

A landscape photograph showing a valley with a dense forest of evergreen trees. The foreground features some bare, light-colored branches and a dirt path. The background shows rolling hills covered in forest under a bright sky. The title text is centered over the middle of the image.

# Ten Years Tending The Woodrat

10/31/2012



# The Disclaimer:

- Decisions are driven by management objectives
- This is cowboy science
- Read the label







# Lucky 13

- Climax Stand
- Mix Grand fir/Cedar Habitat Types
- Harvested 2008 – 2009
- 80 TPA Produce 40-50 MBF



# 2010 Broadcast Burn





# Aerial Herbicide Site Preparation

- October 2010 application
- Atrazine (41% A.I.) – 1 gal/ac
  - Group 5 herbicide
  - Photosynthetic inhibitor
  - Disrupts plant growth
- Metsulfuron methyl (60% A.I.) – 2oz/ac
  - Group 2 herbicide
  - ALS/AHAS inhibitors
  - Disrupts protein synthesis
- Should have anticipated the need for a heliport during timber sale developments





# 1<sup>st</sup> Planting

- Completed May 12<sup>th</sup> 2011
- Some seedlings in cooler for 35 days
- Snow kept us out
- Planting units at 4,300' elevation
- Deep well drained granitic soils
- 415D stock – 330 TPA
  - DF – THPL/ASCA from 4400'
  - WL – THPL/CLUN from 3800'
  - WP – F2 Bingham





# First Year Survival about 70%, Spring 2012





2013

Gophers exasperate the problem





June 2013

We offer front door delivery of “oats”







September 2013

SOW order 25,000 improved WL seedlings



June 2014

Continue to develop an understanding with the gopher





# Ground Based Directed Spray

- August 30, 2014
- Targeting grass and forb spp.
- Should have waited for soil moisture
- Existing trees must be dormant
- Identify stream buffers ahead of time
- Sulfometuron methyl (75% A.I.) – 4oz/ac
  - Group 2 herbicide
  - Utilized a micro-encapsulator
  - Risk of offsite movement











Spray Results May 2015



No damage to the survivors of 2011





# Planting Priorities Change





Time to watch the trees grow





























# So now what?

- Salvaged over 63MMBF in 18 months
- Sowed 1,000,000 seedlings
- Exhausted 4 seedlots
- Depleted the inventory
- Not all seedlots were a desirable match to the site
- Site preparation plan
- Where are the \$\$\$ coming from





# The Woodrat July 2016

## Trees are coming in the spring

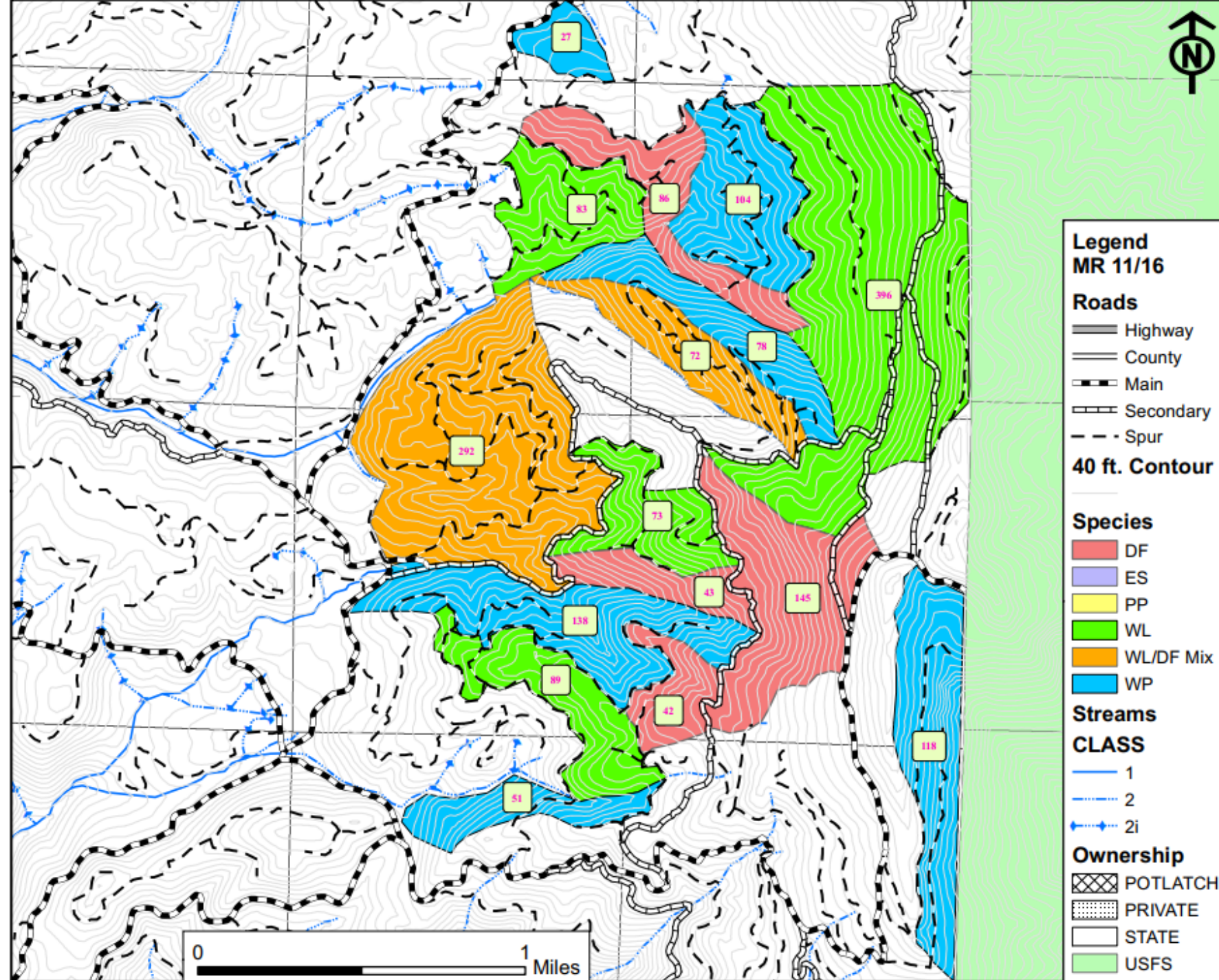




# Spring 2017 Snow Issues









Planting began on March 16<sup>th</sup> and was completed on April 13<sup>th</sup>  
While planting it became apparent that an herbicide release  
treatment would be necessary.





# Aerial Release Spray

- June 23 – 29, 2017
- Targeting Canada thistle and prickly lettuce
- Fixed wing application
- Colpyralid (41% A.I.) – 16oz/ac
  - Group 4 herbicide
  - Synthetic Auxin
  - Disrupts cell growth/division in meristematic tissue
- Indaziflam (19% A.I.) – 5oz/ac
  - Group 29 herbicide
  - Cellulose inhibitor
  - Disrupts cell wall synthesis
  - Strong residual
- Microencapsulator
  - Reduce drift
  - Concentrates delivery & reduces evaporation





# Spray Results, July 2017





# Prolonged summer drought caused mortality





# 1 Year after the release treatment









# A Work in Progress





# Lessons Learned

- Procure Seed
- The “Target Seedling” is a real deal
- Be flexible
- Removing one competitor opens the door to an unknown world of new invaders
- Take herbicide seriously
- Spend as much time in the field as possible
- Mother Nature always bats last

