Strategic Landscape and Stand Management for Owl Habitat on the Deschutes National Forest

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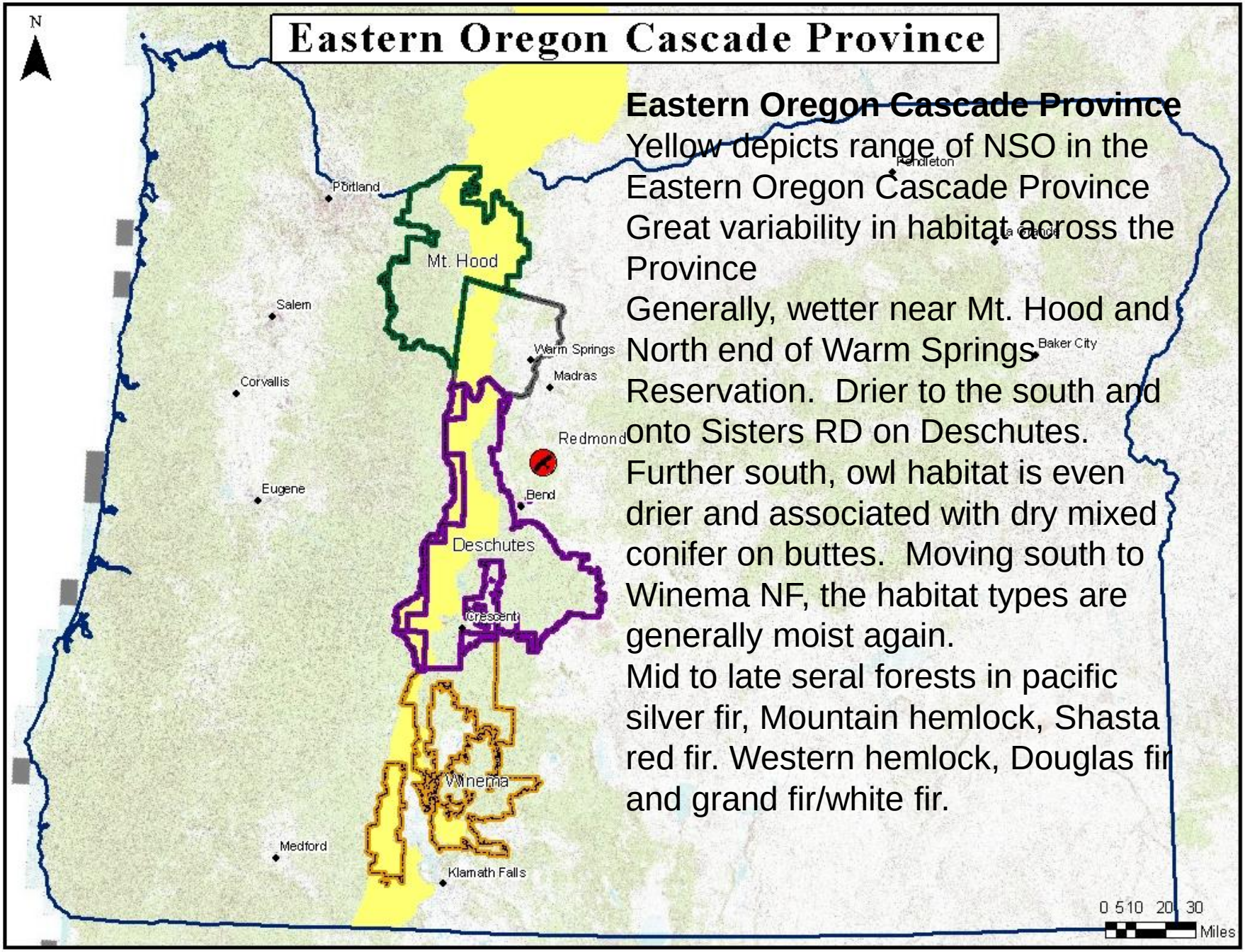


Eastern Oregon Cascade Province

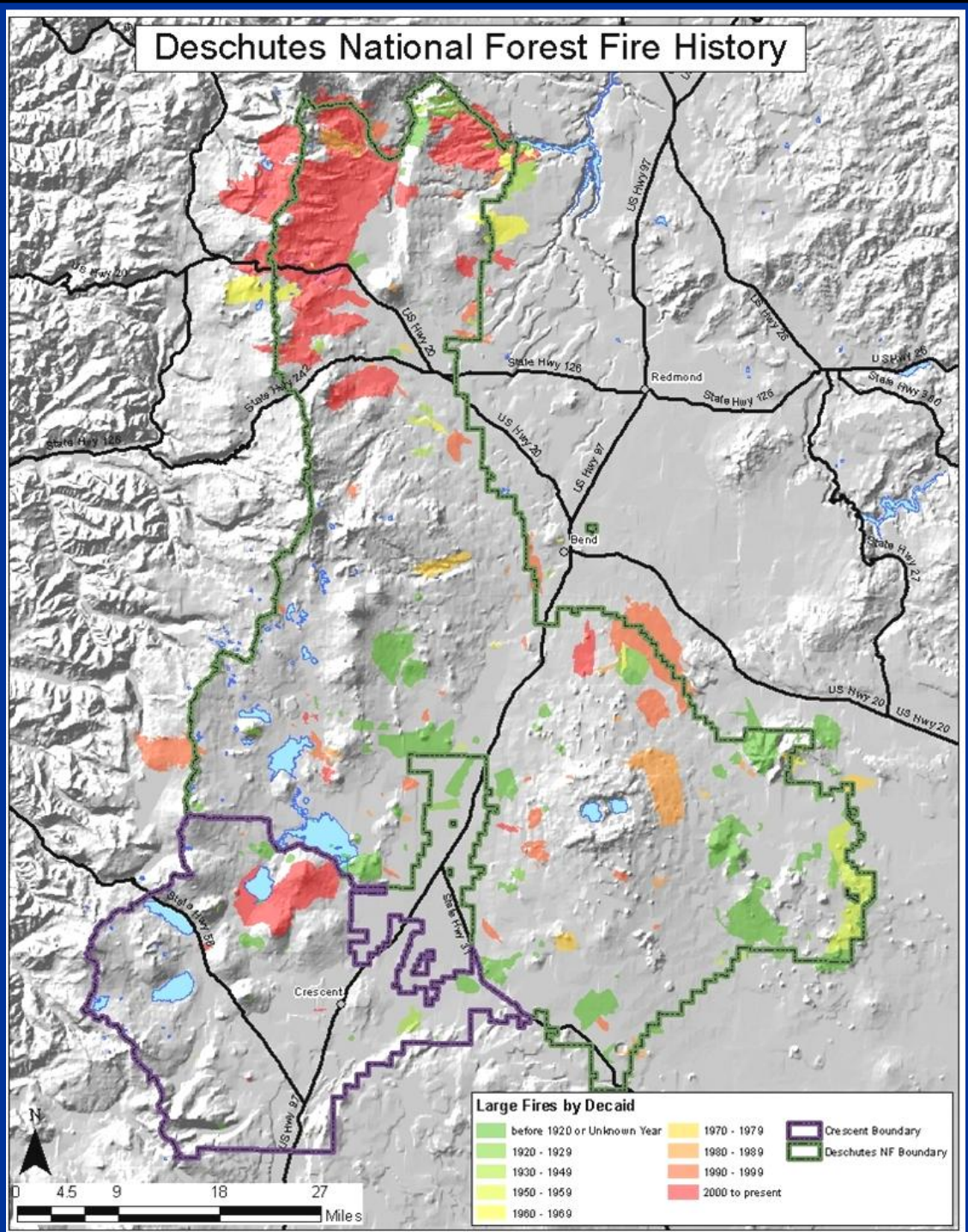
Yellow depicts range of NSO in the Eastern Oregon Cascade Province

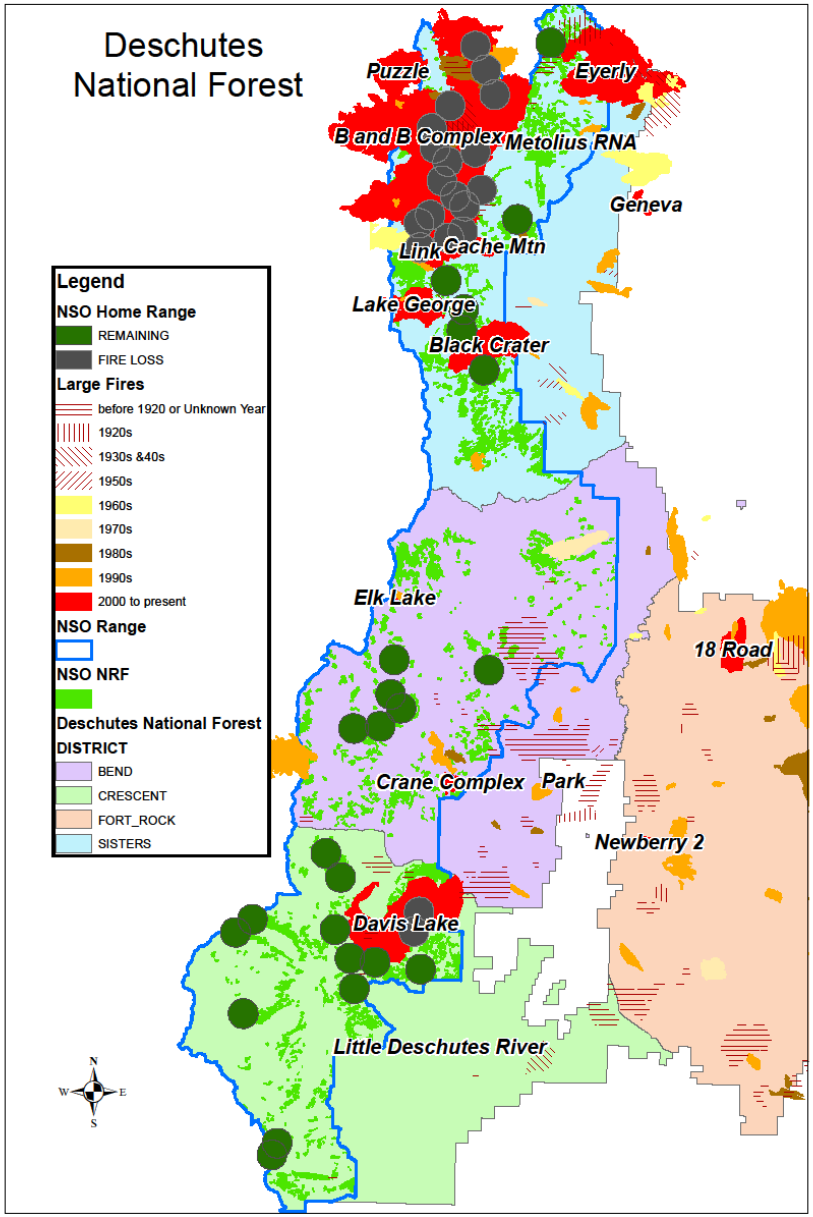
Great variability in habitat across the Province

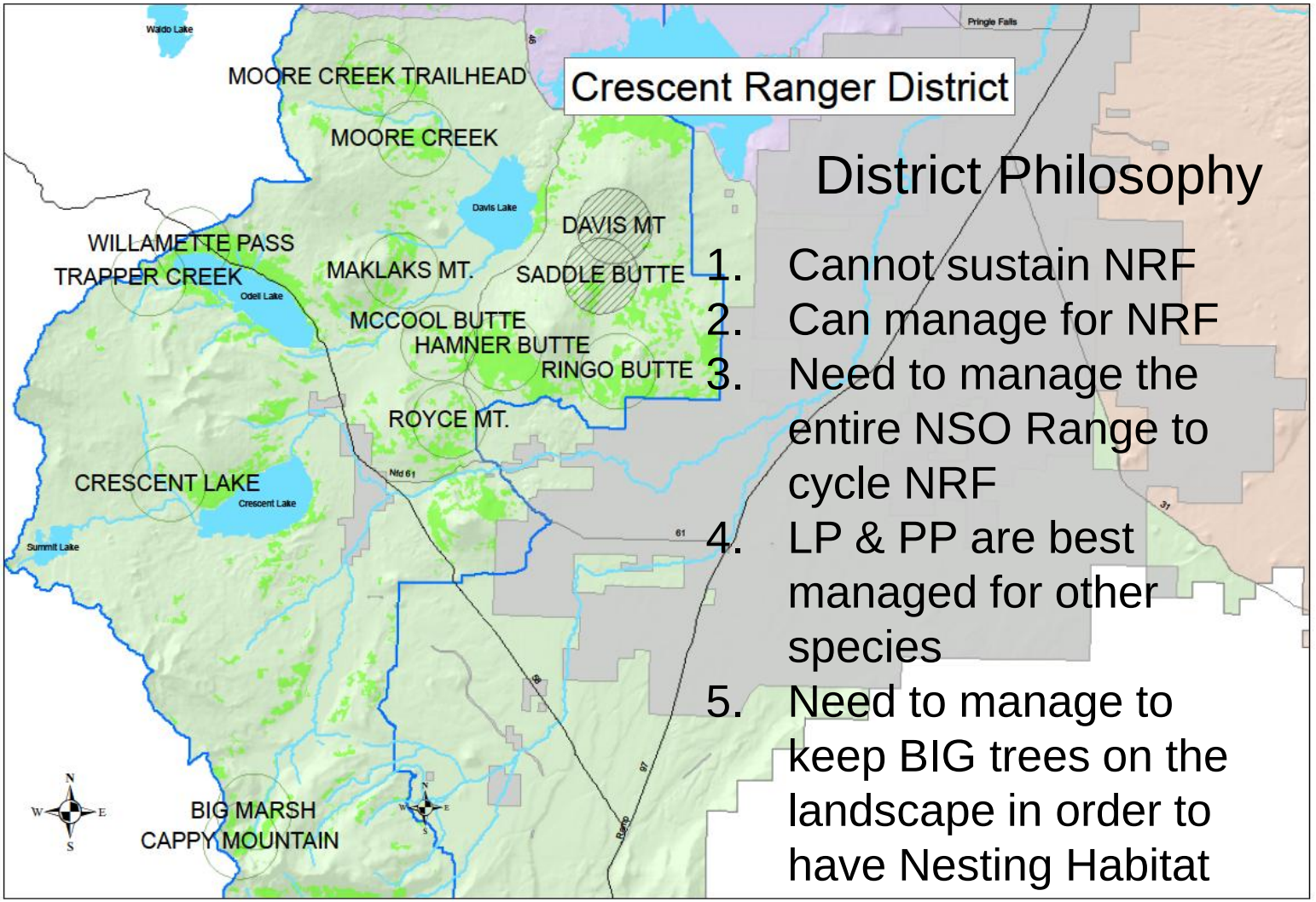
Generally, wetter near Mt. Hood and North end of Warm Springs Reservation. Drier to the south and onto Sisters RD on Deschutes.

Further south, owl habitat is even drier and associated with dry mixed conifer on buttes. Moving south to Winema NF, the habitat types are generally moist again.

Mid to late seral forests in pacific silver fir, Mountain hemlock, Shasta red fir. Western hemlock, Douglas fir and grand fir/white fir.


Deschutes National Forest Fire History
US Hwy 97
US Hwy 20
State Hwy 126
Redmond
State Hwy 242
State Hwy 128
US Hwy 26
State Hwy 380
Bend
State Hwy 27
US Hwy 20
US Hwy 20
State Hwy 58
State Hwy 31
Crescent
US Hwy 97
N
0 4.5 9 18 27
Miles
Large Fires by Decaid
before 1920 or Unknown Year
1920 - 1929
1930 - 1949
1950 - 1959
1960 - 1969
1970 - 1979
1980 - 1989
1990 - 1999
2000 to present
Crescent Boundary
Deschutes NF Boundary


Deschutes
National Forest
Puzzle
Eyerly
B and B Complex
Metolius RNA
Geneva
Link Cache Mtn
Lake George
Black Crater
Elk Lake
18 Road
Crane Complex
Park
Newberry 2
Davis Lake
Little Deschutes River
Legend
NSO Home Range
REMAINING
FIRE LOSS
Large Fires
before 1920 or Unknown Year
1920s
1930s &40s
1950s
1960s
1970s
1980s
1990s
2000 to present
NSO Range
NSO NRF
Deschutes National Forest
DISTRICT
BEND
CRESCENT
FORT_ROCK
SISTERS
N
W
E
S

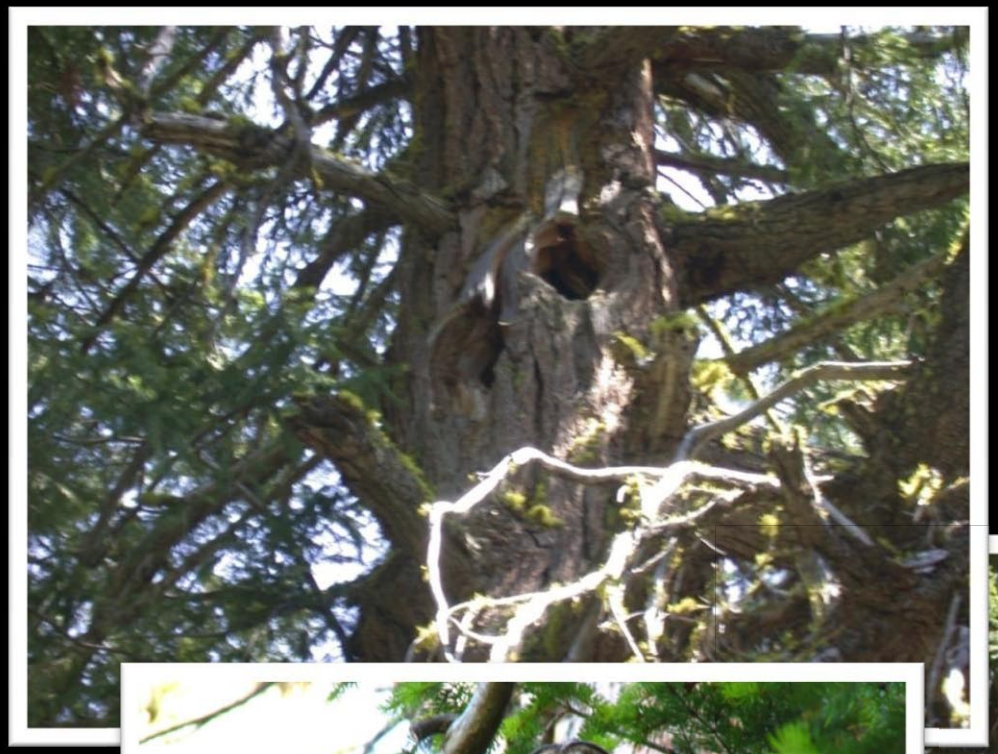


District Philosophy

1. Cannot sustain NRF
2. Can manage for NRF
3. Need to manage the entire NSO Range to cycle NRF
4. LP & PP are best managed for other species
5. Need to manage to keep BIG trees on the landscape in order to have Nesting Habitat

Big Trees

Davis MT (prior to fire)
Nest = Cavity
Tree = 36” DBH DF



Hamner Butte
Nest = Cavity
Tree = 50” DBH DF

Royce Mt.
Nest = Cavity
Tree = 54” DF

Ringo Butte
Nest = Cavity
Tree = 57” DBH PP

A 21” dbh Tree is
NOT Big or Large

Willamette Pass
Nest = Cavity
Tree = 60” DBH DF

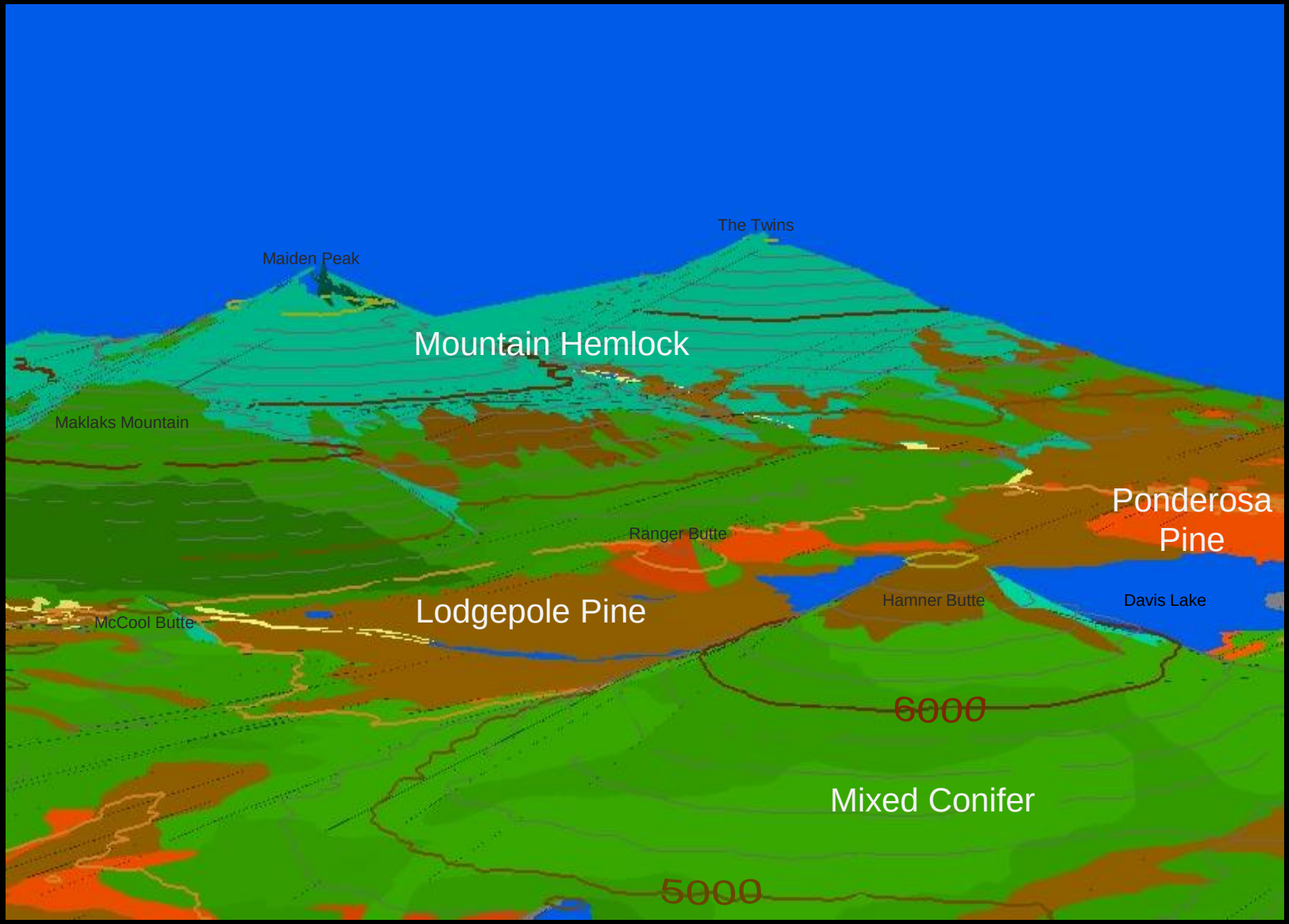
Need to enhance those trees 36”-60”

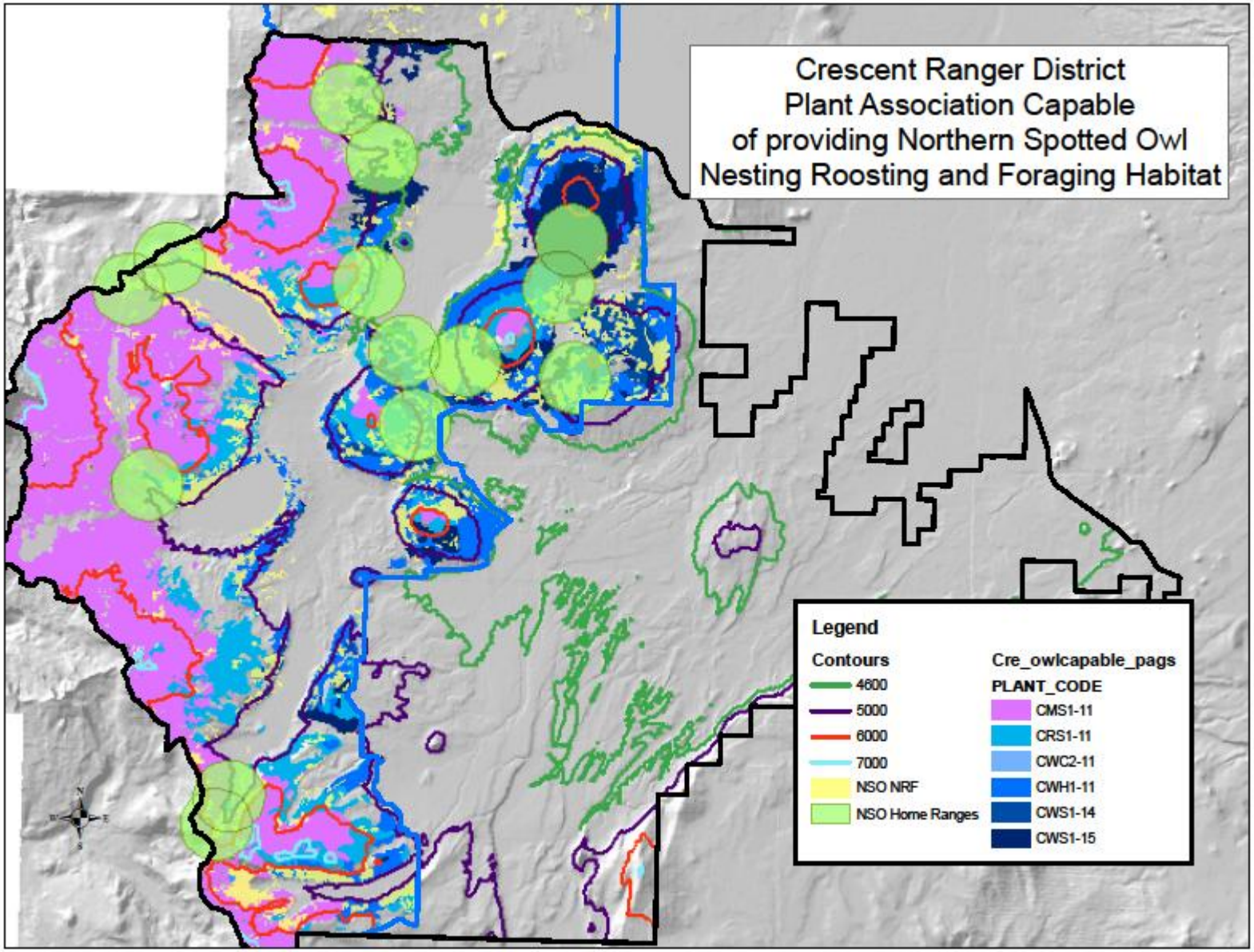
Moore Creek
Nest = Cavity
Tree = 64” DBH DF

Maintain those
greater than 60”

Do what we need with
the smaller trees (<36”) to grow and maintain
the truly LARGE trees for our nesting habitat

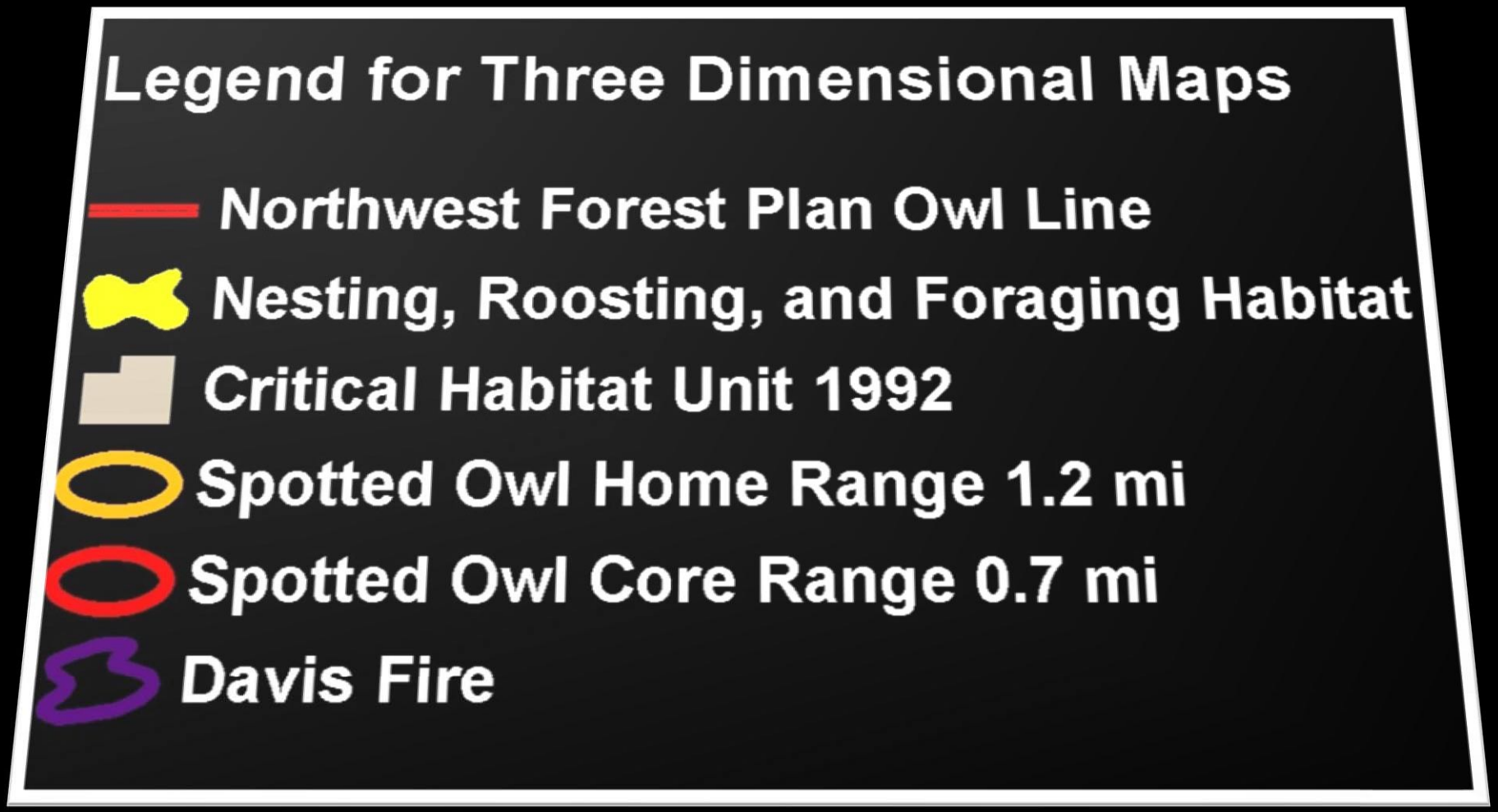

Moore Creek Nest Grove 82” DBH DF


The Twins
Maiden Peak
Mountain Hemlock
Maklaks Mountain
Ponderosa Pine
Ranger Butte
Lodgepole Pine
Hamner Butte
Davis Lake
McCool Butte
6000
Mixed Conifer
5000

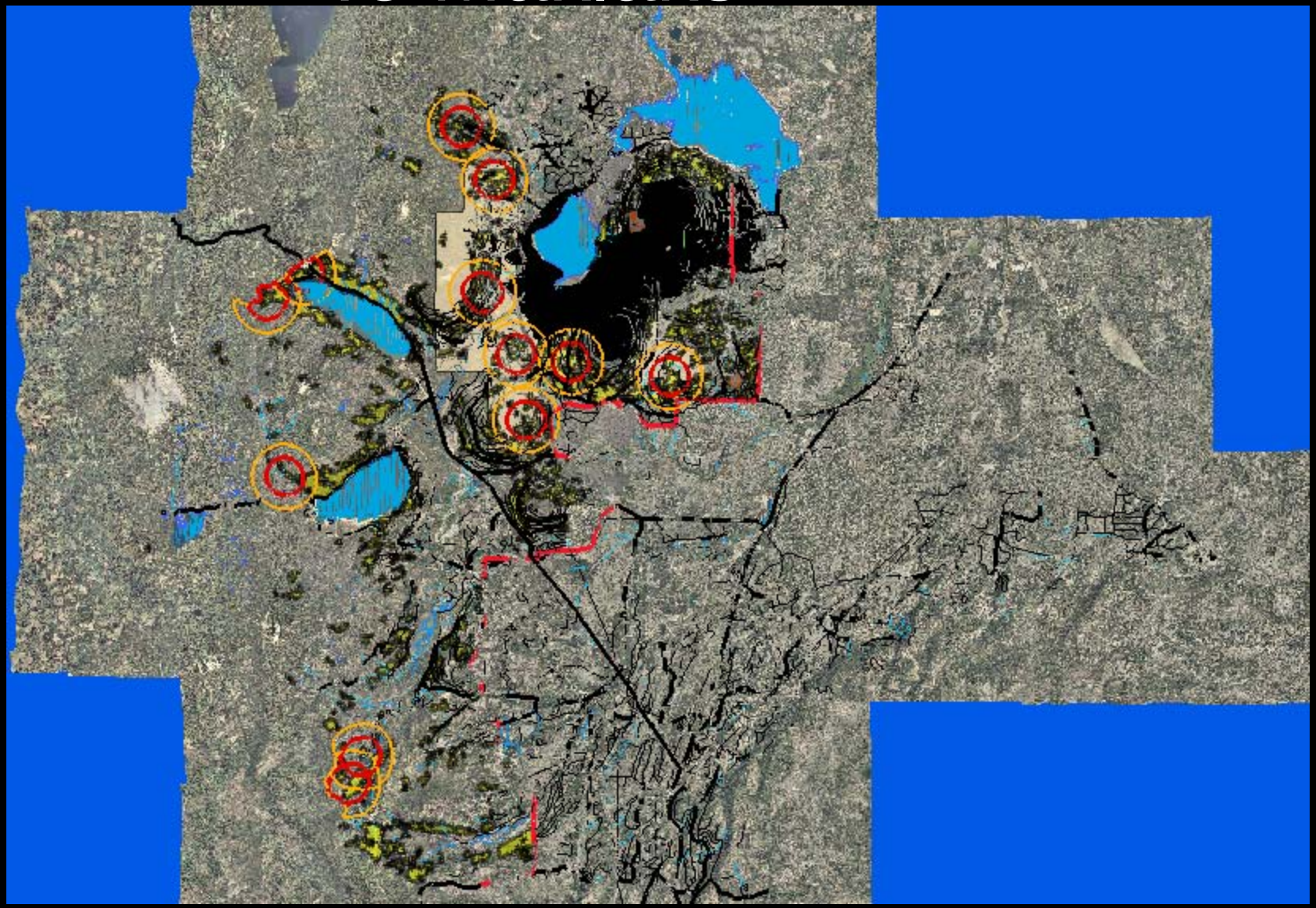

Crescent Ranger District
Plant Association Capable
of providing Northern Spotted Owl
Nesting Roosting and Foraging Habitat
Legend
Contours
4600
5000
6000
7000
NSO NRF
NSO Home Ranges
Cre_owlcapable_pags
PLANT_CODE
CMS1-11
CRS1-11
CWC2-11
CWH1-11
CWS1-14
CWS1-15

Crescent Ranger District Spotted Owl Stats

Site Name	Current NRF w/in 1.2 mi.	% of 1.2 (standard 40%)	Current NRF w/in .7 mi.	% of 0.7 (standard 50%)	Documented Young Produced 1999-2009	Documented Young Produced 1988-1998	Data Since
Hamner Bt.	1952	67%	887	90%	2	5	1977
Davis Mt.	10	0%	0	0%	1	6	1978
Saddle Bt.	279	10%	164	17%	0	4	1979
Big Marsh	641	22%	230	23%	0*	0	1982
Royce Mt.	846	29%	281	29%	2	2	1982
Maklaks Mt.	678	23%	279	28%	5	4	1985
Crescent Lk.	362	13%	120	12%	0*	0	1987
Moore Cr.	846	29%	522	53%	1	1	1988
Cappy Mt.	530	18%	341	35%	0*	2	1989
McCool Bt.	637	22%	220	22%	0	4	1989
Ringo Bt.	984	34%	388	39%	1	1	1989
Moore Cr. Tr.	762	26%	280	28%	2	N/A	1994
Will. Pass	776	27%	299	30%	2*	N/A	2002
Trapper Creek	392	14%	214	22%	0*	N/A	2005


Legend for Three Dimensional Maps
Northwest Forest Plan Owl Line
Nesting, Roosting, and Foraging Habitat
Critical Habitat Unit 1992
Spotted Owl Home Range 1.2 mi
Spotted Owl Core Range 0.7 mi
Davis Fire

To Maklaks

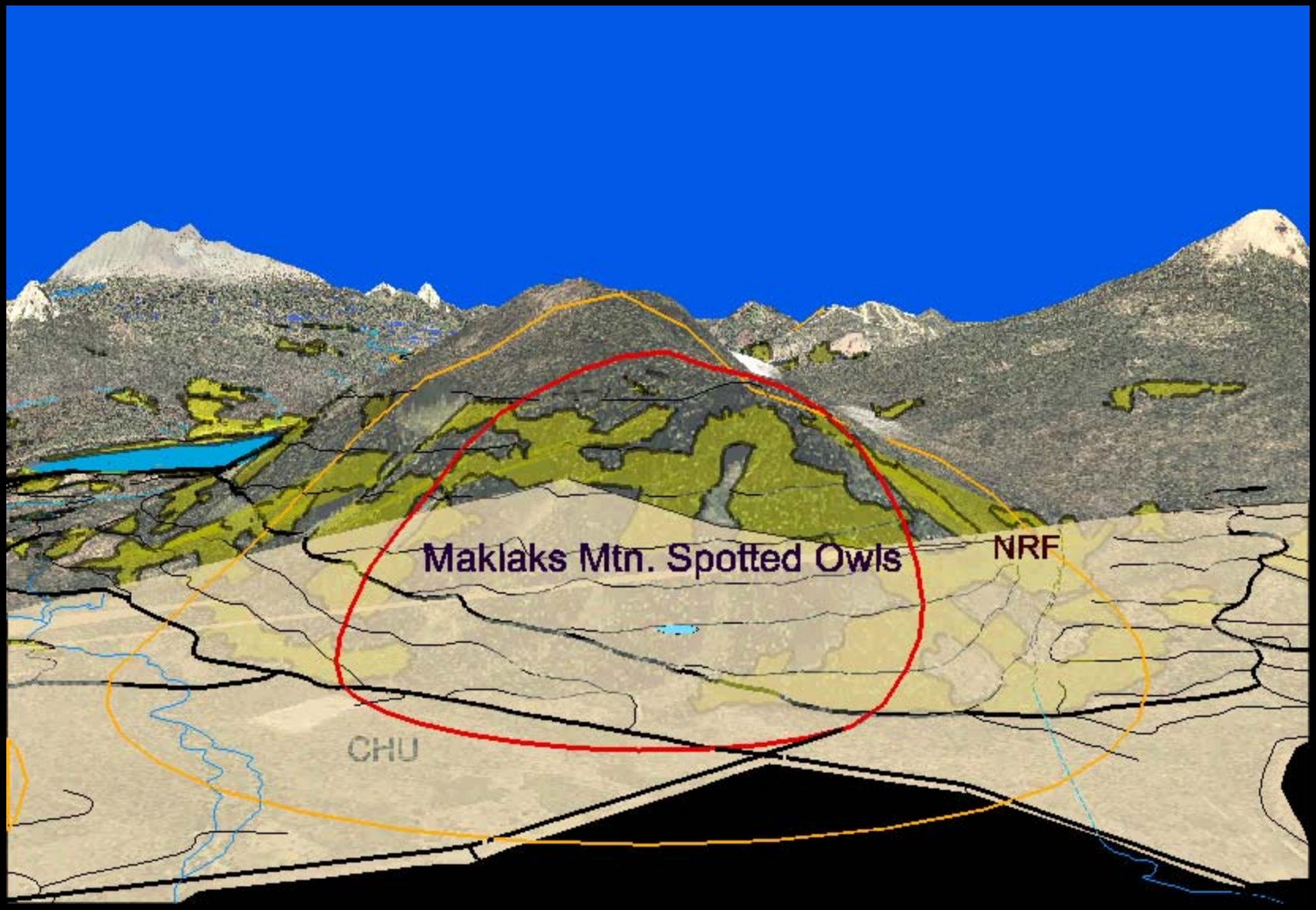


Maklaks – SE Aspect
1999-2009 = 5 juvies
23% NRF in 1.2 mi,
28% NRF 0.7mi

Maklaks Habitat

Scattered Large PP, DF with understory of second growth DF and true firs

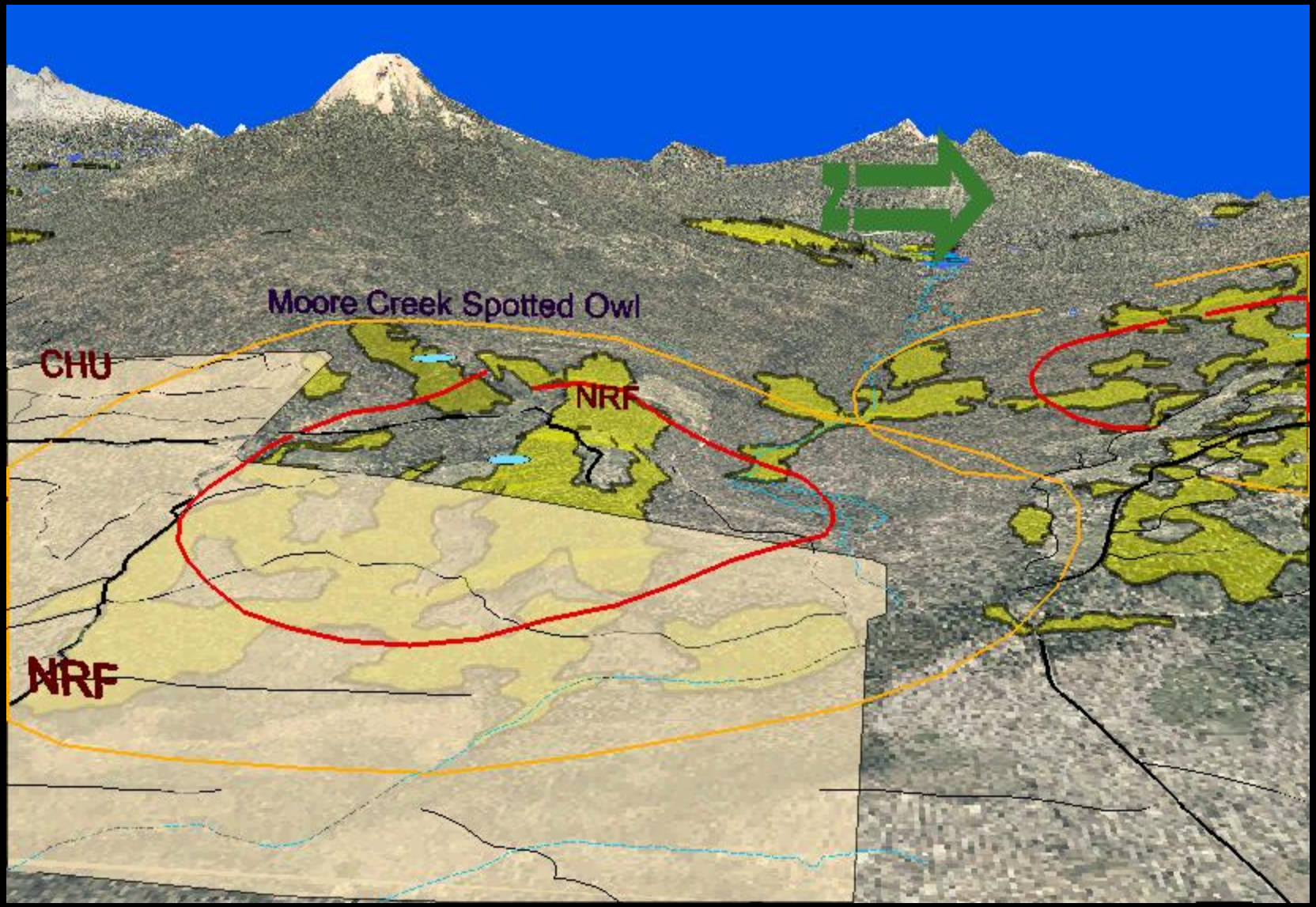
To Moore Creek



Moore Creek Habitat

Aspect NE; Nest is on the upper slope; Nest Tree: DF-64” DBH;

To Hamner Butte



Hamner Habitat

Hamner Nest Tree

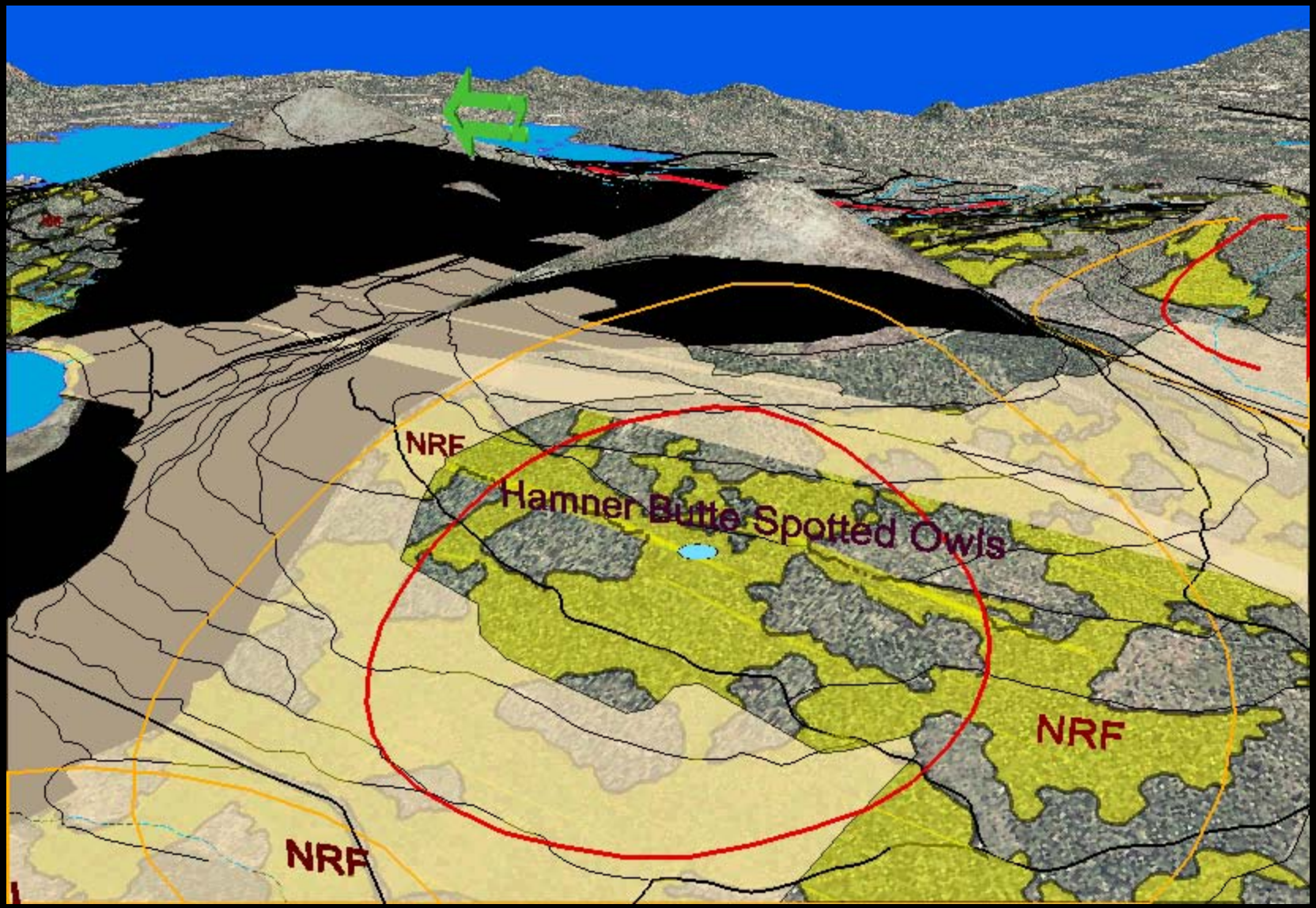
Aspect: W; Nest is on the lower 3rd slope; Nest Tree: DF-50.5” DBH; Elevation: ~5220’


26

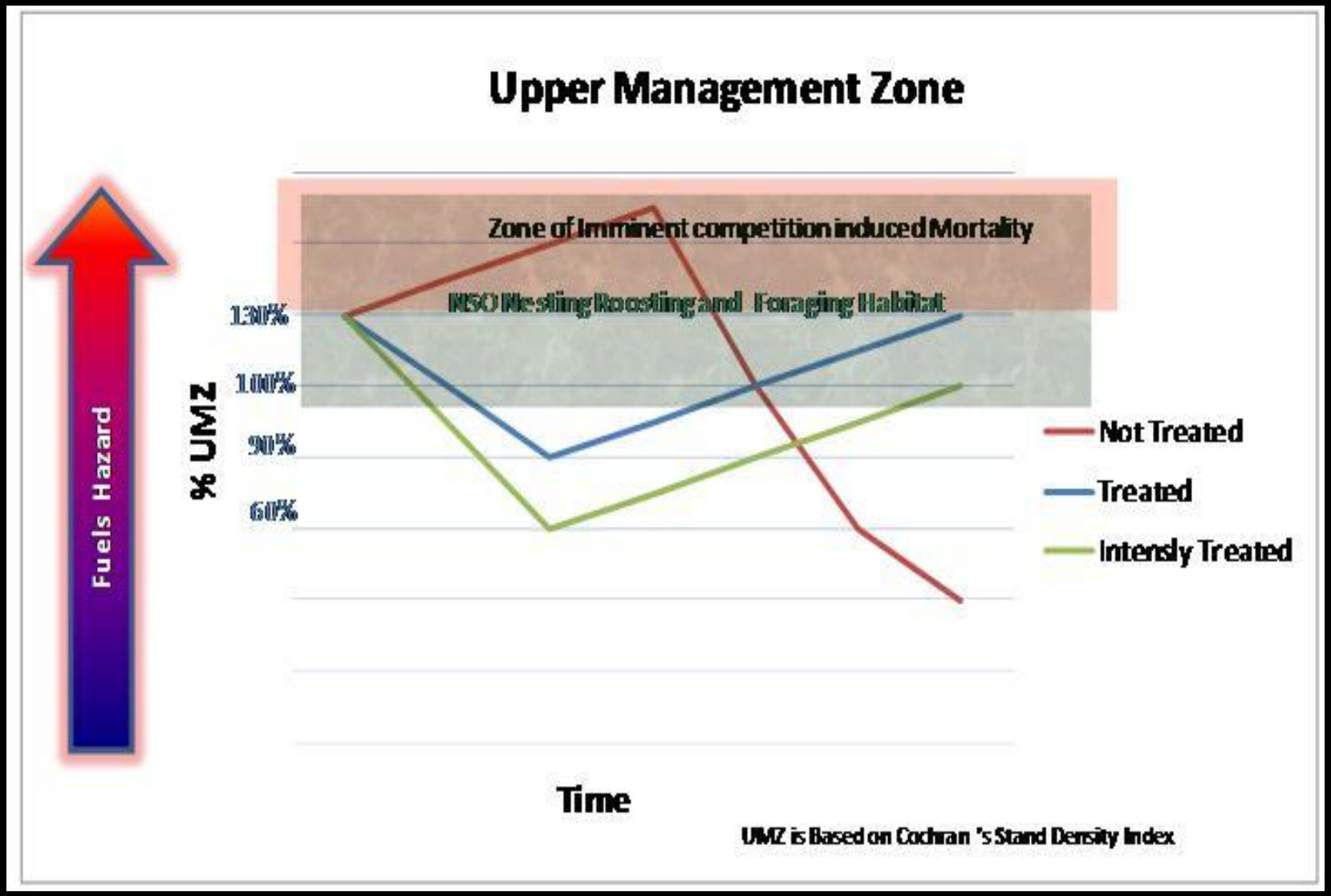
1999-2009 - 2 Juvies 1989-1998 – 5 Juvies

67% NRF in 1.2mi, 90% NRF in 0.7mi

To East Side Hamner

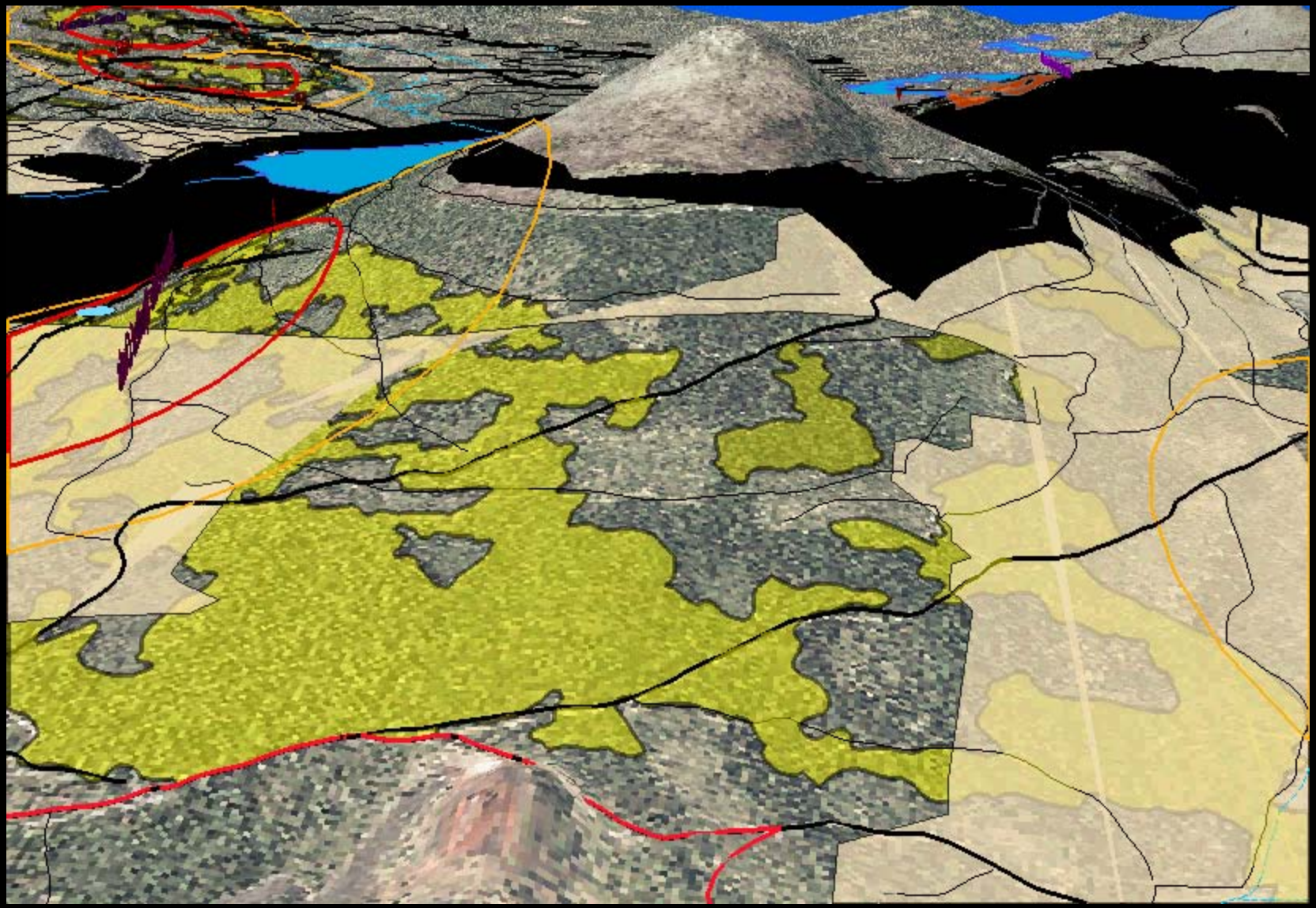


East Side of Hamner Butte



Example: Eastside PP 100% UMZ = 365 SDI=BA 200 sq.ft .

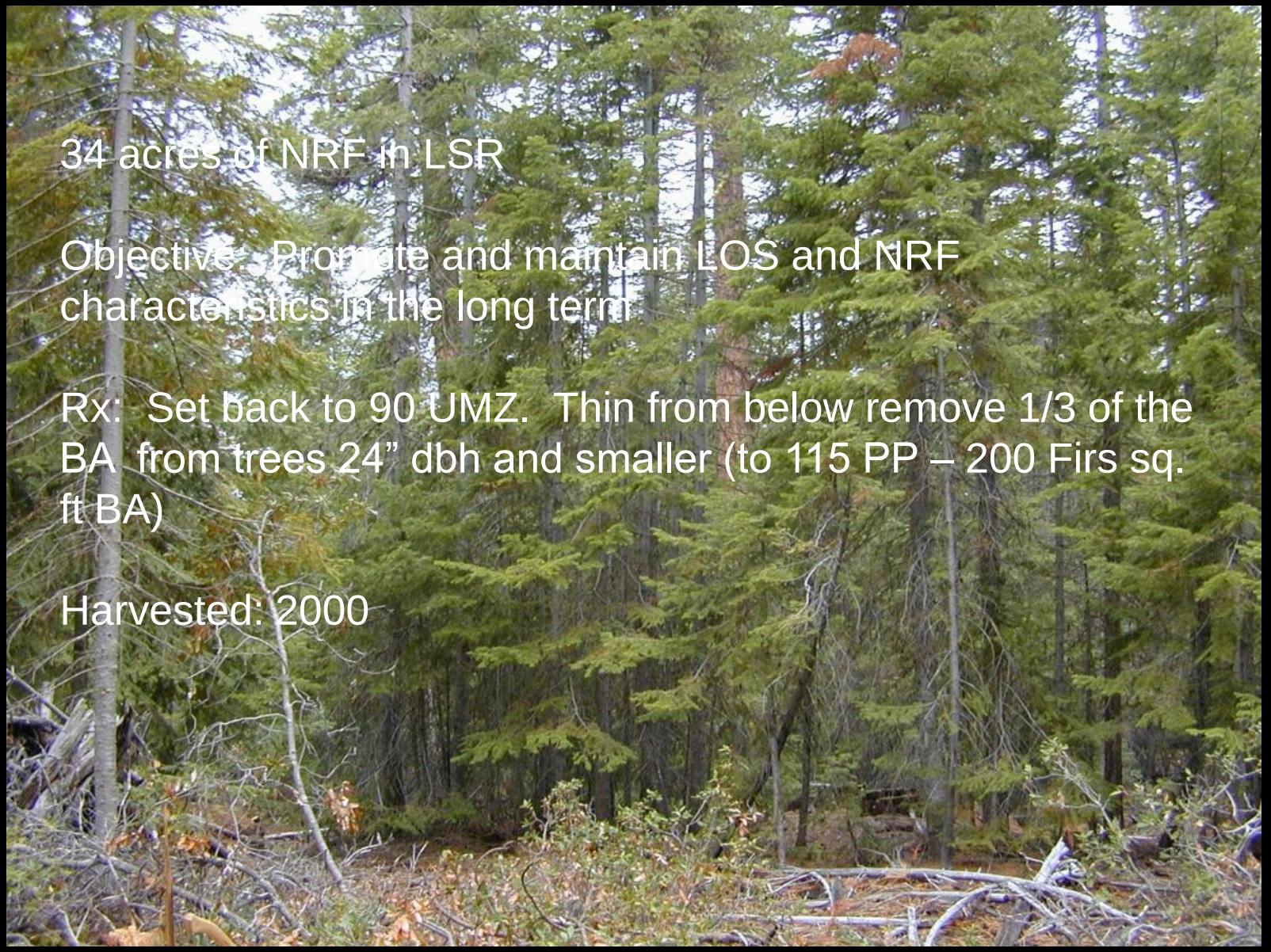
To Goose TS



Goose 2009

Goose 52 acres of NRF in LSR
Objective: Increase resistance to insect disease and stand replacement fire
RX: Set back to 90% UMZ, remove 1/3 of basal area in trees 8”-24”dbh
Harvested in 2000 to Foraging Habitat

Davis Top



34 acres of NRF in LSR

Objective: Promote and maintain LOS and NRF characteristics in the long term

Rx: Set back to 90 UMZ. Thin from below remove 1/3 of the BA from trees 24” dbh and smaller (to 115 PP – 200 Firs sq. ft BA)

Harvested: 2000

2002 PCT leave all healthy viable understory
Post treatment: Dispersal Habitat

2003 Post Davis Fire

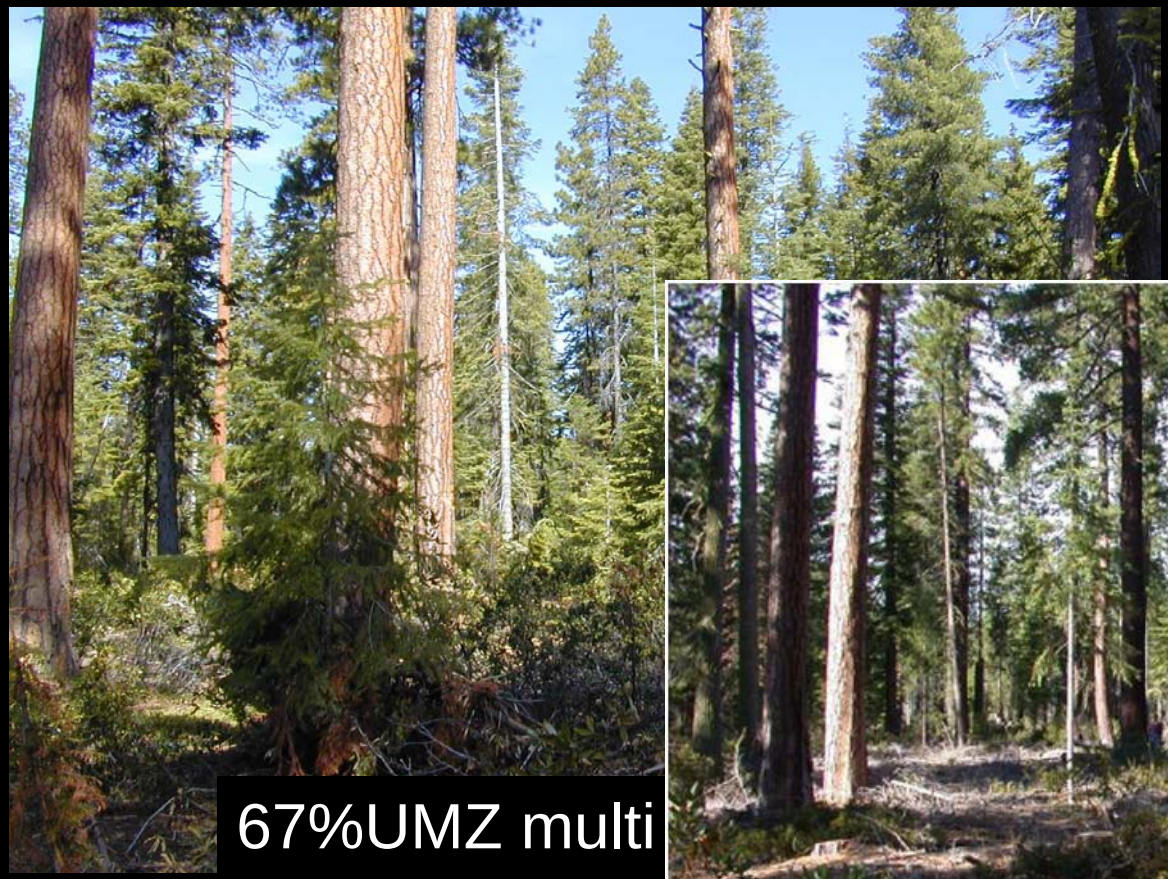
Stand used in burnout operations

Other treated stands to 90UMZ

90% UMZ multi story

90% UMZ single story

Stands treated to 60% UMZ



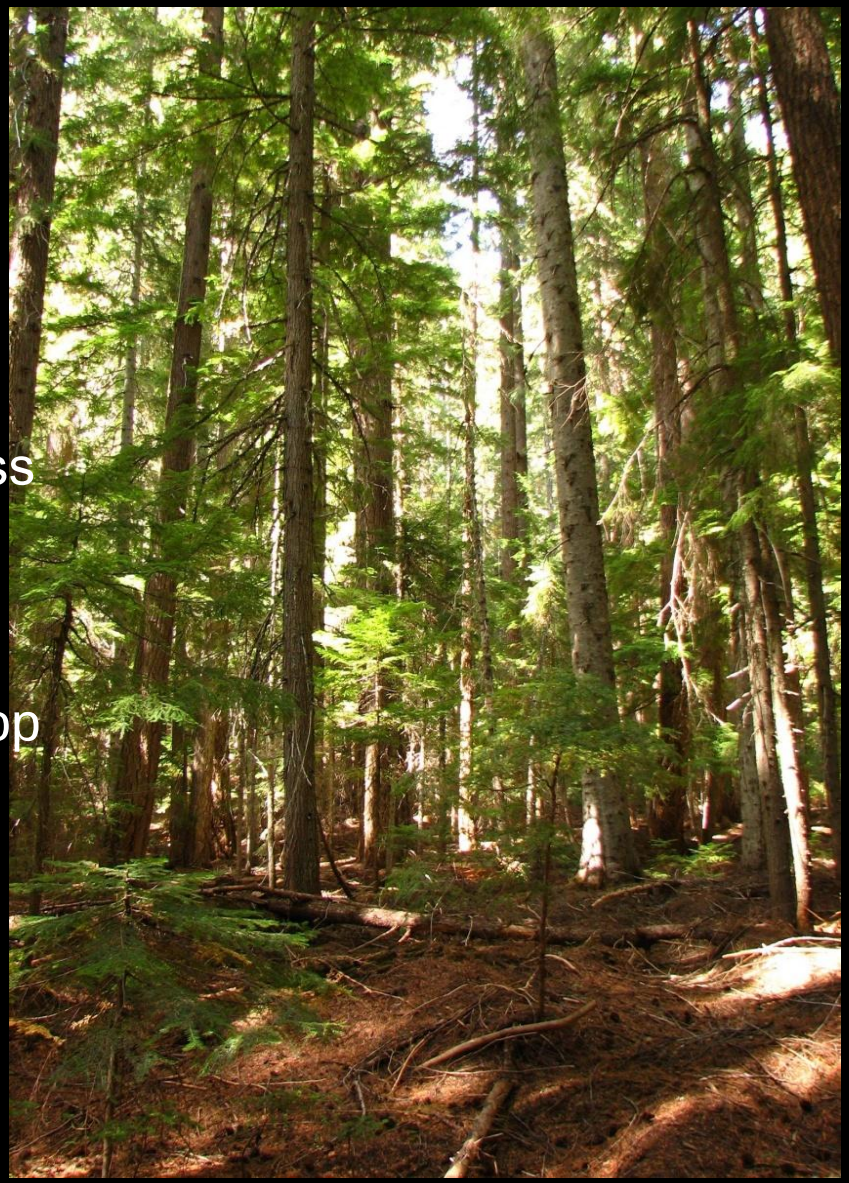
67%UMZ multi

60% UMZ single story

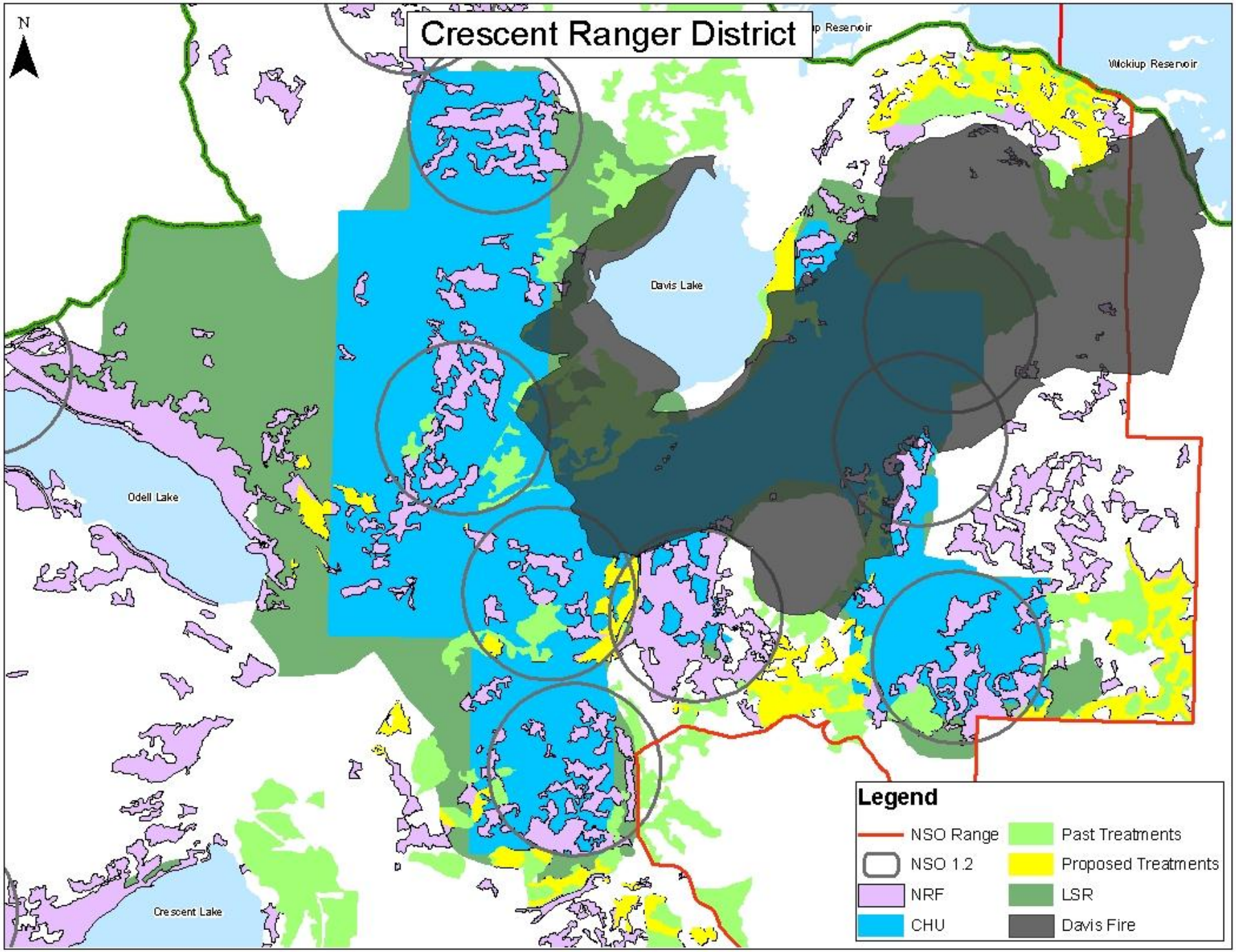
Rosedell CE

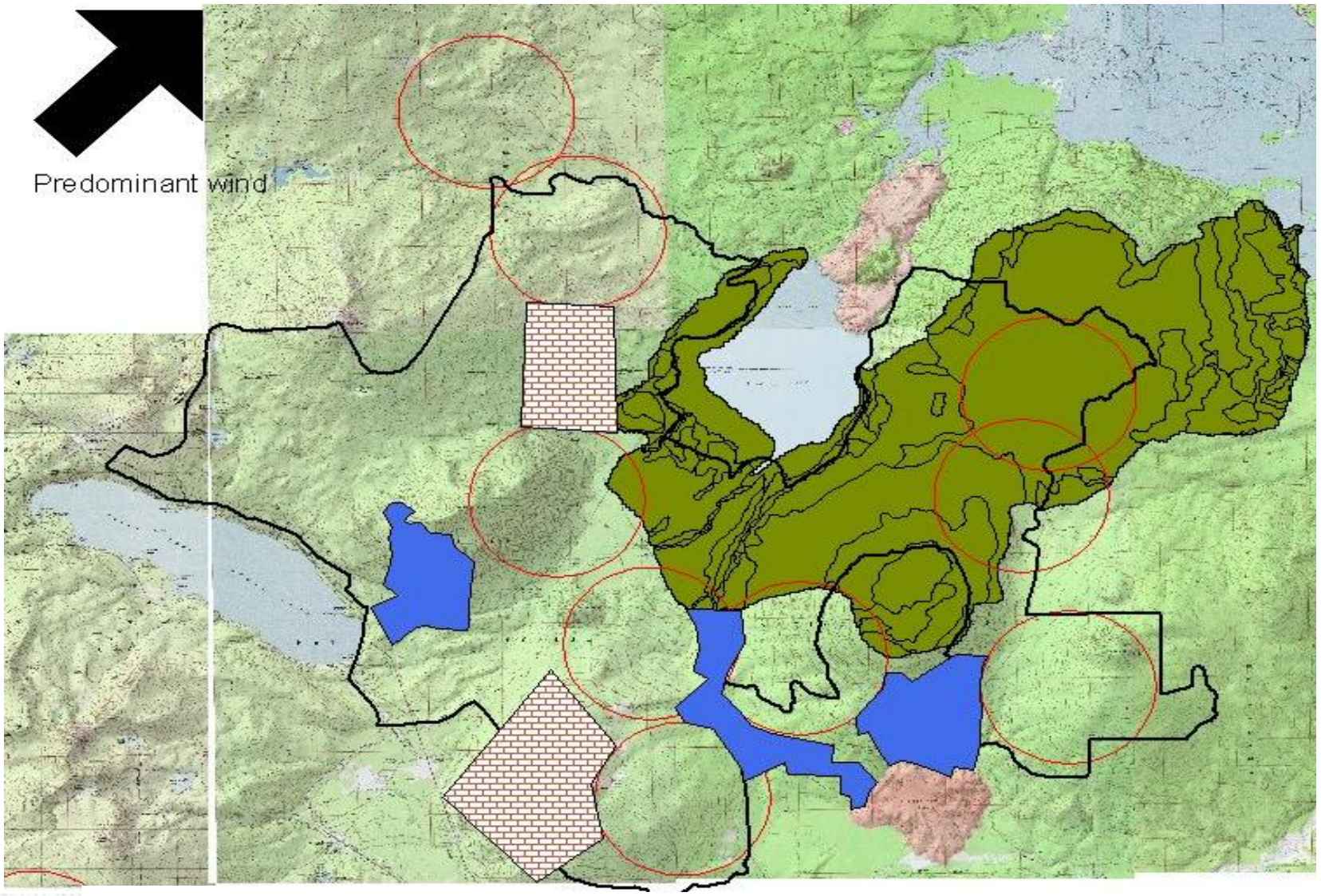
Fuels Treatments In NRF remains NRF Habitat

Thin all 3” dbh and less trees to 18’ spacing, Limb all trees up to provide 8’ clear of ladder fuels. Pile or lop and scatter.



Unit 2, acres 52
in NRF
Elevation: 5000
Slope: 15%
Aspect: S.
Treated in 2006
Remains NRF

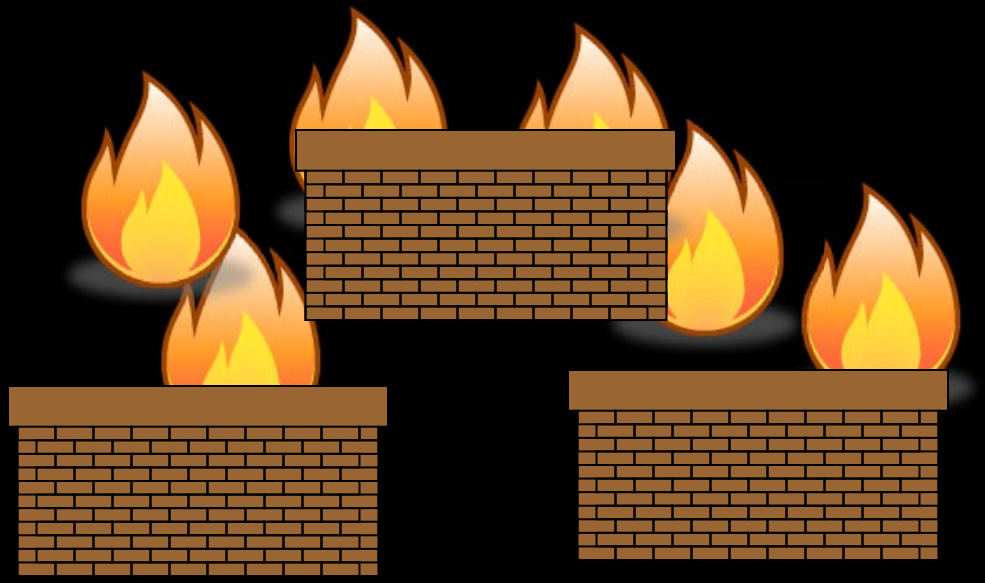

Crescent Ranger District
N
Wickiup Reservoir
Davis Lake
Odell Lake
Crescent Lake
Legend
NSO Range
NSO 1.2
NRF
CHU
Past Treatments
Proposed Treatments
LSR
Davis Fire



Strategy for Landscape Planning to Reduce Fire Risk to Owl Habitat

Fire Behavior modification areas: complete treatment in 80% of the area leaving 20% in a mosaic throughout.

Finney Hatch Break: a checkerboard effect of complete treatments on 40%.



Fuels Treatments:

NRF:

Cut all trees ≤ 3” dbh to 18’ x 18’ spacing. Prune all limbs up to 8’ above ground level.

Non-NRF:

Cut all trees ≤ 6” dbh to 20’ x 20’ spacing.

Snags and Down wood: Leave all snags. Meet down wood guidelines by plant association group and management area, (focus removal of down wood on fuels 9”dbh and below)

Summary
Gotta be strategic

- Large Toolbox with Different Treatments
  - Manage for BIG TREES and options for the future
  - Within NFR, LSR, CHU, Matrix
  - Small and Large Diameter
  - Fuels Reduction

Bottom line need the tools to manage for Nesting Habitat over time and space

Acknowledgements

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Questions?