Draft Meeting Minutes
Oregon Central Coast Forest Collaborative
Wildlife Subcommittee Meeting
4/3/23 2-4pm
Zoom

Attendees *(in alphabetical order)*:

NAME	ORGANIZATION
David Eisler	Siuslaw Watershed Council
Kelly Fuller	Oregon Wild
Marc Barnes	Integrated Resource Management
Paul Engelmeyer	Audubon
Alyssa Bonini	*Coordinator*

Action Items:

WHAT	WHO	WHEN
Begin collecting definitions of terms that need a common understanding between Collaborative members and USFS. Pass to Alyssa to share with USFS.	Paul E.	May 9
Send calendar hold for a May 9 Wildlife Subcommittee meeting (to be held as needed).	Alyssa	May 7

Minutes: by Alyssa Bonini

I. Welcome & Introductions

- Alyssa Bonini introduced herself as the new Oregon Central Coast Forest Collaborative (OCCFC) Coordinator and shared her background. Alyssa can be contacted at abonini@triangleassociates.com and at 503.522.0091 (cell).
- Subcommittee members introduced themselves and their background on the OCCFC.

II. Subcommittee Member Updates

Wildlife Zones of Agreement (ZOAs) Examples from Malheur National Forest Collaborative (MNFC) – *Kelly Fuller, Oregon Wild*

- Kelly Fuller (Oregon Wild) shared examples she found of Wildlife Zones of Agreement (ZOAs) developed by the Malheur National Forest Collaborative.
- The MNFC began developing science-based ZOAs to inform the U.S. Forest Service (USFS) on its Forest Plan updates.
- The MNFC addressed multiple species in their ZOAs by beginning with vegetation management, then worked with scientists to determine which species to focus on.
    - The MNFC created an Aquatic ZOA in addition to a Wildlife ZOA.

- The MNFC's goal in creating ZOAs was to help USFS to make decisions that the MNFC supports more than previous decisions. So far, ZOAs have worked to bring people together around information provided by scientists everyone has agreed upon.
    - The MNFC expects the USFS to use the ZOA science in the NEPA process. If the ZOA science is not used, an explanation is expected.
- There are not many standalone ZOAs. One ZOA relating to interior forest patches was the Goshawk ZOA, which Kelly will share with Subcommittee members. *(Update 4/3/23: the Goshawk ZOA is available on the Wildlife Subcommittee's OneDrive).*

Considering Beavers as a Conservation Priority Issue – *Paul Engelmeyer, Audubon*

- Paul Engelmeyer (Audubon) informally suggested that Subcommittee members should consider bringing beaver to the Collaborative Group as a priority conservation species. Subcommittee members will consider this option and revisit it at the next meeting.
- Beaver conservation is linked to Coho Salmon recovery and is a priority issue for the Watershed Council.
- Beavers have complex habitat on USFS lands.
- Beaver conservation can be used to raise awareness of ecological processes and multi-species recovery and conservation.
- Paul shared the following materials on Beaver conservation, which are available in the Wildlife Subcommittee's OneDrive folder.
    - *Beaver Benefits and Climate Change FAQ*
    - *Appendix C_Species List*

III. Group Discussion: Focus and Scope of Wildlife Subcommittee

- Subcommittee members expressed misalignment about what the Wildlife Subcommittee should focus on moving forward. A need was expressed to find a unified approach. Members discussed the following two approaches for the Wildlife Subcommittee to consider, or as consideration for two distinct Subgroups:
    - Focus on developing general Wildlife ZOAs to help inform a landscape-level plan.
    - Focus on developing recommendations for the USFS related to wildlife on the North Fork Smith Environmental Assessment (EA). Potentially coming up with a third alternative to propose to USFS.
- Trying to limit the number of topics covered under "Wildlife."
- Marc Barnes has access to GIS layers of data sets on late seral forest habitat within the North Fork Smith EA area. He offered to work on identifying interior forest patches as an individual and welcomed anyone else interested. Paul Engelmeyer expressed interest and will follow up with Marc offline.

IV. Align on Terminology and Shared Definitions

- Consider how the Collaborative will agree to use terms including:
    - Interior Forest
    - Buffer
    - Edge
    - Connectivity
    - Mature forest
    - Natural Forest
- It would be helpful to have a glossary of terms that the Collaborative and USFS could align on. Paul Engelmeyer will work to collect definitions and pass them to Alyssa to share with USFS.

Draft Meeting Minutes
Oregon Central Coast Forest Collaborative
Roads Subcommittee Meeting
6/5/23 11:30-1:30pm
Zoom

Attendees *(in alphabetical order)*:

NAME	ORGANIZATION
Fran Recht	Pacific States Marine Fisheries Commission
Paul Engelmeyer	Audubon
Paul Lulay	Hampton Lumber
Alyssa Bonini	*Coordinator*

Action Items:

WHAT	WHO	WHEN
Reach out to USFS for clarification on the following questions: *a. Does USFS have an Effectiveness Monitoring Plan?* *b. Is AOP required for amphibians on non-fish-bearing streams?* *c. How do AOP requirements relate (if at all) to Stream Simulation Design Requirements?* *d. What is USFS's current policy on herbicide use for plant removal on the Siuslaw (vs. manual removal)?*	Alyssa	6/9
Incorporate revisions to ZOA Statements document and share with Subcommittee/Collaborative. Collaborative to consider Statements and test consensus at next monthly meeting (June 9)	Alyssa	6/9
Send a calendar hold for the next Roads Subcommittee meeting on July 10, 2023 from 11:30am – 1:30pm on Zoom.	Alyssa	6/9

Minutes: by Alyssa Bonini

I. Welcome & Agenda Review

- The Coordinator welcomed Subcommittee members and reviewed the proposed agenda.

II. Review Feedback on Draft Zones of Agreement (ZOA) Statements

- Subcommittee members agreed to test consensus on as many of the Draft ZOA Statements as possible during the meeting. Statements that the Subcommittee reach consensus on will go before the full Collaborative group for consideration at its June 9 meeting:
- Subcommittee members reviewed each of the existing 9 Draft Statements. The following questions arose for the USFS:

    - Does USFS have an Effectiveness Monitoring Plan?
    - Is Aquatic Organisms Passage required for amphibians on non-fish-bearing streams?
    - How do AOP requirements relate (if at all) to Stream Simulation Design Requirements?
    - What is USFS's current policy on herbicide use for plant removal on the Siuslaw (vs. manual removal)?
- Subcommittee members added a 10th draft statement (statement #1 in the document) representing the interest of the Subcommittee that USFS ensures adequate funding for each of the ZOAs, and includes completeness and effectiveness monitoring.
- **Consensus:** A quorum of the subcommittee reached consensus on each of the 10 Draft ZOA Statements by following the consensus process outlined in the Collaborative's Operating Protocols, and reserve the right to revisit any of the draft ZOA statements upon the future receipt of new information from USFS.
- The Coordinator will convert the document into a PDF to share with the full Collaborative group in advance of its June meeting.

Action Item: The Coordinator will convert the document into a PDF and share with the full Collaborative group in advance of its June meeting.

III. Wrap up & Next Steps

- The Subcommittee will decide if they need to reconvene in July to discuss feedback from the Collaborative on the Draft ZOA Statements. If the Collaborative reaches consensus on each of the ZOA Statements, the Roads Subcommittee may not need to meet in July.
- The Coordinator will send a calendar hold for the next Roads Subcommittee meeting on July 10, 2023 from 11:30am – 1:30pm on Zoom.

Action Item: The Coordinator will send a calendar hold for the next Roads Subcommittee meeting on July 10, 2023 from 11:30am – 1:30pm on Zoom.

V. Wrap-Up & Next Steps

- Alyssa will be on vacation April 27-May 8.
- The Subcommittee will hold **Tuesday, May 9 from 2-4pm to meet on Zoom**, as needed.

Wildlife Subcommittee

Oregon Central Coast Forest Collaborative

Draft Meeting Minutes
Oregon Central Coast Forest Collaborative
Wildlife Subcommittee Meeting
9/5/23 1-3pm
Zoom

Attendees *(in alphabetical order)*:

NAME	ORGANIZATION
Andy Geissler	AFRC
David Eisler	Siuslaw Watershed Council
Marc Barnes	Integrated Resource Management
Paul Engelmeyer	Audubon
Alyssa Bonini	*Coordinator*

Action Items:

WHAT	WHO	WHEN
Ask USFS if the agency has an official definition for "priority/Keystone species."	Coordinator	9/20
Circulate the USFS Biennial Monitoring Report with OCCFC members and track questions to relay to USFS.	Coordinator	9/20
Work with USFS Liaison to check if Chuck Fisher, Central Coast Range Hydrologist/NEPA Planner, or James Pettett, Hydrologist, is available for the Wildlife Subcommittee's September meeting.	Coordinator	9/20
Send calendar hold for the October 10 Wildlife Subcommittee meeting	Alyssa	9/15 [Complete]

Minutes: by Alyssa Bonini, Coordinator

I. Welcome & Agenda Review

- The Coordinator welcomed Subcommittee members to the meeting and reviewed the agenda.

II. Refresh on June Meeting & Review Action Items

- The Subcommittee revisited action items and approved meeting minutes from its last meeting on June 5, 2023.
- The Coordinator will pdf the June 5 meeting minutes and post to the OCCFC website.

Action Item: The Coordinator will send a pdf of the approved June 5 Wildlife Subcommittee meeting minutes with Cascade Pacific to post to the OCCFC website.

III. Group Discussion: Topics Arising at August OCCFC Meeting

- At the OCCFC's Full August 11 meeting, Paul Engelmeyer asked about the possibility of the USFS increasing habitat blocks and updating habitat reporting indicators. Paul would like to make sure that the USFS's Biennial Monitoring Report addresses topics like canopy closure and habitat blocks. He also expressed appreciation for the work that the Siuslaw National Forest has done to create large habitat blocks to date.
- Questions arising for the USFS include why creation of large habitat blocks are not included in the Biennial Monitoring Report. Is it possible for the public to influence questions that USFS answers in the report?
- It was requested that the Coordinator re-circulate the USFS Biennial Monitoring Report with the OCCFC and encourage them to familiarize themselves with it. Members should relay any questions about the report to the Coordinator to share with USFS.

Action Item: The Coordinator circulate the USFS Biennial Monitoring Report with OCCFC members and track questions to relay to USFS.

IV. Workshop: Wildlife Zones of Agreement

- It was suggested at the Wildlife Subcommittee's June 5 meeting that members draft one ZOA statement for possible ZOA topics of "Beaver; Threatened/Endangered Species; Wildlife Habitat; and Non-Endangered Species."
- After considering the proposed topics, Subcommittee members decided to direct their focus towards crafting draft ZOA statements on Beaver. It was stressed that robust beaver populations are important for salmon and water (quality/quantity) at the forest and watershed level, and that the USFS is in a unique position to spearhead conservation on public lands.
- Andy Geisler, AFRC, asked whether the subcommittee should focus its energy on crafting ZOAs about trapping or about habitat and vegetation management for Beaver. Paul E. suggested that the subcommittee could focus on either, so long as they result in the outcome of beaver populations that are robust enough to create complex habitats that help recover multiple species. He suggested that one way to achieve that desired outcome is for the USFS to end trapping on forest lands managed by USFS.
- Dave Eisler, Siuslaw Watershed Council, expressed a desire to learn more about what internal discussions USFS is having on this topic, if any, and if there is beaver habitat in the Upper Smith River area. The Coordinator flagged that this could be a good opportunity for a field trip.
- The Subcommittee revisited the Adaptation Partners' Climate Change Adaptation Library and used the suggested strategies and tactics highlighted on the Fish Resource area page (which mentions Beaver) to guide the drafting of their ZOAs. A link to this annotated page is accessible on the Wildlife Subcommittee's OneDrive.
- Subcommittee members adopted the qualities that they agreed with into their preliminary draft Beaver ZOA and will share them with the full OCCFC at its September 8 meeting.
- It was expressed that active words (e.g. "restore," "preserve," etc.) should be included in each ZOA.
- The Subcommittee considered how to use language for individuals and landowners that feel that it is their right to shoot beavers on their property. No solution was identified and the Coordinator suggested the subcommittee keep that in mind as they draft.
- Subcommittee members requested that a hydrologist attend the subcommittee's next meeting to review the Beaver ZOAs and help the group understand what is being done on the SNF relating to beaver populations and habitat.

Action item: Coordinator will work with USFS Liaison to check if Chuck Fisher, Central Coast Range Hydrologist/NEPA Planner, or James Pettett, Hydrologist, is available for the Wildlife Subcommittee's September meeting.

- The Wildlife subcommittee's 9.5.23 draft preliminary Beaver ZOAs are available on the Subcommittee's OneDrive online and in Appendix A of these minutes.

V. Wrap-Up & Next Steps

- The Coordinator wrapped up the meeting and reviewed action items.
- The Subcommittee will hold its next meeting on **Tuesday, October 10 from 2-4pm on Zoom**.

Appendix A: Draft Preliminary Zones of Agreement Statements

DRAFT Preliminary Zones of Agreement Statements
Oregon Central Coast Forest Collaborative
Wildlife Subcommittee
v. 09.7.23

Topic: Beaver (*ZOA statements below have been adopted from the Adaptation Partners' Climate Change Adaptation Library.*)

Vision: The Oregon Central Coast Forest Collaborative envisions a Siuslaw National Forest that restores ecological processes and promotes robust beaver populations by acknowledging beaver as a valuable keystone/priority species. This can be accomplished by prioritizing the following ZOAs:

a. **Keystone Species:** The Collaborative agrees that USFS should consider Beaver as a priority/keystone species in the restoration program.

b. **Associated Species:** Identify, retain, and restore riparian and wetland habitat for beaver and associated species. Beaver ponds attract and provide habitat to Oregon's native mink, muskrat, otter, turtles, frogs, and salamanders. Creating high quality habitat is a priority for the OCCFC to support Coho salmon recovery.

c. **Aquatic conservation:** The OCCFC supports the commitment that the USFS has made to improve Tier 1[1] and Tier 2 key watersheds in the Siuslaw National Forest.

d. **Water quantity:** Restore beaver habitat and populations by increasing in-stream flows with dry-season water conservation to reduce withdrawals. Reintroduce and promote beaver by increasing water residence time, storing water on the landscape, restoring meadows and promoting beaver dams.

e. **Habitat quality**: Expand and restore beaver habitat and populations by decreasing fragmentation of stream network to maintain connectivity and habitat quality and support habitat resilience. Provide woody browse and consider restoring willow to maintain the integrity and quality of remaining habitats or habitats that may become suitable as temperatures increase.

f. **Riparian Areas, Wetlands, and Groundwater-Dependent Ecosystems:** Increase upland water storage by accommodating and maintaining larger beaver populations. Increasing beaver populations via translocation and trapping creates more wetland habitat by storing water on the landscape and reduces the effects of decreased streamflow in riparian areas. Beaver population management tactics may include accommodating and maintaining larger beaver populations on the SNF, trapping and relocating beavers that create dams that flood trails, using riparian shrub planting, protection, and riparian aspen restoration and

[1] The U.S. Bureau of Land Management (BLM) and U.S. Forest Service (USFS) define Tier 1 key watersheds as watersheds "contributing directly to the conservation of at-risk salmonids". U.S. BUREAU OF LAND MGMT, U.S. FOREST SERVICE, NORTHWEST FOREST PLAN AQUATIC CONSERVATION STRATEGY (2005), https://www.dfw.state.or.us/fish/crp/docs/coastal_coho/reference/usfs-blm/blmusfsfinalreport.pdf

management, and/or using valley form analysis to assess potential sites for beaver colonies and channel migrations.

g. **Water Resources and Infrastructure:** Implement passive restoration (e.g., appropriate management of beaver populations, reduction or removal of activities that are detrimental to riparian function) to manage for highly-functioning riparian areas that can absorb and slowly release the flow of water off the landscape. Where appropriate, promote and increase beaver populations to restore watershed, floodplain, riparian area, wetland, and groundwater-dependent ecosystem functions.

h. **Watershed Function:** Add wood to streams and increase beaver populations to help restore watershed functions by connecting floodplains, supporting groundwater-dependent ecosystems, reducing drainage efficiency, and maximizing valley storage.

i. **Carbon Storage:** Promote natural carbon capture and storage (CCS) areas by restoring beaver habitat and populations, which create wetlands and wet meadows by building and maintaining dams. Water stored in this fashion may also improve downstream flows into the summer and beyond.

j. **Projects:** When identifying and developing instream habitat improvement projects, USFS will incorporate Beaver habitat needs into its selection criteria.

Wildlife Subcommittee
Oregon Central Coast Forest Collaborative

Draft Meeting Minutes
Oregon Central Coast Forest Collaborative
Wildlife Subcommittee Meeting
11/06/23 2-3pm
Zoom

Attendees *(in alphabetical order)*:

NAME	ORGANIZATION
David Eisler	Siuslaw Watershed Council
Paul Engelmeyer	Audubon
Kami Ellingson	USFS
Alyssa Bonini	*Coordinator*

Action Items:

WHAT	WHO	WHEN
Send a pdf of the approved October Wildlife Subcommittee meeting minutes with Cascade Pacific to post to the OCCFC website.	Coordinator	Complete
Share the USFS's Region 6 draft carbon sequestration white paper with the Subcommittee.	Kami	11/17
Look into whether USFS Region 3 partnered with state agencies to enact a trapping closure on public lands or acted unilaterally.	Paul Engelmeyer, Audubon	12/11
Revisit the conversation about beaver as a "keystone" species on the next agenda, once it is know whether a National Forest can close a forest to trapping.	Coordinator	12/11
Send calendar hold for December 11 Wildlife Subcommittee meeting.	Coordinator	Complete

Minutes: by Alyssa Bonini, Coordinator

I. Welcome & Agenda Review

- The Coordinator welcomed Subcommittee members and the U.S. Forest Service (USFS) to the meeting and reviewed the agenda.
- Kami Ellingson, USFS Hydrologist, attended the meetings to answer Subcommittee questions about beaver, beaver habitat, and what actions the USFS is currently taking to bolster habitat that will support robust beaver populations on the Siuslaw National Forest.

- The Subcommittee requested at its October meeting that Kami attend to share information about beaver habitat. The Subcommittee will use this information to help refine and craft its draft Beaver Zones of Agreement (ZOAs) around what members think is missing from USFS's current management approach.

II. Refresh on September Meeting & Review Action Items

- The Subcommittee revisited action items and approved meeting minutes from its last meeting on October 10, 2023.
- The Coordinator will pdf the October meeting minutes and post to the OCCFC website.

Action Item: The Coordinator will send a pdf of the approved October 10 Wildlife Subcommittee meeting minutes with Cascade Pacific to post to the OCCFC website.

III. Group Discussion: Riparian Habitat and Beaver on the Siuslaw National Forest

- Kami introduced herself to the group and shared her background. She is familiar with coastal forest hydrology from the ridgetop to the ocean and has worked on many aquatic restoration projects.
- She has been frustrated by how to tell the story of beaver on the landscape. The USFS has invested millions to reset hydrological systems in isolated pockets, into targeted land acquisitions and has done work with Tribal partners, Stewardship Groups, and other partners to restore the hydrology. In every case, where the hydrology has been restored, beavers have returned.
- The part of the story that Kami feels USFS is not telling well is "what happens next?" In areas where beavers return but don't persist, it would be helpful to know why. At the Karnowsky Creek Restoration site for example, Kami shared that evidence of an entire colony departing at the same time suggests they were trapped out. Beavers blink in and out of different sites at different times and it is unclear why. Why are there dams that are over 20 years old in some places and not others?
- Misalignment remains in the field as to the role that large wood plays in hydrology and riparian habitat. Where hydrology has been altered and channelized, Kami believes that large wood would be helpful, especially if beaver dams are to be permanent structures on the landscape, or built across high velocity water bodies.
- Beavers would be foundational to Coho recovery, by aiding in the construction of Coho wintering habitat. Beavers and wetlands are lacking components to valley bottoms, and Kami would like to see more beaver and beaver wetland complexes in depositional valleys. What happens in valley bottoms effects the entire watershed and hydrological system.
- Paul Engelmeyer, Audubon Society, shared a general technical report issued by the U.S. Department of Agriculture in 2019 entitled *Managing for Large Wood and Beaver Dams in Stream Corridors*. He would like to see it incorporated into policy direction on the Siuslaw National Forest.
- Kami agreed that there is no need to reinvent the wheel, and that there is plenty of material written about beaver, much of which is USFS and USFWS co-authored. Oregon is also among those states with a beaver management plan.

IV. Discussion: Draft Wildlife Zones of Agreement

Beaver as Keystone Species

Draft ZOA (b) Keystone Species: *The Collaborative agrees that USFS should consider beaver as a priority/keystone/ foundational species in the restoration program.*

- The Coordinator shared the Wildlife Subcommittee's draft Beaver Zones of Agreement, directed attention to ZOA (b) and asked Kami whether USFS recognizes "priority species" or "keystone species" as terms of art in its management plans. Is the keystone species ZOA phrased in a way that the USFS would receive well? Can it be improved in a way to encourage reception?
- David Eisler, Siuslaw Watershed Council, noted that the Wildlife Subcommittee is tasked with developing Zones of Agreement and wants to make it easy for the OCCFC and SNF to align. The language used is important.
- Kami shared that "keystone" is a known term for beaver, but it becomes a more difficult conversation because USFS has no authority to manage for species that come and use the habitat that USFS works on. That said, it would be helpful if the ZOA language could mirror USFS direction language. USFS may be able to use "keystone species" across multiple resource areas, but it would be helpful to know what OCCFC's end goal is to help USFS understand whether "keystone species" will get them there.
- Kami's perspective is that beaver are foundational to much of the habitat that has been lost on the SNF and should be (and are, to a large extent) considered a keystone species in projects to the extent USFS has jurisdiction over them.
- However, it is possible that these Beaver ZOAs may not change what USFS is currently doing on the land since none of its actions preclude beaver. If anything, USFS is bringing beaver back by trying to restore systems to pre-European settlement conditions by including natural processes in its plans for beaver to respond to. That said, Kami would like to see more robust hydrological restoration on the landscape.
- Kami suggested that a wildlife biologist may help inform what language needs to be used on the wildlife ZOAs to ensure the OCCFC's "ask" is within USFS's jurisdiction and authority. Brandi Langham, Fish Biologist, has moved on, but a detailer (Karen Honeycutt) is coming in in early December. Deanna Williams is the current Wildlife Biologist, and Kami is willing to stay involved with this group.
- Paul believes that USFS should be able to acknowledge beaver as a keystone species. It would just take a degree of political will to end trapping. He is hopeful that the Collaborative and USFS can align.
- Kami learned recently of examples of other National Forests that have enacted beaver trapping closures, which would seem to contrast with USFS's authority over habitat and not species. Some National Forests in Oregon have partially restricted trapping in partnership with ODFW, whereas other forests in Region 3 (southwest) have enacted trapping closures unilaterally. She had heard that R3 was having trouble getting grant funding to complete its restoration work without a trapping closure, and is curious to know if state agencies in Region 3 partnered with USFS to enact a trapping closure or if it acted unilaterally. Paul Engelmeyer offered to check with his contacts in the Southwest and find out.

Action Item: Paul Engelmeyer will look into whether USFS Region 3 partnered with state agencies to enact a trapping closure on public lands or acted unilaterally.

- Paul suggested the Subcommittee revisit the conversation about beaver as a "keystone" species once it is known whether a National Forest can close a forest to trapping. The Coordinator will circle back on this topic before the next Subcommittee meeting.

Action Item: The Coordinator will revisit the conversation about beaver as a "keystone" species on the next agenda, once it is know whether a National Forest can close a forest to trapping.

Beaver Dam Analogues

- Dave Eisler, Siuslaw Watershed Council, turned to questions provided in advance concerning USFS's attitude towards Beaver Dam Analogues (BDAs). Kami shared the following responses:
    - Where used, beavers haven't grabbed onto BDAs and have continued building dams at those sites where USFS has tried to divert them from culverts or have chosen different locations. This is likely because stream hydrology is the issue. If the stream channel has issues or is disconnected from the floodplain, building a BDA will not help the underlying hydrology issue.
    - Actions that address the underlying hydrology issues will be more successful. For example, Five Mile Creek was 15-17ft incised up and down the banks, and BDAs wouldn't have done anything there. On the other hand, due to the phased work that was conducted over a ten-year period at Five Mile and Bell Creeks, beaver showed up immediately because the hydrology was reset.
    - Another reason for minimal BDA use on the SNF is that the Oregon Department of Fish and Wildlife (ODFW) ODFW is pushing back with a perspective that BDAs are detrimental. Kami noted Greg Abke, Fish Passage Coordinator for the State of Oregon, has this perspective.
    - Kami added that beaver deceivers at culverts are causing fish passage issues.
    - USFS used BDA tests upstream of existing dams, but it wasn't successful because beavers like to build tall dams.
- Paul noted that beavers will create dams for free, while BDAs ostensibly need to be maintained by engineers. Beavers will find the right spots to put the dams if we let them.
- Kami added that several places in the Southwest (USFS Region 3) are not implementing BDAs in areas where trapping still exists, because the purpose of a BDA is to encourage beavers, not to replace them. But if a forest dedicates resources to a project and don't know what kind of trapping pressure a species is facing, funders may be hesitant to support the project.
- This will take federal and state agencies getting on the same page about how to manage the species.

Next Steps

- Kami read through the Subcommittee's draft ZOAs and thinks that while the water storage story is told well, she did not observe a ZOA that addresses flood attenuation and asked if the Subcommittee would want to address the benefits of a system connected to a floodplain to dissipate floodwaters. (See draft ZOA i).
- If a beaver wetland complex like 5 Mile Bell holds acre-feet of water year-round, flood attenuation is important because an inch of rainfall added to each acre foot is a ton of water that, if held, won't damage or flood another location.
- The Wildlife Subcommittee needs more feedback from other OCCFC members on how to make these draft ZOAs more action-oriented and will discuss whether or how to incorporate flood attenuation into its ZOAs at the group's next meeting.

Action Item: The Subcommittee will discuss whether or how to incorporate "flood attenuation" into its ZOAs at the group's next meeting.

- Paul would like to see something in draft ZOA (j) akin to USFS' climate carbon action strategy. Kami will search for a regional carbon sequestration white paper draft that might be helpful and share with the subcommittee.

Action Item: Kami will share the USFS's Region 6 draft carbon sequestration white paper with the Subcommittee.

V. Wrap-Up & Next Steps

- The Coordinator wrapped up the meeting and reviewed action items.
- The Subcommittee will hold its next meeting on **Monday, December 11 from 2-3pm on Zoom**.

The meeting was adjourned.

Appendix A: Questions for USFS re Aquatic Habitat and Beaver Populations

1. Has USFS identified interior forest patches?
2. What is USFS's connectivity policy and how will it be implemented?
3. Can USFS provide an update on its Barred Owl control strategy? How is USFS planning to fund a Barred Owl removal program? Has USFS begun a NEPA process relating to Barred Owl control and are documents available to the public?
4. What impacts does USFS foresee the NF Smith project having on listed species, namely Marbled Murrelet, Northern Spotted Owl, and Coho? Is USFS designing its treatments to have an effect on those species?
5. Beaver Analogues:
    1. Will the FS be able to construct them at identified locations?
    2. Will contractors be able to use them?
    3. Are there FS guidelines that would prevent their use?

DRAFT Preliminary Zones of Agreement Statements
Oregon Central Coast Forest Collaborative
Wildlife Subcommittee
v. 09.7.23

Topic: Beaver (*ZOA statements below have been adopted from the Adaptation Partners' Climate Change Adaptation Library.)*

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c. **Aquatic conservation:** The OCCFC supports the commitment that the USFS has made to improve Tier 1[1] and Tier 2 key watersheds in the Siuslaw National Forest.

d. **Water quantity:** Restore beaver habitat and populations by increasing in-stream flows with dry-season water conservation to reduce withdrawals. Reintroduce and promote beaver by increasing water residence time, storing water on the landscape, restoring meadows and promoting beaver dams.

e. **Habitat quality**: Expand and restore beaver habitat and populations by decreasing fragmentation of stream network to maintain connectivity and habitat quality and support habitat resilience. Provide woody browse and consider restoring willow to maintain the integrity and quality of remaining habitats or habitats that may become suitable as temperatures increase.

f. **Riparian Areas, Wetlands, and Groundwater-Dependent Ecosystems:** Increase upland water storage by accommodating and maintaining larger beaver populations. Increasing beaver populations via translocation and trapping creates more wetland habitat by storing water on the landscape and reduces the effects of decreased streamflow in riparian areas. Beaver population management tactics may include accommodating and maintaining larger beaver populations on the SNF, trapping and relocating beavers that create dams that flood trails, using riparian shrub planting, protection, and riparian aspen restoration and management, and/or using valley form analysis to assess potential sites for beaver colonies and channel migrations.

[1] The U.S. Bureau of Land Management (BLM) and U.S. Forest Service (USFS) define Tier 1 key watersheds as watersheds "contributing directly to the conservation of at-risk salmonids". U.S. BUREAU OF LAND MGMT, U.S. FOREST SERVICE, NORTHWEST FOREST PLAN AQUATIC CONSERVATION STRATEGY (2005), https://www.dfw.state.or.us/fish/crp/docs/coastal_coho/reference/usfs-blm/blmusfsfinalreport.pdf

g. **Water Resources and Infrastructure:** Implement passive restoration (e.g., appropriate management of beaver populations, reduction or removal of activities that are detrimental to riparian function) to manage for highly-functioning riparian areas that can absorb and slowly release the flow of water off the landscape. Where appropriate, promote and increase beaver populations to restore watershed, floodplain, riparian area, wetland, and groundwater-dependent ecosystem functions.

h. **Watershed Function:** Add wood to streams and increase beaver populations to help restore watershed functions by connecting floodplains, supporting groundwater-dependent ecosystems, reducing drainage efficiency, and maximizing valley storage.

i. **Carbon Storage:** Promote natural carbon capture and storage (CCS) areas by restoring beaver habitat and populations, which create wetlands and wet meadows by building and maintaining dams. Water stored in this fashion may also improve downstream flows into the summer and beyond.

j. **Projects:** When identifying and developing instream habitat improvement projects, USFS will incorporate Beaver habitat needs into its selection criteria.