Bark’s mission is to transform Mt. Hood National Forest into a place where natural processes prevail, where wildlife thrives and where local communities have a social, cultural, and economic investment in its restoration and preservation.

Since 1999, Bark has organized people from communities around Mt. Hood National Forest to keep watch over the ecological conditions of the forest and the actions of the federal agency tasked with managing these public lands, the Forest Service.
As an organization founded by white people in the settler-colonial lineage, Bark is a part of the legacy of land theft and the erasure of native authority over the lands now referred to as the “public lands of Mt. Hood National Forest”. As an organization, we have established influential relationships with the Forest Service, part of the same Federal government which facilitated the violent land theft, colonization, and displacement of indigenous people. Non-native Barkers have access and privilege to this land because of this violent legacy. We are working to transform our organization, to take responsibility for this legacy and these unearned privileges. We are learning to practice acknowledgment, respect, and support for the Molalas, Kalapuyans, Chinookan Clackamas, Chinookan Wascos, Northern Paiute peoples, and Sahaptin speaking peoples who live here and who have always lived here -- and the many other native nations who have always been part of and cared for this land that we now occupy.
Zigzag IRP: Aquatic Resources

Presented by Bark
Agenda

1. What is NEPA?
2. Public comment overview
3. Questions
4. Proposed Action
5. Impacts - Waters
6. Impacts - Aquatic species and habitat
7. Questions/discussion
National Environmental Policy Act (NEPA)
What is the National Environmental Policy Act?

- Enacted by Congress in 1969, NEPA was the first major environmental law in the United States.
- Requires agencies to undertake an assessment of the environmental effects of their proposed actions prior to making decisions.
- Two major purposes:
  - Better informed decision making
  - Citizen involvement
- The product of a NEPA analysis can be:
  - Categorical Exclusion (*no impact*)
  - **Environmental Assessment** (*minor impact*)
  - Environmental Impact Statement (*significant impact*)
Public Comments
Public Comments

● Your right to have a say in the impacts of an agency’s action
● Comments should focus on:
  ○ purpose and need of the proposed action
  ○ proposed alternatives
  ○ the assessment of the environmental impacts
  ○ proposed mitigation
● A substantive comment:
  ○ provides new information about the Proposed Action, an alternative or the analysis
  ○ identifies a different way to meet the need
  ○ points out a specific flaw in the analysis
  ○ suggests alternative methodologies and the reason(s) why they should be used
  ○ makes factual corrections, or identifies a different source of credible research which, if used in the analysis, could result in different effects
Summary

Effective comments are:
- clear
- concise
- objective
- strictly related to the project
- based on reliable (and cited!) sources
Questions?
Preliminary Environmental Assessment
Proposed Action: Riparian Habitat Enhancement

- **Purpose and Need:**
  Not meeting “desired condition” of multi-layer canopy with large-diameter trees, a well-developed understory, more than one age class, and sufficient quantities of snags and down woody debris.

- **Proposed Action:**
  In riparian areas that lack desired levels of large wood, trees would be felled in adjacent upland areas to create better quality riparian structure. Thinning would occur to accelerate and promote desired conditions.
Intermittent streams with ample down wood structure in Units 88(L) and 62 (R)
Areas of proposed thinning within one site-potential tree distance of streams within the **Horseshoe** planning area compared with stand age.
Areas of proposed thinning within one site-potential tree distance of streams within the **Mud Creek** planning area compared with stand age.
Alternatives Comparison

Fisheries Specialist Report Sections 8.2 - 8.3

No Action Alternative: “With no action, large wood recruitment potential and riparian function would continue to remain low in the short term (< 10 years) and would improve in the mid term (10-100 years) to long term (>100 years).”

Action Alternative: “Timber felling would have an unsubstantial effect on large wood debris frequency and recruitment in the short-term (<10 years) and a positive effect on large wood debris frequency and recruitment in the mid-term (10-100 years) to long-term (>100 years) due to accelerated development of late seral characteristics and the production of larger diameter wood than would likely occur under the no action alternative.”
Impacts: Water Quantity - Flooding

- Most of the project is in the transient snow zone, where sudden snow melt can cause flooding.
- Open canopy increases snow accumulation and therefore increases flood risk; roads divert runoff to streams.
- Clear Fork, Mud Creek, and West and East Fork Salmon River are above threshold of concern for flooding.
  - Alternatives for these streams?
  - Increase buffers?
Impacts: Water Quantity – Streamflow

In the analysis of 60-year records of daily streamflow from eight paired-basin experiments in the Pacific Northwest of the United States, the five watersheds that were 100% clearcut all exhibited the 50% streamflow deficits (average daily streamflow in summer, July through September, was 50% lower than streamflow from reference basins). The three watersheds that were from 25% to 50% clearcut did not exhibit the 50% deficits (Perry and Jones, 2017). Impacts would be considered to be the same as those described in the existing condition as all of the 6th and 7th field watersheds in the project area would remain less than 50% clearcut so they would not be expected to exhibit the 50% deficits.

Table 27 Percent of Catchments and Subwatersheds Clearcut

<table>
<thead>
<tr>
<th>Watershed</th>
<th>Percent of the area cumulatively clearcut with the addition of the proposed action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Fork</td>
<td>47%</td>
</tr>
<tr>
<td>Lost Creek</td>
<td>6%</td>
</tr>
<tr>
<td>Muddy Fork</td>
<td>0%</td>
</tr>
<tr>
<td>Sandy River</td>
<td>1%</td>
</tr>
<tr>
<td>Headwaters Sandy HUC12</td>
<td>14%</td>
</tr>
<tr>
<td>Middle Salmon</td>
<td>2%</td>
</tr>
<tr>
<td>Mud Creek</td>
<td>30%</td>
</tr>
<tr>
<td>Upper Salmon</td>
<td>13%</td>
</tr>
<tr>
<td>W &amp; E Fork Salmon</td>
<td>9%</td>
</tr>
<tr>
<td>Upper Salmon HUC12</td>
<td>12%</td>
</tr>
</tbody>
</table>
Impacts: Sedimentation

- There is not a documented survey of Mud Creek where unstable banks are quantified.
  - Analysis is incomplete without this data, especially because Mud Creek is above ToC for flooding
- Sedimentation would occur at Clear Fork and Mud Creek during work
  - Timing restrictions for aquatic species?
- Sections of the Muddy Fork already have greater than 10% unstable stream banks (19% - 13%) and increased sedimentation and embeddedness (12% and 17%)
  - Need further analysis of potential to push sediment levels above ToC for stream function
- Does not adequately address reduction in slope stability from tree harvest
Aquatic Species
Fish Species Determinations

Chinook, Coho, Steelhead, Cutthroat Trout - *May affect, not likely to adversely affect*

Pacific Lamprey - *May affect individuals*
Critical habitat within Horseshoe planning area and the Sandy Headwaters Watershed.
Fish Impacts

- Higher peak streamflow is correlated to higher rates of salmon embryo mortality
  - Timber harvest and construction of roads are positively correlated with peak streamflow

- Significant reduction in embryo survival in size for Chinook, cutthroat, and steelhead trout if fine sediment concentration reaches 15-20%
  - Muddy Creek is already at 12% and has unstable banks
  - Limit work to outside of spawning seasons?
  - Inadequate analysis of sedimentation due to decreased slope stability from tree harvest

- Stated that riparian thinning would not significantly improve desired aquatic habitat conditions vs No Action Alternative
Special thanks to:

Our host and Bark Associate Director Courtney Rae

Our volunteer organizer Mia Pisano

Indigenous peoples of the Columbia River Basin

Photo credit: EarthJustice.org
Thoughts/Questions?