



Why do we need a forest ecosystem management plan?

Why would we cut down any trees?

NHHP FORESTS

Presented by Frank Stricklin, NHHP Steward

NHHP FOREST STEWARDSHIP

- Ecosystem management is an approach that doesn't destroy or degrade the forest for future generations.
- It encourages the restoration of natural processes that were disrupted by historic commercial timber harvesting.
- It is based on conservation science that enhances and protects: Forest and Riparian Habitats; Soil & Water; Wildlife; People; and Natural Beauty & Recreational Opportunities.

FIRE RISK

Hobson's Choice

How do you want your fire?

Fire is a natural process in the forest. You can not draw a line around the park and leave it alone due to the presence of people, and homes at the urban forest interface.

Fuel Treatment

Construct fuel breaks as part of commercial and pre-commercial thinning, to reduce biomass, and fire intensity.

If you ignore fire you will get something, but not what you want.



**THESE TREES HAVE DIED BECAUSE THEY ARE TOO CLOSE TOGETHER
AND WERE NEVER THINNED AFTER A CLEAR-CUT IN THE N250 CIRCA 1990**

DISEASE

There are several areas in the park where wind-thrown trees have resulted from Root Rot.

Thinning and planting rot resistant tree species can manage the severity of this disease.



DISEASES ARE PART OF THE NATURAL FOREST ECOSYSTEM

LAMINATED ROOT ROT “CENTER”



White Pine Blister Rust

- Affects all 5 needle pines
- Telial hosts include Gooseberry and Currants

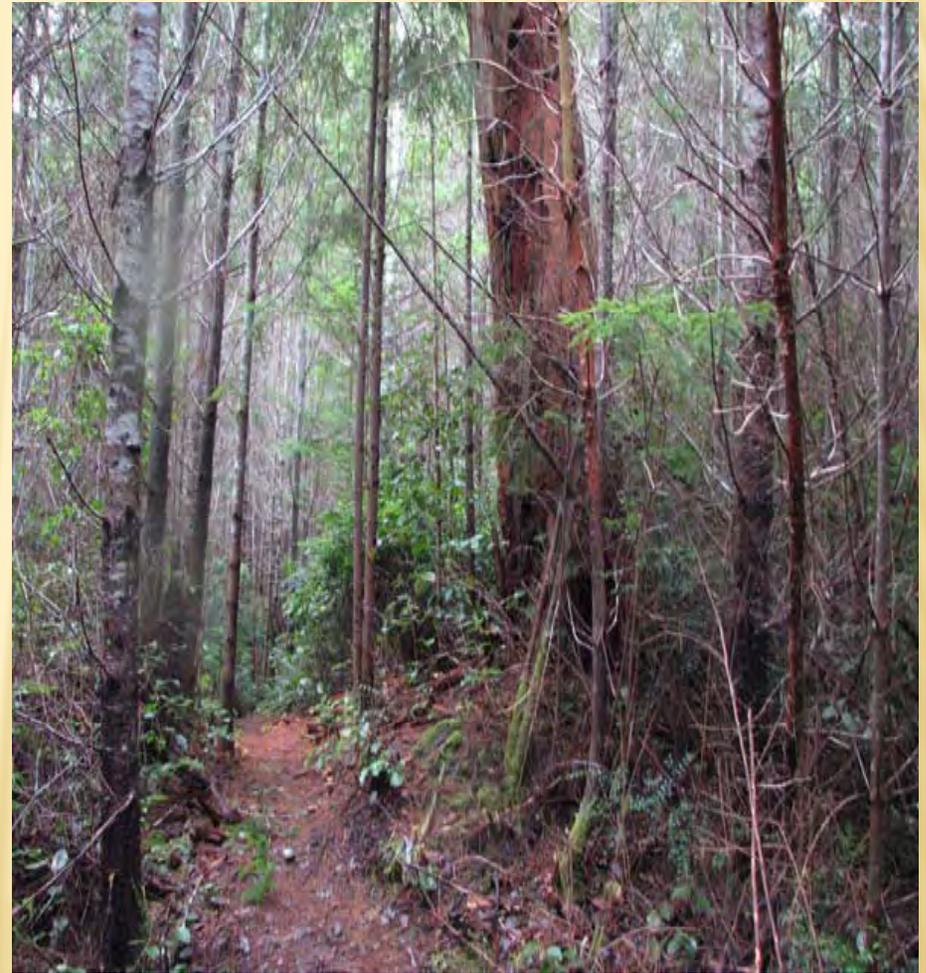


WHITE PINE BLISTER RUST INTRODUCED TO OUR AREA IN 1910

SOME TREES ARE JUST UNSAFE



HAZARD MITIGATION VS HABITAT COMPLEXITY



RISK MANAGEMENT



OPTIONS WITH PEOPLE IN THE MIX

- ❖ Move trail
 - ❖ Best for habitat and safety
- ❖ Remove hazard
 - ❖ Worst for habitat
- ❖ Reduce hazard
 - ❖ Better for habitat than removal
- ❖ Removal causes loss of habitat
- ❖ Habitat can be artificially restored to some extent

ACCEPTABLE LEVEL OF RISK

TREES PICTURED AT RIGHT ARE IN THE STEM EXCLUSION STAGE OF GROWTH. THIS STAND HAS BEEN PRE-COMMERCIALY THINNED

MANY SITES LIKE THIS CAN BE FOUND THROUGHOUT NHHP

Forest stand lacking diversity.



NHHP's even aged stands lack specie diversity as well as vertical and horizontal diversity.

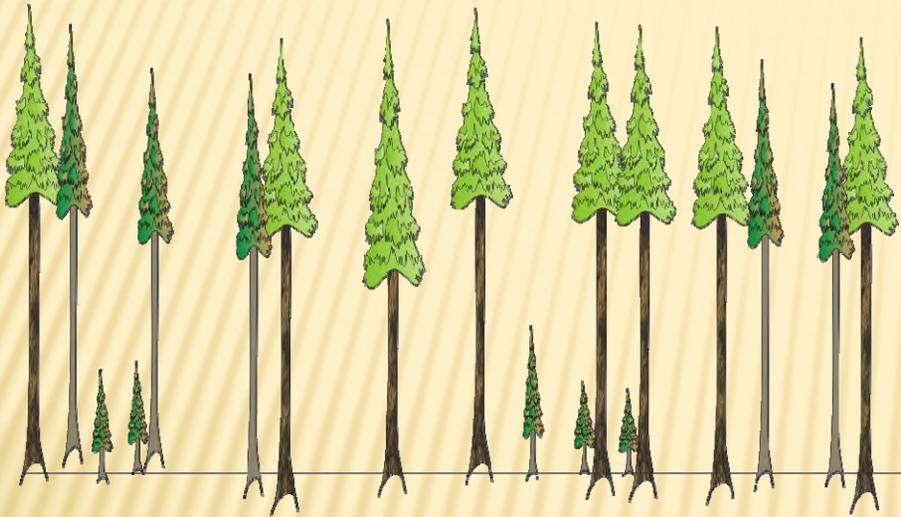


LESS COMPLEXITY LESS WILDLIFE

THIS STAND IS OLD ENOUGH THAT UNDERSTORY DEVELOPMENT HAS ADVANCED TOWARD A MORE COMPLEX STRUCTURE

SHADE TOLERANT TREES IN THE UNDERSTORY

Increasing forest stand diversity.



Understory planting is important and increases complexity and diversity



HEADED THE RIGHT DIRECTION

FUNGI, VASCULAR PLANTS, FOREST FLOOR
INVERTEBRATES, AQUATIC ORGANISMS,
TERRESTRIAL VERTEBRATES, AMPHIBIANS

Crown Class Differentiation, Decadence
Understory development,
Canopy Stratification.



Characteristics of Complex and Late Seral Stage Forests

THIS STAND IS A HEALTHY
RESILIENT FOREST



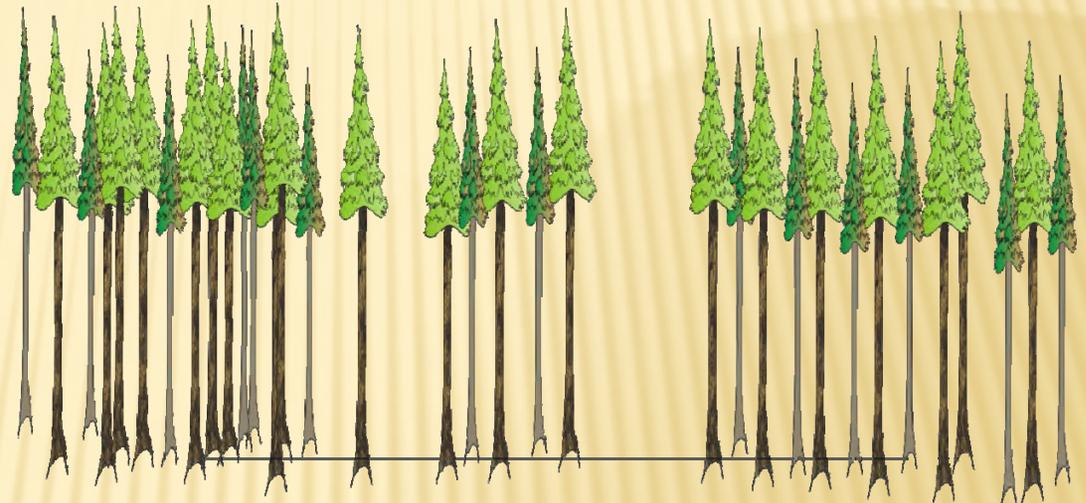
**HABITAT COMPLEXITY MEANS MORE
BIOLOGICAL DIVERSITY**

VARIABLE DENSITY THINNING

- Leads to
 - ✓ Crown class differentiation
 - ✓ Understory development
 - ✓ Canopy stratification
 - ✓ Development of habitat breadth
 - ✓ Pre-interactive niche diversification

BEST PRACTICE - MANAGING FOR BIODIVERSITY

Variable Density Thinning.

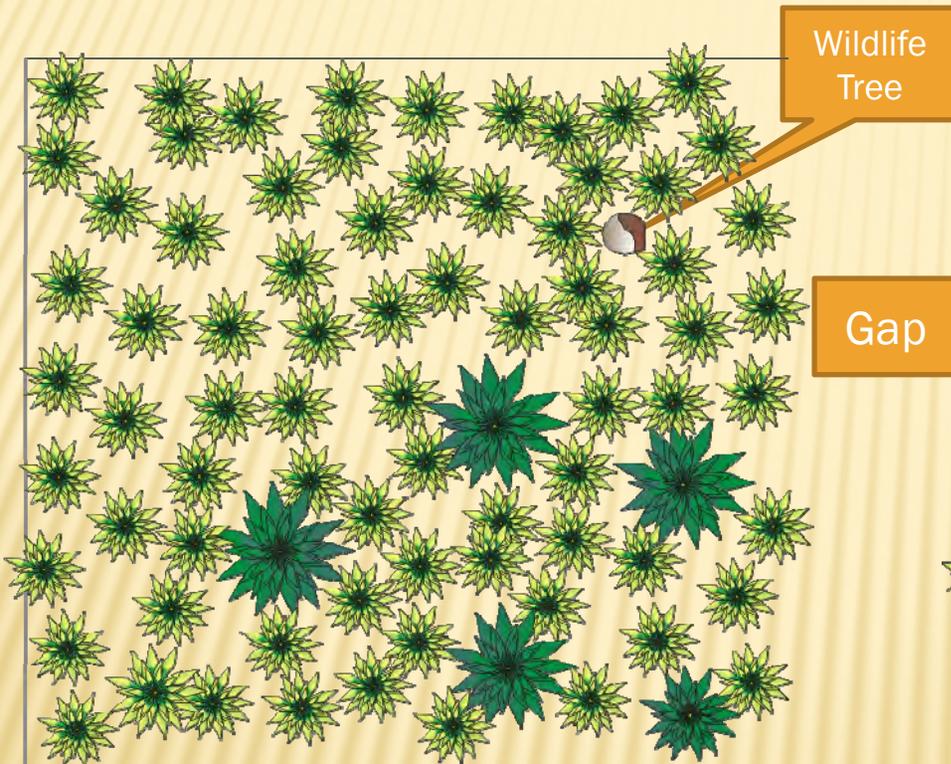


Create a mosaic of unthinned, moderately thinned and heavily thinned patches about 1/4 to 1 acre in scale. This promotes tree growth at differing rates.

THERE ARE MANY WAYS TO THIN

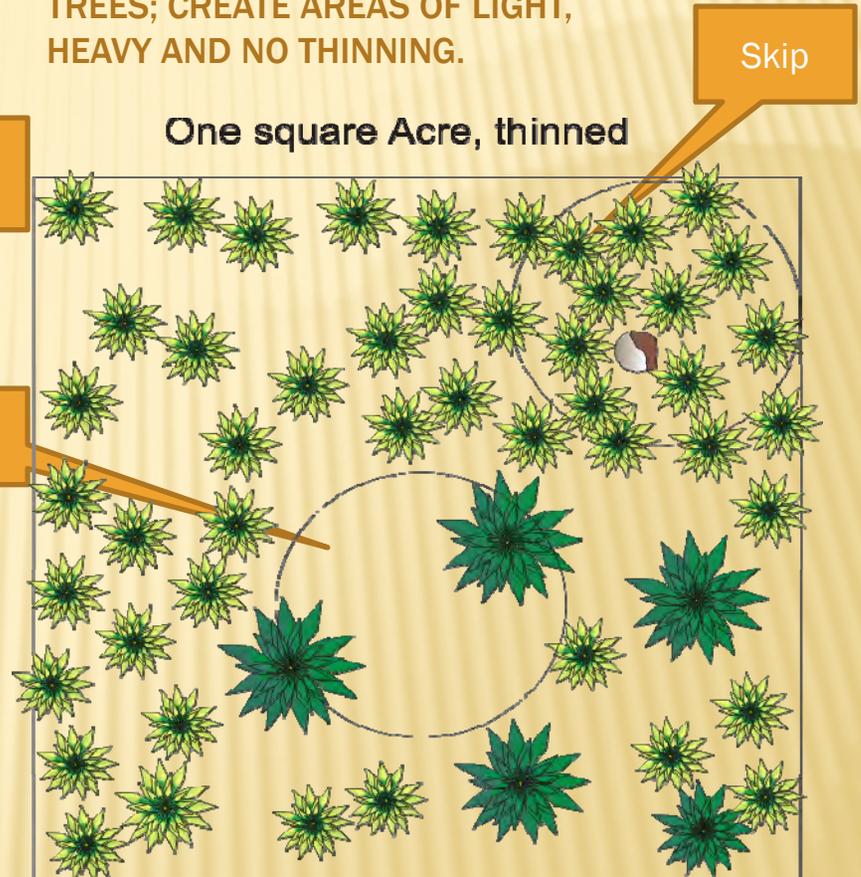
PRIOR TO THINNING, CHECK FOR AREAS OF POTENTIAL WIND THROW

One square Acre, prior to thinning



DON'T THIN AROUND WILDLIFE
TREES; LEAVE THE MOST VIGOROUS
TREES; CREATE AREAS OF LIGHT,
HEAVY AND NO THINNING.

One square Acre, thinned



GOOD PLANNING IS CRUCIAL

COMMERCIAL THINNING



PRE COMMERCIAL THINNING



**SOMETIMES IT COSTS TO THIN,
SOMETIMES IT DOESN'T**

NEW HARDWOOD PATCH



IF YOU MANAGE FOR BIODIVERSITY YOU SHOULD INCLUDE THESE KEY ELEMENTS

- ✘ Repeated thinning
- ✘ Gap creation
- ✘ Promote specie diversity
- ✘ Maintain hardwood patches
- ✘ Promote mast production
- ✘ Protect Riparian areas
- ✘ Underplanting in thinned “plantations”

THINNING IS NOT ENOUGH

No traditional timber harvest rotation!

Commercial forest lands are harvested about every 50 -70 years to maximize profits.

Kitsap County parks are not commercial forest. It is public land that needs to be managed for forest health, habitat diversity and complexity. Logging will be limited to thinning, salvage and hazard tree removal.

Ecosystem management leads to late seral stage with:

- + A wide variety of tree sizes;
 - × LWD, Decadence
- + Improved age distribution;
 - × Young and old trees
- + Healthier wildlife habitat;
 - × Complexity
- + More carbon storage;
 - × BIG trees make big logs that can persist for a 1000 years
- + More options for adaptive management;
 - × Suppose we are wrong?
 - × Approach with Humility!

NO FINAL HARVEST/CLEAR CUTTING OR TERMINAL LOGGING