Prioritizing for dual benefits of forest health and wildfire response

Integrating the requirements of HB 1784 into the Forest Health Assessment and Treatment Framework

Forest Health and Resiliency Division
Washington State Dept. of Natural Resources

Wildfire Advisory Committee
March 18, 2021
Agenda

1. Forest Health Assessment and Treatment Framework
2. HB 1784 Pilot Project: Prioritizing for dual benefit
3. Dual Benefit Prioritization
4. Applications for forest health and fire operations
Forest Health Science and Planning Team

- Ana Barros, Fire Scientist
- Derek Churchill, Forest Health Scientist
- Aleksandar Dozic, GIS Analyst
- Chuck Hersey, Forest Health Planning Section Manager
- Garrett Meigs, Forest Health Scientist
- Amy Ramsey, Forest Health Planner
- Annie Smith, Forest Health Scientist
- Andrew Spaeth, Forest Health Planner
Forest Health Assessment and Treatment Framework
Legislative context

RCW 76.06
Main forest health law for the state of Washington

2017
SB 5546
Forest health landscape evaluations across all lands for priority planning areas

2019
RCW 76.06.200
Forest Health Assessment and Treatment Framework

HB 1784
Dual benefit: forest health and fire response

PODs as a strategy for safe and effective fire response
Forest health assessment

Assess a minimum of 200,000 acres/biennium across all lands.

1. Identify planning areas
2. Conduct landscape evaluations
3. Develop landscape treatment targets
4. Prioritize treatment needs
Forest health assessment

1. Identify planning areas
2. Conduct landscape evaluations
3. Develop landscape treatment targets
4. Prioritize treatments needs with dual benefit
Landscape evaluations

HRV Departure Assessment

Drought Vulnerability

Treatment Need & Locations

Fire Risk Assessment

Habitat

Economics & Feasibility

Diverse Landowner Objectives

Aquatics
1. Identify ownership types and management objectives
2. Map vegetation and forest types
3. Map current forest structure and species composition
4. Assess departure of forest structure
5. Assess wildfire risk
6. Analyze drought vulnerability
7. Map habitat for focal species
8. Evaluate aquatic functions
9. Estimate treatment targets
10. Evaluate operational feasibility and economics
11. Map dense forest, large tree sustainability

12. **Prioritize landscape treatments**
13. **Prioritize wildfire response benefit**
14. **Prioritize for dual benefit using the PODs framework**
Landscape evaluations

12 planning areas  Completed in 2018

18 planning areas  Completed in 2020
   (8 with the full 14-step dual benefit process)

9 planning areas  To be analyzed by December 2022
   (31 for dual benefit)

3.4 million acres assessed for forest health need and

1 million acres for dual benefit
Treatment need (e.g. Methow Valley)

Treat 27-41% of forested acres
Range of treatment types

<table>
<thead>
<tr>
<th>Forest conditions to treat</th>
<th>Treatment need (acres)</th>
<th>Current acres by major landowner*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USFS</td>
<td>Private</td>
</tr>
<tr>
<td>Dry Dense</td>
<td>Medium-Large 32,000 - 47,500</td>
<td>61,427</td>
</tr>
<tr>
<td>Moist + Cold Dense</td>
<td>Medium-Large 1,500 - 3,000</td>
<td>7,749</td>
</tr>
<tr>
<td>Dry + Moist Open</td>
<td>Medium-Large 16,000 - 24,500</td>
<td>24,460</td>
</tr>
<tr>
<td>Total</td>
<td>49,500 - 75,000</td>
<td>*These are current acres, not targets</td>
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</tbody>
</table>

- **Noncommercial thin plus fuels treatment. May be fire only (prescribed or managed wildfire).**
- **Commercial thin plus fuels treatment if access exists. May be noncommercial, fire only (prescribed or managed wildfire), or regeneration treatment.**
- **Maintenance treatment: prescribed fire, managed wildfire, or mechanical fuels treatment. Target range corresponds to 50-75% of dry open and 25-50% of moist open forests.**
### Assessed forest health treatment need for 2018 and 2020 planning areas (30 planning areas)

<table>
<thead>
<tr>
<th>Planning Area Totals (Year)</th>
<th>Forest Structure Class (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small Dense&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>2018 Structure Class Total</td>
<td>9,500 - 16,500</td>
</tr>
<tr>
<td>2018 Total</td>
<td></td>
</tr>
<tr>
<td>2020 Structure Class Total</td>
<td>17,750 - 30,900</td>
</tr>
<tr>
<td>2020 Total</td>
<td></td>
</tr>
<tr>
<td>Grand Total (2018 and 2020 areas)</td>
<td></td>
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</tbody>
</table>

### Anticipated Treatment Type

1. **Noncommercial thin plus fuels treatment.** May be fire only (prescribed or managed wildfire).
2. **Commercial thin plus fuels treatment if access exists.** May be regeneration treatment or fire only (prescribed or managed wildfire).
3. **Maintenance treatment:** prescribed fire, managed wildfire, or mechanical fuels treatment. Target range corresponds to 50-75% of dry open and 25-50% of moist open forests.

### Notes

2018 Total includes acres from planned USDA Forest Service treatments in the Tillicum and Mission Maintenance planning areas that are not in the Structure Class Total.
Legislative report

More information:
https://www.dnr.wa.gov/ForestHealthPlan

Data: https://bit.ly/ForestHealthData
Landscape evaluations in priority planning areas

Local level planning

Alignment of landowner objectives and local priorities

Temporal scale

Spatial scale

20-Year Forest Health Strategic Plan

Landscape evaluations in priority planning areas

49.5k – 75k acres

Treatments & Maintenance

Monitoring

49.5k – 75k acres

Spatial scale

Temporal scale
HB 1784 Pilot Project:

Prioritizing for dual benefit
“Prioritize, to the maximum extent practicable (…), forest health treatments that are strategically planned to serve dual benefits of forest health while providing geographically planned tools for wildfire response.”

-- Section 1, subsection (3)(b)
HB 1784 pilot areas

Pilot areas are a subset of Forest Health Priority Planning Areas

Legend
- Red: 2018
- Yellow: 2020

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroPlan, IGN, and the GIS User Community
HB 1784 Pilot Participation

-Three pilot areas: Cle Elum, Leavenworth and Methow Valley

-Over 150 people participated in the pilot

-Technical Team
  -US Forest Service, DNR, tribes, fire districts, PUD, universities, conservation districts, fire adapted communities and conservation organizations.

  -Four meetings from March 2020 to December 2020

-Three local pilot area meetings in August and September 2020

-DNR Management Team
HB 1784 Pilot Participants

Chief Cody Acord, Okanogan County Fire District 6
Alan Ager, USDA - Forest Service
Michael Barajas, USDA - Forest Service
Ashley Blazina, DNR
Chad Bowman, Chelan Public Utility District
Assistant Chief Glenn Brautaset, Chelan County Fire District 3
Nolan Brewer, DNR
Scott Chambers, DNR
Derek Churchill, DNR
Trevor Contreras, DNR
Ben Curtis, USDA - Forest Service
Michelle Day, USDA - Forest Service
Chris Dunn, Oregon State University
Chief Rich Elliott, Kittitas Valley Fire and Rescue
Matt Ellis, USDA - Forest Service
Jason Emsley, DNR
Walter Escobar, DNR
Nancy Farr, Methow Valley Fire Adapted Communities
Chris Furr, USDA - Forest Service
Patrick Haggerty, Cascadia Conservation District
Jake Hardt, DNR
Corina Hayes, Department of Health
Kathryn Heim, Methow Valley Fire Adapted Communities
Paul Hessburg, USDA - Forest Service
Mike Kaputa, Chelan County
Allen Lebovitz, DNR
Mike Liu, Conservation Northwest
Reese Lolley, The Nature Conservancy
Brian Maier, USDA - Forest Service
Austin Marshall, DNR
Daniel Montano, DNR
Chief Phil Mosher, Chelan County Fire District 6
Chief Kelly O’Brien, Chelan County Fire District 3
Jim Passage, Lake Wenatchee Fire Adapted Community
Susan Pritchard, University of Washington
Amy Ramsey, DNR
Chad Rissman, Chelan Public Utility District
Jeff Rivera, USDA - Forest Service
Rose Shriner, Washington Resource Conservation & Development Council
Liz Smith, DNR
Andrew Spaeth, DNR
Mike Starkovich, USDA - Forest Service
Cary Stock, USDA - Forest Service
Chief David Walker, Lake Wenatchee Fire and Rescue
Dave Werntz, Conservation Northwest

Management Team
Technical Team
Participants in our local meetings

Thank you!
Dual benefit prioritization
Landscape Treatment Priority

(think forest health)
PODs, PCLs, fuelbreaks

- All PCLs are fuelbreaks but not all PCLs will require a fuelbreak treatment

- Potential, potential, potential
Wildfire Response Benefit map “clipped” by PCLs

Potential Control Lines (PCL = boundary)

PCL projects ranked based on wildfire response benefit scores and project size

Landscape Treatment Priority map “clipped” by PODs

PODs ranked based on landscape treatment priority scores and forested area per POD

Dual Benefit Priority: summarized by POD and PCL
Applications for forest health and fire operations
Essence of dual benefit: Forest health treatments can help support safe and effective fire management operations and in turn fire management operations are critical to helping achieve our forest health goals.
Forest health treatment goals will primarily be achieved with large, landscape-level treatments

49.5k – 75k acres

Recently completed 700-acre forest health treatment on DNR trust lands in the Methow Valley priority planning area. Credit: John Marshall.
Landscape treatments

Landscape-level treatments should intersect with potential control lines wherever possible.

Example of a landscape-level treatment melding with a potential control line. Credit: John Marshall
Forest health toolbox

A variety of forest health treatment types will be needed to achieve forest health treatment goals in a priority planning area.
Treatments along PCLs

- Provide safe zones for firefighter engagement
- Provide opportunities for prescribed fire and managed wildfire
- Do not greatly alter fire risk and fire effects
- Can increase probability of fire containment
- Do not act as stand-alone firebreaks
- Can have negative ecological consequences
- Integrated into large landscape treatments
How DNR and Partners can use information from the Forest Health Assessment and Treatment Framework

**PRIORITIZE**
Focus resources in high-priority areas to achieve work at needed scales

**FUNDING**
Focus limited treatment dollars in high-priority areas

**ALIGNMENT**
Align state, federal and local forest health efforts to achieve maximum impact

**IMPLEMENTATION**
Information can be incorporated into local planning, e.g. NEPA & CWPP
How DNR and Partners can use information from the Forest Health Assessment and Treatment Framework

**ACCOUNTABILITY**
Are we achieving our goals?

**ADAPTABILITY**
As conditions on the ground, science and priorities shift over time

**ENGAGEMENT**
Educate communities so that they understand forest health priorities for their areas

**MONITORING**
How are forest health conditions changing over time?
"Boxes only" used to prioritize for dual benefit and help screen for treatment locations in high priority PODs.

PCL attribution and integration into DNR’s GIS database(s).

Combined with local expertise and spatial analysis to define strategic response zones taking ownership into account.

Leadership role

Complexity

POD Applications

Forest Health

Wildfire
Using the KITTI app

1. Keep it or tweak it?
2. Split a big POD into smaller PODs
3. Adjust boundary of a POD
4. Add a new POD
Survey to identify a wishlist of PCL attributes that are relevant to the work you do.
PCLs attribution

- Attributes to support fire incident management (*fire manager hat*)
- Attributes to support treatment projects (*forester hat*)
Considerations

- How do Wildfire Division and their fire partners want to use PODs?
- Where do we need PODs?
- Who needs to be involved in POD delineation, attribution and objective setting? Who coordinates the process?
- What are forums and venues for collaboration?