

MEETING SUMMARY

WESTERN OREGON STATE FORESTS HCP SCOPING TEAM

Tuesday, June 2, 2020, 10:00 am – 2:00 pm

By Webinar/Video Conference

ATTENDEES

Participants: Rich Szlemp (USFWS), Rod Krahmer (ODFW), Ryan Singleton (DSL), Jim Muck (NOAA Fisheries), Tere O'Rourke (NOAA Fisheries), Mike Wilson (ODF), Julie Firman (ODFW)

Technical Consultant and Guests: Troy Rahmig (ICF), Melissa Klungle (ICF), Dan Miller and Lee Benda (TerrainWorks)

Facilitation Team: Cindy Kolomechuk (ODF), Sylvia Ciborowski (Kearns & West), Michelle Bardini (Kearns & West)

WELCOME AND INTRODUCTIONS

Sylvia Ciborowski, Kearns & West, welcomed members. Meeting participants introduced themselves.

Sylvia reviewed the agenda, which included: 1) Agency updates and report out on the Steering Committee (SC), 2) Riparian Conservation Area (RCA) definitions, 3) TerrainWorks modeling summary, 4) Temperature strategy discussion, 5) RCA/Equipment Restriction Zone (ERZ)/Habitat Conservation Area (HCA) frequency table update, 6) Restoration prioritization update, 7) Revisit RCAs using updated Geographic Information System (GIS) data, 8) Confirm topics for SC update, and 9) Approach going forward, next steps, and summary.

AGENCY UPDATES AND REPORT OUT ON STEERING COMMITTEE MEETING

Members had no updates to share relevant to the Western Oregon State Forests HCP process.

Troy Rahmig, ICF, reported out on the May 28 SC meeting. The SC received updates on the conservation strategies, road management actions, timber harvest modeling, restoration actions, and the conservation fund. Adaptive management was also discussed during the meeting. The project team provided more technical details and the SC expressed interest in seeing this level of detail at future meetings. The SC recognized that there is a lot of work to complete before the October Board of Forestry (BOF) meeting. The SC agreed with focusing on the topics that are most pivotal for the comparative analysis as the BOF will review this to make a decision about whether to move forward with the HCP.

Sylvia then gauged the ST's interest in having a joint ST-SC meeting in July or August. The meeting would likely be a time to discuss the topics that would be presented to the BOF and address any areas of concern or red flags. ST members noted that they would be interested in a joint meeting if it would be beneficial and requested seeing a proposed meeting agenda. The project team is to consider whether a joint ST-SC meeting would be helpful and will provide an update at a future meeting.

RIPARIAN CONSERVATION AREA DEFINITIONS

Troy presented on the RCA definitions. Troy reviewed the past conversations on the definitions of high energy stream and potential debris flow tract and noted that there have been no changes. He mentioned that the ST affirmed the definitions at a previous meeting and explained the intent is to close the loop and move forward with the definitions.

Troy reviewed a map showing the stream network, stream types, potential debris flow streams, and high energy streams by District. Given the definition of debris flows, the buffers seem sufficient to capture the wood flow into the system and would not result in much influence on the landscape. As a result, the project team felt comfortable leaving the definition as is.

Discussion

ST members discussed the RCA definitions and provided the following questions:

- What percentage of wood was thought to be had in the large wood recruitment effort?
 - We did not set a recruitment goal to define what the buffers would be. TerrainWorks will review what level of recruitment those buffers will provide during their presentation today.

TERRAINWORKS MODELING SUMMARY

Troy introduced the Dan Miller and Lee Benda with TerrainWorks and explained TerrainWorks was brought in to help with modeling on wood recruitment. Today, TerrainWorks will present the modeling process, methodology, and initial results.

Dan presented results from the wood modeling and provided an overview of the modeling outputs. Key topics of the presentation included:

- The objective of the modeling was to evaluate riparian buffer scenarios in the context of wood recruitment to streams. To meet this objective there were four approaches: 1) proportion of wood from different recruitment sources, 2) related change in recruitment with different buffer widths or along stream extent, 3) spatial variability in relative importance of different recruitment mechanisms, and 4) juxtaposition of wood sources with habitat types.

- Tasks that are required to accomplish these models were: 1) delineate and classify channels, 2) identify potential landslides, debris flow source areas, and runout paths and estimate the frequency of occurrence, and 3) determine the number, size, and location of trees available to fall into channels and/or be carried to channels by landslides and debris flows.

Channels:

- It is important to know where the channels are and the attributes of the channels. The stream layer should match up with the ODF stream layer.
- Reviewed how a channel is represented graphically. This allows data at a fine scale to be maintained and integrated into GIS formats.
- Riparian buffers vary with stream type. Stream type is determined by conflation to the ODF stream layer and modeled attributes.

Landslides and debris flows:

- Used empirical models that relate terrain attributes to observed locations of landslide initiation and extent of runout.
- Translated topographic attributes into landslide density. This was used to estimate relative spatial probability of a landslide occurring.

Runout:

- Runout varies with terrain steepness, topographic confinement, and changes in flow direction.
- The probability of run out from an initiation point to any downstream location was calibrated using debris flow field surveys from ODF's study to estimate the probability of delivery from a potential landslide initiation site to any channel.
- When thinking about wood recruitment, the model assumes the locations with increased spatial density tend to have landslide and debris flows more frequently. The model translates spatial probability to frequency of debris flow.
- The model suggests that the terrain is susceptible to debris flow.
- We are able to take the expected probability of the expected length of debris flow and develop criteria for identifying debris flow prone streams. This allows us to predict which channels are more likely to have debris flow tracks than others. Some streams are more susceptible to landslides and others are more susceptible to debris flow.
- Reviewed wood decay rates.

Wood recruitment model:

- Reviewed stand-type mapping, stand inventory data, the stand growth model, and the tree fall model to understand which trees might contribute wood to the channels.
- There are three sources of wood to fish bearing streams: 1) riparian tree fall, 2) debris flow delivery, and 3) direct landslide delivery.
- There is spatial variability to the amount of wood that might be recruited.
- Reviewed accumulated volume in non-fish bearing channels and fish bearing channels. The accumulated volume varies by assumed decay rate.
- Reviewed model for debris flow delivery of standing trees and delivery of wood by landslides to type N and type F channels.
- Discussed legacy wood.
- Presented a summary of the modeling results including the total volume, percentage of maximum predicted volume by temperature zone, percentage received from type N, and predicted volumes delivered to type F and type N channels.

Discussion

ST members discussed the TerrainWorks wood modeling and provided the following questions and comments:

- Clarifying question regarding the volume of wood in the immediate riparian area. Volume was shown to be contributed by the landslides; however, the landslide areas are not 100% along each stream channel.
 - The model shows increased numbers of accumulated volumes delivered to type F and to type N channels, including debris flows and high energy. The volume of wood includes primarily that from type F channels; these channels are collecting wood overtime and decaying wood overtime. In the model, the volume increased and then levels off.
- The ODF study went along the stream channel and evaluated locally contributed wood in streams that was delivered through landslides. Was this the study used in the modeling?
 - The modeling looks at how many trees will fall and where they end up. This was derived from the inventory data and stand growth data. The model assumes fall direction is any direction to maintain simplicity.
- How significant is the effect of timber harvest on changing the likelihood of landslides?
 - Timber harvesting empirically has influence on landslide probability as there is a relationship between landslides, density, and stand age. The model is based on topographic attributes and does not include timber harvest. It is feasible to do a

model that incorporates anticipated harvest schedules, locations, and storm sequences. We would need to look at harvest, when it is, and where it occurs.

- Does the modeling take into account how harvesting may affect landslides? It is important to look at if there will be trees present during a landslide or a lack of trees present due to clear cutting.
 - The estimated number of landslides does not account for harvest outside of the buffers.
- It was mentioned that fire is not included in this modeling. Suggestion to include more research on fire as more trees fall into riparian zone when there is a fire.
- How do the different sources (riparian verses debris flow) relate to buffer width and what is delivered?
 - The modeling results show total volume to be similar with the different buffer widths.
 - Suggestion to cite the graph for tree fall and source distance function to justify the buffer size.
- A member noted the limitations of the model. It is difficult to compare the model on wood recruitment to actual numbers as the model assumes consistency and makes numbers constant when they may vary/change based on the situation (i.e., large storms).
 - The model is built as a stochastic time series model that estimates wood in terms of time and spatial average rates.
- Bank erosion accounts for 5-10% of wood that comes into the system. This is dependent on where the erosion is occurring, the typography of the basin, and the environment. There is not a lot of opportunity for channel migration due to typography. In these environments, it is likely that wood coming from bank erosion is minor.
- How does the model rotation effect the modeling in terms of wood output or quality of wood? Does the model use a 70-year rotation?
 - The model is set up to model average annual recruitment in a given year. We can look at what would be the average rate of recruitment for any single year within the modeling time period. The model also estimates the volume of wood that would accumulate overtime while accounting for wood decay so we would be able to look at how much wood would accumulate over a 70-year rotation.
- How does steam classification of streams as fish-bearing versus non-fish bearing influence wood recruitment?

- The ODF stream layer was used to determine what streams were fish bearing or non-fish bearing. Because there is a lot of detail in the ODF stream layer and it is ground based information, TerrainWorks did the conflation based of this study.
- From a management perspective, if the classification of streams as fish-bearing and non-fish bearing has some inaccuracies, would the amount of wood delivered to different size buffers change appreciably?
 - It is unlikely that the amount of wood delivery would change significantly.
- It was clarified that the model indicates that most of the wood is being contributed adjacent to the stream.

TerrainWorks will distribute the PowerPoint presentation slides to the ST and include the model descriptions and links to the published reports.

TEMPERATURE STRATEGY DISCUSSION

Troy presented on the temperature strategy for the HCP. Key topics of the presentation included:

- There are two buffering strategies: 1) the temperature protection zone and 2) the wood delivery zone.
- Reviewed stream types with expanded buffers at the intersection of type F streams.
- The intent of the temperature strategy is to minimize the effects of temperature, rather than avoiding the potential effects of temperature.
- The dimensions of the buffer are still an open question. It was noted that the modeling shows there is not much of difference in wood recruitment based on buffer width. The main question is in regard to the buffer width for temperature and the team is continuing to work on this.

Discussion

ST members discussed the temperature strategy and provided the following questions and comments:

- A member expressed concern that a temperature protection zone insufficient in size could potentially raise stream temperatures. There is a need for more information, data, and discussion before a buffer width is determined.
- Suggestion to put this justification on hold until the ST determines the buffer size. Once a buffer is determined, then a write up with a justification and explanation of the buffer size should be developed for ST review.

Troy reviewed next steps and explained the memo will be paused until the ST decides what the buffer size should be. The project team will then revise the memo providing a justification for the proposed temperature projection zone after the buffer is determined. The ST can then decide if a separate write-up is needed or if it can be written into the HCP directly. The goal is to present the ST's recommendation on the buffer strategy at the next SC meeting. Suggestion to schedule a small group meeting to discuss the buffers, look at the data, and begin developing the riparian strategy prior to the next aquatic ST meeting.

Melissa Klungle, ICF, then presented on the temperature vulnerability analysis to prime future conversations. Key topics of the presentation included:

- There are three things used to locate areas that are most susceptible to thermal loading:
1) Coho distribution, 2) streams with a southern aspect, and 3) max channel width.
- Reviewed Districts and the stream miles in the permit area that are susceptible to warming and areas not susceptible to warming.
- Showed what warming looks like within species distribution and presented temperature vulnerable waters within fish distribution. The intention is to do an analysis of streams susceptible to thermal loading.
- Proposed next steps include:
 - Perform temperature vulnerability analysis for all stream types in the permit area.
 - Identify locations in the permit area that are upstream of the temperature protection zone and identify the temperature protection zones that are susceptible to thermal loading.

Discussion

ST members discussed the temperature vulnerability analysis and provided the following questions and comments:

- Why was the southern aspect included?
 - The southern aspect is between 60 and 120 degrees and there is literature showing this aspect is most susceptible to warming. Only a small percentage of the stream networks in Astoria meet the criteria of having a southern aspect
- Concern that the graph and data give the perception that only percentages of the stream need to be buffered. Suggestion to rename the analysis as “temperature protection areas” or “areas most susceptible to warming.”
- This analysis will become part of the justification in the HCP about why the buffers are adequate. The intent is to show that the buffer strategy in place is sufficient for temperature protection.

- This graph aims to be an internal data check to identify which susceptible areas of the stream are protected.

The ST was encouraged to identify additional locations in the permit area that would be vulnerable to temperature and to send any additional thoughts or feedback on the temperature vulnerability analysis to the project team.

RCA/ERZ/HCA FREQUENCY TABLE UPDATE

Troy and Melissa presented a table showing all RCA, ERZ, and HCA activities and the frequency of these activities. The table aims to provide an overall view of the activities that will be included in the HCP. It was noted that the table will be the backbone of the effects analysis. The table will be an appendix in HCP and will be sent out to the ST for review after the meeting.

Discussion

ST members discussed the RCA/ERZ/HCA frequency table and provided the following questions and comments:

- The road section of the HCP is going to be important, and the table is a good start to documenting road management. There are two types of road buildings: 1) a road that crosses the stream and 2) a road that runs parallel to a stream. Suggestion to clarify how much road building is occurring within 200 feet of a stream and to add more detail regarding road building and road crossing.
- It is important to define what frequency means and to define the terms used (frequently, infrequently, and rarely).
- The table is useful however it could be misinterpreted. The impacts of covered activities depend on the scale and magnitude of the activities. Suggest restructuring the table so the activities are listed from rare to frequent.
- How and to what extent will the HCP address off road vehicle areas? What can the HCP say about trying to curb illegal activity that occurs? There have been some issues in the past on state forest lands. Suggestion to recognize this in the HCP but not enforce it.
 - Off-road vehicle activities are hard to deal with in context of HCP. The strategy is to provide recreation infrastructure that promotes lawful use and to engage user groups to help them self-police. To the extent possible, ODF polices recreation, but ODF has limited staff and capacity to do so.
- How does the biological goals and objective making get carried through the HCP?
 - Once we enter into the HCP, the biological goals and objectives are implemented and would become a division goal. The biological goals and objectives will be assured under the HCP as they will be included in ODF's operations, annual operational plans (AOP), and implementation documentation.

- As we are reaching the point where we need to think through implementation of the HCP, the ST will provide feedback on the monitoring and reporting and what is included in the AOP. The AOP aims to show progress toward objectives over time.
- Suggestion to include categories that are no effect in the table.
- Suggestion to add more information and detail into the table and expand on the definitions so they are sufficient from a regulatory perspective.

Troy reviewed next steps and explained the table will be sent out to the ST following the meeting for ST review and feedback. ICF will then update the table to incorporate the feedback from today's discussion as well as the additional edits and comments submitted by the ST following the meeting.

RESTORATION PRIORITIZATION UPDATE

Troy provided an update on the restoration prioritization and explained the ST's comments and feedback have been incorporated into the document. The intent is to get to a place that is good enough for now and can be included in the HCP chapter. Today, we are seeking final ST feedback.

Troy presented the following updates to the restoration prioritization:

- Major changes included clarifying and refining the language and incorporating neutral statements.
- Added the focus to be on high priority projects and the importance of using recent data. The document recognizes data can change and ensures the use of up to date information.
- Updated language to make it clear that all projects are being considered and the implementation of projects will be appropriate for the level of impact each population has.

Discussion

ST members discussed the restoration prioritization and provided the following questions and comments:

- Suggestion to include that agencies have the opportunity to provide input to help prioritize restoration projects.
- Ensure restoration prioritization is described in the implementation chapter.
- There will be an annual reporting process. We will need to think through how often the group should meet to evaluate the implementation of the projects and address any issues.

Troy asked the ST to review the restoration prioritization and provide any edits and feedback by this week. After, it will be plugged into conservation strategy chapter of the HCP. The ST will have the opportunity to review this again when they review the draft chapter.

REVISIT RCAs USING UPDATE GIS DATA

Troy and Melissa presented on RCA characterization and revisited the RCAs using GIS data. The RCAs will need to include how the forest will change overtime. The comparative analysis will show the differences in approach and conservation outcomes between the Forest Management Plan (FMP) and the HCP and will be shared with the BOF in October.

Key topics of the presentation included:

- Presented graphs and charts with the focus on Coho and the Oregon coast conservation areas.
- The data looks at makeup of the forest adjacent to the stream.
- Reviewed forest composition including hardwood and conifer dominated forests.
- The RCAs are in place as a conservation action.

CONFIRM TOPICS FOR STEERING COMMITTEE UPDATE

The next SC meeting is scheduled for June 25. The agenda will likely include updates on the modeling and the conservation strategy and components.

ST members were encouraged to connect with SC members and keep them up to date on the HCP development and progress.

APPROACH GOING FORWARD, NEXT STEPS, AND SUMMARY

Sylvia thanked members for their participation. Members were encouraged to reach out with any agenda items or specific topics they would like to discuss at future meetings.

A member suggested evaluating the covered activities and identifying areas in need of discussion. It would be helpful to revisit the covered activities chapter and what will be presented to the BOF in October. The project team is continuing to have conversations about what will be presented in October; we need to have enough of the details of the HCP developed so we can make assumptions in the comparative analysis for the BOF to review and consider.

Additionally, there was a suggestion to consider a third alternative for NEPA in anticipation for the NEPA process.

The project team will be scheduling a small group meeting before the next aquatic focused ST meeting. The next ST meeting is scheduled for July 23.

ACTION ITEMS

The following action items were identified throughout the meeting:

- Project Team: Consider having a joint ST-SC meeting.
- Project Team: Send HCP schedule with meetings, deliverables, and deadlines to the ST.
- ICF: Distribute TerrainWorks' PowerPoint presentation on modeling to the ST and include the model descriptions and links to the published reports.
- ODF/ICF: Schedule a small group meeting to discuss the buffers, look at the data, and begin developing the riparian strategy prior to the next aquatic ST meeting.
- ST: Identify additional locations in the permit area that would be vulnerable to temperature and send any additional thoughts or feedback on the temperature vulnerability analysis to the project team.
- ST: Review the RCA/ERZ/HCA frequency table and provide any edits or feedback.
- ST: Review the restoration prioritization and provide any edits and feedback by this week.