Oregon’s Aquatic Resources Mitigation Framework

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Project support is provided through EPA Wetland Program Development Grants

Photo credit: Bruce Taylor
Federal Program

Dredge and fill of waters of the US are permitted by the Army Corps of Engineers under Clean Water Act Section 404.

State Program

DSL requires a permit for most projects that remove or fill materials in waters of the state under the Oregon’s Removal-Fill Law (ORS 196.795-990).
Drivers of change to mitigation

Core Issues

✓ Wetland acreage is being replaced but not wetland functions
✓ Mitigation for other waters is lagging

Final Compensatory Mitigation Rule (2008)

✓ Compensatory mitigation decision-making in a watershed context
✓ Replace loss of functions due to unavoidable impacts to all aquatic resources
✓ Use of function or condition assessment to determine compensatory mitigation
✓ Consistent requirements for all forms of mitigation (banks, ILF, permitee-responsible)
How is aquatic resource mitigation currently handled in Oregon?

- DSL requires various wetland function assessment methods; it’s discretionary under CWA 404 authorities.
- Wetland mitigation is currently acreage-based
- Mitigation for non-wetland waters is inconsistent
- No consistent stream function assessment for regulatory use
- Lacking a watershed approach
How are the agencies proposing to improve mitigation?

Implement a **function-based, watershed approach** to aquatic resource mitigation in order to:

- Operate in alignment with the 2008 Federal Rule and Removal-Fill Law
- Ensure the replacement of lost ecological functions and services
- Consider local watershed needs and priorities
- Broaden the spatial and temporal scope of mitigation decision-making
- Increase interagency consistency and transparency in mitigation decision-making
Alignment with Existing Permit Process

- Elements of the mitigation program are being improved.
- These elements are already considered in our existing permit application and review process.
- New tools and guidance will strengthen these existing processes, and programmatic outcomes.

<table>
<thead>
<tr>
<th>PROGRAM ELEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site selection</td>
</tr>
<tr>
<td>Eligibility</td>
</tr>
<tr>
<td>Function assessment tools</td>
</tr>
<tr>
<td>Mitigation accounting</td>
</tr>
<tr>
<td>Stewardship</td>
</tr>
<tr>
<td>Performance standards</td>
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<tr>
<td>Monitoring requirements</td>
</tr>
<tr>
<td>Program effectiveness</td>
</tr>
</tbody>
</table>
How will we achieve a watershed approach?

- Determine where and how watershed information will be incorporated into mitigation
- Identify what data is available
- Make spatial data easily accessible
- Develop protocols for how agencies will use available data to inform decisions
- Track and summarize information at a watershed scale
Which program elements will be used to achieve a watershed approach?

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</tbody>
</table>

Watershed information & considerations
Facilitating a watershed approach

- Online mapping tools
- Rule sets/guidance

DECISION SUPPORT TOOLS

The U.S. Army Corps of Engineers and the Oregon Department of State Lands collaboratively but independently administer a permit process to protect, conserve and provide for the best use of many of Oregon's aquatic resources. This process documents how a proposed project has reduced adverse affects to aquatic resources, and how any unavoidable impacts have been offset by actions, called compensatory mitigation, to replace the area, functions and values of the loss.

Stream Function Assessment Method (SFAM) Map Viewer

The Stream Function Assessment Method allows a rapid assessment of the functions and values of streams. The SFAM tool provides site-specific mapping and reporting information needed to answer a subset of SFAM indicator questions. It also allows SFAM users to upload completed assessments. The SFAM method and supporting documents can be viewed or downloaded from the Department of State Lands website.

Oregon Rapid Wetland Assessment Protocol (ORWAP) Map Viewer

The Oregon Rapid Wetland Assessment Protocol (ORWAP) allows a rapid assessment of the functions and values of wetlands. The ORWAP tool provides site-specific mapping and reporting information needed to answer a subset of ORWAP indicator questions. It also allows ORWAP users to upload completed assessments. The entire ORWAP protocol can be viewed or downloaded from the Department of State Lands website.

Mitigation Planning Map Viewer

The Mitigation Planning Map Viewer is a tool for exploring the suitability of potential sites to provide compensatory mitigation. The information made available in the tool will help facilitate a watershed approach to aquatic mitigation using data that describes watershed characteristics, processes, and strategic sites. Additional information about mitigation planning can be viewed on the Department of State Lands website.
What are we trying to achieve with a function-based approach to mitigation?

Mitigate for functions and values provided by aquatic resources:

**Functions** -
the processes that create and support an aquatic ecosystem

**Values** -
the ecological & societal benefits that aquatic ecosystems provide
Function Assessment Tools

A more function-based mitigation approach in Oregon is based on two function-based assessment methodologies:

- **Oregon Rapid Wetland Assessment Protocol (ORWAP)** – measures functions and values of wetlands
- **Stream Function Assessment Method (SFAM)** – measures functions and values of rivers and streams

Criteria for Function-based Assessment Methods

- ✓ Science-based
- ✓ Function-based
- ✓ Rapid
- ✓ Repeatable
- ✓ Applicable across most stream and wetland types
What are the components of ORWAP and SFAM?

- Excel Workbooks
- User Guides
- Scientific Rationales
- Map Viewers
## ORWAP functions and values

<table>
<thead>
<tr>
<th>CATEGORY (Group)</th>
<th>Hydrologic Function</th>
<th>Water Quality Support</th>
<th>Fish Habitat</th>
<th>Aquatic Habitat</th>
<th>Ecosystem Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNCTIONS/VALUES</td>
<td>Water Storage &amp; Delay</td>
<td>Sediment Retention &amp; Stabilization</td>
<td>Anadromous Fish Habitat</td>
<td>Amphibian &amp; Reptile Habitat</td>
<td>Water Cooling</td>
</tr>
<tr>
<td></td>
<td>Phosphorus Retention</td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Invertebrate Habitat</td>
</tr>
<tr>
<td></td>
<td>Nitrate Removal &amp; Retention</td>
<td></td>
<td></td>
<td></td>
<td>Native Plant Diversity</td>
</tr>
<tr>
<td></td>
<td>Thermo-regulation</td>
<td></td>
<td></td>
<td></td>
<td>Pollinator Habitat</td>
</tr>
</tbody>
</table>

- **Water Storage & Delay**
  - Sediment Retention & Stabilization
  - Anadromous Fish Habitat
  - Amphibian & Reptile Habitat
  - Water Cooling

- **Phosphorus Retention**
  - Resident Fish Habitat
  - Waterbird Feeding Habitat
  - Aquatic Invertebrate Habitat

- **Nitrate Removal & Retention**
  - Resident Fish Habitat
  - Waterbird Nesting Habitat
  - Native Plant Diversity

- **Thermo-regulation**
  - Resident Fish Habitat
  - Waterbird Nesting Habitat
  - Pollinator Habitat

- **Organic Nutrient Export**
## SFAM functions and values

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Hydrologic</th>
<th>Geomorphic</th>
<th>Biologic</th>
<th>Chemical/Nutrient</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNCTIONS/VALUES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surface Water Storage</td>
<td>Sediment Continuity</td>
<td>Maintain Biodiversity</td>
<td>Nutrient Cycling</td>
</tr>
<tr>
<td></td>
<td>Sub/surface Transfer</td>
<td>Substrate Mobility</td>
<td>Create Habit Aquatic/Riparian</td>
<td>Chemical Regulation</td>
</tr>
<tr>
<td></td>
<td>Flow Variation</td>
<td></td>
<td>Sustain Tropic Structure</td>
<td>Thermal Regulation</td>
</tr>
<tr>
<td>MITIGATION PROGRAM ELEMENTS</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td></td>
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</tr>
<tr>
<td>Site selection</td>
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<td></td>
</tr>
</tbody>
</table>

**Eligibility**

whether an existing or proposed compensatory mitigation site provides an ecological match to offset permitted impacts.

**Mitigation Accounting**

protocols for calculating impacts (debits) and determining the required replacement of resources at compensatory mitigation sites (credits).
Considerations for policy

• Maintain adequate predictability & practicability
• Use information from function and value assessments appropriately
• Encourage applicants to strive for high degree of function/value replacement at mitigation sites
• Promote protection and restoration of unique or at-risk aquatic resources
• Incorporate adjustments for mitigation plan components not captured in the assessments
• Align state and federal programs
What is the proposed methodology for compensatory wetland mitigation (CWM)?
NOTE: Wetlands of Conservation Concern and minor impacts are subject to slightly different eligibility and accounting criteria.
STEP 1. DETERMINING CWM SITE ELIGIBILITY

Does the mitigation site provide an **ecological match** to the impact site?
- yes
- no

Does the mitigation site address a **watershed priority**?
- yes
- no

Mitigation site is **NOT approved**

STEP 2. MITIGATION ACCOUNTING

Determine mitigation requirements using the accounting worksheet:
- Minimum acreage
- Increase factors
- Decrease factors
- Buffers

NOTE: Wetlands of Conservation Concern and minor impacts are subject to slightly different eligibility and accounting criteria
Determining CWM Site Eligibility

Ecological match: \textit{replacing impacted class(es) and thematic groups of functions/values in-kind}

- HGM class match
- Cowardin class match
- Group level function and value replacement

<table>
<thead>
<tr>
<th>GROUPS</th>
<th>IMPACT SITE</th>
<th>PROPOSED MITIGATION SITE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Function</td>
<td>Rating Break Proximity</td>
</tr>
<tr>
<td>Hydrologic Function (WS)</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Water Quality Support (SR, PR, or NR)</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>Fish Habitat (FA or FR)</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Aquatic Habitat (AM, WBF, or WBN)</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Ecosystem Support (WC, INV, PD, POL, SBM, or OE)</td>
<td>Moderate</td>
<td>High</td>
</tr>
</tbody>
</table>
STEP 1. DETERMINING CWM SITE ELIGIBILITY

Does the mitigation site provide an ecological match to the impact site?
- yes
- no

Does the mitigation site address a watershed priority?
- yes
- no

Mitigation site is NOT approved

STEP 2. MITIGATION ACCOUNTING

Determine mitigation requirements using the accounting worksheet:
- Minimum acreage
- Increase factors
- Decrease factors
- Buffers

NOTE: Wetlands of Conservation Concern and minor impacts are subject to slightly different eligibility and accounting criteria
STEP 1. DETERMINING CWM SITE ELIGIBILITY

Does the mitigation site provide an ecological match to the impact site?
- yes
- no

Does the mitigation site address a watershed priority?
- yes
- no

Mitigation site is NOT approved

STEP 2. MITIGATION ACCOUNTING

Determine mitigation requirements using the accounting worksheet:
- Minimum acreage
- Increase factors
- Decrease factors
- Buffers

NOTE: Wetlands of Conservation Concern and minor impacts are subject to slightly different eligibility and accounting criteria
Criteria for a watershed priority

A CWM site may still be approved if it:

- addresses a watershed priority, as identified in a planning or assessment document, report, or other data (must consider one or more specific factors); and

- provides a high level of the functions and values that are relevant to the targeted priority (either currently or post-construction).
STEP 1. DETERMINING CWM SITE ELIGIBILITY

Does the mitigation site provide an **ecological match** to the impact site?

- yes
- no

Does the mitigation site address a **watershed priority**?

- yes
- no

Mitigation site is **NOT approved**

STEP 2. MITIGATION ACCOUNTING

Determine mitigation requirements using the **accounting worksheet**:

- Minimum acreage
- Increase factors
- Decrease factors
- Buffers

**NOTE:** Wetlands of Conservation Concern and minor impacts are subject to slightly different eligibility and accounting criteria
NOTE: Wetlands of Conservation Concern and minor impacts are subject to slightly different eligibility and accounting criteria.
**Mitigation Accounting:** The amount of CWM required to replace the impact.

- Minimum acreage based on the mitigation method(s) proposed
- Adjustments to the minimum acreage
  - Increase when fewer specific functions and values will be replaced at the CWM site
  - Increase for temporal loss associated with vegetation and soils development
  - Decrease for stronger site protection & stewardship*
- Credit for required buffers

*A decrease factor cannot reduce acreage below the minimum acreage requirement.*
Mitigation Accounting

Adjustment factors are based on:

• Factors not otherwise captured in the function assessment method

• Review of the factors that Federal Rule outlines as being reason for adjustments to mitigation requirements

• Review of the factors included in other mitigation crediting protocols

• Input from agency experts and stakeholders
Scenario

An applicant with a proposed wetland impact of 0.5 acres wants to see if they can purchase credits from Half Mile Lane.*

Is Half Mile Lane an eligible mitigation site? If so, how many credits need to be purchased?

*This is for demonstration purposes only. DSL does not sell wetland credits from Half Mile Lane if one of the private banks can offset the impact.
Proposed Impact Area*: Rock Creek floodplain near Hillsboro
Proposed mitigation site: Half Mile Lane near Forest Grove
Step 1: Eligibility

Is Half Mile Lane eligible to offset the proposed impacts?

1. HGM class match?
   – Yes, riverine flow-through

2. Cowardin class match?
   – Yes, palustrine emergent is a vegetation community is included at Half Mile Lane

3. Group-level function and value match?
<table>
<thead>
<tr>
<th>GROUPS</th>
<th>IMPACT SITE</th>
<th>PROPOSED MITIGATION SITE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Function Rating</td>
<td>Rating Break Proximity</td>
</tr>
<tr>
<td>Hydrologic Function (WS)</td>
<td>Lower</td>
<td>LM</td>
</tr>
<tr>
<td>Water Quality Support (SR, PR, or NR)</td>
<td>Moderate</td>
<td>MH</td>
</tr>
<tr>
<td>Fish Habitat (FA or FR)</td>
<td>Higher</td>
<td>MH</td>
</tr>
<tr>
<td>Aquatic Habitat (AM, WBF, or WBN)</td>
<td>Higher</td>
<td>MH</td>
</tr>
<tr>
<td>Ecosystem Support (WC, INV, PD, POL, SBM, or OE)</td>
<td>Higher</td>
<td>Higher</td>
</tr>
</tbody>
</table>
Step 2: Accounting

How many credits need to be purchased at Half Mile Lane to offset 0.5 acres of wetland loss at the Rock Creek project?
This accounting worksheet is used to estimate a permittee's mitigation requirements, specific to a particular impact and proposed mitigation site. Requirements are based on (1) the mitigation method proposed, (2) the function/value replacement achieved [predicted], (3) function temporal loss factors, and (4) stewardship and site protection plans. The numerical values of these crediting factors are as follows:

### A) MINIMUM ACREAGE REQUIREMENT (per one acre of impact)

<table>
<thead>
<tr>
<th>Mitigation method</th>
<th>Restoration/creation/credit purchase</th>
<th>Enhancement</th>
<th>Preservation *case-by-case</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
<td>3.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

### B) INCREASE FACTORS (as percentage of minimum)

<table>
<thead>
<tr>
<th>Specific function and value replacement</th>
<th>Number of matched specific functions in ORWAP (requiring match of BOTH function and value):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A (watershed priority) 0.0</td>
</tr>
</tbody>
</table>

Select the first applicable adjustment factor:

NOTE: factor with an asterisk (*) is not applicable to credit purchases

<table>
<thead>
<tr>
<th>Function temporal loss</th>
<th>Impact site is dominated by evergreen forested wetland community</th>
<th>Impact site is dominated by deciduous forested wetland community</th>
<th>Mitigation site has (a) upland soils that were not historically hydric or (b) hydric soils that will be disturbed*</th>
<th>Impact site is dominated by emergent or shrub vegetation (excluding cropped wetlands)</th>
<th>None of the above</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
<td>0.5</td>
<td>0.5</td>
<td>0.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### C) DECREASE FACTORS (as percentage of minimum)

<table>
<thead>
<tr>
<th>Mitigation site protection &amp; stewardship</th>
<th>Minimum requirements</th>
<th>Enhanced stewardship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Credit purchases start with a minimum purchase of one credit per acre of impact.

The minimum acreage requirements are factored into the number of credits a mitigation bank or in-lieu fee project is given.
Increase factor: Specific function and value replacement

The number of matched specific functions in ORWAP is determined by looking at both the function and value ratings.

<table>
<thead>
<tr>
<th>Specific function and value replacement</th>
<th>ORWAP (requiring match of BOTH function and value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A (watershed priority) 0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>≥ 13</td>
<td>0.1</td>
</tr>
<tr>
<td>9-10</td>
<td>0.2</td>
</tr>
<tr>
<td>7-8</td>
<td>0.3</td>
</tr>
<tr>
<td>5-6</td>
<td>0.4</td>
</tr>
<tr>
<td>&lt; 5</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Increase factor: Specific function and value replacement

<table>
<thead>
<tr>
<th>Specific Functions or Values:</th>
<th>IMPACT SITE</th>
<th>PROPOSED MITIGATION SITE</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Function Rating</td>
<td>Rating Break</td>
</tr>
<tr>
<td>Water Storage &amp; Delay (WS)</td>
<td>Lower</td>
<td>LM</td>
</tr>
<tr>
<td>Sediment Retention &amp; Stabilization (SR)</td>
<td>Moderate</td>
<td>MH</td>
</tr>
<tr>
<td>Phosphorus Retention (PR)</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Nitrate Removal &amp; Retention (NR)</td>
<td>Moderate</td>
<td>MH</td>
</tr>
<tr>
<td>Anadromous Fish Habitat (FA)</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Resident Fish Habitat (FR)</td>
<td>Higher</td>
<td>MH</td>
</tr>
<tr>
<td>Habitat Type</td>
<td>Matched</td>
<td>Unmatched</td>
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<tr>
<td>------------------------------------------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>Amphibian &amp; Reptile Habitat (AM)</td>
<td>Moderate</td>
<td>Lower</td>
</tr>
<tr>
<td>Waterbird Nesting Habitat (WBN)</td>
<td>Higher</td>
<td>MH</td>
</tr>
<tr>
<td>Waterbird Feeding Habitat (WBF)</td>
<td>Higher</td>
<td>Moderate</td>
</tr>
<tr>
<td>Aquatic Invertebrate Habitat (INV)</td>
<td>Moderate</td>
<td>Lower</td>
</tr>
<tr>
<td>Songbird, Raptor, Mammal Habitat (SBM)</td>
<td>Higher</td>
<td>MH</td>
</tr>
<tr>
<td>Water Cooling (WC)</td>
<td>Higher</td>
<td>Higher</td>
</tr>
<tr>
<td>Native Plant Diversity (PD)</td>
<td>Lower</td>
<td>Lower</td>
</tr>
<tr>
<td>Pollinator Habitat (POL)</td>
<td>Moderate</td>
<td>MH</td>
</tr>
<tr>
<td>Organic Nutrient Export (OE)</td>
<td>Moderate</td>
<td>MH</td>
</tr>
<tr>
<td>Carbon Sequestration (CS)</td>
<td>Moderate</td>
<td>LM</td>
</tr>
</tbody>
</table>

**Number of matched specific functions:** 13
The adjustment in this scenario is 0 (\textit{+0\% of minimum}) because 13 specific functions and values can be replaced at the mitigation site.
Increase factor: Function temporal loss

There is a time delay associated with replacement of the vegetation community present at the impact site to be replaced at the mitigation site.

Soil processes at the mitigation site will be delayed when creating wetlands from upland soils, and when hydric soils will be significantly disturbed.

Select the first applicable adjustment factor:

<table>
<thead>
<tr>
<th>Impact scenario</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact site is dominated by evergreen forested wetland community</td>
<td>1.0</td>
</tr>
<tr>
<td>Impact site is dominated by deciduous forested wetland community</td>
<td>0.5</td>
</tr>
<tr>
<td>Mitigation site has (a) upland soils that were not historically hydric or (b) hydric soils that will be disturbed*</td>
<td>0.5</td>
</tr>
<tr>
<td>Impact site is dominated by emergent or shrub vegetation (excluding cropped wetlands)</td>
<td>0.2</td>
</tr>
<tr>
<td>None of the above</td>
<td>0.0</td>
</tr>
</tbody>
</table>

NOTE: factor with an asterisk (*) is not applicable to credit purchases.
Appendix B:
Function Temporal Loss: Classification of vegetation community at the impact site

Does living vegetation (excluding pioneer species) cover ≥30% of the substrate? NO

Does the site meet the definition of a cropped wetland?¹

NO

Adjustment = -0.0

YES

Do trees provide areal coverage ≥30%? NO

NO

Do shrubs provide areal coverage ≥30%? NO

NO

Do shrubs and trees together provide areal coverage ≥30%? NO

NO

Emergent vegetation provides areal coverage >30%

YES

Adjustment = -0.2

YES

Is there greater areal cover by deciduous tree species? NO

Is there greater areal cover by evergreen tree species? NO

Is there equal areal cover by evergreen and deciduous tree species

Yes

Adjustment = 0.5

Adjustment = 1.0

¹Cropped wetland is converted wetland that is regularly plowed, seeded, and harvested in order to produce a crop for market. Pasture, including lands determined by the Natural Resources and Conservation Service to be “farmed wetland pasture,” is not cropped wetland. OAR 141-085-0690(c)(D)
Increase factor: Function temporal loss

The adjustment in this scenario is 0.2 (+20% of minimum). The impact area is dominated by emergent vegetation.

The soil adjustment factor is incorporated in the number of credits that a mitigation bank or ILF project is given.
Decrease factor: Site protection & stewardship

| Mitigation site protection & stewardship Pg. 11 | Minimum requirements 0.0 | Enhanced stewardship 0.2 |

This adjustment is designed to incentivize strengthened site protection and long-term maintenance financial arrangements to help ensure the long-term sustainability of CWM sites.
Decrease factor: Function temporal loss

The adjustment in this scenario is -0.2 (counteracting +20% of minimum). Half Mile meets enhanced stewardship criteria through a conservation easements and long-term endowment held by Clean Water Services.
### Scenario adjustment factor summary

<table>
<thead>
<tr>
<th>Factors</th>
<th>Method 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigation method</td>
<td>Credit Purchase</td>
</tr>
<tr>
<td>Function/value replacement</td>
<td>≥13 matches</td>
</tr>
<tr>
<td>Function temporal loss</td>
<td>Emergent/scrub-shrub impacted</td>
</tr>
<tr>
<td>Protection/stewardship</td>
<td>Enhanced stewardship</td>
</tr>
</tbody>
</table>

- Minimum requirement of 1.00 acre for every 1.00 acre of impact
- No increase factor
- Increase factor of 0.2 (+20% of minimum)
- Decrease factor of 0.2 (counteracting +20%)
If this credit purchase is approved, 0.50 credits will be required to mitigate for the 0.50 acre impact.

<table>
<thead>
<tr>
<th>Calculations</th>
<th>Method 1</th>
<th>Method 2</th>
<th>Method 3</th>
<th>Method 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum acreage</td>
<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Increase factor</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease factor</td>
<td>0.2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total adjustment</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applicable impacted acreage</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated wetland mitigation requirements</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buffer acreage</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated buffer credits</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted mitigation requirements</td>
<td>0.5</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Eligibility and credit accounting for streams is being developed using a similar approach.
Implementation steps

– Oregon Department of Transportation pilot
  • DSL, Corps, ODOT
  • Test protocols, assessment tools, web-based data & tools

– Beta release of SFAM
  • Agency staff review and training
  • Public release and training

– Stakeholder outreach
  • Mitigation bankers, tribes, consultants, federal, state and local agencies, NGOs
Implementation steps, continued

– Draft state rule revisions for rulemaking

– Develop internal processes

– Transition existing banks & ILF programs
  • DSL will convert all ILF projects to the new protocols
  • Assist mitigation bankers who voluntarily request a modification of their bank instruments

– Provide training and develop guidance on the new protocols
Proposed State Rulemaking Schedule

– Rulemaking Advisory Committee, May-August 2018
– Public hearings, September-October 2018
– Rule becomes effective February 1, 2019
Acknowledgements

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➤ Michael Szerlog, Tracie Nadeau, Regional Mitigation Team
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