

Exxon Ray Sutcliff

Comments: I don't agree with the recommendations total clean, until the area should be tilled and custom blend reapplied, premoni the should follow to assess the effects of live and winter storms.

USCG PS1 Leo Beal 1972

Comments: NOAA: Art Weiner Art Weiner

I AGREE WITH THE RECOMMENDATION.

Land Rep. John Ebel

Comments: I concur w. ADEC & NOAA Existing Conditions Negade to WILDLIFE.
ASAP TAG REVIEW SHEET

Segment: EL 107  Subd: B  Site: 2  Date
PRE-Review 14/06/90

Priority For Addressing In 1990

- HIGH  X MEDIUM  _ LOW  _ NTR

Treatment Recommended:

BIOREMEDIATION

As per Recommendation

OG SHEET = BROKEN SPR
SKETCH DMS NOT SHOW SPR > NTR

Recommendation Page - TOTAL REMOVAL
OF NIR SEDIMENT (@ 0-20 cm)

SHEET 1  8  NO REC. SHEET

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO

CG  ADEC  EXXON  LAND MGR

TAG 15/06/90

Manual tell [remove surface

OP + BIO

HIGH
SEGMENT AS/EL 107  SUBDIVISION:  B SITE:  Z DATE 8-11-90

USCG/NOAA PS1 Leo Berzalmza  Leo Berzelma
NAME Art Weiner SIGNATURE Art Weiner

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
HEAVILY OILED SUBSURFACE SEDIMENTS IN SOUTHERNMOST SECTOR
OF SITE [≈ 1000 m² OP].

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- Southern most pocket. One of this site has OP Oil
- Under clean sediment, oil is very black in some places and has
  the appearance of mousse in other places, the smell is very strong.
- It needs to be manually removed this year.
- Oiled debris in storm been in center of beach needs
  to be removed also.

LAND MANAGER
NAME John Ebel SIGNATURE John Ebel

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- Oil on this site has very strong odor smell.
- Multiple small micro pockets with very shadow effects
- To evaluate effects of winter conditions on remaining oil.

EXXON
NAME Ray Sotoelo SIGNATURE Ray Sotoelo

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- Reassessment will be necessary in '91. This site is located
  in an area that is very inaccessible.
**ASAP SHORELINE OILING SUMMARY**

**TEAM NO.** ASAP #2  
**EXXON**  
**CHANEY**  
**SOTELO**  
**USCG**  
**WEINER/BERSALONA**  
**DATE** AUG 11 1990  
**TIME** 05:10/13:05  
**TOTAL EST LENGTH OF SHORELINE SURVEYED:** 330 m  
**SURVEYED FROM:** X Foot □ Boat □ Helo  
**WEATHER:** □ Sun □ Clouds □ Fog □ Rain □ Snow  
**OIL CATEGORY LENGTH:** W 15 m M 110 m N 180 m V 2.25 m NO 0 m US 3.13 m  
**TOTAL NO. SITES** 2  
**TIDE LEVEL** 0.5 to 3.5

**SURFACE OIL**

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHARACTER</td>
<td>DISTRIBUTION</td>
<td>OILED ZONES</td>
</tr>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
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<tr>
<td>S.O.R</td>
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<td>POOLED</td>
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<tr>
<td>COVER</td>
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<td>MOUSSE</td>
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<td>PATTIES/T.B.</td>
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<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
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<tr>
<td>EST. SITE LENGTH</td>
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**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>SITE NO</th>
<th>PIT NO</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SSUBSURFACE SEDIMENTS</th>
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<tbody>
<tr>
<td>1 1 40</td>
<td>X</td>
<td>0.20 Y</td>
<td>X</td>
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<td>PC-PC</td>
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<tr>
<td>2 2 50</td>
<td>X</td>
<td>0.20 Y</td>
<td>X</td>
<td></td>
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<td>PC-PC</td>
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<tr>
<td>2 3 20</td>
<td>X</td>
<td>0.20 N</td>
<td>X</td>
<td></td>
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<td>CP-CPR</td>
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</tbody>
</table>

**PHOTOGRAPHS:** ASAP #2  
**ROLL NO.** Roll #3  
**FRAMES:** 516  
**LOCATED BEHIND 3 TREE ISLANDS**

**COMMENTS:** SEE ATTACHED NOTES

**REVISED NO. 727M**
ASAP #2
AUGUST 11, 1990
FROM SSAT MAP
CHANLEY
(SEE NOTES)

SITE 2

SEE ATTACHED NOTES

Schneider

Oil Character Length (ft): AP FO CV 20 CT 520 ST 170 MS 1 PTF 20CM TB FL NO

SUBDIVISION B
LENGTH = 710 METERS
SITE 1
In addition to the SSAT information patches of sheen were and present along the shore and ST/P on bedrock. OP was not observed but SOR/I and traces of customblen were present.

SITE 2

"A"
Broken stain and patchy coats in the UITZ. CT/B/U are found on the boulders which dominate the area.

"B"
Behind a large bedrock outcrop CT/C 1x5 meters is present. Customblen is deposited in many rock crevices. In some locations the customblen concentration exceeded 3 pounds in one crack. It seems that customblen was too concentrated in this area. Bedrock and boulders in the entire area have ST/CT/P. Photo #5.

"C"
In the small cove south of "3 tree island" another very heavy application of customblen was observed in the HITZ and SUPRA. Some logs had been cut in this area. The center of the beach was clean on the surface and a pit to 50 cm did not locate subsurface oil. On the southern edge of the cove a small pocket beach is located. In this area subsurface OP oil was located to 20 cm+. Some customblen in this location. Rainbow sheen was found in tidal pools. SOR/H/B sediments in a 10X10 meter area. Some mobile oil is still present in this area.
SHORELINE EVALUATION

SEGMENT ST/EL-107 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Active bald eagle nests (ST-2) - 3/1 to 6/1; Recreation special use designation (SY) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to unoiled substrate and biota.

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

OILING CATEGORIZATION:
Wide 65 m: Medium 28 m: Narrow 93 m: V.Light 194 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 60 cm

RECOMMENDATIONS:
_____No Treatment Recommended _____Snare/Absorbent Booms
_____Treatment Recommended _____Oil Snares (pom poms)
_____Manual Pickup _____Absorbents (pads, rolls, etc)
_____Bioremediation _____Spot Washing: X Wands
_____Tarmat: ___Breakup
_____Removal _____Beach Cleaner
_____Other (see comments)

COMMENTS: Recommend bioremediation of areas shown on attached sketch map and manual pickup of tarballs. Treatment should be conducted after 6/1 based on above constraints.

TAG COMMENTS:
IN AREA OF POCKET BEACH WORK WITH RISING TIDE AGITATE/RAKE & USE OIL SNARE. SPOT WASH AS REQUIRED.

TAG APPROVAL DATE: 4/16/90
ADEC [Signature] DATE: 4/20/90
EXXON [Signature] DATE: [Signature]
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EL-107-C SUBDIVISION: C

DATE 4/3/90

NAME DAVID A. SCHNEIDER SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

Two rocky beaches in subdivision C are in need of treatment. The area adjacent to subdivision B should be manually wiped where feasible, and boulders placed for additional dewatering. The 2nd & larger rocky beach warrants bioremediation treatment, with tilling recommended to expose deeper oiled sediments to de.

Boulders & rock piles to south of this beach should be wiped/scrubbed in areas of concentrated tar/cont. Remaining portion of subdivision (steep bluff with boulder slope) is highly exposed to wave action. Strand band along this portion can be left untreated for future storm

ADEC NAME PETER MONTEZAN SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

My comments describe 2 beaches working from North to South. These two beaches are in most need of work for Sub C: Beach #1 is the first 75m from "A" with 2-10m wide bed, at the LITZ +Sup + oils. Infront along back headlands, splash reach upon 4m. The oil is not easily handled and around Boulders but that seems to be the most reasonable approach. Washing would be most effective only at narrow tide windows. - Beach #2 has Boulder Coast. Boulder to East (Pitt #1) LITZ, stretch oiling down into finer sediments, hard work, not reachable by wave. Beach #2 is well covered on map. No pits are among smaller boulders here below WITZ. Supertidal covered in snow, and Supertidal Bernabe buried. The oiling deeper below clay clumping. Beach could be tilled, washed and covered. Southernmost beach (Pitt #5) is a rock head, guilley with snowy 8m Supa out 115m LITZ +Supa oiling. Hard work able and unstable, trapped by small drainage. Technically not a bio area, but could be partially effective. The pit #5 to #3 has some pit with LITZ oiling only. Reachable by hand and is not visible from SHP. A lost packet of "C" to be found.

LAND MANAGER NAME VICTOR TRUJILLO SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

Deals well with ADEC comments. Because Beach 2 is ideal for access by the employees. I believe extra attention should be given to this area. As SHP tends to be marshaled after the dewater is gone.

Because the oil has deeply penetrated the substrate, the use of hot water/steam, tilling and fertilization do not recommended. A small flat, used to treat spills in the "A" end of this beach.
## SHORELINE OILING SUMMARY

**OG. C. DILLON** USCG  **D. SCHNEIDER** SEGMENT ST/EL-107

**BIO. J. SASS** LAND REP. **T. PRITCHARD** SUBDIVISION

**EXXON. A. SNICK** ADEC  **P. MONTESANO** TIME 11:30 TO 13:30

**TEAM NO.:** 6  **TIDE LEVEL:** +5 TO +1  **DATE:** 04/02/90

**EST. SUBDIVISION LENGTH:** 399 m  **DAY:** Clouds  **Rain:** Snow

**UPLANDS DESCRIPTION:**  **FOOT:**  **BOAT:**  **HELICOPTER:**

**SURVEYED FROM:**  **SLOPE:**  ** exile

**SURFACE SEDIMENTS:** R 50% B 30% C 15% G 5% S 8% M 2% V

**WAVE EXPOSURE:**  **Low**  **Moderate**  **High**

**OIL CATEGORY LENGTH:** W 193 m M 26 m N 47 m V 100 m NO 10

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
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<tr>
<td>POOLED</td>
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<tr>
<td>COVER</td>
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<td>COAT</td>
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<td>STAIN</td>
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</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PAVEMENT:**  **NEAR SHEEN?**

**PATTIES / TARBALLS:** 2  **SUBSURFACE OIL**

**Photographs:**

**Roll No.:** ST-6-3  **Frames:** 10, 11, 14, 16, 18-20

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED DEBRIS AMOUNT</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>SUBSURFACE SEDIMENTS</th>
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<tbody>
<tr>
<td>1</td>
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<td>X</td>
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<td>C/P</td>
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<td>0 - 17</td>
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<td>C/P/G</td>
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<td>P/G</td>
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<td>X</td>
<td>C/P</td>
<td></td>
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<tr>
<td>5</td>
<td>30</td>
<td>X</td>
<td>0 - 30</td>
<td>X</td>
<td></td>
<td>X</td>
<td>C</td>
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</table>

**REVIEWED:**  **DATE:** 4-8-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST  E107  Subdivision C  

Date (mo/day/yr)  APRIL 2 1996  

Time (24 hr)  1000  

Biologist Jim Burrey  

Length  397 m  

(A) Substrate type and % of segments:  

(1) Bedrock  (2) Boulder  (3) Cobble  (4) Pebble  (5) Sand  

(B) Overall % cover of biota (% of segment): Dense  80  Moderate  15  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)  

Photographs: ST-6-3  

Roll No.  

Frames 15, 14 

BARNACLES  

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tr>
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MYTILUS  

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GASTROPODS  

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FUCUS  

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Wildlife Observations/ General Comments:  

Glaciers gull  

Seal  

Salmon  

Ecological Considerations:  6 Y, 7 II, ST-2  

a) Beach recovery appears to be progressing rapidly  

b) Unlikely that small clean up crew will interfere with any listed sensitives
ADDITIONAL COMMENTS

I - EL107 - C includes a cobble/boulder beach & a small cove (Boulder), both of which are protected from large waves. Unlike more wave-exposed cobble beaches in this segment that have relatively low biotic abundances, those in EL107 - A have dense gastropod & Mytilus cover. This is likely due to the low frequency of disturbance, thus allowing these species to survive and accumulate. The protected cove had the highest diversity & cover of Fistic yet observed. All species listed in the report for EL107- A are present, plus those listed below.

II. MAJOR SPECIES

A. BARNACES - Except where cobble are frequently rolled by waves, barnacles are abundant, with higher densities present on cliff faces.

B. MYTILUS - Densities are frequently high on bedrock and large boulders and often as dense in patches on the cobble beach.

C. GASTROPODS

1. Periwinkles - Littorinae variable abundant, but very dense on the cobble beach. In the mid zone to low zone. Spat & small juveniles are abundant in debris among mussel beds & barnacles in the high to mid zone.

2. Whelks - Most abundant where barnacles & mussels are present, but also in cobble beaches.

3. Limpet - Greatest abundance if spat, juveniles (dense to moderate) in mussel/barnacle habitats in the mid to high zone.

D. FUCUS - Dense in the middle zone to low zone. Sparse to moderate in the on high zone.
III  OTHER SPECIES — found in areas not listed in E107-A, in addition to those listed in E107-A

- Hydrozoa — Stylanthaea parphyra
- Anemones — Anthopleura armatea
- Chilons — Tonnella insignis
- Sea Slugs — Hemaria lixioidea
- Brittlestars — Ophiopholis aculeata?
- Ophiura — Ophiura sp.
- Cali — Pajita granulis
- Acanthothodes hispidus
- Hydroids — Sertulariidae
- Snails — Littorina digitalis, Nocella emarginata

IV  WILDLIFE

- Glauceus bull
- Seal
- Storks
- Raven
- Crow
- Pigeon Guilemor

V  General Comments

1) This beach section has a heavy recruitment of mussels, barnacles, and gastropods (dippers, littorines). Algae are abundant (Fucus and others) from the middle to low and sublittoral zones.

2) Mussel beds (recovery) should not be disturbed during cleaning operations, especially at on the cobble beach.
<table>
<thead>
<tr>
<th>Cliffe and South</th>
<th>EL167C</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Serradulina</em></td>
<td><em>moderat-terra</em></td>
</tr>
<tr>
<td>40/1cm</td>
<td></td>
</tr>
<tr>
<td>Sorted Fish</td>
<td></td>
</tr>
<tr>
<td>Dense mytilina</td>
<td></td>
</tr>
<tr>
<td>Dense <em>Serradulina</em></td>
<td></td>
</tr>
<tr>
<td>Dense Balanus</td>
<td><em>Serradulina</em></td>
</tr>
<tr>
<td><em>Buccinum,</em></td>
<td><em>C unarmed</em></td>
</tr>
<tr>
<td><em>Cryptochiton</em></td>
<td></td>
</tr>
<tr>
<td>Expanded Sandy.</td>
<td></td>
</tr>
<tr>
<td>2.5m² up</td>
<td>1.0m²</td>
</tr>
<tr>
<td>13 <em>Koelzonia</em></td>
<td>0.0m²</td>
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<thead>
<tr>
<th>_DEVICES LIST</th>
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<tbody>
<tr>
<td><em>Bullaria Claudia</em></td>
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<tr>
<td><em>Semihornis Euryanus</em></td>
</tr>
<tr>
<td><em>Parva</em></td>
</tr>
<tr>
<td><em>Citeriuma Scutulata</em></td>
</tr>
<tr>
<td><em>L. Strand</em></td>
</tr>
<tr>
<td><em>Nucella Laminosa</em></td>
</tr>
<tr>
<td><em>Parva</em></td>
</tr>
<tr>
<td><em>Lotia</em></td>
</tr>
<tr>
<td><em>Mytilus edulis</em></td>
</tr>
<tr>
<td><em>Spirorbis</em></td>
</tr>
<tr>
<td><em>Serigula?</em> or <em>Crucipila?</em></td>
</tr>
<tr>
<td><em>Pycnogadus</em></td>
</tr>
<tr>
<td><em>Dermatina</em></td>
</tr>
<tr>
<td><em>Orthidaria</em></td>
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<tr>
<td><em>Naiadopsis</em></td>
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<tr>
<td><em>Nucella Laminosa</em></td>
</tr>
<tr>
<td><em>Sealens laxa</em> or <em>Buccinidae</em></td>
</tr>
<tr>
<td><em>Tonigella brunata</em></td>
</tr>
<tr>
<td>Location</td>
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<td>--------------</td>
</tr>
<tr>
<td>Sunny Beach</td>
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<tr>
<td>Photo 17</td>
</tr>
<tr>
<td>16 Arts 1</td>
</tr>
<tr>
<td>COBRE / Buller / Pebble Beach 2</td>
</tr>
<tr>
<td>Littorinae - dense J/s 1000's/m²</td>
</tr>
<tr>
<td>14 - Photo of Littorinae</td>
</tr>
<tr>
<td>Dense Scutellum</td>
</tr>
<tr>
<td>Large boulders of dem Antilope</td>
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<tr>
<td>Cobble / Buller / Speci Scutellum</td>
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<tr>
<td>Littorinae</td>
</tr>
<tr>
<td>Mod Speci Scutellum</td>
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<tr>
<td>Moderate Littorinae / Scutellum</td>
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<tr>
<td>Dem Spat for Scutellum</td>
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<td>Cinderella Scutellum</td>
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<td>Cove Beach 2</td>
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<td>Hildonbrandia</td>
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<td>Moteclada</td>
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<td>SPECIES LIST</td>
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<tr>
<td>Callophycus ? + Prorocentra or Rhizosolenia</td>
</tr>
<tr>
<td>Keys to Callophylis</td>
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<tr>
<td>Spp A - Rhodophyceae ?</td>
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<td>Pavona ?</td>
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<td>Gigartina ?</td>
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<tr>
<td>Laurencia - Green tinted stuff or Cadedophora ?</td>
</tr>
<tr>
<td>Rhodocheta larva</td>
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<tr>
<td>Ulva - pp</td>
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<tr>
<td>Fucus algarum</td>
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<tr>
<td>Syracophora</td>
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<tr>
<td>Gloeopeltis ?</td>
</tr>
<tr>
<td>Band 2</td>
</tr>
<tr>
<td>Moderati + Adult Nod Scutis</td>
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</table>
ASAP TAG REVIEW SHEET

Segment: EL 107  Subd: C  Site: 1  Date  PRE-Review 1/14/1990

Priority For Addressing In 1990

_____ HIGH  _____ MEDIUM  _____ LOW  X  NTR

Treatment Recommended: NTR

CG - SPORATIC SDR  NO SUBSURFACE OIL

HIGH ENERGY

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO

CG  X  ADEC  X  EXXON  X  LAND MGR  X
SEGMENT AS / ELIOT SUBDIVISION: C SITE: 4 DATE 8-11-90
USCG/NOAA PS1 Leo Bergelson Liz Berendl
NAME ART WEINER SIGNATURE Art Weiner

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
NO SIGNIFICANT OIL REMAINING

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
To make a decision whether the problem of coat/stain that extends thru-out subdivision needs further treatment
- Area is a high energy environment -

LAND MANAGER
NAME John Zobel SIGNATURE John Zobel

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
Cancel up ADEC.
SOR/1 already Sue causing nothing.

EXXON
NAME Rey Sotelo SIGNATURE Rey Sotelo

☐ ☒ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
No further assessment will be necessary on this site.
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed: Two distinct physical conditions exist on EL 107C #2. A southern bed rock outcrop extending from shore into the Gulf creates a wave barrier effect to the open BCP Bach. Conditions here include 50 SOR/ft^2, 0 PSL. North of the outcrop, the SUZ is topped with 0 PSL on 500 c.s. Also, 30-40cm of...

Followup Recommendations: Anchor BCP Bach Manual remove heavy SC
SOR/ft^2, 0 PSL. Completed c.s. B Bach - Storm drain selection into the MLSZ using containment boom to prevent secondary discharges. Also shore boom to recover oil. Hot water, high pressure wash at SUZ is lifted following storm drain standard operating procedure guidelines. Oil left remains from site. Custom block applied prior to site closure. This season.

Comments: I agree with recommendations above. There is a tremendous amount of submerged oil present that needs additional wash in 1990.

Exxon

Comments: I don't agree with steam hose selection on this site. There is some oil existing in the beam, but re-lastic would only re-energize and create more of a hazard. I suggest we give this a chance and reassess in '91.

USCG

Comments: Agree with storm drain recommendation accompanied by hot water wash and appropriate containment.

Land Rep. John Giel

Comments: BCP needs to establish a solid site plan to limit hazards. Excellent recreation site.
ASAP TAG REVIEW SHEET

Segment: FL107  Subd: C  Site: 2  Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

[ ] HIGH  [ ] MEDIUM  [ ] LOW  [X] NTR

Treatment Recommended: NTR

[ ] CG /SKETCH - SOR PATCHY
[ ] SUBSURFACE - OP

does not agree with

Recommendation: STREET - indicator

[ ] STORM BERM relocation

[ ] HIGH ENERGY

Priority Site For Reassessment In 1991

[ ] YES  [ ] NO  [ ] YES  [ ] NO  [ ] YES  [ ] NO  [ ] LAND MGR

TAG 15 Aug 90

STORM BERM Relocation

(Bio already added) remove surface debris

LOW
SEGMENT AS/ Elliot SUBDIVISION: C SITE: 2 DATE 8-11-90

USCG/NOAA PSI Lee Bressanra Lee Bressanra
NAME: Art Weiner SIGNATURE: Art Weiner

YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
Assess heavily oiled stormed.

ADEC
NAME: Wesley Ghormley SIGNATURE: Wesley Ghormley

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This beach is severely contaminated with Exxon Valdez oil. Work is highly recommended for this site in 1990 and possibly additional work should continue here in 1991.
Storm berm relocation w/ Hot H2O flood needs to be used in 1990 also oiled logs (large amount) need to be removed n buried in 90.

LAND MANAGER
NAME: John Ed SIGNATURE: John Ed

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site needs immediate treatment to reduce threat to wildlife.
Very little cutthroat life in PITZ through SITE.
To evaluate effectiveness of treatment after winter conditions.

EXXON
NAME: Rey Sotelo SIGNATURE: Rey Sotelo

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site should be reassessed in '91 to evaluate the effectiveness of customized and winter storm activity.
**ASAP SHORELINE OILING SUMMARY**

**TEAM NO.** ASAP #2  
**EXXON**  
**SEGMENT AS.** FCL/07  

**OG**  
**ECOR/BEERSALON**  
**ADCO**  
**GHORMLEY**  
**LAND REP.** EAGLE, TOWN  
**TOTAL NO. SITES** 2  

**DATE** AUGUST 11, 1990  
**TIME** 12:35  
**TIDE LEVEL** 3.5 to 6.0  

**TOTAL EST LENGTH OF SHORELINE SURVEYED:** 150m  
**SURVEYED FROM:** Foot Boat Helo  
**WEATHER:** Sun Clouds Fog Rain Snow  
**OIL CATEGORY LENGTH:** W 25 m M 90 m N 35 m US271 m  

### SURFACE OIL

<table>
<thead>
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**EST. SITE LENGTH** 60

### SUBSURFACE OIL

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**STORM BERM**

**COMMENTS** SEE ATTACHED NOTES.
SITE 1

"A"
Boulder area near the northern portion of segment contains several bedrock outcrops which retain ST&CT/B. SOR/I extends under boulders which also have CV/S/U. Sheening in tide pools. No customblen observed.

"B"
Small cobble beach. The surface cobbles appear clean. 40 cm pit did not reveal subsurface oil.

SITE 2

"C"
Surface cobbles look mostly clean along this beach however behind large bedrock outcrops and logs in the SITZ there are pockets of SOR/H. Some customblen was observed in these areas. Several old pits were present on the beach and nearly all of these pits have subsurface oil. Along the boulders at the south end of the beach SOR/I/P, CT/P and rainbow sheens were present.
ASAP Follow-Up Recommendations
TAG Recommendations - August 15, 1990

GOA SEGMENT
WB-02  C Site 1  Manual pickup of AP and mousse where accessible - one day maximum followed by bioremediation (M.P.)
WB-02  D Site 1  Follow-up with bioremediation application and reassessment in '91 (M.P.)
WB-02  E Site 1  NTR - Reassessment in '91
WB-03  D Site 1&2  Manual pickup of AP and mousse followed by bioremediation - one day maximum (L.P.)
WB-09  A Site 1  Reapply bioremediation (L.P.)
YG-02  A Site 1  NTR

PWS
EL-53  A Site 1  Reapply bioremediation - reassessment in '91 (L.P.)
EL-53  B Site 1  NTR - reassessment in '91
EL-54  A Site 1  Reapply Customblen - manual rake where feasible (M.P.)
EL-104 C Site 1  Bioremediate small patches (L.P.)
EL-106 B Site 1  Reapply bioremediation and reassessment in '91 (M.P.)
  Site 2  Reapply bioremediation and reassessment in '91 (M.P.)
  Site 3  Reapply bioremediation and reassessment in '91 (M.P.)
EL-107 A Site 1  Reapply bioremediation and reassessment in '91 (M.P.)
  Site 2  Reapply bioremediation and reassessment in '91 (M.P.)
EL-107 B Site 2  Manual till, remove surface OP and bioremediate, reassessment in '91 (H.P.)
EL-107 C Site 2  Storm berm relocation, remove OP sediments or spot wash and pickup with snares - bioremediate (L.P.)

See attached Technological Contract for EL-107. SP-06/SHG req.

TAG
EXXON  Amy Ten Bore
ADEC  Ray Morris KBF
USCG  Ensign St. L. X
NOAA  Bundesfeld B. L. J.

DATED  Aug 15 1990
FOSC  02 Aug 90
Note: Will closely with land manager to effect cleanup.
SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5R  Seabird colony (5/1 to 9/1)
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.

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 108 m: V.Light 0 m: No Oil 275 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:
X No Treatment Recommended _______Snare/Absorbent Booms
_____ Treatment Recommended _______Oil Snares (pom poms)
_____ Manual Pickup _______Absorbents (pads, rolls, etc)
_____ Bioremediation _______Spot Washing: Wands
_____ Tarmat: _______Breakup _______Beach Cleaner
______Removal _______Other (see comments)

COMMENTS:

TAG COMMENTS: MONITORS TO CHECK FOR PRESENCE OF OIL PATCHES ON THE EAST SIDE OF THE DOCK, CLEAN AND DETERMINE THE NEED TO ASSEMBLE A CLEAN UP TEAM FOR REMOVAL

TAG APPROVAL DATE: 4/24/90
ADEC: [Signature] DATE: 5/3/90
EXXON: [Signature] FOSC: [Signature]
NOAA: [Signature] USCG: [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A  Salmon stream mouth - fry outmigration  (3/1 to 5/15)
1B  Salmon stream mouth - spawning  (7/10 to 8/31)
    No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioirrigation 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 6/31)
1J  Purse seine area  (7/20 to 9/30)
1K  Purse seine hook-off  (7/20 to 9/30)
1L  Set net sites  (6/11 to 7/25)
    For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M  Herring spawning  (4/1 to 6/15)
    Restrict boat traffic to essential minimum. Avoid damage to unvegeted 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.

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

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  Kuskokwim-Mishikokwim confluence

7Z  Subsistence area:
    Salmon harvesting  (5/1 to 9/30)
7HH  Finfish harvesting
7B  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.
I recommend no treatment. This is a high energy area. Contains lots of mussels, snails, and barnicles on rock faces and boulders.

ADEC
NAME Michelle Pers Signature Ng

TREATMENT SUGGESTED

COMMENTS
1) Manual scrubbing of BS with a CT on the east side of the beach is one option. Due to the high energy of this area, the wave action may eventually take the coat of a stain if left alone.
2) Hand peel pick-up of the patches of asphalt in the 0m-2m section on the east side of the beach should also be considered.
3) 15 ft Band along headlands varies from a ST to a CT. This area is very exposed and should be left to natural clean methods.

LAND MANAGER
NAME PAN LOGAN Signature Joe Lee

MANUALLY SCRUB BOUNDARY ON EAST SIDE OF BEACH INDICATED ON SCHEMATIC MAP AND PICK UP TAR PATCHES IN 2Mx.2M SECTION.
THE REMAINING STAIN WILL NATURALLY CLEAN.
U.S.F.W.S. SHOULD BE NOTIFIED OF EAGLES NEST SITE.
**SHORELINE OILING SUMMARY**

OC: J. Springer  | USCG: R. Vandevels  | SEGMENT ST: EL 108  
BC: P. Clinton  | LAND RE: D. Logan  | SUBDIVISION: A (1013)  
EX: Exxon  | ADEC: M. Baer  | TIME: 10:30 to 12:30  
TEAM NO.: 5  | TIDE LEVEL: +1 to 0  | DATE: 09/01/90  
EST. SUBDIVISION LENGTH: 2.75 m  | SURFACE OIL DISTRIBUTION OIL/FILM COLOR IMPACTED ZONES  
UPLANDS DESCRIPTION: Grass: Forest: Rock  
SURVEYED FROM: Foot  | Boat  | Helo  
WORKING DIRECTION: N to S  
SURFACE SEDIMENTS: R 40% E 10% C 10% P 15% G 15% S 10% M 0% V 0%  
SLOPE: Long 52% Hang 25% Vert. 25%  
OIL CATEGORY LENGTH: W 0 m M 0 m N 102 m VL 0 m NO 123 m  

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- Asphalt: Pavement
- Pool:
- Cover:
- Coat:
- Stain:
- Mousse:
- Patties:
- Tarballs:
- Film:
- No oil:

- Paved: H F S 0 sq.m by 0 c
- Patties/Tarballs: 0 bags
- Near Shorline?: No BR RW SL TL

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

**Subsurface Oil**

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**Comments:**  
Possible eagle nest in back-beach forest.
Boom recovered.

**Page 6 of 19**
## SHORELINE ECOLOGICAL SUMMARY

**Segment ST 108**  
**Subdivision A**  
**Date (mo/day/yr):** 4/1/90

**Time (24 hr):** 1000-1200  
**Biologist:** Cran #  
**Tide Height:** 7' to 0  
**Length:** 235m

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

(B) **Overall % cover of biota (% of segment):** Dense 20, Moderate 30, Low 50

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

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### Wildlife Observations/ General Comments:

- 3 Bald Eagle - Adult
- Fresh Dead Sea Otter in SUPRA (eyes gone)
- Harbor Seal - Adult
- Deer tracks in SUPRA snow
- Gull
  - Ecological Considerations:
    - Juvenile
    - 7/11

Photographs:  
Roll No. ST-5-2  
Frames 1, 2, 3

---

**NOT PRESENT**

4, 5

**NOT PRESENT**

4, 5

**NOT PRESENT**

4, 5
Crank
Length: 225m

Flora

- Endocladium
- Cladophora
- Porphyra
- Green Encrustose (Uropsora)

Flora

- Halosaccion
- Fucus
- Ectocarpsa
- Gloiopeltis
- Spongormorph
- Porphyra

Flora

- Alaria
- Boseilla
- Lithothamnion
tiny Aletrisce (Rhodomela?)
- Rhodomenia larix
- Odonthalia sp.
- Ultra fenestrata
- Calophyllis
- Ectocarpous
- Green filamentous

Flora

- B. glandula
- B. Curiosus
- Mytilus
- Lithorina

Flora

- Dermosterius
- Piaster
- Mysids
- Orthasterias kohleri
- Serpulid
- Pycnoda

Found

- Balanus glandula
- Littorina

Species List:

H172

M172

L172

Comments

- Bald Eagle sitting in tree watch us land stayed 5 minutes then flew off.
  Possible nest could not verify from beach - Not recorded in ADFG

- Fresh dead sea otter in SUPRA, eyes gone, brain intact.
  Possibly why eagle was watching beach.

- Land otter, Deer and Raven tracks in snow in SUPRA

- In oil tar band there is a dense band of Balanus spot, 70% mort. No adults,
  appears to be last year’s spot. Oil tarring may have inhibited studding form substrata.

- Small tide pools in L172 bedrock

- Alaria appears to replace Fucus in L172

- Mytilus distribution is patchy. High recruitment. Bed appear healthy a 5% mort.

- Mollusca shell in pebble

- High energy beach with rounded cobble/pebble/sand = low macrofauna
SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5R Seabird colony (5/1 to 9/1)
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.

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

OILING CATEGORIZATION:
Wide 0 m: Medium 18 m: Narrow 0 m: V.Light 0 m: No Oil 502 m
Subsurface Oil Observed: Yes X No Maximum Depth 27 cm

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

COMMENTS: Recommended treatment includes bioremediation of area shown on attached sketch map. Work should be conducted prior to 5/1 based on seabird colony constraints or with approval from ADF&G and USFWS.

TAG COMMENTS: Due to environmental sensitivities inaccessibility of the remaining weathered cont, and the high energy exposure, NTR is warranted.

TAG APPROVAL DATE: 4/24/90
ADEC [Signature] DATE: 5-3-90
EXXON [Signature] FOSC: [Signature] DATE: 5-3-90
NOAA [Signature] USCG
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
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. Contact ADF&G Habitat Division prior to treatment for permits.

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

1D
Ethereal Hatchery release (4/15 to 6/1)

1F
Seworni Bay Hatchery release (4/15 to 6/1)

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

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

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

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

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

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

5T
All Bald Eagle nests (3/1 to 9/1)
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)

7H
Finfish harvesting

7I
Deer harvesting (9/15 to 2/26)

7JJ
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT  ST1  EL 108  SUBDIVISION:  B  DATE  4/1/90

USCG  NAME:  AEC Vandegrift  SIGNATURE:  AEC Vandegrift

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
I recommend no treatment. This subdivision is high energy area. Lots of mussels, snails, barnicals and seaweeds growing on beaches and on boulders. The entire length of sub.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
The southeast most B field has a 5 M coat-to-stain band. The coat can be seen in between the B's 60 cm down. Treatment on this area should be manual scrubbing combined with bioremediation in between the B's or sparse booms left for a few days to soak the oil up as the area warms. In addition, removal of oiled logs is necessary. Topography is large B's and is difficult to access. A 6 M band of mussels lies in the LITZ of TPLB along the SE headland following the beach. Manual scrubbing could be used for a 30 M band of CT, that is 1-2 M wide. A 2-3 M band of mussels and barnacles lies along the SE headland. This area is very exposed & high energy.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Manually scavenge 3mx20m rocks/boulders area indicated on sketch map. If oiled logs are burned, burn on rock substrate to recover non-burned oil.

Page 3 of 19
**SHORELINE OILING SUMMARY**

**USCG R. Vandepels SEGMENT ST/ EL 108**

**BIO P. Clark LAND REP D. Logan SUBDIVISION B (2 of 3)**

**EXXON T. Tomblin ADEC M. Boett TIME 12:10 to 13:10**

**TEAM NO.: 5 TIDE LEVEL: 0 to 0 DATE: 04/01/90**

**EST. SUBDIVISION LENGTH: 524 m**

- Sun
- Clouds
- Fog
- Rain
- Snow

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

**WORKING DIRECTION: N to S**

**SURFACE SEDIMENTS: R 85% B 8% C 5% P 2% G 2% S 2% M 2% V**

**SLOPE:**
- Lang 30%
- Hang 10%
- Vert 60%

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

**OIL CATEGORY LENGTH: W____ m M____ m N____ m VL____ m NO____ m**

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

**PATTIES / TARBALLS**

**BAGS**

**NEAR SHORE SHEEN?**
- No

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

**DEBRIS COLLECTED**
- Yes
- No

Photographs:
- Roll No. ______
- Frames ______

---

### SUBSURFACE OIL

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**COMMENTS:**

On northwest-facing cliff, bird nests occupy voids between pillow (lava) structures.

3m x 20m area with splashes to coat between boulders and in joints to 60m depth.
SHORELINE ECOLOGICAL SUMMARY

Segment ST \ EL 108 Subdivision B
Time (24 hr) 12:10 - 14:10 Biologist Crank

Date (mo/day/yr) 4/1/90 Tidal Height: 0 > 1 Length: 524 m

(A) Substrate type and % of segments:
(1) Bedrock 85 (2) Boulder 8 (3) Cobble 5 (4) Pebble 2 (5) Sand 2 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 20 Low 30

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

BARNACLES

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Wildlife Observations/General Comments:
4 Gulls 3 heard, 2 on H2O, 1 flying
1 Sea Otter - Adult
Guano on vertical face - Possible nesting site

Ecological Considerations:

- LX - Special Use Destination
- 711 - Deer harvesting
EL 106 B
10 - 1410
U + 71 ft

Species List

HITZ
Lithothamnion
Bosiella
Halosaccion
Ralphsia
Enteromorpha
Cladophora
Endocladia

MITZ
Rhodomenia palmata
S.m. bladed reds
Cladophora
Lithothamnion
Bosiella
Amoria
Enteromorpha
Ralphsia
Filamentous green

LITZ

Flora
Endocladia

Fauna
Balanus glandula
Liturina
Limpets

Amphipods
Peguara
Liturina
Liturina eggs
Katharina tunicata
Tunicella linnata
Tidepool Sculpin
Red Nudibranch (small)
Dermaasterias
Liturina
Limpets
Siphonaria
B. glandula
B. cariosus

Amphipod
Liturina
Liturina eggs
Orthasterias koehleri
Plaster
Sepulid

Comments
- On headland well established banding of Balanus glandula, Mytilus, B. cariosus observed from skiff - unable to determine mortality.
- Possible bird nesting site, guano on well with many cracks and crevises. No daytime activity, possible nocturnal (Stimp pebbles?)
- Mature Halosaccion in MITZ appears burnt
- Barnacle scarring in LITZ cobbles
- Rock plateau in MITZ 30m x 30m covered with dense healthy mussel bed. Tidepools (0.2m x 9m) covered with Rhodomela lorea. The R. lorea is covered with Liturina scots.
- Sensitive area: foot traffic should be avoided.
- Angular cobble behind boulders with dense concentrations of Liturina and Limpets.
SEGMENT ST/EL-108 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5R Seabird colony (5/1 to 9/1)
5t All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
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 unoiied biota and substrate.

SHPO SIGNATURE: ______________________________ DATE: 4/25/90

OILING CATEGORIZATION:
Wide 160 m: Medium 0 m: Narrow 42 m: V.Light 0 m: No Oil 259 m
Subsurface Oil Observed: Yes X No_____ Maximum Depth 10+ cm

RECOMMENDATIONS:
_____No Treatment Recommended  _____Snare/Absorbent Booms
X Treatment Recommended ______Oil Snares (pom poms)
_____Manual Pickup ______Absorbents (pads, rolls, etc)
_____Bioremediation ______Spot Washing: ______Wands
_____Tarmat: ______Breakup _______Beach Cleaner
_____Removal _______Other (see comments)

COMMENTS: Recommended treatment includes 1) placement of pom poms/ snares in cracks between boulders to pick up pooled oil. Work should be conducted before 5/1 or after 9/1 based on seabird colony restrictions or with approval of ADF&G and USFWS regarding seabird colony and possible eagle nest, not listed by USFWS on 1990 map.

TAG COMMENTS: TREAT AS INDICATED PRIOR TO MAY 1st. FOLLOWING
CONSULTATION WITH, AND APPROVAL BY, USFWS APPLY BIOREMEDIATION
IN AREAS INDICATED ON SKETCH.

TAG APPROVAL DATE: 9/24/90
ADEC EXXON NOAA USCG
ACT WEAK DATE: 5-3-90 FOSC: _______
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

1D Easter Hatchery release (4/15 to 6/1)

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

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

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

1H Remote release site

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

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

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

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

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncolored 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.

6J 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.
FROM ARCTIC SALVOR TO SSAT

FIELD SHORELINE COMMENT SHEET

SEGMENT SL EL 108-C

SUBDIVISION: C

DATE 4/1/90

USCG NAME AEC Vandepels
SIGNATURE AEC Vandepels

□ NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

I suggest placing pompons in among boulders in 15x100m band and let the warming of the sun and tides/wave action clean area. Southern most in sub C.

ADEC NAME Michele Eber
SIGNATURE Eber

□ NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

EL 108 is a high energy beach with a prolific murex, balanus, and fucoid population in the LTZ. If way through the segment, and continuing to the S. end of the segment the B/C beaches have several large areas with high occurrence of CT to CV on the tops of the B5 as well as the underlying areas. Two prime methods of treatment are recommended: 1) As the oil warms, pack and re-pack booms in the areas between the B5, replacing them every 3 days to absorb the oil pockets. In addition, manually wipe the boulders and hand pick up the wet patches. 2) The second treatment option is washing with hot water. Wands and using booms to absorb the sheen coming off the beach. The first treatment may take more labor, but the oil will not be forced further into the bottom layers and the impact will be lessened on the rich B/C band of LTZ organisms lying 10 feet below the impacted areas. During any form of treatment, the crew should be kept off the activity peckocks to maintain the mussels beds throughout the site.

LAND MANAGER NAME Dan Logan
SIGNATURE Logan

□ NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

Isolated pockets on the southern portion of this segment have high a CT pop in upper intertidal zone above areas of high mussel production. This area has a Southern exposure which should warm during summer. I recommend packing these areas with snake booms to absorb the oil as it warms. Because of the lower intertidal mussel beds in this area I recommend oil water wash only as a last resort if other treatments are unsuccessful.

15 OF 19
## SHORELINE OILING SUMMARY

**OG. J. Springer** USCG R. Vondelpels
**BIO. P. Ciock** LAND REP. D. Logan

**SEGMENT** ST/ **EL 108**
**SUBDIVISION** C (30F3)
**TEAM NO.: 5** **TIDE LEVEL:** 0 to +4
**DATE:** 04/01/90 **TIME:** 13:10 to 15:30
**EST. SUBDIVISION LENGTH:** 748 m

**UPLANDS DESCRIPTION:**
- Grass
- Forest
- Rock
- Foot
- Boat
- Halo

**SURFACE SEDIMENTS:**
- R 35% B 45% C 15% P 5% G - % S - % M - % V - %
**SLOPE:** Lang 60% Hang 30% Ver 10%

**OIL CATEGOR LENGTH:** W 160 m M - m N 97 m V - m NO 50 y m

### SURFACE OIL

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### OILED AMOUNT

- Debris
- Log
- Vegetation
- Trash
- Debris

- Photographs: Roll No.
- Frames

### PAVEMENT

- H F S 15 sq.m by 3 cm
- Patties / Tarballs 0 bags
- Near Shore Sheen? No
- BR RW SL TL

### DEBRIS COLLECTED

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**COMMENTS**

Eagle's nest in woods behind second pocket beach. Coral collected from joints in rock on NE point.

**Reviewed** by [Signature] **Date:** 4-5-90

**Reviewed** by [Signature] **Date:** 4-7-90
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### Comments

- [41]
Sketch Map

- B.C.P.G. Beach
- 2m x 20m CT/B
- LWL
- Corals found in joints.

Legend:
- △ No Subsurface Oil
- □ Subsurface Oil

- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/D Dry Distribution
- CT/S Splashed Distribution

- Oiled Vegetation

- High energy shore line.

- Collect pooled oil with scoops and portions

- Boulder, cobble, pebble, beach

- Mussels on boulders
- 17m x 2m CT/ST/B
- 5m x 20m CV/C on boulders & rock face
- Pooled in crevices with RW sheen in puddles, 90% coverage.

- 20m x 10m CT/W pockets of asphalt & mousse, 70% coverage.

- 30m x 100m CV/B
- on underside of boulders 60% coverage

- Boulder, Pebble Beach

- 10m x 1m ST/S along rock face 5% coverage.

- Oil Character Length (m): AP 50 GT 140 ST 57 MS PT TB FL No. 501
**SHORELINE ECOLOGICAL SUMMARY**

<table>
<thead>
<tr>
<th>Segment ST</th>
<th>EL 108</th>
<th>Subdivision</th>
<th>C</th>
<th>Date (mo/day/yr)</th>
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(A) Substrate type and % of segments:

1. Bedrock 35
2. Boulder 45
3. Cobble 15
4. Pebble 5
5. Sand 10
6. Silt

(B) Overall % cover of biota (% of segment): Dense 50, Moderate 10, Low 40.

(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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NOT PRESENT

### MYTILUS

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### GASTROPODS

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### FUCUS

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NOT PRESENT

**Wildlife Observations / General Comments:**

- Immature Golden Eagle (12 yr Bald Eagle?) - flying
- Bald Eagle - Adult
- Seabird Rookery
- Pelagic & Brandt Cormorants (00+)
- Black-vented Kittiwake (500+)
- Glaucous-winged Gull (00+)
- Oystercatcher (1)

**Ecological Considerations:**

- L71 - Special Use Destination
- 711 - Deer Harvesting
- 5R - Sea Bird Colony - offshore rocks

16 of 19
The area is a boulder beach with angular cobble in MITZ, cobble appeared rounded in LITZ observed through H2O (tide covered). Cobble in MITZ is protected from wave action by large numerous boulders.

1. In H1TZ: there is a moderate discontinuous band of Balanus glandula, adults, juveniles and spat; 50% morts.

2. In MITZ: there is a 6m Mytilus band with patchy distribution and dense concentrations, Mytilus recruitment is high.

Gastropod (Littorina, Limpets) concentrations were dense on boulders but sparse in cobble.
Balanus glandula is dense on boulders; 10% morts.
Fucus is in moderate concentrations, 80% appears burnt - trends reproductive.
20% Porphyra cover on boulders.

3. LITZ: was unexposed when this area was surveyed. Observations were taken through H2O. Species observed: Fucus ≈ moderate concentrations.
  Chondrocladia ≈ moderate
  Rhodomenia palmata ≈ moderate
  B. glandula ≈ dense
  B. carinatus ≈ dense
  Kathrina tunicata ≈ sparse

Unable to turn cobble for observations.

Overall biotic concentrations for this area: 25% dense 25% moderate 50% sparse
Species List

**HITZ**
- Endocladia
- Filamentous greens
- Small bladed red
- Rhodomea larix
- Fucus
- Lithothamnion
- Calliarthen
- Halosaccion
- Gloiopeltis
- Endocladia
- Odontialla
- Sytosiphon
- Mastocarpus papilata

**MITZ**
- Filamentous greens
- Small bladed red
- Rhodomea larix
- Fucus
- Lithothamnion
- Calliarthen

**LITZ**
- Odontialla
- Alaria
- Fucus
- Cladophora
- Bosie lla
- Filamentous red
- Lithothamnion

Flora

**Fauna**
- Balanus glandula
- Limpets
- L'itorina
- Mytilus
- Tidepad Sculpin
- Balanus glandula
- B. ecorious
- Small orange sponge
- Anthropleuro
- Litharina
- Katharina tunicata
- Coral
- Hydroid
- Anthropleuro
- Bryozoa
- Siphonaria
- Plaster

Comments
- Fucus stipes in LITZ appear burnt
- Mastocarpus papilata - one plant in upper MITZ
- Textbook zonation on vertical faces - B. glandula + Mytilus + B. ecorious
- Forest area; overhang has high den potential
- Seabird Rookery is located on two offshore rocks. Survey made by skiff drive-by counts are quick estimates.
- Corals found on partially submerged rock
- There was a 100 m x 20 m a black cover with some pooling
- The following page of comments refers to this portion of
ADDENDUM: SUBDIVISION CONSTRAINTS
-SEGMENT EL-108 SUBDIVISION C (3 of 3)

WORK WINDOW

<table>
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<th>Manual Pickup</th>
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<td>WORK PRIOR TO 8/15</td>
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<tr>
<td>Other Approved Treatment</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

NO CONSTRAINT. Work area is over 800m from colony.

5T Bald Eagle Nest

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

711 Subsistence: Deer Harvesting

Closed to bioremediation and other approved treatment after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC 7/1/90 DATE 6/10/90

Prepared By: ___________ Date 6/9/90
ECOLOGY MAP
SEGMENT EL-108

Work Area

Seabird Colony
Active Eagle Nest
Inactive Eagle Nest

EXxon Company, USA
Map Key: PWS-EL-107
June 04, 1990

METERS
0 176 732

1 inch = 1233 feet
SHORELINE EVALUATION

SEGMENT ST/EL-109 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
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.

SHPO SIGNATURE:

DATE: 5/8/90

OILING CATEGORIZATION:
Wide 204 m: Medium 225 m: Narrow 883 m: V.Light 1537 m: No Oil 411 m
Subsurface Oil Observed: Yes X No Maximum Depth 38 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of cleanup debris in areas indicated on sketch maps #1 and 2, 2) manual removal of tarmat in area indicated on sketch map #4, 3) manual raking of surface cobble in area indicated on sketch map #2, and 4) bioremediation of areas indicated on sketch maps #1, #2, #3, #4. Work should be conducted after 5/1.

TAG COMMENTS: Monitors TO ASSESS LOCAL NEED FOR TREATMENT.

TAG APPROVAL DATE: 5/7/90
ADEC Art Weil X
EXXON Andy Tsh X
NOAA Gary Berge X
USCG C.A. Reiter X

FOSC: ____ L DATE: 5/12/90
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 Pelz 424-3214

Gill net areas (8/7 to 8/31)

1D Gill net areas (8/7 to 9/30)
1K Gill net areas (8/7 to 9/30)
1L Gill net areas (8/7 to 9/30)

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 uncleared 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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Shorebird/waterfowl concentration (4/1 to 6/15)
Restrict all activity to essential minimum, especially boat traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (5/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 300m 3/1 to 6/1. Air approach and takeoff from and to nest are allowed 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:

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

Subsistence areas: Subsistence areas: Salmon harvesting (6/1 to 9/30)
T. H.
T. H. Fish harvestng (6/1 to 9/30)
7. J. Invertebrate harvesting (6/1 to 9/30)

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 Fell 257-2359

PWS, SEWAGE AND NURSE ECOLOGICAL CONSTRAINTS
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1 EL-109 SUBDIVISION: A DATE 4/23/90

USCG
NAME: William E. White SIGNATURE: William E. White

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SKETCH #1

1. Pickup of o/hy shore boom
2. Bio/mediate entire area of U/I/SU

SKETCH #2

1. Pickup of shore boom
2. Break up surface cobble and bio/mediate

SKETCH #3

1. Bio/mediate - p.t. - 14 - 16

SKETCH #4

1. Manual pickup of asphalt pavement

ADEC
NAME: Peter Montesano SIGNATURE: Peter J. Montesano

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

See Attached

LAND MANAGER - USDA Forest Service
NAME: Don J. Breitinger SIGNATURE: Don J. Breitinger

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

This segment is a recreation special use destination area for the period 6/1 - 9/15, and also a subsistence deer harvesting area for the period 8/15 - 3/1.
1. Pickup oily shore boom and bio/mediate entire area of U/I/SU as noted on sketch map #1.
2. Pickup oily shore boom, breakup surface and bio/mediate as noted on sketch map #2.
3. Bio/mediate area as noted on sketch map #3.
4. Manual pickup of asphalt pavement and bio/mediate or shave on sketch map #4.
5. The remainder of the segment should be left to natural weathering.
We refer to Etym ops sketch...
EL09 - A ADEC Comments
Peter Montesano

- Bioremediation
  Pit *3 (Bedrock Plateau), *4, *7 (remove Tar Splatters Fins
  *14 (Heavy Brown of Foiling), *16 (Marginally Approp.
  Pit *6: Remove Patties, Splatters, Snare, Ponds/debris in
  MITZ Boulders, Washable oil but inaccessible to LCV,
  Sheen in water trapped between Boulders, and
  Sheen traces 20' off shore of Beach
  Sketch map *2: Bio west end of Beach and
  Remove Snare line illustrated on map.
  Pit *10: Spot wash with Steam and HW hoses
  as flush.
  Sketch map *4: Remove Asphalt layers illustrated
  on map
  Pit *21: Small area w/ spot washable oil
  Pits *13, 19, and 20: examine O6 Form to
determine treatments for thin layer
**SHORELINE OILING SUMMARY**

**OG:** C. Dillon  
**USCG:** PS/1 E. White  
**SEGMENT:** ST/1  
**DATE:** 04/12/90  
**TIME:** 14:30 to 19:45

**BIO:** J. Barry  
**LAND REPT:** D. Morehead  
**DATE:** 7-10

**EXXON:** G. Stiles  
**MONTESANO:**  
**TEAM NO.: 6**  
**TIDE LEVEL:** +0.7  
**SURVEYED FROM:** Boat  
**WORKING DIRECTION:** W to E

**EST. SUBDIVISION LENGTH:** 3441 m  
**SUN:** ☐  
**CLOUDS:** ☐  
**FOG:** ☐  
**RAIN:** ☐  
**SNOW:** ☐

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

**SURFACE SEDIMENTS:**  
- R: 40%  
- F: 35%  
- C: 20%  
- P: 5%  
- G: 0%  
- O: 0%  
- M: 0%  
- V: 0%

**SLOPE:**  
- Long: 35%  
- Hang: 40%  
- Vert: 25%

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

**OIL CATEGORY LENGTH:**  
- W: 105 m  
- M: 130 m  
- N: 1095 m  
- V: 16.31 m  
- NO: 5.10 m

---

### SURFACE OIL

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### PAVEMENT

- H F  
- 3  
- BAGS

---

### OILED DEBRIS

- Oiled  
- Parched  
- Pen  
- Porphyrin  
- Tarred  
- Asphalt

### OIL/DEBRIS AMOUNT

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**SCREWED DEBRIS?**  
- YES ✖  
- NO ☐

---

### PHOTOGRAPHS

- Roll No.: ST-6-16

---

### SURFACE SUBSURFACE OILS

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<th>SUBSURFACE OIL CHARACTER</th>
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<th>OILED DEBRIS BELOW</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN (Y/N)</th>
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### COMMENTS

**REVIEWED:**  
**DATE:** 4-21-90
## Subsurface Oil (Continued)

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1. Manual pickup of oily snare boom
2. Bioremediation (Granular type Fertilizer) entire area of UI/SU

LEGEND

1 Δ
Π - No Substrate Oil
2 Δ
Π - Substrate Oil

CT/C
Corroded Distribution

CT/B
Broken Distribution

CT/P
Partly Distribution

CT/S
Separated Distribution

Δ
Dead Vegetation

OIL CHARACTER LENGTH (m): AP 0 PO 0 CV 3 GT 15 ST 30 MS 2 FT 0 TB 0 FL 0 NO 0
1. Manual pickup of snare boom.
2. Break up surface cobble and bio-remediate.

Legend:
- CT/C: Common Distribution
- CT/B: Common Distribution
- CT/P: Patchy Distribution
- CT/S: Splashed Distribution

Oil Character Length (m): AP 0 PO 0 CV 0 CT 75 ST 35 MS 0 PT 0 TB 0 FL 0 NO 90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/EL109 Subdivision A Date (mo/day/yr) 23 APRIL 1990
Time (24 hr) 1500 1999 Biologist Jim Barry Length = 344'

(A) Substrate type and % of segments:
1) Bedrock 60 (2) Boulder 20 (3) Cobble 20 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 60 Moderate 30 Low 10

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

### Photographs:
Roll No. ST-6-6
Frames 24, 31

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Wildlife Observations/ General Comments:

Kenana Star - 2
Pheasant Guineafowl (Aoutline, cuticals) - 5
Seagull - 1

Ecological Considerations:

7) Barnacles next nearest - SW end of segment - avoid as long term
   visit to this section of the segment.

8) Seaweed harvesting during August - February - minimal impact from cleanup operations
   except perhaps in the NE corner of the bay.
1. General Comments

EL109 is a long segment comprised by several habitat types that range from highly exposed headland cliffs to protected pebble beaches.

1) Vertical Bedrock Cliffs and High Angle Boulder Beaches.

Barnacles (Semibalanus, Chthamalus, and Balanus) are moderately to densely abundant on these substrates, particularly in the more exposed sections of the substratum. Small juveniles and spat are sparse to moderate. Mytilus is mostly sparse, and least abundant on the most exposed sections, with greater density on slightly protected sites. Algae densely cover the lower zones, with sparse to moderate cover of bees and locally dense mats. Gastropods are moderate, but dense in patches on patches. Nodella (whelks) are locally dense in the low and middle zones. B. asper is abundant on subtidal areas.

2) Cobble and Pebble Beaches.

These beaches also vary in exposure, but are generally low in moderately exposed. More exposed beaches have low densities of all but gastropods, (limpets and ditonine snails). Algae are usually low in cover, except in the middle to low zone, where corals and other filamentous green algae cover many rocks, and in the lower zone where Fucus and other algae (Phyllospadix, etc.) are moderately to dense. Barnacles and mussels generally are rare, except for patches on adjacent boulders. Low and moderately exposed beaches have higher densities of bryozoans. A mussel bed is present on one beach (see O6 map), adjacent
to a sparse clam bed. Fucus is moderate on protected
sheltered beaches. Several subtidal fish are abundant (1.3鱼/m²) beneath clumps with low urchins (picklebacks and skulpins).

B. Oil Related Comments

1) Most of the oil is now restricted to high and supratidal
zones where it has only minor impacts, if any, on the intertidal
fauna. The only sensitive site to cleanup operations is the
mangrove bed in the NE corner of the bay. This area should
not be trampled by cleanup crews.

2) This area has an eagle nest nearby, but cleanup will likely not
impact eagle behavior. Deep harvesting (August-February)
may be affected during cleanup operations in the NE corner.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EL-109 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
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<tr>
<th>Manual Pickup</th>
<th>Open</th>
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<tbody>
<tr>
<td>Tarmat Removal</td>
<td></td>
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</table>

| Bioremediation | WORK PRIOR TO 8/15 |
| Manual Raking  |                  |

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T  Bald Eagle Nest
    NO CONSTRAINT. Nest more than 400m from recommended treatment areas.

711 Subsistence: Deer Harvesting
    No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

5R  Seabird Colony
    NO CONSTRAINT. Work site is more than 820m from Seabird Colony, as per 7/6/90 letter to Otto Hinsum from USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

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

5/21/90
ADEC
EXXON
NOAA
USCG

Prepared by: Andrea Meyer
Date: 5/19/90

TAG ADDENDUM DATE
FOSC

DATE 5/1/90

7/13/90
SEGMENT ST/ EL-110  SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature]  DATE: 4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 412 m: Narrow 44 m: V.Light 0 m: No Oil 162 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

___ No Treatment Recommended  ___ Snare/Absorbent Booms
X Treatment Recommended  ___ Oil Snare (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 treatment activities are recommended as follows: 1)* Hand till and bioremediate area shown on attached sketch map, 2) Bioremediate only in other areas shown on map, and 3) Manual removal of tarmat (see map). Work should be conducted after 6/1 and with approval from USFWS based on above eagle constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90  ADEC [Signature]  DATE: 4/22/90
EXXON  [Signature]  FOSC:  [Signature]  NOAA  [Signature]  USCG [Signature]
PWS ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

6U  Recreation: Tent sites (6/1 to 9/15)
6V  Anchorage s (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 1 EL 110 SUBDIVISION: A DATE 04/03/90

SCG NAME: AEC Vandepols SIGNATURE: AEC Vandepols

☐ NO TREATMENT RECOMMENDED  X TREATMENT SUGGESTED

COMMENTS:
I suggest no treatment on the western most beach of EL 110 sub A. The 3 beaches immediately east need some hand tilling and bio.

ADEC NAME: Michele Fass SIGNATURE: M Fass

☐ NO TREATMENT RECOMMENDED  X TREATMENT SUGGESTED

COMMENTS:
1084 is a low energy area of high recreational value. There are 4 primary 5m wide bands varying in length from 20m to 150m. On CT/B, the areas also have portions of TD and AP. In the areas w/BS, the BS can be seen down to 45cm and is 5cm behind the top B. In the P.C.S areas, the penetration is 5 cm down of the then bedrock. The 1st 4m x 20m band requires manual scrubbing of BS, hand pickup of jet size and larger C w/CT and mulch/lake patches. Pick up surf the surface layer, then bio/remediate. The next 5 x 20m area needs manual scrubbing of the CT on the BS, then bioremediation of 4' x 5' squares (1st: a 1-2cm layer) or sand big underlying C. The remaining areas should have similar treatment.

LAND MANAGER NAME: Dan Logan SIGNATURE: D Logan

☐ NO TREATMENT RECOMMENDED  X TREATMENT SUGGESTED

COMMENTS:
This is a low energy shoreline with a fair anchorage but exposed to the south. Starting at the west end the first 4m x 20m band should have rocks manually scrubbed then hand tilled to aerate sediments and apply fertilizer.

The 6m x 20m CT/B Band immediately to the east has 90% cover. CT/B w/SMALL BROKEN PATCHES of TAR. This area should have tar patches scrubbed then hand till and fertilize. The remaining 2 OILED bands should have the same treatment as the previous 6 x 20m Band.

S DF 19
## SHORELINE OILING SUMMARY

**USCG R. Vard**

**Bio:** P. C. L. **Land Rep:** D. Logan

**Team No.:** 5 **Tide Level:** +4 to +1 **Date:** 09/10/90

**Est. Subdivision Length:** 600 m **Clouds:**

**Uplands Description:** Grass Rock **Working Direction:** W to E

**Surveyed From:** Foot **Soil:** % S % V

**Slope:** Lang 80% Hang 15% Vert 5% **Wavelength Exposure:** Low Med High

**Oil Category Length:** W 0 m M 280 m N 10 m V 0 m No 250 m

### SURFACE OIL

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**Pavement:** H @ S 10 sq. m by 4 ft or

**Patties / Tarballs:** 0 BAGS

**Near Shore Sheen?** NO BR RW SL TL

**Oiled Debris:**

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**Debris Collected:** YES NO

**Type:**

**Photographs:**

- Roll No.: 1-2
- Frames: 12, 21, 22, 33

### SUBSURFACE OIL

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**Comments**

2 of 19

**Reviewed:** [Signature] **Date:** 4-7-90
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**COMMENTS**
SHORELINE ECOLOGICAL SUMMARY

Segment ST  1 E - 110  Subdivision  A  Date (mo/day/yr)  4/6/90
Time (24 hr) 1130 - 1355  Biologist  Crank  Tide Height: + 3 ft
       Length: 600 m

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment): Dense 40  Moderate 20  Low 40

(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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GASTROPODS

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FUCUS

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Wildlife Observations/General Comments:
At 0950 spotted 3 Killer Whales: 1 adult, 2 calves
off of EL 109, they remained in area all day.
3 Bald Eagles - 2 mature, 1 immature
6 Tufted Puffins - 5 mature, 1 immature
1 Fox Sparrow
1 White-crowned Sparrow

Ecological Considerations:
(5) Special Use Destination
(7) Deer Harvesting
(57) Eagle Nest - did not find
Boulder / Intercobble / Intergavel
Mussel bed - 150 m > 10 m

50°F

50°F
Comments - 

- Heavy Mytilus recruitment on boulders
- Fucus is reproductive
- High den potential in uplands
- In ULTZ oil band Adult B. glandula had 20% mortality
- Heavy Fucus recruitment in ULTZ; LITZ
- Barnacle scarring in ULTZ bedrock
- 10% B. cariosus mortality with pockets of 90% mortality. Predation from Nucella?

- 150x10 m intercobble/intergravel dense mussel bed in MITZ with 80% Adults 20%. Spot area should be protected. Limit foot traffic. Mortality 3-8%.

- NW of mussel bed there is high recruitment in ULTZ and LITZ and sparse recruitment in MITZ. Adults are rare

- Porpoise vertebrae found in ULTZ

- A 1m² patch of Zostera in a LITZ tidepool

- Found small clump of eggs 3cm³ in gravel in LITZ - possible Herring.
<table>
<thead>
<tr>
<th>Species List</th>
<th>UITZ</th>
<th>MITZ</th>
<th>LITZ</th>
<th>Comments</th>
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<td>Dermasterias</td>
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<td>Blaitomyia glandula</td>
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<td>Littorina scutulata</td>
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<td>Egg in LITZ 3.4</td>
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<td><em>Nucella plumosa</em></td>
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<td>~Porphyra</td>
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60 = 19
SEGMENT: EL110

DATE: 01/02/90

CHECKLIST:
- Arrow
- Approx. Scale
- Mag/Thin Strip
- Oil Dist.
- Wash
- Length
- Cover
- Subarc. Character
- Ext. H/A/W/L
- DLS
- Profile Location(s)
- Pit Location(s)
- Photo Location(s)

LEGEND:
1 Δ Pt - No Subsurface Oil
2 Δ Pt - Subsurface Oil

CT/C: Continuous Distribution
CT/B: Break Distribution
CT/P: Patchy Distribution
CT/S: Splashed Distribution

Oil Vegetation

Photo location, direction, and number

TCH MAP

Runoff under sediments

CT/P

3x30m 5-year
down, but follow
Boulder, cobble,
Pebble, gravel,
Sand beach

Low energy Shortline beach

CT/P and FV on
boulders
SBL x TL
2x40m of SBL

4x40m ST/B
Dek to SBL
90% cover

Rock face

BIO

BIO

BIO

BIO

BIO

BIO

BIO

BIO

BIO

0 – 100 m

Approx.
SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION B (2 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate.

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 29 m: V.Light 149 m: No Oil 867 m
Subsurface Oil Observed: Yes No ______ 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: _____ Breakup ______ Beach Cleaner
_____ Removal ________ X* Other (see comments)

COMMENTS: Recommend bioremediation of areas shown on attached sketch map, and in situ log burning. Work should be conducted after 6/1 with approval from ADF&G and USFWS based on above eagle nest constraint.

LEAVE LOGS IN PLACE

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAILEY
EXXON ANDY TAUN
NOAA BRIAN WEIR
USCG ________________________ FOSC: ________________________ DATE: 4-22-90
PWS ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

1H Remote release site

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

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

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

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

2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to 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 prior to treatment.

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

ST All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 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 (6/15 to 2/25)

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

SEGMENT ST1 EL1104 SUBDIVISION: B DATE 04/02/90

USCG NAME AEC Vandepols SIGNATURE AEC Vandepols

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED COMMENTS

Western most beach of EL110 Sub B has 1x3 M and 3x20 M areas that may or may not need hand cleaning. Logs on beach need to be removed or burned on site.

ADEC NAME Michele Baer SIGNATURE Michele Baer

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED COMMENTS

There are patches in the first 1/2 of the segment varying from 1/2 to 5 M wide by 0.5 B and averaging 5 M long. The terrain is primarily P beaches and S fields. Treatment should include manual scrubbing of the coated areas and removal or burning of the oiled logs. The burning of the logs should be done on the bedrock shelf so the tar that remains can be contained and easily removed. The remaining 1/2 of the segment is a high energy zone with occasional 0 bands of S/B that are very slight.

LAND MANAGER NAME Dan Logan (NB) SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED COMMENTS

1) Manually scrub rocks in coated areas indicated on sketch map.
2) Burn oiled logs on site and on sandy rock, then scrub burn site.

12 0F19
### SHORELINE OILING SUMMARY

**Team No.:** 5  
**Tide Level:** +1 to +2  
**Date:** 04/02/90

**Estimated Subdivision Length:** 1140 m  
**Uplands Description:**  
- Grass
- Forest
- Rock
- Green, m. m. n. m., Pillow lava

**Surface Sediments:**  
- R: 25% B: 35% C: 15% P: 15% G: 10% S: 5% M: 2% V: 3%
  
**Slope:**  
- Lang: 30% Hang: 60% Ven: 20%

**Wave Exposure:**  
- Low
- Med
- High

**Oil Category Length:** W: _ m  
M: _ m  
N: _ m  
V: _ m  
L: _ m  
NO: _ m

### SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>Cover</td>
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<tr>
<td>No Oil</td>
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<td></td>
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</tbody>
</table>

**Pavement:**  
- H  
- F  
- S

**Near Shoreballs?**  
- No

**Oiled Sheen?**  
- No

**Debris Collected:**  
- Yes

**Type:**  
- Bags

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

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>-</td>
<td>X</td>
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<td>PGS</td>
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**Comments:**

9 of 19

**Reviewed:**  
- _
- Date: 4-7-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/EL 110 Subdivision B Date (mo/day/yr) 4/2/90

Time (24 hr) 955-1510 Biologist Cranke Tide Height: +1' 2.5

Length: 1140

(A) Substrate type and % of segments:
(1) Bedrock 25% (2) Boulder 35% (3) Cobble 15% (4) Pebble 15% (5) Sand 10% (6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

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

Wildlife Observations/General Comments:
1) Bald Eagle flying
2) Cormorants on cliff face
3) Crows on boulder

Ecological Considerations:
6 Y - Special Use Destination
7 II - Deer Harvesting
ST-2 - Eagle Nest, did not find
**Species List**

<table>
<thead>
<tr>
<th>Species</th>
<th>UITZ</th>
<th>MITZ</th>
<th>LITZ</th>
<th>Comments</th>
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<td>13 animals in tides</td>
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**Comments**
- Weather picked up and assessment made at rapid pace; minimum cobbles were turned.
- Segment consists of Rocky headlands, steep by boulder shoulders and pocket Boulder (cobble in 8-brach cobbles is round comfort), other beaches have angular cobbles.
- Fucus concentrations are moderate in LITZ on rounded cobble beach but dense on angular.
- Freshwater runoff, small stream on beach.
- Oyster shell in driftline
- In oil bond Boletus 202 mort.
Rock face
Cobble, Pebble Beach
Rock face and boulders

EL-110

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

Map Key: PWS-131b
Name: James Springer
Date: 04/02/90
Date Entered:
EL-15

EL-10

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

A

B

Rock face and boulders

Boulder, cobble, pebble, sand, beach

Pebble, granule, sand, beach

Boulder, cobble, pebble, beach

PWS 131b

Map Key: PWS-131a
Name: James Spring
Date: 04/02/90
Date Entered:

ADEC Segment Length: 2620 ft
180°FAR

100 200 300 METERS
SEGMENT ST/ EL-110 SUBDIVISION C (3 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
(5T) Restrict air traffic to essential minimum. Air approach and takeoff to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

Wide_30 m: Medium_0 m: Narrow_0 m: V.Light_0 m: No Oil_815 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ___

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC [Signature] DATE: 4/21-90
EXXON [Signature] DATE: 4/21-90
NOAA [Signature] DATE: 4/21-90
USCG [Signature]
USCG
NAME: AEC Vandepols
SIGNATURE: AEC Vandepols

NO TREATMENT RECOMMENDED

COMMENTS

I concur with statement of Land Manager.

ADEC
NAME: Michelle Ball
SIGNATURE: MBall

NO TREATMENT RECOMMENDED

COMMENTS

The headland in the beginning of the segment has a healthy
healthy band of lichen. The area is very high energy and
difficult to access. Most of the stain is no longer detectable
except for a patch 30 m x 20 m of CT/B on the R.B.C.P. beach.
Since this area is of very high energy, I recommend
monitoring the area in July, and until then leaving
the cleaning to the high wave energy of the area. If this
patch is still detectable in place, manual scrubbing
of the sea grass is recommended.

LAND MANAGER
NAME: Dan Logan
SIGNATURE: DLog

NO TREATMENT RECOMMENDED

COMMENTS

This is a high energy, very exposed subdivision. No oil observed
on rock face. The pocket beach is very exposed and will not
receive high recreation use. There is a 20 m x 20 m CT/B on boulders
off rock on the western edge. Hot water treatment will not work
here as the oil will flow over bedrock and not be recovered. I
recommend re-evaluating the beach in place, if the bottom section is
not naturally cleaned by sea then manually clean rocks 17 of 19.
**SHORELINE OILING SUMMARY**

**OG J. Springer**  |  **USCG R. Vandevels**  |  **SEGMENT ST: EL11D**
---|---|---
**BIO: P. Clark**  |  **LAND REP: D. Logan**  |  **SUBDIVISION: C (30+3)**

**EXXON T. Tomlin**  |  **ADEC M. Baer**  |  **TIME: 15:05 to 16:00**

**TEAM NO.: TIDE LEVEL: +2 to +3**
**DATE: 04/02/90**

**EST. SUBDIVISION LENGTH: 880 m**

**UPLANDS DESCRIPTION:** ☑ Grass ☑ Forest ☑ Rock ☑ Tectonic graben and pillow lava.

**SURVEYED FROM:** ☑ Foot ☑ Boat ☑ Helo

**WORKING DIRECTION:** SE to NW

**SURFACE SEDIMENTS:**
- R 35% B 55% C 8% P 2% G 6% S 3% M 2% V

**SLOPE:**
- Lang 10%
- Hang 70%
- Vert 20%

**WAVE EXPOSURE:** ☑ Low ☑ Med ☑ High

**OIL CATEGORY LENGTH:**
- W 20 m
- M 0 m
- N 0 m
- V 20 m
- L 0 m
- O 860 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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<td>FILM</td>
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<tr>
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</table>

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

---

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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**COMMENTS:** "J D" carved into oil stain - apparently by hot water wand.

---

**Photographe:**
- Roll No.
- Frames

**Debris Collected:**
- LOGS ☑ YES ☑ NO
- VEGETATION ☑
- TRASH ☑
- DEBRIS ☑

**Oiled Debris:**
- AMOUNT SM MD LG

**Oiled Debris:** SM MD LG

---

**REVIEWED:** [Signature] [Date: 4-1-90]

---

Page 1 of __
SHORELINE ECOLOGICAL SUMMARY

Segment ST1E110 Subdivision C

Date (mo/day/yr) 4/2/90

Time (24 hr) 1510-1615Biologist Crank

Tide Height: +2.5 - +4
Length: 880 m

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

(B) Overall % cover of biota (% of segment):
Dense 20  Moderate 30  Low 50

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

**Barnacles**

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<th>Rare</th>
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**Fucus**

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Photographs:
Roll No. ST-5-2
Frames 26, 27

Wildlife Observations/General Comments:
3 Bald Eagles - Adults (X Flying as pair)
1 Common Merganser

Ecological Considerations:
6Y - Special Use Destination
711 - Deer Harvesting
ST-2 - Eagle Nest - did not locate
## Species List

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<tr>
<th>Species Name</th>
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<th>MITZ</th>
<th>LITZ</th>
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### Comments:
- Discolored Mussels on boulder on west side of cobble break.
- Tannic acids leaching from rocks.
- Beach is rounded cobble with low macro-biota.
- Dense biota in bedrock behind boulders.
- LITZ covered by tide.
Rock face

Cobble, Pebble Beach

Rock face and boulders

EL-110

PWS 1312

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

Map Key: PWS-1312
Name: James Springer
Date: 04/02/90

2620
190 = 19

ADES Segment Length:

METERS

200
100

SHORELINE EVALUATION

SEGMENT ST/ EL-999  SUBDIVISION A (1 OF 1) DATE  4/24/90

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.

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

OILING CATEGORIZATION:
Wide 0 m: Medium 14 m: Narrow 97 m: V.Light 0 m: No Oil 467 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:  5/5/90
EXXON  [Signature]  DATE:  [Signature]
NOAA  [Signature]  DATE:  [Signature]
USCG  [Signature]  DATE:  [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beech flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, prior to July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. 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 Petz 424-3214

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

1E Main Bay Hatchery release (4/20 to 6/15)

1F Snowbird Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 5/1)

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 Petz 424-3214

1I Gill net area (6/7 to 9/30)

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

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

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

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates. Contact ADF&G, USFWS or PWSAquaculture Association for confirmation and authorization.

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/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 (6/1 to 8/1)

Active Bald Eagle nests (6/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 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)

Finfish harvesting

Deer harvesting (9/15 to 2/28)

Invertebrate harvesting

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

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

SEGMENT ST  EL- 999  SUBDIVISION: A     DATE

USCG NAME  AEC Vandepels  SIGNATURE  AEC Vandepels

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

ADEC: Michele Baer  SIGNATURE  Michele Baer

Mousse spots are rare. It is on tops of B's and pebbles only. Natural cleansing by wave energy recommended.

Dead otter found by team #6  1/4 mile of shore.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME  Carol S Huber  SIGNATURE  Carol S Huber

Recommend continued natural cleansing. Most oil in this segment is in large boulders and bedrock outcrops. No sheening noted, oil appears stable. Resource sensitivity - deer harvesting.
OG: J. Springer  USCG R. Vandeveer  SEGMENT STA. EL-999
BIO: R. Frank  LAND REP. G. Abbe  SUBDIVISION A  (LOT 7)
EXXON T. Jenkins  ADEC M. Balf  TIME 02:30 08:30
TEAM NO. 5  TIDE LEVEL -2 TIDAL  DATE 04/12/90
EST. SUBDIVISION LENGTH: 550 ft  SUN  CLOUDS  FOG  RAIN  SNOW
UPLANDS DESCRIPTION:  Grass  Forest  Rock
SURVEYED FROM:  Foot  Boat  Helo  WORKING DIRECTION:  N  to  S
SURFACE SEDIMENTS:  % Clay  % Sand  % Silt  % gravel  % Organic  % V.O.
SLOPE:  Lang  % Hang  % Van  % WAVE EXPOSURE:  Low  Med  High
OIL CATEGORY LENGTH:  W  m  M  m  N  m  VL  m  VL  m  NO 493

### SURFACE OIL

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Photographs:
- Roll No: 5/5/7
- Frames: 15

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### SURFACE SEDIMENTS

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### COMMENTS

**REVIEWED: YW**

**DATE:** 4/25/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/EL.999  Subdivision A  Date (mo/day/yr) 4/24/90

**Time (24 hr) 0730-0830 Biologist Grant**

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

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

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

#### Barnacles

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#### Fucus

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**Wildlife Observations/General Comments:**
- Extern Rep Spotted Beluga in front of Segment 0630 traveling N
- Heard terrestrial Birds in uplands

**Ecological Considerations:**
- 711 Deer Harvesting
PWS

Comments:

- Lower Intertidal Zone has low benthos.
  - Rare barnacle population and occasional Littorina in cobble. Rare barnacles on boulders and moderate Littorina. Sparse mussels and moderate barnacles.
  - Low Benthos on Pebble Beaches. Beaches covered at mid-tide level.

- Middle Intertidal Zone has dense worm population.
  - Sand area has dense worm population.
  - Middle Intertidal Zone of priotis is recovering.

- Cobbles covered with filaments and green algae.
  - On the northern boulders adult barnacles are just starting to settle and 70% mortality, but on the southern - just under half (plates and 30% mortality, but 80% of the boulders - just under half) in rest of boulders barnacles sparse.
  - Near runoff Littorina were moderate.

- Mytilus bed on Southern Rock. 30m x 12m dense cover.
  - Fucus is sparse with rare sporblings. 30% of population is rostrate.

- Upper Intertidal Zone has low benthos.
  - Few barnacle population and no occasional Littorina in cobble. Few barnacles on boulders and moderate Littorina. Sparse mussels and moderate barnacles.
SEGMENT ST/ EN-45 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 20 m: Narrow 8 m: V.Light 0 m: No Oil 147 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

X No Treatment Recommended

X Treatment Recommended

Snare/Absorbent Booms

Oil Snare (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing:

Wands

Beach Cleaner

Spot Washing:

Wands

Spot Washing:

Wands

Other (see comments)

COMMENTS: Bioremediate cover, coat and subsurface oil. Work should be conducted after 6/1 with approval of ADF&G and USFWS based on eagle nest constraint.

TAG COMMENTS:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

__________________________

TAG APPROVAL DATE: 4/26/90

ADEC Art Weers Art Weers

EXXON A. Ray Teul A. Ray Teul

NOAA [Signature] [Signature]

USCG [Signature] [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

1C
Esther Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Sewmill Bay Hatchery release (4/15 to 6/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site

1D
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 1D contact ADF&G for specific dates, locations and constraints.

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

1F
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.

1G
Seabird colony (5/1 to 9/1)
Restrict all activity to essential minimum, especially air traffic.

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

1I
All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict all activity 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.

1J
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

1K
Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrate harvesting

1L
For Codes 1J through 1L contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EN 45  SUBDIVISION: A  DATE 4-06-90

NAME   ___________________________ SIGNATURE   ___________________________

☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment for this Subdivision. Labor intensive for what would be gained. Also all tide zones seem to be doing well.

NAME   Michele Baer  SIGNATURE   ___________________________

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

On B field, I recommend manual wiping of the broken c7 and removing the Bs to pick up the underlying 5 cm of OR c,p, and S surface. There lies a crevace to the NW of the B field with a 2 x 20m cv/c. Scrubbing of the walls would help reduce the cv, but visqueen should be placed over the oil-free tidepools lying at the base of the crevace during the clean process. The adjoining B, C and P beach required no treatment. No surface oil was present and pits dug in the MITZ and MHTZ revealed no.

NAME   Daniel Loscar  SIGNATURE   ___________________________

☑ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

I recommend manually wiping the broken c7, the 2x20 cv/c and 2m x 15m c7/b should be hand wiper.
**SHORELINE OILING SUMMARY**

- **Team No.:** 5  
- **Tide Level:** +6 to +4  
- **Date:** 04/10/90

**UPLANDS DESCRIPTION:**
- Grass  
- Forest  
- Rock  
- Sun  
- Clouds  
- Fog  
- Rain  
- Snow

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

**WORKING DIRECTION:** W to E

**SURFACE OIL**

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**PAVEMENT:**
- H F S
- 0 eq. m by 0 cm

**PATTIES / TARBALLS**
- 0 BAGS

**NEAR SHORE SHEEN?**
- No  
- BR  
- RW  
- SL  
- TL

**OILED DEBRIS**

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**DEBRIS COLLECTED**
- Anchor
- Bags

**Photographs:**
- Roll No. 5T-5-4
- Frames 1-3

**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 OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<tbody>
<tr>
<td>1</td>
<td>50</td>
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<td>-</td>
<td>X</td>
<td>PV</td>
</tr>
<tr>
<td>2</td>
<td>45</td>
<td>X</td>
<td>-</td>
<td>X</td>
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</tr>
<tr>
<td>3</td>
<td>20</td>
<td>X</td>
<td>10-15</td>
<td>X</td>
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</tbody>
</table>

**COMMENTS**

**Reviewed** JF 4/13/90

---

**Page 1 of **
SKETCH MAP

LEGEND

A
- Subsurface Oil

CT/BS
Central Zone Distribution

CT/PS
Peripheral Zone Distribution

CT/S
Splatter Distribution

Cleared Vegetation

1
Fence location, direction, and number

Oil Character Length (m): AP  PO  CV  Z  CT  SO  MS  PT  TB  FL  NO  747
### Shoreline Ecological Summary

**Segment:** ST 1 EN 45  
**Subdivision:** A  
**Date:** 4/4/90

**Time (24 hr):** 1510-1530  
**Biologist:**  
**Rank:**  
**Length:** 207 m  
**Tide Height:** +6 ft

#### A) Substrate Type and % of Segments:
- Bedrock: 10
- Boulder: 5
- Cobble: 50
- Pebble: 20
- Sand: 15
- Silt: 5

#### B) Overall % Cover of Biotas (% of Segment):
- Dense: 5
- Moderate: 15
- Low: 5

#### C) Density, Substrate Preference (by number from A, above), & Vertical Zonation of Major Taxa:
- **Barnacles**
- **Mytilus**
- **Gastropods**
- **Fucus**

**Wildlife Observations/General Comments:**
- 7 Hevy Barnacles Scouring on Bedrock  
- Ever Green and B. grandulza are dense 10% mort.  
- Terraced Bedrock &o (s) tidepools 0.5 m²  
- Dense Molinia in Silt/pebbles.  
- Large algae included: *N. flexilis*, *M. arenaria*, *M. maritima*  
- LITZ unreported  
- Banded cockle beach = low biota  
- Recruitment moderate on boulders and large  
- Not apparent in cooke.
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<tr>
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<th>UTZ</th>
<th>MITZ</th>
<th>LITZ</th>
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<td>Calliarthron/Corallina</td>
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<td>Cladophora spp</td>
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<td>Costaria spp</td>
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<tr>
<td>Endocladia muricata</td>
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23
SEGMENT ST/ EN-46 SUBDIVISION A (1 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
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 unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 51 m: Narrow 62 m: V.Light 0 m: No Oil 587 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

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

COMMENTS: Recommend 1) manual pick up of trash, 2) bioremediation of oil-coated beach (see sketch map), and 3) burning of legs with greater than 10% oil cover.

TAG COMMENTS: 

TAG APPROVAL DATE: 4/23/90
ADEC ART WEISS [Signature] FOSC: [Signature] DATE: 5/4/90
EXXON [Signature] NOAA [Signature] USCG [Signature]
Salmon stream mouth - fry outmigration (3/1 to 5/15)

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

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

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 unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

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

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

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

Finfish harvesting

Deer harvesting (8/15 to 2/28)

Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SUGGEST THE TWO BEACHES IN SUB-A ON SE+E SIDE OF ENTRANCE ISLAND NEED BIO.

NAME: Michele Egan
SIGNATURE: 

NAME: Dan Logan
SIGNATURE: 

I recommend hand tilling the 20m x 30m then applying fertilizer, the 30m x 20m can be hand cleaned. The 30m x 30m CT/C should be hand cleaned.
## SHORELINE OILING SUMMARY

**USCG R. Vandepol**

### 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>COAT</td>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATTIES</td>
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<tr>
<td>TARBALLS</td>
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<td>FILM</td>
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### OILED DEBRIS AMOUNT

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<td>Trash</td>
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<tr>
<td>Debris</td>
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### OILED AMOUNT DEBRIS SM MOLG

### DEBRIS COLLECTED

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<th>YES</th>
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### NEAR SHORE SHEEN?

| NO | BR RW SL TL |

### PAVEMENT:

| H F S | _ sq. m by _ cm |

### PATTIES / TARBALLS

| 0 | BAGS |}

### PHOTOGRAPIHS:

- Roll No. 57-5-4
- Frames 4-11

### 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>OILED CHARACTER</th>
<th>OIL / FILM COLOR</th>
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### SUBSURFACE SEDIMENTS

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### COMMENTS

Large pain-pain lodged between boulders.

Reviewed by [Signature] 4/13/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST / EN 46
Subdivision A

Date (mo/day/yr) 4/16/90

Time (24 hr) 1350 - 1740
Biol ogist Crank

Length 1290m
Tide Height: +3.5 ft

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

(B) Overall % cover of biota (% of segment):
   Dense 50
   Moderate 20
   Low 30

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

BARNACLES

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<th>Sparse</th>
<th>Rare</th>
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MYTILUS

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GASTROPODS

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<th>Rare</th>
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FUCUS

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Wildlife Observations/ General Comments:
Chickadees

Ecological Considerations:
    711 - Deer Harvesting
    ST - Active Bald Eagle Nest - not located
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<th>LLTZ2</th>
<th>LLTZ3</th>
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<td><em>Costaria SPP</em></td>
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<td><em>Endocladia muricata</em></td>
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<td><em>Clams</em></td>
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EN-46

Map Key: PWS-144
Name: James Spring
Date: 9/6/90
Date Entered:

XXXXX Wide
\\\\ Medium
----- Narrow
TTTT Very Light
0000 No Oil
ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural resource survey in progress. No treatment until formal constraint entered on shoreline evaluation form.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates an active nest within 400m of Subdivision A work site. However, the work area is outside the buffer zone established by USFWS on 5/15/90 by Mike Lockhart.

7II Subsistence: Deer Harvesting

No constraint to manual pickup. Closed to bio remediation, log burning, and other approved treatment after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic USFWS established buffer zone. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE

ADEC
EXXONM AN SO JAMES DOUG LAWTON FOSC
NOAA
USCG

Prepared By: WA Date 6/1/90
SEGMENT ST/ EN-46 SUBDIVISION B (2 OF 2) DATE 4/6/90

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 uniled biota and substrate. Do not trample or otherwise damage fucus and mussel beds.

SHPO SIGNATURE: DATE: 5/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 21 m: Narrow 45 m: V. Light 0 m: No Oil 1269 m
Subsurface Oil Observed: Yes X No Maximum Depth

RECOMMENDATIONS:

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

Other (see comments)

COMMENTS: Recommend removal of tarmat. Work should be conducted before 8/15 due to deer harvesting constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90
ADEC EXXON NOAA USCG

TAG APPROVAL DATE: 5/12/90

DATE:
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

1D
Excess Hatchery release (4/15 to 6/1)

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

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

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

1H
Remote release site

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

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

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

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

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

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

3O, 3Q
Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

5R
Seabird/wader/fowl 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. All approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

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

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

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

6Y
Special use destination

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

7H
Finfish harvesting

7I
Deer harvesting (5/15 to 2/28)

7JJ
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
**USCG NAME: AEC Vandepols**

**SIGNATURE: AEC Vandepols**

- [ ] NO TREATMENT RECOMMENDED
- [ ] TREATMENT SUGGESTED

**COMMENTS**

I recommend no treatment for sub. B.

---

**ADEC NAME: Michele Baer**

**SIGNATURE: Michele Baer**

- [ ] NO TREATMENT RECOMMENDED
- [x] TREATMENT SUGGESTED

**COMMENTS**

Sub-Segment B is a moderate energy area. Treatment is required in the 1st R.B.C. beach on the SW wall only. Manual scrubbing is required for a 3 x 25M band of CT. Mussel beds are located on both sides of the beach. 5/18.

---

**LAND MANAGER**

**NAME: Pan Logan**

**SIGNATURE: Pan Logan**

- [ ] NO TREATMENT RECOMMENDED
- [x] TREATMENT SUGGESTED

**COMMENTS**

I recommend manual scavenging of rocks and boulders on the 3 x 25M band of CT.
**SHORELINE OILING SUMMARY**

---

**OG:** J. Springer  | **USCG:** R. Vandepels  | **SEGMENT:** EN46  
**BIO:** R. Grank  | **LAND REP:** D. Logan  | **SUBDIVISION:** 3 (2047)  
**EXXON:** T. Tomblin  | **ADEC:** M. Baker  | **TIME:** 17:45-18:30  
**TEAM NO.:** 5  | **TIDE LEVEL:** +1 to +1  | **DATE:** 04/18/90  
**EST. SUBDIVISION LENGTH:** 1002 m  | **SURFACE SEDIMENTS:** R 70%, B 25%, C 15%  
**UPLANDS DESCRIPTION:** ☑ Grass, ☑ Forest  | **SLOPE:** Land 50%, Hang 30%, Vert 20%  
**SURVEYED FROM:** ☑ Foot  | **OIL CATEGORY LENGTH:** W 0 m M 25 m N 42 m  
**WORKING DIRECTION:** E to W  
---

### SURFACE OIL

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<th>OIL/FILM COLOR</th>
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**Pavement:** H B S 2 sq. m by 2 cm  
**Patties/Tarballs:** 7 bags  
**Near Shore Sheen:** No  
---

### SUBSURFACE OIL

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
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**Photographs:**  
- Roll No. 57-5-4  
- Frames 12-14

**COMMENTS**

---

**Page 1 of 2**

---

**Reviewed by:** [Signature]  
**Date:** 4/13/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST

Subdivision B

Date (mo/day/yr) 4/4/90

Time (24 hr) 1740-1840

Biologist Cranke

Length 100.2 m

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 25 (3) Cobble 15 (4) Pebble 10 (5) Sand 5 (6) Silk

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

Dense 10, Moderate 15, Low 25

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

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

BARNACLES

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MYTILUS

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FUCUS

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Wildlife Observations/General Comments:

1. Bird Seals - Adult
2. Glaucous-wing Gulls

Ecological Considerations:

711 - Deer Harvesting
7T - Active Bald Eagle Nest (not located)

Photographs:

Roll No. ST-5-4

Frames 12, 14

- Dense sea urchin concentrations in lower LITZ through segment
- Heavy barnacle scar in LITZ
- Be hind oilseed rape (located on 06 map) that was 3m x 1.7m tidepool surrounded by dense Fucus and Mytilus beds. This area should have limits access to lessen disturbance on this well established beds.
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<th>UTZ</th>
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Lesson 15

- Third of Instructors is apt to comment on the way in which each student react to the project.

Lesson 1:

- The lesson is divided into three main sections, each focusing on a specific aspect of the project.
- Sections include analysis of data, calculation of results, and interpretation of findings.
- The project involves the use of various tools and techniques to achieve the desired outcome.

Lesson 2:

- Small pocket book used to hold the data. The data is used in the project and contains detailed information.
- Sections include analysis of samples, testing of materials, and identification of components.
- The project involves the use of various tools and techniques to achieve the desired outcome.

Lesson 3:

- Lecture notes, well established in the class.
- Instructor and student, both work together, and discuss the project.

Notes:

- Class notes will be sent to the students in the project.
- The project is divided into three main sections, each focusing on a specific aspect of the project.
- The project involves the use of various tools and techniques to achieve the desired outcome.
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. Work area is 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 and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unölled biota and substrate. Do not trample or otherwise damage Fucus, mussel beds or sea stars.

MAY 29 1990

DATE
SEGMENT ST/ER-01  SUBDIVISION A (1 OF 3)  DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16715.
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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: [Signature]  DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 127 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X  Maximum Depth

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

COMMENTS: Recommend removal of mousse patties manually from area shown on sketch map. Work should be conducted between 5/1 and 8/15.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC Art L. Weiner  Anticline  FOSC [Signature]  DATE: 4/27/90
EXXON John Tore [Signature]
NOAA [Signature]
USCG [Signature]
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed of banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
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 (8/11 to 7/25)

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

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

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

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

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

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

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

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

SEGMENT ST/ER-01  SUBDIVISION: A  DATE: 06 April 90

USCG
NAME: LARRY FLETCHER  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. BIO-REMEDY.

ADEC
NAME: PAUL M. SAGE  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. Remove oil from underlying sediments below breakers.
2. Ensure oil cover on rocks is not mobile.
3. BIO REMEDIATE.

LAND MANAGER
NAME: Leif Carlson  SIGNATURE: [signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Uses for the segment include subsistence deer and invertebrate harvesting. Treatment as suggested by ADEC above.
## SURFACE OIL

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### SUBSURFACE OIL

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### COMMENTS

All observed tar balls were removed during the survey.

---

**Revision**

RM April 1990
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / 10 / ER

<table>
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<th>Time (24 hr)</th>
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**A)** Substrate type and % of segments:
- (1) Bedrock 10
- (2) Boulder 15
- (3) Cobbles 10
- (4) Pebbles 10
- (5) Sand 5
- (6) Shingle 5

**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 (J), new settlement (S)

**BARNACLES**

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**Wildlife Observations/ General Comments:** Orchestella benedict was included in the gastropod count; Dermatostomias (Astartidae) was occasionally present underneath the water, has been very clear around this island, perhaps 40' from the shore.

**Ecological Considerations:** Invertebrate harvest over at hatching release.
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-1 All bald eagle nests (3/1 to 6/1)- Active eagle nests (3/1 to 9/1)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Charles J. Holmes DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 588 m: No Oil 2423 m
Subsurface Oil Observed: Yes__ No X__ Maximum Depth

RECOMMENDATIONS:

X__ No Treatment Recommended
T__ Treatment Recommended
M__ Manual Pickup
B__ Bioremediation
T__ Tarmat: B__ Breakup
R__ Removal
O__ Oil Snares (pom poms)
A__ Absorbents (pads, rolls, etc)
S__ Spot Washing: W__ Wands
B__ Beach Cleaner
O__ Other (see comments)

COMMENTS: ________________________________

TAG COMMENTS: ________________________________

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner Art Weiner
EXXON Art Weiner Art Weiner
NOAA Bill Weisser Bill Weisser
USCG __________ ________
FOSC: __________ DATE: 4/27/90
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

1H
Remote release site

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

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

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

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

2M
Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncultivated 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 from haulouts.

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

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

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

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

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

6Y
Special use destination

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

7HH
Finfish harvesting

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

PWS-CODE 4/11/90
SEGMENT ST: ER-01 SUBDIVISION: B DATE 06 APRIL 90

USCG NAME LARRY FLETCHER SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

1. ASSURE ALL TOMPODS ARE REMOVED.
2. DETERMINE SOURCE OF SILVER SHEEN noting AT RDQ AGG UPPER LIMITS.
3. CLEAN OIL FROM SLATE Flagstones ON BEACH MAN CAHN, NOTE AREA WHERE OIL SHOWN ON "CLAIMS, CLIP OIL ON PEBBLES, SHELLS"

LAND MANAGER NAME Leigh Carlson SIGNATURE Leigh Carlson ADIR

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Uses for the segment include: subsistence deer and invertebrate harvesting. Treatment as suggested by ADEC above.
SHORELINE OILING SUMMARY

OG: Rich Moro
USCG: Larry Fletcher
SEGMENT: ER-01

BIO: Bob Lemon
LAND REP: Leigh Carson
SUBDIVISION: B (RE3)

EXXON: Jon Chamber
ADEC: Dave Sall
TIME: 17:30 to 20:00

TEAM NO.: 10
TIDE LEVEL: +0.8 m (0.5 to +0.8 m (+25°))
DATE: 06/17/90

EST. SUBDIVISION LENGTH: 300 m

SUN ☑ ☐ CLOUDS ☑ ☐ FOG ☑ ☐ RAIN ☑ ☐ SNOW ☑ ☐

SURVEYED FROM: ☐ Foot ☑ Boat ☑ Helo

SURFACE OIL

SURFACE OIL

SURFACE ELEVATION:

SURFACE OIL DENSITY:

SUBSURFACE OIL

PAVEMENT:

NEAR SHORE SHEEN?

OILED DEBRIS:

OILED DEBRIS:

NEAR SHORE SHEEN?

DEBRIS COLLECTED:

TYPE:

BAGS:

PHOTOGRAPHS:

ROLL NO.:

FRAME:

COMMENTS:

REVIEWED:

DATE:

Page 1 of

REVIEWED:

DATE:

Page 1 of
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER  Subdivision B  Date (mo/day/yr)  4/6/90
(7:30 - 2:10)  Biologist Lemon

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

(B) Overall % cover of benthos (% of segment): Dense 80%  Moderate  Low

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

BARNACLES

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GASTROPODS

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Wildlife Observations/General Comments: Mixed red algae covers the low zone about 90% not
reflected above; Laminaria dense below. Ochithella borealis makes a significant
contribution to the gastropod population on the beach, especially in another mullus frequently seen.
Asteroids sightings include Pteraster, Henricia, Pseudopodia, and Lepanaster, however.

Ecological Considerations: Protobranchs and Scaphopods shells are common along the shore. Indicate
possible commercial potential for these blinks at lower levels. Chilled stream at south end
of subdivision found no fish or fish food or oil. Chilled stream at north end of
subdivision by cabin, found insect larvae, no fish and no oil.

Investigate harvest of this area.
ER-01

Map Key: PWS-1374
Name: Rich Macy
Date: 07 April 1990
Date Entered:

Legend:

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

ADEC Segment Length: 4875m

PWS 1970

3/5
**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

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<th>Description</th>
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<td>1A</td>
<td>Salmon stream mouth - fry outmigration (3/1 to 5/15)</td>
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<tr>
<td>1B</td>
<td>Salmon stream mouth - spawning (7/10 to 8/31)</td>
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<tr>
<td>5T</td>
<td>All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)</td>
</tr>
<tr>
<td>1F</td>
<td>Sawmill Bay Hatchery release (4/15 to 6/1)</td>
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<tr>
<td>7II</td>
<td>Subsistence area: Deer harvesting (8/15 to 2/28)</td>
</tr>
<tr>
<td>7JJ</td>
<td>Subsistence area: Invertebrate harvesting</td>
</tr>
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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) Bald eagle nest in Subdivision C.

---

**OILING CATEGORIZATION:**

- Wide: 0 m
- Medium: 0 m
- Narrow: 0 m
- V.Light: 279 m
- No Oil: 1432 m

Subsurface Oil Observed: Yes

**RECOMMENDATIONS:**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Notes</th>
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<tr>
<td><strong>X</strong> No Treatment Recommended</td>
<td>Snare/Absorbent Booms</td>
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<tr>
<td>____ Treatment Recommended</td>
<td>Oil Snares (pom poms)</td>
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<tr>
<td>____ Manual Pickup</td>
<td>Absorbents (pads, rolls, etc)</td>
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<tr>
<td>____ Bioremediation</td>
<td>Spot Washing: Wands</td>
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<td>____ Tarmat: Breakup</td>
<td>Beach Cleaner</td>
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<tr>
<td>____ Removal</td>
<td>Other (see comments)</td>
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**COMMENTS:**

---

**TAG COMMENTS:**

---

**TAG APPROVAL DATE:** 4/21/90

ADEC: [Signature]  DATE: 4/7/90

EXXON: [Signature]  DATE: 4/7/90

NOAA: [Signature]  DATE: 4/7/90

USCG: [Signature]  DATE: 4/7/90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

1H Remote release sites

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

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

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

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

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

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

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

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts. 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)
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 harvesting (5/1 to 9/30)

7HH Finfish harvesting

7H Deer harvesting (6/15 to 2/28)

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

PWS-CODE 4/11/90
SEGMENT ST/ER-01 SUBDIVISION: C DATE 07 APRIL 20

USCG NAME LARRY FLETCHER SIGNATURE Larry Fletcher
☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC NAME DAVID SAAY SIGNATURE David Saay
☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

LAND MANAGER NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR
☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
SHORELINE OILING SUMMARY

OIL. Rich Barry
USCG, Larry Fletcher
SEGMENT ST/ ER-01

BIO, Bob Lemon
LAND REP, Leigh Carlson
SUBDIVISION C

EXXON Tom Czernik
ADEC, Dave Gay
TIME 07:30 10/07/90

TEAM NO: 10
tide level: +0.8m(2.6) to -1.1m(3.6)
DATE 07/1 Apr/1 90

EST. SUBDIVISION LENGTH: 1699 m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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PAVEMENT: None

PATTIES/TARBALLS < < 1 BAGS

NEAR SHORE SNEE? NO

SUBSURFACE OIL

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<th>PIT DEPTH (cm)</th>
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<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
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COMMENTS: All observed tar balls were removed during the survey.

REVIEWED: 
DATE: 7 April 1990

Page 1 of
SHORELINE ECOLOGICAL SUMMARY
Segment ST / 10 / ERI Subdivision Date (mo / day / yr) 4 / 17 / 90
0700 - 0835 Biologist Lemon

(A) Substrate type and % of segments:
   (1) Bedrock 50 (2) Boulder 25 (3) Cobble 15 (4) Pebble 5 (5) Sand 5 (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 (G)

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Wildlife Observations/ General Comments: Mixed red algae makes up much of the low zone cover. Also seen in the low zone were gammarid amphipods (40% cover), Dermasteres (asteroida). Seaweeds and free living polychaete worms. 5 waterfowl & 3 deer. 1 otter, 2 eagles were sighted.

Ecological Considerations: Invertebrate harvest at hatchery release area.
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

ER-1

Map Key: PWS-1974
Name: Richard Martin
Date: 27 April 1970
Data Entered:

ADEC Segment Length: 6675m
XXXX Wide
\\\\ Medium
---- Narrow
TTTT Very Light
0000 No Oil

ER-1

Rep Keys: PWS-1976
Name: Richard Marley
Date: 07 April 1970
Data Entered:
SEGMENT ST/R-ER-02 SUBDIVISION A (1 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
I F Sawmill Bay Hatchery release (4/15 to 6/1)
II Subsistence area: Deer harvesting (8/15 to 2/28)
JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: ______________________ DATE: 4/23/90

OILING CATEGORIZATION:
Wide_0 m: Medium_0 m: Narrow_73 m: V.Light_336 m: No Oil_252 m
Subsurface Oil Observed: Yes__ No__ Maximum Depth____

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

COMMENTS: ______________________________________________________

____________________________________________________

TAG COMMENTS: _____________________________________________________________

TAG APPROVAL DATE: 4/23/90
ADEC Art Westman _______________ NOBG: ____________ DATE: 4-27-90
EXXON Mary Catallo ____________ USCG ______________
NOAA Joseph Ritten ____________
1A  Salmon stream mouth - fry outrun (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  Seward Bay Hatchery release (4/15 to 8/1)  *
1G  Cannery Creek Hatchery release (4/21 to 8/1)
1H  Remote release sites
1I  Gill net area (8/7 to 8/31)
1J  Purse seine area (7/20 to 9/30)
1K  Purse seine hook-off (7/20 to 9/30)
1L  Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M  Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unciled 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 USPWS 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 8/1)
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
7I  Deer harvesting (5/15 to 7/30)
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: ER-02  SUBDIVISION: A  DATE 4/7/90

USCG
NAME LARRY FLETCHER  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

ADEQ
NAME David m. SALE  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Some upland on rocks, nesting on occasional "beach rock" does not require clearing as it seems non-mobile, stable and in a small quantity.

LAND MANAGER
NAME Leigh Carlson  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Uses include subsistence deer and invertebrate harvesting.

Tar balls were picked up while surveying the subdivision. The remaining splash on the rocks is stable and is hard to pick out because of the coloring of the rocks.
SHORELINE OILING SUMMARY

OC: R. May USCG LARRY FLETCHER SEGMENT ST: ER-02
BIO: B. Lind LAND REP: LUCY COOK ST: SUBDIVISION: A
EXXON: J. Czernaski ADEC PART: SEE

TEAM NO.: 10 TIDE LEVEL: (6") to (2") m (3.2") DATE: 04/06/90
EST. SUBDIVISION LENGTH: 604 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

TEAM NO.: 10 TIDE LEVEL: (6") to (2") m (3.2") DATE: 04/06/90

SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE

SURFACE SEDIMENTS: R S % B 10 % C 30 % P 30 % G 5 % S 15 % M % V %

SLOPE: Lang % Hang % Vert %

WAVE EXPOSURE: ☐ Low ☐ Med ☐ High

OIL CATEGORY LENGTH: W m M m N m VL 375 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>FILM</td>
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PAVEMENT: H F S sq. m by cm

PATTIES / TARBALLS: 1 BAGS

NEAR SHORE SHEEN: NO BR RW SL TL

OILED DEBRIS

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<tr>
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<td>Trash</td>
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<td>Debris</td>
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Photographs:

Roll No. 5T/10/9
Frames: 24, 25, 26

SUBSURFACE OIL

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<td>X</td>
<td>G  P</td>
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COMMENTS

Note: all visible tar balls removed during survey.

This is evidence for two generations of tar here!

1. Pre-EPA Valley, tar stained root balls
2. EPA Valley, tar stained root balls

Page 1 of 1 Supplied by near snow奥林 during survey.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / 10/ ER 2  Subdivision A  Date (mo/day/yr) 4/6/90  
1500 - 1600  Time (24 hr)  
Biologist LEMON  sunny, round 8°C  

(A) Substrate type and % of segments:  
1. Bedrock 5% (2) Boulder 10% (3) Cobble 40% (4) Pebble 30% (5) Sand 15% (6) Silt  

(B) Overall % cover of biota (% of segment): Dense Moderate 40% 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. 5T/10/8  
Frames 24 - 32  

**BARNACLES**

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**FUCUS**

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Wildlife Observations/General Comments: Low zone occupied by mixed Reds at Greens for about 80% coverage; key groups above don't show this; Gammarid amphipods sparse in drift line; vigorous NEMERTINEs sparse under rocks in drift line.  

Ecological Considerations: Inspect stream, no fish, fish food or oil. Investigate harvest area, deer harvest area, hatchery release.  

[Signature]
SHORELINE EVALUATION

SEGMENT ST/ ER-02 SUBDIVISION B (2 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 95 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes ___ No X Maximum Depth ___

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
_____ Tarmac: ___ Breakup ___ Beach Cleaner
_____ Removal ___ Other (see comments)

COMMENTS: Recommend the manual removal of sporadic tar balls and bio­
remediate the pocket beach as shown on sketch map. Work should be con­
ducted after 6/1.

TAG COMMENTS: Monitor to check presence of tar balls as
indicated on sketch map prior to treatment

TAG APPROVAL DATE: 4/23/90
ADEC [Signature] DATE: 4-27-90
EXXON [Signature] DATE: 4-27-90
NOAA [Signature] DATE: 4-27-90
USCG [Signature]
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. Contact ADF&G Habitat Division prior to treatment or permits.

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

Estuary Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Seaward Bay Hatchery release (4/18 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 (5/11 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 unseeded intertidal and subtidal algae and seagrasses.
Contact ADF&G for specific dates and locations.

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

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

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

All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (5/1 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.

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

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

Gear harvesting (5/15 to 2/25)
Invertebrate harvesting

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

SEGMENT ST1 ER-02 SUBDIVISION: B DATE 4/3/90

USCG
NAME: LARRY FLETCHER SIGNATURE: LARRY B. FLETCHER

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

1. BIO-REMEDiate OIL COAT.

ADEC
NAME: DAVID M. SAELE SIGNATURE: DAVID M. SAELE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

☐ 1. Remove manually any tar balls, tar mats.
☐ 2. Need to remove tiny oil from surface sediments, just below pebble/siltstone pile. Sham water in order and in water on site shows mobility of exiting oil. Retaining top 2 cm of sandy soil.
☐ 3. Immediate

LAND MANAGER
NAME: LEIGH CARLSON SIGNATURE: LEIGH CARLSON ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

Uses include subsistence deer and invertebrate harvesting.
Recommend treatment outlined by ADEC above.

14/9/18
## 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:** H F S sq. m by cm

**PATTIES / TARBALLS:** 1 BAGS

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

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

**AMOUNT**
- SM
- MD
- LG

**DEBRIS COLLECTED**
- YES
- NO

**TYPE**
- TAR BALLS

**#BAGS:** 1

**Photographs:**
- Roll No. ST/10/8
- Frames 27 - 32

## SUBSURFACE OIL

<table>
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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm - cm)</th>
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**COMMENTS**

Surface oil is fairly low, but increases immediately beneath, and on the bottom of the surface veneer.

**Revision**
- RM 4/6/90

**Review**
- 13/6/89

**Reviewed**
- JL

**Date**
- 4/10/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER2 Subdivision B Date (mo/day/yr) 4/16/90

Time (24 hr) 1600 - 1700 Biologist Lemon clear

(A) Substrate type and % of segments:
- Bedrock (10)
- Boulder (10)
- Cobble (30)
- Pebble (20)
- Sand (6)
- Silt (6)

(B) Overall % cover of biota (% of segment):
- Dense (5)
- Moderate (45)
- Low (2)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- (1) Juvenile Settlement (4)
- (2) New settlement (3)

**BARNACLES**

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**GASTROPODS**

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Wildlife Observations/General Comments: Low zone only has mixed algae and some green for approx 80% coverage not indicated above.

Ecological Considerations: Invertebrate harvest area; deer harvest, hatchery release.
ER-02

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

Map Key: PWS-156
Name: R. Mary
Date: 6 April 1990
Date Entered:

ADEC Segment Length: 756m

B Light 0.6 90m 10°
A No 1.0 150m 17°
V. Light 2.1 315m 3°
Light 0.3 45m 0°
600m 1°
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F  Sawmill Bay Hatchery Release  No constraint to manual pickup; closed to bioremediation prior to 6/1.

1K  Purse Seine Hook-off  No constraint to manual pickup; closed to bioremediation after 7/25.

7II  Subsistence: Deer Harvesting  No constraint to manual pickup; closed to bioremediation after 8/15.

7JJ  Subsistence: Invertebrate Harvesting  No constraint to manual pickup. No constraint to bioremediation.

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 uncleaned biota and substrate.

Prepared by:  [Signature]  Date:  6/9/90
SHORELINE EVALUATION

SEGMENT ST/ER-03 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7JJ Subsistence area: Invertebrate harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Date: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 48 m: No Oil 2984 m
Subsurface Oil Observed: Yes No Maximum Depth

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

COMMENTS:


TAG COMMENTS:


TAG APPROVAL DATE: 4/13/90
ADEC __ JOHN BAER ___ FOSC: ___ DATE: 4-15-90
EXXON __ ANQON TEM __
NOAA __ Buildaesofst Cord __
USCG __ Keiioihners __
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)

1B
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

1D
Estuary Hatchery release (4/15 to 6/1)

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

1F
Seward Bay Hatchery release (6/15 to 9/15)

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

1H
Remote release site

1I
Gill nets 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 nets sites (8/11 to 7/25)

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

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

3N, 3P
Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (6/15 to 9/15)

3O, 3Q
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulout.

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

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

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

6U
Recreation:
Tent sites (5/1 to 9/15)
Anchorage (5/1 to 9/15)
Forest Service cabins (8/1 to 9/15)
Lodge (8/1 to 9/15)
Special use destination

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

7HH
Finfish harvesting

7I
Bear harvesting (6/1/04 to 8/25)

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

SEGMENT ST  E12-3  SUBDIVISION:  A  DATE 06 APR 90

NAME  LARRY FLETCHER  SIGNATURE  [Signature]

☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

☐ TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

☐ TREATMENT RECOMMENDED

LAND MANAGER
NAME  Leigh Carlson  SIGNATURE  [Signature]  [ADNR]

☐ TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

[Signature]  3016
## SHORELINE OILING SUMMARY

**OG & Nat:** USCG LARRY FLETCHER SEGMENT STI ER-03

**Bio & Land Rep:** LAND REP. LARRY CANTON SUBDIVISION A

**EXXON & Cypress:** ADEC Date: Safety TIME: 07:16 to 09:00

**TEAM NO.:** 10 TIDE LEVEL: 12 m (Slo) Date: 04/16/90

**EST. SUBDIVISION LENGTH:** 50 ± 2 m

**UPLANDS DESCRIPTION:** Grass Forest Rock

**SURVEYED FROM:** Foot Boat Helo

**WORKING DIRECTION:** SW to NE

**SURFACE SEDIMENTS:** R 30% B 20% C 10% P 10% G 5% S 5% M 5% V 5%

**SLOPE:** Lang % Hang % Vert %

**WAVE EXPOSURE:** Low Med High

**OIL CATEGORY LENGTH:** W ______ m M ______ m N ______ m V ______ m NO 30.5 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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### PITS

**PIT NO.** | **PIT DEPTH (cm)** | **SUBSURFACE OIL CHARACTER** | **OILED INTERVAL (cm-100cm)** | **BELOW OIL/FILM COLOR** | **PIT ZONE** | **ANA** | **SUBSURFACE SEDIMENTS** |
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### COMMENTS

Oiling in very lightly oiled portion of segment is quite minor.

**Revision**

RM 4/6/90

**Reviewed**

BIL DATE 4/10/90

Page 1 of
OG, PA
SEGMENT ST/EE-3
SUBDIVISION A (el)
DATE 2 April 90

CHECKLIST
No Acre
Approx. Scale
Geophysical
Oil Dist.
Oil
Length
% Cover
Rheologic Character
Est. HMAUML
SSL
Profile Location(s)
Profile
Plot Location(s)
Photo Location(s)

LEGEND
1 A
Downward extent of oiling determined
2 A
Bottom of oiling extent
CT/C
Continuous Distribution
CT/B
Broken Distribution
CT/P
Patchy Distribution
CT/S
Splashed Distribution

Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO

Granite gutfleke breck with cobbles and boulders - admends going orange - angular, but fairly well sorted loewange
rock head breck w vertial pillar brecktes - green, gray
pocket eash gippeles, cobbles, sand and agyn
Stream with water fall
No oil
Stream (oil)

High angle rocks
High angle rubble - same plaete
No oil
### SHORELINE ECOLOGICAL SUMMARY

#### Segment ST_06/30/83

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<tr>
<th>Subdivision</th>
<th>Date (mo / day / yr)</th>
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#### Time (24 hr) | Biologist | Weather
----------------|-----------|-------------
0700 - 1000    | Lemon     | 4°C, wind 40 N, cloudy

#### Substrate type and % of segments:
1. Bedrock (50%)
2. Boulder (20%)
3. Cobble (10%)
4. Pebble (10%)
5. Sand (5%)
6. Silt

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

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

### Barnacles

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### Fucus

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**NOT PRESENT**

### Wildlife Observational General Comments:
- Intertidal area
- Pyura sp. ( Asteroids )
- Gammarid amphipods specialist (Amphipoda)
- A total of 50 fish species were observed in the area.
- Sighting included: 5 deer, 2 eagles, 72 gulls, and 12 gull rookery.

### Ecological Considerations:
- Three streams were checked for fish or fish food or oil in pits was found. Deer "harvest" area, input harvest, hatchery release.
R-03

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

ER-3

Map Key: PWS-167b
Name: Dick Marry
Date: 6 April 1990
Data Entered:

---

PWS 167A
SHORELINE EVALUATION

SEGMENT ST/ ER-04  SUBDIVISION A  (1 OF 2)  DATE  4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: ___________________________ DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 367 m: No Oil 1925 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: 4/25/80

ADEC  Art Walls  Proof
EXXON  Don Teal  Proof
NOAA  John Talbot  Proof
USCG  Kenneth Young  Proof

FOSC:  Proof  DATE: 5-3-80
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A. Disturb stream bottom - by cultigation (3/1 to 5/15)
1B. Disturb stream bottom - 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. Seward Bay Hatchery release (4/15 to 6/1)
1G. Cannery Creek Hatchery release (4/21 to 6/1)
1H. Remote release site
1I. Gill net area (6/7 to 6/31)
1J. Purse seine area (7/20 to 9/30)
1K. Purse seine hook-off (7/20 to 9/30)
1L. Set net sites (6/11 to 7/25)

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

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

Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P. Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q. Harbor seal and sea lion molting (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)
Anchorages (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

6V. Subsistence area:

Salmon harvesting (5/1 to 9/30)

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

SEGMENT 81 ER-04 SUBDIVISION: A DATE 05 APR 90

NAME LARRY FLETCHER SIGNATURE Larry R. Fletcher

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC

NAME DAVID M. SAGE SIGNATURE David M. Sage

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Oil stain on rocks does not seem mobile.
No treatment necessary.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Public uses for the segment include subsistence deer, finfish and invertebrate harvesting.

4 of 12
### SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>TARBALLS</td>
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**PAVEMENT:** H F S

**PATTIES / TARBALLS:** 2 BAGS

**NEAR SHORE SHEEN?** NO

**OILED DEBRIS**

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**DEBRIS COLLECTED**

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**NUMBER OF BAGS**

- Photographs:
  - Roll No.: 57/10/48
  - Frames: 1-8

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
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** ANA SUBSURFACE SEDIMENTS**

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**COMMENTS**

- Revision
  - RM 4/5/40
  - 385

- Reviewed: OIL
  - Date: 4/8/40
Note: Pit 264 refer to sediments exposed by downward erosion of the stream.

No oil, pebble, gravel, beach

Cobbles, boulders, granules, sand

No oil (except for petrol)

Splattered stain in NYTZ best developed in cracks in the bedding where it penetrates shallow bedrock

Cobbles, granules, sand

No oil

Pebble, cobble pocket beach

Shallow slate bedrock

Scattered thin bands of splattered "stain"

High angle pebble, cobble, boulder beach over shallow slate bedrock, S> N70E 30W

Well sorted sand, granule beach. The sediments are in slake segments

The supratidal zone is snow covered
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/CR 1400-1630

Date (mo/day/yr) 4/5/80

Biologist: Lemon

Snowing; wind 7 mph NE

(A) Substrate type and % of segments:

(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);

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Wildlife Observations/General Comments: Unique rocky marine biota; common amphipods present.

Other noteworthy marine biota: common amphipods present.

Oscillatoria sp. (green algae); echinoderm, bivalve, mollusks (bivalve, gastropods) all present.

Ecological Considerations: The latter occasionally cast up in drift. Fish eggs in low zone.

Terrestrially: deer, bear, and other tracks and scent common on snow and sand.

* Checked 2 streams, 3rd one had a cave. Did not check; no fish food found. Deer harvest, invertebrate harvest, hatchery release, finfish harvest, stream spawn.

80 of 12
SHORELINE EVALUATION

SEGMENT ST/ER-04 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Anadromous stream no. 226-50-16436
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Other constraints as listed above. ADF&G catalogued anadromous stream in Subdivision A.

SHPO SIGNATURE: _______________ DATE: _______________

OILING CATEGORIZATION:
Wide 0 m: Medium 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 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 bioremediation between 6/2 and 7/9. Bioremediation may not be conducted within 100m of anadromous fish stream without prior permission of ADF&G.

TAG COMMENTS: __________________________________________________________

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

Salmon fry nursery area (4/31 to 7/31)
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 unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

All Bald Eagle nests (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.
FIELD SHORELINE COMMENT SHEET

SEGMENT: ST 1 EG-04 SUBDIVISION: B DATE: 05 APRIL 90

NAME: LARRY FLETCHER SIGNATURE: LARRY R. FLETCHER

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

1. BIO-REMETEbrate OIL COAT AND SPLASH.

ADEC

NAME: DAVID M. SABE SIGNATURE: DAVID M. SABE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

THIS BEACH SEGMENT REQUIRES SOME SORT OF TREATMENT:

1. THE UNDERLYING SEDIMENTS (Saturated to approx. 2 cm) NEED TO BE REMOVED. OIL SHEEN ON ROCK SURFACE SHOWS MOBILITY OF OIL AT THIS TEMPERATURE (40°C).

2. BIOREMEDIATE LARGER ROCKS FOR REMOVAL OF COVER.

LAND MANAGER

NAME: LEIGH CARLSON SIGNATURE: LEIGH CARLSON ADNR

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS:

PUBLIC USES FOR THE SEGMENT INCLUDE SUBSISTENCE DEER,
FINFISH AND INVERTEBRATE HARVESTING. RECOMMEND BIOREMEDIATION
OF OIL COAT AND SPLASH AS THE OIL IS NOT OF A CONSISTENCY
TO BE RECOVERED BY MANUAL METHODS SHORT OF REMOVING
A PORTION OF THE BEACH.

7 of 12
**SHORELINE OILING SUMMARY**

**USCG: Larry Fletcher**  
**ADEC: Bart Sale**  
**DATE:** 02/06/90  
**TIME:** 12:05 to 12:35

**Segment:**  
**Subdivision:**

**Subdivision Number:** 10  
**Tide Level:** +0.3 m (1')

**Surveyed From:**  
**Working Direction:** S to N

**Uplands Description:**
- Grass
- Forest
- Rock
- Sun
- Clouds
- Fog
- Rain
- Snow

**Surfaced Sediments:**
- R: 10%
- S: 20%
- M: 20%
- L: 20%
- V: 10%
- P: 10%

**Slope:**
- Long: 0%
- Hang: 0%
- Vert: 90%
- Wave Exposure:
  - Low: 0%
  - Med: 0%
  - High: 0%

**Oil Category Length:**
- W: 0 m
- M: 44 m
- N: 249 m
- V: 793 m
- VL: 2 m
- NO: 216 m

### Surface Oil

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**Pavement:** H S  
**Near Shoreballs?** No  
**Patties/Tarballs:** 1

**Subsurfaced Oil**

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*Oiled interval < 5 cm does not constitute subsurface oil.

**Comments:**

**Revised:** RM 4/5/90  
**Reviewed:** Dof 12

**Page 1 of**
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER 4 - Subdivision: B

Date (mo/day/yr) 4/5/90
1630 - 1800
9 (24 hr) Biologist Lemon Snowing; wind 7 mph NE

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

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

(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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Photographs: Roll No. ST/10/8 Frames 9 - 13

Wildlife Observations/General Comments: Other noteworthy marine biota: Dermasterias (on bedrock); Scallop (common); Oysterガイ (asociated); and Pyura (barnacles found in large numbers in the low zone). One high zone area above -

Ecosystem Considerations: 1 meter wide and 3 long had a dense mussel cover, otherwise as reported above.

Marine life: sea urchins and oyster shells can be found along the shore and barnacles are common on rocks. A nearby salt marsh suggests a nearby wetland. Other species of interest:

- *Pisaster giganteus* (bivalve) shells common on beach, suggests a nearby area of interest, possibly a salt marsh.
- Deer, raccoon, and hawks frequent the area.
- Stream spawning and salmon run, visible from the shore.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-4 SUBDIVISION B (2 of 2)

WORK WINDOW

| Bioremediation More Than 100m From Stream | WORK PRIOR TO 7/1 |
| Bioremediation Less Than 100m from stream | WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.) |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-50-16436) is located in adjacent Subdivision A more than 100m from recommended treatment area. An uncatalogued stream is present in Subdivision B. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream.

1F Sawmill Bay Hatchery Release
Closed to bioremediation prior to 6/1.

7HH Subsistence: Finfish Harvesting
Closed to bioremediation after 7/1.

7II Subsistence: Deer Harvesting
Closed to bioremediation after 8/15.

7JJ Subsistence: Invertebrate Harvesting
No constraint to bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC

Date 6-10-90

Prepared by

Date 6/10/90
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 16436): Salmon fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for dates and locations. Deer harvest (7II) - 8/15 to 2/28. Special use area (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permit. Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: __________ DATE: _______

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 342 m; V.Light 208 m; No Oil 270 m

Subsurface Oil Observed: Yes____ No X __ Maximum Depth ______

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 _______ Removal
____ Other (see comments)


TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN PAUL DATE: __________
EXXON ANDY PAGE DATE: _______
NOAA R. W. WESCHBOFF DATE: _______
USCG M. J. HALL DATE: 4-19-90
SEGMENT 571 ER-05  SUBDIVISION:  A  DATE 04 APRIL 96

USCG NAME  LARRY FLETCHER SIGNATURE  Lary Fletcher

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE ASPHALT AND TAR BALLS.
2. BIO-REMEDIAL

ADEC NAME  DAVID M. SALT SIGNATURE  David M. Salt

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE ASPHALT AND TAR PATTIES AND ANY SUBSURFACE OILED SECTIONS.
2. CLEAN ANY OIL FROM INTERSTICES OF BOULDERS AND REPROCK
3. BIOMEDICAL

LAND MANAGER NAME  Leigh Carlson SIGNATURE  Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
PUBLIC USES FOR THE SEGMENT INCLUDE RECREATION AND SUBSISTENCE DEER HARVESTING. RECOMMEND MANUAL REMOVAL FOLLOWED BY BIOREMEDIATION.

180522
**SHORELINE OILING SUMMARY**

OIL: LF, Marz | USCG: LARRY FLETCHER | SEGMENT: STI | ER: OS

BIO: B. Lenz | LAND REP: Lead, Current | SUBDIVISION: A (LOC)

EXxon: M. Czerniak | ADEC: Dave Solar

TEAM NO.: 10 | TIDE LEVEL: 0.7m (2) to +0.9m (3D) | DATE: 04/04/90

EST. SUBDIVISION LENGTH: 790 m | Sun | Clouds | Fog | Rain | Snow

UPLANDS DESCRIPTION: | Grass | Forest | Rock

SURVEYED FROM: | Foot | Boat | Helo

WORKING DIRECTION: | W to E

SURFACE SEDIMENTS: | R 10% | B 20% | C 20% | P 20% | G 10% | S 20% | M 10% | V 10%

SLOPE: | Lang 100% | Hang 0% | Vert 0%

WAVE EXPOSURE: | Low | Med | High

OIL CATEGORY LENGTH: | W 38 m | M 38 m | N 38 m

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**SURFACE OIL**

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Photographs:

- Roll No. 57107
- Frames 29-36

**SUBSURFACE OIL**

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<th>OILED INTERVAL (cm cm)</th>
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COMMENTS

- Asphalt (2) 16.5 m x 2 x 0.45 = 21.45 m³
- (2) 60 m x 1 m x 0.5 = 30 m³
- (3) 30 m x 3 m x 0.5 = 45 m³

OILED INTERVAL <5 cm IN PIT NO. 1 DOES NOT CONSTITUTE SUBSURFACE OIL

**Revision**

RM 4/4/90

Page 1 of 1
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10 ERS__ Subdivision__ A__________________ Date (mo/day/yr) 4/4/90
1900 - 1900 __Biologist__ Leman__________________ Rain

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

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

Wildlife Observational/General Comments: Inspected 2 streams, found no salmon or
food for salmon.

Ecological Considerations: Hatchery release, spawning, deer harvest.
SKETCH MAP

LEGEND
1 \( \Delta \)
- Pit - No Subsurface Oil

2 \( \Delta \)
- Pit - Subsurface Oil

C/C
- Cerulean Cloud

C/B
- Cerulean Band

B/P
- Cerulean Banded Pebble

S/P
- Cerulean Splashed Pebble

CfV
- Oiled Vegetation

\( \times \)
- Photo location, direction, and number

---

ER-05

(1) \( 46 \times 2 \times 0.65 = 21.4 \text{ m}^2 \)

(2) \( 60 \times 1 \times 0.50 = 30 \text{ m}^2 \)

(3) \( 30 \times 2 \times 0.50 = 30 \text{ m}^2 \)

---

Oil Character

h (m): AP 270 PO CV CT 2D ST MB TB 135 FL NO
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-5 SUBDIVISION A (1 of 1)

WORK WINDOW

| Manual Pickup & Tarmat Removal | More Than 400m From Eagle Nest | OPEN |
| Manual Pickup & Tarmat Removal | Less Than 400m From Eagle Nest | CLOSED |
| Bioremediation More Than 400m From Eagle Nest | WORK PRIOR TO 8/15 |
| Bioremediation Less Than 400m From Eagle Nest | CLOSED |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 1A,1B | Salmon Stream | ADF&G catalogued anadromous stream (226-50-16432) 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 and tarmat removal. |
| 1F | Sawmill Bay Hatchery Release Area | No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1. |
| 5T | Bald Eagle Nest | USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal and bioremediation less than 400m from active nest. No constraint to manual pickup, tarmat removal and bioremediation more than 400m from nest. |
| 7II | Subsistence: Deer Harvesting | No constraint to manual pickup and tarmat removal; 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; do not allow linitial 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. No personnel or boats within 400m of active nest. Restrict boat and air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16432) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC DATE 6-10-90
Incorporates information from USFWS bald eagle survey 5/26/90.

ECOLOGY MAP 4/1
SEGMENT ER-5

EXXON
Exxon Company, USA
May 11, 1990

Map Key: PWS-ER-5

SEASON A (1-01-77)

METERS

0 410 820

1 inch = 1346 feet

★ Seabird Colony

▲ Eagle Nest

ANADROMOUS STREAM
226.50-16432

ANADROMOUS STREAM
226.50-16436

ER-04
ER-07
ER-06
ER-05
ER-09

Active

BY

WORK AREA
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16432

SEGMENT ER-5 SUBDIVISION A

WORK WINDOW

Tarmat Removal CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream No constraint to tarmat removal.
1F Sawmill Bay Hatchery Release No constraint to tarmat removal.
5T Bald Eagle Nest Closed to tarmat removal. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area.
711 Subsistence: Deer Harvesting No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-5A FOR ADDITIONAL CONSTRAINT INFORMATION.

Tag Approval Date 6/4/90
ADEC Ray Materials 6/4/90
EXXON Andy Tetz 6/4/90
NOAA Joseph Judd 6/4/90
USCG G. A. BEEF 6/4/90

Prepared by Andrew Myers Date 6/2/90
Incorporates information from USFWS bald eagle survey 5/26/90.

ER-04

ER-07

ER-06

ER-09

ER-05

ANADROMOUS STREAM
226° 50’-16432

ACTIVE EAGLE NEST

ANADROMOUS STREAM
226° 50’-16436

Seabird Colony

Eagle Nest

ECOLOGY MAP
SEGMENT ER-5
SUBDIVISION A-1

METERS
0 180 360

1 inch = 1346 feet

May 11, 1990

Exxon Company, USA

Map Key: PAG-ER-5
SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream no. 226-50-16432 and 16430
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay hatchery release (4/15 to 6/1)
5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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: Breakup X Removal    X Beach Cleaner
X Other (see comments)

COMMENTS: Recommend removal of tarmat and bioremediation as shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of hatchery and salmon constraints and with the approval from ADF&G and USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 4/15/90
ADEC [Signature] DATE: 4/22/90
EXXON [Signature] FOSC [Signature] DATE: 4/22/90
NOAA [Signature] USCG [Signature]
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream fry - fry outmigration (2/1 to 5/15) - no disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon stream adults - 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 Sewall 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 unciled 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 (4/1 to 9/1)
5S Shorebird/waterfowl concentration (4/1 to 5/15) - restrict air traffic to essential minimum, especially air traffic.
5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (4/1 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 Recreational fishing - test 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 2/20)
7JJ Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST1  ER-06  SUBDIVISION:  A  DATE 04 APRIL 90

USCG
NAME: LARRY FLETCHER  SIGNATURE:  [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. MANUALLY REMOVE ASPHALT.
2. BIO-REMEDiate.

ADEC
NAME: DAVID M. SAGE  SIGNATURE:  [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

☐ MANUALLY REMOVE THE BALL, ASPHALT AND SATURATED
   SEEDMENTS TO 3X4 CM.

LAND MANAGER
NAME: LEIGH CARLSON  SIGNATURE:  [Signature]  A DNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Public uses for the segment include recreation and tent sites
and subsistence harvesting of deer, finfish and invertebrates.
Recommend manual removal followed by bioremediation.

12/22
### SHORELINE OILING SUMMARY

**USCG** LARRY FLETCHER  
**SUBDIVISION**  
**TIME** 18:40 to 18:52  
**DATE** 04/19/90  
**TEAM NO.** 10  
**TIDE LEVEL** 0.3 m (1.0) to 0.3 m (1.0)  
**EST. SUBDIVISION LENGTH** 526 m  
**UPLANDS DESCRIPTION**  
- Grass  
- Forest  
- Rock  
**SURVEYED FROM**  
- Foot  
- Boat  
- Helo  
**SURFACE SEDIMENTS**  
- Red 30%  
- Black 30%  
- Brown 20%  
- Gray 20%  
- Orange 20%  
- Mound 8%  
- Muddy 0%  
- Vegetation  
- Trash  
- Debris  
**OIL CATEGORY LENGTH**  
- West 0 m  
- East 0 m  
- North 117 m  
- South 0 m  
**OIL TYPE**  
- Medium  
- Light  

### 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>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>POOLED</td>
<td></td>
<td></td>
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<tr>
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<td>STAIN</td>
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<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PAVEMENT:** H F  
**PATTIES/TARBALLS:** 0  
**NEAR SHORE SHEEN:**  

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

**DEBRIS COLLECTED**  
- Yes  
- No  

**TYPE:** 

-brace from  

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

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>SEDIMENT INTERVAL</th>
<th>BELOW OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>X</td>
<td>0.7</td>
<td>X</td>
<td>X</td>
<td>NG</td>
<td>S</td>
</tr>
</tbody>
</table>

**COMMENTS**  

**Revision**  
**REVIEWED**  
**DATE** 4/9/90
SEGMENT ST/ ER-06

DATE 04/ April 90

CHECKLIST
- Acreage
- Approx. Scale
- Segment/Block
- Oil Distances
- Length
- % Cover
- Substrate Character
- Est. HWL/AVL
- SSL
- Profile Location(s)
- Plotting(s)
- Plot Location(s)
- Photo Location(s)

LEGEND
1 ▲
- Pit - No Subsurface Oil

2 ▲
- Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

Note:
- Pit #1: 7cm deep of oil on water.
- Oil in water.
- Est. Oil in water is 10%.
- Rainbow sheen on water.
- Oil in water.
- Brown, tan, and black.
- Basal sediments are dark brown.

ER-06

Sketch Map

1:30

Oil Characteristic

- AP_90
- PO
- CV_11B
- CT
- ST
- MS
- TB
- FL
- NO_408
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/6
Subdivision ST
Date (mo/day/yr) 4/4/90

Time (24 hr) 1730 - 1800
Biologist Lemon

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

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);
juvenile/adults (%); new settlement (%)

WILDLIFE OBSERVATIONS/GENERAL COMMENTS:

Ecological Considerations:

16 of 22
## ADDENDUM; SUBDIVISION CONSTRAINTS
### SEGMENT ER-6 SUBDIVISION A (1 of 1)

### WORK WINDOW

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmat Removal More Than 400m From Eagle Nest</td>
<td>OPEN</td>
</tr>
<tr>
<td>Tarmat Removal Less Than 400m From Eagle Nest</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation Less Than 400m From Eagle Nest</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation More Than 400m From Eagle Nest and 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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1A, 1B</strong> Salmon Streams</td>
<td>ADF&amp;G catalogued streams (226-50-16430, 16432) are 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&amp;G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal.</td>
</tr>
<tr>
<td><strong>1F</strong> Sawmill Bay Hatchery Release</td>
<td>No constraint to tarmat removal; closed to bioremediation prior to 6/1.</td>
</tr>
<tr>
<td><strong>1K</strong> Purse Seine Hook-off</td>
<td>No constraint to tarmat removal; closed to bioremediation after 7/20.</td>
</tr>
<tr>
<td><strong>5T</strong> Bald Eagle Nest</td>
<td>USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to tarmat removal and bioremediation less than 400m from active nest. No constraint to tarmat removal and bioremediation more than 400m from nest.</td>
</tr>
<tr>
<td><strong>7HH</strong> Subsistence: Finfish Harvesting</td>
<td>No constraint to tarmat removal and bioremediation.</td>
</tr>
<tr>
<td><strong>7II</strong> Subsistence: Deer Harvesting</td>
<td>No constraint to tarmat removal; closed to bioremediation after 8/15.</td>
</tr>
<tr>
<td><strong>7JJ</strong> Subsistence: Invertebrate Harvesting</td>
<td>No constraint to tarmat removal and bioremediation.</td>
</tr>
</tbody>
</table>

### OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow Inipol 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 all disturbance to essential minimum. All approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to unceded biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16430) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC  

DATE 6-10-98
Incorporates information from USFWS bald eagle survey 5/26/90.

Ecology Map
Segment ER-6
Subdivision A

Meters

Exxon Company, USA
Map Key: PMS-ER-6
May 11, 1990

1 inch = 1251 feet

Seabird Colony
Eagle Nest
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16430

SEGMENT ER-6 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,1B  Salmon Stream  ADF&G catalogued anadromous streams (226-50-16430 and -16432) are on the two boundaries of Subdivision A. No constraint to manual pickup and tarmat removal.

1F  Sawmill Bay Hatchery Release  No constraint to manual pickup and tarmat removal.

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

5T  Bald Eagle Nest  NO CONSTRAINT. Bald eagle nest is more than 400m from work site.

7HH  Subsistence: Finfish Harvesting  No constraint to manual pickup and tarmat removal.

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

7JJ  Subsistence: Invertebrate 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 all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unailed biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-6A FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90

ADEC Ray Moran 6/22/90

EXXON Army TSM 6/23/90

NOAA J. Gordon 6/23/90

USCG 6/23/90

FOSC 6/24/90

Prepared by Andrew 6/3/90
Incorporates information from USFWS bald eagle survey 5/26/90.

Exxon Company, USA
Map Key: PhS-ER-6
May 11, 1990

ECOLOGY MAP
SEGMENT ER-6

Seabird Colony
Eagle Nest

1 inch = 1251 feet
**SHORELINE EVALUATION**

**SEGMENT ST/ER-07**  **SUBDIVISION A (1 OF 1)**  **DATE: 4/4/90**

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

<table>
<thead>
<tr>
<th>ADF&amp;G Anadromous stream no. 226-50-16428</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A Salmon stream mouth - fry outmigration (3/1 to 5/15)</td>
</tr>
<tr>
<td>1B Salmon stream mouth - spawning (7/10 to 8/31)</td>
</tr>
<tr>
<td>1F Sawmill Bay Hatchery release (4/15 to 6/1)</td>
</tr>
<tr>
<td>6Y Recreation: Special use destination</td>
</tr>
<tr>
<td>7II Subsistence area: Deer harvesting (8/15 to 2/28)</td>
</tr>
</tbody>
</table>

See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid any unnecessary disturbance or damage to unooled biota and substrate.

---

**SHPO SIGNATURE:** Charles J. Halman  **DATE:** 4/20/90

**OILING CATEGORIZATION:**

<table>
<thead>
<tr>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 0 m: No Oil 0 m</td>
</tr>
<tr>
<td>Subsurface Oil Observed: Yes  No</td>
</tr>
<tr>
<td>Maximum Depth</td>
</tr>
</tbody>
</table>

**RECOMMENDATIONS:**

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

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

**COMMENTS:** Recommend manual removal of tarmat and asphalt patches followed by bioremediation. Work should be conducted between 6/2 and 7/9 based on above salmon constraints. No treatment should be performed at the Special Study site (Exxon AP-16) on the east shore of the small islet (see sketch map); Contact SCAT office for specific restrictions (564-3660).

**TAG COMMENTS:**

---

**TAG APPROVAL DATE:** 4/19/90

<table>
<thead>
<tr>
<th>ADEC</th>
<th>Exxon</th>
<th>NOAA</th>
<th>USCG</th>
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<tbody>
<tr>
<td>Art Weiner</td>
<td>Andy Trela</td>
<td>Paul Weerts</td>
<td>Kenneth M. Alvarez</td>
</tr>
</tbody>
</table>

**FOSC:**  **DATE: 4/15-90**
Salmon fry nursery area (4/31 to 7/31)

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

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

Seward Bay Hatchery release (4/18 to 6/1)

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

Remote release sites

Gill net area (8/7 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 unilingual intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Herbor seal and sea lion pupping (5/15 to 7/1)

Herbor 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 (6/1 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 8/1)

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 (8/1 to 9/15)

Anchorages (8/1 to 9/15)

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

Lodge (8/1 to 9/15)

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

SEGMENT 5T1 ER-07  SUBDIVISION:  A     DATE: 04 APRIL 90

BCG
NAME: LARRY FLETCHER   SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
1. MANUALLY REMOVE ASPHALT AND TAR PATTIES.
2. BIO-REMEDICATE.

ADEC
NAME: DAVE M. SAVS   SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
1. MANUALLY REMOVE ASPHALT AND TAR PATTIES FROM SHORELINE OF ISLAND AND TOMBOL.

TOMBOL needs to be TREATED/CLEANED AT A LOW TIDE TO ACCESS.
TOMBOL also had a SHEEN OF OIL IN THE PIT, ESPECIALLY WHEN SURFACE SEEDMENTS PULLED INTO PIT. THERE IS A CLEAR RIPPLING (DARKEN IN TOP 2-3 cm) BETWEEN SURFACE AND SUBSURFACE. THERE MAY BE MORE OIL IN THE TOMBOL THEN JUST TAR BOLDS/PATTIES.

LAND MANAGER
NAME: Leigh Carlson   SIGNATURE: Leigh Carlson   ADNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
Listed as priority 1 by PWSA. Listed as public use area in the PWS area plan. Area used for recreation and subsistence deer harvesting. Recommend manual removal followed by bioremediation.

79F 22
SHORELINE OILING SUMMARY

OG & MGR USCG LARRY FLETHER SEGMENT ST/ EC-07
BIO & ENV LAND REP LAND CONSERV SUBDIVISION A
EXXON & CSB ADEC DEPT. SLOG TIME 15:15 to 15:35
EST. SUBDIVISION LENGTH: 914 m EST. DATE 04/04/90
TIDE LEVEL: 0.5 m (17) SUM 0.5 m (17) DATE 04/04/90
UP LANDS DESCRIPTION: Grass Forest Rock
SURVEYED FROM: Foot Boat Helo
SURFACES: R. 20% B. 10% C. 10% G. 15% S. 40% M. 15% V
SLOPE: Lang 100% Hang 50% Vert 10% WAVE EXPOSURE: Low Med High
OIL CATEGORY LENGTH: W 3 m M 3 m N 903 m VI 71 m NO 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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<tr>
<td>PATTIES</td>
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<tr>
<td>TARBALLS</td>
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</table>

PAVEMENT: H F (496 sq. m by 2 cm)
PATTIES / TARBALLS 1 BAGS
NEAR SHORE SHEEN NO

OILED DEBRIS AMOUNT
Logs Z3
Vegetation
Trash Debris

OILED DEBRIS COLLECTED
# BAGS

PHOTOGRAPHS:
Roll No. 57/10/7
Frames 20-24

SUBSURFACE OIL

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<tr>
<th>PIT NO.</th>
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<th>OILED INTERVAL (cm)</th>
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COMMENTS
Asphalt 150x2x25% (e) = 75
210x3x35% (e) = 221
210x2x10% (e) = 42
263x3x20% (e) = 158

REVISION
RM 4/4/90
80F 22
REVIEWED DIL DATE 4/8/90
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST/10/ER.7**  
Subdivision: A  
Date (mo/day/yr): 4/4/90  
Time (24 hr): 1500 - 1600  
Biolologist: Lemon  
Rain

A) Substrate type and % of segments:
(1) Bedrock 20   (2) Boulder 3   (3) Cobble 10   (4) Pebble 15   (5) Sand 55   (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 (3)

<table>
<thead>
<tr>
<th>Barnacles</th>
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*Wildlife Observations/ General Comments: In mid zone found nudibranch eggs, annelid worms, epizoic on Fucus. Deer and possibly weka were in snow.*

*Ecological Considerations: clam shells (Tissue #4), from apparent raised bed as described for section 8. Hatchery release; spawning, deer harvest, set aside. Checked stream and found no fish or potential food.*
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-7 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 More Than 100m From Stream</td>
<td>WORK 6/1 to 7/20</td>
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</tr>
<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>WORK 6/1 TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
<td></td>
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</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Streams
ADF&G catalogued anadromous streams (226-50-16428 and 16430) are 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 and tarmat removal.

1F Sawmill Bay Hatchery Release
No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.

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

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

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. 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 unrolled balsa and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM FOR (STREAM NO. 226-50-16428) FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE: 6/4/90
FOSC Date: 6/14/90
Prepared by: [Signature] Date: 6/4/90
Incorporate information from USFWS bald eagle survey 4/18/90.

ECOLOGY MAP
SEGMENT ER-7
SUBDIVISION 4 - (1 of 1)

METERS
0 301 702
1 inch = 1250 feet

★ Seabird Colony
△ Eagle Nest

Exxon Company, USA
Map Key: PlS-ER-7
May 11, 1990
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16428

SEGMENT ER-7 SUBDIVISION A

<table>
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<tbody>
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<td>Manual Pickup</td>
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<td>Tarnat Removal</td>
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<td>OPEN</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 1A,1B | Salmon Stream | ADF&G catalogued anadromous stream (226-50-16428) is in Subdivision A. No constraint to manual pickup and tarnat removal. |
| 1F   | Saw Mill Bay Hatchery Release | No constraint to manual pickup and tarnat removal. |
| 1K   | Purse Seine Hook-off | No constraint to manual pickup and tarnat removal. |
| 7II  | Subsistence: Deer Harvesting | No constraint to manual pickup and tarnat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. 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 unoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-7A FOR ADDITIONAL CONSTRAINT INFORMATION.
Incorporate information from U.S. Fish & Wildlife survey 5/26/90.

ECOLOGY MAP

SEGMENT ER-7

SUBDIVISION (of )

METERS

Exxon Company, USA

Map Key: FM-ER-7

May 11, 1990

Seabird Colony

Eagle Nest

1 inch = 1250 feet
SEGMENT AS ER-7  SUBDIVISION: A  SITE: 1  DATE 8/11/90

USCG
NAME  Mr. Michael D. Brown  SIGNATURE  Michael D. Brown

☐ YES  ☑ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

---

ADEC
NAME  John Hayes  SIGNATURE  Jeff

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work order most likely sent in for AP manual pickup on this segment, should be reassessed following additional treatment. Next AP lane adjacent to tot site.

---

LAND MANAGER
NAME  DOUGLAS GIBSON  SIGNATURE  Douglas Gibson

☐ YES  ☑ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

---

EXXON
NAME  Mark Marr  SIGNATURE  Mark Marr

☑ YES  ☑ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: To check for asphault.
GENERAL DATA

SEG ID: ER-7  SBDV:  A SITE: 1  TEAM: 1  DATE: 8/1/90
SITE LGTH 340  OIL CATEGORIES: W 0 M 0 N850 VL 150 NO 190 U 932.

SURFACE DATA

CHAR #: 1 OIL CHAR: AR OIL DIST: CONT BRKN PTCH SPLH T
TIDAL ZONE: SU UI T MI LI

CHAR #: 2 OIL CHAR: CT OIL DIST: CONT BRKN PTCH SPLH T
TIDAL ZONE: SU UI U MI LI

CHAR #: 3 OIL CHAR: TB OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH T
TIDAL ZONE: SU X UI MI LI

CHAR #: OIL CHAR: O OIL DIST: CONT BRKN PTCH SPLH T
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: O OIL DIST: CONT BRKN PTCH SPLH T
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: O OIL DIST: CONT BRKN PTCH SPLH T
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TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: O OIL DIST: CONT BRKN PTCH SPLH T
TIDAL ZONE: SU UI MI LI
ASAP Data Entry Form

Subsurface Data

Segment ID: ER-7  Subdiv: A  Site: 1

Pit #1  Pit Depth: 15  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #2  Pit Depth: 30  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #3  Pit Depth: 45  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #4  Pit Depth: 60  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #5  Pit Depth: 75  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #6  Pit Depth: 90  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #7  Pit Depth: 105  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #8  Pit Depth: 120  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #9  Pit Depth: 135  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #10 Pit Depth: 150  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #11 Pit Depth: 165  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG

Pit #12 Pit Depth: 180  Oil Character: X  Oil Interval: From ___ To ___
Clean Below: ___  Pit Zone: SU UI MI LI
Subsurf Sediment: BRK BLD COB PEB GRM SAN MUD VEG
ASAP TAG REVIEW SHEET

Segment: ERO7 Subd: A Site: 1 Date
PRE-Review 14-Aug-90

Priority For Addressing In 1990

HIGH MEDIUM LOW NTR

Treatment Recommended: MANUAL REMOVE - ASPHALT PAVES & TIE BARS
   only because of SITE 2 clean-up
   but MATRIX calls for NTR

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
CG  X  ADEC  X  EXXON  X  LAND MGR  X

TAG 13-Aug-90
NTR
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-07 SUBDIVISION A DATED 8-1-90

MODIFICATION CLASS I ___ CLASS II ✓ CLASS III ___

1. REASON FOR MODIFICATION
   Some Friable Asphalt Mat still on Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
   Manually Remove Asphalt Mat / Patties.

3. TIMING ISSUES

ADEC

EXXON

USCG

LAND MANAGER Douglas Gibson (If field rep is on scene)
FIELD SHORELINE COMMENT SHEET

SEGMENT AS / ER-7 SUBDIVISION: A SITE: 2 DATE 5/1/90

JSCG
NAME: Michael D. Brown SIGNATURE: Michael D. Brown

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: [Text not legible]

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: [Text not legible]

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To Check for Asphalt

ADEC
NAME: John Hayer SIGNATURE: [Signature]

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: [Text not legible]

LAND MANAGER
NAME: Douglas Gibson SIGNATURE: Douglas Gibson

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: [Text not legible]

EXXON
NAME: [Name] SIGNATURE: [Signature]

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: [Text not legible]
**GENERAL DATA**

SEG ID: **ER-7**  
SBV: **A**  
SITE: **2**  
TEAM: **1**  
DATE: **8/11/90**  
SITE LGTH: **850**  
OIL CATEGORIES: **W, O, M**  
N, O, SBO,Y, L, N, NO, 150, U, 432 F.C.  

**SURFACE DATA**

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</table>
ASAP TAG REVIEW SHEET

Segment: ER07  Subd: A  Site: 2  Date: 11 AUG 90

Priority For Addressing In 1990

___ HIGH   ___ MEDIUM   ___ LOW   ___ NTR

Treatment Recommended: MAT TIRE CALLS FOR
MILL OF ASPHALT
ON BROKEN

Priority Site For Reassessment In 1991

YES CG NO  YES ADEC NO  YES EXXON NO  YES LAND MGR NO

TAG 13 AUG 90

Additional TAG MAT removal of CUSTOM BLEN
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-05  SUBDIVISION A  DATED 8-1-90

MODIFICATION  CLASS I  CLASS II  CLASS III

1. REASON FOR MODIFICATION

Some Friable Asphalt Mat still on Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Mat / Patties.

3. TIMING ISSUES

ADEC

EXXON

USCG

LAND MANAGER (If field rep is on scene)
**ASAP SHORELINE OILING SUMMARY**

**TEAM NO. ONE**

**EXxon MARTINEZ**

**SEGMENT AS: ER - 7**

**OG REIMER**

**USGS BROWN**

**ADEC HAYES**

**LAND REP GIBSON**

**SUBDIVISION A**

**DATE 8/1/90**

**TIME 15:10:40**

**TIDE LEVEL 7.10 ft**

**TOTAL EST LENGTH OF SHORELINE SURVEYED: 590 m**

**SURVEYED FROM:** Foot ☑ Boat ☑ Helo ☐

**WEATHER:** ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

**OIL CATEGORY LENGTH:** W 0 m M 0 m N 250 m VL 50 m NO 190 m US 0 m

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**SURFACE OIL**

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<tr>
<th>CHARACTER</th>
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<th>OILED ZONES</th>
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<tr>
<td>S.O.R.</td>
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<td>POOLED</td>
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<tr>
<td>COVER</td>
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<tr>
<td>COAT</td>
<td>U</td>
<td>U</td>
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<tr>
<td>STAIN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES/T.B.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
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**EST. SITE LENGTH**

- **SITE 1:** 340 m
- **SITE 2:** 250 m
- **SITE 3:**

**SUBSURFACE OIL**

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<th>SITE NO.</th>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>Photographs:</th>
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<td>P-P</td>
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**COMMENTS**

The only significant oiling on this subdun is the Tarmat remaining on site #2. This area was manually worked and Tarmat removed. The mat present is in and around the trenches left by previous work. The current oiling may represent more oiling being brought to surface in warm...
SHORELINE EVALUATION

SEGMENT ST/ER-08 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

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

SHPO SIGNATURE: DATE: 4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 523 m: V.Light 1026 m: No Oil 1313 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmac: Breakup
X Removal

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual break-up and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC
EXXON
NOAA
USCG

FOSC: DATE: 4/17/90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

Main Bay Hatchery release (4/1 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 uncultivated intertidal and subtidal algal 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/wader/willow (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

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

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

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

SEGMENT ST  E R- R  SUBDIVISION:   A   DATE 04 APR 90

NAME  LARRY FLETCHER  SIGNATURE  Larry R. Fletcher

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
1. REMOVE ASPHALT AND TAR PASTES MANUALLY.
2. BIO-REMEDATE.

ADEC

NAME  David M. Sale  SIGNATURE  David M. Sale

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
1. Remove asphalt and tar patches manually.
   Move rocks where necessary to get all of asphalt.
2. Bio remediation.

LAND MANAGER

NAME  Leigh Carlson  SIGNATURE  Leigh Carlson  ADNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Listed as priority 1,3 by PWS CA. Listed in PWS Area plan as public use area for anchorage, recreation and subsistence uses. Recommend manual removal followed by bioremediation.

29/82
**SHORELINE OILING SUMMARY**

**OG & Map** USCG LARRY FLETCHER
**BIO & Land** LAND REP. LiSiCIA GOERON
**SUBDIVISION** A

**Team No.** 10  
**TIDE LEVEL** 7.8m (L) to 10.6m (H) Date 04/04/90

**EST. SUBDIVISION LENGTH** 307.2 m
**UPLANDS DESCRIPTION** ☐ Grass ☐ Forest ☐ Rock

**SURVEYED FROM** ☐ Foot ☐ Boat ☐ Helo  
**WORKING DIRECTION** to clockwise

**SURFACE SEDIMENTS** R 40% B 40% C 20% P 0% G 0% S 0% M 0% V 0%

**SLOPE** Lang % Hang % Vert %

**WAVE EXPOSURE** ☐ Low ☐ Med ☐ High

**OIL CATEGORY LENGTH** W Q m M Q m N 0 m V Q m

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**SURFACE OIL**

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</table>

**PAVEMENT** H F ☐ 75 sq m by 3 cm

**PATTIES/TARBALLS** ☐ BAGS

**NEAR SHORE SHEEN?** ☐ BR RW (SL) TL

**OILED DEBRIS AMOUNT** SM/MD/LG

**DEBRIS COLLECTED** ☐ YES ☐ NO

**TYPE** ☐

**#BAGS** ☐

**Photographs:**

Roll No. 55/10/2
Frames 14-19

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**SUBSURFACE OIL**

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**COMMENTS** Segment consists mainly of high angle eels.  
**PAVEMENT** is concentrated near junction with ER-07.  
* oiled interval < 5 cm does not constitute sub-surface oil.

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**Revision** RM 4/4/90

**Reviewed** 3 of 22

**Reviewed** J W DATE 4/9/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/0/EB  Subdivision _ Site________ Date (mo/day/yr) __4/4/90__

Time (24 hr) _____________________ Biologist ___________________ Rain, wind 12 mph, waves 3' mild, 4°C

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

B) Overall % cover of biota (% of segment): Dense (70%) Moderate (30%) Low (10%)

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

BARNACLES

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<th>Moderate</th>
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MYTILUS

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Wildlife Observations/General Comments: Greatest total coverage on bedrock was through the mid zone. Red and Alaria and Katharine, all Halosaccion, all modest in low zone. Endemia in mid zone. Lepidoseira reticulata in mid. Lithocolea seen laying eggs.

Ecological Considerations: Beds of Tresus (bivalve) have apparently been uplifted and now die in the zones we see today: deeper water may hold many more. Important for subsistence and recreation. Odocoleus hemianus (doe), Mustela vison (mink) and bald eagle were sighted. A dead Enhydrion Latera (seal otter) was found unshelled, only skin and bone remain. Tent sites, deer harvest.
SEGMENT AS/ER-Y SUBDIVISION: A SITE: 1 DATE 8/1/90

NAME: Michael O. Brown SIGNATURE: Michael O. Brown

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADEC

NAME: John Hoyer SIGNATURE:

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

LAND MANAGER

NAME: Douglas Gibson SIGNATURE:

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON

NAME: Mariner N.B. SIGNATURE:

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: To see if any additional asphale forms.

REVISION NO. 7/26/98
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08 SUBDIVISION A. DATED 8-1-90

MODIFICATION CLASS I _ CLASS II _ CLASS III 

1. REASON FOR MODIFICATION
Asphalt Patties (Friable) starting at E End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
Manually Remove Asphalt Patties. Ex Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC
EXXON
USCG
LAND MANAGER/Douglas Gibson (If field rep is on scene)
GENERAL DATA

SEG ID: ED-8 SBDV: A SITE: 1 TEAM: 1 DATE: X/11/90
SITE LGTH 200 OIL CATEGORIES: W M N
N M N 340Y1 300 NO 60 U S
1991 REASSESSMENT: USCG: N ADEC: Y LDMGR: Y EXXON:

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 2 OIL CHAR: TB OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI X MI X LI

CHAR #: 3 OIL CHAR: NL OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
SUBSURFACE DATA

SEGMENT ID: EP-Y  SUBDIV: A  SITE: 1

PIT #1  PIT DEPTH 30  OIL CHARACTER  NO  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_SM_MUD_VEG

PIT #2  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #3  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #4  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #5  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #6  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #7  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_SM_MUD_VEG

PIT #8  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #9  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_SM_MUD_VEG

PIT #10  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #11  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_SM_MUD_VEG

PIT #12  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_GRN_SM_MUD_VEG

PIT #13  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM  TO
CLEAN BELOW:  PIT ZONE: SU  UI  M1  LI
SUBSURF SEDIMENT: BRK_BLD_COB_PEB_SM_MUD_VEG
SEGMENT AS/ ER-X  SUBDIVISION: A SITE: 2  DATE 8/11/90

SCG  NAME: Michael D. Brown  SIGNATURE: [Signature]

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: [Blank]

ADEC  NAME: John Heyes  SIGNATURE: [Signature]

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No treatment at this time only remain of oiling were CTLs.

LAND MANAGER  NAME: Douglas Gibson  SIGNATURE: [Signature]

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: [Blank]

EXXON  NAME: Michael D. Martin  SIGNATURE: [Signature]

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: [Blank]
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-OB SUBDIVISION A. DATED 8-1-90.

MODIFICATION CLASS I  CLASS II  ✓ CLASS III

1. REASON FOR MODIFICATION
Asphalt Patches (Friable) starting at E End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
Manually Remove Asphalt Patties.
@ Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC
EXXON
USCG
LAND MANAGER: Douglas Gibson (If field rep is on scene)
GENERAL DATA
SEG ID: E2-Y SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
SITE LTH: O O O N 340 VL 330 NO 60 UC

SURFACE DATA
CHAR #: 1 OIL CHAR: CT. OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
CHAR #: 2 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
CHAR #: 3 OIL CHAR: OIL OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
CHAR #: 4 OIL CHAR: OIL OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
CHAR #: 5 OIL CHAR: OIL OIL DIST: CONT BRKN PTCH SPLH
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CHAR #: 6 OIL CHAR: OIL OIL DIST: CONT BRKN PTCH SPLH
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TIDAL ZONE: SU UI MI LI
CHAR #: 9 OIL CHAR: OIL OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
GENERAL DATA

SEG ID: ER-8 SBDV: A SITE: 3 TEAM: 1 DATE: 8/1/90
SITE LSTH: 350 OIL CATEGORIES: W M N 340 VL 300 NO CO U O

SURFACE DATA

CHAR: 1 OIL CHAR: SO9 OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR: 2 OIL CHAR: SY OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR: 3 OIL CHAR: CT OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR: 4 OIL CHAR: MS OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR: 5 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR: ___ OIL CHAR: ___ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI

CHAR: ___ OIL CHAR: ___ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
SEGMENT AS \ ER-3 \ SUBDIVISION: A SITE: 3 DATE 8/1/90

JSCG
NAME: Michael A. Brown SIGNATURE: Michael A. Brown

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991 REASON:

ADEC
NAME: John Heyer SIGNATURE: 

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991 REASON:

LAND MANAGER
NAME: Douglas Gibson SIGNATURE: 

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991 REASON:

DON'T HAVE INFORMATION WHEN BIO SQUAD VISITED/TREATED THIS SITE. RECOMMEND FURTHER APPLICATION IN 90 IF TIME ALLOWS TURN OVER ROCKS AND SPRAY TREATMENT. (EAST END OF SITE 3 ONLY NEEDS TREATMENT)

EXXON
NAME: Martinez W.J. SIGNATURE: 

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991 REASON:
SEGMENT AS1 ER-S SUBDIVISION: A SITE: 4 DATE 8/1/90

SCG NAME: Michael D. Brown SIGNATURE: Michael D. Brown

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADEC NAME: John Hayes SIGNATURE: Jeff

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No treatment recommended at this time. Patches remaining are sparse and well weathered.

LAND MANAGER NAME: DOUGLAS GIBSON SIGNATURE: Douglas Gibson

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON NAME: Martinez, N. SIGNATURE: N/A

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
GENERAL DATA

SEG ID: ER-Y
SBDV: A
SITE: 4
TEAM: 1
DATE: 8/1/90

SITE LEN: 130
OIL CATEGORIES: W
N
VL
300
O
60
U

1991 REASSESSMENT: USCG: N
ADEC:
LDMEGR: E
EXXON:

SURFACE DATA

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OIL DIST: CONT
BRKN
PTCH
SPLH
X
TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI X

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PTCH
SPLH

TIDAL ZONE: SU UI MI LI

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PTCH
SPLH

TIDAL ZONE: SU UI MI LI

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OIL DIST: CONT
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TIDAL ZONE: SU UI MI LI

CHAR #: 9
OIL CHAR: NO
OIL DIST: CONT
BRKN
PTCH
SPLH

TIDAL ZONE: SU UI MI LI
# ASAP SHORELINE OILING SUMMARY

## Team Information
- **Team No.**: ONE
- **Team Leader**: Exxon Martinez
- **Segment**: ER-8
- **Date**: 8/1/90
- **Surveyed From**: Foot, Boat, Helo
- **Weather**: Sun, Clouds, Fog, Rain, Snow

## Site Survey Information
- **Total No. Sites**: 4
- **Surveyed To**: 11:55
- **Tide Level**: 6-0
- **Length of Shoreline Surveyed**: 2612 ft.

## Surface Oil

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## Subsurface Oil

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<th>Surface-Subsurface Sediments</th>
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## Comments
- Site #1 was previously worked with the removal of tarmat according to Exxon Rep. The existing tarmat is in and around the trenches on the beach when material was removed. This is a bit of a mystery.

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*REVISION NO. 1/27/90*
# ASAP SHORELINE OILING SUMMARY

SEGMENT AS: EP-3  SUBDIVISION: A

## SURFACE OIL (CONTINUED)

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<td>Y</td>
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## SUBSURFACE OIL (CONTINUED)

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<th>OILED INTERVAL</th>
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**COMMENTS**
ER-08

Site #1

CT/S 1% on Boulders MITZ-VITZ

Site #2

Site #3

Yes

Site #4

CT/P CUL/PL SOR/ST

ALDERS

Rocks

Rocks

ADEC Subsegment Length: 2862 m

Date: 8/1/90

Map Key: PWSER-8A

Name: Reimer

Subdivision Field Map

Wide

Medium

Narrow

Very Light

No Oil

AK State Plane Zone 4 1:7202
SHORELINE EVALUATION

SEGMENT ST/ ER-09 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 6V Recreation: Anchorages (6/1 to 9/15)
- 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.

SHPO SIGNATURE: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:
- Wide 0 m: Medium 0 m: Narrow 399 m: V.Light 677 m: No Oil 71 m
- Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

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 tarballs, mousse, oiled vegetation and debris from locations shown on sketch map. Work should be conducted after 6/1. Avoid disturbance to "set- aside" study site (Exxon AP-16) in adjacent segment (ER-07).

TAG COMMENTS: _______________________________________________________

TAG APPROVAL DATE: 4/12/90
ADEC [Signature] DATE: 4-25-90
EXXON
NOAA [Signature]
USCG [Signature]
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 ER-9 SUBDIVISION: ____________ DATE: 03 APRIL 90

USCG
NAME: LARRY FLETCHER SIGNATURE: ______________

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS:
1. MANUALLY REMOVE TAR PATCHES.
2. BIO-REMEDiate.

ADEC
NAME: DAVID M. SAGE SIGNATURE: ______________

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS:
1. MANUAL REMOVAL OF TAR PATCHES
2. INCLUDE ROCK WASHING IN AREA OF CERCLA SITE TO REMOVE TAR PATCHES ON ROCKS
   RECOMMEND CLEANING AT 7108 LEVELS BELOW 4', TO REMOVE TAR PATCHES FROM TOMBOLO

LAND MANAGER
NAME: LEIGH CARLSON SIGNATURE: ______________

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS:
Listed as priority 1 by PWSCA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. A-frame shelter located among spruce trees on the tombolo. Recommend manual removal of mousse and asphalt patches. Possible washing off tar and mousse cover near CERCLA site. Follow-up with bioremediation.
SHORELINE OILING SUMMARY

OG 6.6107 USCG LARRY FLETCHER SEGMENT ST/ER-09
0 G. B. Leonard LAND REP Leland Cooper SUBDIVISION A (10-41)
Ixon J. Czaparik ADEC Port Sales TIME 10:20 10 0 18:53
TEAM NO.: 10 TIDE LEVEL: +1.2 to +1.7 m DATE 04/23/90
EST. SUBDIVISION LENGTH: 929 m " Sun Clouds Fog Rain Snow
UPLANDS DESCRIPTION: Grass Forest Rock
SURVEYED FROM: Foot Boat Helo WORKING DIRECTION: 10 counterclockwise
SURFACE SEDIMENTS: R 20% B 0% C 10% P 15% G 15% S 20% M 0% V 0% WAVE EXPOSURE: Low Med High
SLOPE: Lang 100% Hang 0% Vert 0% OIL CATEGORY LENGTH: W 0 m M 0 m N 4 53 m V 0 33 m NO 0 53 m

SURFACE OIL

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PAVEMENT: H F 8 sq. m by ___ cm
PATTIES/TARBALLS: 10 BAGS
NEAR SHORE SHEEN? BR RW BL TL

OILED DEBRIS AMOUNT DEBRIS COLLECTED TYPE
Logs SM MD LG YES NO
Vegetation
Trash X
Debris

Photographs:
Roll No. 55/10/7
Frames 9-13

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COMMENTS: Primed out rock fragment

Revision RM 4/3/90
Reviewed DATE 4/1/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/GA 9  Subdivision: ______________ Date (mo/day/yr) 4/3/90
1900 - 1900
Time (24 hr) ______________ Biologist: Lemon ______________ Rain: 4/3

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

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

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

BARNACLES

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Wildlife Observations/General Comments:

- one bird skeleton observed; few gulls not visible except from skiff; basking seen in front of bedrock area; adults (sea urchin) & clams here similar to EAA 10:  B. "Common shell not uncommon... Trash has been burned on this beach leaving fragments of melted plastic. Oil is at 10' level.

Ecological Considerations:

- Stream between EAA 9 & GA 8 was examined; one insect larva found; no fish or shrimp, but fishy smell, anchovies.

- There may be clumps of recreational value at tide levels lower than available in this survey.
WORK PLAN ADDENDUM

Segment ER-09 Subdivision A Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION

   Request for Bid Extension within the Subdivision

2. ADJUSTMENT TO WORK PLAN

   Add Biorxiv to...as indicated on the sketch

SHPO APPROVAL NEEDED YES X  SHPO SIGNATURE

TAG APPROVAL DATE 6/20/90

ADEC Ray Mroz  P. Hino
EXXON Andy Tar  C. Beal
NOAA Joseph Guinn  G. Johnson
USCG G.A. Reiter  G. Reiter

Address: 1234 Main St, Town, State, Zip

Prior to working subdivision, check with us FOSC to ensure their people are out of the area.
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER- 09 SUBDIVISION A SITE 1+2 DATED 8/2/90

MODIFICATION CLASS I ___ CLASS II ___ CLASS III ___

1. REASON FOR MODIFICATION
   Asphalt, residual oil and tarballs on segment.
   S:ke 1 SOR/H/B PT/5 TB/5
   S:ke 2 AP/P1B See sketch map for locations

2. SUGGESTED ADJUSTMENT TO WORK PLAN
   Manually remove AP SOR/H and PT/TB also
   recommend reaplication of Bio on Site 1 work areas identified
   on sketch map.

3. TIMING ISSUES
   REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING
   MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC
   ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS).

ADEC

EXXON

USCG

LAND MANAGER (If field rep is on scene)

NOTE THAT 9 & 7 PUT UP DO EACH OTHER, THIS END OF 9 IS ALL
THAT NEEDS WORKED ON 9.
SEGMENT AS: ER-9 SUBDIVISION: A SITE: 1 DATE 8/1/90

ISCG
NAME: Michael O. Brown
SIGNATURE: 

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADEC
NAME: John Hayes
SIGNATURE: 

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Oil remaining on site 1 consists of heavy SOR at some subsurface to 16m. In addition there is a stream on this site that should be reevaluated as there was oil reaching in the form of SOR on the northern bank. See stretch map for SOR + TB locations.

LAND MANAGER
NAME: Douglas Gibson
SIGNATURE: 

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON
NAME: Montmar
SIGNATURE: 

☐ YES ☑ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
GENERAL DATA

SEG ID: ER-9 SBDV: A SITE: 1 TEAM: 1 DATE: 8/11/90
SITE LNGTH 500 OIL CATEGORIES: W O M N 26 VL 353 NO 520 U 2025 W

SURFACE DATA

CHAR #: 1 OIL CHAR: SB OIL DIST: CONT BRKN H PTCH X SPLH T
TIDAL ZONE: SU UI X MI LI

CHAR #: 2 OIL CHAR: CV OIL DIST: CONT BRKN PTCH X SPLH
TIDAL ZONE: SU UI X MI LI

CHAR #: 3 OIL CHAR: CT OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI LI

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TIDAL ZONE: SU UI MI LI

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<td>PEB</td>
<td>GRN</td>
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</table>
SEGMENT AS I  
SUBDIVISION: A  
SITE: 2  
DATE 8/1/90

USCG
NAME Michael D. Brown  
SIGNATURE Michael D. Brown

☐ YES  ☒ NO  
PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADEC
NAME John Meyer  
SIGNATURE [Signature]

☒ YES  ☐ NO  
PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Oiling consists of AP/LP in 5 areas along this sub-section. 
Recommend manual IL in 1990. See sketch for location.

LAND MANAGER
NAME DOUGLAS GIBSON  
SIGNATURE Douglas Gibson

☐ YES  ☒ NO  
PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING 
MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC 
ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS)

EXXON
NAME Mantzner  
SIGNATURE Mantzner

☐ YES  ☒ NO  
PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
### General Data

**SEG ID:** ER-9  
**SBDV:** A  
**SITE:** 2  
**TEAM:** 1  
**DATE:** 8/1/90

**SITE LGTH:** 600  
**OIL CATEGORIES:** W  
**1991 REASSESSMENT:** USCG: Y  
**ADEC:** Y  
**LDMGR:** Y  
**EXXON:** N

### Surface Data

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<th>OIL DIST</th>
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**TIDAL ZONE:** SU UI MI LI
### ASAP SHORELINE OILING SUMMARY

**Team No. One**

**Exxon Martinez**

**Segment As:** ER-9

**Subdivision:** A

**Date:** 8/1/90

**Time:** 8:45 to 10:15

**Tide Level:** 5 to 6

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

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

**Oil Category Length:**
- W: 0 m
- M: 0 m
- N: 70 m
- V: 350 m
- N: 530 m
- US 202 m

### Surface Oil

<table>
<thead>
<tr>
<th>Site 1</th>
<th>Site 2</th>
<th>Site 3</th>
</tr>
</thead>
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<tr>
<td><strong>Character</strong></td>
<td><strong>Distribution</strong></td>
<td><strong>Oiled Zones</strong></td>
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<td>/C /B /P /S</td>
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<td>S.O.R.</td>
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<td>X X</td>
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<td>Cover</td>
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<tr>
<td>Mousse</td>
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<tr>
<td>Patties/T.B.</td>
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<td>X</td>
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<tr>
<td>Film</td>
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<td>X</td>
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**Est. Site Length:** Site 1: 500 m

### Subsurface Oil

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<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm-deg)</th>
<th>Clean Below (Y/N)</th>
<th>Pit Zone</th>
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<td>H</td>
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<td>X</td>
<td>BP-PC-B</td>
<td>Photographs: Roll No. _______ Frames _______</td>
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</table>

**Comments:** The only significant oiling on this segment is a small 2 x 18 m area on a Rock/Boulder Terrace with heavy SOR remaining after it appears some manual work was done. The remaining oil is in the form of separate patches as seen.

**Reviewed:**

**Revision No.:** 3/2/90
ER-9 A

--- Narrow
TTTT Very Light
0000 No Oil

Subdivision Field Map
Map Key: PWSE-9A
Name: Reimer

Date: 8/1/90
Data Entered:

ADEC Subsegment Length: 1152m

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

AK State Plane Zone 6
1:3771
per-9a
SEGMENT ST/ ER-10  SUBDIVISION A (1 OF 1)  DATE  4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Tent
sites (6U) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

SHPO SIGNATURE: ____________________________  DATE: April 12, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 226 m: V.Light 928 m: No Oil 1104 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: Manually remove tarballs and tarmat. Bioremediate as
indicated on sketch map. Work after 6/1.

TAG COMMENTS:__________________________

TAG APPROVAL DATE: 6/12/90
ADEC  EXXON  NOAA  USCG  FOSC: ______ DATE: 4/79-90
FIELD SHORELINE COMMENT SHEET

SEGMENT 1, ER-10  SUBDIVISION:  ___________  DATE 03 APRIL 90

NO TREATMENT RECOMMENDED   ☑ TREATMENT SUGGESTED

1. Manually remove asphalt and tar balls.  

ADEC
NAME  DAVID M. SAGE  SIGNATURE  David M. Sage

NO TREATMENT RECOMMENDED   ☑ TREATMENT SUGGESTED  (LIMITED)

1. Remove tar patches and asphalt
2. Bio-remediate areas of heavy cover

THE HI-ANGLE FACES ON THIS SECTION HAVE A RICH DIVERSITY OF MOLLUSK AND OTHER INTERTIDAL LIFE. THE OILING APARENT HERE DOES NOT WARRANT MAJOR DISTURBANCE OF THE COMMUNITY EQUILIBRIUM.

LAND MANAGER
NAME  LEIGH CARLSON  SIGNATURE  Leigh Carlson  ADNR

☑ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Listed as priority 1 by PWSCA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. Most of the ill on the segment is splinters which blend in fairly well with the coloring of the rocks and the rich biota growing on them. Most of the tidelands in the segment consist of large angular boulders that are difficult to walk on. Recommend manual removal of asphalt pavement and tar balls followed by bioremediation.
SHORELINE OILING SUMMARY

OG & NPS USCG LARRY FLETCHER SEGMENT ST/ER-10
NO. E. NORTHERN LAND REP LINDA CURRIE SUBDIVISION A (10F1)
XXON J. CZERNIKI ADEC DAVE SLOAN TIME 13:30 to 15:30
EAM NO.: 10 TIDE LEVEL: ± 0.95 to +1.0 m DATE 04/03/90
EST. SUBDIVISION LENGTH: 2.434 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helio WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 5% B 65% C 20% P 10% G 8% M 8% V %
SLOPE: Lang 10% Hang 50% Ven 40% WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W _____ m M _____ m N 2.64 m VL 977 m NO 1194 m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>NO OIL</td>
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PAVEMENT: H 2.5 63 sq. m by 3 cm
PATTIES / TARBALLS / BAGS
NEAR SHORE SHEEN? NO

OILED DEBRIS AMOUNT

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<td>Trash</td>
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<td>Debris</td>
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Photographs:
Roll No. 5T/10/6 and 10/7
Frames 30-37 1-8

SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>OILED INTERVAL BELOW (cm)</th>
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COMMENTS *OILED INTERVAL < 5 cm in PIT NO. 1 and 2 do not constitute subsurface oil

Revision
RM 4/3/90

Reviewed HW DATE 4/6/90

Page 1 of
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10ER/10 Subdivision A Date (mo/day/yr) 4/3/90
1340 - 1630 Time (24 hr) Biologist Lemon Rain
90931

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 65 (3) Cobble 20 (4) Pebble 10 (5) Sand

(B) Overall % cover of biota (% of segment): Dense 70 Moderate 60 Low

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

BARNACLES

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MYTILUS

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FUCUS

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Wildlife Observations/General Comments: From shift, Alaria could be seen as a moderate low zone cover. Site: Shore had many shells of Patelloida, some appearing to have died beheaded in a zone higher than normal for the species. Bellinga had eggs on the shore line, Harbor seal at other sites. Family not identified by shift duties.

Ecological Considerations:

Laminaria spp. subtidally

Warm sites, current, harvest. Also note that many

juveniles of Charlotte, Patelloida, and Tris is in the sand. There may be recreational/cultural value in these sites. Four species were checked for anomalous fish, none found, nor any food for them; snow blizzard occurs in many cases.
SHORELINE EVALUATION

SEGMENT ST/ ER-11 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Sawmill Bay Hatchery release (1F) - 4/15 to 6/1; Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Anchor-
ages (6V) - 6/1 to 9/15. Special use designation (6Y) - 6/1 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

OILING CATEGORIZATION:
Wide 0 m: Medium 1093 m: Narrow 157 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: Breakup
X Removal

COMMENTS:
Manual removal of asphalt tarmat and oiled debris. Bio-
remediation as indicated on sketch map. Work after 6/1 based on
hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC John Bauer
EXXON Andy Teal
NOAA Bud Wescott
USCG C.A. Keiter

DATE: 4/10/90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ER-11  SUBDIVISION: __________________________ DATE 03 APRIL 90

USCG
NAME LARRY FLETCHER  SIGNATURE Larry R. Fletcher

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. MANUALLY REMOVE ASPHALT AND TAR PARTIES.
2. BIO-REMEDY.

ADEC
NAME DAVID M. SUE  SIGNATURE D. Sue

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. MANUAL REMOVAL OF ASPHALT AND TAR BALLS/PATTERNS
   - WILL REQUIRE SCRAPING OFF SOME SECTIONS
   - USE OF BRAZIL | OVERSIZE TOWS MAY BE APPROPRIATE ON THE
     SECTIONS. NOTE: SOME ASPHALT MAY BE UNDER SAND & DEBRIS
2. CLEAN BOULDERS OR COVER
   - PAINT CAUSING GREEN ON ROCK SHOWS SOME OIL MOBILITY
   MOBILE OIL MUST BE REMOVED
3. BIOREMEDIATE

LAND MANAGER
NAME Leigh Carlson  SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Listed as priority 1,3 by PWSA. Listed in PWS area plan as public use area
for anchorage, recreation and subsistence uses. The segment has nice sandy
beaches and flat areas for tent camping, especially around the lagoon at pits
2,3 and 4. Recommend manual removal of asphalt pavement and debris
followed by bioremediation, especially in the areas around the boulders.
### SHORELINE OILING SUMMARY

**USCG LARRY FLETCHER**  
**LAND REP. (Cont'd)**  
**DATE: 04/03/90**

**EST. SUBDIVISION LENGTH:** 1227 m  
**SURVEYED FROM:** Foot  
**SURFACE SEDIMENTS:** R  
**SLOPE:** Lang 100%  
**OIL CATEGORY LENGTH:**

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<tr>
<th>OIL FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</thead>
<tbody>
<tr>
<td>S</td>
<td>M</td>
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**SURFACE OIL**

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

**OIL/FILM COLOR:**

**IMPACTED ZONES:**

**OIL CHARACTER:**

**OILED DEBRIS:**

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<td>Debris</td>
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**PAVEMENT:**

- H  
- F  
- Bags

**NEAR SHORE SHEET**

- No  
- BR  
- AW  
- TL

**OILED INTERVAL**

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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>BELOW OIL/FILM COLOR</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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</table>

**COMMENTS:**

- Wide distributed soft asphalt patches.

**OILED INTERVAL:**

- Pit Nos. 1, 2, 4, 5, and 6

**DO NOT CONSTITUTE SUBSURFACE OIL**

**REVIEWED:**

- Dan Woodward

**DATE:** 04/03/90
### Shoreline Ecological Summary

**Segment:** ST 1100 - 1330  
**Subdivision:**  
**Date (mo/day/yr):** 4/3/90

**Time (24 hr):** 1508  
**Biollogist:** Lemon  
**Rain:**  

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

(B) **Overall % cover of biota (% of segment):**
- Dense
- Moderate
- Low 10%

(C) **Photographs:** Roll No. 5/10/96  
**Frames:** 21-29

#### Barnacles

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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#### Mytilus

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#### Gastropods

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#### Fucus

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<td>2M</td>
<td>6</td>
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</table>

**Wildlife Observations/General Comments:**
- One sighting each of otter, seal, eagle, deer-Tim 15 quills. Dead otter on beach.  
- No evidence of drift line at the snow line had 35% amphipod coverage and an oligochaete (annelida).

**Ecological Considerations:** Deer harvest, hatchery release.
APR-04-1990 19:41 FROM BRASOS SEAHORSE TO DAN WOODWARD P.08

NOTES: Days are estimates for a 12 man crew.
I. Light patrol spotted for first 50m, then 4m beach:
   60% cover, dark brown. Pavement is soft, 2cm thick.
II. Pavement continues in U1Z and 2T2: soft, 2cm thick.
III. Entire beach is paved 30m wide, 60% cover 5cm thick.

ER-11

Approximate location of Exxon study site AP-18

Sketch Map

Pavement

Asphalt, gravel, sand

2-3 bags of debris, 10cm x 4cm
Oiled logs

Pavement much less dense than in L1Z. Continuous in U1Z and 2T2.
Snow-covered.

Approximate location of Exxon study site AP-18
# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT ER-11 SUBDIVISION A (1 of 1)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup</td>
</tr>
<tr>
<td>Tarnat Removal</td>
</tr>
<tr>
<td>Bioremediation</td>
</tr>
</tbody>
</table>

## ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 594-3274.

## APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| No constraint to manual pickup and tarnat removal. Closed to bioremediation prior to 6/1. |
| 1F Sawmill Bay Hatchery Release |                                             |
| No constraint to manual pickup and tarnat removal. Closed to bioremediation after 7/20. |
| 1K Purse Seine Hook-off          |                                             |
| No constraint to manual pickup and tarnat removal. Closed to bioremediation after 8/15. |
| 7II Subsistence: Deer Harvesting |                                             |

## 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 unrolled biota and substrate.
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-11  SUBDIVISION A (141)  DATED 6/4/90

MODIFICATION  CLASS I  CLASS II  CLASS III  X

1. REASON FOR MODIFICATION -
A "tongue" of oil was approx. 500 of the 1200 m of the beach segments where
this layer reached the surface it was manually removed. However, areas
of between treatment in High-Super Intertidal zone as characterized by a
layer of oil approx. 10 cm thick from between 3 and 10 cm below the
surface of the substrate. These areas with a subsurface are marked
on the attached map.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
ER-11 A (141) is recommended for firemediation. However, in order
to effectively expose oil in the subsurface zone to the fuel or
contamination and facilitate its effectiveness, I recommend that
the area marked on attached map be mechanically tilled. For areas
below High Intertidal Zone no meach. tilling is recommended. Because of
the lagoon's sensitivity, no meach. tilling in this area.

3. TIMING ISSUES
The field assessment 7/10/90 area identified
aggregates 1-3 cm thick below the cobble veneer within the
sporadic patches 1-3 cm broken BUM89 - natural degradation
occurring no further treatment required. Picked up oil soaked
soil sample pad.

ADEC: J. B. Meade  Dale W. Davis  7/10/90
EXXON: """"  """
USCG: ""  ""
LAND MANAGER: (If field rep is on scene)

\[\Box\]

TOTAL P. 05
WORK PLAN ADDENDUM

Segment ER-11  Subdivision A  Dated 7/11/90

MODIFICATION

1. REASON FOR MODIFICATION

  REQUEST FROM FIELD FOR MECHANICALLY ASSISTED TILLING
  OF A "BURIED LEASE" AS PER ATTACHED.

2. ADJUSTMENT TO WORK PLAN

  TAG REVIEW OF THE AREA IN QUESTION ON 7/10 IDENTIFIED THE FOLLOWING.

  - LEASE FOUND AS INDICATED HOWEVER MAXIMUM THICKNESS FOUND
  1-3 CM. BANNO WAS CHARACTERIZED AS BROKEN + PATCHY USUALLY
  IN A 1M BAND. THE REMAINING OIL WAS CRUMBY IN NATURE
  AND AT LOW CONCENTRATION.

  TAG RECOMMENDATION:  NO FURTHER TREATMENT REQUIRED

SHPO APPROVAL NEEDED YES  SHPO SIGNATURE  NO

TAG APPROVAL DATE  7/11/90
ADEC JOHNNY BAUER  JOHNNY
EXXON ANDY TELFORD
NOAA MIKE WHEATON  MIKE WHEATON
USCG G.A. REITER  G.A. REITER

FOSC  DATE  7/11/90
Areas recommended for
mech. tilling prior to
immediation on
attached Work Plan
Modification Recommend.

Area is a lagoon and
not to mechanically tine.

Areas with subsurface layer of soil
and these areas recommended for tilling.

[Signature]
[Date]
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-11  SUBDIVISION A  DATED 8/3/90

MODIFICATION CLASS I  CLASS II  √ CLASS III

1. REASON FOR MODIFICATION

Extensive AP/S1F + SOR in M.U.+S Zones along segment. See sketch map for location of AP+SOR.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

① Manually rake or aerate AP+SOR.
② Apply custom blower.

3. TIMING ISSUES

ADEC

EXXON

USCG

LAND MANAGER [signature] (If field rep is on scene)
SEGMENT AS / ER-11 SUBDIVISION: A SITE: 1 DATE 8/2/90

ISCG NAME: Michael D. Brown SIGNATURE: Michael D. Brown

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADEC NAME: John Hayes SIGNATURE: John Hayes

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Recommend on work order modification that AP+SOR be raked, aerated and customblended. Site should be reassessed.

LAND MANAGER NAME: Douglas Gibson SIGNATURE: Douglas Gibson

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXON NAME: Montgomery Mild. SIGNATURE: Montgomery Mild.

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Seeing SOR appear where tar mat was removed. SOR is almost a soft friable mat, no thickness to it 1-2cm.
GENERAL DATA

SEG ID: ER-II  SBV: A  SITE: I  TEAM: I  DATE: 8/1/90
SITE/14TH: OIL CATEGORIES: W N  VR  NO  U
1991 REASSESSMENT: USCG:  ADEC:  LUMGR:  EXXON:

SURFACE DATA

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TIDAL ZONE: SU UI MI LI

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ASAP DATA ENTRY FORM
SUBSURFACE DATA
SEGMENT ID:

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### ASAP SHORELINE OILING SUMMARY

**Team No.: ONE**

**Exxon Martínez**

**Segment As: F-1-11**

**Og: Reimer**

**USGS Brown**

**ADEC Hayes**

**Land Rep: Gibson**

**Total No. Sites:** 1

**Date:** 8/2/90

**Time:** 9:00 to 10:30

**Tide Level:** 5 to 7

**Total Est Length of Shoreline Surveyed:** 17.50 m

**Surveyed From:** Foot  Boat  Helo

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

**Oil Category Length:** W 110 m  M 100 m  N 500 m  VL 440 m  NO 100 m  US 10 m

### SURFACE OIL

**Site 1**

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<tr>
<th>Character</th>
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<th>Oiled Zones</th>
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<tr>
<td>S.O.R.</td>
<td>M H</td>
<td>M M M</td>
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<tr>
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<tr>
<td>Cover</td>
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<td>Coat</td>
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<tr>
<td>Stain</td>
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<tr>
<td>Mousse</td>
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<tr>
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**Est. Site Length:** 1250

### Site 2

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### Site 3

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### SUBSURFACE OIL

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<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Clean Below (Y/N)</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
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<tr>
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<td>0 - 3</td>
<td>Y</td>
<td>X</td>
<td>C - PCS</td>
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</tbody>
</table>

**Photographs:**

- **Roll No.: ASAP-01-01**
- **Frames:** 26 - 30

**Reviewed:** 8/4/90

**Comments:**

The majority of this site has finial Tarmut. The predominant concentration is in a 2-3m band near the site, however sporadic to patchy areas are found in and around rubble in mid and lower ITEZ as well. Much of this site has had manual removal, and Tarmuts are.

**REVISION NO. 7/27/98**
SEGMENT ST/ER-12 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
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.

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 259 m: V.Light 0 m: No Oil 204 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

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

COMMENTS: __________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

TAG COMMENTS: ______________________________________
________________________________________________________
________________________________________________________

TAG APPROVAL DATE: 4/24/90
ADEC Art Weiner Art Weiner DATE: 5-3-90
EXXON Amy Test Amy Test
NOAA Joseph Tallent Joseph Tallent
USCG M.J. Hale
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 Sewmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (8/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1);
3O, 3Q Harbor seal and sea lion molting (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 6/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U Recreation:
6V Tent sites (5/1 to 9/15)
6W Anchorages (5/1 to 9/15)
6X Forest Service cabins (6/1 to 9/15)
6Y Lodge (5/1 to 9/15)
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.

PWS-CODE 4/11/90
FIELD SHORELINE COMMENT SHEET

ADDRESS ST / E2-12 SUBDIVISION: A DATE 02 APRIL 90

USCG
NAME Larry Fletcher SIGNATURE Larry R. Fletcher

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

21 of 31

ADEC
NAME Dave m. sam SIGNATURE Dave m. sam

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Listed as priority 2;4 by PWS CA. Listed as public use area in PWS area plan.
### SHORELINE OILING SUMMARY

**USCG LARRY ELMER**
**SEGMENT 87**
**ER-12**

**TIDE LEVEL**: +1.5 feet

**DATE**: 04/02/80

**UPLANDS DESCRIPTION**: Grass, Forest, Rock

**SURVEYED FROM**: Foot, Boat, Helicopter

**WAVE EXPOSURE**: Low, Med, High

**OIL CATEGORY LENGTH**: W 0 m M 0 m N 251 m V 0 m NO 216 m

### SURFACE OIL

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<thead>
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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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**PAVEMENT**: H F  
**PATTIES / TARBALLS**: BAGS

**NEAR SHORE SHEEN?**: No

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

**DEBRIS COLLECTED**: No

**PHOTOGRAPHS**: Roll No. STA/80

**Frames**: 1-1.2

### SUBSURFACE OIL

*Oiled interval < 5 cm in pits 1-3 does not constitute subsurface oil*

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
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**COMMENTS**: No! Tarred cloth ran up under the groyne in the STZ making 1/3 cover across MITZ / VITZ.

**Revision**: RM 4/3/90

**Reviewed**: YW 8/4/90

*Page 1 of__*
**SHORELINE ECOLOGICAL SUMMARY**

**Segment 57/10/ER 12**

**Subdivision** B

**Date (mo/day/yr)** 4/2/90

**Time (24 hr)** 1700

**Biologist** Bob Lemon

---

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

1. Bedrock 8
2. Boulder 45
3. Cobble 4
4. Pebble 5
5. Sand 8

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

- Dense
- Moderate
- Low 1% dense

(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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### ASTROPODS

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**Wildlife Observations/General Comments:** Lower zone not visible except by wading. Most biota found under cobble; gammarids amphipods, Nephthalia borealis; Bedrock made up very little of this segment - Drift and debris found sparse; other sightings and tracks.

**Ecological Considerations:** Bald eagle, deer harvest, hatchery release.
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F  Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1  All bald eagle nests (3/1 to 6/1)—Active eagle nests (3/1 to 9/1)
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.

SHPO SIGNATURE:  
DATE: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 417 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes  No  X  Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on salmon and eagle nest constraint and after the approval of USFWS regarding eagle nest.

TAG COMMENTS: Remove asphalt patches indicated on sketch.

TAG APPROVAL DATE: 4/24/90
ADEC
EXXON
NOAA
USCG
DATE: 5/3/90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
Salmon fry nursery area (4/31 to 7/31)
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 uncultured intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.
Harbor seal and sea lion pupping (5/15 to 7/1);
Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
All Bald Eagle nests (3/1 to 8/1)
Active Bald Eagle nests (3/1 to 8/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination
Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (9/15 to 2/28)
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

MEMENT ST/FM-12 SUBDIVISION: B DATE 02 April 90

USCG
NAME LARRY FLETCHER SIGNATURE

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE TAR MATS (ASPHALT) AS MUCH AS POSSIBLE.
2. BREAK-UP ANY REMAINING OIL.
3. BIO-REMEDIATE.

23393

ADEC
NAME DAVID M. SNE SIGNATURE

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE TAR MATS AS MUCH AS POSSIBLE.
2. CLEAN ROCKS OR COVER UNTIL STAIN REMAINS
   a) HOSE WASHING (BACKPACKS)
3. TURN TO EXPOSE ROCKS TO FURTHER WEATHERING
4. BIO-REMEDIATE

THOUGH THIS SECTION WILL BE DIFFICULT TO CLEAN, THE ENVIRONMENTAL RESTRAINT OR MATEHRY RELEASE REQUIRES ELIMINATION OF ALL POSSIBLE WASTE OIL.

LAND MANAGER
NAME LEIGH CARLSON SIGNATURE LEIGH CARLSON ADE.

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
Listed as priority 2, 4 by PWSCA. Listed as public use area in PWS area plan. Treatment as mentioned above by ADEC.

Most of the oiling is on cobble/boulder beach that is usable for recreational uses.
SHORELINE OILING SUMMARY

SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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PAVEMENT: H F

NEAR SHORE SHEEN?

TIE BALLS

SUBSURFACE OIL

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<th>SUBSURFACE OIL CHARACTER</th>
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COMMENTS

"Pavement" is extremely soft. Becomes progressively better developed to east. Then there is a sharp drop in oiling.

* OILED INTERVAL < 5 cm. IN PIT NO'S. 4 AND 5.

DO NOT CONSTITUTE SUBSURFACE OIL.

Revision

RM 4/2/90

4/17/90

Signatures

W
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/10ER12 Subdivision G ___________________________ Date (mo/day/yr) 4/2/90

1700 - 1730 (24 hr) ___________________________ Biologist Bob Lemon __________

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

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

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (9)

**BARNACLES**

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Wildlife Observations/General Comments: amphipods at waterline. Live littorines in old lower zone not surveyed. Little drift on this beach.

Ecological Considerations: Bald eagle, deer, harvest, hatchery release.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-12 SUBDIVISION B (2 of 3)

WORK WINDOW

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<tr>
<td>Bioremediation</td>
<td>WORK 6/1 - 7/20</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F Sawmill Bay Hatchery Release
No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.

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

5T Bald Eagle Nest
NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates no active nests within 400m of the work area.

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

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 ADDENDUM DATE 6/01/90
ADEC [Signature] 6/01/90
EXXON [Signature] 6/01/90
NOAA [Signature] 6/01/90
USCG [Signature] 6/01/90

FOSC [Signature] DATE 6/12/90
[Signature] 6/12/90

Prepared by: [Signature] DATE 5/31/90
Incorporates information from
USFWS bald eagle surveys 5/26/90.

ECOLOGY MAP
SEGMENT ER-12
SUBDIVISION B (2 of 2)

Seabird Colony
Eagle Nest

1 inch = 1696 feet

Exxon Company, USA
Map Key: PS-ER-12
May 11, 1990
SEGMENT ST/ ER-12  SUBDIVISION C (3 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
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 unciled biota and substrate. Eagle nest in Subdivision C.

SHPO SIGNATURE: ___________________________ DATE: 4/25/90

OILING CATEGORIZATION:
Wide 0_m: Medium 0_m: Narrow 0_m: V.Light 107_m: No Oil 771_m
Subsurface Oil Observed: YesNo Maximum Depth_____

RECOMMENDATIONS:

Yes ___ No X ___ Treatment Recommended

Snare/Absorbent Booms
Oil Snares (pom poms)
Manual Pickup
Absorbents (pads, rolls, etc)
Bioremediation
Spot Washing
Tarmac: Breakup
Removal

Beach Cleaner
Other (see comments)

COMMENTS: __________________________________________________________

______________________________________________________________

TAG COMMENTS: _____________________________________________________

TAG APPROVAL DATE: 4/24/90
ADEC  ART WERNER  ANTIOCH  EXXON  ANOY TAYLOR  NOAA  J. TAYLOR  USCG  M.S. HALL
FOSC:  ___________ DATE: 5-3-90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No 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)
Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

All Bald Eagle nests (3/1 to 8/1)
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

Subsistance area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrate harvesting

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

USCG
NAME LARRY FLETCHER SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

26  of  31

ADEC
NAME  NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson APNR

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Listed as priority 2, 4 by PWSCA. Listed as public use area in PWS area plan.
**SHORELINE OILING SUMMARY**

**USCG** LARRY BETHKE  SEGMENT 8T/ ER-12
**LAND REP** LEE CARSON  SUBDIVISION C (3 of 3)

**EXON** A. CAPO  ADEC  DATE 6/19/89
OUTH 7:15 to 10:00

**TEAM NO.:** 10  **TIDE LEVEL:** MSN (V) 10, 11:00 AM (C)  **DATE:** 6/19/89

**EST. SUBDIVISION LENGTH:** 920 m  **UPLANDS DESCRIPTION:**
- Grass  - Forest  - Rock

**SURVEYED FROM:**  - Foot  - Boat  - Helo  **WORKING DIRECTION:** NW to SE

**SURFACE SEDIMENTS:**
- R 5%  - B 45%  - C 45%  - P 2%  - G 3%  - S 8%  - M 2%  - V 2%  **WAVE EXPOSURE:**
- Low  - Med  - High

**OIL CATEGORY LENGTH:**
- N m  - M m  - L m  **PAVEMENT:**
- H 8 no, m by 8 no, m

**PATTIES/TARBALLS**  **BAGS**

**NEAR SHORE SHEEN?**
- No  - BR  - RW  - OL  - TL

**OILED DEBRIS AMOUNT**

<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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**PAVEMENT:**

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<tr>
<td>Logs</td>
<td>Vegetable</td>
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<td>Debris</td>
<td>BAGS</td>
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**Photographs:**
- Roll No: ST 6/19
- Frames: 19, 20

**SUBSURFACE OIL**

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<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm)</th>
<th>Below</th>
<th>Oiled Debris</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Subsurface Sediments</th>
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**COMMENTS:**

- There is a sharp change between subsegments B & C

**Revision:**
- RM 4/2/90

**Reviewed:**
- D.W 4/7/90
SHORELINE ECOLOGICAL SUMMARY
Segment 8T/10/ER12 - Subdivision C
Date (mo/day/yr) 4/2/90
Biologist Bob Lemon

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

(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 (6)

Photographs:
Roll No. 5T/10/6
Frames 19-20

BARNACLES

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GASTROPODS

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Wildlife Observations/General Comments:

Ecological Considerations: Bald eagle, deer harvest, hatchery release.
SHORELINE EVALUATION

SEGMENT ST/ ER-13  SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Sawmill Bay Hatchery release area (1F) - 4/20 to 5/10; subsistence deer harvest area (7II) - 8/15 to 2/28; Special use area (6Y).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

SHPO SIGNATURE: [Signature]  DATE: April 11, 1990

OILING CATEGORIZATION:
Wide 0  m: Medium 0  m: Narrow 0  m: V.Light 716 m: No Oil 109 m
Subsurface Oil Observed: Yes  No X  Maximum Depth ______

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/11/90
ADEC JOHN BAIRD  EXXON ANNYE CAREY  NOAA BURLESON KELLOGG  USCG C.A. KILEY

FOSC: [Signature]  DATE: 4-19-90
FIELD SHORELINE COMMENT SHEET

SEGMENT STREET: 13  SUBDIVISION: ________________  DATE: 02 APRIL 90

USCG
NAME: LARRY FLETCHER  SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS:

ADEC
NAME: DAVID ME SALE  SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS:

What looked like stain on this segment was masked by diatoms and Porphyras (Red Algae), as well as filamentous green algae. Other intertidal life, such as mussels, Littorina, limpets, seemed to be in good health. Even if the oil we spotted was actually oil, then it is as a stain.

LAND MANAGER
NAME: Leigh Carlson  SIGNATURE: Leigh Carlson  ADNR

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS:

Listed as priority 2.4 by PWSCA. Listed as public use area in. 5's area plan.
**SHORELINE OILING SUMMARY**

**USCG** LARRY FETTY HER SEGMENT ST/ **EC-13**

**BIO** B. Sniff Land Rep Lead Contact **AC** (LCFI)

EXXON / G. G. S. SUBDIVISION DATE START **TIME** 14:50 to 16:05

TEAM NO: 10 TIDE LEVEL: 10.5m (+1) to +11.5m (+1.5) DATE 04/02/90

EST. SUBDIVISION LENGTH: **EEE** m **U** Sun **F** Clouds **R** Fog **R** Rain **S** Snow

UPLANDS DESCRIPTION: □ Grass □ Forest □ Rock

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

SURFACE SEDIMENTS: R 15% B 30% C 20% P 15% G 15% S 20% M 10% V 10%

SLOPE: Lang 10% Hang 30% Vert 50% WAVE EXPOSURE: □ Low □ Med □ High

OIL CATEGORY LENGTH: W m M m N 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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<tr>
<td>ASPHALT PAVEMENT</td>
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<td>POOLED</td>
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<td>COVER</td>
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<td>PATTIES</td>
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<td>TARBALLS</td>
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<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
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PAVEMENT: H F S sq. m by cm

PATTIES / TARBALLS BAGS

NEAR SHORE SHEEN? No BR RW SL TL

**OILED DEBRIS AMOUNT**

<table>
<thead>
<tr>
<th>Debris Type</th>
<th>Amount</th>
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| Logs | Z
| Vegetation | Z |
| Trash | X |
| Debris | X |

**Debris Collected**

□ YES □ NO

TYPE:

Photographer:

Roll No: 57/10/6

Frames: 1-10

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-020)</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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<tr>
<td>1</td>
<td>50</td>
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**Notes:**

**Difficult to differentiate between traces of oil and algae growing on rocks.**

Revision: **RM 4/2/90**
**SHORELINE ECOLOGICAL SUMMARY**

**Rev:** 09/30/90

- **Subdivision:** None
- **Date (mo/day/yr):** 4/2/90
- **Time (24 hr):** 1600
- **Biol ogist:** Bob Lemon
- **C**

(A) Substrate type and % of segments:

1. Bedrock 15%
2. Boulder 30%
3. Cobble 20%
4. Pebble 15%
5. Sand 20%
6. Silt

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

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

### BARNACLES

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### GASTROPODS

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**Photographs:**

- **Roll No.** 55/10/6
- **Frames:** 1-10

**Wildlife Observations/General Comments:**

- Biota rich on isolated bedrock; absent in scour channels. Possible brain band appears to be diatom scum in high zone. Zonation of Halosaccion occupying same spot locally abundant. Porphyra (Rhodophyta) locally abundant in high zone boulder tops.

- Biological Considerations: deer harvest, hatchery release.
SEGMENT ST/ ER-14 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Seabird colony (5R) - 5/1 to 9/1; Anchorages (6V) - 6/1 to 9/15; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Keep traffic and disturbance to minimum, especially in vicinity of bird colony. Restrict air traffic to absolute minimum.

SHPO SIGNATURE: [Signature] DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1782 m

Subsurface Oil Observed: Yes No X Maximum Depth_____

RECOMMENDATIONS:

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

COMMENTS: No treatment recommended. No oil found during survey.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90

IDEC [Signature] DATE: 4/19/90

EXXON [Signature] DATE: 4/19/90

NOAA [Signature] DATE: 4/19/90

USCG [Signature] DATE: 4/19/90
FIELD SHORELINE COMMENT SHEET

USCG
NAME LARRY FLETCHER SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME DAVID M. SALE SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Land manager (name) Leigh Carlson Signature Leigh Carlson Adnr

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Bird rookery shown for segment in PWS area plan.
**SHORELINE OILING SUMMARY**

**USCG LARRY FLITE** SEGMENT AER-14  
**LAND REP Lewis Carlson** SUBDIVISION A (1 of 1)  
**DEO Dave Shinitz** TIME 16:30 to 16:45  
TEAM NO.: 10  
TIDE LEVEL: +1.5/-2.4 DATE: 04/01/90  
EST. SUBDIVISION LENGTH: 243.5 m  
TEAM NUMBER: 22  
DATE: 04/01/90  
DATE OF OILING: 04/01/90  
DATE OF OILING: 04/01/90  

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

**SURVEYED FROM:**  
- Foot  
- Boat  
- Halo

**WORKING DIRECTION:** SE to NW

**SURFACE OIL**

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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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**OILED AMOUNT**

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**NEAR SHORE SHEEN?** NO  
BR RW BL TL

**PIT SUBSURFACE OILED BELOW OIL FILM COLOR**

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**COMMENTS**

(0)
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/10/6R14  Subdivision none  Date (mo/day/yr) 4/1/90  
1600 - 1645  
Time (24 hr)  Biologist Bob Lemon  

(A) Substrate type and % of segments:  
1 Bedrock 90  2 Boulder 10  (3) Cobble (4) Pebble (5) Sand (6) Silt  

(B) Overall % cover of biota (% of segment):  
Dense 80  Moderate 20  Low  

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

**BARNACLES**  

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Wildlife Observations/General Comments:  
Surveyed via staff dive by, low gear not seen and not scored here; several pictures taken.  
Gastropods could not be seen well enough to score them here.  
NW, shore had a greater proportion of plants perhaps not fairly recognized here.  
Nereocystis Kelp on both sides.

Logistical Considerations: Seabird colony, deer harvest, hatchery release, anchorages.
SHORELINE EVALUATION

SEGMENT ST/ER-18 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1; Subsistence
deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un
oiled biota and substrate.

SHPO SIGNATURE: JAMES W. FOWLER DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 199 m; V.Light 813 m; No Oil 1207 m
Subsurface Oil Observed: Yes X No Maximum Depth 27 cm

RECOMMENDATIONS:
[ ] No Treatment Recommended
[ ] Treatment Recommended
[ ] Manual Pickup
[ ] Bioremediation
[ ] Tarmat: Breakup
[ ] Removal

[ ] Spot Washing: Wands
[ ] Beach Cleaner

[ ] Other (see comments)

COMMENTS:

TAG COMMENTS: Due to the high human use of this embayment
biomass, the stained area following further
deri fertilization by field monitors

TAG APPROVAL DATE: 4/12/90
ADEC
EXXON
NOAA
USCG

FOSC: DATE: 4-19-90
FIELD SHORELINE COMMENT SHEET

USCG
NAME: LARRY FLETCHER
SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED
COMMENTS:

ADEC
NAME: DAVID M. SAGE
SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED
COMMENTS:

"Bathtub ring" on rocks seems to be stable and not likely to mobilize. No treatment recommended as long as segment does not begin to green as warmer temps occur.

LAND MANAGER
NAME: Leigh Carlson
SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED
COMMENTS:

Listed as priority 1 by PWSCA. Listed as public use area in PWS area plan. Segment is located adjacent to good anchorage area in South Twin Bay. The splatters of oil in the middle portion of the segment are mainly in symmetrical lines that are easily visible from a boat. For aesthetic purposes, rearranging some of the boulders would break up the unnatural line created by the oiling.
SHORELINE OILING SUMMARY

OG R. Nash USCG LARRY FLETCHER SEGMENT ST/ ER-18
NO. B. Czarnecki ADEC Data Entry
SUBDIVISION: A (1 of 1)
TEAM NO.: 10 TIDE LEVEL: +1.5 m (29) to +0.3 m (1)
DATE 01/02/90
TIME 10:30 to 13:30

EST. SUBDIVISION LENGTH: 2379 m

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

SURFACE SEDIMENTS: R 40 % B 20 % C 20 % P 10 % G 5 % S 10 % M

SLOPE: Lang 20 % Hang 40 % Vert 40 %

WAVE EXPOSURE: Low Med High

OIL CATEGORY LENGTH: W 206 m M 186 m N 137 m

SURFACE OIL

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PAVEMENT: H F 8 sq. m by cm

PATTIES/TARBALLS ___________ BAGS

NEAR SHORE SHEEN? NO BR RW TL

Note: Snow was probably produced from a field of fishing boats in Bay on 04/01

OILED DEBRIS AMOUNT

Logs    7
Vegetation 2
Trash  5
Debris  4

Photographs:

Roll No. 5/10/5
Frames 10-28

SUBSURFACE OIL

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COMMENTS

Note: Snow in supratidal zone.

Revision
RM 4/2/90

Reviewed ___________ DATE ___________
**SHORELINE ECOLOGICAL SUMMARY**

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- **Biologist:** Bob Leon
- **Wind:** 6 mph NE

(A) **Substrate type and % of segments:**
   - Bedrock 40
   - Boulder 20
   - Cobble 20
   - Pebble 10
   - Sand 20
   - Silt 10

(B) **Overall % cover of biota (% of segment):**
   - Dense 10%
   - Moderate 50%
   - Low 40%

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**
   - Juveniles / adults (X), new settlement (6)

### BARNACLES

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**Wildlife Observations/General Comments:** Barnacles ranged from high through low zones; many large old Sericulobus cariosus present. Fucus in reproductive condition. Sensitive but unusual organism included Porus nemerosus, Sporocerus (ANNELIDA), Tissa (Novillozoa), katharina (polychaeta), encrusting barnacles (oesthobranchia) plus a narrow zone of algae below tidel level.

**Ecological Considerations:** Deer harvest, hatchery release. Also numerous shells and perhaps a suitable habitat for Sericulobus cariosus, and Fucus espinos (BIVALVES) found about mid segment. Anfibolobus strand not confirmed; snow covered above the tidel line; the intertidal runoff was inspected.
SHORELINE EVALUATION

SEGMENT ST/ ER-19 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Stream mouth (catalog no. 16406); Fry outmigration (1A) - 3/1 to 5/15; Spawning (1B) - 7/10 to 8/31; Deer harvesting (7II) - 8/15 to 2/28; South Twin Bay is a recreational anchorage (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No specific subdivision constraints identified.

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

OILING CATEGORIZATION:
Wide_0 m: Medium_0 m: Narrow_0 m: V.Light_306m: No Oil_2330 m
Subsurface Oil Observed: Yes____ No X__ Maximum Depth____

RECOMMENDATIONS:
X__ No Treatment Recommended ___ Snare/Absorbent Booms
___Treatment Recommended ___ Oil Snares (pom poms)
___Manual Pickup ___ Absorbents (pads, rolls, etc)
___Bioremediation ___ Spot Washing: ___ Wands
___Tarmat: ___ Breakup ___ Beach Cleaner
___Removal ___ Other (see comments)

COMMENTS: No treatment recommended due to only isolated minor stain found during survey.

TAG COMMENTS: Recreation use to be medium use by ISCC
MINOR STAIN IN ONE LOCATION, DOES NOT WARRANT INTRUSION

TAG APPROVAL DATE: 4/19/90
ADEC JOHN BAUER [Signature] FOSC: [Signature] DATE: 4-19-90
EXXON ANDY TALL [Signature] NOAA [Signature]
NOAA [Signature] USCG [Signature]
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER - 19    SUBDIVISION:   DATE 01 APRIL 90

USCG
NAME: LARRY FLETCHER    SIGNATURE: 

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME: David Miller    SIGNATURE: 

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

See land manager comments below. Rounded cobbles break seem to have rubbed itself clean under high energy environment. Ciller did not allow pits closer than 15-20 cm.

LAND MANAGER
NAME: Leigh Carlson    SIGNATURE: Leigh Carlson

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

Listed in PWS area plan for public use/anchorage. Listed as priority I by PWS CA. Area directly behind storm berm still covered by snow. Did not appear likely to have oiled debris under snow cover.

(\)
### SHORELINE OILING SUMMARY

#### SURFACE OIL

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#### COMMENTS

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The image contains a detailed record of a shoreline oiling summary. It includes information about surface oil and subsurface oil, with specific details about the distribution, color, and impact zones. The summary also includes data on surface sediments, wave exposure, and other environmental factors. The document is reviewed and dated for completeness.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER19 Subdivision none Date (mo/day/yr) 4/1/90
1400-1530 Time (24 hr) Biologist Bob Lomon

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

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

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

BARNACLES

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Wildlife Observations/General Comments: Sparse drift line at about +10 had Diptera (Insects) and Amphipods in sparse abundance. Supratidal snow had deer, bear, and other tracks. 1 eagle sitting. The water covered the low zone but wading led me to believe there was little change from general trend of the water line.

Ecological Considerations: deer harvest, hatchery release, stream spawning.
Wide

Medium

Narrow

ADEC Segment Length: 2163m

Map Key: PWS-195m

Name: R. Mar

Date: 1 April '90
SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION A (1 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 98 m: Narrow 47 m: V.Light 180 m: No Oil 96 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

RECOMMENDATIONS:
____ 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: Recommend bioremediation of area shown on sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC [Signature] [Signature]
EXXON [Signature] [Signature]
NOAA [Signature] [Signature]
USCG [Signature] [Signature]

FOSC: [Signature] DATE: 4/27/90
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
    Salmon stream mouth - spawning (7/10 to 8/31)

1B  No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
    No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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

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

1H  Remote release site

1I  Gill net area (5/7 to 8/31)

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

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

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

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

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

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

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

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

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

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

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

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

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

6Y  Special use destination

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

7HH  Finfish harvesting

7II  Deer harvesting (8/15 to 2/26)

7JJ  Invertebrate harvesting
    For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST / ER20  SUBDIVISION: A  DATE 07 APRIL 90

USCG
NAME LARRY FLETCHER  SIGNATURE [Signature]
☑ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE ANY TAR PASTIES OR BALLS.
2. BIO- REMEDiate.

ADEC
NAME [Signature]  SIGNATURE [Signature]
☑ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS
(1) Remove subaerobic sediments and oil,
(2) Wash oil from breakwater piers, including cleaning review and practice joints of oil.
(3) Bioremediate

Care should be taken to remove oil from breakwater piers, to avoid water pollution.

LAND MANAGER
NAME Leigh Carlson  SIGNATURE Leigh Carlson ADNR
☑ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS
Uses for the area include subsistence, finfish and deer harvesting.
This subdivision needs more treatment than just manual removal and bioremediation. Will need to use some type of washing method.

30/17
SHORELINE OILING SUMMARY

OG: Richard Martz  USCG  Larry Fletcher  SEGMENT ST/ ER-20
BIO: Bob Lemon  LAND REP: Leigh Carlsen  SUBDIVISION A
EXXON: Jon Czapak  ADEC: Dave Salo  TIME: 09:27 to 09:30
TEAM NO.: 10
EST. SUBDIVISION LENGTH: 465 m

UPLANDS DESCRIPTION: ☑ Grass  ☑ Forest  ☑ Rock
SURVEYED FROM: ☑ Foot  ☑ Boat  ☑ Helo  WORKING DIRECTION: NW to SE
TIME TO DAY: ☑ Sun  ☑ Clouds  ☑ Fog  ☑ Rain  ☑ Snow

SURFACE OIL

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

OILED DEBRIS AMOUNT
Logs: _ _ _
Vegetation: _ _ _
Trash: _ _ _
Debris: _ _ _

OILED DEBRIS

Photographs:
Roll No. _ _ _/19
Frames: _ _ _- 23

NEAR SHORE SHEEN? ☑ NO BR RW SL TL

SURFACE OIL

- OIL: _ _ _
- FILM: _ _ _
- IMPACTED ZONES: _ _ _

OIL CATEGORY LENGTH: W _ m M _ m N _ m V _ m

SLOPE: Lang: _ _ _% Hang: _ _ _% Ven: _ _ _%

WAVE EXPOSURE: Low Med High

SUBSURFACE OIL

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COMMENTS

Page 1 of 1

REVIEWED ___________ DATE ___________
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/9

Subdivision: A
Date (mo / day / yr): 4/7/90
Time (24 hr): 0830-0930
Biolgesit: Lemon

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

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

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

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MYTILUS

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ASTROPODS

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FUCUS

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Wildlife Observations/General Comments: Mixed red algae made up much of the low zone cover. Demosponges (Sponges) gammarid amphipods, sea urchins, and other Polychaete worms common in the low zone. 2 Watchful and 1 deer off. 2 Eagle spinglings saw made.

Ecological Considerations: Stream mouth spawning, finfish harvest, deer harvest.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION A (1 of 3)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
<th>Duration</th>
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<tbody>
<tr>
<td>1K</td>
<td>Purse Seine Hook-off</td>
<td>Closed to bioremediation after 7/25.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.</td>
</tr>
<tr>
<td>7HH</td>
<td>Subsistence: Finfish Harvesting</td>
<td>Closed to bioremediation after 7/1.</td>
</tr>
<tr>
<td>711</td>
<td>Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation after 8/15.</td>
</tr>
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</table>

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Restrict beach disturbance to essential minimum after 8/15. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

Prepared by: [Signature]
Date: 6/9/90

FOSC [Signature] Date: 6/10/90
ECOLOGY MAP
SEGMENT ER-20

SUBDIVISION A (1 of 3)

METERS

- Seabird Colony
- Active Eagle Nest
- Inactive Eagle Nest

Exxon Company, USA
Map Key: PKS-ER-20

TREATMENT AREA

No boat, beach
Aircraft access
USFWS survey 5/24/90
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-20  SUBDIVISION A  DATED 6-10-90
MODIFICATION CLASS I  CLASS II  CLASS III

1. REASON FOR MODIFICATION
   CURRENT WORK ORDER ADDENDUM ABROGATED

2. SUGGESTED ADJUSTMENT TO WORK PLAN
   LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION

3. TIMING ISSUES
   NONE

ADEC  Dale W. Sanders
EXXON  Myron Gelbro
USCG  Terry F. Ross
LAND MANAGER  Bill Yancy (If field rep is on scene)

Mark W. Martin (DNR)
**SITE 1**

<table>
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<tr>
<th>DISTRIBUTION</th>
<th>OILED ZONES</th>
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**SITE 2**

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**SITE 3**

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**OIL**

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**CLEAN BELOW (YN)**

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**PIT ZONE**

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**SURFACE SUBSURFACE SEDIMENTS**

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**PHOTOS**

- [Photo 1](image1.jpg)
- [Photo 2](image2.jpg)

---

"RING OF CU/SOR WAS LOCATED ON BOTH SIDES OF THE SITE. THE SOR WAS WOODEN, *

Granular material that was broken by the crew. The Cu was set in boulders in the area. The site was not contaminated as observed by the crew."

"The stream was not contaminated at Site 1."

---

**LAND: JOHN DEAN**

**LAND REP: STEVE WARD**

**TOTAL NO SITES:** 3

**TIME:** 12:30 1/21 12:40

**TIDE LEVEL:** +0.10 +0.20 +0.30

**LENGTH OF SHORELINE SURVEYED:** 667 m

**WEATHER:** Sun, Clouds, Rain, Snow

**LENGTH:** W 46 m M 13 m N 5 m W 15 m NO 27 m US 19 m
SHORELINE EVALUATION

SEGMENT ST/ ER-20    SUBDIVISION B (2 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: [Signature] DATE: 4/13/90

OILING CATEGORIZATION:
Wide 221*m: Medium 320**m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 46+cm

RECOMMENDATIONS:

___ 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: ___ Wands
X Tarmac: ___ Breakup  ___ Beach Cleaner
X Removal  ___ Other (see comments)

COMMENTS: Recommend 1) removal of tarmac and asphalt patches, and 2) bioremediation with raking of areas indicated on sketch map.

* 221m Exxon length (no islet shown on ADEC map)
** 320m ADEC length

TAG COMMENTS:


TAG APPROVAL DATE: 4/21/90
ADEC ART WEINER    ART WEINER
EXXON ANN TA Nexx
NOAA BRIAN WEREF    BRUCE BOTTSTRO M
USCG KENNETH KANE

FOSC: [Signature] DATE: 4/27/90
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

1H Remote release site

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

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

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

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

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

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

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

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

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

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

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

6V 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)
Finfish harvesting

2HH Deer harvesting (3/15 to 2/26)
Invertebrate harvesting

For Codes 7Z through 7J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST E 20  SUBDIVISION: A  DATE 6 April 99

USCG
NAME: Larry Fletcher  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

ENTIRE SUBDIVISION WAS HEAVY SUB-SURFACE OIL. NO SHEEN SIGHTED AT THIS TIME, HOWEVER THE HEAVY OILING MAY BEGIN TO SHEEN LATER DURING WARM WEATHER.

ADEC
NAME: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

This sector remains very badly oiled, and, because of proximity to hatching, the village of Ohuga should be completely cleaned up. All treatment methods should be considered.

1.  Wash oil with high pressure foam backed foam
2.  Remove and/or clean oiled sediments below boulder piles
3.  Oilied sediments in main beach area will either require fluming by implementation of pipe in upper beach; or removal of sediments. Attention should be paid to oiled geotext fabric in upper beach area.

LAND MANAGER
NAME: Leigh Carlson  SIGNATURE: [Signature]  ADNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Uses for the area include subsistence finfish and deer harvesting. This subdivision contains a salmon stream which is oiled and should be looked at by ADF&G. The segment is heavily oiled and will need some type of washing or other intensive method to remove it.
**SHORELINE OILING SUMMARY**

**REVIEW No. 0/2331**

**I.O. Richard Murphy**
**USCG**
**LAND REP. Leigh Carlisle**
**ST/ER-20**

**EXXON**
**ADEC**
**Dave Sale**

**TEAM No.: 10**
**DATE: 07/04/1990**
**TIME: 16:19, 10/17/90**

**EST. SUBDIVISION LENGTH:** 453 m

**SURFACE OIL**

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<th>DISTRIBUTION</th>
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<tr>
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**SURFACE OIL PAVING:**

- Pavement: H, F (sq.m by cm)
- Patties/Tarballs: BAGS

**SURFACE OIL IMPACTED ZONES:**

- Oil category: W 247 m M 339 m N 9 m VL 0 m NO 0 m

**SLOPE:**

- Land 100% Rock 0%

**VEGETATION:**

- Low 0% Med 0% High

**WAVE EXPOSURE:**

- Low 0% Med 0% High

**SLIP:**

- 0%

**DEBRIS COLECTED:**

- Yes / No

**DEBRIS AMOUNT:**

- Logs
- Vegetation
- Trash
- Debris

**OILED DEBRIS TYPE:**

- Bags

**photographs:**

- Oiled debris concentrated on island and in storm damage
- Roll No: ST/04/1990
- Frames 1-14

**COMMENT:**

- Oiled oil.

**SUBSURFACE OIL**

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**REVISED DATE:**

- RM 8 April 1990

**SUBSURFACE SEDIMENTS**

- Oil: 5 many dry mud constitute

**SUBSURFACE OILING:**

- Subsurface oiling
### Subsurface Oil (continued)

<table>
<thead>
<tr>
<th>PIT NO.</th>
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<th>SUBSURFACE OIL CHARACTER</th>
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<th>OIL/FILM COLOR</th>
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**COMMENTS**

- Oil ≤ 30 µm per mL
- Constitute subsurface oil

**Revision**
RM 07 April 1990
SHORELINE ECOLOGICAL SUMMARY

Segment ST 10/58 ST Subdivision R Date (mo/day/yr) 5/7/10
Time (24 hr) Biologist Lemon

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 10 (3) Cobble 30 (4) Pebble 20 (5) Sand 30 (6) Silt

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

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

BARNACLES

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Wildlife Observations/General Comments: This subdivision is exposed to a 70 mile N.E. fetch and gets a lot of snow and it also gets a lot of oil. Therefore, long areas are unoccupied - 16 pets were dug in this subdivision.

Ecological Considerations: Stream mouth spawning, finfish harvest, deer harvest.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT ER-20 SUBDIVISION B (2 of 3)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
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<tr>
<td>Tarmat Removal</td>
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<td>Manual Raking</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
    No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 7/25.

5T  Bald Eagle Nest
    USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, manual raking, and bioremediation within 400m of active nest.

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

7II Subsistence: Deer Harvesting
    No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

Prepared by: [Signature]
Date: 6/19/90

FOSC
DATE: 6-10-90
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT CR-20  SUBDIVISION B  DATED 6-10-90

MODIFICATION  CLASS I  CLASS II  CLASS III

1. REASON FOR MODIFICATION

CURRENT WORK ORDER PROGRAM SPECIFIES MANUAL ACKRA,
TARMAK REMOVAL, MANUAL ACKRA AND BIOREMEDIATION
LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION
DELETE BIOREMEDIATION

3. TIMING ISSUES

NONE

ADEC  Dale W. Branden
EXXON  James C. Jones
USCG  Tony S. Perry
LAND MANAGER  Martha Martin (If field rep is on scene)
SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Stream mouth in segment Subdivision C is not recorded in ADF&G anadromous catalogue (USGS Seward A-3, Rev. 12/89).

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 318 m: Narrow 147 m: V.Light 462 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

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

COMMENTS: Manual pick up of oiled debris. Spot wash using pom poms to control sheen. Burn logs and debris if approved. Bioremediation with mechanical tilling. MECHANICAL TILLING SHOULD NOT BE ALLOWED IN THE AREA OF DENSE MUSSEL BEDS IN THE LITZ

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner Art Weiner
EXXON _____ _____
NOAA Bullwasser Bullwasser
USCG Kenneth Kranz Kenneth Kranz
FOSC: [Signature] DATE: 4-27-90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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

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

Remote release sites

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 8/15)
Restrict boat traffic to essential minimum. Avoid damage to uncleared 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)

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

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

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

Recreation:

Tent sites (6/1 to 9/15)

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.
USCG
NAME: LARRY FLETCHER
SIGNATURE: [Signature]
☐ NO TREATMENT RECOMMENDED
☒ TREATMENT SUGGESTED

THIS SUBDIVISION IS HEAVILY OILED. NO SPLEN SIGHTED AT THIS TIME, HOWEVER IT MAY BEGIN TO SPLEN LATER DURING WARM WEATHER.

ADEC
NAME: David M. Sale
SIGNATURE: [Signature]
☐ NO TREATMENT RECOMMENDED
☒ TREATMENT SUGGESTED

1. Badly tarred coat on bedrock must be washed until stain remains.
2. Oiled sediments must be removed or cleaned in place with rock washing.
3. Oil tar on surface of beach (enlargement) was becoming mobile in warm sun.
4. Remove oiled debris.
5. Recommend

LAND MANAGER
NAME: Leigh Carlson
SIGNATURE: [Signature]
☐ NO TREATMENT RECOMMENDED
☒ TREATMENT SUGGESTED

Uses for the area include subsistence fishing and deer harvesting.
This subdivision needs more treatment than just manual removal and bioremediation. Will need to use some type of washing method.

[Signature] 12/17
SHORELINE OILING SUMMARY

OG: Richard Marty   USCG: Larry Fletcher
BIO: Bob Lemon    LAND REP: Leigh Carlson
EXXON: Jon Czarnecki   ADEC: Dave Sale

TEAM NO.: 10   TIDE LEVEL: 109 ft, 109.15 ft (OS)   DATE: 07/19/90
EST. SUBDIVISION LENGTH: 772 m

EXXON: J. J. Land   LAND REP: Carl Subdivision

SURVEYED FROM: Foot, Boat, Helo
WORKING DIRECTION: N 10° S
SURFACE SEDIMENTS: R 15% B 30% C 15% P 15% G 15% S 5% M 5% V 5%
SLOPE: Lang 90% Hang 10% Vert 10%
WAVE EXPOSURE: Low, Med, High
OIL CATEGORY LENGTH: W 10 m M 103 m N 27.3 m VL 496 m NO 0 m

SURFACE OIL

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PAVEMENT: H F (S) 5' sq. m by 5' cm
PATTIES / TARBALLS: 0
BAGS: NEAR SHORE SHEEN: 0
BR RW SL TL:

OILED DEBRIS: AMOUNT: DEBRIS COLLECTED
Logs: 0
Vegetation: 0
Trash: 0
Debris: 0

Photographs:
Roll No. ST/10/2
Frames: 0 - 26

SUBSURFACE OIL

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<th>OILED INTERVAL</th>
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COMMENTS

Oil depth = 5 cm or m

11/27

Page 1 of

REVIEWED __________ DATE __________
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### COMMENTS

Pit 7 - Light sheen shown on water in pit.

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16/4/90
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST 1/26/70**  
**Subdivision** C  
**Date (mo/day/yr)** 4/1/70  
**Time (24 hr)** Lemon  

(A) **Substrate type and % of segments:**  
1. Bedrock 15%  
2. Boulder 30%  
3. Cobble 15%  
4. Pebble 15%  
5. Sand 20%  
6. Silt 5%  

(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 (S)

**BARNACLES**  
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**Wildlife Observations/General Comments:**  
- Gastropods include *Ochridella beryllic*, *Telodrilus*, *Littorina littorea*, *Natica sp.*  
- Most remarkable were *Mytilus*, bedded on 6 cm of oil pits.  
- Many deer tracks, as seen along E. shore.

**Ecological Considerations:**  
- Insectivorous stream, most often *Copepods* (*Branchiura*) feed away; pit by stream was  
- *Porphyra* starlings, *Bivalves* (BIVALVES)  
- *Sediment* beds of commercial value. *Stream mouth*  
- *Fish* harvest, *deer* harvest.

179/17
WORK PLAN ADDENDUM

Segment ER-20 Subdivision: C Dated: 5/9/90

MODIFICATION

1. REASON FOR MODIFICATION
   • Snow melt in SUITZ revealed additional tarmats, requested from field for further clarification to continue access and removal of asphalt lens.

2. ADJUSTMENT TO WORK PLAN
   • Manually remove asphalt lens that continues under the storm berm.
   • Manually rake down clean storm berm material into the SUITZ to access the lens where practical. Clean material removal should not exceed a depth of 12".
   • Consultation with Cultural Resource Staff indicates no concern archaeologically no further action required.

SHPO APPROVAL NEEDED YES __ NO X__

TAG APPROVAL DATE 5/9/90

ADEC ART WERNER DATE
EXXON AMY TETL DATE
NOAA BU WESCOTT DATE
USCG D.D. ROME DATE
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT ER-20 SUBDIVISION C (3 of 3)

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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 oiled log/debris burning; closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 7/25.

5T    Bald Eagle Nest

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

7HH   Subsistence: Finfish Harvesting

No constraint to manual pickup. Closed to bioremediation after 7/1.

7II   Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC   Date 6-12-90

Prepared by Date 6/12/90
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-20 C SUBDIVISION C DATED 6-12-90

MODIFICATION CLASS I / CLASS II / CLASS III

1. REASON FOR MODIFICATION

CURRENT WORK ORDER INCOMPLETE MANUAL ARCHAEOLOGY, MECHANICAL, AND HABITAT
LAND MANAGER (CUR) WISHES TO DELETE BIORESTORATION

2. SUGGESTED ADJUSTMENT TO WORK PLAN

DELETE BIORESTORATION

3. TIMING ISSUES

NONE

ADEC Dale W. Gardner
EXXON M. E. Jones
USCG Harry F. Perry
LAND MANAGER (If field rep is on scene) Marka Martin (DNR)
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION C (3 of 3)

WORK WINDOW

<table>
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<th>Activity</th>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

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APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K Purse Seine Hook-off

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No constraint to manual pickup. Closed to bioremediation after 7/1.

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

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC Date 6-12-90
Prepared by Date 6/12/90
DATE: July 11, 1990
TIME: 2:30p

SENT TO: EXXON

ATTENTION: TOM KELLY

THIS FAX IS BEING SENT BY: Gail Evanoff

NUMBER OF PAGES (INCLUDING THIS SHEET): 1

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE. (907) 573-5118.

ORIGINALS WILL BE SENT VIA:
- [ ] US MAIL - EXPRESS MAIL
- [ ] US MAIL - FIRST CLASS
- [ ] HAND DELIVERY - 
- [ ] OTHER - 

ORIGINALS WILL NOT BE SENT

NOTE: RE: ER 20 (B) (C). CVC is willing to extend the workwindow up to July 25, 1990 for manual raking and pickup to proceed. NOTE: I have not been able to confer with CVC land Mgrs. regarding segment readiness for bioremediation. CVC proposes to submit its recommendation 7/12/90. Thank you.

FAX OPERATOR:

DISCUSSED ERZOC W/ Gail E. 7/2/90
asked Gail if we could go in while Manual was and Bray even though after July 1 date (Sweden)
She said no. I told her I'd look at tomorrow.

REVIS 01/10/89
BY DJT
SHORELINE EVALUATION

SEGMENT ST/ ER-21   SUBDIVISION A (1 OF 1) DATE  4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached ecological Constraint sheet for specific constraints and contacts.

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 179 m: No Oil 3010 m
Subsurface Oil Observed: Yes  No  X  Maximum Depth 

RECOMMENDATIONS:
X No Treatment Recommended
T Treatment Recommended
M Manual Pickup
B Bioremediation
T Tarmat 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:  5/3/90
ADEC
EXXON
NOAA
USCG

FOSC:  DATE: 5-5-90
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 in-pot 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 (4/1 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pot 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 in-pot 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

1I Gill net area (6/7 to 6/31)
1J Portage salmon area (7/20 to 9/30)
1K Portage salmon hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-pot 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 uncultured intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-pot application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict all activity to essential minimum. No personnel within 400m. Aircraft to maintain 600m horizontal and 300m vertical distance from haulouts. No application of in-pot 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: USFWS Jill Parker 786-3377

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 Roth 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict all traffic and 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:
6V Tent sites (6/1 to 9/15)
6W Anchorage (6/1 to 9/15)
6X Forest Service cabins (6/1 to 9/15)
6K Lodge (6/1 to 9/15)
6Y Special use destination

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-pot 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: ER-21  SUBDIVISION: A- 1 of 1  DATE 04-23-90

SCG
NAME: Michael Buckman  SIGNATURE: __________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME: John Hayes  SIGNATURE: __________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Walked entire segment. Only oiling observed. Water line discharges tar/stain band at UI/IZ.

LAND MANAGER
NAME: MARSHA MARTIN/PUR SIGNATURE: __________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Rare splatters of stain & coat.
SHORELINE OILING SUMMARY

TEAM NO. 11  TIDE LEVEL +5.5 to +1.5  DATE 4/23/90
EST. SUBDIVISION LENGTH: 3163 m

SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS  AMOUNT | DID YOU COLLECT DEBRIS?
Log | SM MD LG | YES ☑ NO ☑
Vegetation | | |
Trash | | |
Debris | | |

Photographs:
Roll No. 0
Frames 0

SUBSURFACE OIL

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COMMENTS

Shore zone consists mostly of high angle Boulder/Rock Beach with a large Boulder/Cobble beach at the southern end of the segment. Some SS/S staining was observed in the MITZ which was <10% distribution. Some of the Boulders had a small amount of Coating.

REVIEWED ───── DATE ─────
SEGMENT S\# - \(2\) - 2

DATE 4 - 23 - 90

CHECKLIST
- N Arrow
- Approx. Scale
- Suggested Density
- Oil Dist.
- Width
- Length
- % Cored
- Substrate Character
- Est. HWL

- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 O
- No Subsurface Oil
2 O
- Subsurface Oil

CT/C
- Continuous Distribution
CT/B
- Broken Distribution
CT/P
- Patchy Distribution
CT/S
- Splashed Distribution

Oil Character Length (m): AP 0 PO 0 CV 0 CT 5 ST 180 MS 0 PT 0 TB 0 FL 0 NO 3083
SHORELINE ECOLOGICAL SUMMARY

Segment ST-ER-2; Subdivision A (1 of 1) Date (mo/day/yr) 04/23/90
Time (24 hr) 1600- Biologist K. E. Conlan

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment):
- Dense 80
- Moderate 15
- Low 5

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Juveniles/adults (1)
- New settlement (3)

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Wildlife Observations/General Comments:
- 2 Harmon Ale Duck
- Bald Eagle
- Sea Otter

Ecological Considerations:
- Abundant amphipods amongst cobble
- In MITZ
ER-20

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

ER-21A

Map Key: PWS-201f
Name: Mike Foyet
Date: 4/23/90

ADEC Segment Length: 3183m

METERS
SEGMENT MN/ER-23 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1
- Subsistence deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled substrate and biota.

SHPO SIGNATURE: Charles Sullivan DATE: April 12, 1990

OILING CATEGORIZATION:
- Wide 0 m: Medium 0 m: Narrow 166 m: V. Light 140 m: No Oil 0 m
- Subsurface Oil Observed: Yes X No
- Maximum Depth 25 cm

RECOMMENDATIONS:
- X No Treatment Recommended
- ___ Treatment Recommended
- ___ Manual Pickup
- ___ Bioremediation
- ___ Tarmat: ___ Breakup
- ___ Removal
- ___ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER
EXXON
NOAA
USCG
FIELD SHORELINE COMMENT SHEET

SEGMENT S/E-23 SUBDIVISION: ____________________ DATE 02 APRIL 90

USCG
NAME LARRY FLETCHER SIGNATURE _______________

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME DAVID M. SABLE SIGNATURE ______________

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Banding or oiling on this segment is limited to a cover that seems stable and not likely to become mobile. Bio-remediation may have a positive effect here in reducing cover further to stain. This peninsula has a SBA Lion rookery at its end, and should be monitored for sheen during summer. Remediation, however, would probably not be effective on the larger boulders.

LAND MANAGER
NAME Leigh Carlson SIGNATURE ______________

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Listed as priority 2 by PWSCA. Beach is steep and consists of large boulders. Not the best of sites for landing a skiff and taking a leisurely walk along the beach. Oil stain on the boulders does not rub off easily. Oiled cobbles under the boulders may benefit from some bio-remediation.
**SHORELINE OILING SUMMARY**

**USCG LARRY FLETCHER SEGMENT ST**

**TIME: 9:30 to 10:30**

**DATE: 04/02/90**

**SURFACE OIL**

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**SUBSURFACE OIL**

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**COMMENTS**

**PAVEMENT:** H F 8 sq. m by 8 cm

**PATTIES/TARBALLS:** None

**DEBRIS:** None

**OILED DEBRIS:**

- Logs
- Vegetation
- Trash
- Debris

**BAGS:**

Photographer:

- Roll No. 57/10/5
- Frames 1-9

**REVISION:**

RM 4/2/90

**REVIEWED:**

Page 1 of
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/10/ER23  Subdivision  none  Date (mo/day/yr)  4/2/90

1000 - 1100  Time (24 hr)  Biologist  Bob Lemon

(A)  Substrate type and % of segments:

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

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

### BARNACLES

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<tr>
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**Wildlife Observations/General Comments:** Low zone not surveyed; mid zone partially surveyed through the water by wading. While boils seen from boat, 4 animals a long distance away. From top of Tumalo 12 gulls, 2 seals, 1 waterfowl, numerous bear and deer scat. Iron-golden 8' boulder tops were 90% covered with filamentous chlorophyta and Porphyra (Rhodophyta). Ecological Considerations: and a few w/ Porphyra (Chlorophyta). Grammatid amphipods seen about, but sparse under cobble. A very high energy setting, surrounded by rocks. Deer heron area, sealsions about a mile away.
SHORELINE EVALUATION

SEGMENT ST/ ER-25   SUBDIVISION A (1 OF 1) DATE 4/20/90

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 unciled biota and substrate.

SHPO SIGNATURE: __________________________ DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 146 m: No Oil 989 m
Subsurface Oil Observed: Yes No X Maximum Depth______

RECOMMENDATIONS:

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

COMMENTS: ________________________________________________

________________________________________________________________

TAG COMMENTS: _____________________________________________

________________________________________________________________

TAG APPROVAL DATE: 5/1/90
ADEC Art Wiegard Art Wiegard
EXXON Amy Reid Amy Reid
NOAA Gary Severe Gary Severe
USCG

FOSC: __________________________ DATE: 5-9-90
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

1D
Ester Hatchery release (4/15 to 6/1)

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

1F
Sewmill Bay Hatchery release (4/15 to 6/1)

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

1H
Remote release site

1I
Gill net area (5/7 to 6/31)

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

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

1L
Set net sites (5/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M
Herring spawning (4/1 to 5/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

5R
Seabird colony (5/1 to 7/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

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

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

6V
Tent sites (5/1 to 9/15)

6W
Anchorages (5/1 to 9/15)

6X
Forest Service cabins (5/1 to 9/15)

6Y
Lodge (5/1 to 9/15)

6Z
Special use destination

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

7HH
Finfish harvesting

7JJ
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.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ER-25 SUBDIVISION: A DATE 4/20/90

USCG NAME Randolph Hubbard SIGNATURE Randolph w. Hubbard

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
1. Spotted film

ADEC NAME J. Lynn Martin SIGNATURE J. Lynn Martin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ONLY OIL WAS A LIGHT STAIN AT BOTH THE NORTH END AND SOUTH END OF SUB-SEGMENT, THEREFORE NO TREATMENT IS REQUIRED

LAND MANAGER NAME Marsha Martin/DNR SIGNATURE Marsha Martin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Degree of oil minimal to rare.
**SHORELINE OILING SUMMARY**

**OVERVIEW**
- *Province:* USCG
- *Author:* SMOHE OIHG
- *Date:* 4/21/90

**SEGMENT ST:** FR-25
**SUBDIVISION:** A
**LAND REP.:** M. Martin (ENR)
**ADJACENT LOCALITY:** EXXON Arbuckle
**TIME:** 10:12:45
**DATE:** 4/20/90

**EST. SUBDIVISION LENGTH:** 1090 m
- **Sun:** Clouds
- **Fog:** Rain
- **Snow:**

**SURVEYED FROM:**
- **Foot:** Castle
- **Boat:** Falcon
- **Halo:** Working direction:
  - **South to North**

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

**SURFACE SEDIMENTS:**
- R: 0%
- B: 30%
- S: 20%
- P: 40%
- G: 0%
- O: 0%
- M: 0%
- V: 0%

**SLOPE:**
- **Long:** 70%
- **South:** 30%
- **West:** 0%

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

**OIL CATEGORY LENGTH:**
- W: 0 m
- M: 0 m
- N: 0 m
- V: 160 m
- N: 750 m

**SURFACE OIL**

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**PIT ZONE**
- **ANALYSIS SHEET:**
- **DATE:**
- **REVIEWED:**

**SUBSURFACE OIL**

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**COMMENTS**
- Generally, low angle pebble, cobble, boulder beach. Alternating patches of finer (pebble) beach sections are found with coarser (boulder) regions. This is probably controlled by the underlying bedrock structure and backshore topography. The general trend is for a coarsening of sediments to the north. The only oil found along this section of beach was sporadic splattering or remnant puddles on cobble and boulders associated with the coarser sections of beach. The northern third of the segment was not surveyed due to the rough rocky nature of the shoreline and no Halo access. This section of shoreline is indicated as having no oil by AEC.

**REVIEWED**
- **DATE:** 4/21/90
ETCH MAP

SEGMENT ER-25
SUBDIVISION A - map #1
DATE 4/10/80

CHECKLIST
- N Arrow
- Approx. Scale
- Bay/Rub Study
- Oil Dist.
- Width
- Length
- St Cover
- Calculated Character
- Est. HHA, MPA
- BEL
- Surface Location(s)
- Position
- Ft Location(s)
- Photo Location(s)

LEGEND

- A
- P - No Subdivision Oil
- T - Subdivision Oil

CT/C
Continuous Distribution
CT/0
Surface Distribution
CT/1
Patches Distribution
CT/2
Splashed Distribution

LEGEND

- O
- Photo location, direction, and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 160 ST 0 MS 0 PT 0 TB 0 FL 0 MO 930
## SHORELINE ECOLOGICAL SUMMARY

**Segment ST / ER25** Subdivision A

**Date (mo/day/yr)** 4/20/90

**Time (24 hr)** 1345 Biolgist TONY J. ZAMORA

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

### (B) Overall % cover of biota (% of segment):
- Dense 10%
- Moderate 80%
- Low 10%

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

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Photographs:
- Roll No. ST 14-10
- Frames 1-6

**Wildlife Observations/ General Comments:**
- Sealing & Sealion Spotted, Deer Scat
- Very Dense, Littorine, on Blgr & Cbl in Mitz.
- Low Tde, Not Surveyed

**Ecological Considerations:** FIII, W,

- Site Appears Healthy, New Growth of Barnacles, Mytilus, Littorine
  - As well as Many Littorine, Eggs and Fish Eggs Und.
  (probably hermania)
ER-25

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

Map Key: PWS-214b
Name: Reimer
Date: 4/06/90
Date Entered:
SHORELINE EVALUATION

SEGMENT ST/ ER-26 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ___________________________ DATE: 4/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 75 m: No Oil 615 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: 4/19/90
ADEC ___________________________ Date: 4/26/90
EXXON ___________________________ Date: 4/28/90
NOAA ___________________________ Date: 4/28/90
USCG ___________________________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
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 (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

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

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

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

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 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 (5/1 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.
FIELD SHORELINE COMMENT SHEET

SEGMENT 1 PER - 26 SUBDIVISION: A DATE 4/13/90

USCG
NAME LARRY FLETCHER SIGNATURE

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME DAVID M. SAE SIGNATURE

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Area used for subsistence deer harvesting.
**SHORELINE OILING SUMMARY**

**OG** Richard Martyn
**BIO** Bob Lemon
**LAND REP.** Leigh Carlson
**SUBDIVISION** A

**EXXON** Jon Czarnecki
**ADEC** Dave Sale
**TIME** 07:40, 10/29/90
**DATE** B / April 1990

**TEAM NO.** 10
**TIDE LEVEL** 026, (02) 18:37-19:17
**DATE** 8/1

**EST. SUBDIVISION LENGTH** 250 m
**DATE** 8/1

**UPLANDS DESCRIPTION**:
- Sun
- Clouds
- Fog
- Rain
- Snow

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

**WORKING DIRECTION**:
- N to S

**SURFACE SEDIMENTS**:
- R
- B
- 15%
- C
- P
- 20%
- G
- 20%
- S
- 10%
- M
- 10%
- V
- 10%

**SLOPE**:
- Lang
- Hang
- Vert

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

**OIL CATEGORY LENGTH**:
- W
- M
- N
- V

**OIL DISTRIBUTION**:
- Film
- Color
- Impacted Zones

**PAVEMENT**:
- H
- F

**PATTERNS / TAR BALLS**:
- None

**NEAR SHORE SHEEN?**
- No
- BR
- RW
- SL
- TL

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

**Debris Collected**
- Yes
- No

**OILED DEBRIS**

**DEBRIS COLLECTED**
- TYPE
- BAGS

**PHOTOGRAPHS**:
- Roll No.
- Frames

---

**SUBSURFACE OIL**

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<tr>
<th>PIT NO. (cm)</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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**COMMENTS**

Revision RM 8 April 1990

**REVIEWED**

Page 1 of 1
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER 26
Subdivision A
Date (mo/day/yr) 4/6/40
Time (24 hr) 0900 - 0900
Biologist Roberta
Weather: clear, calm

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

(B) Overall % cover of biota (% of segment): Dense Moderate 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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Photographs:
Roll No. ST/10/11 - ST/10/10
Frames 1-7 - 33-36

Wildlife Observations/General Comments:
Low zone cover included Halosaccion, Phacellophora, and other
Low and mid zone animals included; oligochaete, Tubificid, and others;
Isopods, Amphipods, Isopods (Ponto), Spinophilus (ANELLID), Solenaria (ANELLID), Littorina (ANELLID);
Fucus, including 4 mm juveniles (ASTERACEA). On the terrestrial abundance of deer tracks and scat.
Ecological Considerations: deer and bear tracks no scat, flat uplands at Emerson gosse and Plugue
Speckle trees.

Deer harvest area. Flat uplands would make good rotation sites.
SHORELINE EVALUATION

SEGMENT ST/ER-27 SUBDIVISION A (1 OF 1) DATE 4/8/90

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.

SHPO SIGNATURE: ____________________________ DATE: 4/19/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 36 m: No Oil 964 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

________________________________________________________________________

________________________________________________________________________

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TAG COMMENTS:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

TAG APPROVAL DATE: 4/19/90

ADEC ART WEISSER DATE: 5-1-90
EXXON ANN HEPPE DATE: 5-1-90
NOAA G. I. WRIGHT DATE: 5-1-90
USCG KENNETH DAVIS DATE: 5-1-90
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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 uncollected intertidal and subtidal algae and sea grass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)

Harbor seal and sea lion molting (6/15 to 9/15)

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

Seabird colony (6/1 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 (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)

Invertebrates harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

Segment area used for subsistence deer harvesting.
SHORELINE OILING SUMMARY

**Date**: APR-03-1990 14:59 FROM BRASOS SEAHORSE TO JOHN WOODWARD  P.24

**OAG** Richard Martz USCG **Larry Fletcher** SEGMENT ST/ER-27
**BIO** Bob Zeman LAND REP Leigh Carlson SUBDIVISION A
**EXXON** Jon Gomel, ADEC Dave Sale TIME 08:30 10-09-97
**TEAM NO:** 10 **TIDE LEVEL:** -1.5 m (3') **DATE** 09/08/90
**ST. SUBDIVISION LENGTH:** 1009 m **Sun** **Clouds** **Fog** **Rain** **Snow**
**UPLANDS DESCRIPTION:** ☐ Grass ☐ Forest ☐ Rock **WORKING DIRECTION:** N to S
**SURFACE SEDIMENTS:** R 5% B 36% C 30% P 20% G 10% S/0 10% M 10% V 10%
**SLOPE:** Low % Hang % Vert % **WAVE EXPOSURE:** ☐ Low ☐ Med ☐ High
**OIL CATEGORY LENGTH:** W __ m M __ m N __ m V __ m NO __ m

**SURFACE OIL**

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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
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**PAVEMENT:** H F S None __ sq. m by __ cm
**PATTIES/TARBALLS:** None __ BAGS
**NEAR SHORE SHEEN?** ☐ BR RW SL TL

**OILED DEBRIS**

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<th>SM</th>
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**SUBSURFACE OIL**

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**COMMENTS**: Staining is very minor.
SEGMENT ST/66-27

SUBDIVISION A

DATE 8/14/90

CHECKLIST

A. Avenue
B. Approx. Scale
C. Sample Back
D. Oil Dist.
E. Width
F. Length
G. % Cover
H. Subsurface Character
I. Ext. HW/LWL
J. SSL
K. Profile Location(s)
L. Profile(s)
M. Plot Location(s)
N. Photo Location(s)

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C Continuous Distribution

CT/8 Banded Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oklahoma Oil Company

Oil Character Length [ft]: AP PO CV GT ST 37 MS PT TB FL NO 972
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / 10/ER 27 | Subdivision A | Date (mo/day/yr) 4/2/10
---|---|---

Administerer: [Name]

(24 hr) | Biologist: Lemon
---|---

(A) Substrate type and % of segments:

1. Bedrock: 5%
2. Boulder: 25%
3. Cobble: 30%
4. Pebble: 20%
5. Sand: 10%
6. Silt: 0%

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

- Dense: __
- Moderate: __
- Low: 25%

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

- Juveniles / adults (X), new settlement (√)

**BARNACLES**

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Wildlife Observations/General Comments:

- Amphipods and insects were found in the drift line. Low as mid biota: *Gammarus*, *T. latens*, *A. nigripes*, *P. sp.,* *Chironomus*, *H. stagnalis*. *P. longicollis*, *L. stagnalis* (attending *L. stagnalis*), *P. longicollis*. A close-up of dense zonation.

Ecological Considerations:

- Chub溪 stream found nothing fish were feeding on or any fish. Another stream with waterfall right away was not choked, assumed not contaminated.
SEGMENT ST/ ER-28  SUBDIVISION A  DATE  4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Charles E. H. DATE: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 78 m: No Oil 190 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

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

COMMENTS: ____________________________________________

TAG COMMENTS: _________________________________________

TAG APPROVAL DATE: 4/20/90
ADEC Art Werner, Deputy FOSC: DATE: 4-26-90
EXXON Mary (CGR) Mader
NOAA Paul (CGR) Weisheit
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 Estuary Hatchery release (4/15 to 5/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release sites
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1G 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)
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.

3O, 3Q 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.

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

5S 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)
7H-H Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST/ER-28  SUBDIVISION: A        DATE 4/8/90

ISC/NAME:  LARRY FLETCHER SIGNATURE: [Signature]

☑ NO TREATMENT RECOMMENDED        ☐ TREATMENT SUGGESTED

COMMENTS:

ADEC

NAME: DAVE M. SMITH SIGNATURE: [Signature]

☑ NO TREATMENT RECOMMENDED        ☐ TREATMENT SUGGESTED

COMMENTS:

THE OIL WE FOUND STAINING THE COBBLE/Cobble BEACH
ON THIS SEGMENT IS WEATHERED FROM THE NORMAL
WEARING OF THE SMALL WELL-ROUNDED STONES BY WAVE ACTION.
THOUGH SOME OIL WAS FOUND IN A BAND ~ 3-10 CM.
DEEP IN MAIN STORM DECK, WITH A FEW MORE CYCLES
OF TURNING, IT SHOULD CLEAN ITSELF OUT TO A STAIN.

LAND MANAGER

NAME: LeEWH CARLSON SIGNATURE: [Signature]

☑ NO TREATMENT RECOMMENDED        ☐ TREATMENT SUGGESTED

COMMENTS:

Area used for subsistence deer harvesting.

LAND MANAGER

NAME: [Signature]

DATE: 4/8/90
**SHORELINE OILING SUMMARY**

**OG:** R. Richard Marty, USCG
**BIO:** Bob Lemon, LAND REP.
**EXXON:** Jon Czerniak, ADEC
**LAND REP:** Leigh Carlson, SUBDIVISION

**ST SUBDIVISION LENGTH:** 304 m

**TIDE LEVEL:** 1.5 m (F') to 1.95 m (F)

**TIME:** 09:47 to 10:20

**DATE:** 1 April 1990

**LAND REP:** Ken LeMar

**WORKING DIRECTION:** N to S

**SURFACE SEDIMENTS:** R - % B - % C 60 % P 30 % G 10 % S % M % V %

**OIL CATEGORY LENGTH:** W - m M - m N - m

**OIL CATEGORY:**
- **LENGTH:** W - m
- **M** - m N - m

**WPVEMENT:** H F S sq. m by cm

**PATTIES/TARBALLS:**
- **TYPE:**
- **BAGS**

**NEAR SHORE SHEEN?** NO

**ROLL NO.:** 5T/10/11
**FRAMES:** 12-18

**SURFACE OIL**

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**SUBSURFACE OIL**

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**COMMENTS:** Oil limited to a lense in the north of the segment.

**R. Marty & Apr:**

**NO. 24**

**REVIEWED**

**DATE**
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST/0/ER29**  
**Subdivision:** A  
**Date (mo/day/yr):** 4/8/90

- **Biologist:**  
- **Date (24 hr):** 0400 - 1030  
- **Condition:** clear, calm

**A.**  
- **Substrate type and % of segments:**  
  1. Bedrock  
  2. Boulder  
  3. Cobble  
  4. Pebble  
  5. Sand  
  6. Shingle

**B.**  
- **Overall % cover of biota (% of segment):**  
  - Dense  
  - Moderate  
  - Low < 5%

**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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**ASTRÓPODS**

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**Wildlife Observations/General Comments:**  
Low zone had filamentous greens on cobble tops.  
Mussels and limpets in drift line.  
Bear tracks on scat, bear scat common.  
Beached seal.  Not much life on this beach.

**Ecological Considerations:**  
Flat uplands make good nesting sites.  
Over harvest site.

---

*Signed:*  
15/02/84
SHORELINE EVALUATION

SEGMENT ST/ ER-29  SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
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.

SHPO SIGNATURE: Charles 3.  Date: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 746 m: No Oil 1433 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup
____ Bioremediation
____ Tarmat: Breakup
____ Removal
____ Other (see comments)

COMMENTS:

______________________________

TAG COMMENTS:

______________________________

TAG APPROVAL DATE: 4/20/90
ADEC ART WEINER Art WeCRJ
EXXON  FOSC:  DATE: 4/26/90
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 unojled 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 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.
SEGMENT ST/ER-29  SUBDIVISION: A  DATE 4/8/90

USCG
NAME LARRY FLETCHER  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME DAVE M. SACE  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

LAND MANAGER
NAME Leigh Carlson  SIGNATURE  Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Segment area used for subsistence deer harvesting.

179F2X
## SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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### SUBSURFACE OIL

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**Comments:**
There appear to be a number of staining mechanisms at work on this beach.

1) Oil staining
2) Iron/Mn staining
3) ‘Tannin’ staining from algae etc

It is quite difficult to differentiate between these, and some of the sediments mapped as ‘oil stained’ may actually be oil free.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER29 Subdivision A Date (mo/day/yr) 4/8/90
Time (24 hr): 1600 - 1900 Biologist (Lemon)

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

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

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

BARNACLES

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Wildlife Observations/ General Comments: The latter two in mid zone also filamentous greens on boulder tops about 30% cover in mid zone. Low zone includes M. edulis, Rhodeus, Littorina, Parvulae, including e. sporelings, and other sessile filamentous reds, and Ulva (Chlorophyta).
Low zone animals included Geniculaphora (15000) o Megaster (Asteroida), 5 sections.

Ecological Considerations: Photographs: Roll No. ST/10/11 Frames 19 - 26

High zone included in seals, amphipods, and isopods in drift line.

Deer Tracks were abundant along the snow line. Game Trails crossed the snow to the beach. One substantial stream of oil, insects, and fish was found.

Dead Harvester

230 lx