

Forest Health Advisory Committee



Wood Pellet Boiler (340K BTU), Northport School District
Northport, WA, Stevens County

March 12, 2019

Olympia, WA



FHAC Meeting Agenda



- Welcome and Introductions
- Legislative Session Update
- Forest Health Division Update
- Sx^wuytn Project Presentation
- Forest Health Monitoring Framework
- Collaborative Grant Programs
- 2019 Forest Health Advisory Committee Workplan



Legislative Session Update- Agencies Requests

- 19-21 Forest Health Operating and Capital Budget Requests: \$40.45 million (DNR, DFW, State Parks and Conservation Commission)
- DNR: \$5.8 million operating and \$17.7 million capital budget
- DFW: \$6 million capital budget
 - Commercial and pre-commercial thinning
 - Prescribed fire
 - Two prescribed fire crews
- State Parks: \$500K operating and \$500K capital budget
 - Surveys, planning, technical staff assistance
 - High priority forest health treatments
- Conservation Commission: \$9.95 million operating budget
 - Fund conservation districts to assist private landowners with forest health treatments and post-fire recovery activities.



Legislative Session Update- DNR Capital Budget

- 19-21 BN DNR Forest Health Capital Budget Request: \$17.7 million total
- State lands forest health treatments (\$3 million)
- Private fuel reduction treatments and community wildfire preparedness (\$6 million)
- Federal land forest health treatments (\$3 million, eastern WA)
- Good Neighbor Authority (\$2 million, project planning and implementation on federal lands statewide)
- Forest Collaborative capacity and treatment grant programs (\$2 million)
- Monitoring, tracking system and economic study (\$1.7 million)



Legislative Session Update- HB 1784 (Kretz)

-HB 1784 amends RCW 76.06.200 Forest Health Assessment and Treatment Framework to:

- Prioritize forest health treatments that are strategically planned to serve dual benefits of forest health and wildfire response.

- Locate and design forest health treatments to provide wildfire response personnel with strategically located areas to assist managing wildfire response.

-HB 1784 amends 76.04.015 to:

- Require DNR to provide a geographic information system for fire response personnel that includes forest health treatments on federal, state and private lands.



Forest Health Division Update

-DNR Forest Health Program is now the Forest Health Division.

-Forest Health Division Programs:

-Community Wildfire Preparedness and Fuel Reduction

-Forest Health Monitoring and Technical Assistance

-Forest Health Planning and Partnerships

-Federal Lands Program (GNA)

-Landowner Assistance Program

-Prescribed Fire Program

-Urban Forestry



Forest Health Division Update

Forest Health Division Organizational Structure

State Forester
Deputy Supervisor for
Wildfire and Forest Health

Forest Health
Division Manager

Science and Planning
Assistant Division Manager
(vacant)

Forest Resiliency &
Outreach
Assistant Division Manager
(new position)

Federal Lands Program
(GNA)
Assistant Division Manager



Forest Health Division Update

In the near future, DNR will be hiring the following positions:

- Prescribed Fire Program Manager
- Science and Planning Assistant Division Manager
- Forest Pathologist



Northport School District Wood Pellet Boiler

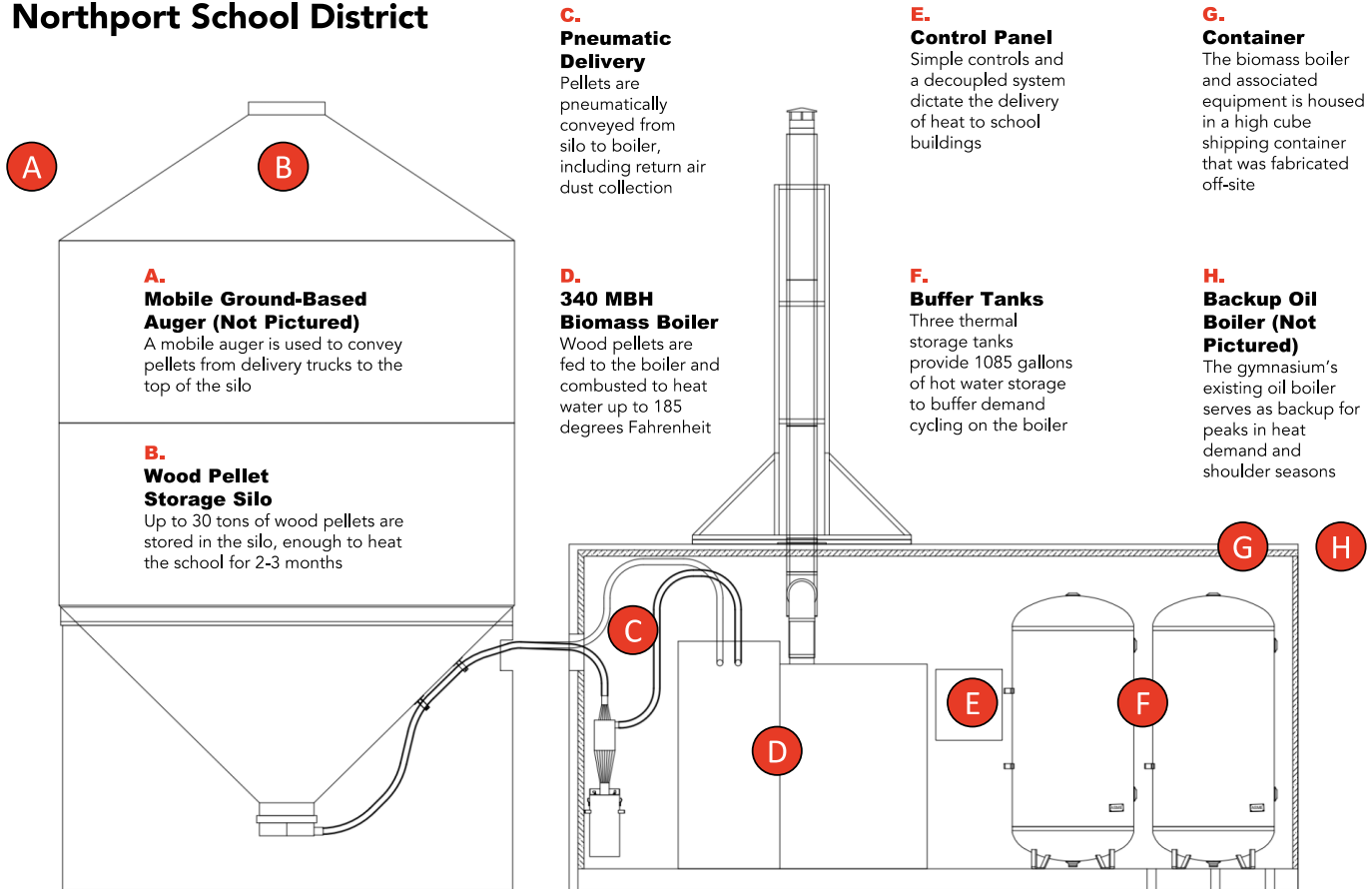
- Project Cost approx. \$400k, funded by Dept. of Commerce and supported by WSU Energy Program
- Operational October 2018
- Estimated to use approx. 70 tons pellets/yr
- Cost savings: approx. \$20K/year in fuel cost savings

Wood Pellet Boiler (340K BTU), Northport School District
Northport, WA, Stevens County



Northport School District Wood Pellet Boiler

Biomass Heating for Northport School District



WE
WISEWOOD ENERGY

Design Team
Wisewood Energy
R&W Engineering
Smith Monroe Gray Engineers

Construction Team
UCR Construction
Norstar Heating & Cooling

Funders & Supporters
Department of Commerce
Innovation is in our nature.



Energy Program
WASHINGTON STATE UNIVERSITY



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

Sx^wuytn (Trail) Project Presentation

Ray Entz, Kalispel Tribe of Indians



20-Year Plan Monitoring



20-YEAR FOREST HEALTH STRATEGIC PLAN

EASTERN WASHINGTON



Goal 5	Strategies
1	Collect, map, analyze, and report on forest health conditions, forest restoration and management activities, and trends in forest health and wildfire risk over time across all land ownerships.
2	Identify metrics to measure progress against specific management goals and objectives.
3	Create a forest health tracking system that includes spatial and tabular data describing forest health treatments conducted by federal agencies, state agencies, tribes, and other willing landowners.
4	Support effective fire management actions and integrate Qualitative Risk Assessment (QRA) and treatment data into the Wildland Fire Decision Support System (WFDSS).
5	Provide regular forest health treatment progress reports to the legislature and communicate results to partner agencies, county governments, communities, conservation groups, timber industry, tribes, and other stakeholders.
6	Complete comprehensive mapping of current forest structure, wildlife habitat, and fuel conditions across eastern Washington by 2020. Update forest inventory data on a regular basis to reflect changes in forest conditions from wildfires, insects, disease, and management.
7	Develop standardized, science-based mapping of wildland urban interface (WUI) zones in Washington State, including better characterization of current land use within WUI zones.



20-Year Plan Monitoring

Primary Components:

1. Track treatment implementation

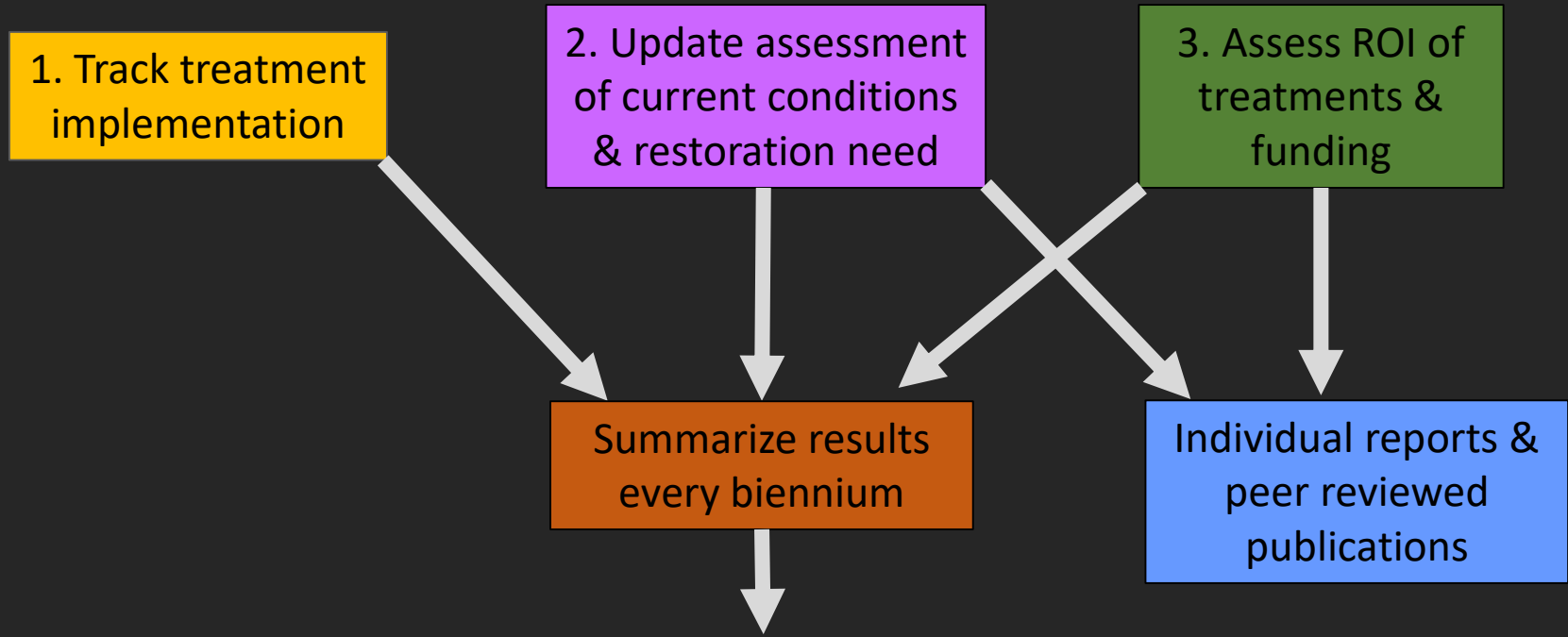
2. Update assessment of current conditions & restoration need

3. Assess ROI of treatments & funding



20-Year Plan Monitoring

Primary Components:



- Report to legislature
- Summary results & data for partners & public: agencies, stakeholders, press.
- Progress updates for all eastside & for each planning area.
- Updated information informs plans for existing and new planning areas



1. Track treatment implementation

- DNR building systems & databases for public & private treatments.
- Currently, DNR is building a Forest Health Tracking System to more efficiently track DNR administered forest health treatments.
- Second phase of Forest Health Tracking System will integrate other landowner treatments where feasible.
- Report acres treated by different landowner types & progress towards treatment targets



2. Update assessment of current conditions & restoration need

→ Build and maintain all lands current conditions database:

Need:

- Vegetation conditions are constantly changing due to treatments, fires, other disturbances, growth, climate change etc.
- Assess change over 20 years: Need baseline conditions & consistent measurement methods & datasets across all eastern WA.
- Are we moving towards targets for resilient landscapes?
 - Across all eastside, for each planning area?
- Many partners doing monitoring for specific project areas:
 - Need base veg data at project area & treatment unit levels for monitoring.
- Use as base layers for monitoring changes to fire & insects risks, habitat, volume, ecosystem services, etc. Plus, for new & existing planning areas



2. Update assessment of current conditions & restoration need

→ Build and maintain all lands current conditions database:

Methods:

- Partner with UW & USFS.
- Structure, species composition, inventory information (FRIS), tree lists, etc.
- Combine phoDAR, LiDAR, and other remotely sensed datasets with plot networks of DNR, USFS, Tribes, & others to model layers
- Create for 2015, 2017, & 2019 to allow for 2015-2019 monitoring
- Update every 2 years thereafter
- Create web-based portal for data?? Include key biophysical planning layers such as fire risk (QWRA), potential vegetation, projected change in drought stress



WA State LiDAR Coverage

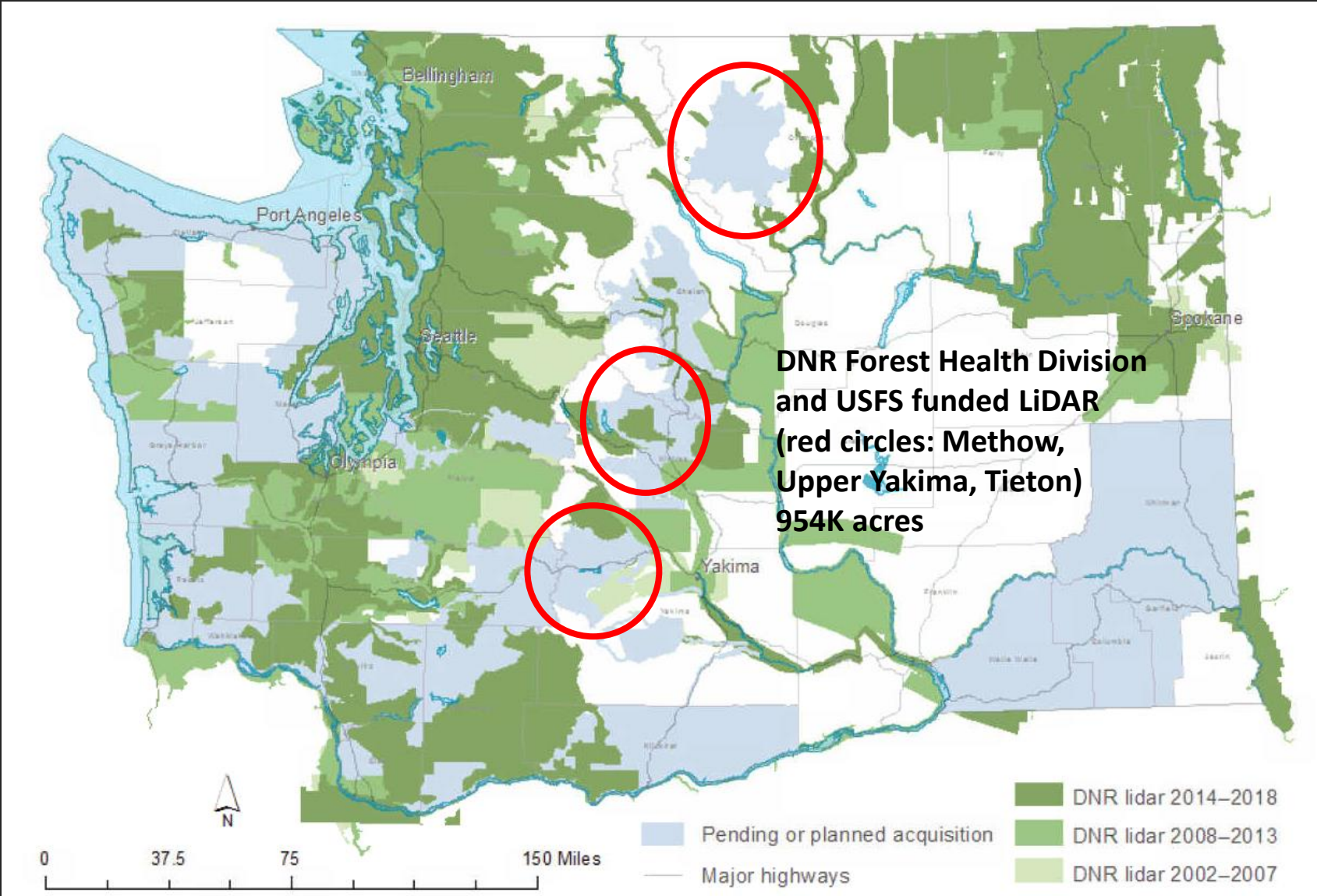


Figure 2. Lidar collection by year.

WA State Priority LiDAR Acquisition Areas

24

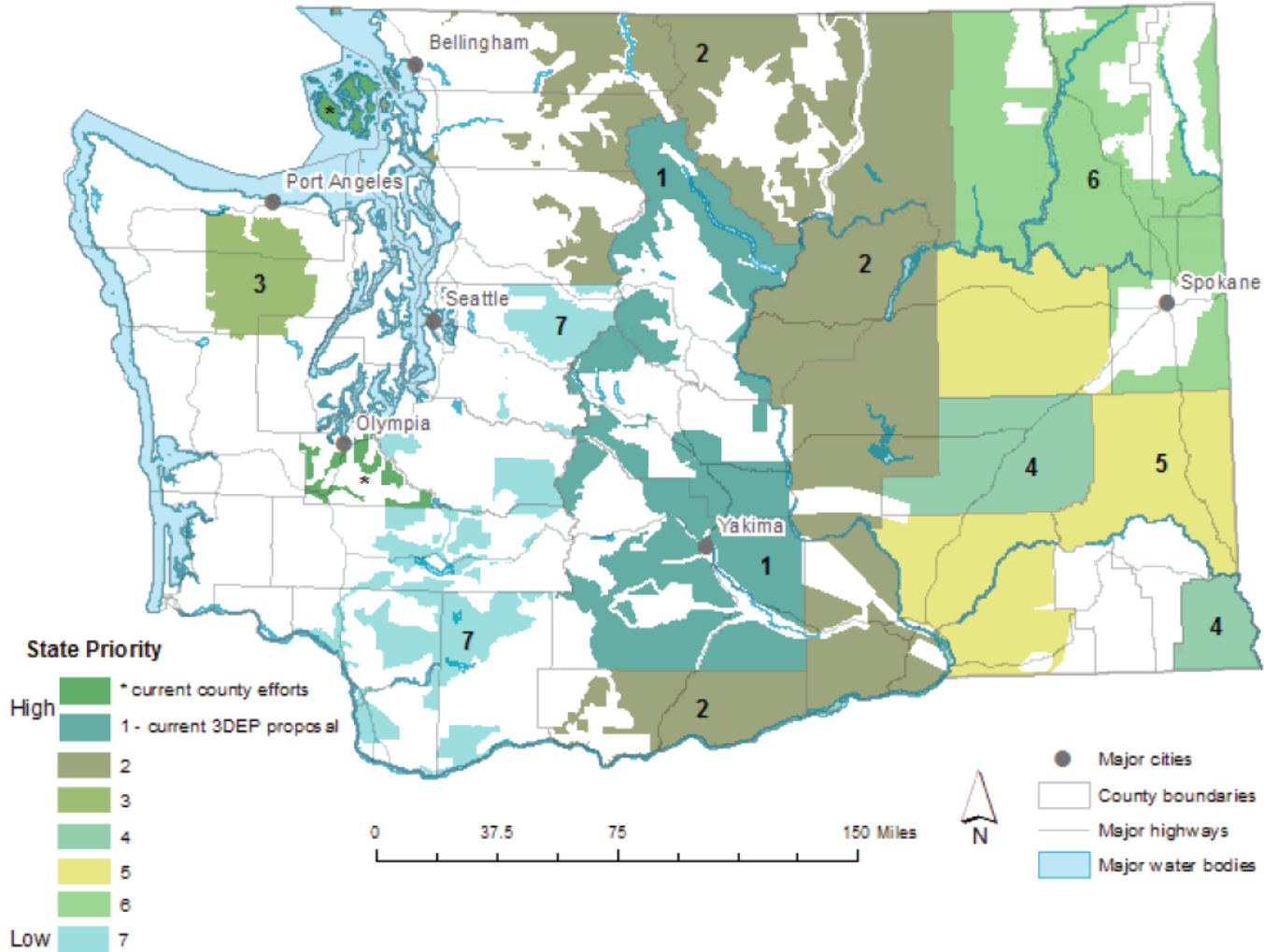
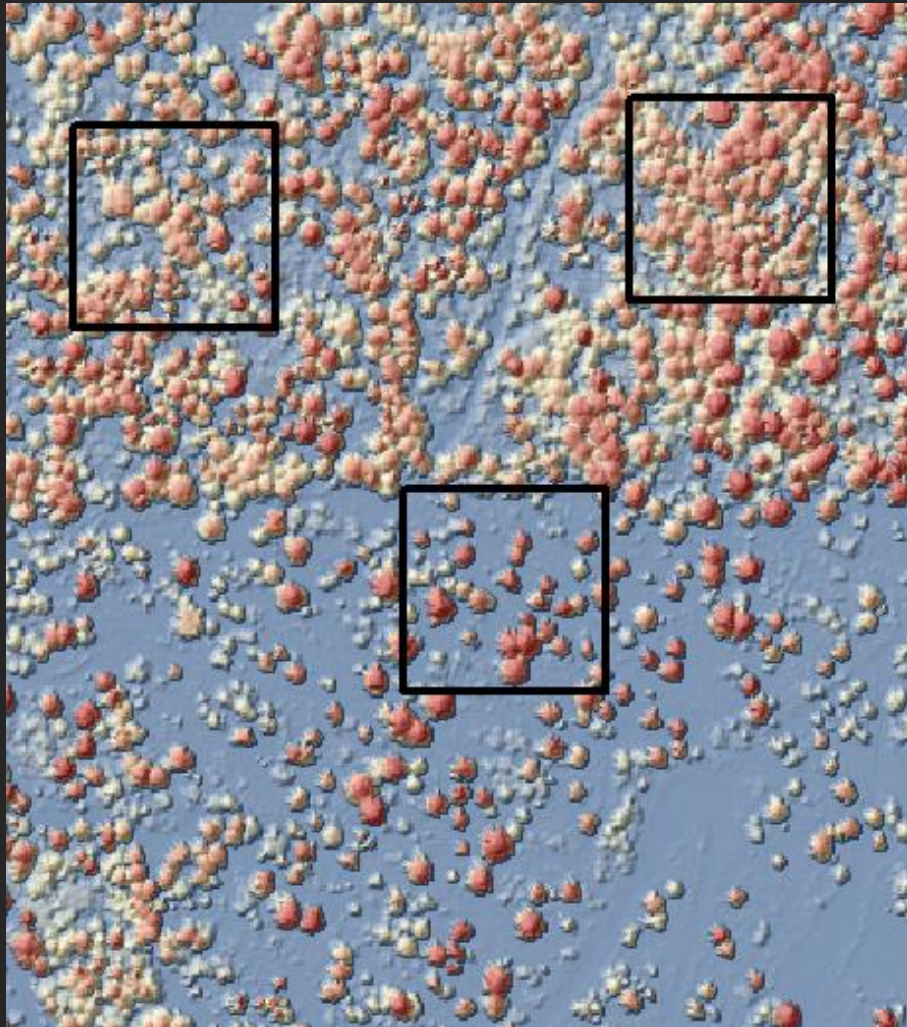


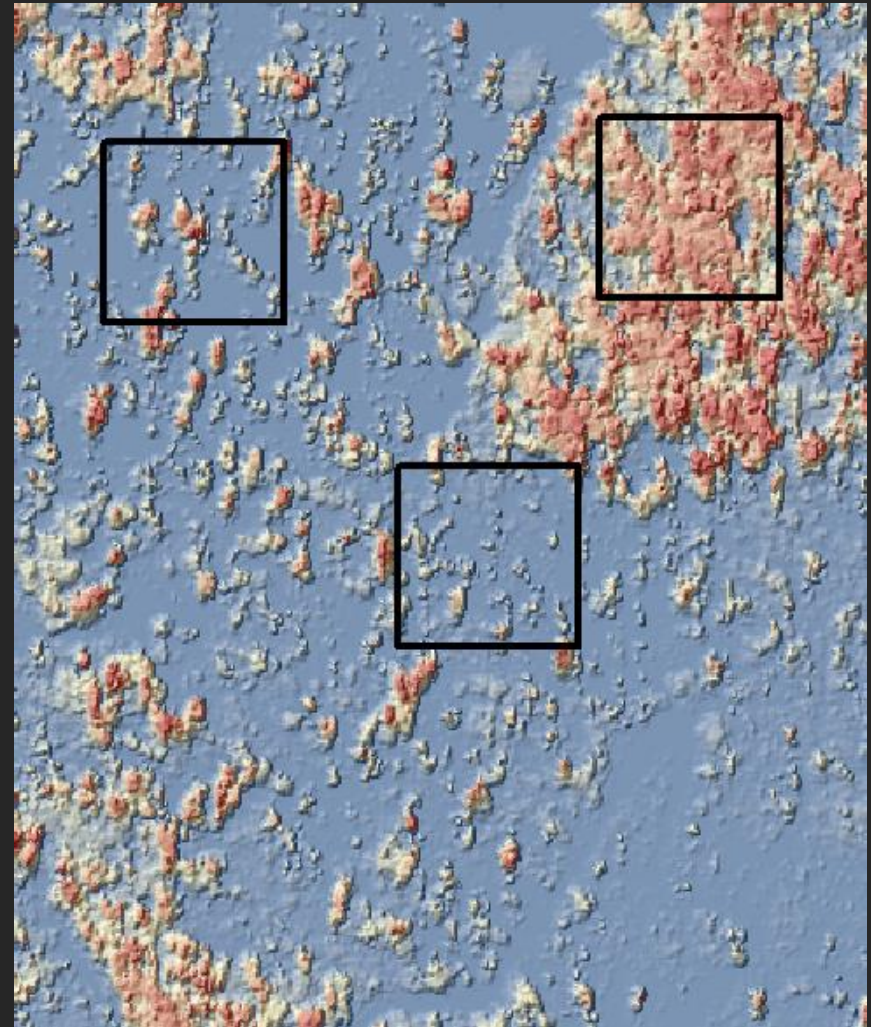
Figure 13. State priority map for completing lidar coverage across the remainder of Washington State.

Stand Level Change

2008



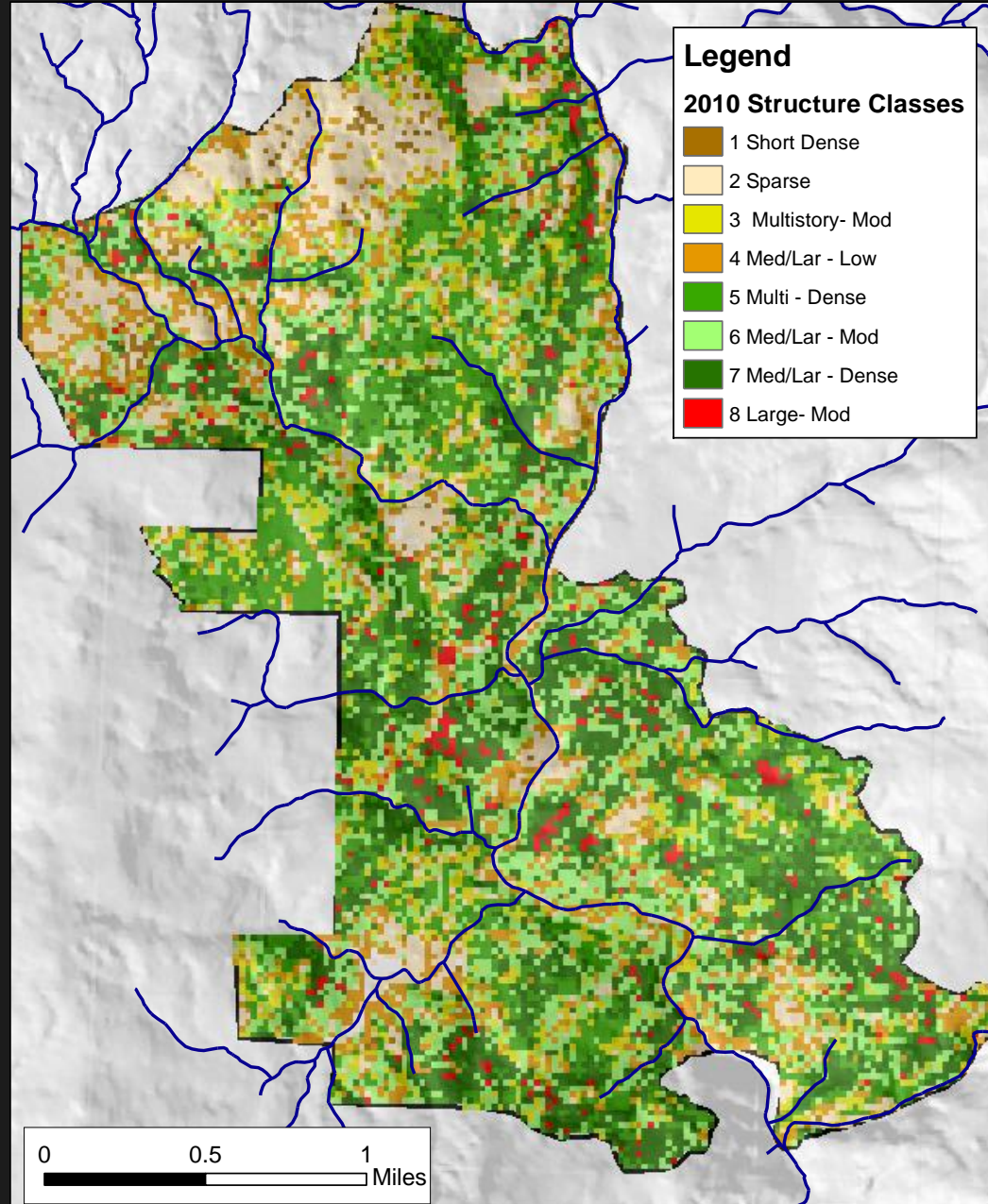
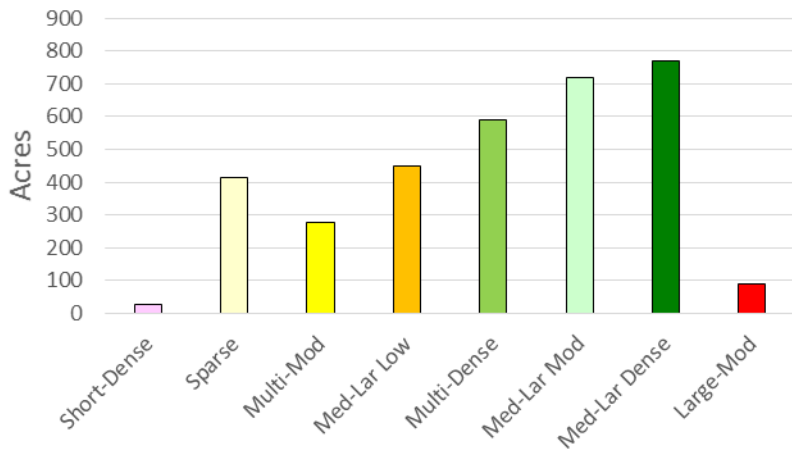
2015



Watershed-Project Area Level Change

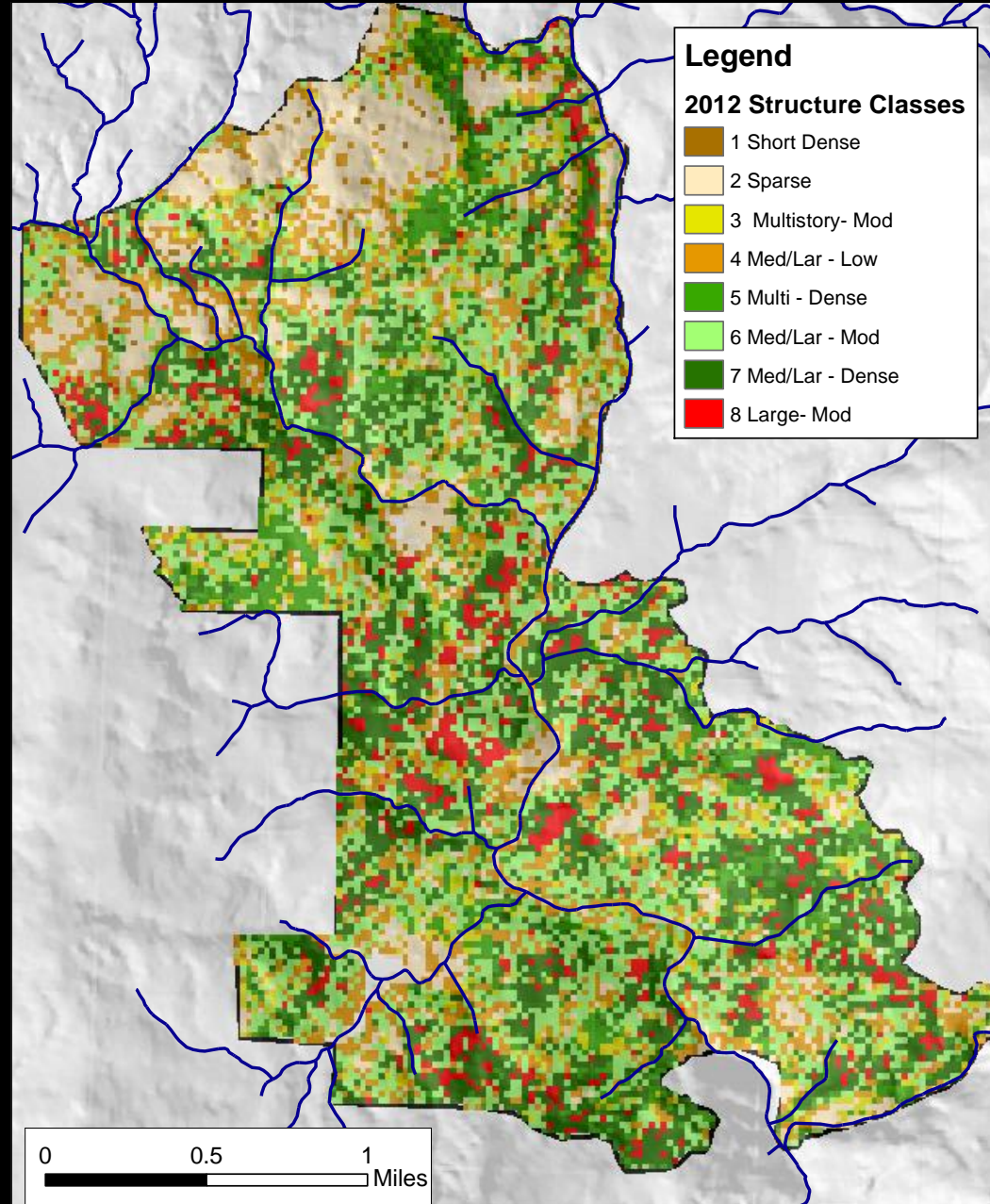
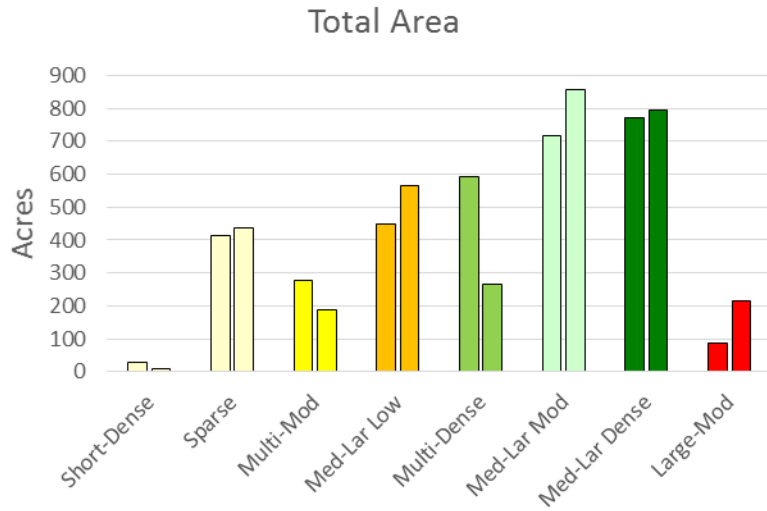
Pre- Treatment Structure Classes

Total Area

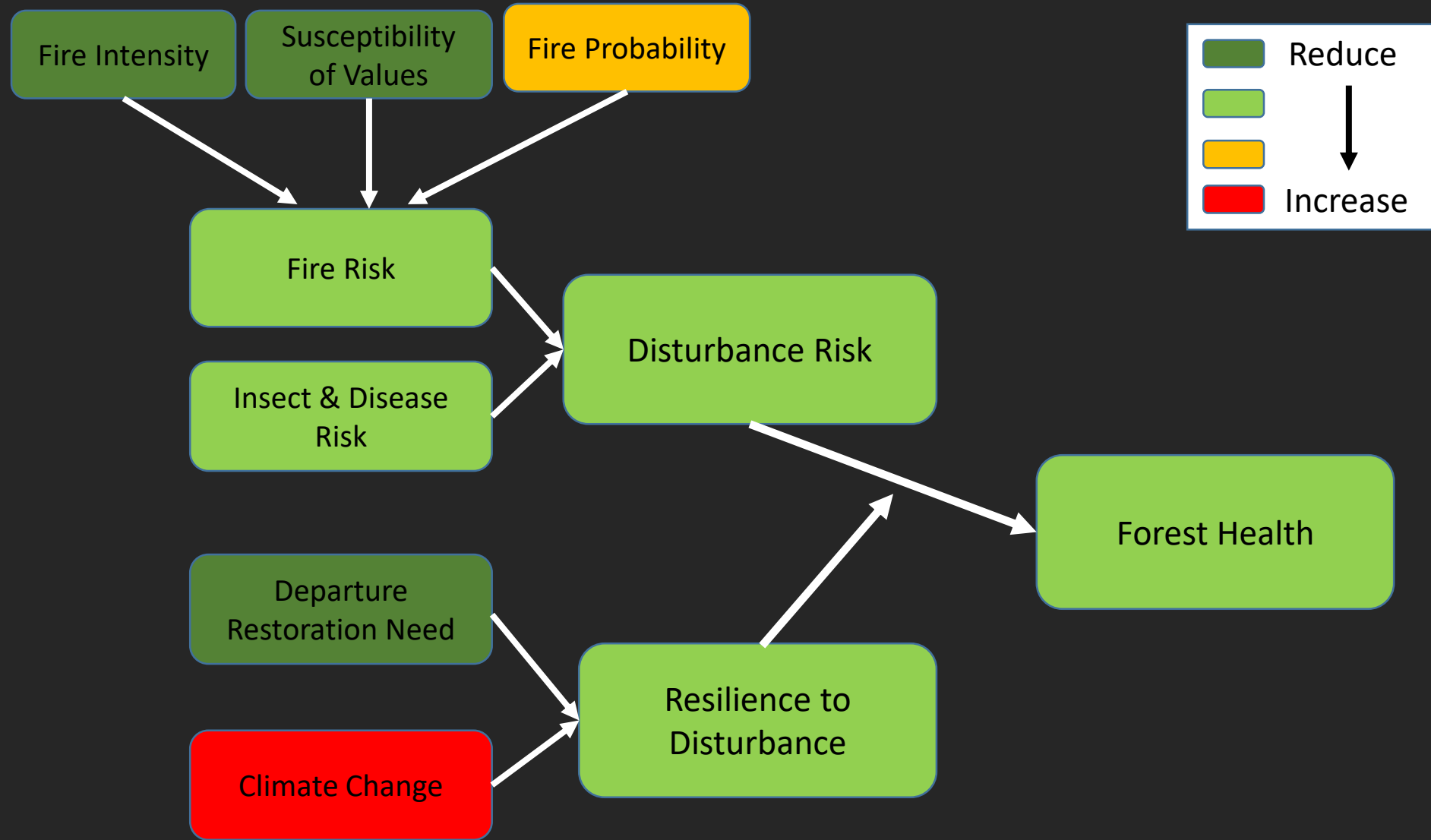


Watershed-Project Area Level Change

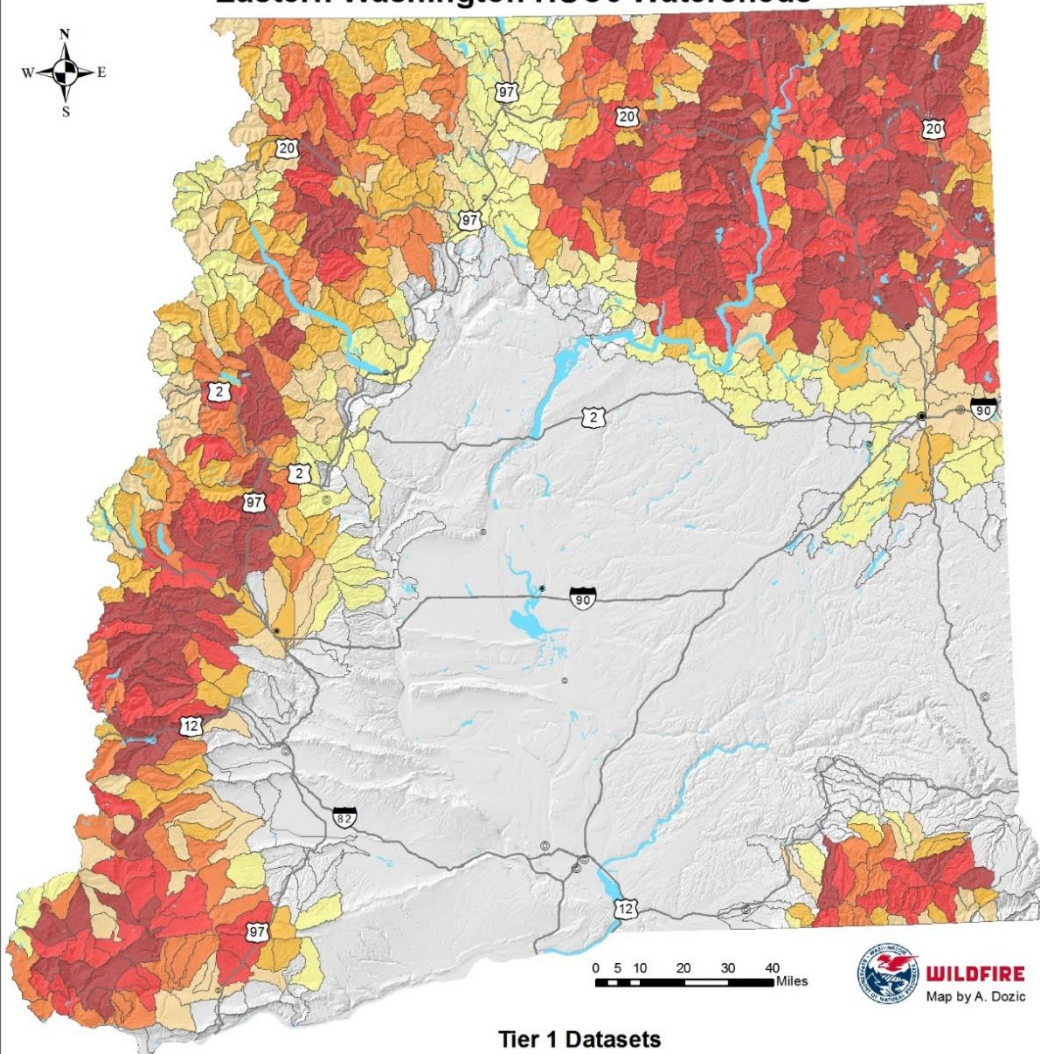
Post Treatment Structure Classes



Changes in Risk Across Eastside



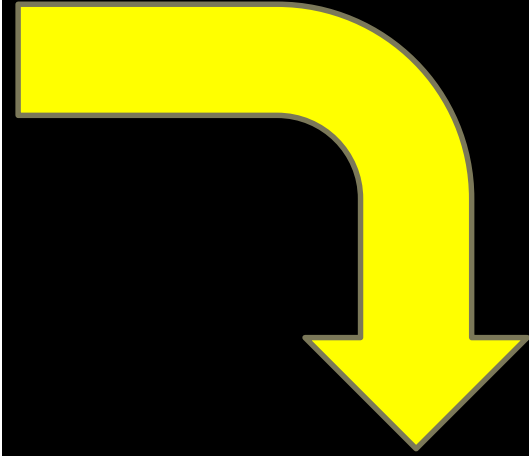
Forest Health/Wildfire Risks (Tier 1) Eastern Washington HUC6 Watersheds



Tier 1 Datasets

- Fire Probability: Average of Fire Threat Index from Westwide Wildfire Risk Assessment, large fire probability (Davis et. al 2017), and burn probability from Quantitative Wildfire Risk Assessment for OR and WA (USFS Region 6 2017)
- Insect and Disease Risk: National Insect and Disease Risk Map (Krist et al. 2014)
- Active Restoration Need: TNC and USFS Restoration Needs Analysis (Haugo et al. 2015)
- Climate Change: Increase in Water Balance Deficit (AdaptWest 2015)

- Low Forest Health/Wildfire Risk
- Medium Forest Health/Wildfire Risk
- High Forest Health/Wildfire Risk
- 12-digit/6th level hydrologic unit watersheds



Move to Green!

2. Update assessment of current conditions & restoration need

→ Update eastside restoration needs assessment

Need

- Legislature, media, stakeholders, etc. ask:
 - How many acres need to be treated & what will it cost
- Version used in Forest Health Plan (Haugo et al. (2015)) is outdated (2006 data)

Forest Ecology and Management 335 (2015) 37–50



ELSEVIER

Contents lists available at ScienceDirect

Forest Ecology and Management

journal homepage: www.elsevier.com/locate/foreco



A new approach to evaluate forest structure restoration needs across Oregon and Washington, USA



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and

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Expanding Our Understanding of Forest Structural Restoration Needs in the Pacific Northwest



2. Update assessment of current conditions & restoration need

→ Update eastside restoration needs assessment

Need

- Legislature, media, stakeholders, etc. ask:
 - How many acres need to be treated & what will it cost
- Version used in Forest Health Plan (Haugo et al. (2015)) is outdated (2006 data)
- Incorporate climate change projections
- Improved analysis of treatment types in order to better estimate:
 - Commercial vs non-commercial treatments
 - Volume outputs to inform infrastructure investment
 - Overall costs estimates
 - Acres and locations where wildfire will need to do the work.
- Need to estimate future treatments, costs, outputs: fire and mechanical.

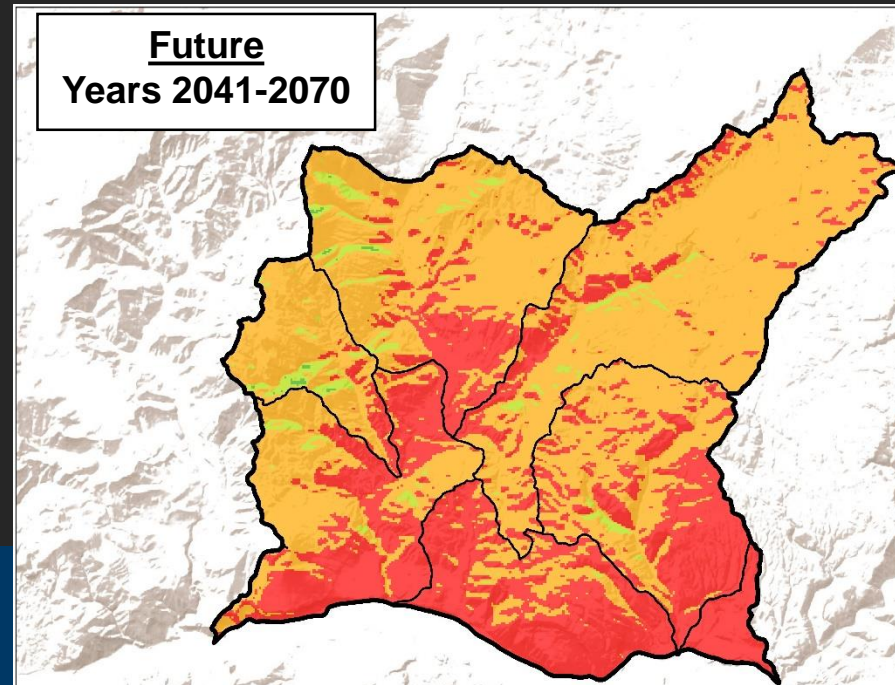
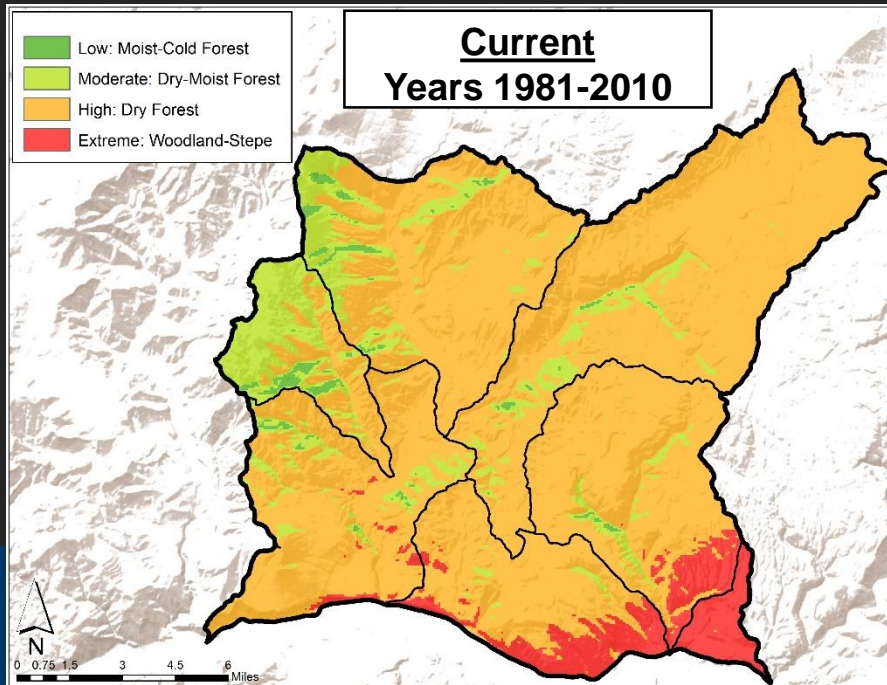


2. Update assessment of current conditions & restoration need

→ Update eastside restoration needs assessment

Methods

- Use current conditions dataset
- Led by UW & DNR; partner with TNC, USFS, & others.
- Incorporate modeling and field data on projected shifts in forest types, including identifying forest areas with high likelihood of conversion to shrub-steppe.



2. Update assessment of current conditions & restoration need

→ Update eastside restoration needs assessment

Methods

- Use current conditions dataset
- Led by UW & DNR; partner with TNC, USFS, & others.
- Incorporate modeling and field data on projected shifts in forest types, including identifying forest areas with high likelihood of conversion to shrub-steppe.
- Incorporate data from existing and new field studies on treatment longevity across different treatment types and vegetation types.
- All lands science! Combine and leverage long term plot networks
- Results for all eastside, plus broken out by planning areas & other areas.



3. Assess “Return on Investment”: Treatment effectiveness

→ Reduction in uncharacteristic fires and risk to communities

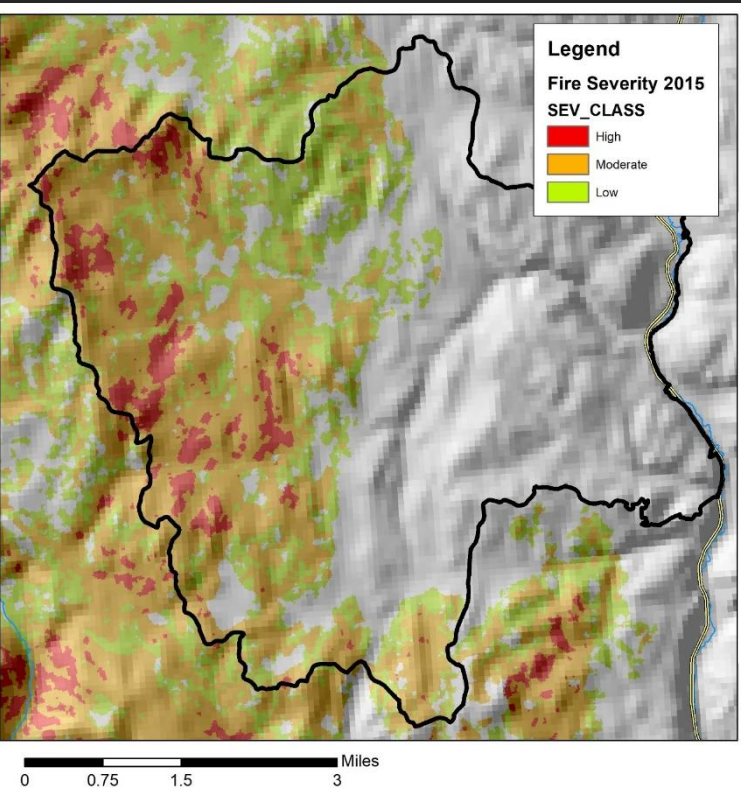
- Fire modeling to demonstrate changes in fire severity and risk to communities. Periodically update QWRA dataset, plus modeling for specific planning areas.
- Potentially expand current Chelan County UW study examining reduction in smoke impacts from treatments, especially increased use of Rx fire.



3. Assess “Return on Investment”: Treatment effectiveness

➔ Reduction in uncharacteristic fires and risk to communities

- Fire modeling to demonstrate changes in fire severity and risk to communities. Periodically update QWRA dataset, plus modeling for specific planning areas.



Shelan County UW study examining reduction in fire severity and behavior, especially increased use of Rx fire.

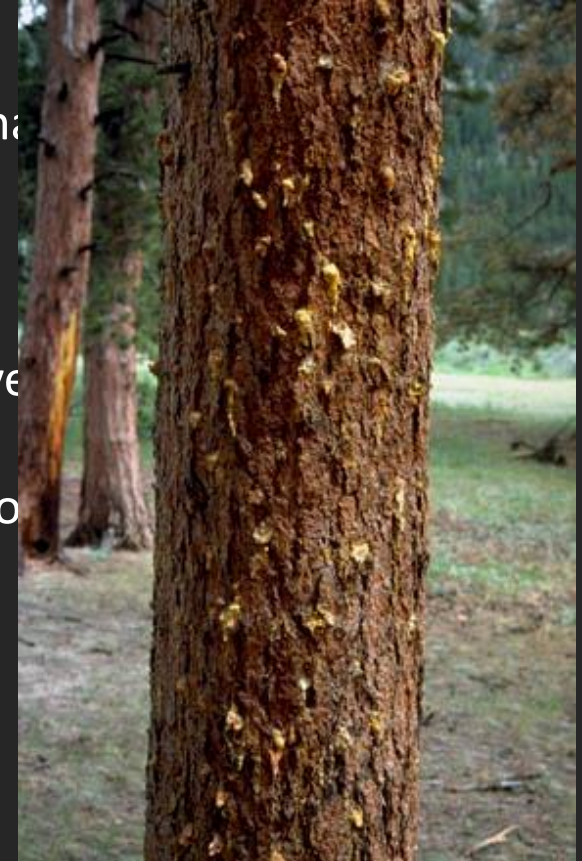
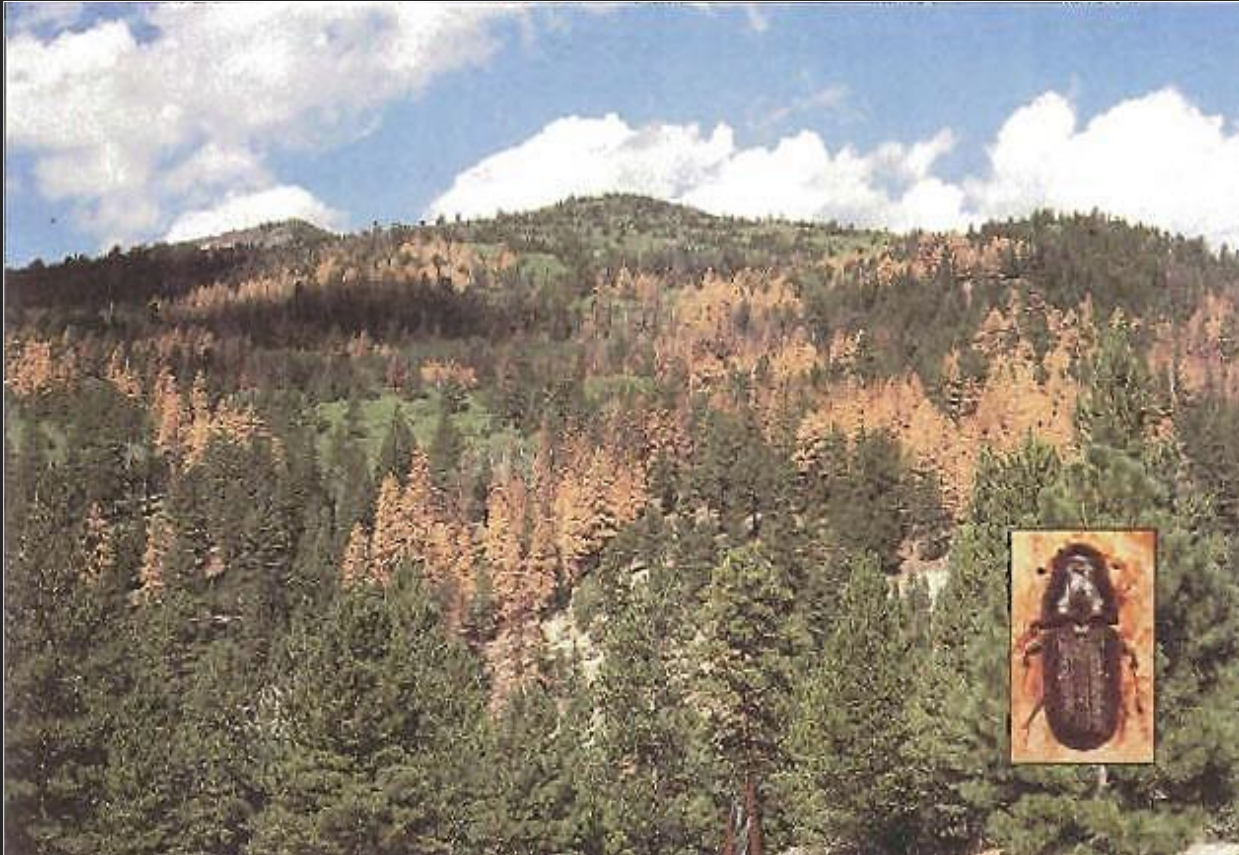


Fire severity and behavior:
RV?
a



3. Assess “Return on Investment”: Treatment effectiveness

→ Reduced susceptibility to drought & large scale insect outbreaks



3. Assess “Return on Investment”: Treatment effectiveness

→ Effects on economic outputs and ecosystem services

- Study to estimate impacts of planned and anticipated restoration work on volume outputs, revenues, jobs, etc.
- Fund study on ecosystem services benefits of large scale treatments.
- Effects of treatments on snowpack, water yield, stream flow, and fish habitat:
 - Leverage ongoing large scale studies (UCSRB-Ecotrust, PNW-PNAL)
 - Support ongoing field work to add empirical data to models (TNC,UW)



3. Assess “Return on Investment”: Treatment effectiveness

→ Effects on ecosystem services

- Funding & technical support for monitoring of habitat, recreation, carbon, etc.
 - Goshawk → LiDAR, phodar, current conditions data
 - Social license for forest management
 - Carbon: stable vs maximize?
 - Invasives?
 - Aquatics?
 - Others??



3. Assess “Return on Investment”: Treatment effectiveness

→ Effects on ecosystem services

- Funding & technical support for monitoring of habitat, recreation, carbon, etc.
 - Goshawk → LiDAR, phodar, current conditions data
 - Social license for forest management
 - Carbon: stable vs maximize?
 - Invasives?
 - Aquatics?
 - Others



20 YP and current conditions dataset will attract researchers
All Lands Science!



20-Year Plan Monitoring

1. Track treatment implementation

2. Update assessment of current conditions & restoration need

3. Assess ROI of treatments & funding

\$1 million in Forest Health budget request for monitoring:

- Current conditions dataset
- Updated restoration needs assessment:
 - Climate change, future treatment need, & areas at risk of conversion
- Fire modeling examining treatment effectiveness at reducing fire severity
- Expand smoke & Rx fire study
- Snowpack field studies
- Acquire LiDAR and other data



20-Year Plan Monitoring

1. Track treatment implementation

2. Update assessment of current conditions & restoration need

3. Assess ROI of treatments & funding

\$1 million in Forest Health budget request for monitoring

- Current conditions dataset
- Updated restoration needs assessment:
 - Climate change, future treatment need, & conversion to shrub-steppe
- Fire modeling examining treatment effectiveness at reducing fire severity
- Expand smoke & Rx fire study
- Snowpack field studies
- Update insect and disease risk map
- Economic and Ecosystem services study
- Others?

Monitoring Sub-committee?



Collaborative Grant Programs

We have renamed the grant programs:

Forest Collaborative Infrastructure Pilot is now:

Building Forest Partnerships Grant Program



Collaborative Grant Programs

We have renamed the grant programs:

Cross-Boundary Competitive Grant Program is now:

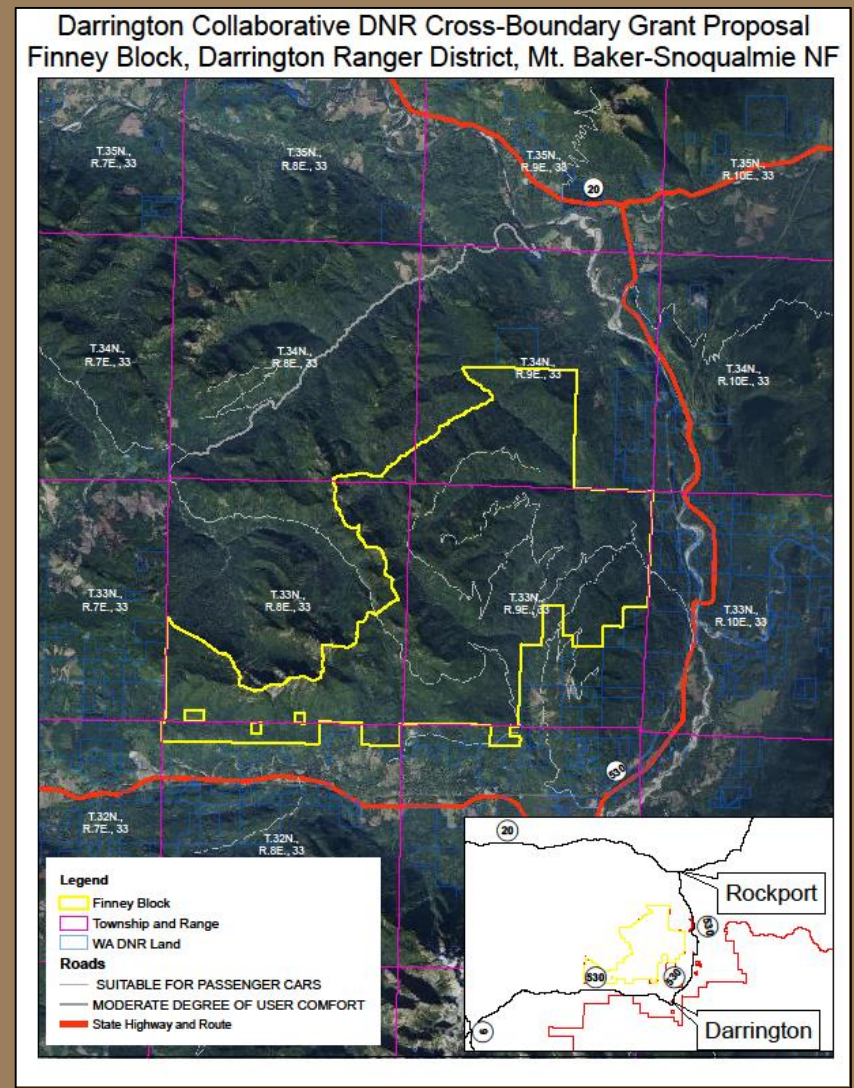
All Lands Forest Restoration Grant Program



Collaborative Grant Programs

-DNR has requested \$2 million in the 19-21 capital budget to continue these two grant programs

-DNR is looking for FHAC feedback on grant program criteria and requirements to inform next RFP process.



Building Forest Partnership Grant Program

Overview of current program

- Funding pool: \$250,000
- Maximum award amount: \$25,000
- Funded 9 proposals
- No match required
- Eastern WA proposals must include 20-Year Plan activities
- Proposals must state how funds will help advance developmental goals.



Building Forest Partnerships Grant Program

Eligible Activities

- Facilitation and coordination of workplans for 20-Year FH Planning Areas
- Organizational and staff support, including facilitation, technical assistance, and networking
- Outreach/Communication
- Development of Zones of Agreement, action plans, and project proposals.
- Workshops and trainings



All Lands Forest Restoration Grant Program

Overview of current program

- Total funding: \$1.4 million (two funding pools)
 - \$1 million eastern WA and \$400K western WA
- Maximum award amount: \$400,000
- No match required, but points awarded for match
- Eastern WA proposals only for 20-Year Plan activities
- GNA: points awarded for effective use of GNA



All Lands Forest Restoration Grant Program

Eligible Activities

- Aquatic evaluations and data acquisition (no funding for aquatic treatments)
- Landscape evaluations
- Data acquisition (LiDAR), surveys, etc..
- Planning (pre-NEPA and full NEPA including contract NEPA)
- Vegetation treatments (prescribed fire, thinning, etc...)
- Post-implementation monitoring
- Coordination with landowners and stakeholders



Collaborative Grant Programs

Discussion Questions

- What should the funding levels be for the two programs?
- Should we increase the max. award amount for partnership grant?
- Any change to eligible activities or entities?
- Any change in criteria and scoring?
- Any types of projects we want to emphasize?
- Who from the FHAC would like to work with us on revising the grant programs?

