



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SEATTLE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

FEB 14 2008

Regulatory Branch

Applicant: Natural Resources Conservation Service (NRCS)  
Co-applicants: Washington State Department of Transportation (WSDOT)  
Washington Department of Fish and Wildlife (WDFW)  
US Army Corps of Engineers (USACE)  
Ducks Unlimited (DU)

Notice to interested parties:

Reference: 200400681  
NRCS

Enclosed for your review and comment are revised drawings dated February 14, 2008, and the proposed permit modification submitted to the U.S. Army Corps of Engineers (Corps) by the NRCS concerning the above referenced permit application located in wetlands adjacent to the Willapa River, one mile downstream of the City of South Bend in Pacific County, Washington.

The proposed revision consists of removing up to 5,450 lineal feet of existing levee, and excavating an estimated 30,700 cubic yards of levee, mudflat channel and tidal channel material. Additional information for the proposed permit modification is attached to this letter.

The original permit activity included removing up to 10,000 linear feet of levee and excavating up to 101,302 cubic yards of levee, mudflat channel and tidal channel material. A copy of the Corps' Public Notice circulated on August 25, 2004, and is available on the Corps' website at: <http://www.nws.usace.army.mil>.

The Corps is considering the proposed permit modification in light of our regulations and comments received. The Corps will not make a final permit decision until comments have been reviewed and evaluated.

Comments on this revision must be furnished to this office in writing or via email within 30 days from the date of this letter.

If you have any questions, please contact me at (206) 766-6439 or email at [Ronald.J.Wilcox@usace.army.mil](mailto:Ronald.J.Wilcox@usace.army.mil).

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Wilcox". The signature is fluid and cursive, with the first name "Ron" and last name "Wilcox" clearly distinguishable.

Ron Wilcox, Project Manager  
South Puget Sound Section

Enclosures



**Subject:** Willapa Estuary WRP Project  
Proposed Project Modification  
Dike Removal and Restoration of Tidal Channels

**Date:**  
January 28, 2008

## Estuary Restoration Project Description

The remaining project element will convert 275 acres of existing freshwater wetland to 275 acres of estuarine wetlands.

### DIKE REMOVAL

- Approximately 5,450 lineal feet of dike (existing wetland fill) will be removed.
- Dike removal will convert 5.3 acres of existing filled land to an estuarine wetland.
- Available fill material from dike removal will be approximately 30,700 cu. yds.
- Maximum depth of excavation on the 5.3 acres of existing filled land (dike) is 8.5 feet and will lower the existing ground elevation to 8.0 feet NAVD88.

### Dike Material Discharge (fill placement)

- Excavated material from the existing dike will be discharged into the existing dike borrow ditch and existing field drainage ditches number 1 and number 2.
  - Up to 24,430 cubic yards of material from the existing dike will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Up to 3,170 cubic yards of material from the existing dike will be discharged into the existing field drainage ditch 1, and will cover an area of up to 2.0 acres to a maximum depth of up to 5.4 feet (minimum existing ditch bottom elevation of 2.6 feet NAVD88 to a maximum fill elevation of 8.0 feet NAVD88).
  - Up to 3,100 cubic yards of material from the existing dike will be discharged into the existing field drainage ditch 2, and will cover an area of up to 3.2 acres to a maximum depth of up to 5.0 feet (minimum existing ditch bottom elevation of 2.0 feet NAVD88 to a maximum fill elevation of 7.0 feet NAVD88).

### **EXTERIOR TIDAL CHANNEL INLET CONSTRUCTION (Riverward of levee)**

- Approximately 2.8 acres of salt marsh on the river side of the existing dike will be disturbed to construct the four tidal inlets.
- Approximately 925 lineal feet of tidal channels will be excavated on the river side of the existing dike to construct the tidal channel inlets to channel numbers 1, 2, 7, and 8.

#### **Tidal Channel Material Discharge (fill placement)**

- Available fill material from excavation of the tidal inlets will be approximately 8,429 cu. yds.
  - Approximately 500 linear feet will be excavated for the inlet to tidal channel 1 up to a maximum depth of 6.4 feet (bottom elevation 3.0 feet NAVD88), up to 3,320 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 240 linear feet will be excavated for the inlet to tidal channel 2 up to a maximum depth of 7.7 feet (bottom elevation 0.6 feet NAVD88), up to 3,350 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 120 linear feet will be excavated for the inlet to tidal channel 7 up to a maximum depth of 6.9 feet (bottom elevation 2.2 feet NAVD88), up to 1,029 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 65 linear feet will be excavated for the inlet to tidal channel 8 up to a maximum depth of 8.7 feet (bottom elevation 2.2 feet NAVD88), up to 730 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).

**TIDAL CHANNEL CONNECTION (from existing estuary outside dike to interior field)**

- Approximately 315 ft of tidal channel numbers 1, 2, 7 and 8 will be restored after the existing dike fill is removed to connect the tidal inlets to the remnant tidal channels.

**Tidal Channel Material Discharge (fill placement)**

- Available fill material from excavation of tidal channels at the location of the existing dike fill will be approximately 5247 cu. yds.
  - Approximately 75 linear feet will be excavated for tidal channel 1 up to a maximum depth of 5.0 feet (bottom elevation of 3.0 feet NAVD88), up to 407 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 75 linear feet will be excavated for tidal channel 2 up to a maximum depth of 11.5 feet (bottom elevation of -3.5 feet NAVD88), up to 2,350 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 80 linear feet will be excavated for tidal channel 7 up to a maximum depth of 8.5 feet (bottom elevation of -0.5 feet NAVD88), up to 1,190 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 85 linear feet will be excavated for tidal channel 8 up to a maximum depth of 9.5 feet (bottom elevation of -1.5 feet NAVD88), up to 1300 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).

### **INTERIOR TIDAL CHANNELS (landward of levee)**

- Approximately 1,571 ft of existing remnant tidal channels; numbers 1, 2, 5 and 8; will be excavated in the existing freshwater wetland on the land side of the existing dike to remove restrictions to tidal flow.

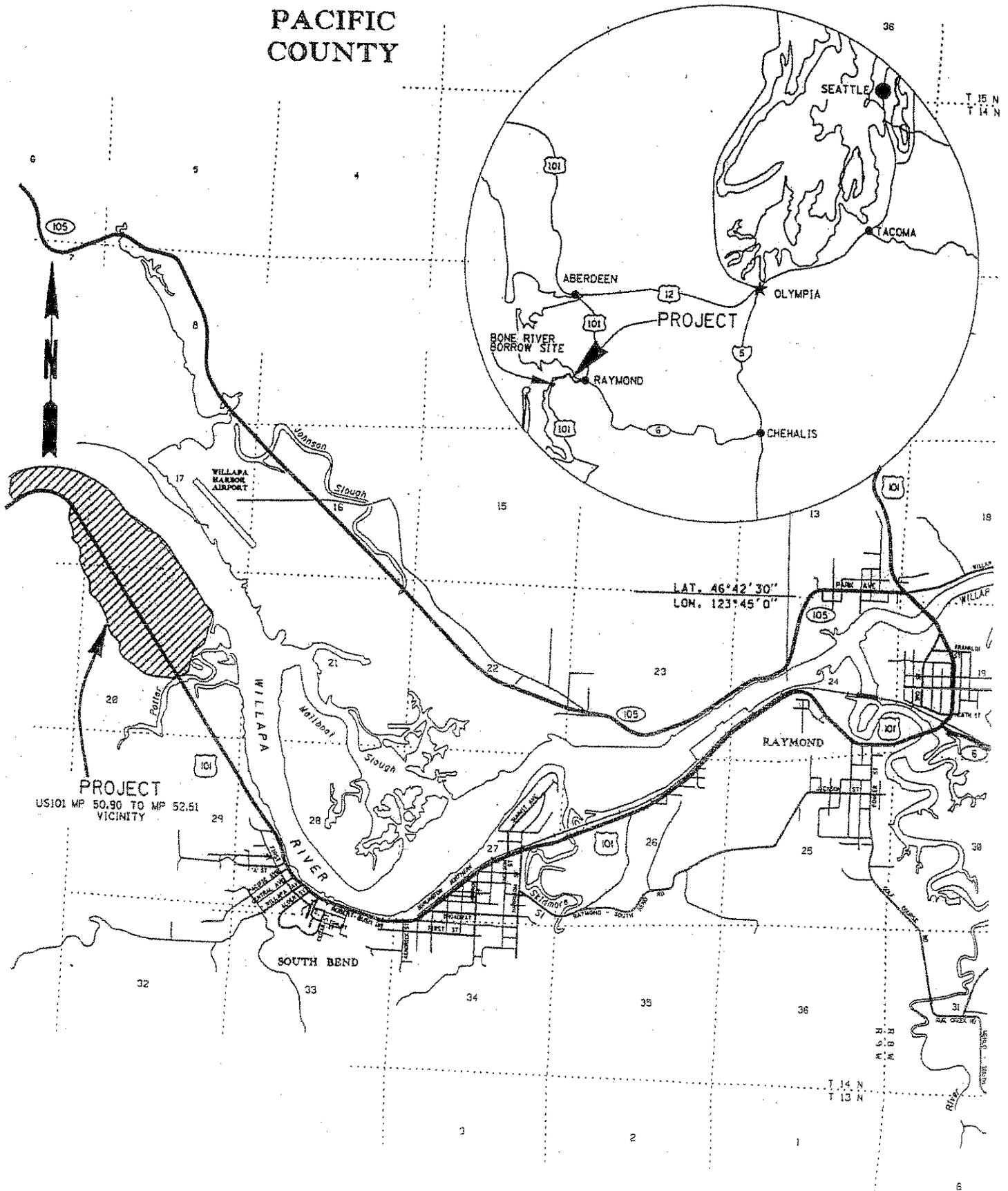
#### **Tidal Channel Material Discharge (fill placement)**

- Available fill material from excavation of remnant tidal channels will be approximately 2125 cu. yds.
  - Approximately 195 linear feet of remnant tidal channel 1 will be excavated up to a maximum depth of 2.5 feet (bottom elevation varies from 3.2 to 5.4 feet NAVD88), up to 138 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 535 linear feet of remnant tidal channel 2 will be excavated up to a maximum depth of 1.6 feet (bottom elevation varies from 1.9 to 2.7 feet NAVD88), up to 266 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 728 linear feet of remnant tidal channel 5 will be excavated up to a maximum depth of 4.0 feet (bottom elevation varies from -1.0 to -0.6 feet NAVD88), up to 1,612 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
  - Approximately 113 linear feet of remnant tidal channel 8 will be excavated up to a maximum depth of 4.8 feet (bottom elevation varies from 2.7 to 2.8 feet NAVD88), up to 109 cubic yards of material will be discharged into 5,700 lineal feet of the existing borrow ditch. Total borrow ditch fill (received from all project elements) will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).

### **OVERALL PROJECT NOTES**

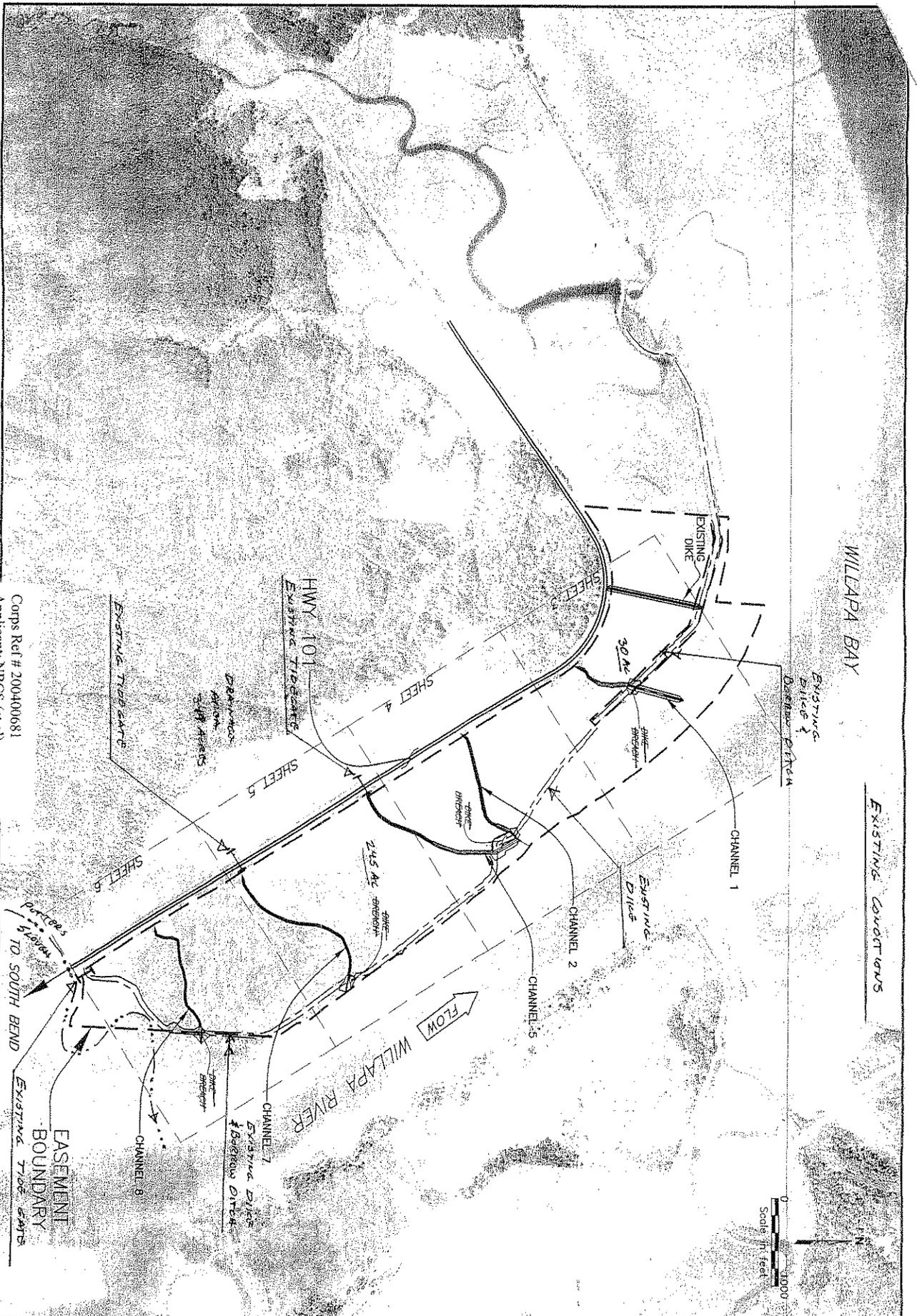
- In summary, all excavated material from the excavation for the tidal channel inlets, tidal channel connections at the existing dike, and remnant tidal channel removal of obstructions will be combined and discharged into 5,700 lineal feet of the existing borrow ditch and will cover an area of up to 8.1 acres to a maximum depth of up to 8.7 feet (minimum existing ditch bottom elevation of -0.7 feet NAVD88 to maximum fill elevation of 8.0 feet NAVD88).
- MHHW as shown on the drawings is 8.4 feet NAVD88 or 9.9 feet MLLW.

# PACIFIC COUNTY



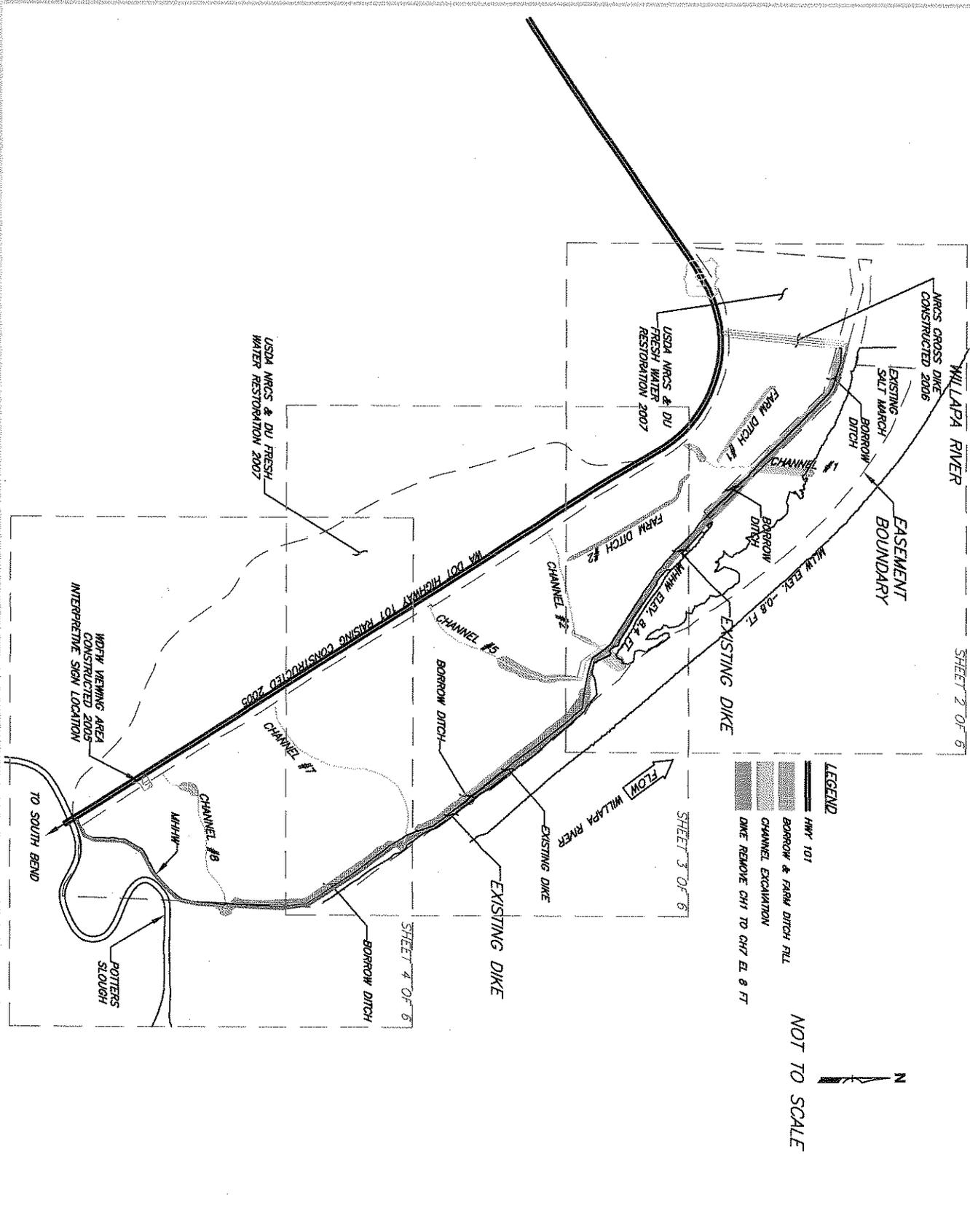
Corps Ref # 200400681  
 Applicant: NRCS (et al)  
 Location: Willapa River near  
 South Bend, Pacific County, WA  
 Date: 14 February 2008  
 Sheet 1 of 8

## VICINITY MAP



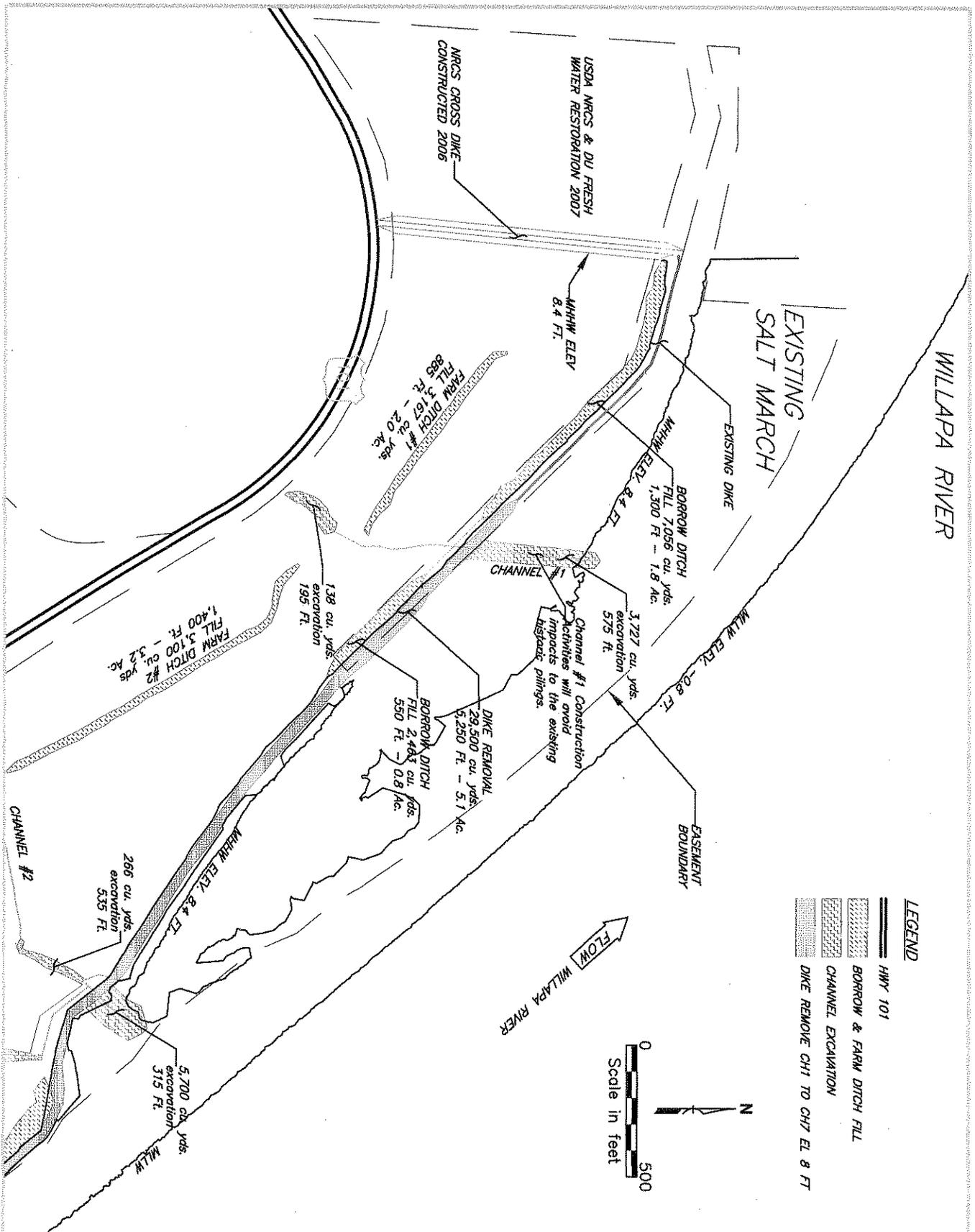
Corps Ref # 200400681  
 Applicant: NRCS (et al)  
 Location: Willapa River near  
 South Bend, Pacific County, WA  
 Date: 14 February 2008  
 Sheet 2 of 8

 <p><b>NRCS</b>          Natural Resources Conservation Service          United States Department of Agriculture</p>	<b>WILLAPA WRP ESTUARY RESTORATION</b> PLAN VIEW		Date APR 2007	
	Designed OMR / LAJ	Drawn HOD	Checked LAJ	Date APR 2007
	Approved L. Johnson, SCE #4/26/07			Date APR 2007
	NRCs PRACTICE STANDARD 657 JOB CLASS IV			Date APR 2007
	The Name WILLAPA			Date APR 2007



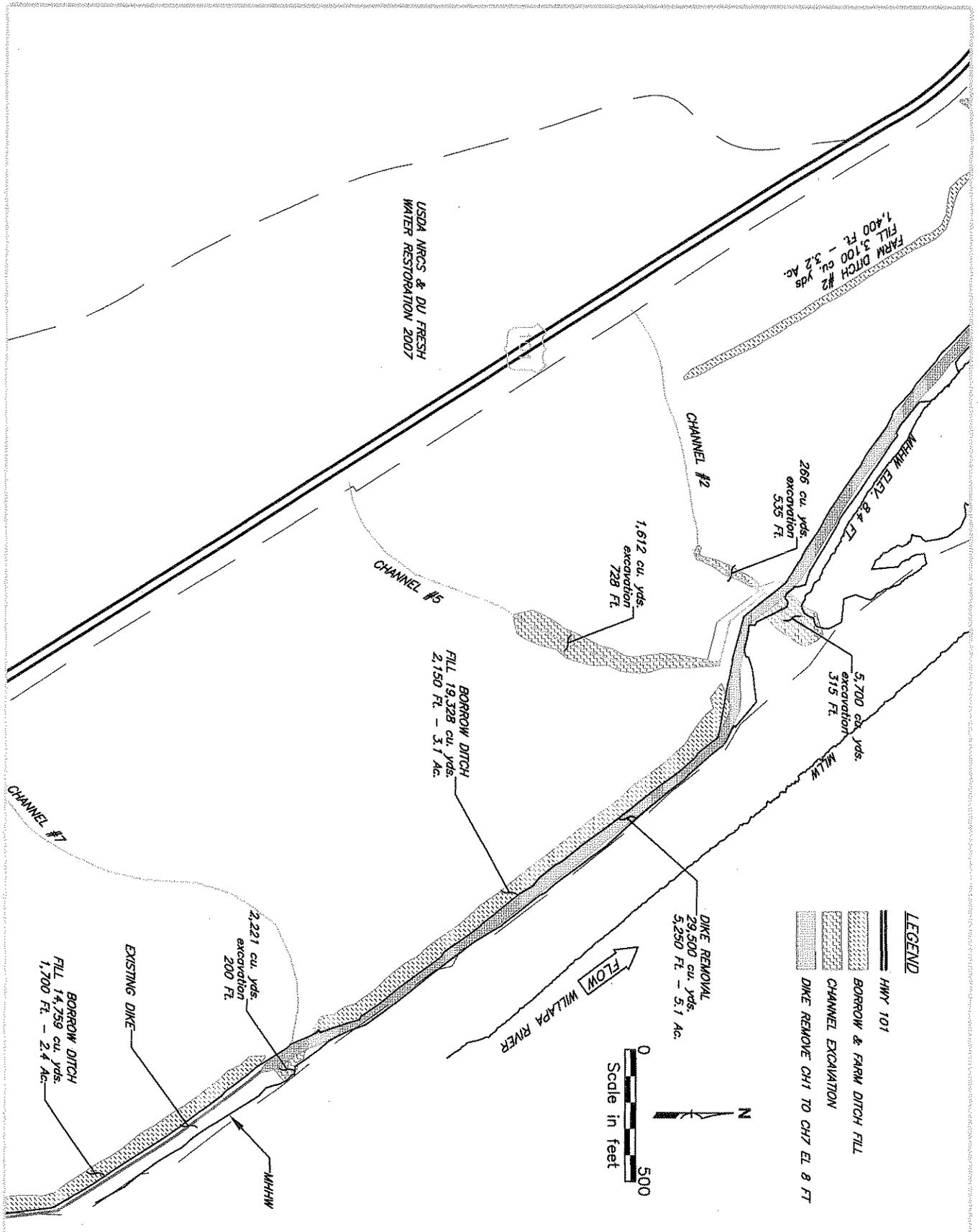
**WILLAPA ESTUARY RESTORATION PROJECT**  
**2008 REQUESTED MODIFICATION**  
**PROJECT LAYOUT**

Designed DMR, Corps Ref # 200400681  
 Drawn WES DU, Applicant: NRCS (et al)  
 Location: Willapa River near  
 South Bend, Pacific County, WA  
 Date: 14 February 2008  
 Sheet 3 of 8



**WILLAPA ESTUARY RESTORATION PROJECT**  
**2008 REQUESTED MODIFICATION**  
**DETAIL PLANVIEW 1**

Designed .....	Corps Ref # 200400681
Drawn .....	Applicant: NRCS (et al)
Checked .....	Location: Willapa River near South Bend, Pacific County, WA
Approved .....	Date: 14 February 2008
	Sheet 4 of 8



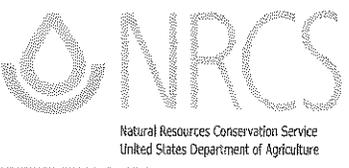
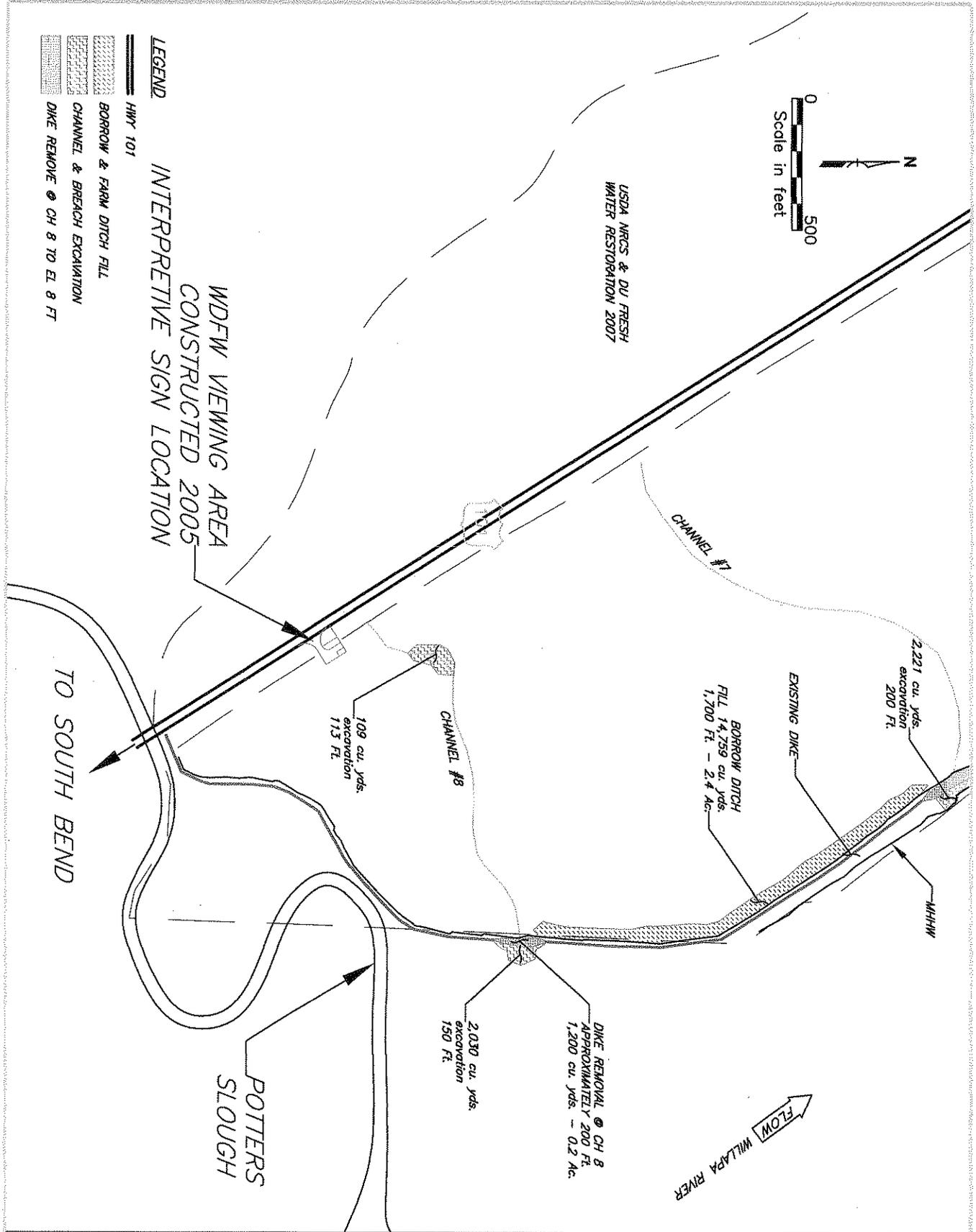
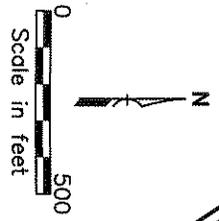
**WILLAPA ESTUARY RESTORATION PROJECT**  
**2008 REQUESTED MODIFICATION**  
**DETAIL PLANVIEW 2**

Designed .....	Corps Ref # 200400681
Drawn .....	Applicant: NRCS (et al)
Checked .....	Location: Willapa River near
Approved .....	South Bend, Pacific County, WA
	Date: 14 February 2008
	Sheet 5 of 8

- LEGEND**
- ▬ HWY 101
  - ▬ BORROW & FARM DITCH FILL
  - ▬ CHANNEL & BREACH EXCAVATION
  - ▬ DIKE REMOVAL @ CH 8 TO EL 8 FT

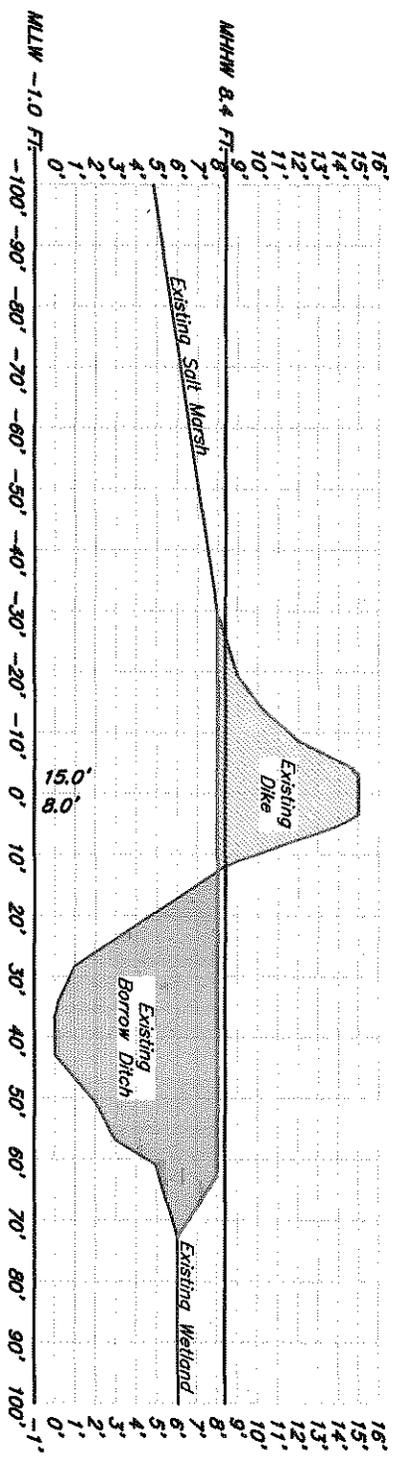
WDFW VIEWING AREA  
CONSTRUCTED 2005  
INTERPRETIVE SIGN LOCATION

USDA NRCS & DU FRESH  
WATER RESTORATION 2007

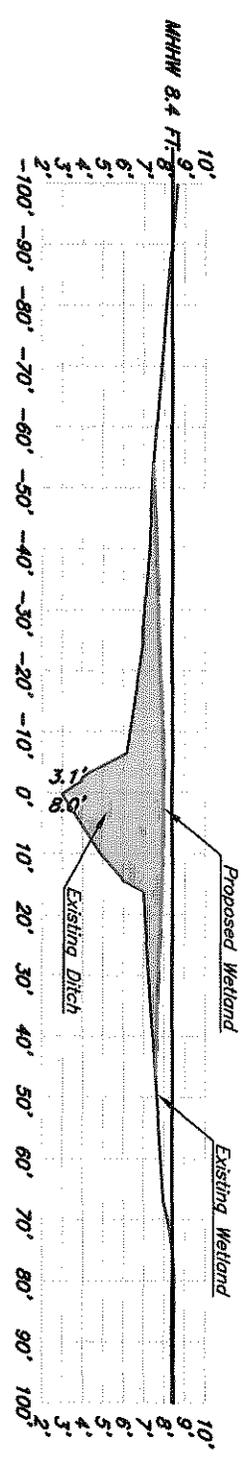


**WILLAPA ESTUARY RESTORATION PROJECT**  
**2008 REQUESTED MODIFICATION**  
**DETAIL PLANVIEW 3**

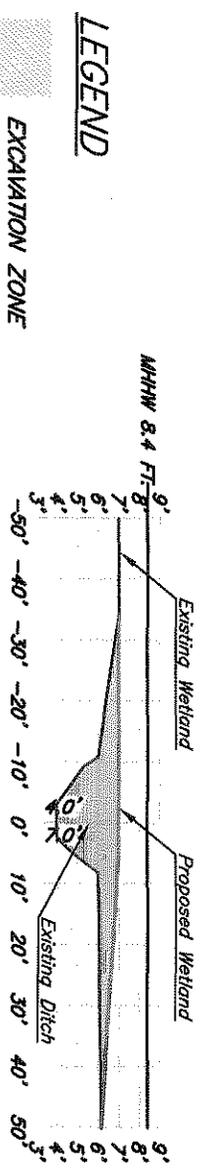
Designed .....	Corps Ref # 200400681
Drawn .....	Applicant: NRCS (et al)
Checked .....	Location: Willapa River near
Approved .....	South Bend, Pacific County, WA
	Date: 14 February 2008
	Sheet 6 of 8



**CROSS SECTION**  
**TYPICAL DIKE REMOVAL AND BORROW DITCH FILL TO ELEV 8 FT.**  
 N.T.S.



**CROSS SECTION**  
**TYPICAL FARM FIELD DITCH #1 FILL TO 8 FT.**  
 N.T.S.

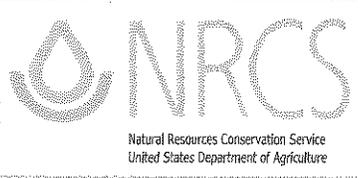


**CROSS SECTION**  
**TYPICAL FARM FIELD DITCH #2 FILL TO 7 FT.**  
 N.T.S.

**LEGEND**

EXCAVATION ZONE

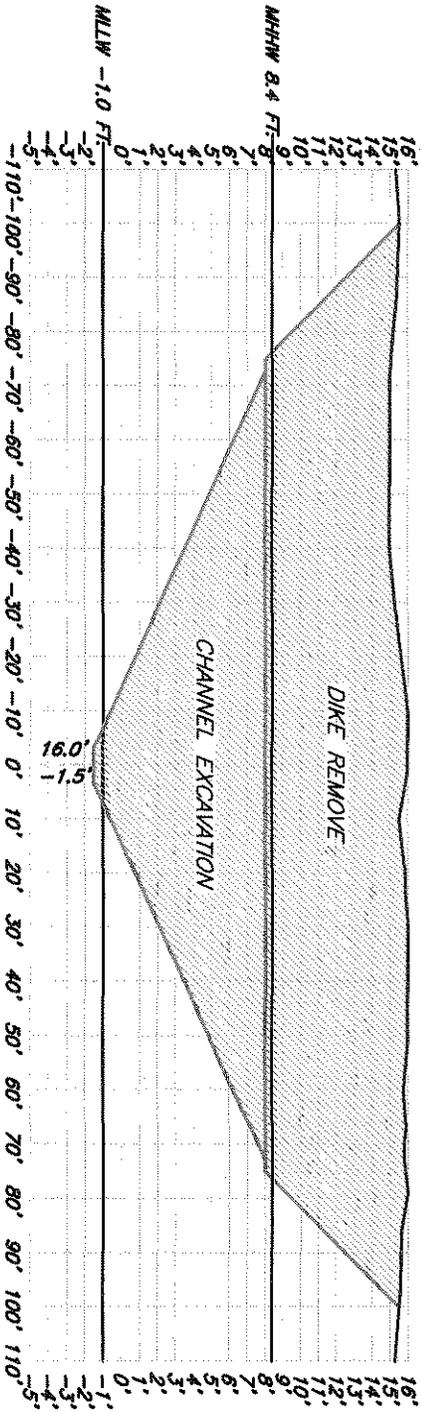
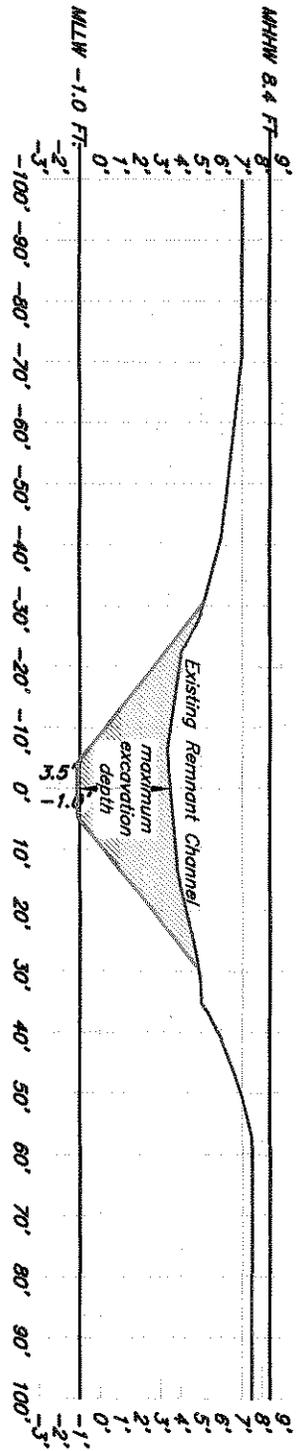
FILL ZONE



**WILLAPA ESTUARY RESTORATION PROJECT**  
**2008 REQUESTED MODIFICATION**  
**DIKE REMOVAL & BARROW DITCH FILL**

Corps Ref # 200400681  
 Applicant: NRCS (et al)  
 Location: Willapa River near South Bend, Pacific County, WA  
 Date: 14 February 2008  
 Sheet 7 of 8

Designed .....  
 Drawn .....  
 Checked .....  
 Approved .....



**LEGEND**

 EXCAVATION ZONE



**WILLAPA ESTURARY RESTORATION PROJECT**  
**2008 REQUESTED MODIFICATION**  
**CHANNEL EXCAV. & DIKE REMOVAL**

Designed .....  
Drawn .....  
Checked .....  
Approved .....

Corps Ref # 200400681  
Applicant: NRCS (et al)  
Location: Willapa River near  
South Bend, Pacific County, WA  
Date: 14 February 2008  
Sheet 8 of 8