



Permitting and Mitigation in Oregon's Wetlands and Waters (Division 85) RAC Meeting # 3 Summary

May 21, 2025; 9:00 a.m.

Overview

The Permitting and Mitigation in Oregon's Wetlands and Waters (Division 85) Rulemaking Advisory Committee was convened by the Oregon Department of State Lands (DSL) on May 21, 2025, via Zoom. The RAC was convened to provide input on proposed amendments to the administrative rules governing permitting and mitigation in wetlands and waters.

RAC Members and Attendance

Name	Affiliation	Present?
Members		
Becky Kreag	Board Member, The Wetlands Conservancy	X
Brad Livingston	Wetlands Program Lead, Oregon Department of Transportation	X
Brian Cook	Permitting Program Manager, Clean Water Services	X
Dana Kurtz	Senior Environmental Scientist, Anderson Perry	
Emily Alcott	Principal Ecologist & Fluvial Geomorphologist, Interfluve	X
Jesse Steele	Executive Director, Grande Ronde Model Watershed	
Julia Bond	Alternate for Kaitlin Lovell	X
Jonas Moiel	Senior Ecologist / Principal, Green Banks, LLC	X
Kaitlin Lovell	Mitigation Banking Policy Director, City of Portland	X
Marnie Keller	Environmental Services Programs Manager, Cow Creek Band of Umpqua Tribe of Indians	
Michael Martin	League of Oregon Cities	
Melissa Brown	Alternate for Kaitlin Lovell	X
Ron Wierenga	Deputy Director, Clackamas Water Environment Services	X

	(Association of Oregon Counties representative)	
Sue Brady	Alternate for Dana Kurtz	X
Staff		
Danielle Boudreaux	Department of State Lands	X
Grey Wolf	Department of State Lands	
Melody Rudenko	Department of State Lands	X
Daniel Evans	Department of State Lands	X
Charles Redon	Department of State Lands	X
Advisors		
Andrea Seager	Advisor U.S. Army Corps of Engineers	
Joy Lovett	Advisor Land Use and Waterway Alterations Coordinator, Oregon Department of Fish and Wildlife (ODFW)	
Shelley Tattam	Advisor 401 Program Project Manager, Department of Environmental Quality (DEQ)	X
Interested Parties		
Catina Piliaris	Lakeside Industries	X
Candice Diorio	Environmental Permits Specialist at Oregon Department of Transportation	X
Jennifer Mongolo	Streamscape Environmental LLC	X

Welcome and Introductions

Samantha Meysohn, a facilitator from Kearns & West, welcomed participants to the third meeting of the Rulemaking Advisory Committee (RAC) for Permitting and Mitigation in Oregon's Wetlands and Waters. She highlighted the purpose of the meeting, which was to provide background on stream mitigation accounting to ensure a shared understanding for upcoming RAC discussions. DSL staff, RAC members, and technical advisors then introduced themselves and shared their affiliation and roles.

Agenda Review; Zoom Protocols

Samantha provided an overview of the [meeting agenda](#) and reviewed Zoom protocols, including chat usage and technical support instructions. Meeting materials were shared via email prior to the session and can also be found on the rulemaking website:

<https://www.oregon.gov/dsl/pages/rulemaking.aspx>.

Presentation/Discussion - Stream Compensation Methodology

Samantha introduced Melody Rudenko, DSL, who explained the differences between wetlands and streams within the context of Oregon's removal-fill law. She shared that wetlands are typically measured by area, while streams require more detailed assessment due to their structure and movement. For streams, mitigation focuses on more than just replacing what was physically removed. It must address elements such as bank stability, habitat complexity, and flow characteristics. Melody gave examples of stream impacts, including culvert replacements and changes to streambanks, and described how each type of impact may trigger different mitigation requirements. She also noted that perennial and intermittent streams are treated differently, based on their ecological roles and seasonal flow patterns.

DSL shared the definitions for both functions and for values. Melody explained that functions are the processes supporting aquatic ecosystems, while values are the ecological and societal benefits they provide. DSL shared a Zoom poll to understand RAC members familiarity with the definitions, and all poll participants shared that they were familiar. She then introduced the Stream Function Assessment Method (SFAM), as a tool used to evaluate the health and function of streams. Melody outlined SFAM's reliance on indicators such as channel morphology, substrate condition, hydrologic regime, and riparian structure. Melody explained how SFAM scores inform both impact assessment and credit generation in mitigation banking. She reinforced that compensatory mitigation must achieve improvements, particularly in terms of hydrology, habitat support, and biogeochemical processes, rather than simply meeting form-based criteria.

Members had the following questions and comments:

- A RAC member asked whether the ten-year prediction includes expectations for things like tree growth and invasive species management. They also wondered if an operations and maintenance plan is required to ensure that the site functions as predicted over time.
 - *Response: Monitoring and performance requirements are in place for mitigation sites. The ten-year window is intended to allow time for sites to stabilize after restoration, since they often look degraded initially. There are requirements to ensure actions like invasive species management and tree survival are maintained.*
- Another RAC member asked whether there is guidance in SFAM materials for predicting future conditions, such as tree growth, since tree size and ecological functions change over time.
 - *Response: There is some guidance at the end of the SFAM manual, and more is being developed. We acknowledge the importance of having clearer direction on what to expect from trees over time and we are working to integrate this guidance into both SFAM training and the broader removal-fill program.*
- A DSL team member raised a question about versioning on the SFAM website, noting inconsistencies between references to the current version and older versions.
 - *Response: Newer materials are embedded in expanded website menus, which can confuse users because links to older versions appear more visibly.*

DSL launched a poll on participants' or their organizations' use of SFAM. The results showed that most participants are using or familiar with it. She then transitioned to discussing accounting methods,

distinguishing eligibility from accounting, which calculates the amount of mitigation banking credits needed. Melody explained that proposed rule changes would eliminate group-level ecological matching to avoid requiring mitigation for unaffected functions and would clarify the definition of stream size based on flow rather than width, incorporating Department of Forestry criteria directly into the rule. She emphasized that accounting focuses solely on quantifying mitigation credits or debits through a formula combining changes in function, value weighting, project size, and policy adjustments.

Charles Rendon, DSL, discussed the Essential Salmon Habitat (ESH) rules, explaining that ESH under current rules includes spawning and rearing habitats, but not migratory behavior. She noted that DSL has historically not recognized migratory behavior as qualifying for ESH, though this will be reviewed further offline to ensure proper application. Melody confirmed that while the law limits migratory habitat inclusion, rearing and spawning must be considered. She also emphasized that incomplete ESH data impacts the accuracy of the SFAM model, which depends on full lifecycle inputs.

Members had the following questions and comments:

- One RAC member asked about how often DSL updates sources of degradation that affect value scores and whether this is consistent across the state and watersheds.
 - *Response: Some values change immediately when landscape features change, like development. The mapper tool we use is updated yearly with new data layers from various agencies. DSL only directly updates the ESH layer. Other layers, such as water quality, get updated by agencies like Department of Environmental Quality (DEQ). This helps keep the data current and relevant. The value scores will never reduce the mitigation amount required, they will not pull back credits.*
- Another RAC member wondered if consultants could reach out to DSL if they believe the mapper undervalues a project's watershed, given the limits of mapping and analysis capacity.
 - *Response: Absolutely. The map tools are very useful, but they cannot fully replace on-the-ground knowledge. We encourage conversations with DSL about specific watershed conditions to incorporate local expertise.*
- A RAC member sought clarification on the removal of functional categories from scoring and worried that this might cause missing functions and lack of mitigation for them.
 - *Response: There is a concept of trade-offs, sometimes a function lost is replaced by another gained. Our policy allows some trade-offs but requires in-kind replacement for highly valued functions with significant loss. If loss exceeds a point threshold, in-kind replacement is required; otherwise, trade-offs are possible.*
- One RAC member raised concerns that this system might incentivize minimizing scores through professional judgment to reduce mitigation requirements and pointed out that) ESH only accounts for spawning, not rearing or foraging habitat, potentially conflicting with other regulatory drivers.
 - *Response: Those are excellent comments. We have recorded them and will review them carefully. Submitting these concerns in writing would be very helpful, as well.*

- Another RAC member asked whether the formula for debits and credits incorporates the delta between pre- and post-project conditions, or if it simply represents current site values plus adjustments. They also asked how adjustments are applied.
 - *Response: We use “debts and credits” as terminology, but it really means the mitigation amount. The functional gain or loss, the delta between pre- and post-project conditions, is incorporated in the function scores part of the formula. Adjustments can be applied in different ways: some apply to the total post-project site level, others to specific functions. We designed adjustments to not disincentivize beneficial mitigation actions, such as planting trees that grow slowly but provide long-term benefits.*
- One RAC member followed up about whether adjustments are applied site-wide or function-specific and how they avoid disincentivizing planting slow-growing trees or diverse mitigation types.
 - *Response: We apply adjustments both at the total site level and to specific functions depending on the reason for adjustment. We carefully designed this to avoid disincentivizing mitigation like slow-growing trees. We welcome feedback if you see ways this system could still discourage certain types of mitigation, because diversity in mitigation approaches is valuable.*
- Another RAC member followed up on concerns about the Essential Salmon Habitat (ESH) designation, particularly ensuring it applies not just to spawning habitat but also to rearing and migration, noting some confusion about how ESH is applied and where to request review.
 - *Response : At this [link](#), you can request review of the ESH designation to help ensure it is applied accurately according to the law and rules.*
- A RAC member sought confirmation that migratory behavior is currently not qualifying under ESH designation based on past communications.
 - *Response: That is correct. Migratory behavior has not been accepted as qualifying essential salmon habitat.*
- One RAC member shared that ESH designation influences the SFAM model, and that the model’s accuracy depends on the completeness of input data. If ESH does not cover all life cycle stages, the model may be incomplete.
 - *Response: That is very helpful feedback. The model quality relies on accurate input data, so if ESH designation is incomplete, it impacts the model’s usefulness.*

Melody explained the two-step eligibility and accounting process for mitigation. She highlighted a flow chart showing how decisions are made about whether a mitigation option fits an impact, emphasizing the ecological match box and noting two upcoming rule changes: removing the requirement to match group-level functions to avoid unnecessary mitigation, and clarifying the definitions of size categories. She then described the foundational components and key objectives of the accounting protocol, which include assessment outputs from SFAM, a unit of measure that quantifies those outputs, and adjustments that modify mitigation amounts. She presented the formula used to calculate debits or credits: value-weighted SFAM function scores multiplied by the unit of measure, plus any adjustments.

Members had the following questions and comments:

- One RAC member asked whether all functions are equally weighted in the calculations.

- *Response: The functions are equally weighted in the overall calculation. However, the individual measures within each function have different weights in the SFAM formulas.*
- Another RAC member asked if higher functional scores always indicate better conditions and if lower scores indicate worse conditions.
 - *Response: Yes, that is correct. A higher score, closer to one, is considered better, and a lower score is worse. This is specific to SFAM, as other assessments sometimes interpret high scores differently, such as indicating stress or disturbance. Our range is based on actual stream data from the Pacific Northwest.*
- One RAC member asked how value scores and function scores are used together in mitigation calculations.
 - *Response: We definitely use both value and function scores because they provide important context about the watershed functions at the site. The goal is to require mitigation proportional to the loss of function but weighted higher if the function is more highly valued. We do this by applying weights that increase mitigation requirements based on value scores, rather than simply adding scores together, which would lack scientific justification.*
- A RAC member asked how value scores influence the evaluation and whether changes in value score could theoretically increase or decrease the mitigation amount.
 - *Response: It is unusual for value scores to change significantly, but the evaluation score can increase or theoretically decrease if the value changes due to a project. We multiply the value score by the function difference and then add that to the function difference itself to get the total. This means value weighting only increases mitigation, not decreases it, and changes in value scores after projects are rare but accounted for.*
- Another RAC member asked whether value scores can ever decrease or if they only increase mitigation requirements.
 - *Response: Value scores never decrease mitigation. They proportionally increase it. For example, a low value score will result in a small increase, while a high value score results in a larger increase. This weighting only adds to the total mitigation amount; it never reduces it.*

DSL launched a poll on participants' understanding of why SFAM value scores matter for mitigation. The poll indicated that most participants understand their importance. Melody transitioned the group and explained that the project team conducted an extensive evaluation of various units of measure for quantifying mitigation requirements. The team tested multiple metrics including total project area, impacted in-channel area, linear distances, and more using both real and hypothetical project examples to cover a broad range of scenarios. After thorough analysis, linear feet along the stream centerline was identified as the most scientifically appropriate and practical unit, as it aligns well with the SFAM assessment framework that incorporates stream width and quality data. This choice reflects the unique characteristics of Oregon's program. DSL launched another poll asking participants to share if they have enough information on the topic and if they do or do not support using linear feet. Melody summarized the poll's results, most people shared that they had enough information and supported using linear feet, while a few members shared that they needed more information on the matter.

Members had the following questions and comments:

- One RAC member asked about the risk of incentivizing narrow streams and the importance of width in habitat value.
 - *We were worried about incentivizing unnatural sinuosity, as we have seen in another state where every stream mitigation bank ended up with the same sinuosity due to their program design. However, we realized these concerns cannot be fully solved by the accounting formula or unit of measure. Instead, we have to trust the review process early on to catch designs that are unnaturally sinuous or inappropriate and require redesign. We started thinking about width in a similar way. It had not come up as much before, but it is a good point. In practice, reviewers have already been adjusting credit amounts based on the width of the stream, especially in cases like narrow ditches. Just like with sinuosity, it is really about having reviewers who can see when something does not look natural and ask for changes.*
- One RAC member asked about how the current practice might consider area and width even though the proposal focuses on linear feet, and whether narrower streams are treated differently.
 - *Response: In our mitigation bank instrument, we list both area and linear feet because we were not sure which would be more pertinent to use in varying situations. In practice, for narrower streams like ditches, DSL has been using width to convert linear feet, so permittees impacting narrower features buy fewer credits. So there has been some incentive for narrower streams, even if it is not fully aligned with the proposed approach of only using linear feet.*
- Another RAC member acknowledged the challenge of consistency with width and length in mitigation programs and their approach to handling that variability.
 - *Response: We also have these struggles with width and length in other mitigation programs. Consistency is a real challenge, and currently, we evaluate things case-by-case.*
- One RAC member asked about whether wider projects extending further into the riparian zone might be undervalued by using stream length as the unit of measure instead of area or another metric.
 - *Response: None of our tested units of measure extended far beyond the project footprint, so we cannot compare projects that go well beyond the stream channel. SFAM does collect some data on riparian width beyond the mapped area, but only one question addresses how far the riparian area extends, so it has limited influence on results. I do not know of a way the program currently incentivizes greater riparian width.*
- Another RAC member noted the potential benefits of wider floodplain projects that might not be fully captured by the bankfull width measurement and how that might affect valuation.
 - *Response: It is possible that floodplain projects with larger width and more complex shapes provide benefits that are not fully captured by just measuring bankfull width times stream length.*
- Melody explained the role of adjustments in the stream functional assessment method, emphasizing they address impacts not captured by eligibility or functional scores, such as

temporal loss or gain. She noted that the technical advisory committee recommended adjustments for long-term site protection and vegetation recovery lag, but not for channel complexity due to insufficient data. Adjustments can increase or decrease mitigation requirements or credits and may be applied to individual or all functions. Melody introduced a vegetation-based temporal lag adjustment applied only at the impact site, using a standard 3% discount rate per year. Tiered by vegetation type, the adjustment accounts for 5 years for herbaceous (15%), 7 years for shrubs (20%), and 10 years for trees (30%), and applies only to functions influenced by vegetation. These are not additive, and a maximum of 30% across six functions may apply.

Members had the following questions and comments:

- A RAC member asked for clarification on how a project could receive a neutral thermal regulation score despite removing trees, particularly since DEQ uses a shade calculator to assess temperature-related impacts.
 - *Response: If the existing thermal regulation function score was already low because the area being measured was an exposed, sunny stretch with little to no shade to begin with, then the score would be zero initially and zero in the predicted condition. So even though the project removed trees, those trees were not directly shading the stream, and the thermal regulation function score remained unchanged. If the stream edge had been shaded initially, we would have seen a reduction in the score. Other functional losses due to tree removal relate to impacts across the broader riparian area, not just the edge of the stream, which is why those other function scores declined.*
- Another RAC member asked whether the tree loss adjustment is a flat percentage regardless of the number or size of trees removed, and whether these factors are considered behind the scenes.
 - *Response: There is no fixed rule or formal guidance written into the rule for the number or size of trees removed. Because this is an adjustment, the applicant and permit evaluator review the project details and determine whether the adjustment is appropriate. If only one tree was removed far from the stream, that might not justify the adjustment. Human judgment is still very much part of the process. Regarding tree size, one of the strengths of the functional assessment method is that large trees do increase functional scores.*
- One RAC member followed up to ask whether applying both a function score reduction and an adjustment for tree loss results in a double penalty.
 - *Response: The adjustment is intended to reflect the lag in function over a ten-year period after replanting. If vegetation is removed and replanted, the predicted score accounts for the fact that it will take time to regain full function. That ten-year lag is what the adjustment is trying to capture. If you do not replant, then you are missing both the vegetation and its predicted future function.*
- Another RAC member asked why biodiversity is not listed as a function related to herbaceous vegetation.

- *Response: Herbaceous vegetation is not currently a measured factor in calculating that particular function during field assessments. It is outside the scope of what we can change through this rulemaking, but it could definitely inform future updates to the functional assessment method. We want to continue improving these tools as we learn more and as new data becomes available.*

Melody introduced a proposed adjustment intended to incentivize long-term site protection for stream mitigation projects. While wetland rules already include a simple binary adjustment for enhanced protection, the stream proposal uses a tiered system. Projects with basic protections, such as deed restrictions or approved management plans with stewardship funding, would receive a ten percent increase. Higher levels of protection, such as conservation easements or fee title ownership by a land trust, would receive a twenty percent increase. Melody shared how these adjustments could substantially raise credit totals for eligible sites.

Members had the following questions and comments:

- One RAC member asked whether separate credit calculations would be required for intermittent and perennial stream components on a single site, and whether those distinctions would need to be maintained through credit sales, or if the accounting could be combined similarly to how wetland classes are managed.
 - *Response: We are planning to follow the same approach we use for wetlands to maintain consistency. While we separate wetland, stream, and other waters types into distinct credit pools, we do not require sellers to track individual credit sales by micro-habitat or stream type. You might have to complete separate SFAMs to calculate credits for different stream types on a site, but those values will ultimately be combined into a single stream credit total for sales and accounting purposes. This approach aligns with our existing mitigation program practices and is expected to continue unless there are future changes at the federal level.*
- Another RAC member expressed concern about how function-based assessments will be integrated into the payment-in-lieu (PIL) program, particularly how evaluated functions will translate into costs within the PIL calculator, noting that this mechanism is widely used due to the limited availability of credits.
 - *Response: At this time, we do not have a method for applying function-based accounting to payment-in-lieu because that program is not linked to a specific mitigation site. Since there is no baseline or predicted condition to evaluate, we cannot use a functional approach to set prices in this context. For now, we are not proposing any changes to payment-in-lieu as part of this rulemaking. We can discuss this further outside of the meeting if needed.*

Interested Party Comments

Samantha opened the floor for interested party comments; however, no comments were made.

Next Steps

Danielle outlined the upcoming schedule for the next RAC meeting on June 12, 2025. She explained that a meeting agenda will be sent to RAC members by June 5, along with a list of the rules to be presented.

Additionally, Danielle shared that office hours for RAC members will be held at 10 a.m. on Monday, June 9, specifically for technical questions and answers in preparation for the June 12 meeting.

Lastly, Danielle shared that the Meeting #3 Summary will be sent to RAC members in the coming weeks and that all meeting materials, including the most recent meeting's recording, will be posted to the rulemaking website: <https://www.oregon.gov/dsl/pages/rulemaking.aspx>

Adjourn

Samantha closed the meeting by thanking DSL staff, RAC members, and interested parties for their participation, reminding members of the next meeting date on June 12. She also expressed appreciation for the engagement and feedback received, reiterated the reminder about office hours, and welcomed members to reach out via email for further inquiries. Finally, she noted that an evaluation would be sent out.