Map Packet -- Figure 1. <u>Current WFSL Structural Classes</u>

Based on the stand development phases identified by Oliver and Larsen (1990) and modified by O'Hara et al. (1996),

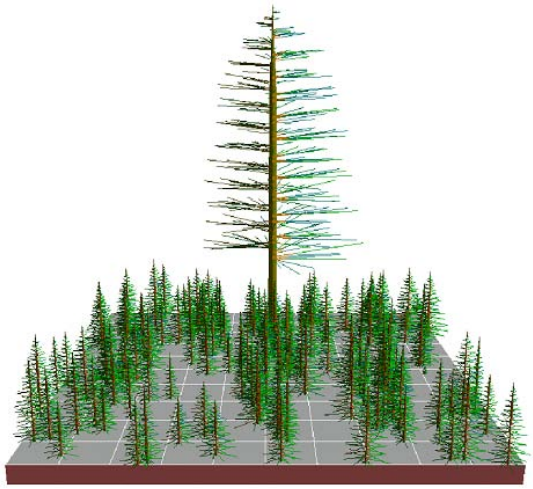


Figure 1 Stand Initiation Structural Stage - One canopy stratum (may be broken or continuous); one cohort of seedlings or saplings; grass, forbs, and shrubs may also be present.

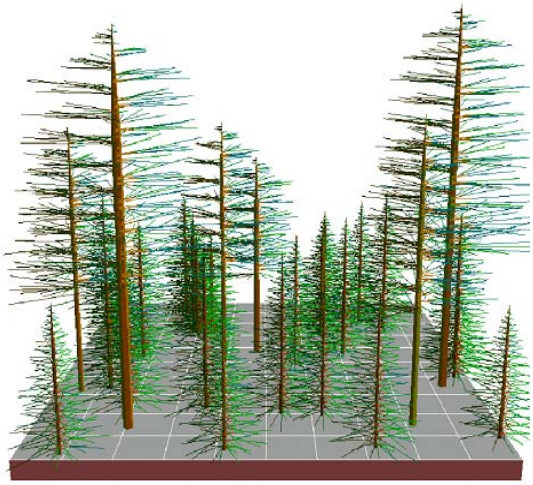


Figure 2 Stem Exclusion Open Canopy Structural Stage – One broken canopy stratum which includes poles or smaller trees; grasses, shrubs, or forbs may also be present.

Current WFSL Structural Classes (continued)

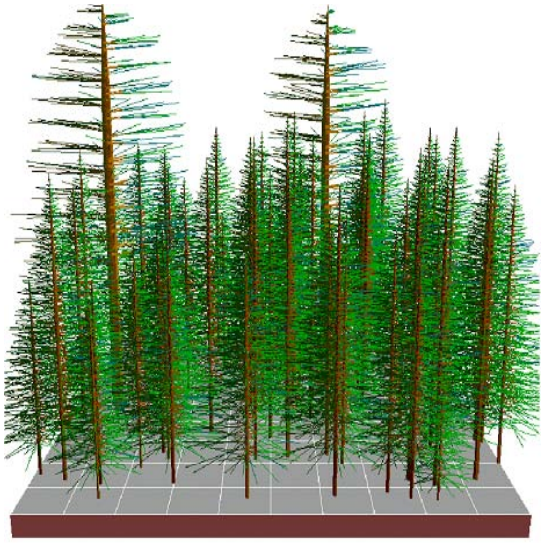


Figure 3 Stem Exclusion Closed Canopy Structural Stage – Continuous closed canopy, usually on cohort; poles, small or medium trees present. Suppressed trees, grasses, shrubs, and forbs may be absent in some cover types.

Figure 4 Young Forest Multistory Structural Stage – Multi-aged (multi-cohort) stand with assortment of tree sizes and canopy strata present but very large trees absent. Grasses, forbs, and shrubs may be present.

Current WFSL Structural Classes (continued)

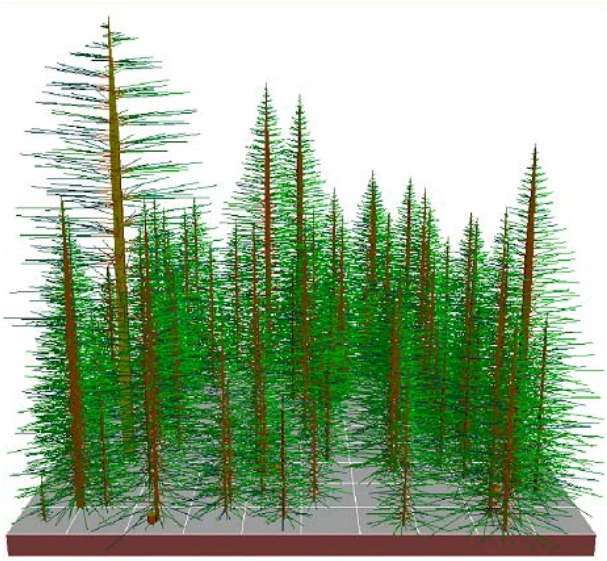


Figure 5 Understory Reinitiation Structural Stage - Broken overstory canopy with formation of understory stratum; two or more cohorts. Overstory may be poles or large trees; understory is seedlings, saplings, grasses, forbs, or shrubs.

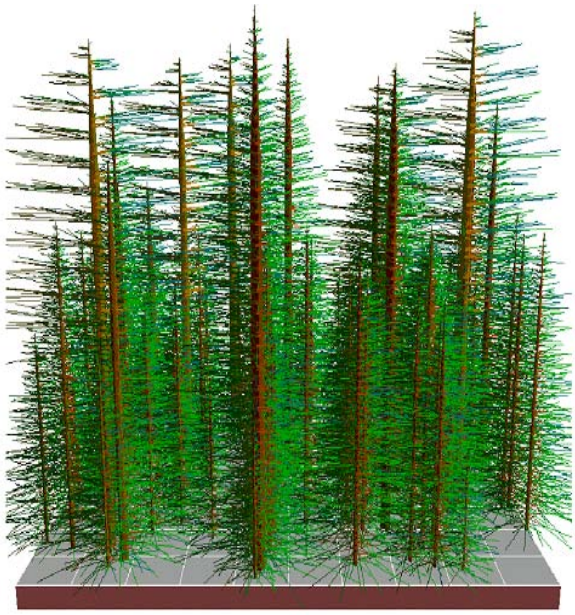


Figure 6 Old Forest Multistory Structural Stage – Multi-aged stand with assortment of tree sizes and canopy strata present including large, old trees. Grasses, forbs, and shrubs may be present.

Current WFSL Structural Classes (continued)

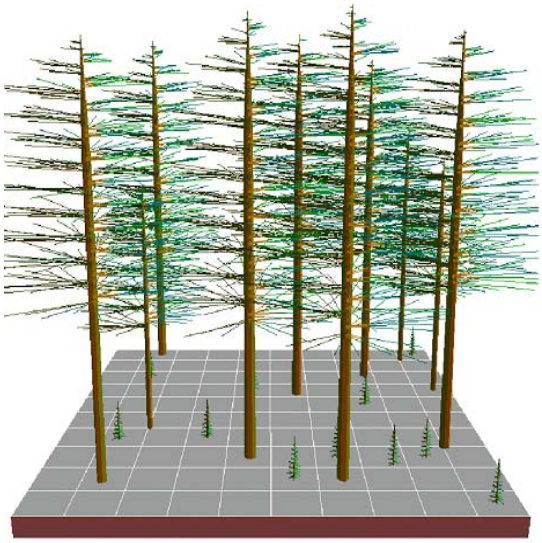


Figure 7 Old Forest Single Story Structural Stage – Broken or continuous canopy of medium to large, old trees. Single or multi-cohort. Understory absent or consisting of some seedlings, saplings, grasses, forbs, or shrubs

Alternative B Summary Table

Stand	LSR Gross/ Net Acres	Matrix Gross/Net Acres	Unit Rx	Riparian Acres Within Unit/Treated	Resulting Canopy Closure %	Diameter Live Tree Cut Limit	Fuels Reduction	NRF Acres Treated	NRF Acres Changed to Non-Suitable	Results in wood products ccf/mbf	Remarks
A		89/80	LFR	0/0	15	None	GPB	0	0	3,538/1,840	Regeneration Cut with 15% green tree retention-Plant trees
B		29/26	MFR	0/0	30	None		0	0	500/260	Regeneration Cut with 30% green tree retention-Plant trees
C		206/184	MFR	0/0	40	None		0	0	615/320	Regeneration Cut with 40% green tree retention-Plant trees
D		23/21	MFR	0/0	30	None		0	0	404/210	Regeneration Cut with 30% green tree retention-Plant trees
E		54/48	UAM	0/0	50	None		48	0	738/384	2 acre or less Group Selection Gaps and Thinning
F		73/65	HFR	0/0	50	None		73	73	1000/520	Regeneration Cut with 50% green tree retention-Plant trees
G		102/91	ST	0/0	50	None		91	0	1,400/728	Removes recently killed and declining grand and Douglas fir trees
H	44/44		FRR	0/0	No change	6"	GPB/UB	44	0	0	Thins grand fir sapling patches to 100 tpa; snags > 10/ac would be felled;Plant trees
I	66/53		FRR	0/0	35	20"		53	66	815/424	Cuts overstory to 35%, creating gaps <2 ac; Cuts grand fir within 50' of old-growth ponderosa pine; Plant trees
J	34/34		FRR	0/0	No change	Dead only		0	0	0	Cuts snags > 10/ac; maintains 2% cover of coarse woody debris; Plant trees
K	108/108		FRR	0/0	No change	Dead only		0	0	0	Cuts snags in excess of 7/ac within SFB >10/ac in remaining unit; maintains 2% cover of coarse woody debris; Plant trees
L	112/107		FRR	30/25	No change	Dead only		0	0	0	Cuts snags in excess of 10/ac; no treatment within 25' of streams; Plant trees
M	68/68		PPUT	0/0	60	20"	GPB	67	0	523/272	Cuts 2/3 of 6-20" dbh grand fir understory; cuts snags in excess of 10/ac
N	75/75		SFB	0/0	40	20"		65	65	865/450	Cuts trees to create a 40% canopy cover; cuts snags in excess of 7/ac; cuts intermediate grand fir within 50' of old growth ponderosa pine
O	22/22	29/29	SFB	0/0	40	20"		48	48	588/306	
P	34/34		SFB	0/0	40	20"		26	26	392/204	
Q	44/44		SFB	0/0	50	20"		4	0	507/264	
R	38/38		PM	0/0	N/A	N/A	UB	0	0	0	Young stand thinning and underburning
S	33/33	1/1	SFB	0/0	40	20"	GPB	0	0	381/198	Cuts trees to create a 40% canopy cover; cuts snags in excess of 10/ac; cuts intermediate grand fir within 50' of old growth ponderosa pine
T	82/82		SFB	0/0	40	20"		82	82	631/328	
U	146/146		SFB	0/0	40	20"		16	16	1,123/584	
V	7/6		SFB	7/6	60	8"	HPB	6	0	0	Cuts trees no greater than 8"; no treatment within 25' of stream;
W	3/3		SFB	0/0	40	20"	GPB	0	0	46/24	Same as other SFB…
X	57/51		LPUT	0/0	40	20"		10	10	392/204	Cuts lodgepole pine and grand fir to a 40% canopy closure ; cuts snags in excess of 7/ac
Y	162/81		LTC	0/0	No change	20"	HPB	1	0	0	Cuts Intermediate grand fir within 50' of every other old-growth ponderosa pine
Z	11/10		AR	8/7	No change	10"		1	0	0	Cuts trees up to 10"dbh that are encroaching on aspen patches; cuts hazard trees around Gotchen Guard Station. No cut treatment within 25' of streams.
AA	663/50	2/0	LGST	21/2	No change	6"		50	0	0	Thins dense grand fir sapling patches to 100 tpa. No treatment within 25' of streams.
BB	662/50		LGST	53/4	No change	6"		50	0	0	
Total	2471/1139	608/545		119/44				735	386	14458/7520	

Map Packet -- Table 1

Alternative C Summary Table

Stand	LSR Gross/Net Acres	Matrix Gross/Net Acres	Unit RX	Riparian Acres Within Unit/Treated	Resulting Canopy Closure%	Diameter Live Tree Cut Limit	Fuels Reduction	NFR Acres Treated	NRF Acres Changed to Non-Suitable	Results in wood products ccf/mbf	Remarks
A		89/80	LFR	0/0	15	None	GPB	0	0	3,538/1,840	Regeneration Cut with 15% green tree retention-Plant trees
B		29/26	MFR	0/0	30	None		0	0	500/260	Regeneration Cut with 30% green tree retention-Plant trees
C		206/184	MFR	0/0	40	None		0	0	615/320	Regeneration Cut with 40% green tree retention-Plant trees
D		23/21	MFR	0/0	30	None		0	0	404/210	Regeneration Cut with 30% green tree retention-Plant trees
E		54/48	UAM	0/0	50	None		48	0	738/384	2 acre or less Group Selection Gaps and Thinning
F		73/65	HFR	0/0	40	None		73	73	1000/520	Regeneration Cut with 40% green tree retention-Plant trees
G		102/91	ST	0/0	50	None		91	0	1,400/728	Removes recently killed and declining grand and Douglas-fir trees
H	44/39		FRR	0/0	No change	10"	GPB/UB	39	0	0	Cuts snags > 10/acre; thins understory trees (primarily grand fir) less than 10" dbh to 18'-20' spacing; Plant trees
I	66/53		FRR	0/0	35	10"		66	66	0	Cuts snags > 10/ac; thins understory trees (primarily grand fir) less than 10" dbh to 18'-20' spacing, creating gaps < 2 ac; cuts grand fir within 50' of old-growth Ponderosa pine; leaves 10 snags per ac.; Plant trees
J	34/30		FRR	0/0	<40	10"		0	0	0	Cuts trees up to 10" dbh; leaves ave. of 10 snags per acre. Plants trees
K	129/113		FRR	0/0	<40	10"		10	10	0	Cuts trees up to 10" dbh; leaves ave. of 10 snags per acre. Plants trees
L	112/100		FRR	30/25	<40	10"		0	0	0	Cuts trees up to 10" dbh; leaves ave. of 10 snags per acre. Plants trees
M	68/61		PPUT	0/0	60	20"	GPB	61	0	469/244	Cuts 2/3 of 6-20" dbh grand fir understory; cuts snags in excess of 10/ac
R	38/38		PM	0/0	N/A	N/A	UB	0	0	0	Young stand thinning and underburning
S	144/144	1/1	SFB	0/0	40	10"	GPB	0	0	0	Cuts trees up to 10"dbh to create a 40% canopy closure; cuts all grand fir <10:dbh within 50 ' of old growth ponderosa pine
X	57/51		LPUT	0/0	40	20"		10	10	392/204	Cuts lodgepole pine and grand fir less than 20" dbh to a 40% canopy closure; leaves 7 snags/acre
Y	278/249	2/2	LTC	0/0	>40	10"	GPB/UB	74	0	0	Cuts grand fir less than 10"dbh within 50' of all old growth ponderosa pine; elsewhere, understory trees (primarily grand fir) thinned to 18'-20' spacing, leaves avg of 10 snags/acre
Z	11/10		AR	8/7	N/A	10"	HPB	1	0	0	Cuts trees up to 10"dbh that are encroaching on aspen patches; cuts hazard trees around Gotchen Guard Station
AA	571/485		UDR	21/18	N/A	10"	GPB	314	0	0	Thins understory trees (primarily grand fir) less than 10" dbh to 18'-20' spacing
BB	354/30		LGST	53/4	N/A	6"	HPB	30	0	0	Thins dense grand fir sapling patches to 100 trees per acre
CC	293/249	1/1	UDR	0/0	N/A	10"	GPB	194	0	0	Thins understory trees (primarily grand fir) less than 10" dbh to 18'-20' spacing
DD	25/21		UDR	0/0	N//A	10"		20	0	0	Thins understory trees (primarily grand fir) less than 10" dbh to 18'-20' spacing
EE	30/22		FB	8/0	>40	10"		18	0	0	Thins trees less than 10"dbh to 18 - '20' spacing; removes all grand fir less than 10" dbh within 50 ft of old growth ponderosa pines;retains 7 snags per acre
FF	6/6		FB	3/3	>40	10"		1	0	0	Thins trees less than 10"dbh to 18 - '20' spacing; removes all grand fir less than 10" dbh within 50 ft of old growth ponderosa pines;retains 7 snags per acre
Total	2260/1701	580/519		123/57				1050	159	9,056/4,710	

Map Packet -- Table 2

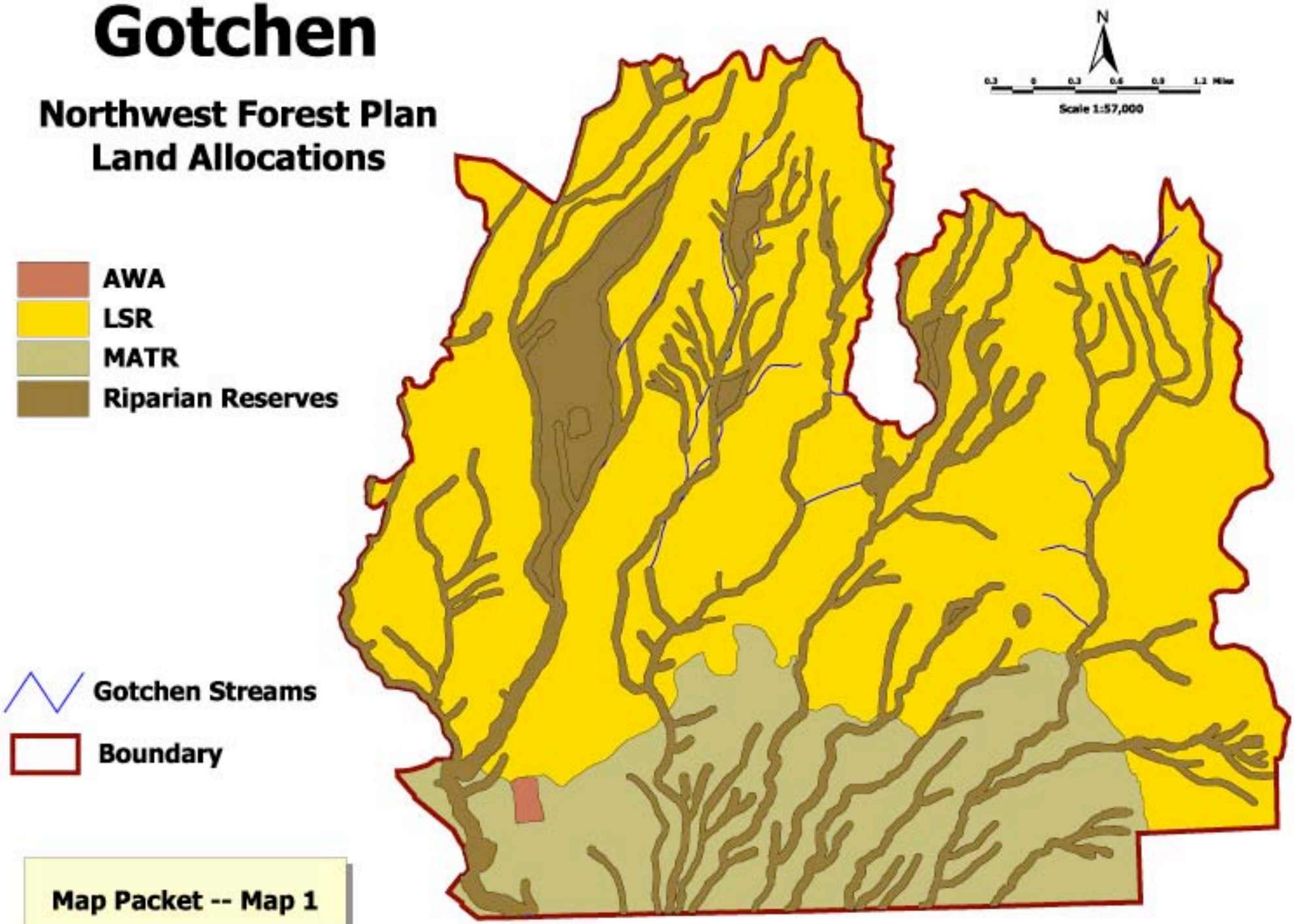
Alternative D Summary Table

Stand	LSR Gross/ Net Acres	Matrix Gross/Net Acres	Unit Rx	Riparian Acres Within Unit/Treated	Resulting Canopy Closure %	Live Tree Cut Diameter Limit	Fuels Reduction	NFR Acres Treated	NRF Acres Changed to Non-Suitable	Results in wood products ccf/mbf	Remarks
A		89/80	HLR	0/0	15	None	GPB	0	0	3,538/1,840	Regeneration Cut with 15% green tree retention-Plant trees
B		29/26	HMR	0/0	30	None		0	0	500/260	Regeneration Cut with 30% green tree retention-Plant trees
C		206/184	HMR	0/0	40	None		0	0	615/320	Regeneration Cut with 40% green tree retention-Plant trees
D		23/21	HMR	0/0	30	None		0	0	404/210	Regeneration Cut with 30% green tree retention-Plant trees
E		54/48	UAM	0/0	50	None		48	0	738/384	2 acre or less Group Selection Gaps and Thinning
F		73/65	HFR	0/0	40	None		73	73	1000/520	Regeneration Cut with 40% green tree retention-Plant trees
G		102/91	ST	0/0	50	None		91	0	1,400/728	Removes recently killed and declining grand and Douglas-fir trees
H	44/39		FRR	0/0	No change	6"	GPB/UB	39	0	0	Cuts snags in excess of 10/acre; thins dense grand fir sapling patches to 100 treess/ac. Plant trees
I	66/53		FRR	0/0	40	10"		53	66	0	Creates "gaps" <2 acres ea to assist in reforestation;cuts snags in > 10/ac; cuts grand fir <10"dbh within 50' of old-growth Ponderosa pine; Plant trees
J	34/30		FRR	0/0	No change	Dead only		0	0	0	Cuts snags in excess of 10/ac. Plant trees
K	108/97		FRR	0/0	No change	Dead only		0	0	0	Cuts snags in excess of 10/ac. Plant trees
L	112/101		FRR	30/25	No change	Dead only		0	0	0	Cuts snags in excess of 10/ac. No treatment within 25' of streams. Plant trees
M	68/61		PPUT	0/0	70	10"	GPB	61	0	0	Cuts 2/3 of 6-10" dbh grand fir understory; cuts snags in excess of 10/ac
N	75/75		FB	0/0	>50	10"		65	0	0	Cuts trees up to 10" dbh to create a minimum 50% canopy closure; cuts intermediate grand fir within 50' of old growth ponderosa pine; cuts snags in excess of 7/ac
O	22/22	29/29	FB	0/0	>50	10"		48	0	0	
P	34/34		FB	0/0	>50	10"		26	0	0	
Q	44/44		FB	0/0	>50	10"		4	0	0	
R	38/38		PM	0/0	N/A	N/A	UB	0	0	0	Young stand thinning and underburning
S	33/33	1/1	FB	0/0	>50	10"	GPB	0	0	0	Cuts trees up to 10" dbh to create a minimum 50% canopy closure; cuts all intermediate grand fir within 50' of old growth ponderosa pine; cuts snags in excess of 7/ac
T	82/82		FB	0/0	>50	10"		82	0	0	
U	146/146		FB	0/0	>50	10"		16	0	0	
W	3/3		FB	0/0	>50	10"		0	0	0	Same as Above
X	57/51		LPUT	0/0	40	None		10	10	392/204	Cuts lodgepole pine and grand fir to a 40% canopy closure ; cuts snags in excess of 7/ac
Y	162/81		LTC	0/0	N/A	10"	HPB	1	0	0	Cuts 1/2 of intermediate grand fir trees within 50' of every other old-growth ponderosa pine
Z	11/10		AR	8/7	N/A	10"		1	0	0	Cuts trees up to 10"dbh that are encroaching on aspen patches; cuts hazard trees around Gotchen Guard Station. No cut treatment within 25' of streams.
AA	663/50	2/0	LGST	21/2	No change	6"		50	0	0	Thins dense grand fir sapling patches to 100 trees per acre
BB	662/50		LGST	53/4	No change	6"		50	0	0	
Totals	2464/1100	608/545		112/38				718	149	8,587/4,466	

Map Packet -- Table 3

Gotchen

Northwest Forest Plan Land Allocations



Map Packet -- Map 1

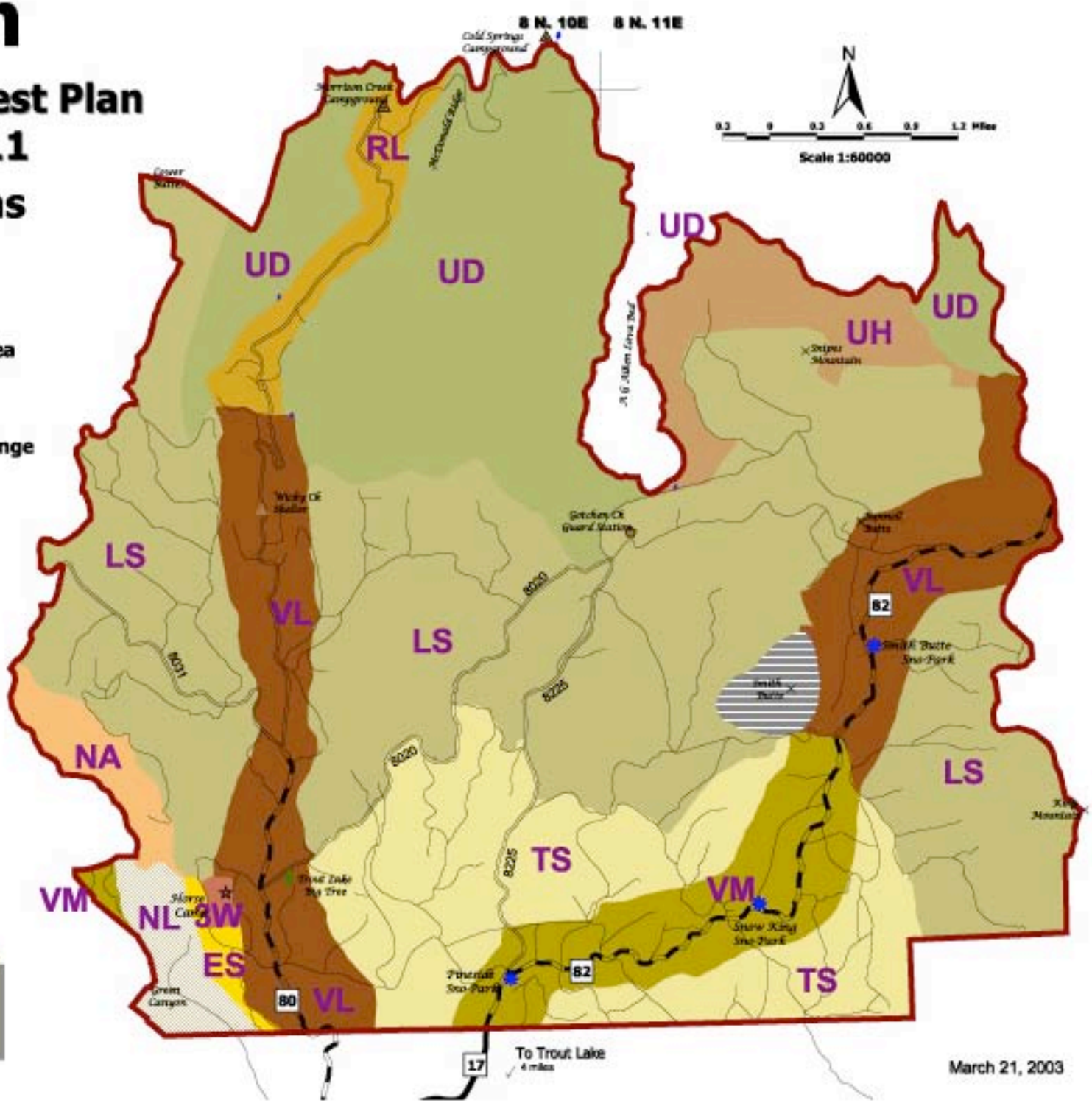
April 9, 2003

Gotchen

Gifford Pinchot Forest Plan Amendment 11 Management Areas

RNA - Resource Natural Area (Proposed)
3W - Administrative Site
ES - Deer and Elk Winter Range
LS - Late-Successional
NA - Wild & Scenic River
NL - Wild & Scenic River
RL - Roaded Recreation
TS - General Forest
UD - Unroaded Recreation
UH - Unroaded Recreation
VL - Visual Emphasis
VM - Visual Emphasis
ww - Visual Emphasis

Project Area Boundary



Map Packet -- Map 2

High Spruce Budworm Defoiation

Medium Spruce Budworm Defoliation

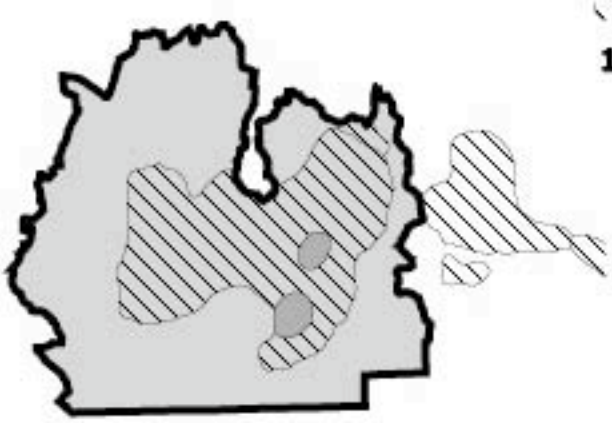
Low Spruce Budworm Defoliation

Gotchen Project Planning Boundary

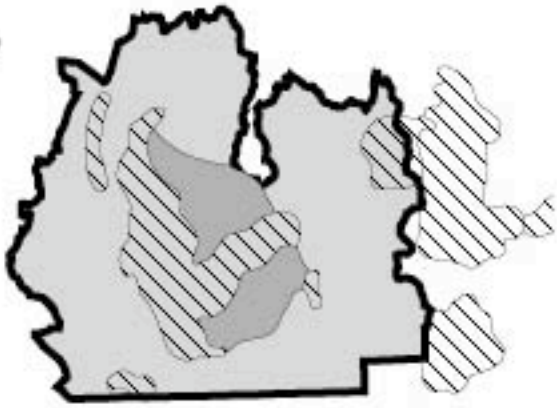
1994

1995

1996

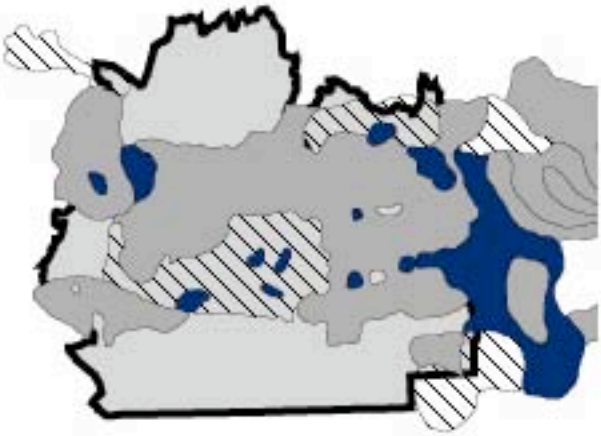


1997

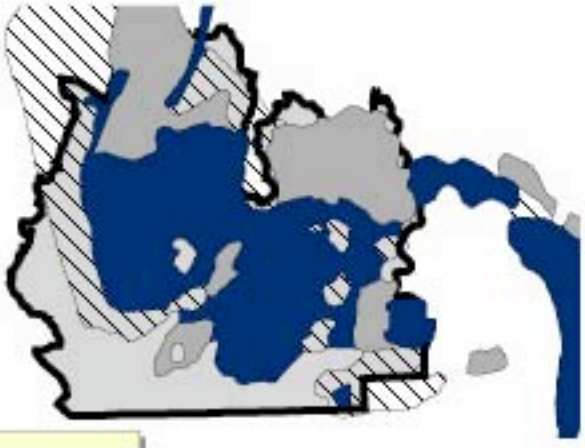


1998

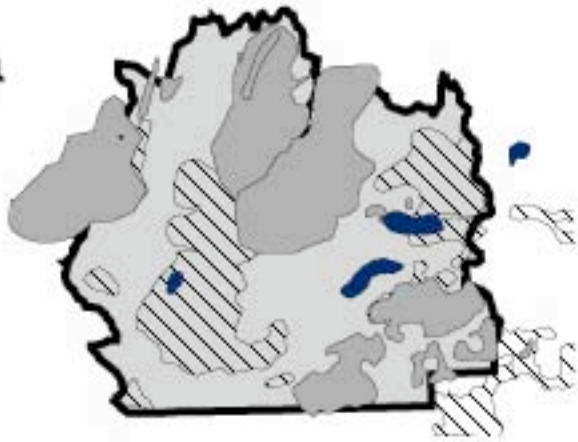
1999



2000



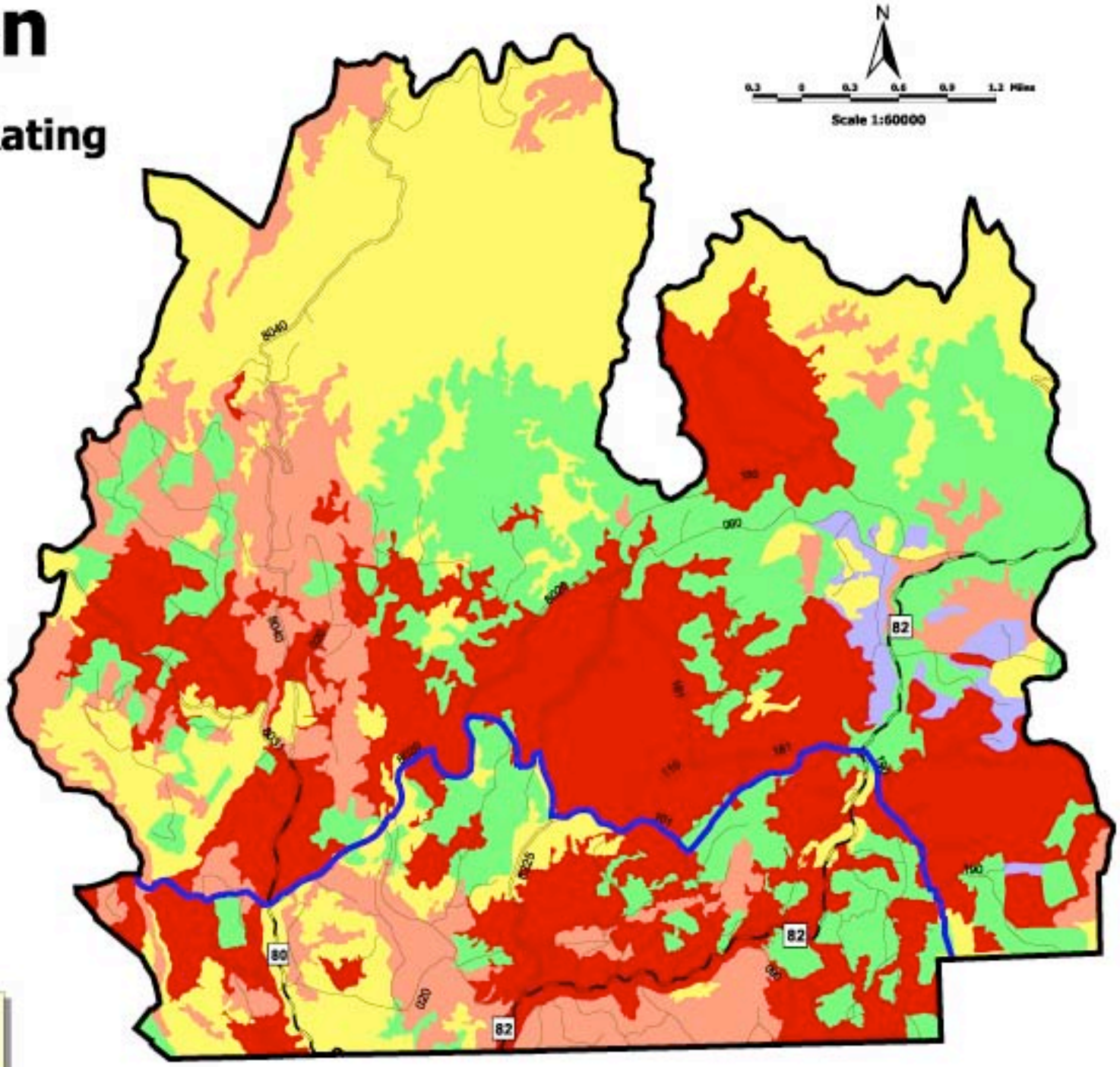
2001



Map Packet -- Map 3

Gotchen

Composite Fire Rating



Dry Condition Rating

- Very Low
- Low
- Moderate
- High
- Very High

- Boundary
- Matrix Boundary

Map Packet -- Map 4

April 9, 2003

Gotchen

Proposed Road Closures/ Decommissionings

Current Status - CLOSED

Current Status - OPEN

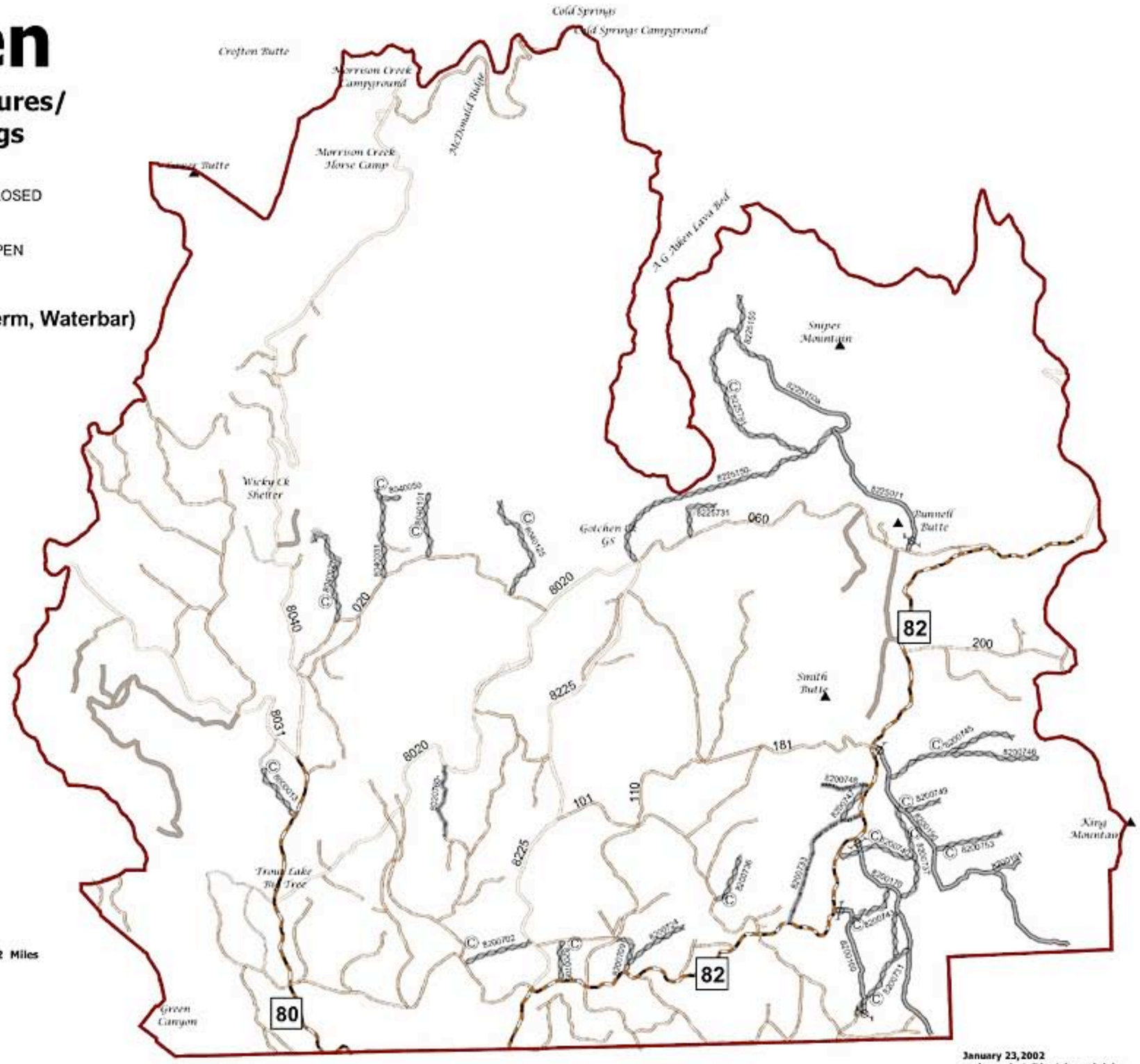
Berm, Waterbar

Decommission (Rip, Berm, Waterbar)

Gate

Gotchen Boundary

Forest Roads



N
W E
S

0.4 0 0.4 0.8 1.2 Miles

Scale 1:55000

January 23, 2002
...gis_projects/gotchen-eis/eis

Gotchen

Alternative B

Proposed Activities

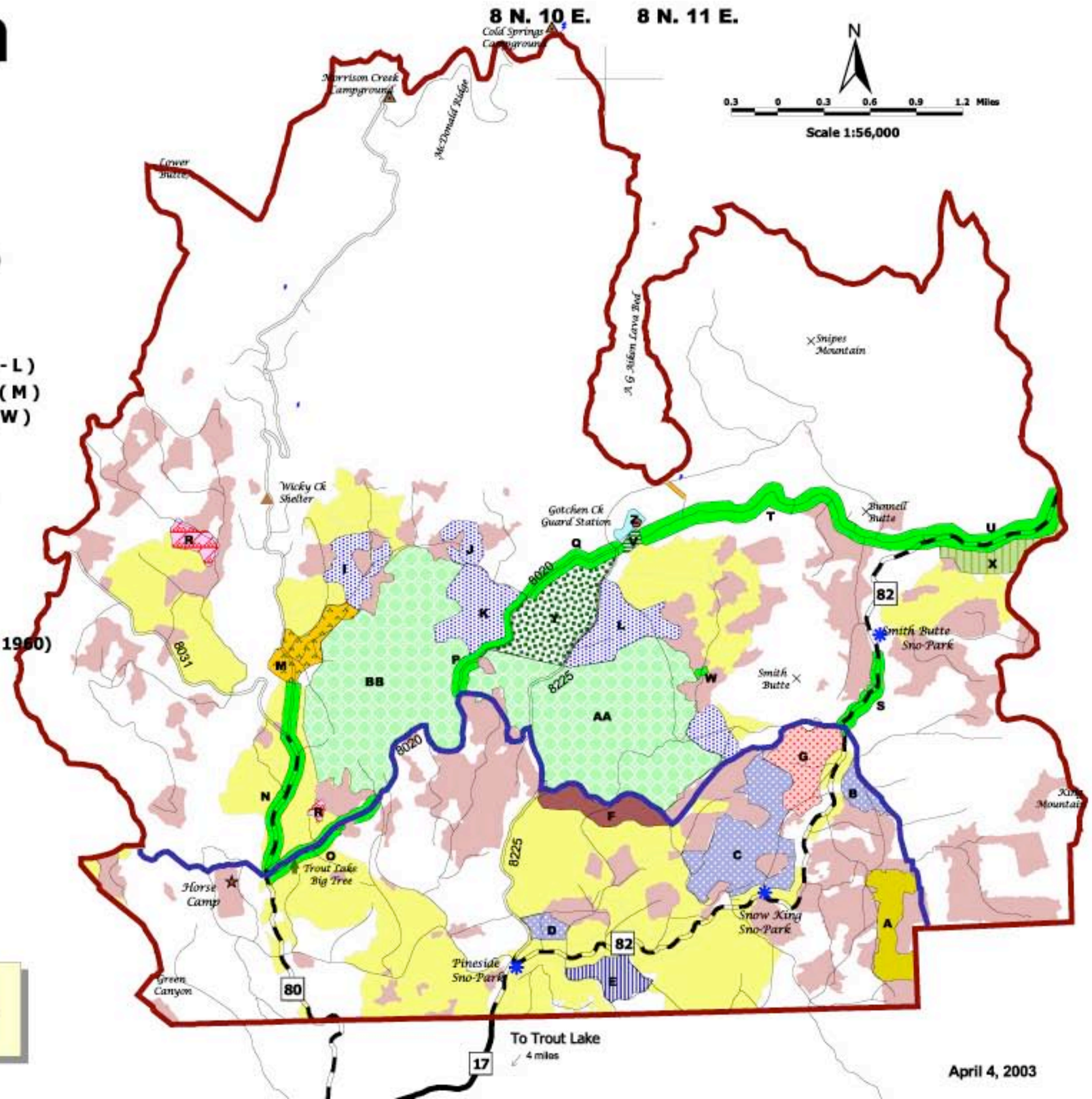
- Light Forest Retention (A)
- Medium Forest retention (B - D)
- Uneven Age Management (E)
- Heavy Forest Retention (F)
- Sanitation Thin (G)
- Fuel Reduction-Regeneration (I - L)
- Ponderosa Pine Understory Thin (M)
- Shaded Fuel Break (N - Q, S - U, W)
- Plantation Maintenance (R)
- SFB-Riparian Reserve (V)
- Lodgepole Understory Thin (X)
- Legacy Tree Culture (Y)
- Aspen Restoration (Z)
- Gap Sapling Thin (AA, BB)
- Proposed Trail

- Young Forested Plantations (post 1960)
- Partial Harvest

- Highway
- Secondary Roads
- Improved Roads
- Unimproved Roads

- Planning Area Boundary
- Matrix - LSR Boundary

Map packet -- Map 6



April 4, 2003

Gotchen

Alternative C

Proposed Activities

- Light Forest Retention (A)
- Medium Forest Retention (B, C, D)
- Uneven Age Management (E)
- Heavy Forest Retention (F)
- Sanitation Thin (G)
- Fuels Reduction-Reforestation (I, J, K, L,H)
- Ponderosa Pine Understory Thin (M)
- Plantation Maintenance (R)
- Shaded Fuel Break (EE, FF, S)
- Lodgepole Pine Understory Thin (X)
- Legacy - 10in DBH (Y)
- Aspen restoration (Z)
- Landing-Gap Sapling (BB)
- Understory Density Reduction (AA , CC,DD)
- Proposed Trail

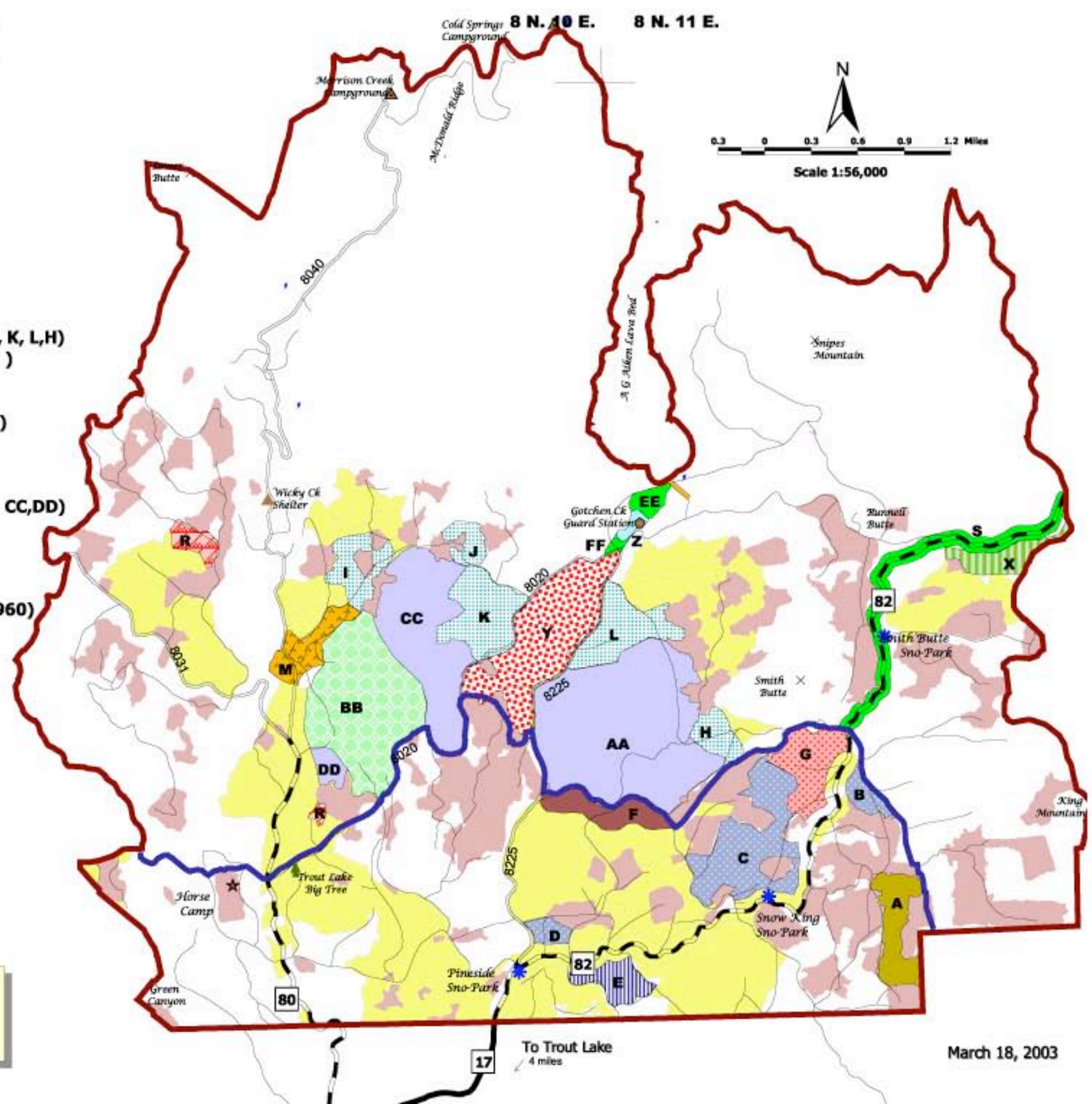
Past Activities

- Young Forested Plantations (post 1960)
- Partial Harvest

- Highway
- Secondary Roads
- Improved Roads
- Unimproved Roads

- Planning Area Boundary
- Matrix - LSR Boundary

Map Packet -- Map 7



March 18, 2003

Gotchen

Alternative D

Proposed Activities

- Light Forest Retention (A)
- Medium Forest retention (B - D)
- Uneven Age Management (E)
- Heavy Forest Retention (F)
- Sanitation Thin (G)
- Fuel Reduction-Regeneration (I - L)
- Ponderosa Pine Understory Thin (M)
- Shaded Fuel Break (N - Q, S - U, W)
- Plantation Maintenance (R)
- SFB-Riparian Reserve (V)
- Lodgepole Understory Thin (X)
- Legacy Tree Culture (Y)
- Aspen Restoration (Z)
- Gap Sapling Thin (AA, BB)
- Proposed Trail

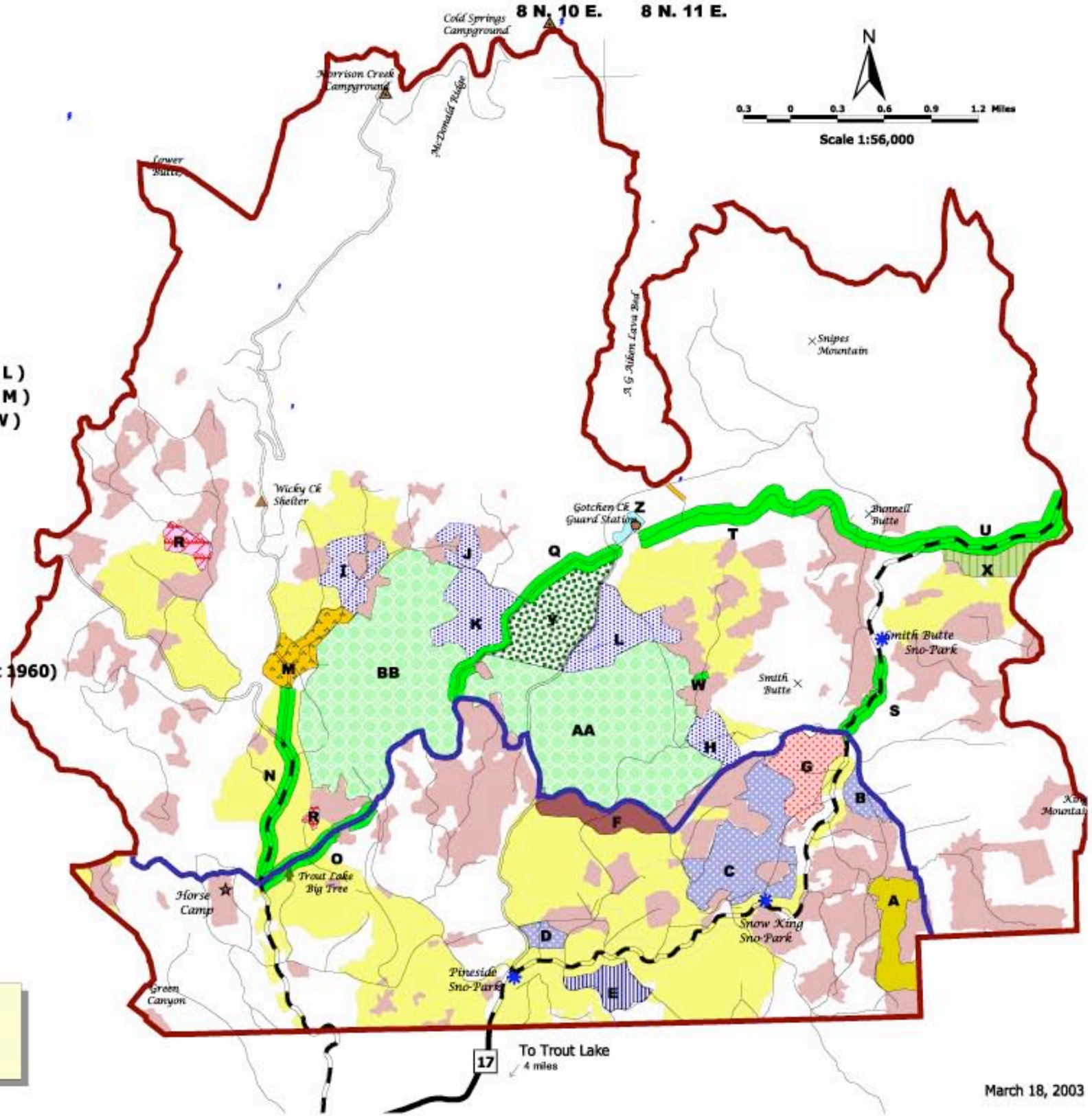
Past Activities

- Young Forested Plantations (post 1960)
- Partial Harvest

- Highway
- Secondary Roads
- Improved Roads
- Unimproved Roads

- Planning Area Boundary
- Matrix - LSR Boundary

Map Packet -- Map 8



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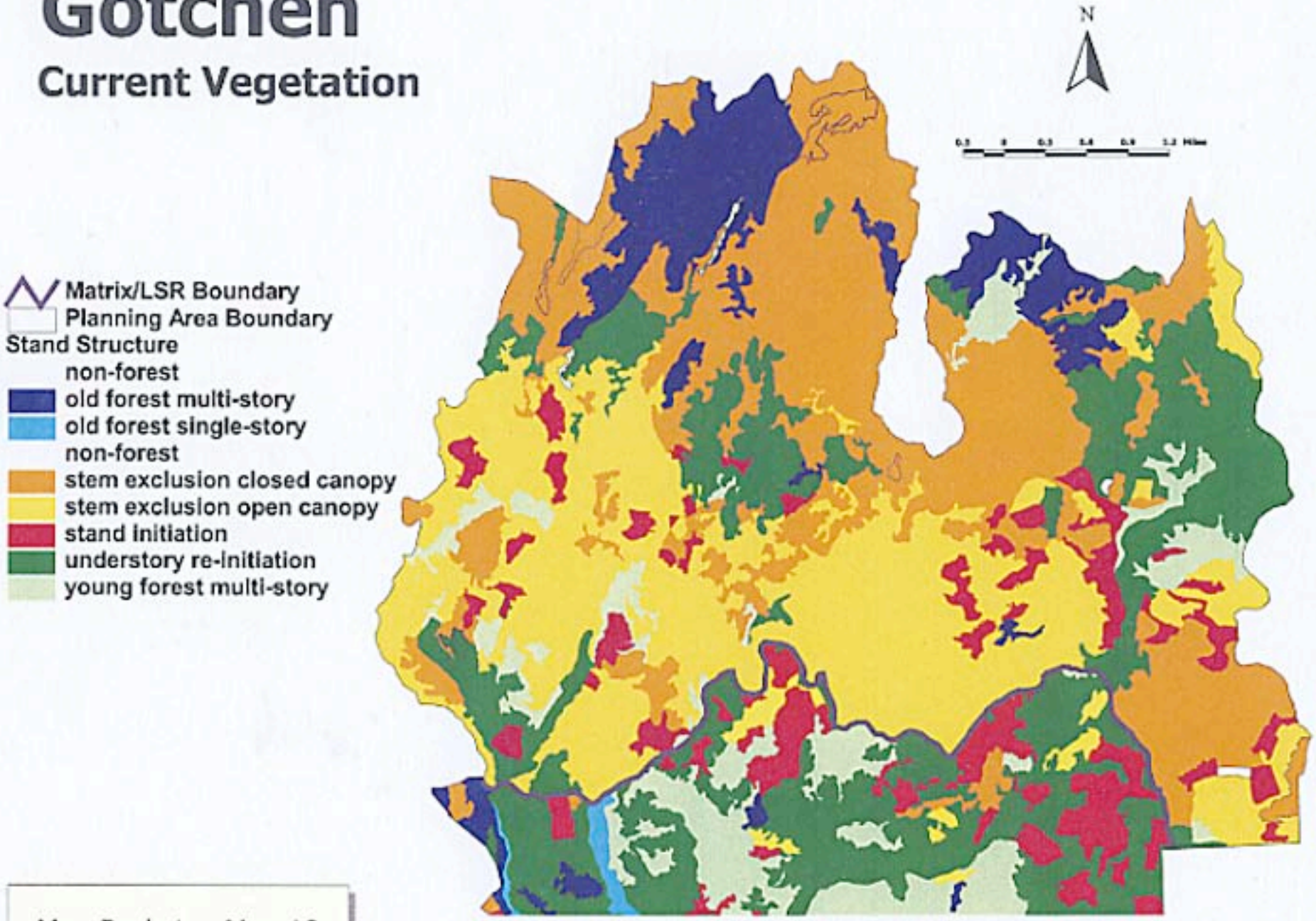
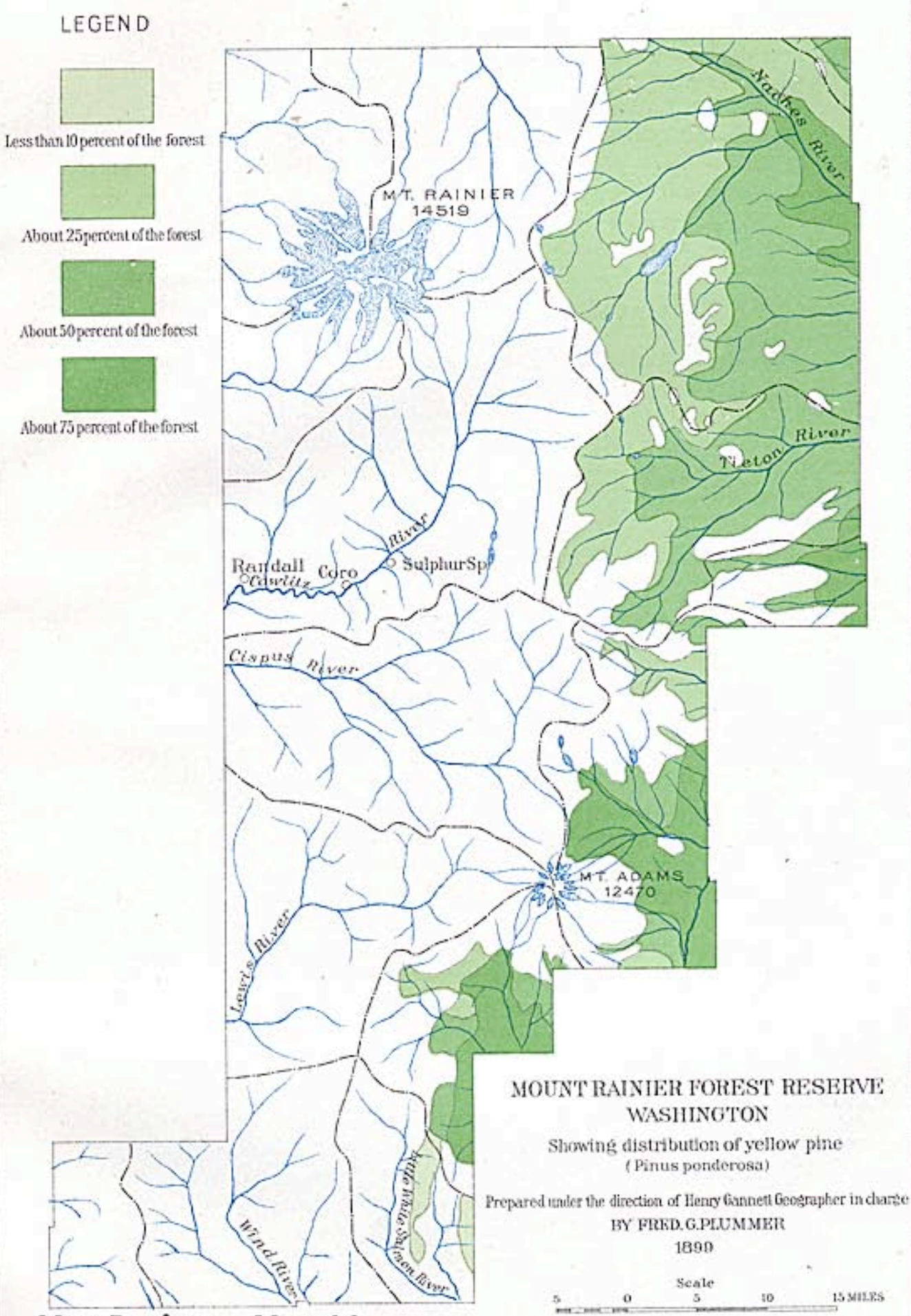
Current Vegetation



Map Packet -- Map 10

May 22, 2003



MOUNT RAINIER FOREST RESERVE
WASHINGTON

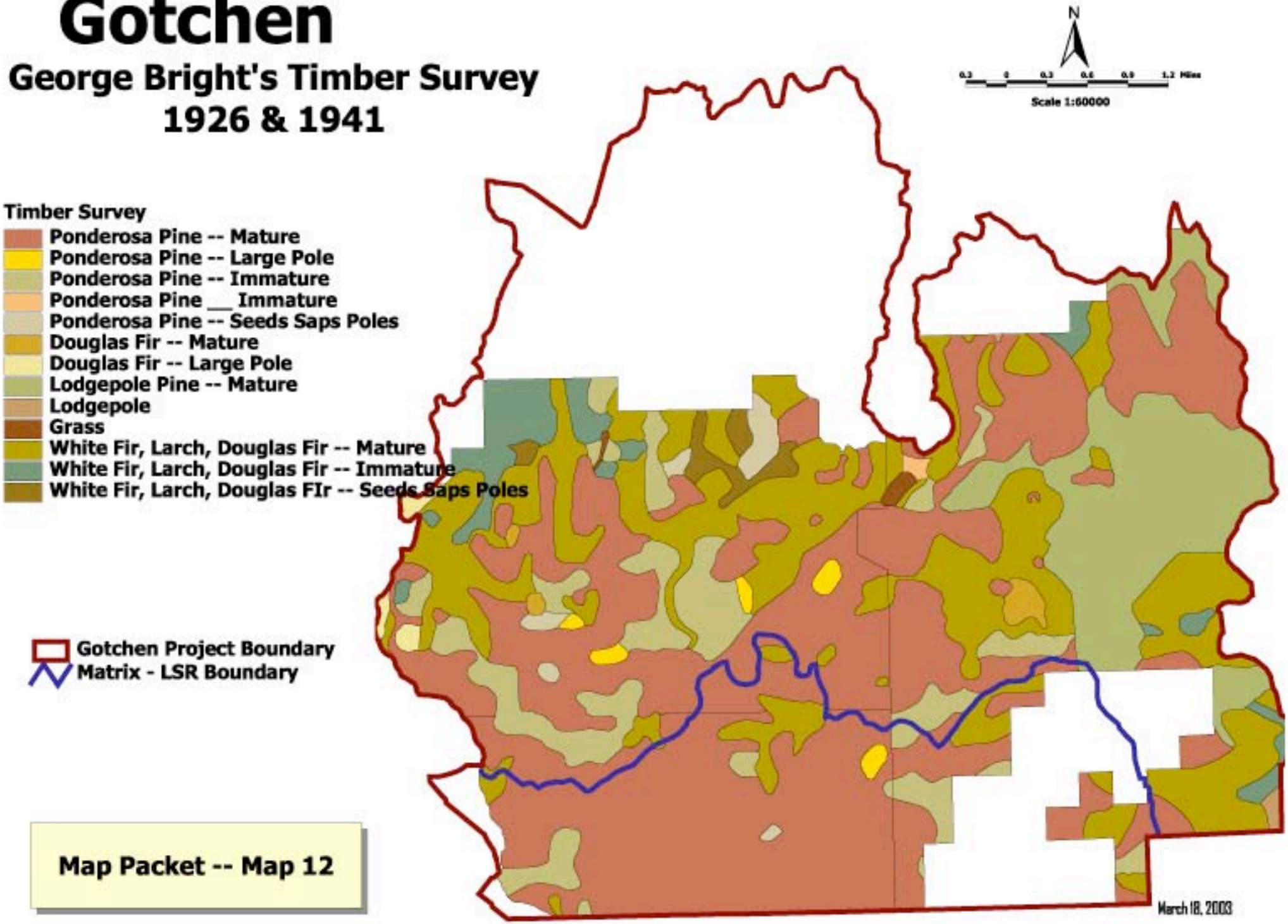
Showing distribution of yellow pine
(Pinus ponderosa)

Prepared under the direction of Henry Gannett Geographer in charge
BY FRED. G. PLUMMER
1899

Map Packet -- Map 11

Gotchen

George Bright's Timber Survey
1926 & 1941



Map Packet -- Map 12

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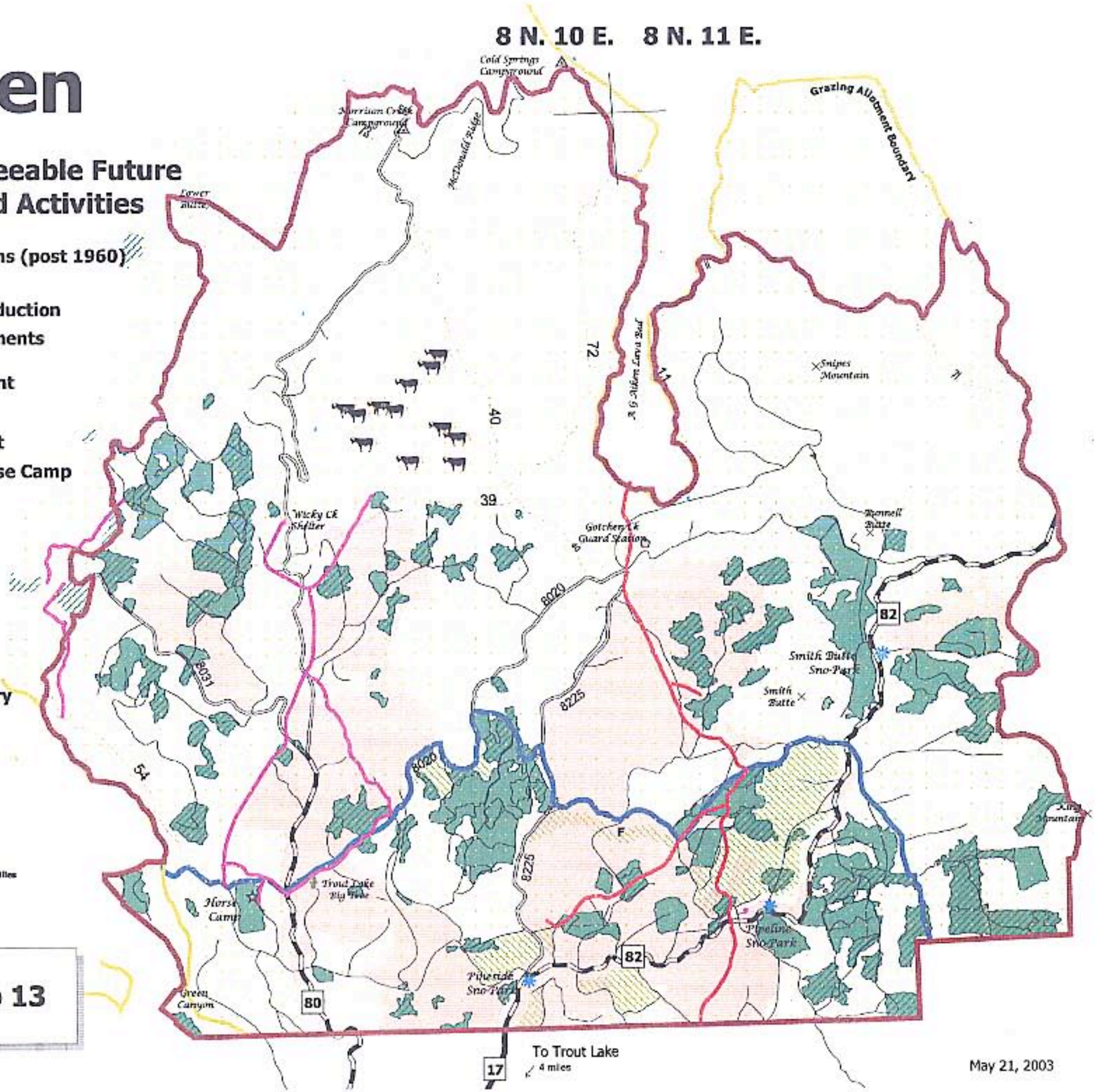
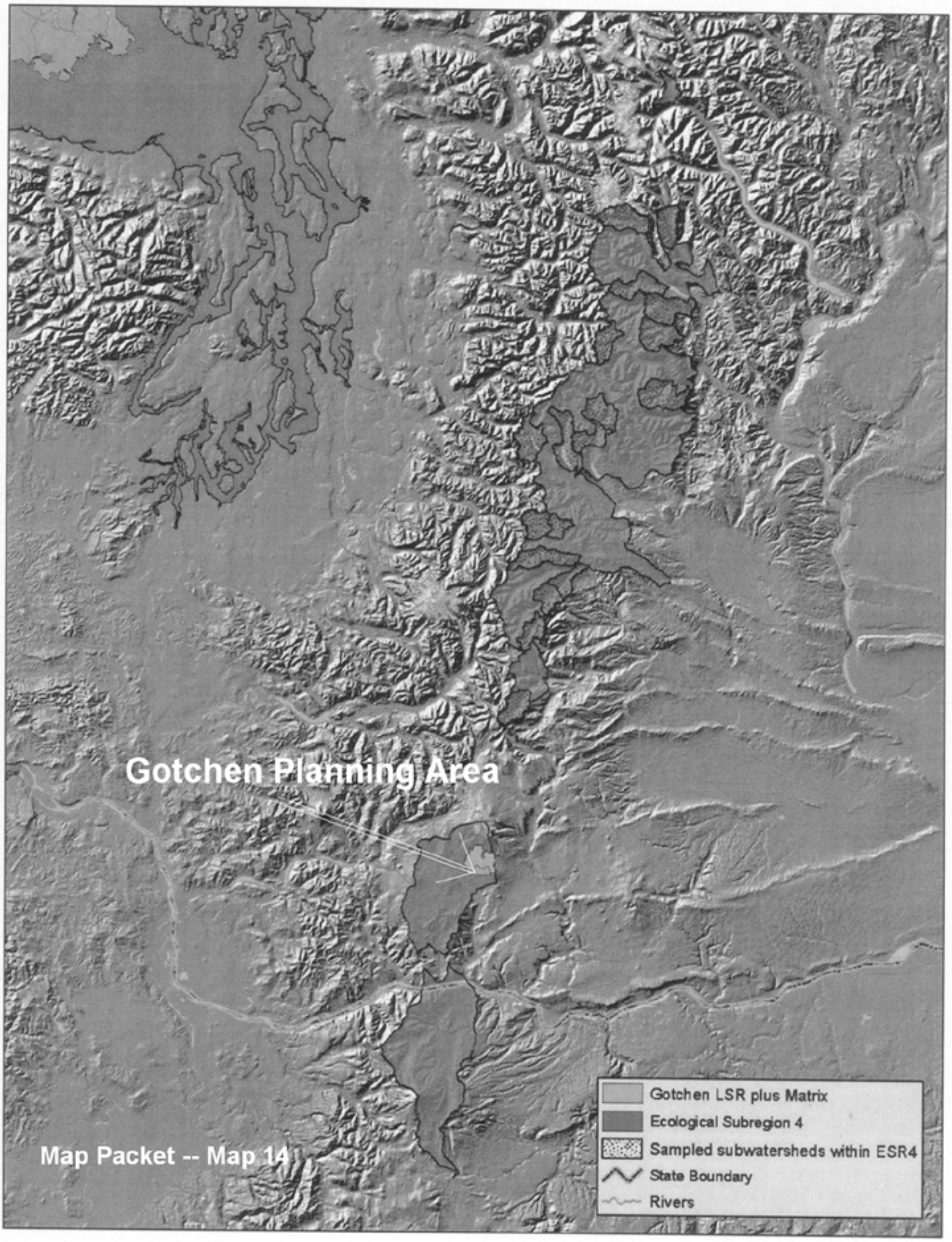
Past, Present and Forseeable Future Non-Gotchen Related Activities

- Young Forested Plantations (post 1960)
- Partial Harvest Units
- On-Going Matrix Fuel Reduction
- Future Vegetation Treatments (Pre-Commercial Thin)
- Existing Grazing Allotment
- Existing Trails
- Future Trail Development
- Existing (Relocated) Horse Camp
- Future Sno-Park
- Highway
- Secondary Roads
- Improved Roads
- Unimproved Roads
- Pipeline
- Gotchen Project Boundary
- Matrix - LSR Boundary



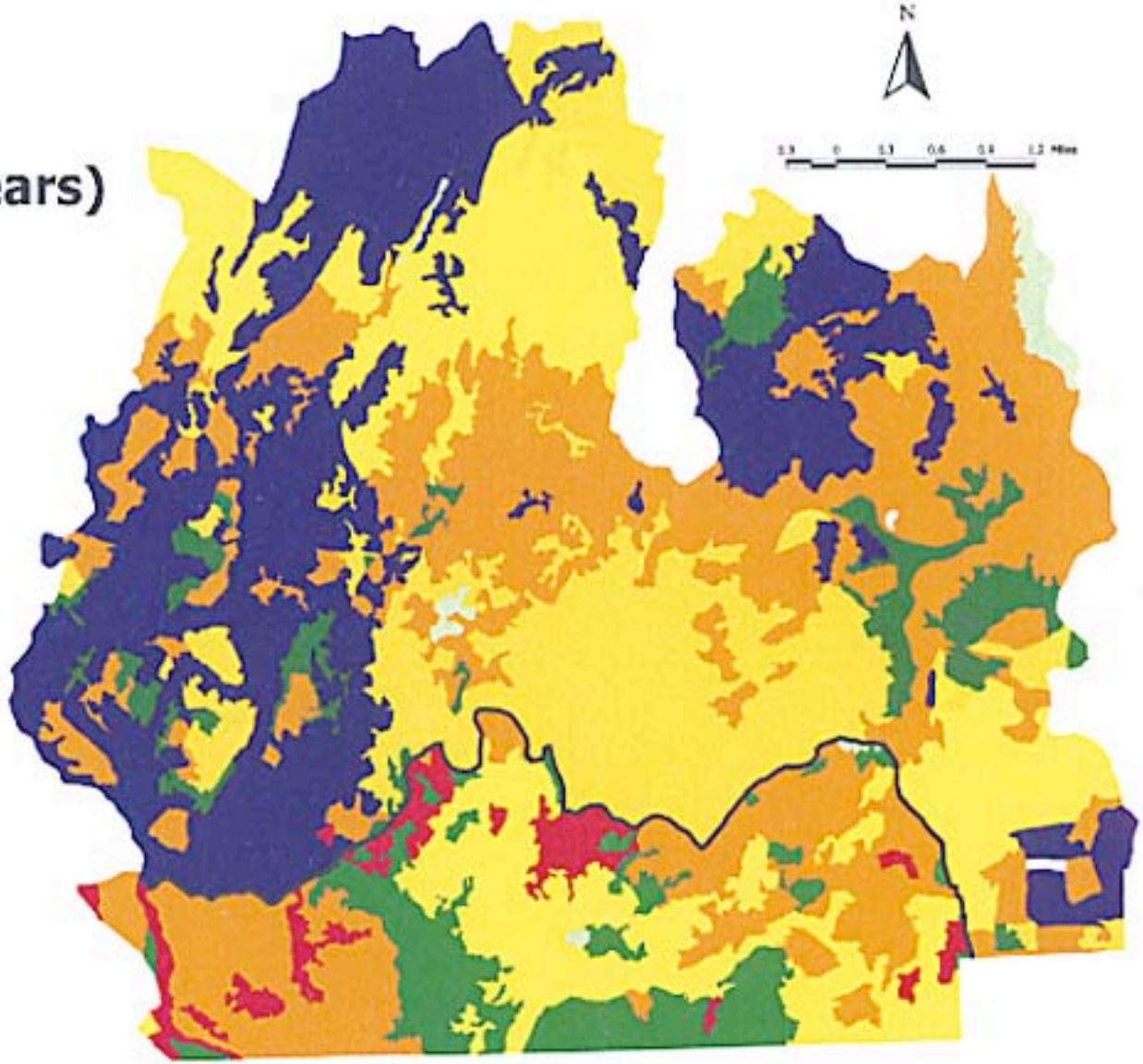
Map Packet -- Map 13

May 21, 2003


Gotchen Planning Area
Map Packet -- Map 14
Gotchen LSR plus Matrix
Ecological Subregion 4
Sampled subwatersheds within ESR4
State Boundary
Rivers

Gotchen

Alternative A
Vegetation Map (50 years)



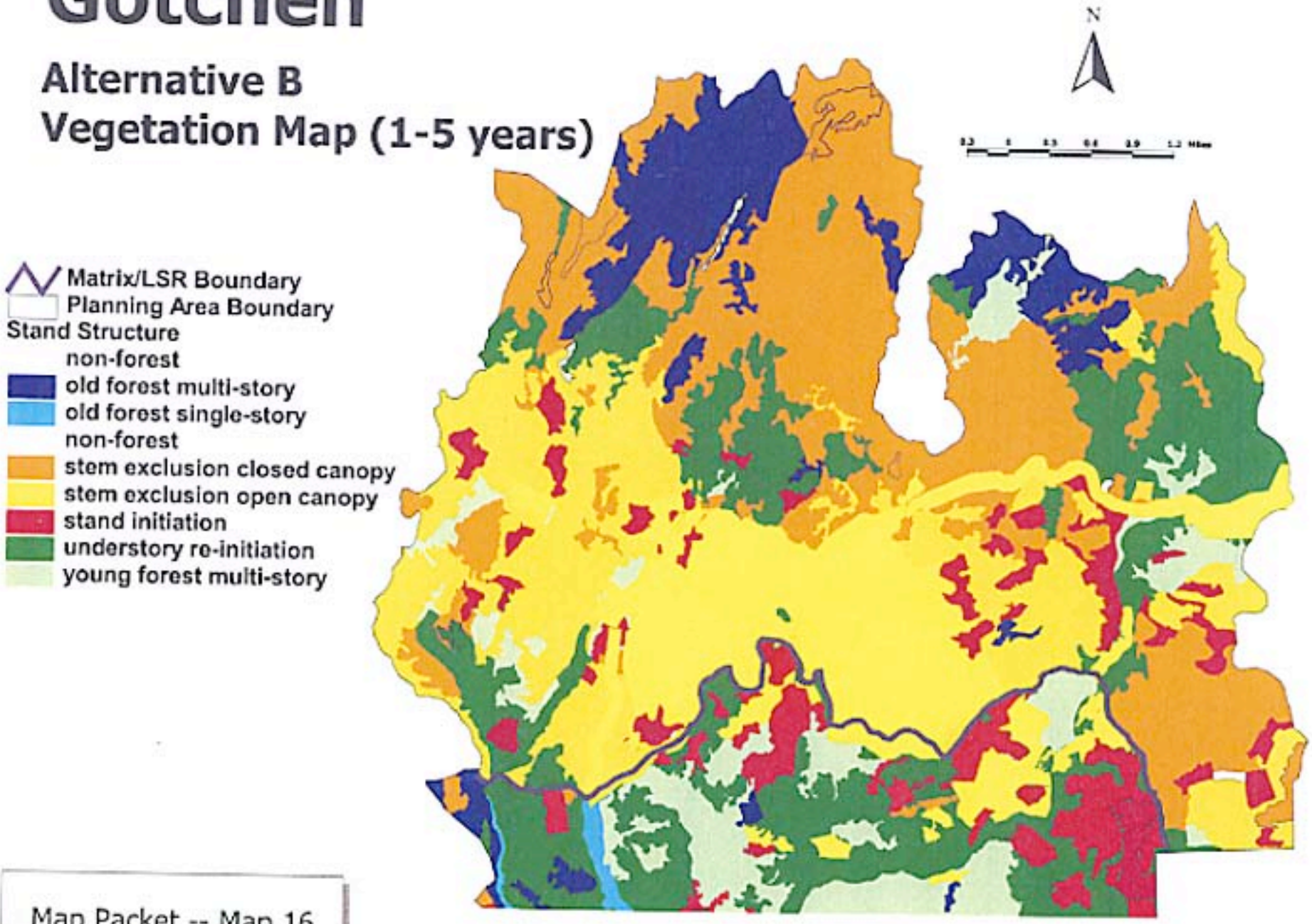
Matrix/LSR Boundary
Stand_Structure
- Stand Initiation
- Stem exclusion open canopy
- Stem exclusion closed canopy
- Understory re-initiation
- Young forest multi-story
- Old forest multi-story
- Old forest single-story

Map Packet -- 15

May 22, 2003

Gotchen

Alternative B
Vegetation Map (1-5 years)

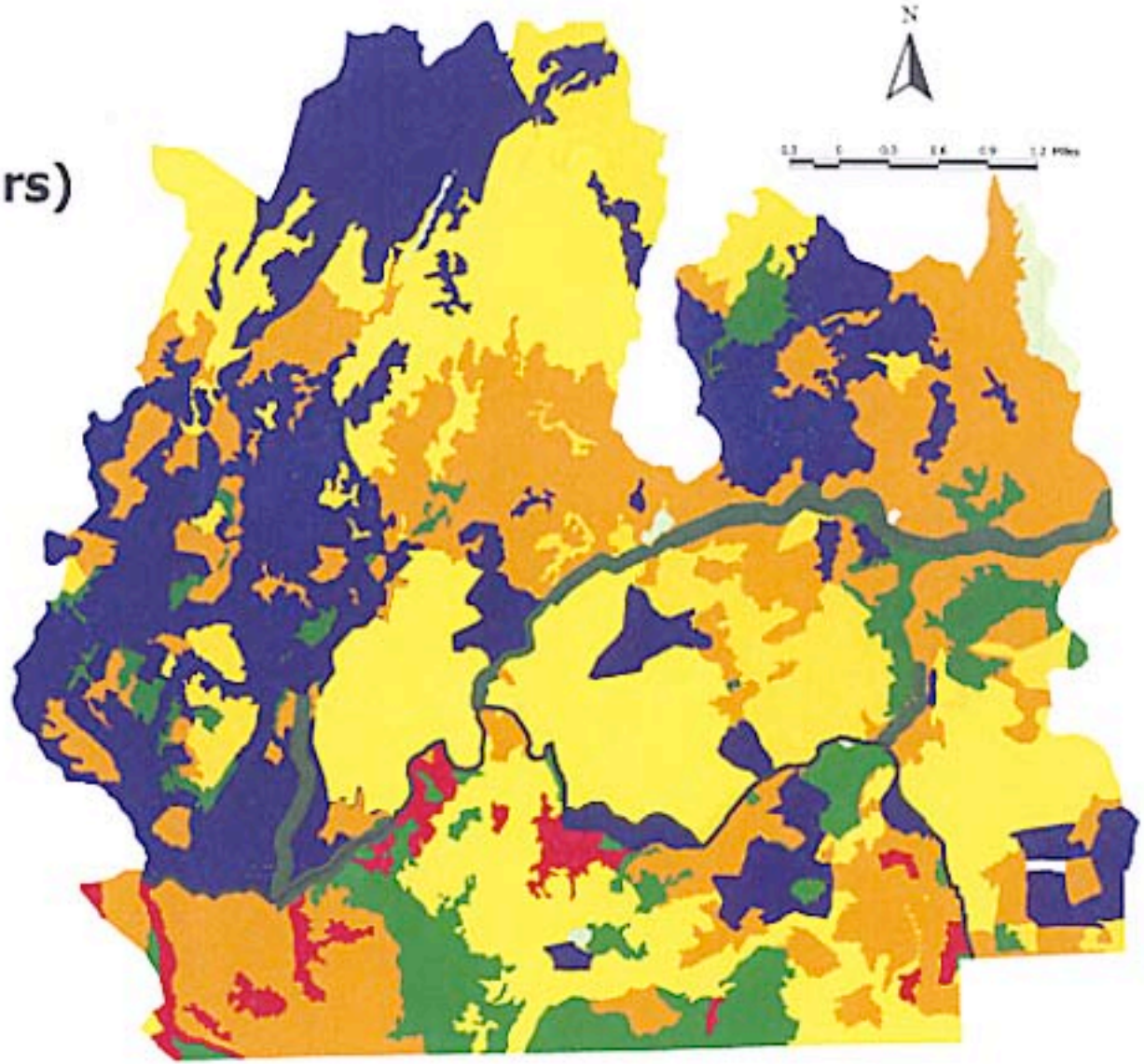


Map Packet -- Map 16

May 22, 2003

Gotchen

Alternative B
Vegetation Map (50 years)



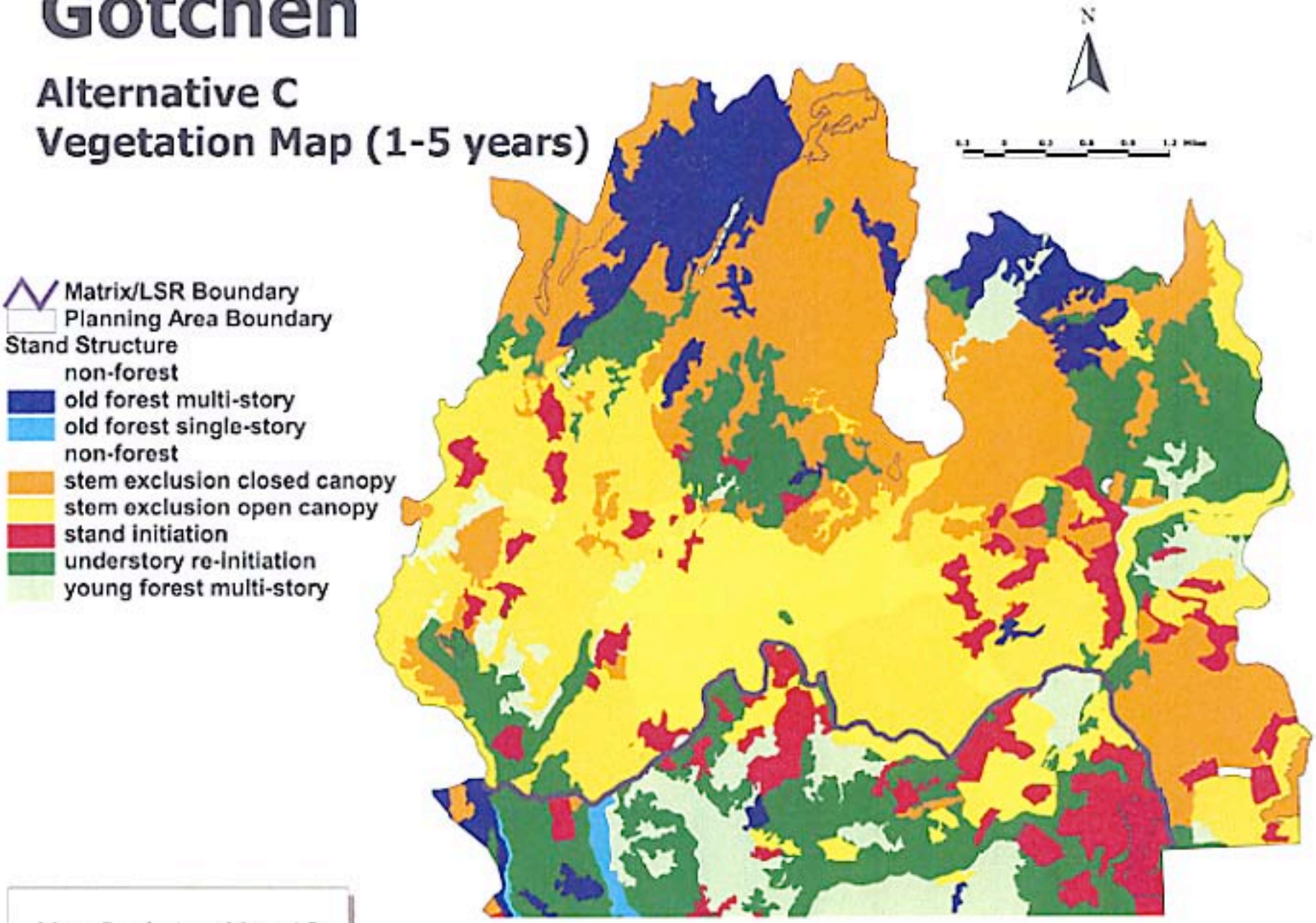
Matrix/LSR Boundary
Stand_Structure
- Stand Initiation
- Stem exclusion open canopy
- Stem exclusion closed canopy
- Understory re-initiation
- Young forest multi-story
- Old forest mullti-story
- Old forest single-story

Map Packet -- 17

May 22, 2003

Gotchen

Alternative C
Vegetation Map (1-5 years)



Map Packet -- Map 18

May 22, 2003

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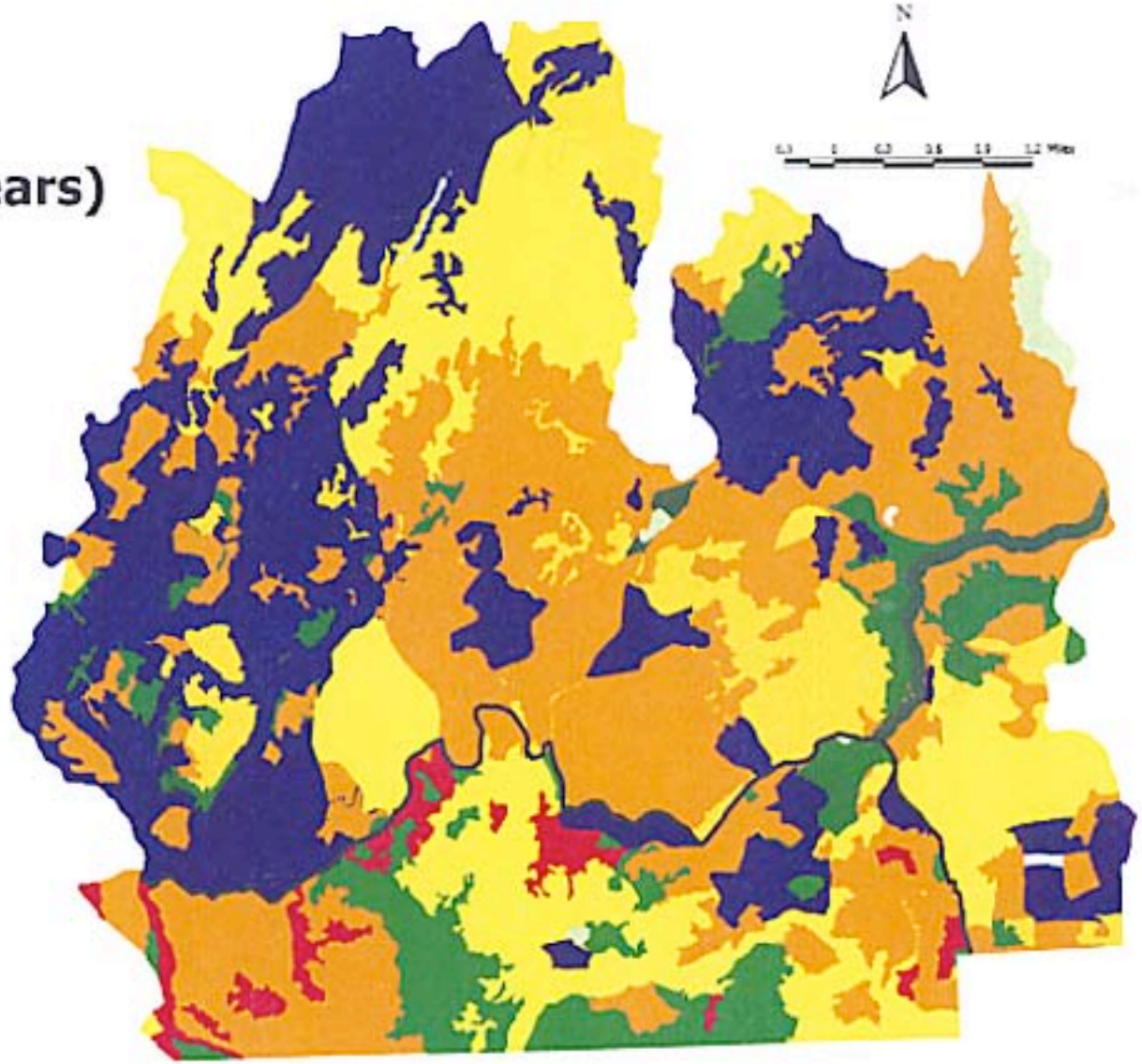
Alternative C
Vegetation Map (50 years)



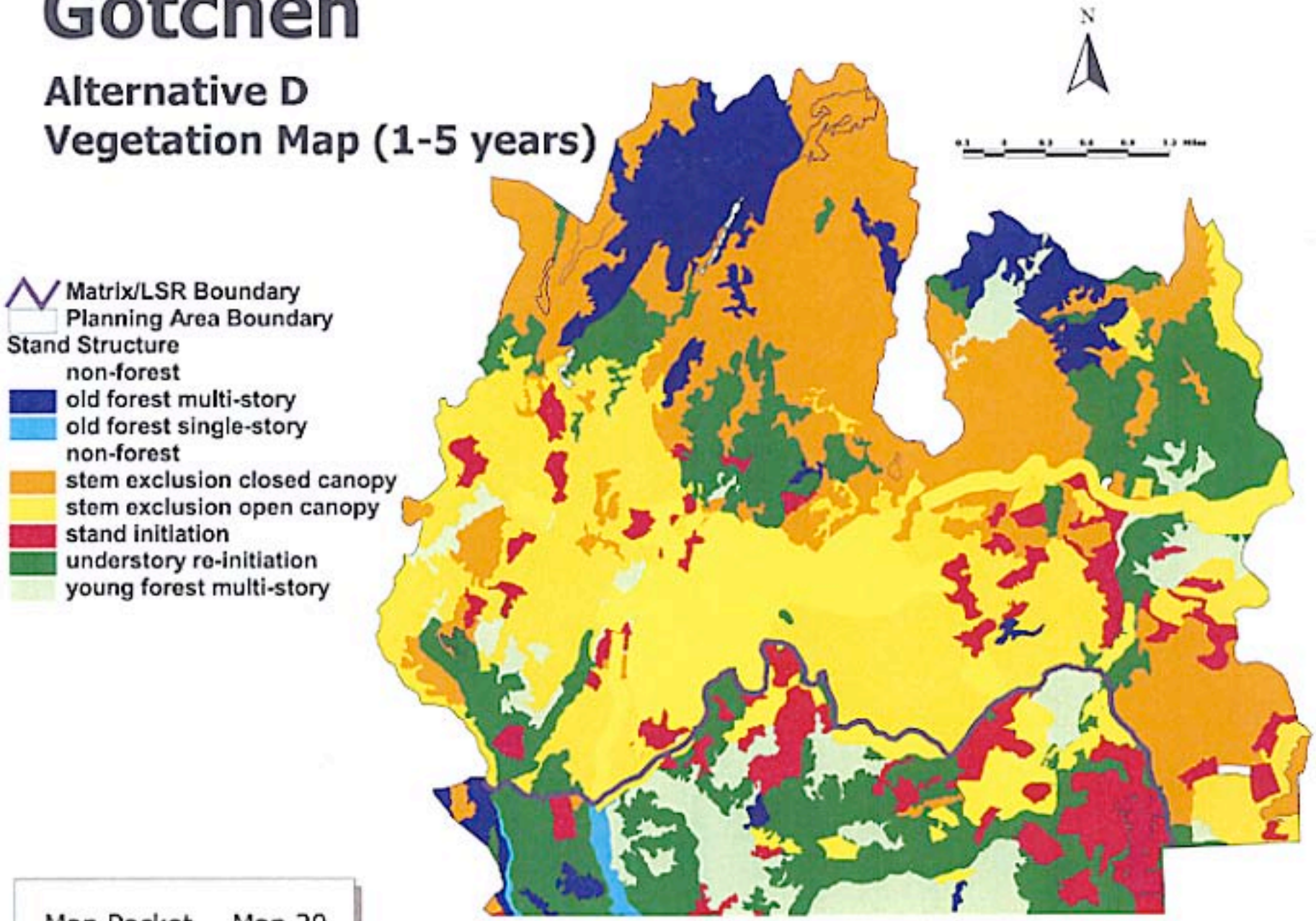
Matrix/LSR Boundary
Stand_Structure
- Stand Initiation
- Stem exclusion open canopy
- Stem exclusion closed canopy
- Understory re-initiation
- Young forest multi-story
- Old forest mullti-story
- Old forest single-story

Map Packet -- Map 19

May 22, 2003

Gotchen

Alternative D
Vegetation Map (1-5 years)

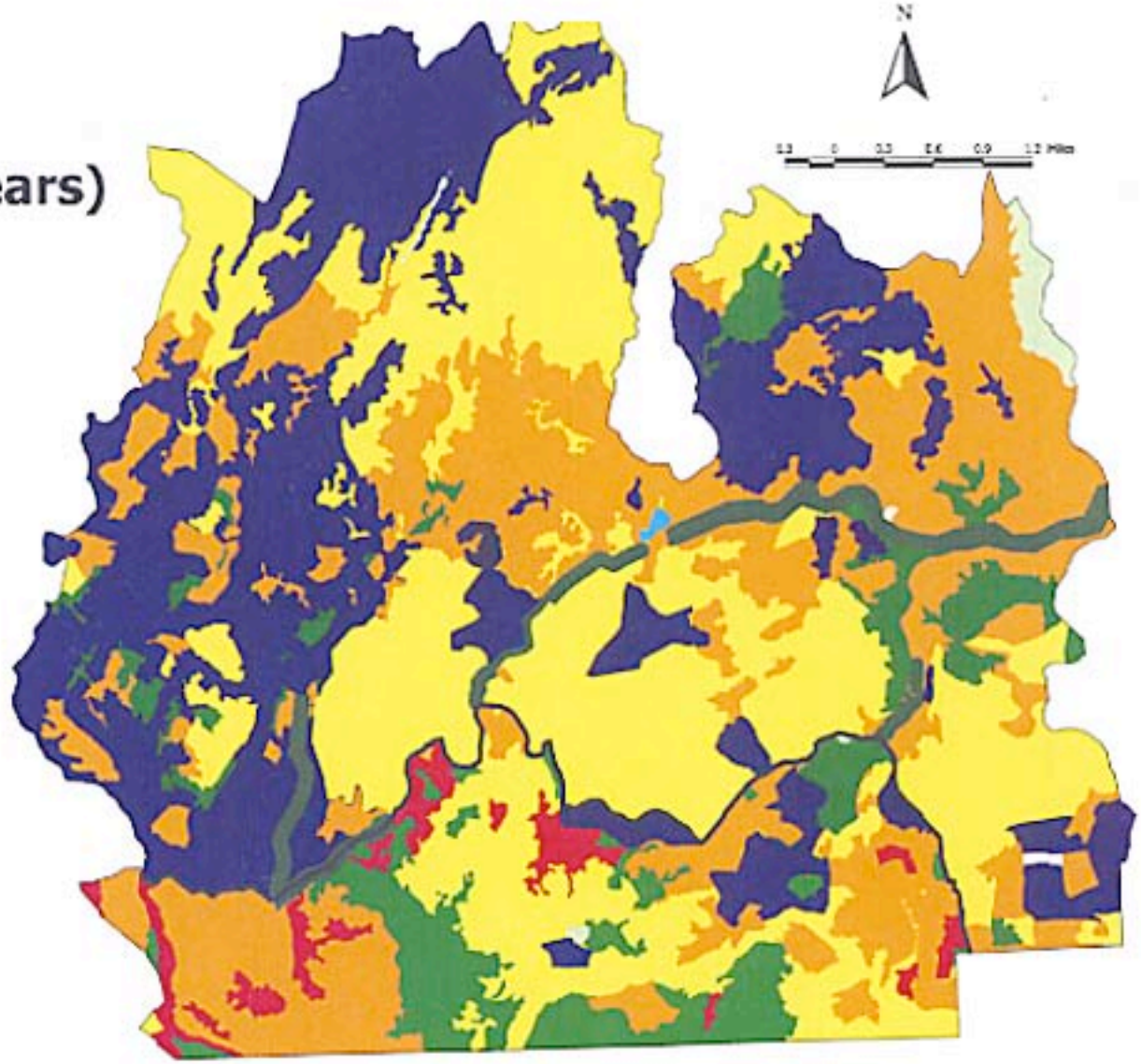


Map Packet -- Map 20

May 22, 2003

Gotchen

Alternative D
Vegetation Map (50 years)



Matrix/LSR Boundary
Boundary.shp
Stand_Structure
- Stand Initiation
- Stem exclusion open canopy
- Stem exclusion closed canopy
- Understory re-initiation
- Young forest multi-story
- Old forest mullti-story
- Old forest single-story

Map Packet -- Map 21

May 22, 2003