Washington's Forest Health and Wildfire Management

Robert L. Edmonds
Professor Emeritus
School of Environmental and Forest Sciences
University of Washington, Seattle, WA

Forest Health Highlights in Washington—2017

Forest Service
Pacific Northwest Region
Forest Health Protection

Washington State Department of Natural Resources
Forest Health Program

March 2018

http://www.dnr.wa.gov/Publications/rp_fh_2017_forest_health _highlights.pdf

What is a Healthy Forest?

A healthy forest ecosystem (including streams) sustains ecosystem complexity while providing human social and economic values and the ability to recover from natural and human stresses.

Westside WA

IMPACTS OF GLOBAL WARMING AND FIRES

- Warmer, drier conditions result in increased forest diseases, insects and fire
- Fire radically changes forest ecosystems, through tree death, loss of productivity and increasing erosion. They take a long time to recover.
- Climate change will mean less snow, more rain on snow, flooding, issues for urban water supplies. Will some tree species be unable to grow in new climate regimes?
- Wildfire is a great threat to forests, human lives and property some towns and cities in eastern Washington. e.g., Leavenworth, are very vulnerable to fire.
- Fires in eastern Washington produce smoke in both eastern and western
 Washington that can last weeks unhealthy for humans, reduces visibility for scenery and airports, negative for tourism. Is this the new normal?
- Agriculture is impacted by global warming and wildfire smoke decreased production, timing of harvest might change, farm animals breath in smoke, eat foliage with ash.

What can we do?

Eastside

Fire fighting; controlled (prescribed) fire, thin the forest. How to pay for this? – taxes, salvage log, economic incentives for forest treatment - biofuels, new forest products from diameter logs.

Protect lives and structures in high risk areas, provide egress plans.

Westside

Favor biodiversity/biological legacies, forest structure, etc. Create more natural conditions – multiple species.

DNR 20-YEAR FOREST HEALTH STRATEGIC PLAN (Implemented 2017)

Goal 1

2.7 million acres of forest land in eastern Washington need treatment to be more resilient to fire, insects and diseases. Goal is to conduct **1.25 million acres** of scientifically sound, cross ownership boundary management and restoration treatments in priority watersheds to increase forest and watershed and resilience by 2037. Requires cooperation between federal and state, tribes, industry and small forest owners.

Conclusions

- 1. Forest health problems in Washington will continue to get worse with climate change at least for a while, especially fires in eastern Washington. Fires could increase in western Washington. Smoke problems could become more common.
- 2. Forests, agriculture, people, structures and tourism are affected.
- 3. Need to proactively manage forests to reduce stress in eastern Washington (including federal forests) thinning, fuel reduction, restoration to more natural conditions.
- 4. Employ ecosystem management in western Washington ecological forestry.
- Cost of treatment and restoration is high and it takes a long time. Economic incentives are needed to use small diameter wood - new forest products, biofuels.