

MEETING SUMMARY

WESTERN OREGON STATE FORESTS HCP SCOPING TEAM

Tuesday, February 4, 2020, 10:00 am – 2:00 pm

Oregon Department of Forestry, 2600 State St, Salem, OR

ATTENDEES

Participants: Jim Muck (NOAA Fisheries), Julie Firman (ODFW), Nick Palazzotto (ODF), Randy Smith (ODF), Rich Szlemp (USFWS), Rod Kraemer (ODFW), Brian Pew (ODF), Ryan Singleton (DSL), Josh Seeds (DEQ) – *by phone*

Technical Consultant and Guests: Troy Rahmig (ICF), Melissa Klungle (ICF), Mike Wilson (ODF)

Facilitation Team: Cindy Kolomechuk (ODF), Deb Nudelman (Kearns & West), Sylvia Ciborowski (Kearns & West)

WELCOME AND INTRODUCTIONS

Deb Nudelman (Kearns & West) welcomed members. Meeting participants introduced themselves.

Deb reviewed the agenda, which includes: 1) Agency updates from Scoping Team (ST) members, 2) Report out on stakeholder engagement, 3) Riparian Management Areas (RMAs), 4) Riparian Management Activities, 5) TerrainWorks Modeling Follow-up, 6) Confirm topics for Steering Committee update, and 7) Approach going forward, next steps, and summary.

Cindy Kolomechuk (ODF) reflected on the past ST meeting on December 3. At the last meeting, the team focused on the terrestrial strategy and discussed northern spotted owl and marbled murrelet. The goals for today's meeting are to dive in on the methodology of what may occur in the Riparian Management Areas (RMAs), and discuss expectations about what activities could occur in those areas to accomplish conservation goals and objectives. Today will also include an update on modeling and how it will be used.

AGENCY UPDATES

Members provided the following updates relevant to the Western Oregon State Forests HCP process:

Oregon Department of Forestry (ODF): 1) Randy Smith will be joining the Scoping Team as an ODF representative. Randy is a wildlife biologist and has expertise in the aquatic side, and can help provide that expertise.

REPORT OUT ON STAKEHOLDER AND PUBLIC ENGAGEMENT

Deb noted that the project team is considering the engagement schedule for 2020 and is anticipating that there may be a meeting open to the public in late March through mid-April, with a focus on explaining the approach for the conservation strategy. There would then be another meeting open to the public in late May through mid-June to provide further detail on the conservation strategy and work products to date. A last meeting open to the public would then occur prior to the BOF meeting in October. After each meeting open to the public, stakeholders are invited to request additional engagement; to date, the team has been meeting with representatives from the industry, conservation, and recreation community.

Deb encouraged ST members to stay in touch with their SC members, to help ensure alignment on key topics throughout HCP development. The project team is available to help with those briefings as needed.

RIPARIAN MANAGEMENT AREAS (RMAs)

Troy Rahmig (ICF) provided an overview of the goals for today. The team will explain terminology being considered around the aquatic strategy, have a discussion around how to measure riparian buffers, and hear information on the utility of buffers as it relates to temperature and wood recruitment. The intent is to have a discussion around what we are trying to accomplish in the buffer areas, which can help inform the appropriate buffer widths; and also discuss what activities can occur within the buffer areas to meet biological goals and objectives. Troy clarified it is important to discuss the rationale for the buffers first, which would then lead to determining the buffer width to meet that rationale.

A member added that a buffer width that meets fish objectives might not necessarily meet objectives for terrestrial species. Although today's focus is on the aquatic species, it will be important to talk about how activities within buffers can affect terrestrial species. Unstable slopes and equipment exclusions are topics that likely would be important as part of this conversation.

RMA Terminology

Troy noted that the team is proposing to use the term "Riparian Management Area" to describe the area within the riparian buffers. He asked the group whether they are aligned with that terminology, or if they have other suggestions or concerns.

Members discussed and had the following comments and questions:

- The term “RMA” is fine, but it will still be important to know what the hard buffers are (i.e., areas where no trees could be harvested). If there is an area that is designated as no-touch, it should be described that way.
- The group suggested discussing what might happen within RMAs, and then circling back to see if there may be different terms needed to describe different types of areas (i.e., no touch areas versus areas where some management is occurring).
- In discussing the RMAs, topics that will be important to define and discuss are: canopy cover, trees per acre, better defining what happens in confluences with fish bearing streams, thinning proposals, and definition of “high density stocking” within forests. The NOAA Fisheries representative noted that NOAA Fisheries sent ODF a paper on thinning prescriptions, which are driven by temperature and wood recruitment. The paper was not peer reviewed and was never finalized but includes useful concepts for consideration.

Measuring Buffer Widths: Horizontal versus Slope Distance

Troy noted that there are different ways to measure buffer widths: by horizontal or slope distance. ODF measures buffers using horizontal distance, rather than slope distance, which is more widely used in Oregon. It will be important to be very clear in communications and in the HCP document, to make it clear that distances are measured in horizontal distance, not slope distance. Troy asked for comments and suggestions, and whether members are aligned around using horizontal distance as a measurement.

Members discussed and had the following comment and questions:

- ODF noted that there is operational simplicity to measuring buffers by horizontal distance.
- A member noted that the State of Washington also uses horizontal buffers on both state and federal lands, at least since the 1999 Fish Law was passed.
- One advantage of measuring buffers using horizontal distance is that it provides wider buffers on steeper slopes, which are the most erosion prone areas; it automatically builds in compensation for steeper slopes. Others noted that it will be important that the HCP document explain that using horizontal distance compensates for steep slopes, as this is an added benefit to the conservation strategy.
- A member asked whether there are concerns about using horizontal distance to measure the area involved within a buffer. ODF noted that it is easier to measure area using horizontal buffer. There is no difference in the area measurement whether horizontal or slope distance measurements are used.
- Overall, members agreed that using horizontal distance to measure buffers is appropriate, rather than slope distance. They did have some concern that using horizontal distance will be more difficult for the public to understand, even though using

horizontal distance has many benefits, in particular that it compensates for steep slopes. Diagrams or some clear illustration may help explain the concept, to avoid public misconception. It will also be important to explain the benefits of using horizontal distance (i.e., automatic compensation for steep slopes).

- When distances are referenced in the HCP document, suggest a footnote to explain that horizontal distance is being used, to avoid any confusion.

Average and Minimum Buffer Widths

Troy explained that the ODF and ICF team is looking for input and discussion on how buffer widths are described. The team proposes that buffer widths be described as averages rather than minimums. Troy invited ST members to discuss whether they are aligned with the approach of describing buffer widths as averages, and whether minimums are needed in any cases.

Members discussed and made the following comments:

- Scoping Team members generally agreed that it is appropriate for the HCP to describe buffers in terms of average buffer widths, and then describe typical variances. Generally, it would be helpful to have a minimum buffer width. If it is not possible to meet the average in one area, would need to over-allocate in another area to make up for that and meet the average.
- NOAA Fisheries staff noted that in HCP implementation, NOAA Fisheries would be looking at ODF monitoring reports to understand whether the buffer requirements are being met. Annual reporting would describe how averages are being met, and any exceptions (variances) being made.
- It will be important to consider how to measure buffers that include culverts near small streams.
- Members discussed how existing roads are factored into the buffer widths.
 - NOAA Fisheries clarified that if a road is near the stream, the buffer begins at the stream, includes the road, and then continues past the road to the buffer line, removing the width of the road from the buffer width and compensating with an overall wider buffer.
 - Suggest that the HCP clearly describe what happens when there is a road within the RMA. When a road occurs within the buffer area, it should be clear how the road's influence on the stream is addressed. It will be important to describe the potential impact of roads. If a road occurs within a riparian area and is not disconnected, those areas might be targeted first for disconnection.
 - ICF noted that that team is starting the process of using GIS to understand the road system near riparian areas and will be able to describe that at a future meeting. Members asked how exact road locations are verified in GIS. ODF

noted that it has a roads layer in GIS. For state forests, the roads data is accurate and corrected to LIDAR.

- A member noted that in general, there is understanding that existing owls and murrelets have already either gotten used to existing roads or avoid them.
- Consider how roads in buffer areas offer a potential opportunity for mitigation.
- Members discussed flexibility in buffer areas:
 - In the field, it is important to have some flexibility. ODF staff often over-allocate riparian areas into the buffer and go beyond the buffer requirement, knowing that there are natural fluxes in the landscape.
 - The main impediments to achieving average buffer width are steep ground and roads, so flexibility is useful.
 - Flexibility can be difficult in yarding corridors.
- ICF asked whether it would be appropriate to have flexibility to have average buffer widths for one side of a stream or another, or whether minimum buffers on either side of the stream are appropriate.
 - A member noted that the desired outcome condition should be to have a certain density of bigger trees in buffer areas so that trees can fall into streams and allow crowns for bird use. Some of those trees would naturally fall into streams and become large wood. If those trees are taken out as part of thinning process, then there is a loss of opportunity for large wood to fall into streams. For site specific areas, it might be okay to have different buffers on either side of the stream, as long as the desired outcome is kept in mind, and as long as attention is paid to shading and how that affects trees. Suggest starting with programmatic buffers, and then having site specific exceptions as needed.
 - Within RMAs, suggest that proposed thinning only be allowed under certain circumstances. Proposed thinning should only occur if a certain number of trees per acre remains, if a certain canopy cover can be retained, if temperature remains appropriate for protection of fish species, and if shade is protected. Would need to know some conditions about the site to determine whether harvest is okay (i.e., number of trees, canopy cover, temperature, shade, etc.). Size of trees is also important: once a tree gets to a be a certain size, might not want to thin beyond that size.
 - Also consider what kind of thinning could occur in the area just outside of the RMA: there might be a desire to have a certain number of trees per acre with the idea that some trees might fall to hit the stream for large wood.

- Suggest flexibility to apply different buffers based on sensitivity to climate change. For example, might want wider buffers in areas that are more temperature sensitive.
- Suggest having a table that shows under what conditions buffer should be protected or added. Foresters could then consider those variables when going out into the field.
- Members discussed the rationale for potential management within RMAs:
 - The goal of active management in RMAs should be to improve habitat to improve fish species. If the explicit goal is to benefit fish habitat, then the question about whether or not to thin trees would be driven by the biology and what's going to benefit that riparian habitat. The goal of harvesting trees within RMA is not to increase timber revenues, but rather to benefit the species. It may actually be quite costly to cut trees within RMAs (i.e., not commercially profitable). There should be discussion about whether managing within RMAs is the best use of funding, or whether funds could be spent more effectively in other ways to get better species habitat and benefits.
 - It would be helpful to understand how much area within RMAs could actually benefit from some level of harvest (i.e., what general percentage).
 - Members noted that terrestrial versus aquatic species within RMAs have different needs. Certain actions in RMAs might benefit aquatic species but not terrestrial species, and vice versa, so there will need to be consideration of these tradeoffs. A member noted that state forests include a lot more terrestrial area than RMA area, so it makes sense to implement actions in RMAs that are more beneficial to riparian species.
 - Many habitat activities that occur in upland terrestrial areas will also cost money. Will be important to discuss how much money is spent in uplands versus riparian areas.

Stream Temperature and Buffer Strategy

Jim Muck (NOAA Fisheries) and Julie Firman (ODFW) provided a review of studies a literature focused on stream temperature. Troy noted that the intent of the conversation today is to determine whether the current data and information is sufficient to move into Terrainworks modeling.

The main points of Jim's presentation included:

Jim made a brief presentation of science review and summarized literature that describes the relationship between stream shade loss and subsequent stream temperature increase.

Members discussed and made the following comments:

- Discussed what amount of temperature change affects fish. DEQ defines 0.3 degrees as an increase in temperature. The 0.3 degrees is cumulatively for all sources.
- Discussion about appropriate buffer widths at the confluence with fish bearing streams. It is important to avoid shade loss and corresponding increase in stream temperature. Members discussed potential mitigation measures to offset any effects on temperature (for example: if there is less cutting in the watershed overall, that would reduce temperature effects).
- Members discussed buffer strategy along small perennial streams at the confluence of perennial or seasonal Type F streams. They considered how buffer widths could impact shade loss and temperature increases, and how drainage plays a part in the buffering strategy along perennial streams. They noted that if thinning occurs in RMAs, this can result in canopy cover loss and potential shade loss.

Julie made a presentation on stream temperature related to buffer width and patch distance. The main points of her presentation included:

- Review of eighteen references, including recent 2018 paper, on heating that occurs based on various buffer widths.
- Research Looked into how much distance is needed to dilute heat in streams before it reaches fish. Six references indicate the percentage of recovery within a stream.
- A recent 2018 paper shows how much heating occurs downstream depending on buffer width. A logarithmic curve shows that most of the recovery happens fairly rapidly; at 500' downstream, there is about a 0.3 increase in temperature. The graph shows that any warming that occurs could be mostly recovered within about 500 feet. There is not much difference between 1000 ft and 5000 ft downstream, because most of the heat impact has been diluted by 1000 ft downstream.

Members discussed and made the following comments:

- Suggestion to also look at several other references that are not included here. Julie noted that she will look at those references and update the data summary.
- Discussed whether and under what circumstances cooling occurs in streams. Some noted that heat can be diluted through groundwater, and some heat can be lost to the atmosphere.
- ICF suggested that Scoping Team members identify any mitigation measures that could be taken to offset temperature effects in places where temperature increases cannot be avoided.
- ICF suggested that the team could use data to identify areas in the permit area that are more susceptible to warming, and consider varying buffer widths (i.e., wider buffers in areas that are more susceptible to warming, and smaller buffers in areas that are less

susceptible to warming). A member noted that it will be important to have site specific data to justify smaller buffers, and an explanation of how much temperature increase could be expected.

- Discussed beaver management and alder management, and how that relates to stream temperature and shade:
 - Beavers can help with salmon and coho recovery, and there is a push by some to restore beaver habitats. However, beaver needs alder and early seral openings, which are not compatible with older forests. There is opportunity for research on beaver dams. If areas are opened around beavers, beavers may naturally expand into those areas
 - Creating beaver habitat and alder stands is a potential mitigation measure. It will be important to consider whether this is the most effective type of mitigation.
 - Will be important to consider the best location for beaver habitat. If beaver management becomes part of the HCP conservation strategy, consider taking this action in areas other than around large perennial streams (because beavers will not build dams across large perennial streams).
 - There is a tradeoff: removing some older forest to bring in beaver results in degrading forest for the benefit of creating salmon habitat. There may be opportunities to maintain older forests and do restoration projects that have a similar impact as having beavers there. On the other hand, beavers may be able to accomplish more than habitat restoration projects could.
 - Note that winter habitat is the limiting factor for beavers. Temperature and habitat needs are different throughout the year.
 - The overall question is whether beaver recovery should be part of the management tools within the HCP to benefit covered species. Members discussed benefits and tradeoffs of including beaver strategy within the HCP or alternatively in ODF's FMP.

RIPARIAN MANAGEMENT ACTIVITIES

Troy framed a discussion around what kinds of management activities could occur within RMAs. The team presented some examples of management directions and best management practices. Management directions could include a variety of directives that ODF would be required to follow within the RMA. The best management practices (BMPs) would be suggestions for best practices under certain conditions (for example, options for how to design roads to reduce effects and achieve conservation outcomes). Troy explained that the intent of the conversation today is to gain alignment about what the terms “management directions” and “BMPs” mean, and to begin to discuss appropriate management directions and BMPs.

Members discussed and made the following comments:

- Suggest management direction that prohibits new roads in riparian areas, with certain exceptions if needed. May also consider a cap on road miles, and direction around whether to decommission old road miles when new road miles are created. Another member noted that there will need to be attention paid to where new roads can be built: it will be difficult to avoid building in RMAs and terrestrial management areas.
- Some of the BMPs articulated for roads are more appropriate to classify as management directions.
- Suggest having a programmatic list of what may occur within the RMA, and then variances for other things that could be allowed for in the RMA under certain conditions.
- Suggest yarding corridors as BMPs.
- Troy: the way we would present this info in HCP is that things that are management direction would be part of the plan. BMPs would be incorporated as an appendix of options.
- Suggest management direction to describe where variable buffers could be implemented to deal with temperature.

Troy suggested that at a later meeting, the team bring a standard proposal for what would be permissible within the RMAs as well as what variances/exceptions could occur inside the buffer under certain conditions. The Scoping Team could then discuss and refine that proposal.

TERRAINWORKS MODELING FOLLOW-UP

Troy and Melissa provided an update on the TerrainWorks modeling and methodology:

- The buffers are part of the package that will go to TerrainWorks for use in modeling. TerrainWorks will also model the amount of wood that could be recruited into the system as a result of buffer strategy. TerrainWorks will also give us the ability to rerun the model with changes to the buffer strategy. Today, want to give you an update before TW does its modeling, and show you the methodology they will use.
- TerrainWorks will be getting started on the wood recruitment modeling and will estimate wood recruitment potential under different riparian management strategies.
- Reviewed the NetMap data attributes.
- The model will be used to estimate wood recruitment and decay along streams. Wood gets into streams through either mortality or decay. There are assumptions in the modeling on this wood recruitment.

- The modeling will show wood recruitment into fish bearing streams, to allow us to understand the correlation between riparian strategy and impact on species.
- Several papers are used in the model assumptions (Miller and Burnett 2007, Miller and Burnett 2008, and Benda and Dunne 1997).
- After TerrainWorks completes its modeling, the Scoping Team can have further conversation on buffering strategy.

Members discussed and made the following comments:

- Consider running the models against the current take avoidance strategy, which could be useful in the later NEPA analysis.

CONFIRM TOPICS FOR STEERING COMMITTEE UPDATE

The next SC meeting is scheduled for March 31, 2020.

APPROACH GOING FORWARD, NEXT STEPS AND SUMMARY

Deb thanked members for their participation.

Future ST meetings will be extended to four hours to allow for more time for discussion. The next ST meetings are scheduled for:

- Tuesday, February 25 (terrestrial focused)
- Tuesday, March 3 (aquatic focused)

ACTION ITEMS

The following action items were identified throughout the meeting:

- KW – Update calendars to reflect four-hour Scoping Team meetings.
- Julie Firman – Share slide presentation.
- Josh Seeds – Share additional references with Julie and Scoping Team. Share RipStream resource modeling regarding heat loss/dilution.
- Julie – Incorporate the additional references and update slides.