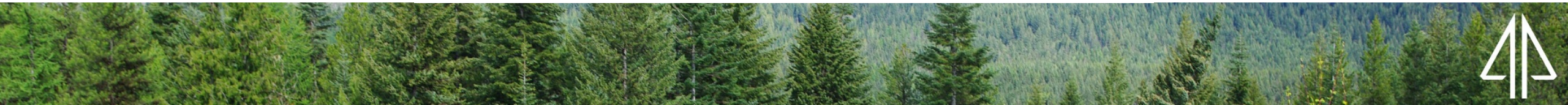




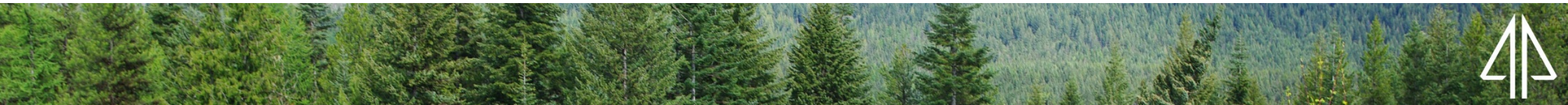
**Stimson Lumber**  
A TRADITION OF QUALITY



# Developing Successful Operational Chemical Site Preparation Prescriptions

December 13, 2018

**Bill Pittman**  
**Stimson Lumber Company**



GOAL –

# A Well-Distributed Free-To-Grow Plantation

- Wise use of chemical is key to that success



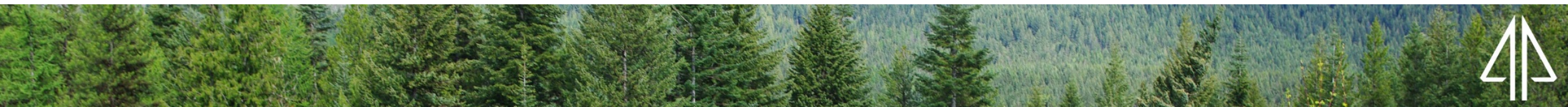


# Wise use of chemical is key to that success

- Maintain soil moisture
- Increase survival and vigor
- Better distribution of seedlings
- Increased yield at harvest
- Shorter rotations

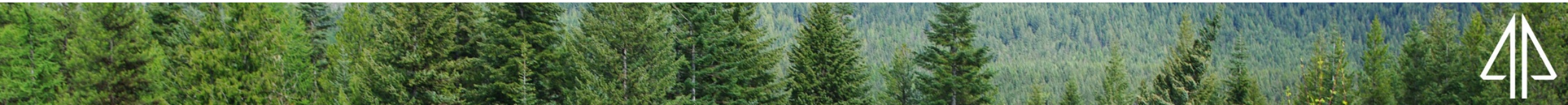


# Seed to Shelf



## 2 herbicide specific GOALS

1. Control weeds
2. Stay out of the newspaper



LEGAL ROUNDUP —

## Lawsuit brings \$289 million verdict against maker of Roundup weed killer

Jury finds fault with herbicide manufacturer despite lack of scientific evidence.

JOHN TIMMER - 8/11/2018, 11:45 AM

## Kitsap County residents fight back against companies spraying herbicide

By: Ranji Sinha

Updated: Sep 10, 2018 - 11:31 PM

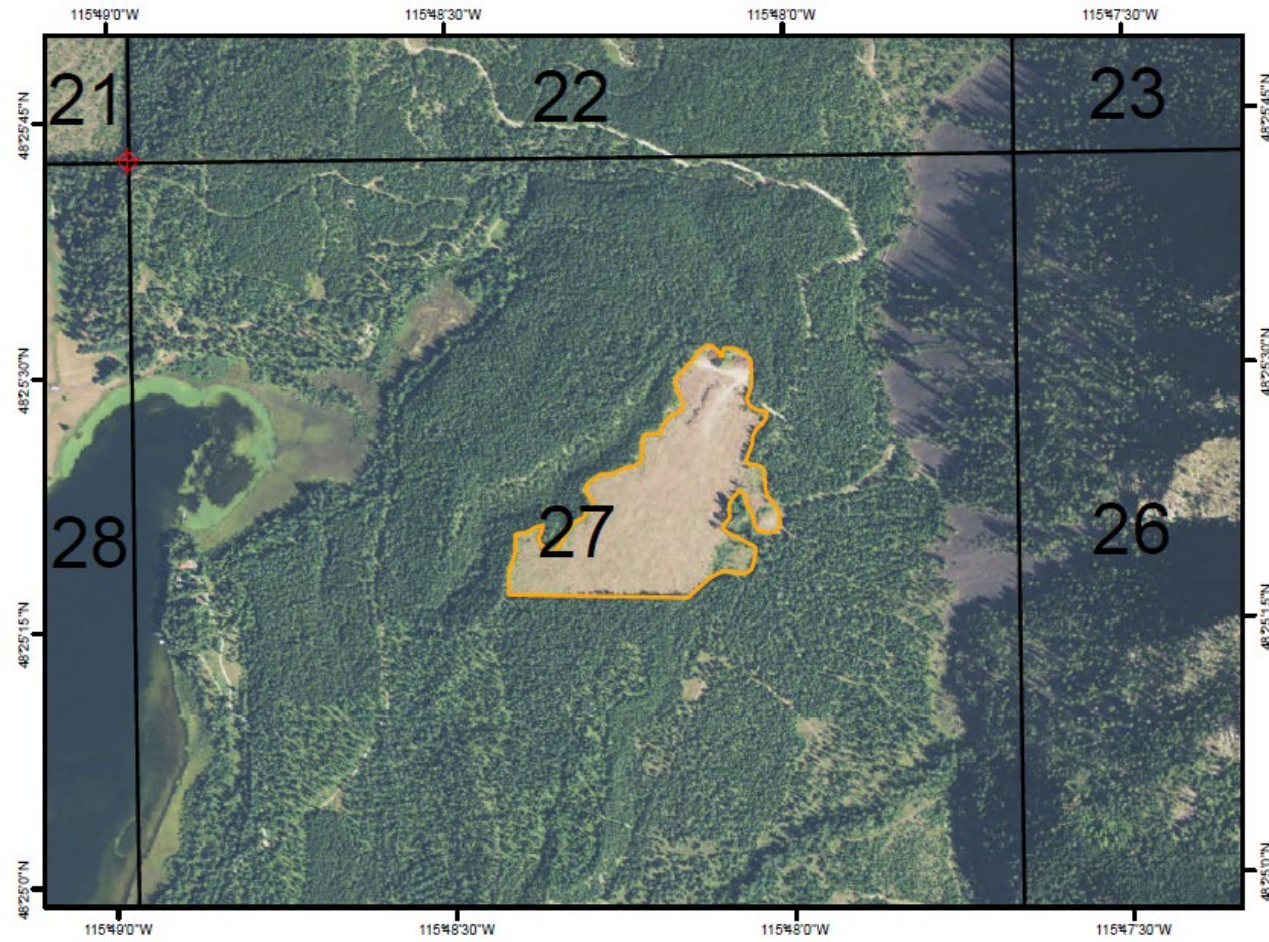




Our motivation...



# 2013 Aerial Image



# Background information...

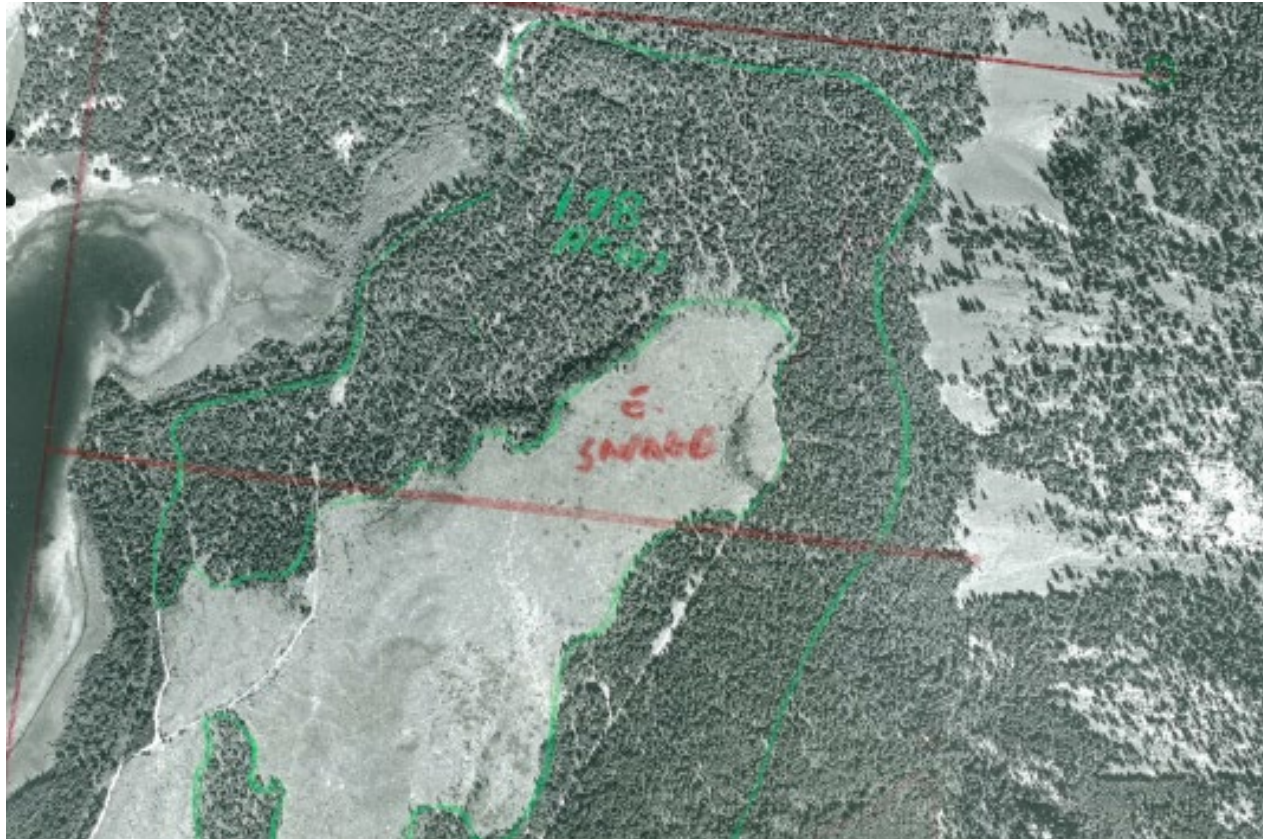
Habitat Type = Western Red Cedar

Site Index = 79

Ash Cap Soils



# 1969 Aerial Photo



Stand was harvested at age 43

Yielded 12 mbf per acre

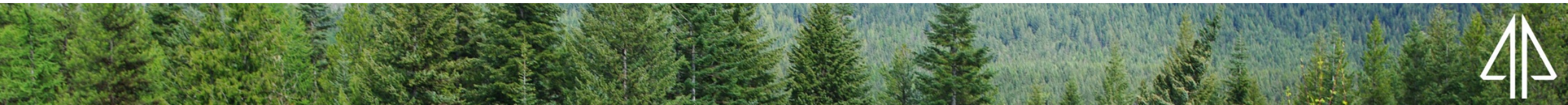
Planted again in spring 2014



With any investment (planting) . . .  
there is a need to protect it.



Not to say we spray everything we plant . . .



But often we need to!





# Herbicide damage

Treated 5/19/15

5 MAT



1 YAT



# Ingredients for a successful Rx

Know the . . .

- Spray Area
- Target Vegetation
- Neighbor
- Label



# Knowing the spray area

## OFFICE PREP WORK

Initial GIS screening:

Water types, presence of fish use

Registered domestic use intakes

Species of Concern

Soil types and parent material

Future plans: what species are scheduled to plant and when

Adjacent landowners: private industrial, private non-industrial, federal, state, or private

Application method: aerial or ground (broadcast, directed spray, hack-n-squirt, spot spray)

Application period: spring, summer, fall



# FIELD WORK

Mapping: GPS 1) spray area, 2) water resources, 3) retention areas, 4) heliport, 5) track to heliport

Existing Brush: distribution and % cover, height and what species

Existing Grass and Broadleaves: distribution and % cover, height and what species

Existing Residual Conifer and/or Hardwood component: condition

Aerial Hazards: high use roads, harvest activity with towers, power lines, snags

Adjacent landowners: cover types

Public Safety Hazards: houses, recreational areas, public/private water sources, public roads, harvest areas

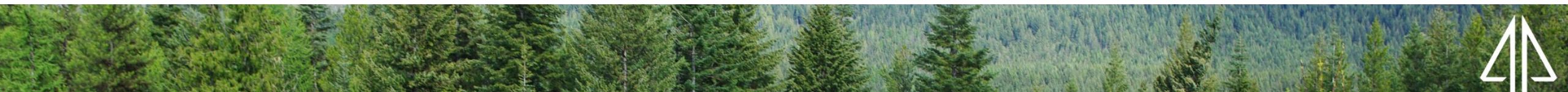
Access Condition: gates/locks, conditions of roads - paved, rocked, dirt

Heliport Status and Condition: level? large enough? Type of work needed to mitigate?



# Products routinely used

- Glyphosate
- Velpar
- Imazapyr
- Escort
- Tordon
- Oust
- Transline
- Atrazine
- Surfactants



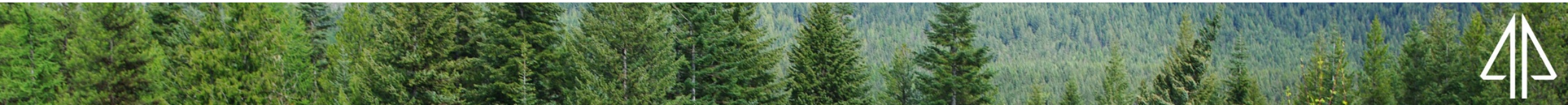
# APPLICATION TYPE



# Application Type – Aerial or Ground?

Points to Consider. . .

- Proximity to sensitive sites (houses, high use areas)
- Visibility
- Topography
- Road access
- Size and distribution of brush levels
- Amount of water onsite
- Adjacent boundary types
- Proximity to other spray units
- Past experiences



Sometimes a combination of both





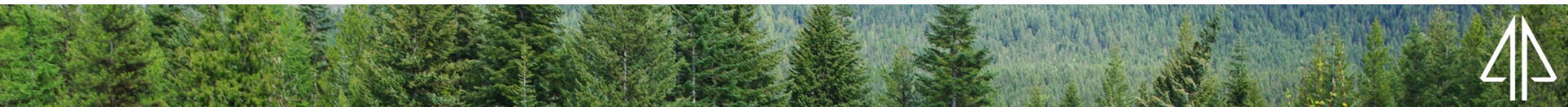
# Waving Wand



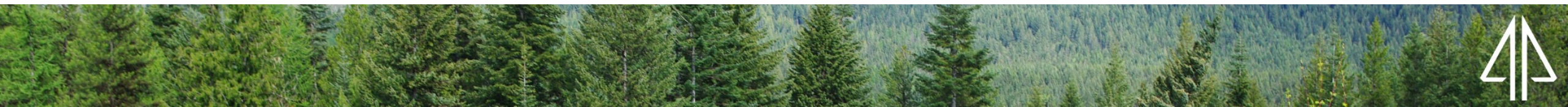
# Directed Spray



# Spot Spray



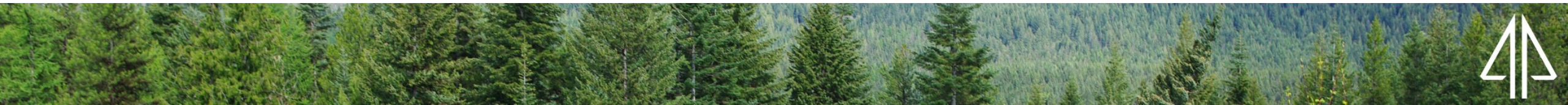
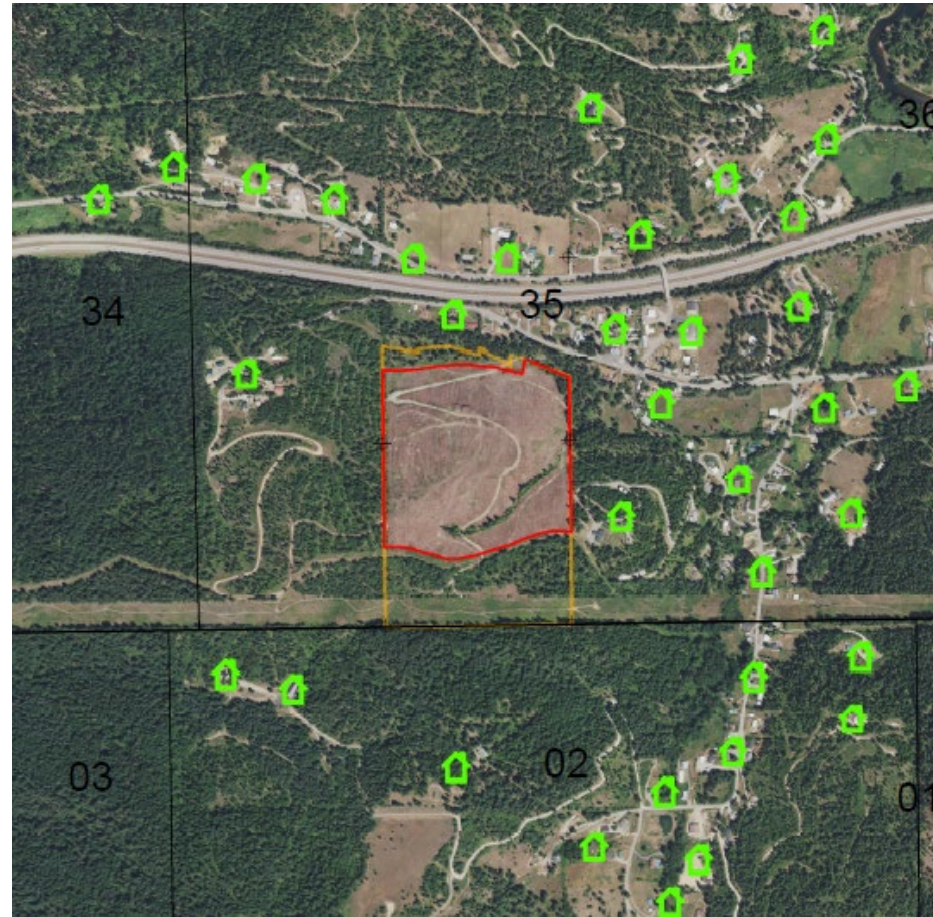
# Hack - n - Squirt



# Aerial

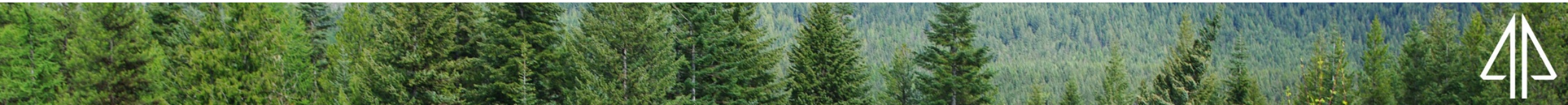


# Knowing the Neighbors



# Neighbor Notification

- Within 1000 feet for broadcast herbicide applications.
- Within 300 feet of dwelling for spot spray applications and roadside spraying.
- A letter is sent to each.



# Know the Label





# Worker Protection Standard



## How to Comply With the 2015 Revised Worker Protection Standard For Agricultural Pesticides

What Owners and Employers Need To Know



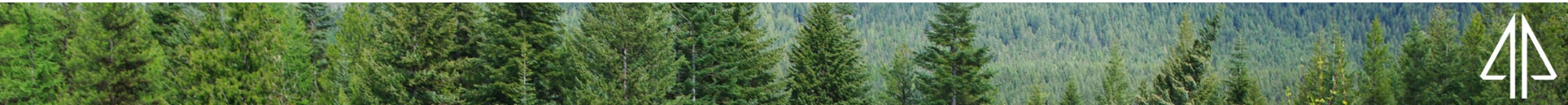
# Worker Protection Standard

- Requires that owners of agriculture establishments:
  - Inform and protect employees from potential pesticide exposure
  - Train them about pesticide safety



# Who is covered by the WPS?

- EPA recognizes two types of agricultural employees:
  - Workers
  - Handlers
- Specific training is required for each



# What is a “Worker”?

- A worker is anyone who:
  - Is “employed” in exchange for a wage, AND who perform tasks related to growing and harvesting of plants (timber) on farms, greenhouses, nurseries and FORESTS.
- A worker is not:
  - Office employees
  - Truck drivers
  - Mechanics
  - Road construction crews



# Who are our “Workers”?

- Internally = our foresters, interns
- Externally = Contractors (loggers, cruisers, labor crews)

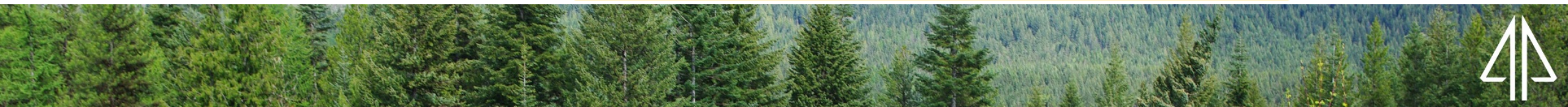
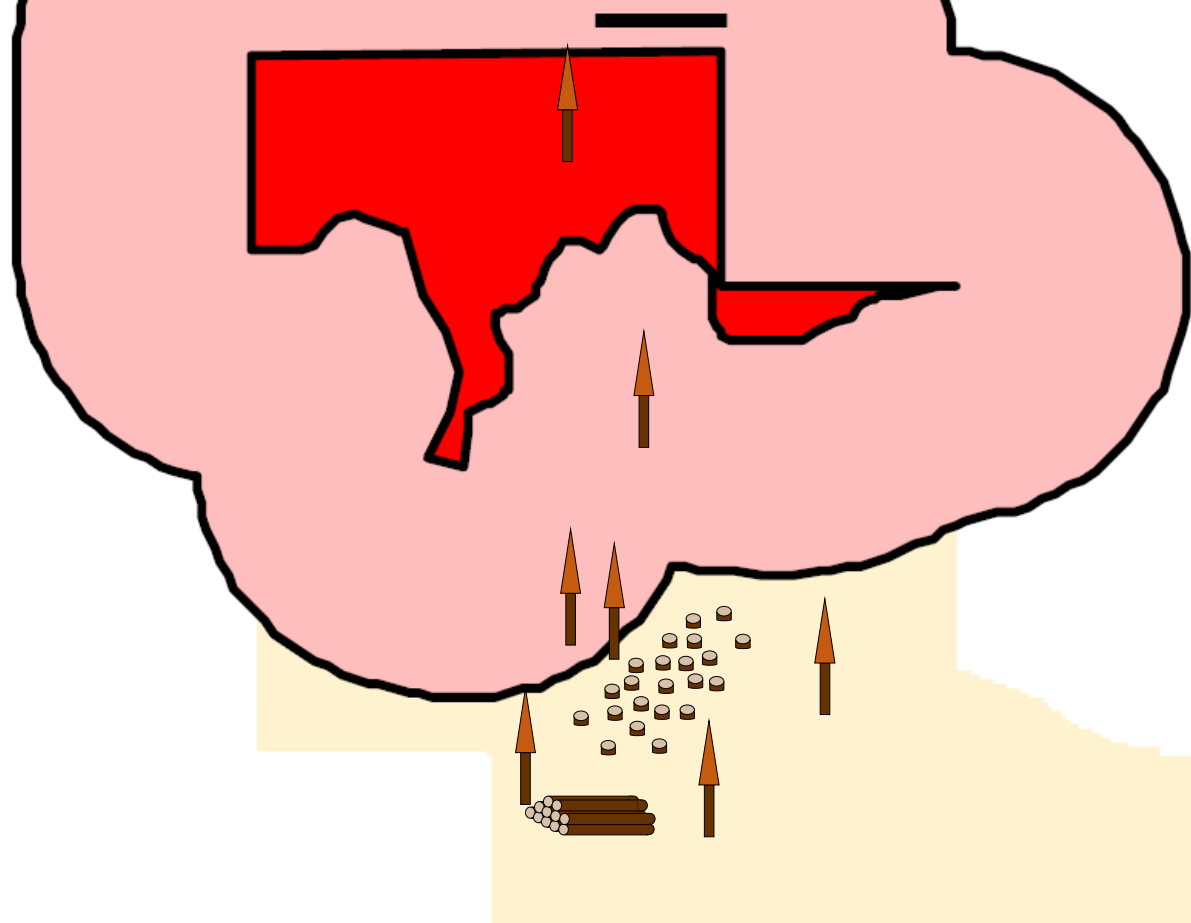


# What are our requirements to our workers?

- We need to notify them prior to pesticide applications when working within  $\frac{1}{4}$  mile of a spray unit.
- “If” they need to enter the spray area to perform a task within 30 days of application, we need to train them BEFORE they enter.
- Training consist of watching an 18 minute video regarding pesticide safety.



# GRAND JUNCTION



# Sustainable Forestry Initiative

## Performance Measure 2.2

*“Minimized chemical use required to achieve management objectives...”*





# Minimizing Chemical Use. . .

More to it than just using 1 quart instead of 2 quarts

Using labeled products for correct use

Following the label and local, state and federal laws

Using proper equipment and trained people

Using licensed applicators

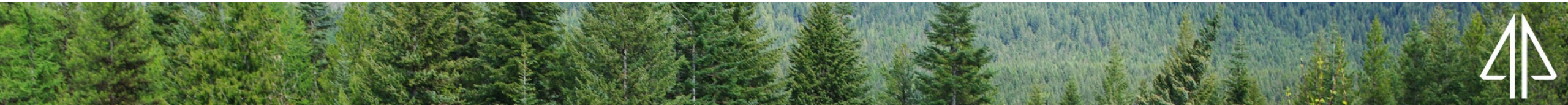
Using GPS to ensure accuracy

Using the correct products on the targets to do the job

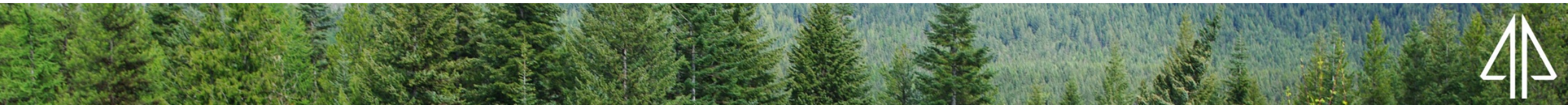
Using the correct amount of product to get the job done

Staying updated with current and new products and trends

Work with internal and external contacts to test new products/rates/timing and evaluate efficacy

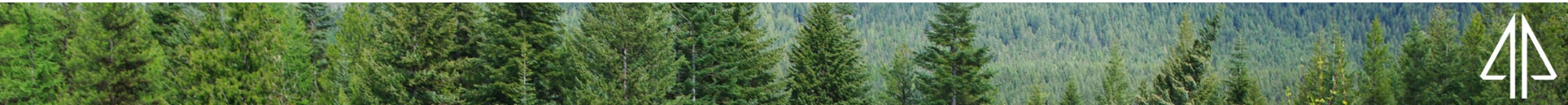


# Drones



# In summary. . .

- Goal: Free To Grow . . . As quickly as we can get there
- A combination of. . .
- The best seed and stock type you can afford to purchase
- Having an A+ planting crew
- Recognition that early vegetation control is paramount
- To make \$ you have to invest \$
- A forester's shadow is the best thing for a seedling!



Thank You

