



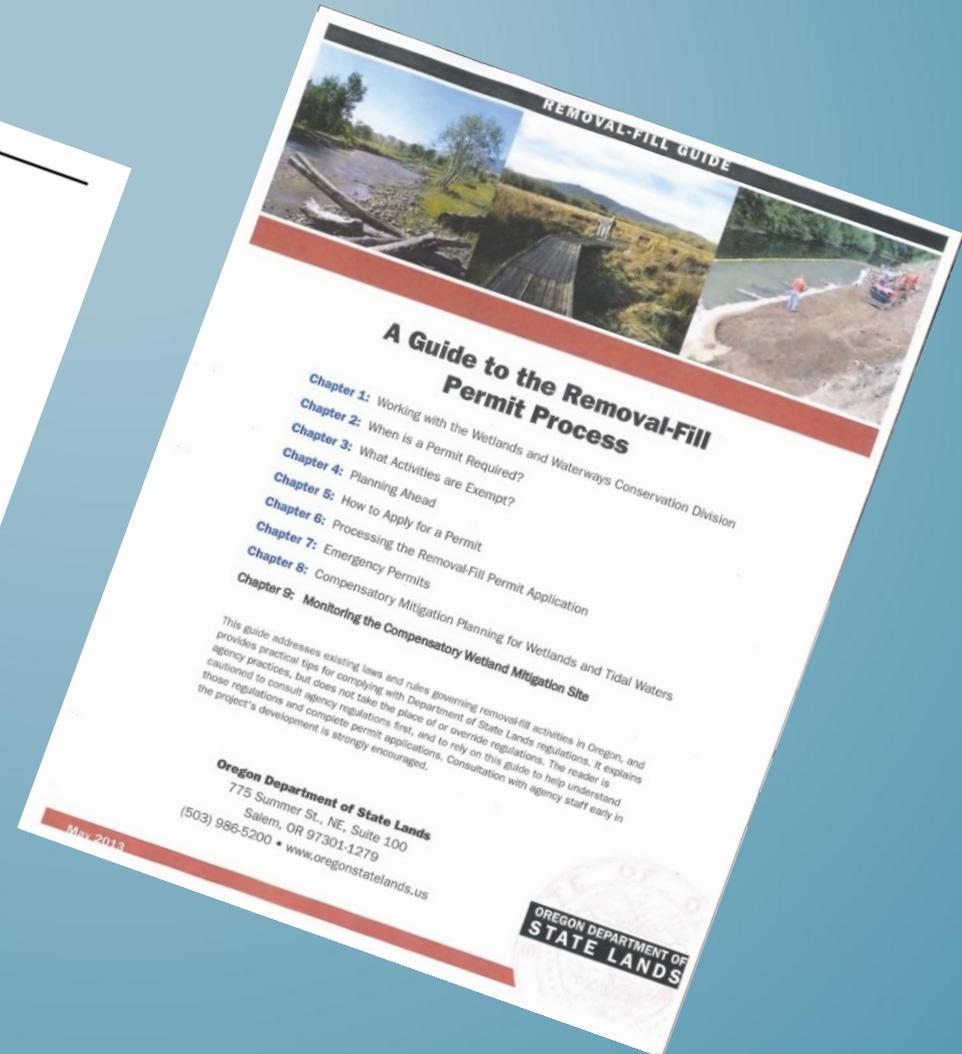
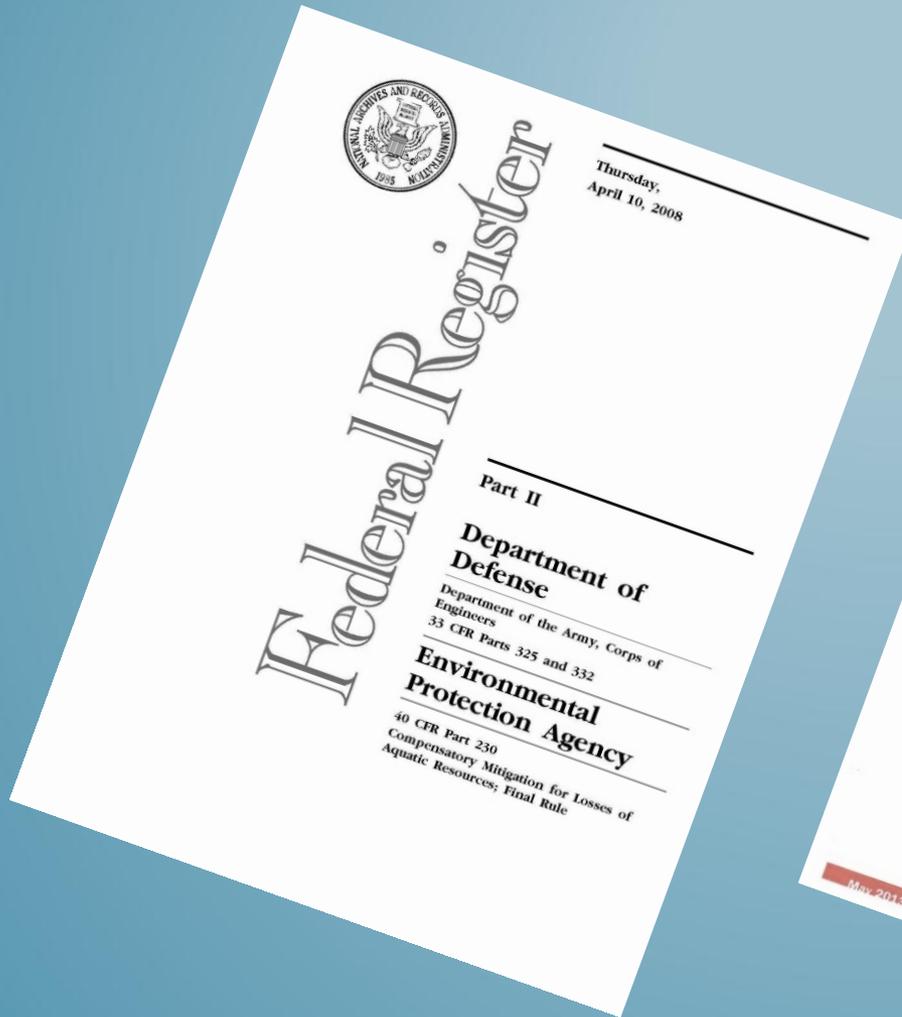
WETLAND MITIGATION

*Environmental Services
Oregon Department of Transportation
October 2014*

The background of the slide is a reproduction of the painting 'The Scream' by Edvard Munch. It depicts a figure in a dark coat on a wooden bridge, looking out at a turbulent, swirling sea under a sky of intense, fiery reds and oranges. The overall mood is one of intense emotional distress or mental anguish.

WETLAND
MITIGATION!!!
Aaaagh . . .

WHAT IS MITIGATION?



WHAT DO
WE DO
FIRST?



“MITIGATION” INCLUDES:

1st:
Avoidance

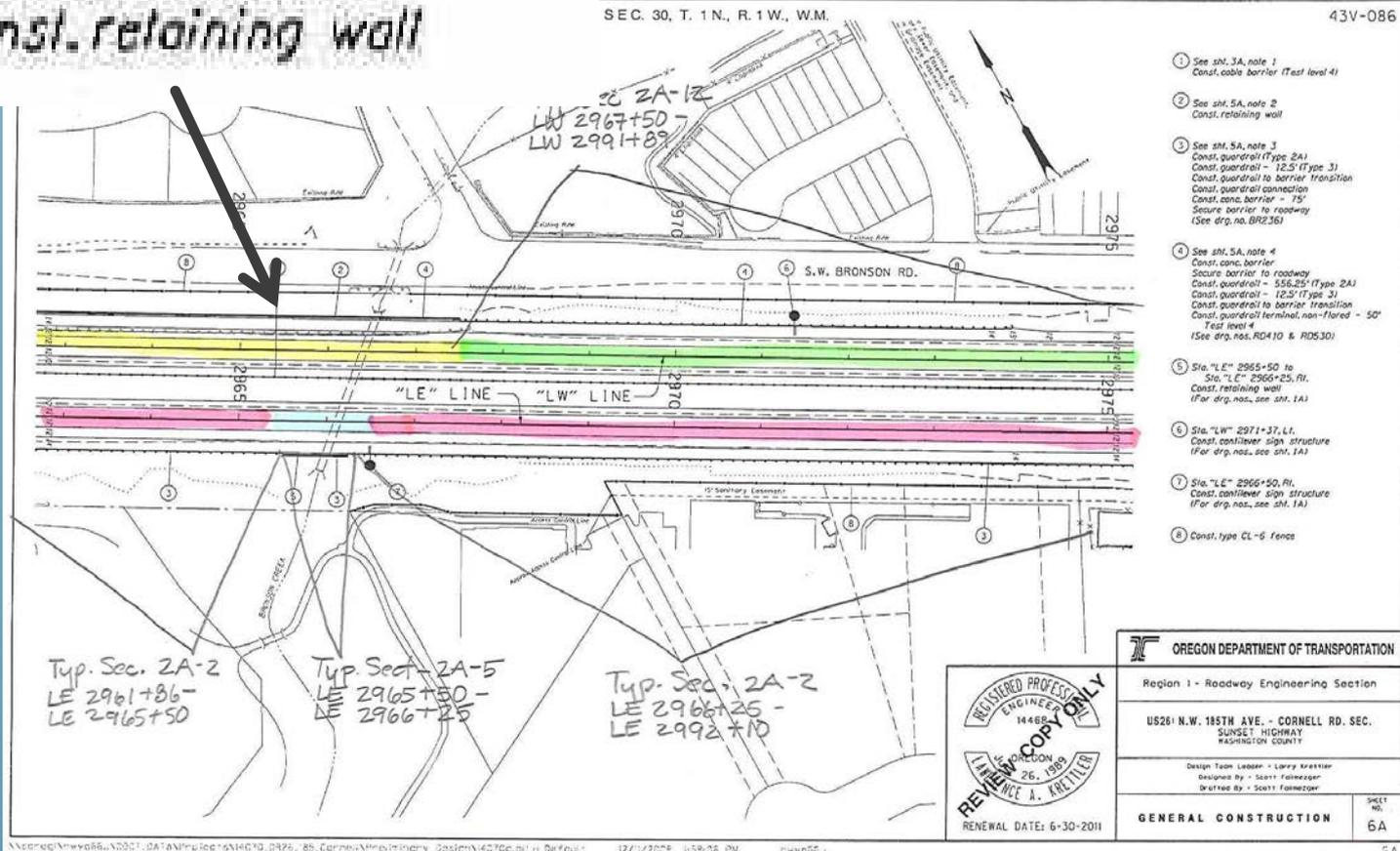


2nd:
Minimization



APPLYING ALL AVOIDANCE AND MINIMIZATION MEASURES

② See sht. 5A, note 2
Const. retaining wall

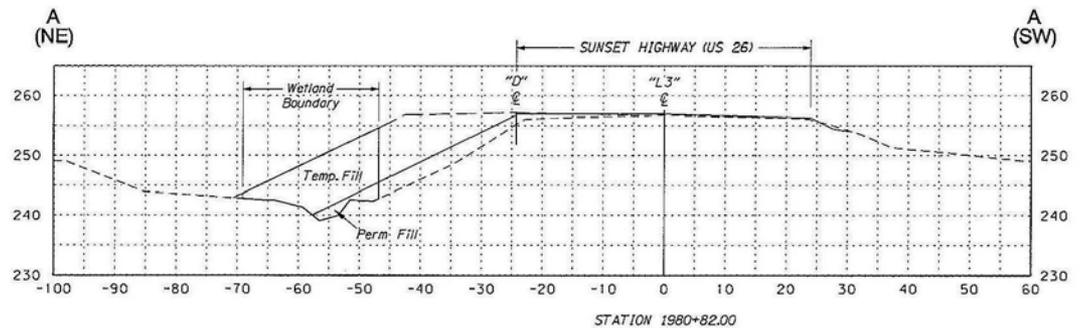


FINAL IMPACT CALCULATIONS:

| Wetland Impact Table | | |
|----------------------|-------------------|----------|
| Fill Type | Area | Volume |
| Temporary | 1,888 SF 0.04 ac. | 1,160 CY |
| Permanent | 400 SF 0.01 ac. | 30 CY |

| Wetland Impact Table | | |
|----------------------|-------------------|----------|
| Fill Type | Area | Volume |
| Temporary | 1,888 SF 0.04 ac. | 1,160 CY |
| Permanent | 400 SF 0.01 ac. | 30 CY |

WEST WETLAND IMPACT AREA CROSS SECTION



LEGEND
 - - - - Existing Ground
 ——— Permanent Roadway
 - - - Detour

CROSS SECTION A-A



| | |
|---|----------------|
|  OREGON DEPARTMENT OF TRANSPORTATION | |
| REGION 1 - ENVIRONMENTAL UNIT | |
| US 26: WEST FORK DAIRY CREEK BRIDGE #02673 SUNSET HIGHWAY WASHINGTON COUNTY | |
| Design Team Leader - Claire S. Carder Designed By - Stephen Skeels Drafted By - Jodi Heydarpour | |
| PERMIT APPLICATION MAP | SHEET NO. 3 |

DOCUMENTATION: REQUIRED IN PERMIT APPLICATIONS

Table 1. Wetland Size and Impacts

| Wetland | Total Area (ac) | Impact Area (ac) | Impact Description |
|-----------|-----------------|------------------|--|
| Wetland A | 0.09 ac | 0.09 ac | Excavated and filled with FMS |
| Wetland B | 0.19 ac | 0.00 ac | Not impacted but enhanced by plantings |
| Wetland D | 0.036 ac | 0.03 ac | Excavated and filled with FMS |
| TOTAL | 0.316 ac | 0.12 ac | Excavated and filled with FMS |

We still have
WETLAND
IMPACTS!!!
Now what?
Aaaagh . . .



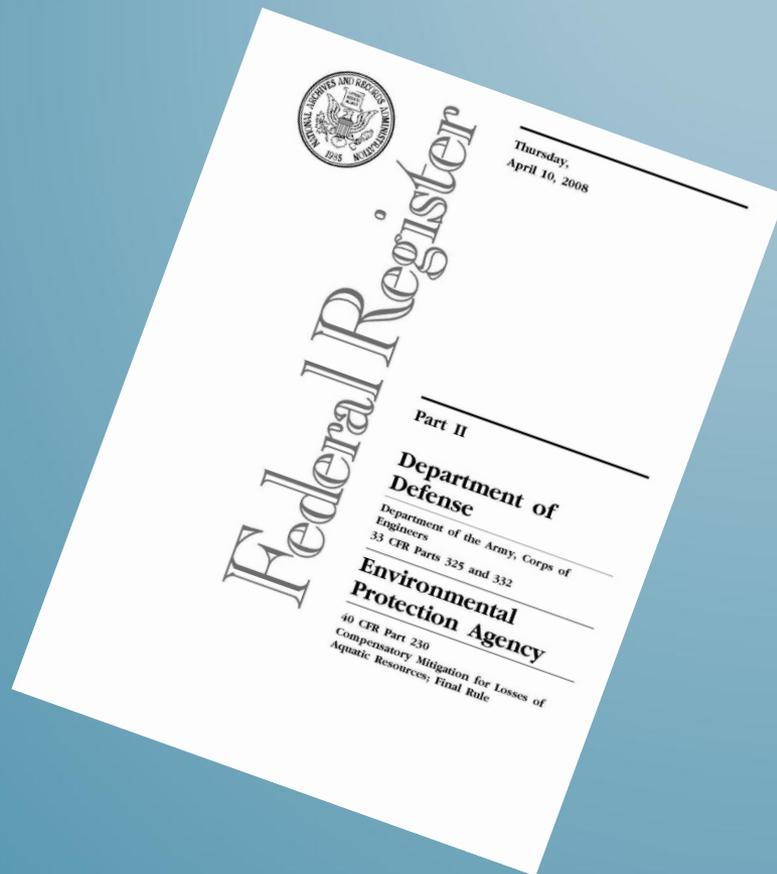
QUESTION:

Why does the amount of wetland impact matter?

ANSWER:

It helps define mitigation options and permitting path

WHAT IS COMPENSATORY WETLAND MITIGATION (CWM)?



Army Corps of
Engineers
33 CFR Part 325

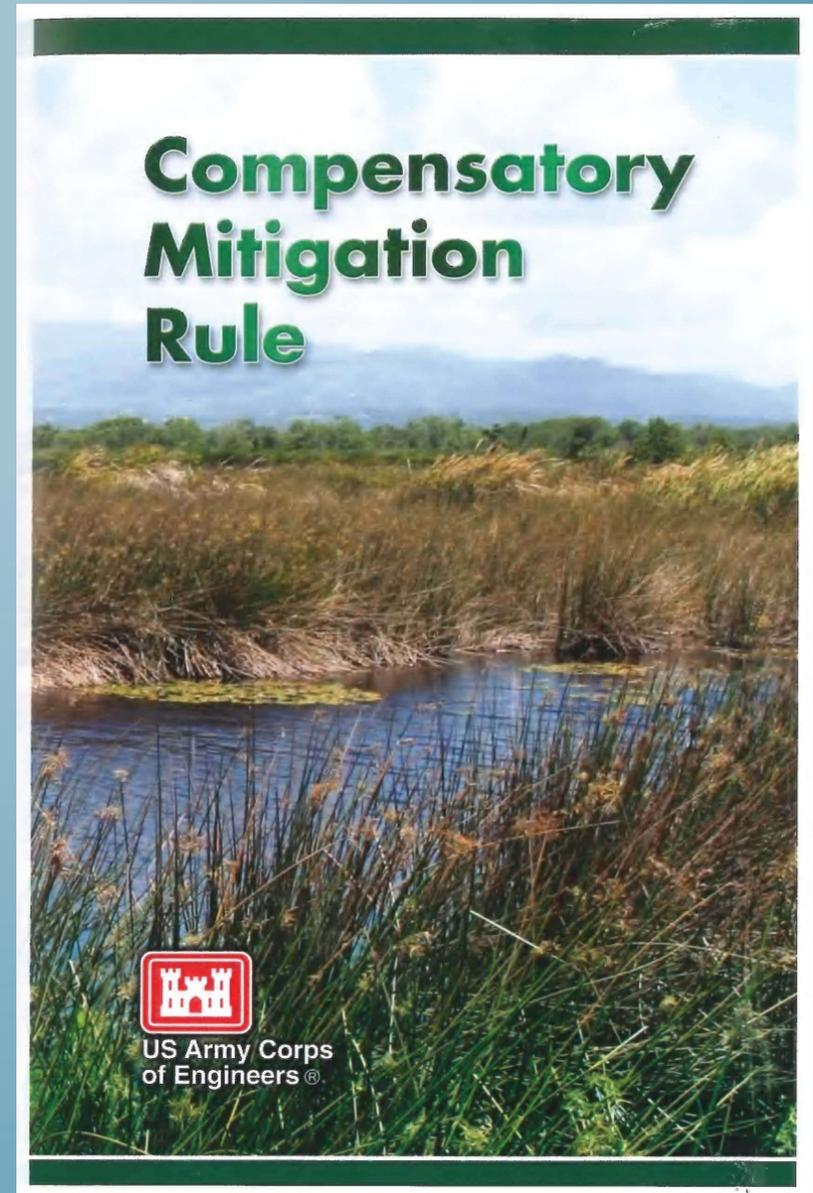
WHAT IS COMPENSATORY WETLAND MITIGATION (CWM)?



*Department of
State Lands
OAR 141-085-0500*

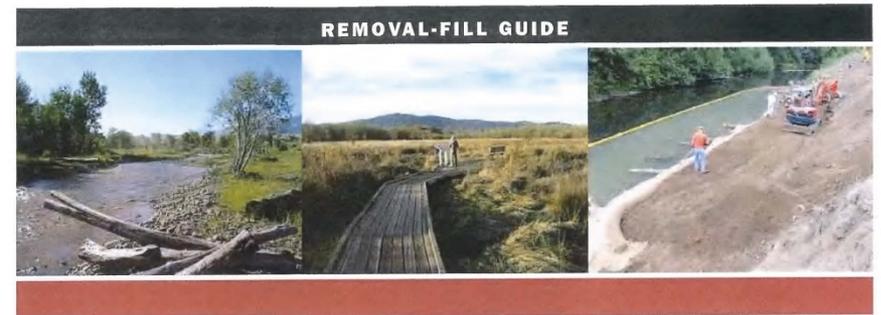
WETLAND MITIGATION HIERARCHY ARMY CORPS OF ENGINEERS

<http://www.usace.army.mil/cw/cecwo/reg/>



WETLAND MITIGATION HIERARCHY DEPARTMENT OF STATE LANDS

http://www.oregon.gov/dsl/PERMITS/docs/Removal_Fill_Guide_May_2013.pdf#page=138



A Guide to the Removal-Fill Permit Process

- Chapter 1:** Working with the Wetlands and Waterways Conservation Division
- Chapter 2:** When is a Permit Required?
- Chapter 3:** What Activities are Exempt?
- Chapter 4:** Planning Ahead
- Chapter 5:** How to Apply for a Permit
- Chapter 6:** Processing the Removal-Fill Permit Application
- Chapter 7:** Emergency Permits
- Chapter 8:** Compensatory Mitigation Planning for Wetlands and Tidal Waters
- Chapter 9:** Monitoring the Compensatory Wetland Mitigation Site

This guide addresses existing laws and rules governing removal-fill activities in Oregon, and provides practical tips for complying with Department of State Lands regulations. It explains agency practices, but does not take the place of or override regulations. The reader is cautioned to consult agency regulations first, and to rely on this guide to help understand those regulations and complete permit applications. Consultation with agency staff early in the project's development is strongly encouraged.

Oregon Department of State Lands
775 Summer St., NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200 • www.oregonstatelands.us



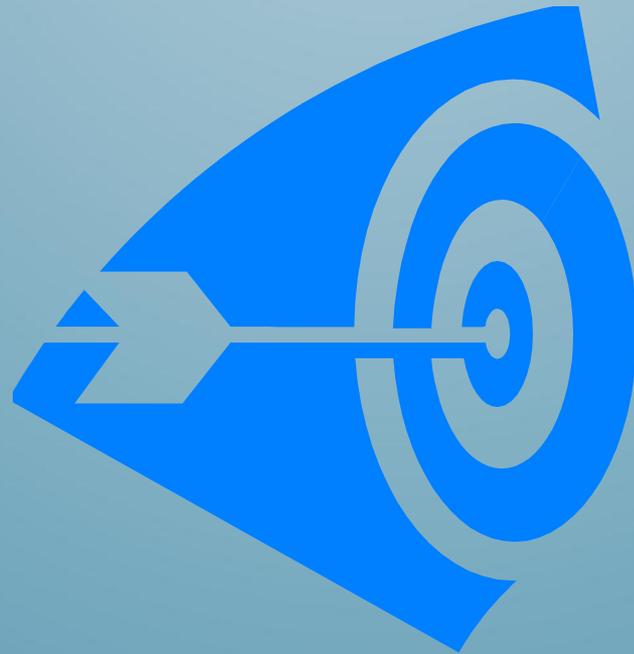
May 2013

ACOE-DSL: DIFFERENCES IN MITIGATION OPTIONS

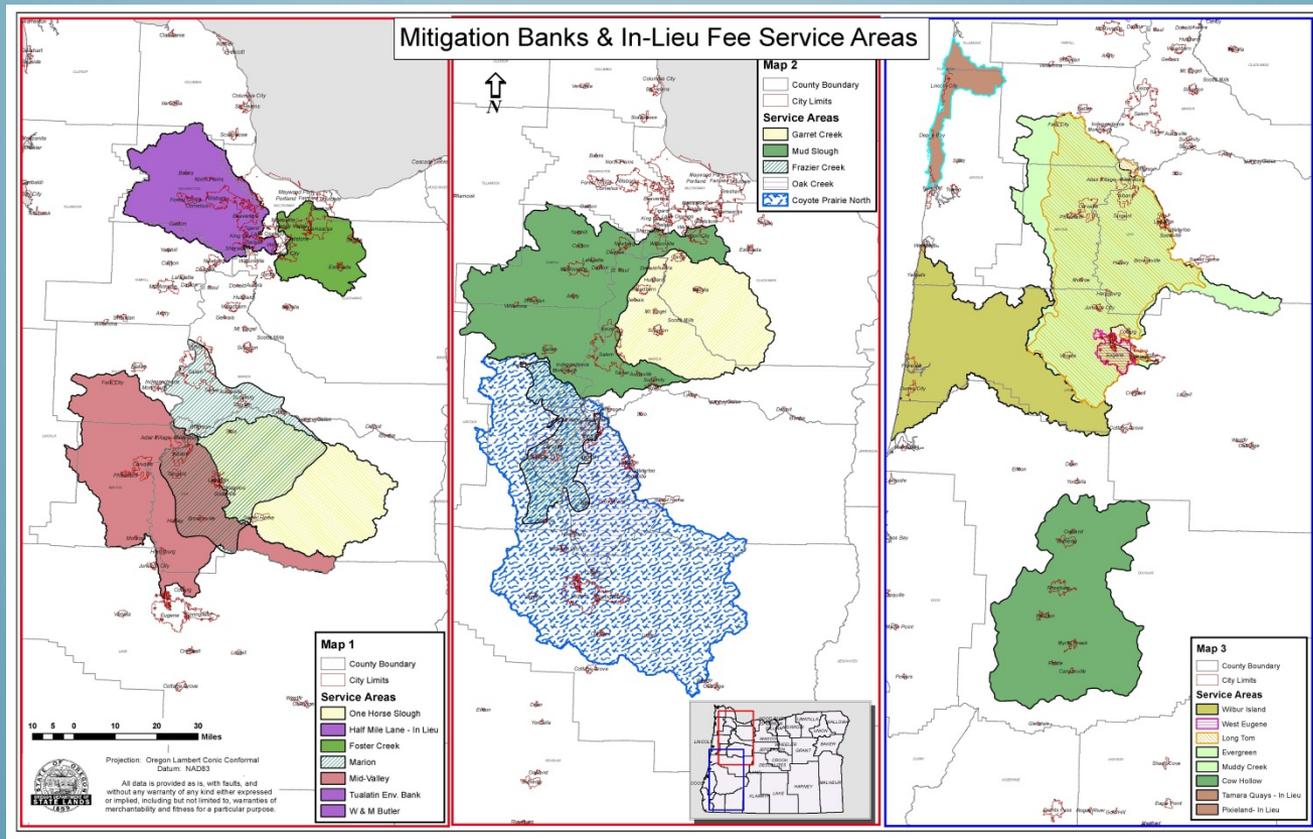


US 26: 185th – Cornell Road

HOW TO CHOOSE THE MOST APPROPRIATE WETLAND MITIGATION OPTION?



THE PREFERRED OPTION: WETLAND MITIGATION BANKS



A high-contrast, black and white illustration. In the foreground, a person is shown from the chest up, leaning over a wooden railing. Their face is contorted in a state of extreme shock or distress, with wide, staring eyes and an open mouth. In the background, two other figures are walking away on the same bridge. The entire scene is rendered with heavy, expressive black lines and white space, creating a stark, graphic effect. A speech bubble is positioned above the person's head, containing text.

No mitigation
bank!
Aaaaagh . . .

NEXT OPTION: IN-LIEU FEE



ADVANCED MITIGATION



PERMITTEE-RESPONSIBLE MITIGATION

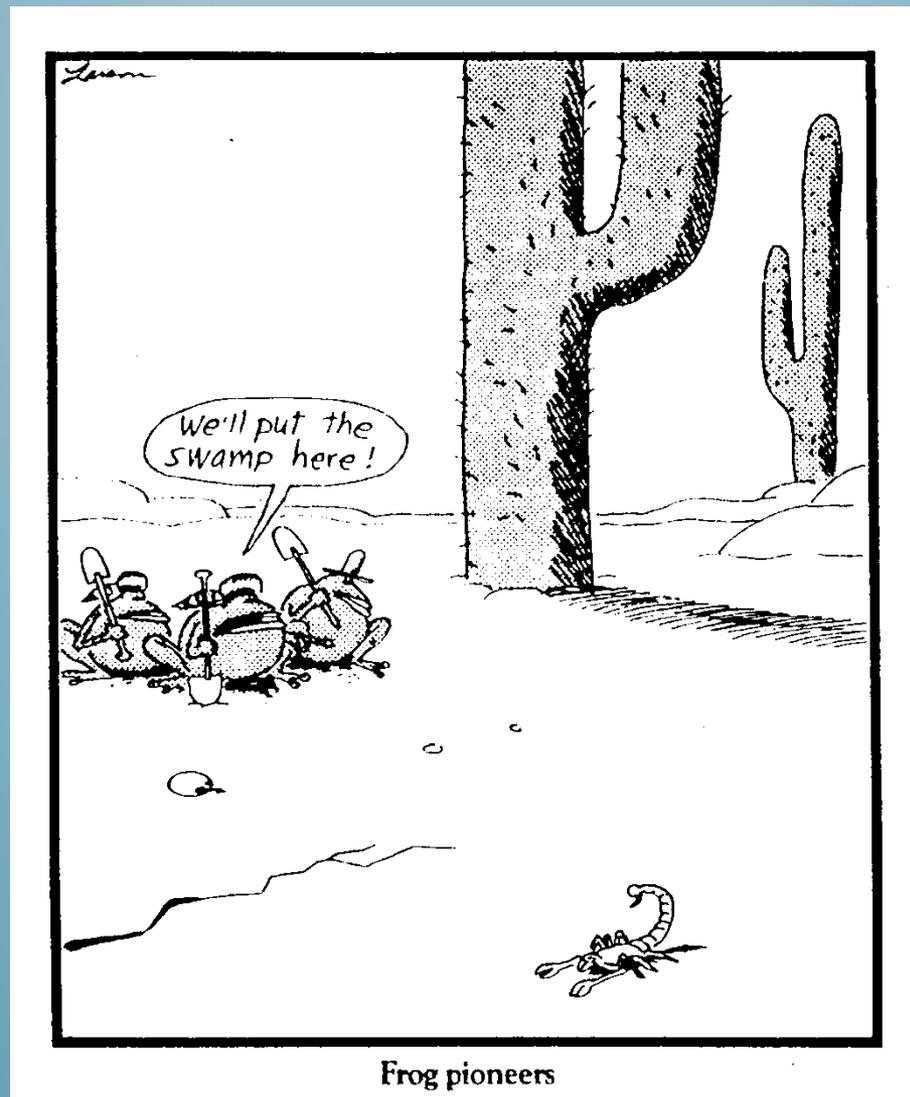




PERMITTEE-RESPONSIBLE MITIGATION: MITIGATION PLAN COMPONENTS



What is wrong with this picture?



WHAT YOU NEED TO KNOW ABOUT PERMITTEE- RESPONSIBLE MITIGATION

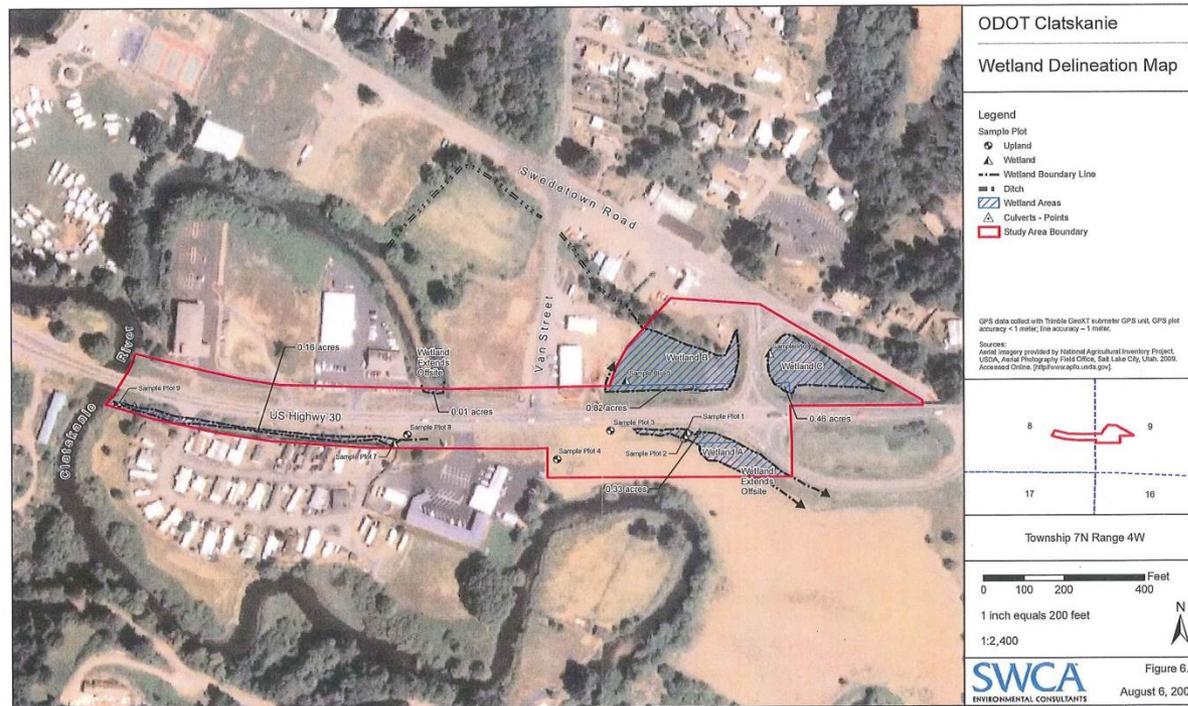


Forever is a very long time!

COSTS FOR MITIGATION CONSTRUCTION: Bobcat Marsh Mitigation Bank

| Task | Budget - from amended IGA | Actual Costs to date (as of 7-10-13) | Difference |
|-------------------------------|---------------------------|--------------------------------------|---------------------|
| Design and Permitting | \$132,369.00 | \$151,814.26 | -\$19,445.26 |
| Staff time - pre construction | \$4,150.00 | \$2,715.00 | \$1,435.00 |
| Construction | \$572,300.00 | \$502,489.36 | \$69,810.64 |
| Staff time - construction | \$4,731.00 | \$14,325.00 | -\$9,594.00 |
| Post Construction | \$171,150.00 | \$19,840.58 | \$151,309.42 |
| Staff time post construction | \$41,500.00 | \$21,300.00 | \$20,200.00 |
| Endowment | \$117,640.00 | \$117,940.00 | -\$300.00 |
| TOTAL | \$1,043,840.00 | \$830,424.20 | \$213,415.80 |

PERMITTEE-RESPONSIBLE MITIGATION: Additional Considerations



PAYMENT-IN-LIEU FEE: An option only for DSL



Credit Request Form Oregon In-Lieu Fee Program

DATE STAMP

Oregon Department of State Lands

| AGENCIES WILL ASSIGN NUMBERS | | |
|--|------------------------------------|---------------------------------------|
| DSL Permit No. | Army Corps of Engineers Permit No. | 180-day reservation ends: |
| In-Lieu Fee Project Name and Credits Purchased | | LAS account number and payment amount |

SEND ONE SIGNED COPY OF YOUR MATERIALS TO

Oregon Department of State Lands, ATTN: In-Lieu Fee Mitigation Specialist, 775 Summer Street NE, Suite 100, Salem, OR, 97301, OR fax to (503) 378-4844 OR email to dana.hicks@state.or.us.

*Include an ORWAP functional assessment (if this was the method required) with your request if proposing purchase of wetland credits from the Half Mile Lane project.

(1) APPLICANT INFORMATION

| | |
|---|------------------|
| Applicant Name and Address | Business Phone # |
| | Home Phone # |
| | Fax # |
| | Email |
| Authorized Agent Name and Address | Business Phone # |
| | Home Phone # |
| | Fax # |
| | Email |
| Clerk use Consultant <input type="checkbox"/> Contractor <input type="checkbox"/> | |

(2) PROJECT LOCATION

| | | | | |
|--|--------|---|-----------|---------|
| Street, Road or Other Descriptive Location | | Legal Description (attach <i>tax lot map</i> *) | | |
| | | Township | Range | Section |
| In or near (City or Town) | County | Tax Map # | Tax Lot # | |
| Latitude (in DD.DDDD format) | | Longitude (in DD.DDDD format) | | |

(3) PROPOSED PROJECT INFORMATION

| How many credits are needed? _____ Credits | When will the credits be purchased by? ____/____/____ | | |
|--|---|----------------|---|
| Wetland Impacts | | | |
| Wetland Impact HGM Class/Subclass | Impact Cowardin System/Class | Acres Impacted | Do both the Corps and DSL require mitigation for these impacts? |
| | | | |

1

DSL: ADDITIONAL OAR REQUIREMENTS FOR MITIGATION PLANS

 Acronyms

Step 3: Develop a Mitigation Plan

A CWM Plan is required for permittee-responsible CWM and should have a level of detail commensurate with the size and complexity of the proposed mitigation. A CWM plan is not required for proposed CWM using approved bank credits, advance mitigation credits, in-lieu fee program credits, or payment in-lieu, however the principal objectives must still be addressed in the permit application for impacts greater than 0.2 acres, and guidance is provided in Section 3 below.

The CWM plan should usually develop in a specific sequence:

Goals → Objectives → Performance Standards → Monitoring Plan

There should be an increasingly detailed progression from the goals that state *what* is aimed for, to more detailed objectives telling *how* goals will be accomplished, to performance standards that provide specifics on *how many*, *how much*, or *what types* of quantifiable items (e.g. 60% cover of native herbs each year of monitoring) will be provided.

A suggested outline for CWM Plans using permittee-responsible mitigation or for mitigation bank development is outlined below. For CWM plans using preservation, see [Appendix D](#).

CWM Plan Outline

Section 1: CWM Plan Overview

- 1.1 Ecological Goals and Objectives
- 1.2 Description of CWM Concept
- 1.3 Summary of CWM Acreages
- 1.4 Summary of Function & Value Gains and Losses

Section 2: CWM Site Information

- 2.1 Site Owner Information
- 2.2 Physical Location Information

Section 3: Description of How the CWM Addresses the Principal Objectives

- 3.1 Function and Value Replacement
 - 3.1.1 Justification for Out-of-kind Mitigation (if applicable)
- 3.2 Local Replacement of Locally Important Functions and Values
- 3.3 Self-sustaining/Minimum Maintenance Needs
- 3.4 Siting Considerations
- 3.5 Minimize Temporal Loss

Section 4: CWM Existing Site Conditions

- 4.1 Wetland Delineation or Determination Results
- 4.2 Existing HGM and Cowardin Classes On-site
- 4.3 Description of Existing and Proposed Hydrology
- 4.4 Existing Plant Communities
- 4.5 Site Constraints or Limitations

RFG Chapter 8: Compensatory Mitigation for Wetlands and Tidal Waters Page 8-19



Be wise . .
Minimize!