



# Rulemaking Advisory Committee

Permitting and Mitigation in  
Oregon's Wetlands and Waters  
(Division 85)

**June 12, 2025**





# Meeting Agenda

*Amazon Prairie – Mitigation Site / Melody Rudenko, DSL*

1:00 PM	Introductions, Agenda Review, Zoom Protocols
1:25 PM	Presentation Recap – Stream Mitigation Accounting
1:40 PM	Discussion – Stream Mitigation Accounting
2:25 PM	Break
2:40 PM	Presentation – Policies for Special Circumstances
3:00 PM	Discussion – Policies for Special Circumstances
3:45 PM	Interested Party Comments
3:55 PM	Next Steps
4:00 PM	<i>Meeting ends</i>

***Meeting Goals:*** Discussion of the proposed draft rules relating to stream mitigation accounting and policies for special circumstances.

# Zoom Protocols

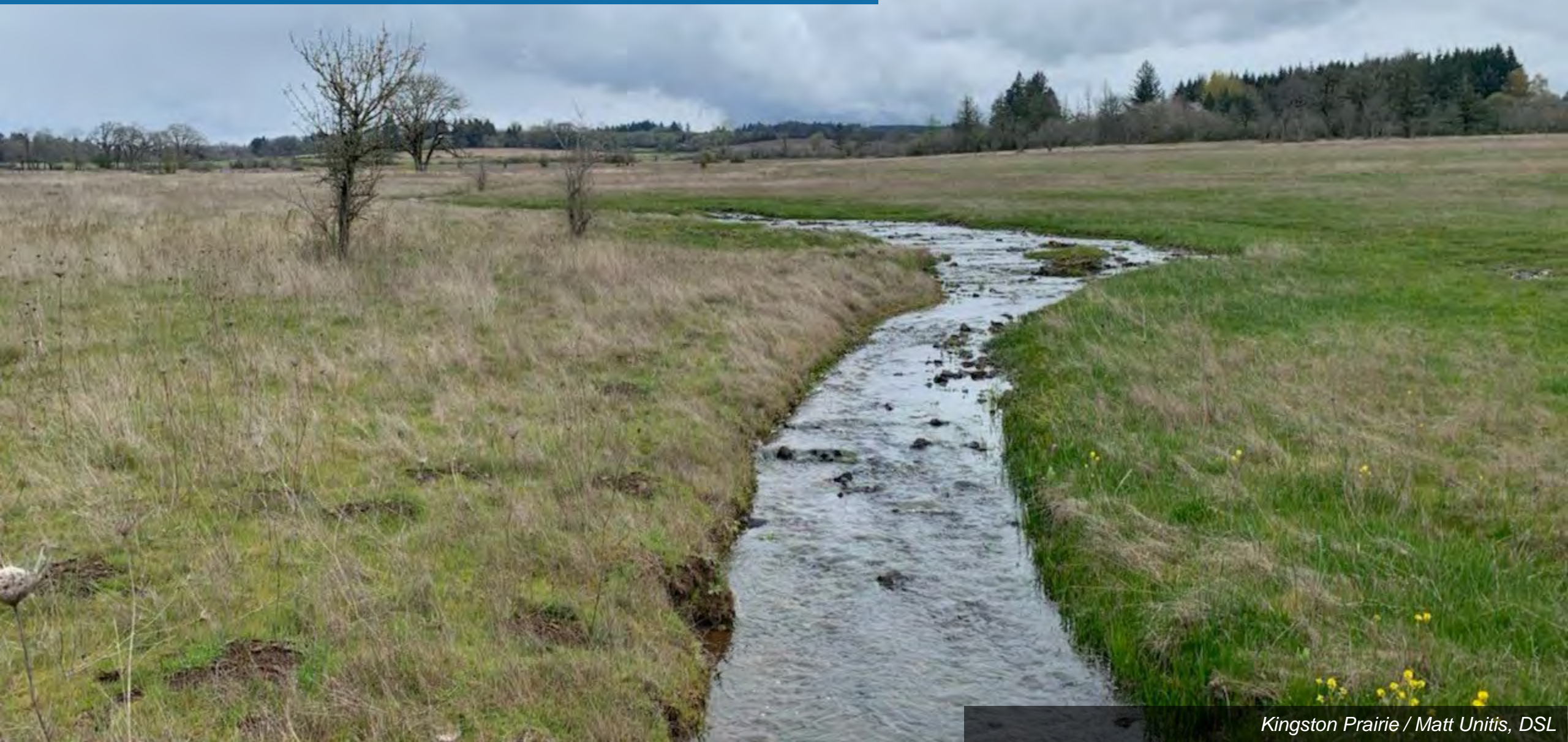


Each person who wishes to speak will be asked to raise their hand.

- To raise your hand, click the reactions near the bottom of your screen and click “raise hand” or by pressing star 9 if you are on the phone.
- Will seek a balance of speaking time during discussions
- *For technical support, please message us in the chat.*
- Please keep your mic muted unless it is your turn to speak. Use of video is encouraged.
- Closed captions are available.
- Please use the chat for questions and comments
- We ask that all participants be respectful of each other and DSL representatives.



# Stream Mitigation Accounting Review





# Stream Mitigation Accounting Review

- Eligibility requirements
- Change in functions
- Value weighting
- Unit of measure
- Temporal loss adjustment
- Long term site protection adjustment



# **Stream Mitigation Eligibility**



For a stream mitigation project to be eligible to compensate for losses from an impact project there needs to be an ecological match for the following:

- Sub-basin or estuary
- Flow permanence (perennial or intermittent)
- Stream Size (small, medium, large)
- Essential Salmonid Habitat designation (if applicable)

Out of kind mitigation that addresses a watershed priority (rather than being an ecological match) is also an option.

*What Kind of Mitigation?*

# Stream Mitigation Accounting - Gain & loss of functions

- A baseline Stream Function Assessment (SFAM) provides scores (0-10) for the existing stream functions at the project site
- Predicted function scores for conditions 10-years post project demonstrate how the functions at the project site may change
- The difference in score between the existing conditions and predicted condition is calculated to determine the expected gain or loss in function from the project actions

Specific Stream Functions	Baseline Function Score	Predicted Function Score	Gain or Loss
Surface Water Storage	4.02	4.62	0.6
Sub/Surface Water Transfer	3.88	3.91	0.03
Flow Variation	4.34	4.88	0.54
Sediment Continuity	4.98	5.26	0.28
Sediment Mobility	2.11	1.71	-0.4
Maintain Biodiversity	1.42	2.25	0.83
Create and Maintain Habitat	2.87	2.93	0.06
Sustain Tropic Structure	4.08	4.49	0.41
Nutrient Cycling	4.29	3.27	1.02
Chemical Regulation	4.31	4.09	-0.22
Thermal Regulation	4.22	0.00	-4.22

*How Much Mitigation?*

# Stream Mitigation Accounting

Value weighting the loss or gain of function scores

- The value score of a function is used to calculate the value weight by multiplying the value score, expressed as a percentage, by the gain or loss of a function

Step 1

calculate change in function score due to project action



Surface Water Storage:  $4.62 - 4.02 = 0.60$

Step 2

calculate value weight



Surface Water Storage:  $0.60 \times (8.0/10) = 0.48$

Step 3

add value weight to change in function score

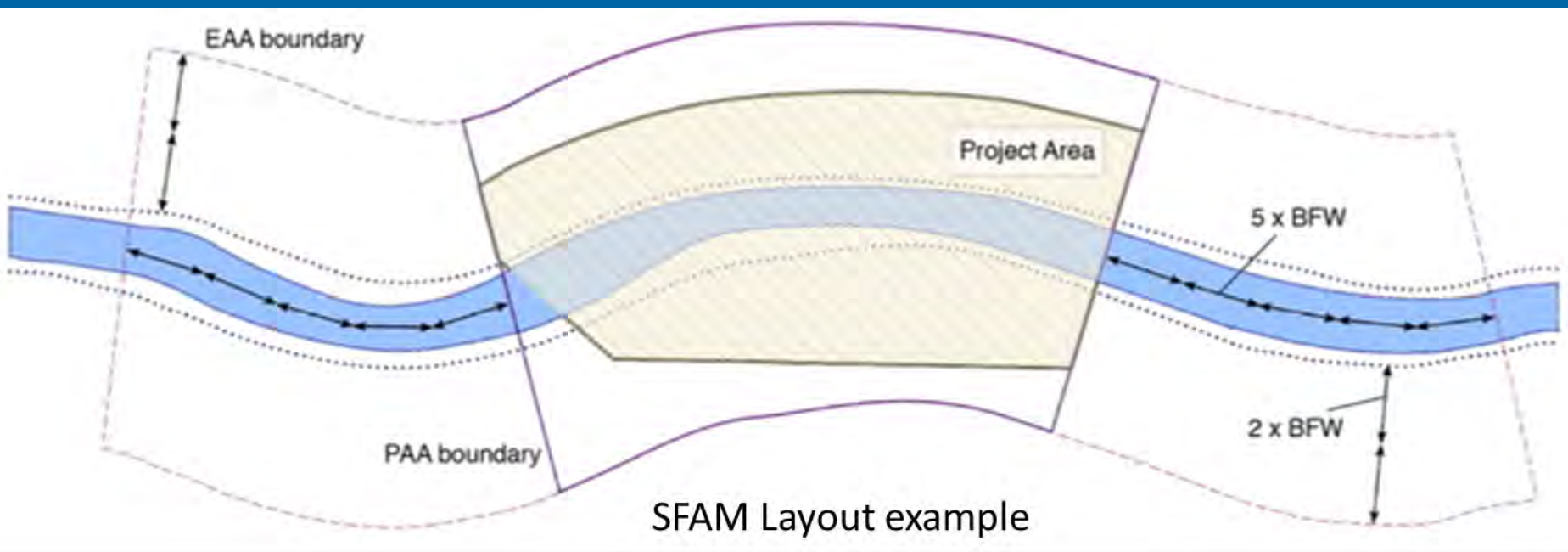
Surface Water Storage:  $0.6 + 0.48 = 1.08$



# Stream Mitigation Accounting

Unit of Measure – Linear feet on stream centerline

- The unit of measure acts as a multiplier to quantify the quality of stream functions being gained or lost due to project activities
- The value weighted change in function is multiplied by the length of the project measured in feet on the centerline of the stream



Value Weighted Change in  
Surface water storage =  
1.08

Length of project = 185 feet

$1.08 \times 185 = 199.8$  gain in  
surface water storage  
function for the example  
project

# Stream Mitigation Accounting

Temporal loss  
adjustment  
for vegetation  
removal



- This adjustment increases the amount of mitigation required for impacts to vegetation
- Only applies to the functions that use vegetation data in the calculation of the function score
- Tiered based on the type of vegetation that is removed
  - Herbaceous plants: 15% adjustment for chemical regulation and nutrient cycling
  - Shrubs: 20% adjustment for maintain biodiversity, create and maintain habitat, sustain trophic structure, nutrient cycling, chemical regulation, and thermal regulation
  - Trees: 30% adjustment for maintain biodiversity, create and maintain habitat, sustain trophic structure, nutrient cycling, chemical regulation, and thermal regulation
- Adjustments are not additive





# Stream Mitigation Accounting

## Long-Term Site Protection Adjustment

- This adjustment decreases the amount of mitigation required for long term protection of the site
- Tiered based of type of protection
  - 10% for deed restriction
  - 20% for conservation easement
- Applied to the total mitigation calculation



# Stream Mitigation Accounting Summary

*Calapooia Creek, Oakland OR/ DSL Photo: Mel Rudenko*

- SFAM scores capture the gain and loss of functions resulting from a project
- Value-weighting the functional change from a project reflects the importance of the opportunity to provide a function and the significance of that function in the location
- Unit of measure acts as a multiplier to quantify the quality of stream functions being gained or lost due to project activities and which unit of measure is most appropriate depends on function assessment used – Linear Feet for Oregon (SFAM)
- Adjustments to the mitigation calculation can be applied at the appropriate level to incorporate agency policies and to reflect factors not captured elsewhere in the mitigation calculation



# Stream Mitigation Accounting - Rule Language

- 510(90) & (95) stream and river definition added
- 0690 stream mitigation eligibility change for group level replacement, detail on stream size, reorganization of the paragraphs and subparagraphs
- 0692(3)(d) stream mitigation accounting**
- 0705(1)(e) Predicted conditions in function and values assessment 10 years post project



# Special Circumstances and Other Policies







## Other Policies for Special Circumstances

- Threshold for being required to use function-based accounting and complete a Stream Function and Values Assessment.
- Mitigation requirement for hardened streambank or bed.
- In-kind replacement for high value functions.



# **Threshold for requiring an assessment and using function-based accounting**



- For projects that don't have permanent direct or indirect impacts, both up and down stream.
- Provides a simplified mitigation calculation that does not require a functions and values assessment
- Requires 1:1 in-kind mitigation based on
  - Project size
  - Project type
- Not a threshold for using a “best professional judgement” (BPJ) assessment or for when mitigation would not be required

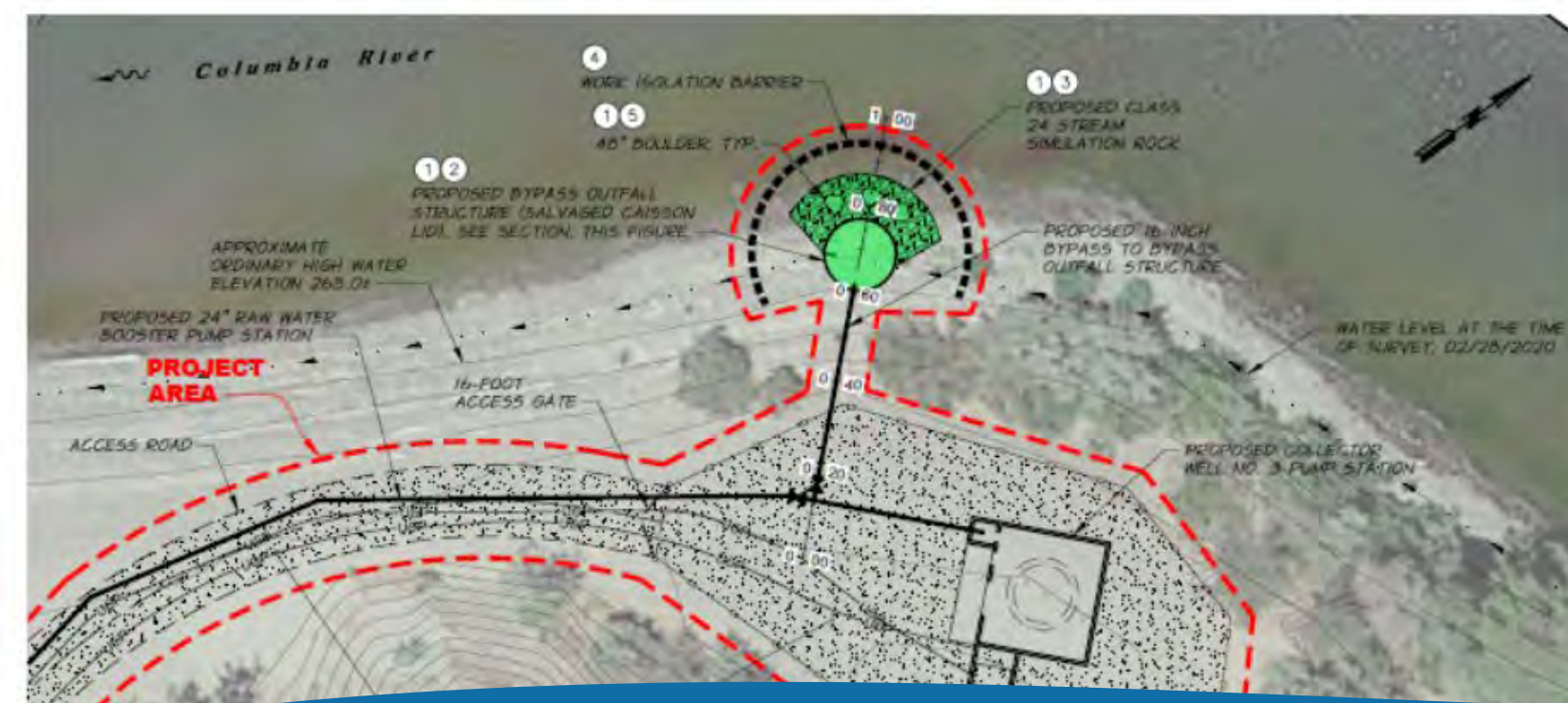




## Metrics used in the threshold

- Project
  - Impact width
  - Impact Length
  - Bed or bank stabilization structures
- Stream
  - Bed material
  - Active erosion





## LEGEND

FILL AND REMOVAL AREA BELOW OHWE

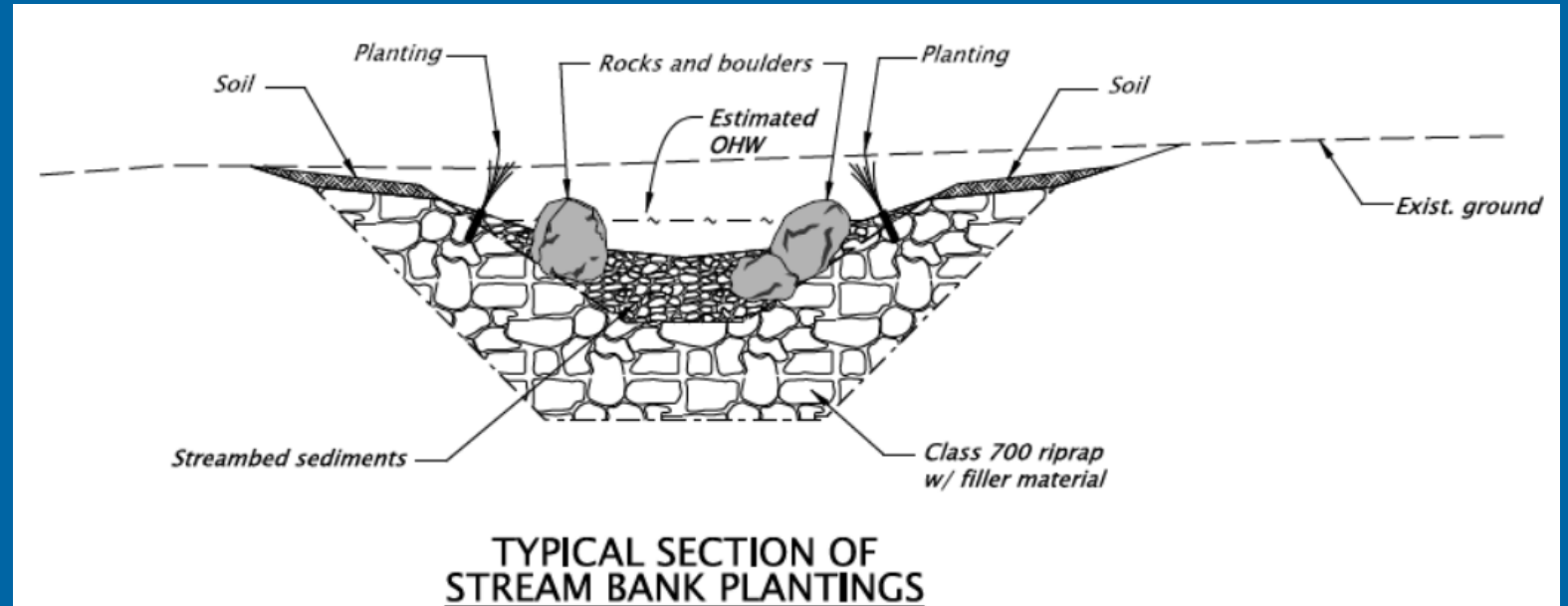
## FILL/REMOVAL VOLUME SUMMARY

- ① **PERMANENT REMOVAL - COLUMBIA RIVER**  
NATIVE STREAMBED MATERIAL  
AREA =  $25' \times 25' = 625$  SF  
VOLUME =  $25' \times 25' \times 1' = 24$  CY
- ② **PERMANENT FILL - COLUMBIA RIVER**  
BYPASS OUTFALL STRUCTURE  
AREA =  $15' \times 15' = 225$  SF  
VOLUME =  $15' \times 15' \times 1' = 9$  CY
- ③ **PERMANENT FILL - COLUMBIA RIVER**  
CLASS 24 STREAMBED SIMULATION MATERIAL  
AREA =  $22' \times 22' = 484$  SF  
VOLUME =  $22' \times 22' \times 2' = 36$  CY
- ④ **TEMPORARY FILL - COLUMBIA RIVER**  
WORK AREA ISOLATION  
AREA =  $100' \times 6' = 600$  SF  
VOLUME =  $100' \times 6' \times 0.2' = 5$  CY

Example:  
Columbia River,  
Municipal Water  
System  
Improvements

- 37' wide project area
- River 10,500' wide
- Project width <10% river width
- Project Length <1X river width
- Site not actively eroding (banks already have some riprap)

# Mitigation requirement for hardened streambank or bed



Problem – Proposed accounting utilizes SFAM scores that reflect surface conditions and may not accurately reflect all changes from hardening projects

Proposed solution – add the mitigation for hardening policy to rule along with function-based accounting



## Stream hardening example – Newell Creek Tributary Project Example

Function	Mitigation calculated
Surface Water Storage	-58
Sub/Surface Water Transfer	-55
Flow Variation	182
Sediment Continuity	339
Sediment Mobility	-530
Maintain Biodiversity	-57
Create and Maintain Habitat	63
Sustain Trophic Structure	0
Nutrient Cycling	-57
Chemical Regulation	-71
Thermal Regulation	0
total	-244

### Project Proposal

- 140 feet of channel and bank armouring to prevent erosion
- Channel alignment, bank slopes, channel gradient, and cross-section to remain unchanged
- Excavation of the channel and banks followed by backfilling with riprap

# In-Kind Function Replacement



- Replacement of lost functions with in-kind mitigation is best for aquatic resources
  - Providing local replacement of locally important functions
- TAC strongly recommended that functions and values needed to be replaced in-kind to the maximum extent possible
- TAC suggested limit on trade-offs should be made



# Function Replacement - Definitions



*In-Kind* means a resource of similar structural and functional type to the impacted resource



*Out-of-Kind* means a resource of a different structural and functional type from the impacted resource



*Trade-off* is replacing one type of function loss by a gain in a different type of function



In-kind replacement of an impacted function will be required when:

- Pre-project value score  $> 7$  (high rating) and
- Loss of that function is  $\geq 1$



## Function replacement and trade offs– ODOT Willow Creek project example

Function	Existing Function Score	Predicted Function Score	Change in Function Score	Value Score
Surface Water Storage	4.0	4.6	0.6	8.0
Sub/Surface Water Transfer	3.9	3.9	0.0	10.0
Flow Variation	4.3	4.9	0.6	7.5
Sediment Continuity	5.0	5.3	0.3	5.2
<b>Sediment Mobility</b>	<b>2.1</b>	<b>1.7</b>	<b>-0.4</b>	<b>7.5</b>
Maintain Biodiversity	1.4	2.3	1.3	5.6
Create and Maintain Habitat	2.9	2.9	0.0	6.2
Sustain Trophic Structure	4.1	4.5	0.4	5.5
Nutrient Cycling	4.3	3.3	1.0	5.5
Chemical Regulation	4.3	4.1	-0.2	5.5
<b>Thermal Regulation</b>	<b>4.2</b>	<b>0.0</b>	<b>-4.2</b>	<b>7.4</b>

The losses of sediment mobility and thermal regulation are both associated with a high (>7) value.

The loss of sediment mobility function is small (<1) so can be replaced with gains in other functions (trade off)

The loss of thermal regulation is high ( $\geq 1$ ) so in-kind replacement would be required

# Special Circumstances and Other Policies - Rule Language

- 0680(3)(j) compensatory mitigation requirement for hardening
- 0692(3)(e) in-kind function replacement
- 0692(3)(g) & (5)(c) exception for not requiring function-based accounting
- 0685(3)(c) exception for not requiring a functions and values assessment
- 0700(2)(b) exception for when financial security will be required



## Interested Party Comments

Please raise your hand  
to speak.

Please keep comments  
limited to 3 minutes.



# Interested Party Comments



Use the "Raise Hand" feature to provide community input. Time is limited and we may not be able to hear from all of you today.

- To raise your hand, click the reactions near the bottom of your screen and click "raise hand" or by pressing star 9 if you are on the phone.
- You will be called in the order in which hands are raised.
- Please keep your mic muted unless it is your turn to speak.

## When it's your turn to speak:

- When your turn is coming up, the moderator will call on you to begin speaking.
- Please say your name, where you're from, and any organization you're representing.
- Please keep your remarks to three minutes and be respectful of each other and agency representatives. We will help track your time.





## What's Next?

*Middle Fork – Willamette River / Dan Cary, DSL (retired)*

- The next RAC meeting is July 9. A meeting agenda will be sent by July 2, with a list of the rules to be presented.
  - Office hours for RAC members will be held at 10 a.m. on Monday, July 7 in preparation for the July 9 RAC meeting about banking types and remaining mitigation topics.
  - For members who cannot attend, please send any comments by July 7.
- In the next week, a meeting summary will be sent to RAC members and today's meeting recording will be posted.
- All meeting materials will be posted to DSL's Rulemaking website:  
[www.oregon.gov/dsl/Pages/rulemaking.aspx](http://www.oregon.gov/dsl/Pages/rulemaking.aspx)





# Thank You!

**Facilitator**

Samantha Meysohn  
smeysohn@kearnswest.com  
360-536-3660

**Oregon Department of State Lands**

Danielle Boudreaux, Rulemaking  
Coordinator

**[Oregon.gov/DSL](http://Oregon.gov/DSL)**



*Middle Fork – Willamette River / Dan Cary, DSL (retired)*