



Basics of Forest Management Planning

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Extension Forestry

Why Plan?



Why Plan?

- Gets you thinking about goals, options, constraints
- Organizes your approach
- Organizes your records
- Demonstrates commitment





What's in a plan?

- Cover sheet
- Property description & history
- Landowner objectives
- Maps
- Resource descriptions
 - Timber, other vegetation, water, wildlife habitat, soils, access, recreation, etc.



RMP Template

Oregon State University
Extension Forestry
Resource Management Planning Series
Template Version: July 31, 2002

Management Plan for:

Landowner Name: _____

Property Name: _____

Date of Plan: _____

This template was designed to provide a fairly simple way to write management plans for participants in the OSU Extension Forestry Resource Management Planning (RMP) course. Plans developed using the template and the RMP curriculum will be consistent with the Oregon Forest Stewardship Planning Guidelines and may be accepted by the Oregon Department of Forestry as "Forestry Assistance" Stewardship Plans under the Stewardship Incentives Program with the approval of your local Service Forester. The plans will exceed the requirements of the American Tree Farm System for Certification as a Tree Farm. Additional sections and more detailed information will be necessary for the plan to qualify as a "Forest Practices" Stewardship Plan leading to a Forest Practices Stewardship Agreement.



What's in a Plan?

- Forest health & fire risk observations
- Sources of assistance
- Business & legal considerations
- Action plan (management recommendations)
- Signature page



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A: General Information

A1: Cover Page

Date of plan: _____

Plan writer: _____

Landowner Information

Name: _____

Address: _____

Phone: _____

Fax and/or email: _____

Tract Information

Name: _____

Size: _____

Legal description: _____

Latitude & Longitude: _____

Tax Information

Land use classification: _____

Fire Protection District: _____

Property tax classification: _____



OSU Extension Service in Douglas County

Extension Service
In Douglas County

Forest Management Planning - - Resources in Douglas County

Departments:

- 4-H Youth
- Food Safety & Master Food Preservers
- Forestry
- Horticulture
- Livestock & Forage
- Master Gardener

Calendar of
Events

Faculty & Staff

Local Links

Current Weather

Douglas County
Government

1. [Management Plan Template](#)
2. [Goals & Objectives Worksheet](#)
3. [Business & Legal Considerations Checklist](#)
4. **Management Plan "Requirements"**
 - [American Tree Farm System](#)
 - [Forest Stewardship Plan \(Oregon\)](#)
5. **Where to Get Property Information**
 - [Douglas County Assessors Office](#)
 - [Douglas County Clerks Office \(copies of deeds, other recorded documents\)](#)
6. **Where to get Maps & Aerial Photos**
 - [Assessor/Plat Maps/Aerial Photos](#)
 - Riparian Management Area Details:
 - Oregon Dept of Forestry, Roseburg, OR 440-3412
 - Soils Maps and Information:
 - [Natural Resources Conservation Services, Web Soil Survey](#)

extension.oregonstate.edu/douglas



General Description



- Overview in paragraph form
- Where the property is located
- Key features
- Current use
- Only limited detail





Example: General Description

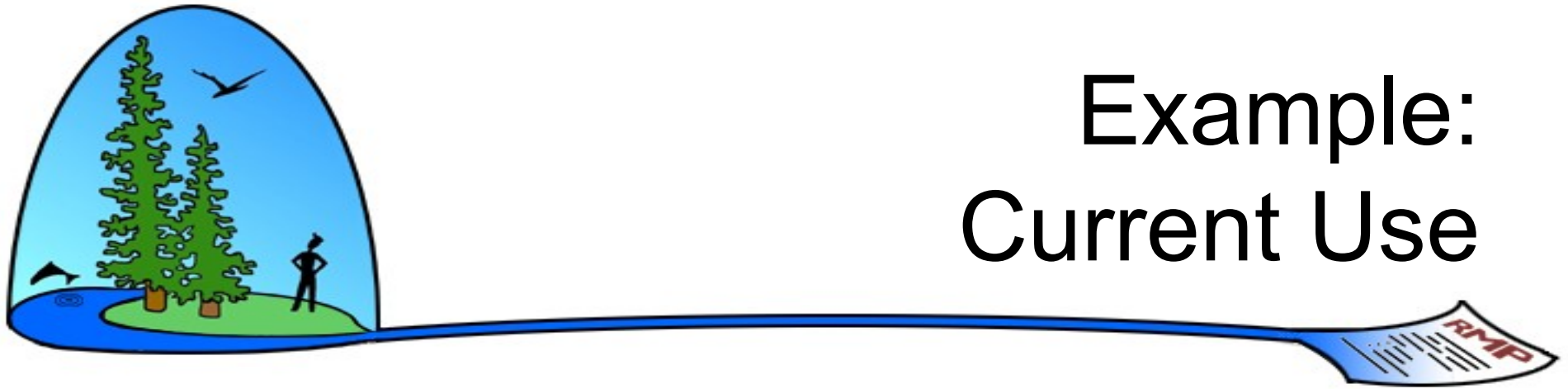
- The Glide Educational Forest is located 12 miles east of Roseburg and is accessible from Highway 138. It consists of approximately 360 acres and is owned by Douglas County.



Example: Current Use



- The “center” portion of the property is used by a variety of local groups for educational purposes and contains nature trails, a demonstration dam, seasonal shelters for youth classes, a pavilion, and a large parking area.



Example: Current Use

- Timbered areas are managed by the Land Department and generate revenue through timber harvests. A back corner of the property is used as a shooting range for the Sheriff's Department. Part of the property is managed by Public Works as a transfer site.



History Statement



- Paragraph(s) describing how you got your property, how it relates to your family, and what's been done to it
- Sets the context of your management plan
- Should be personal





Example: History Statement

- The Glide Educational forest was formed by resolution of the county commissioners in 1970 as a forestry and natural resources education area. Part of the site was originally a landfill, which is now capped and excluded from regular use.



Make a first draft on a property description.

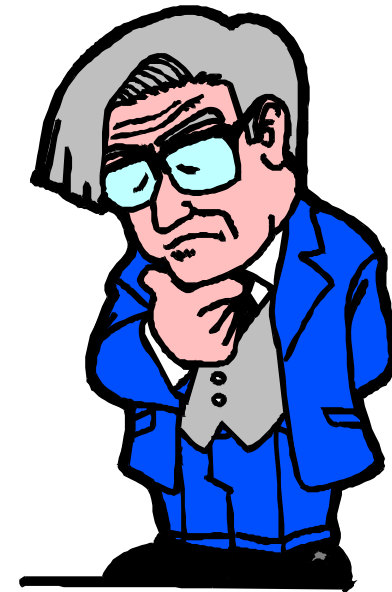
Goals & Objectives



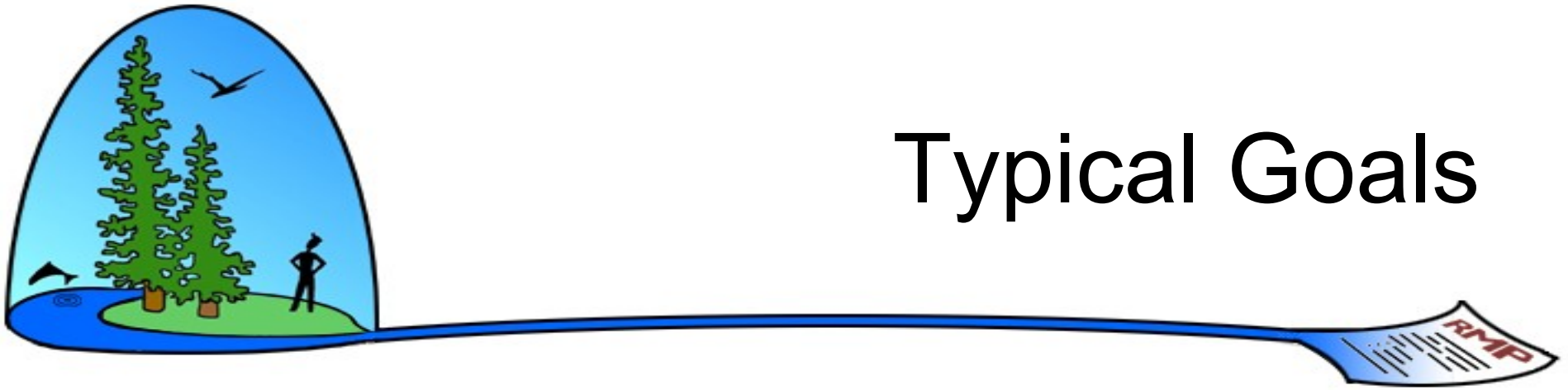
What's a goal?



- Statement of intent
- Very broad & general



Typical Goals



- Produce income
- Enhance wildlife habitat
- Improve woodland roads
- Protect soil and water resources
- Maintain recreation opportunities
- Pass property intact to next generation



What's an objective?

- Statement of intent
- Specific
- Defines what and when





Example Objectives

- Produce \$10,000 in after-tax income each year for the next 5 years
- Develop 10 acres of whitetail deer habitat within 7 years
- Rock roads throughout property within 3 years
- Convert 30 acre pasture to mixed conifer stand in 5 years

Basics of Forest Management Planning Goals & Objectives Worksheet

| | |
|------------|--|
| <i>FYI</i> | <p>Goal: A broad statement of intent. (Examples: Produce merchantable timber, maintain forest health, enhance wildlife habitat.)</p> <p>Objective: A more specific statement of intent that indicates what and when. (Examples: Produce \$10,000 in net revenue from timber harvests each year, 2008 through 2012, thin stand1A within next five years, remove blackberries from riparian areas and replant with native vegetation by 2011.)</p> |
|------------|--|

| | |
|-----------------|---|
| <i>To Do...</i> | Identify one or more goals for your property, then identify one or more objectives for each goal. |
|-----------------|---|

| | |
|----------------|-------------------------------|
| Goal 1: | Objectives for Goal 1: |
|----------------|-------------------------------|

| | |
|----------------|-------------------------------|
| Goal 2: | Objectives for Goal 2: |
|----------------|-------------------------------|

| | |
|----------------|-------------------------------|
| Goal 3: | Objectives for Goal 3: |
|----------------|-------------------------------|

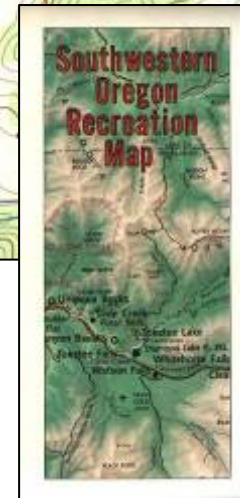
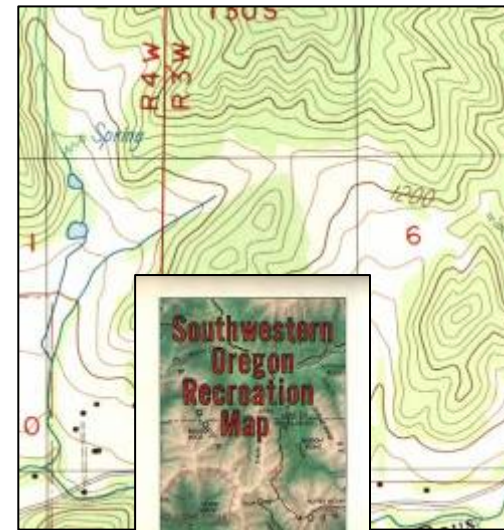
Your goals and objectives may change as you develop your plan. That's OK!



Maps & Photos



- Planimetric maps
- Topographic maps
- Aerial photos
- Soil maps
- GIS maps/overlays

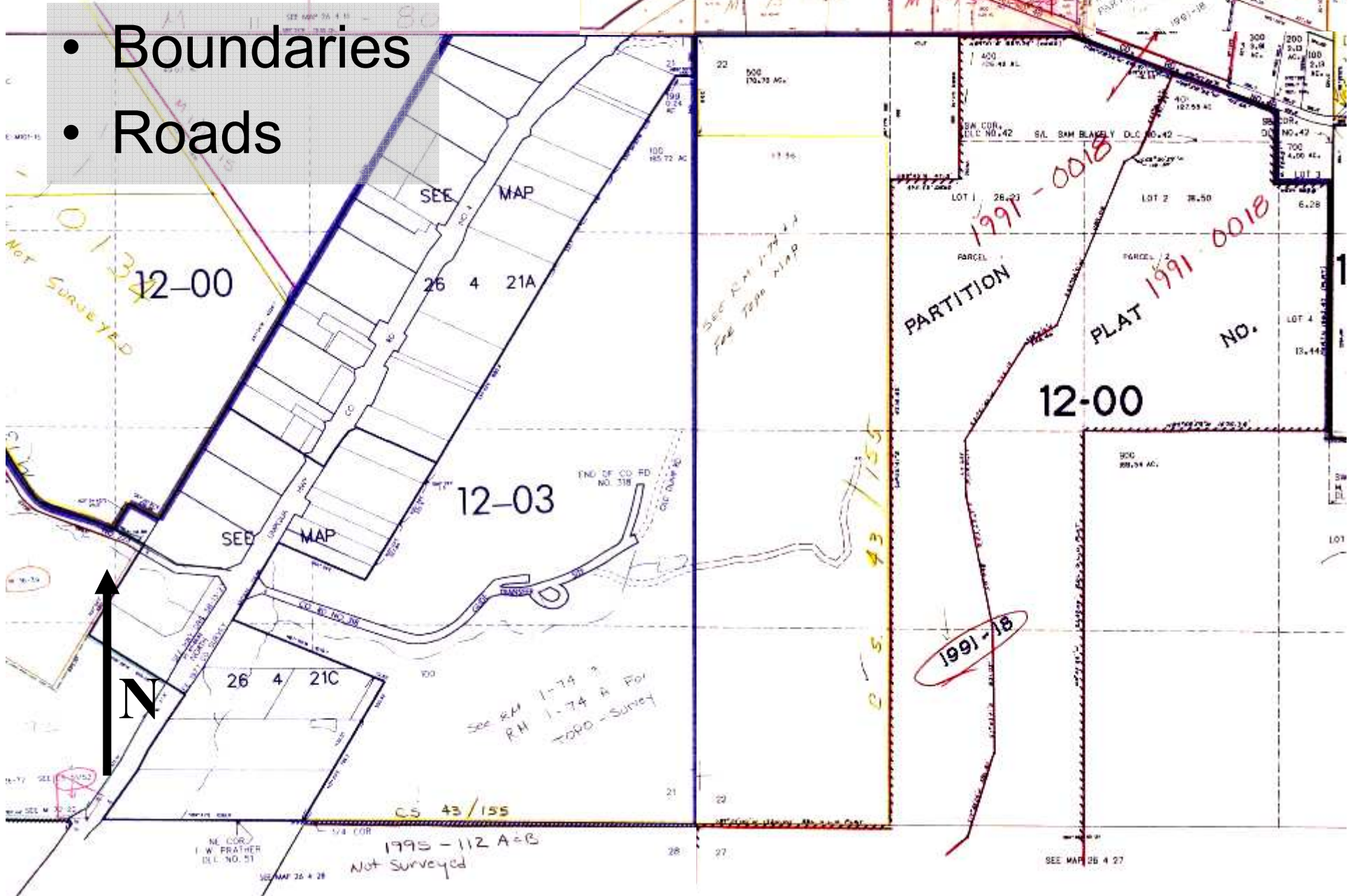


SEC. 21 T.26S. R. 4W W.M.
DOUGLAS COUNTY

Plat Map

HWY CO. RD. NO. 4

- Boundaries
- Roads



0134
Not Surveyed

SEE MAP 1-74 A
FOR TOPO MAP

1991-0018
PARTITION

PLAT 1991-0018
No.

1991-18

See RM 1-74 A
RM 1-74 B For
TOPO - Survey

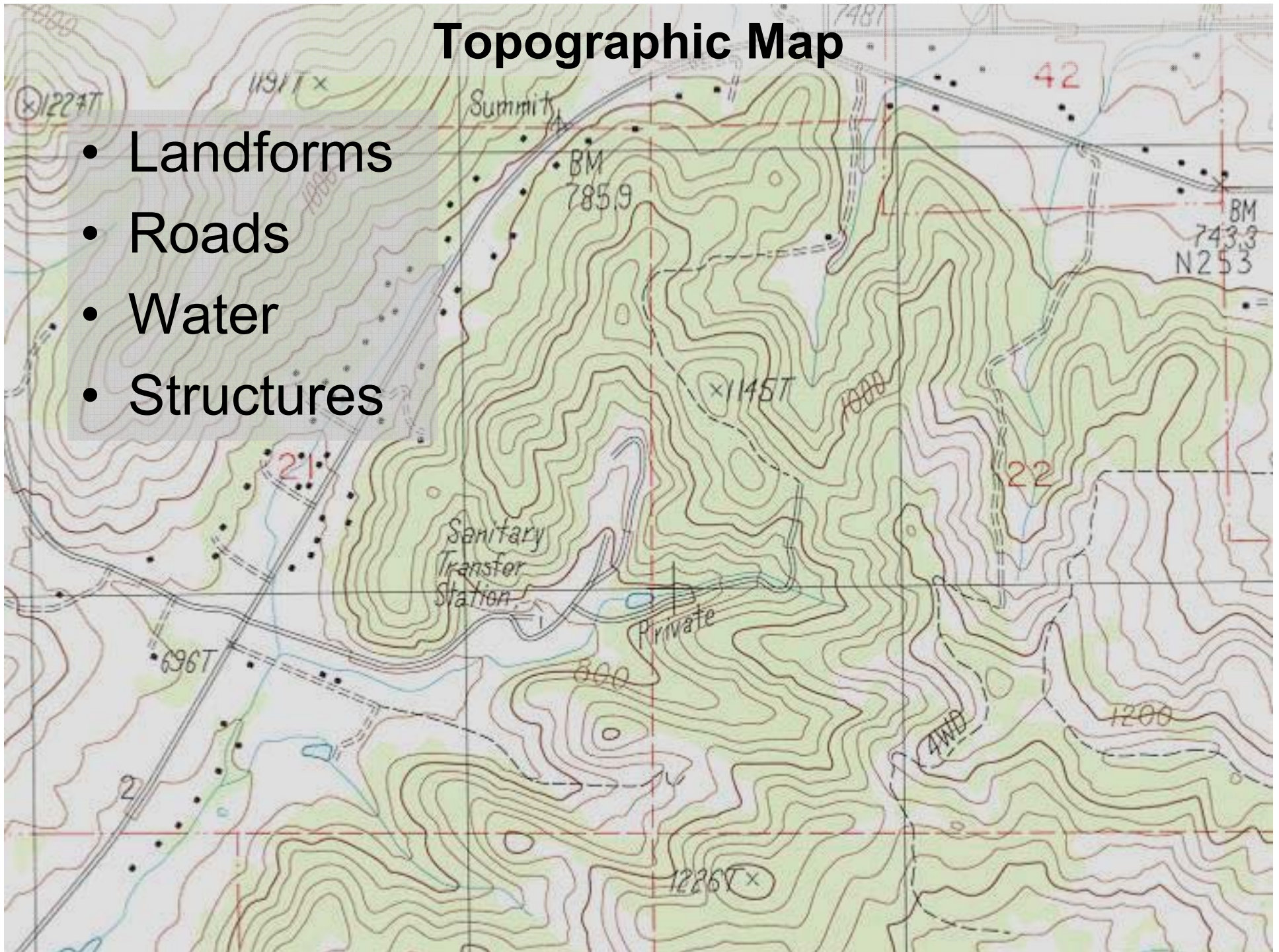
CS 43/155

1995-112 A+B
Not Surveyed

SEE MAP 26 4 27

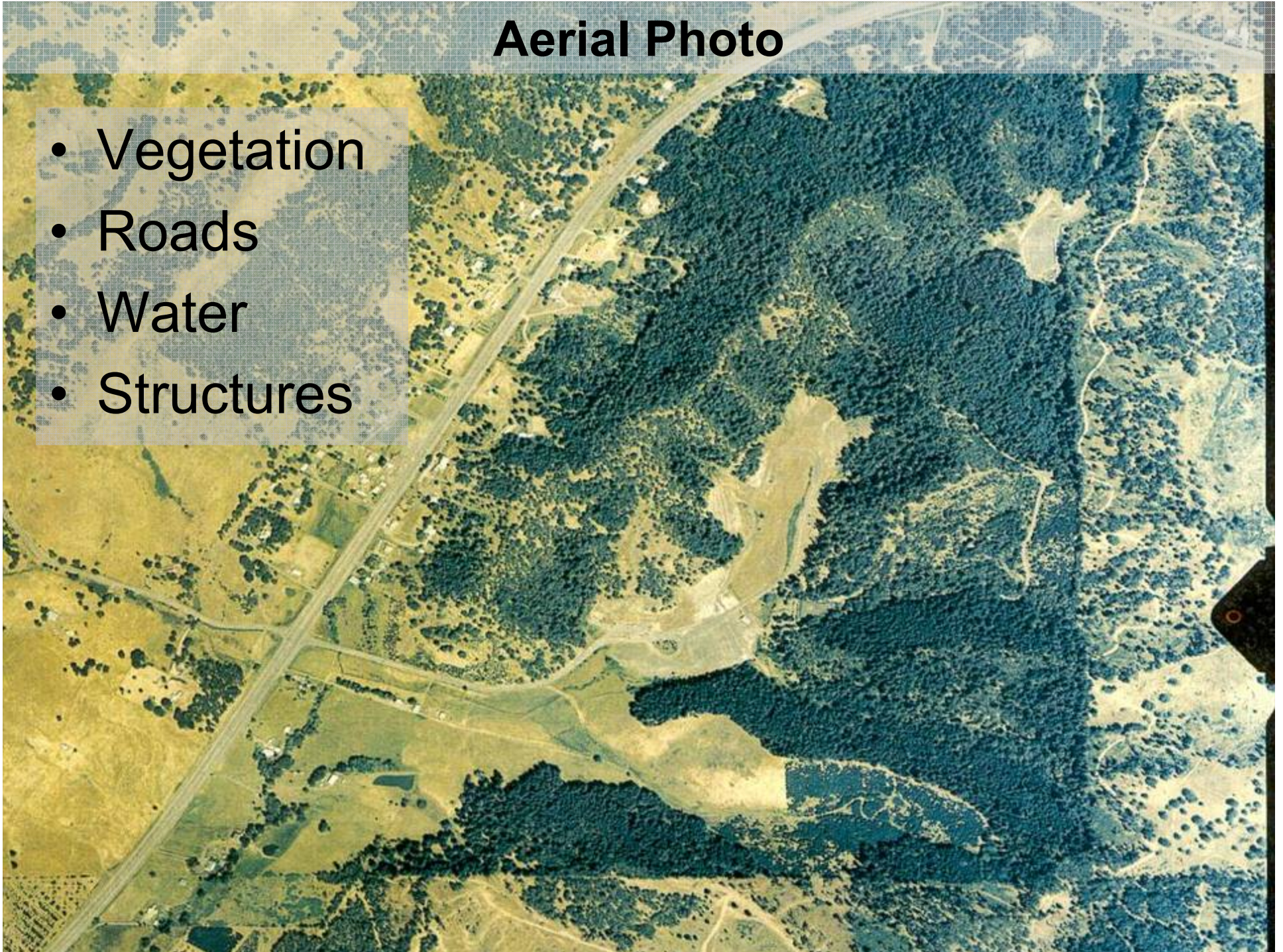
Topographic Map

- Landforms
- Roads
- Water
- Structures



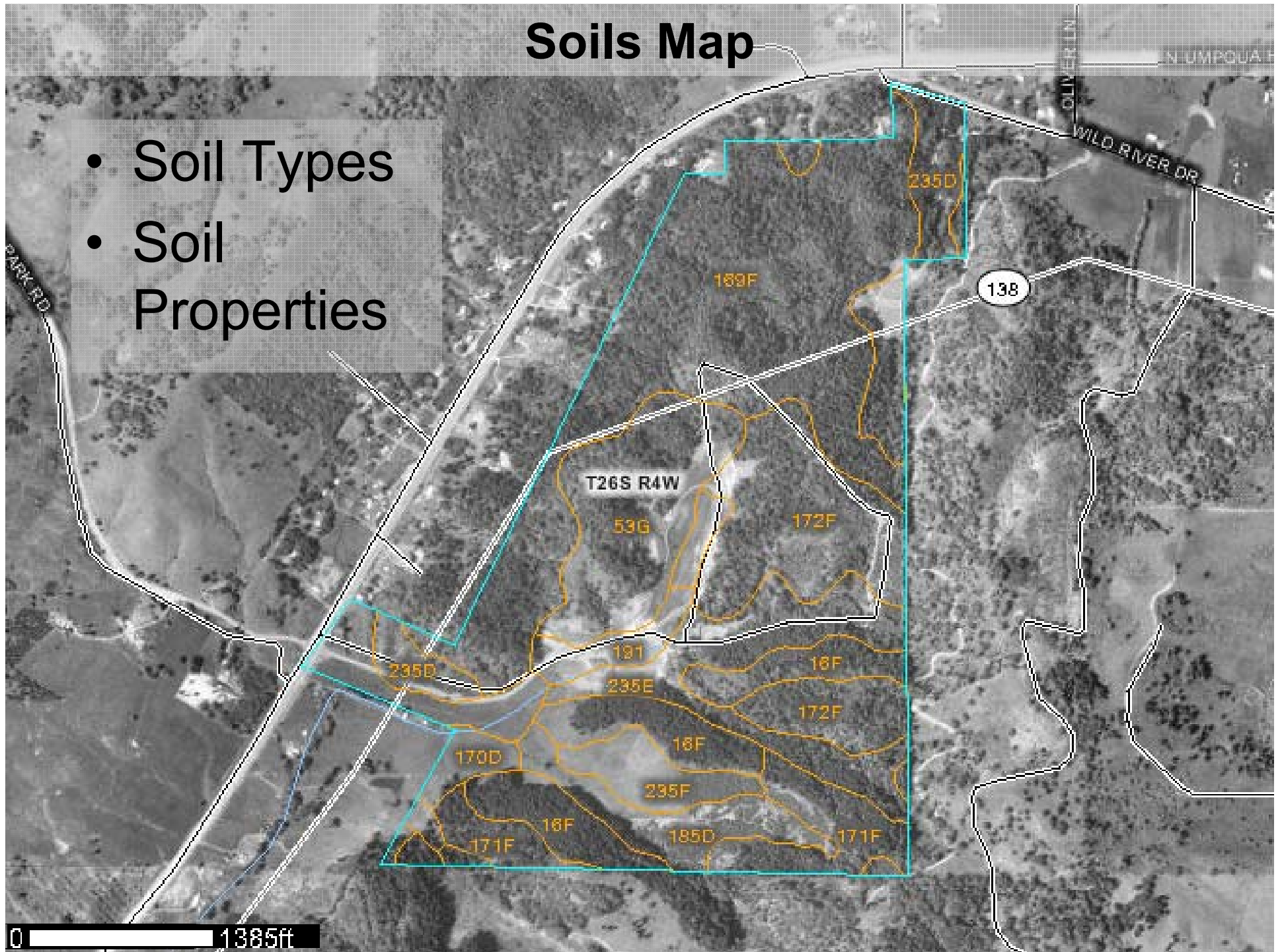
Aerial Photo

- Vegetation
- Roads
- Water
- Structures



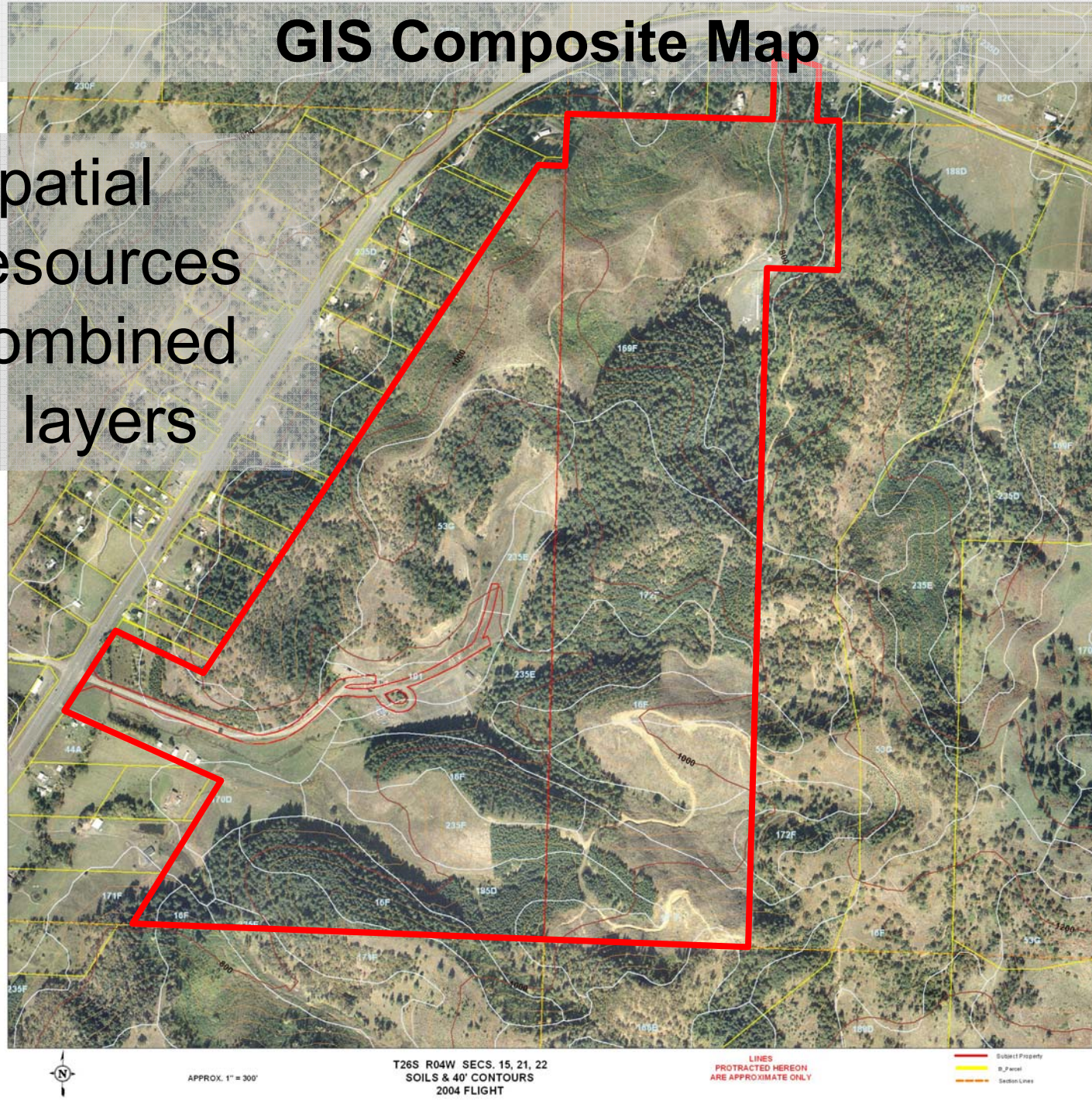
Soils Map

- Soil Types
- Soil Properties



GIS Composite Map

- Spatial resources combined in layers

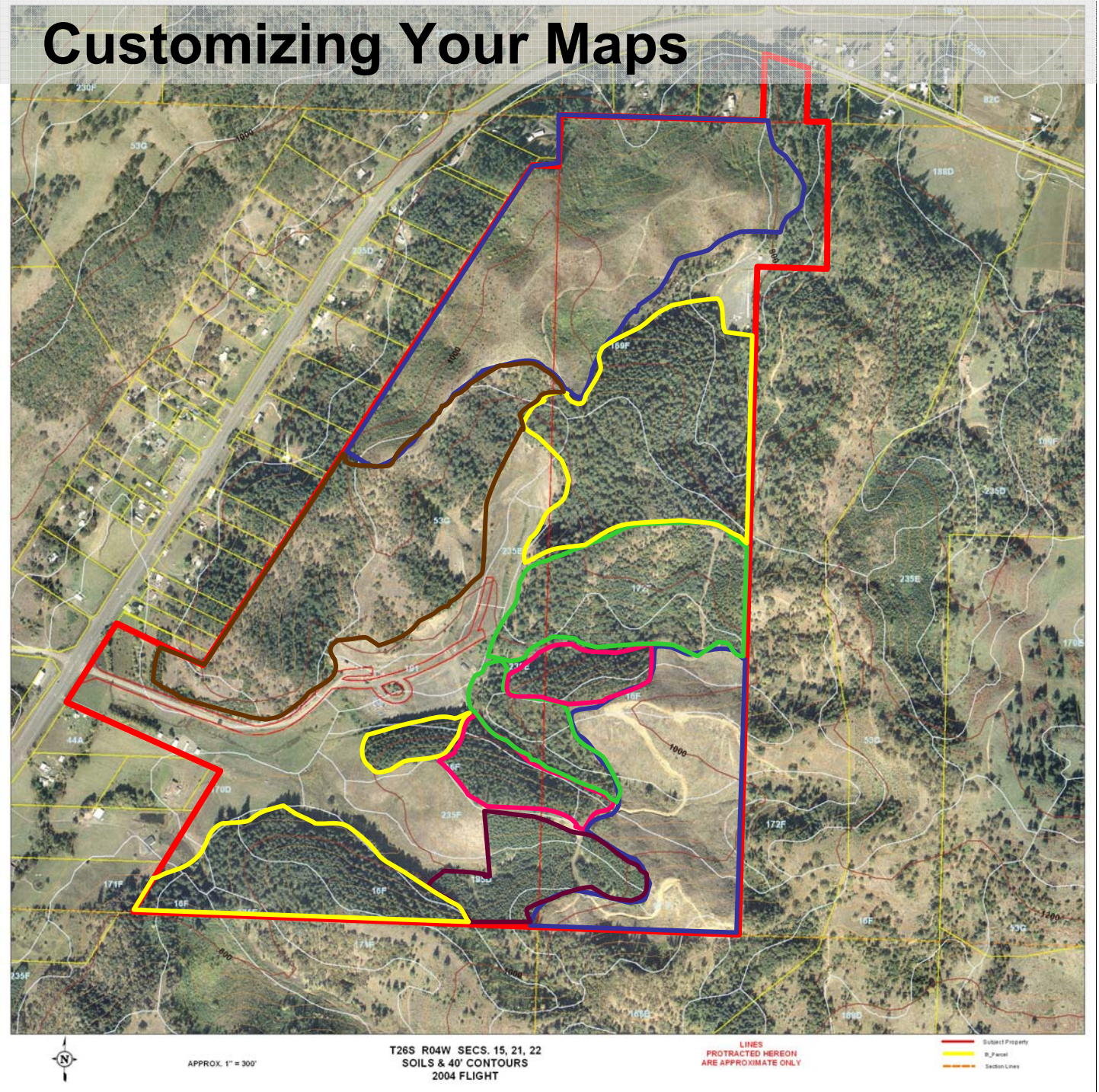


Customizing Your Maps

Map

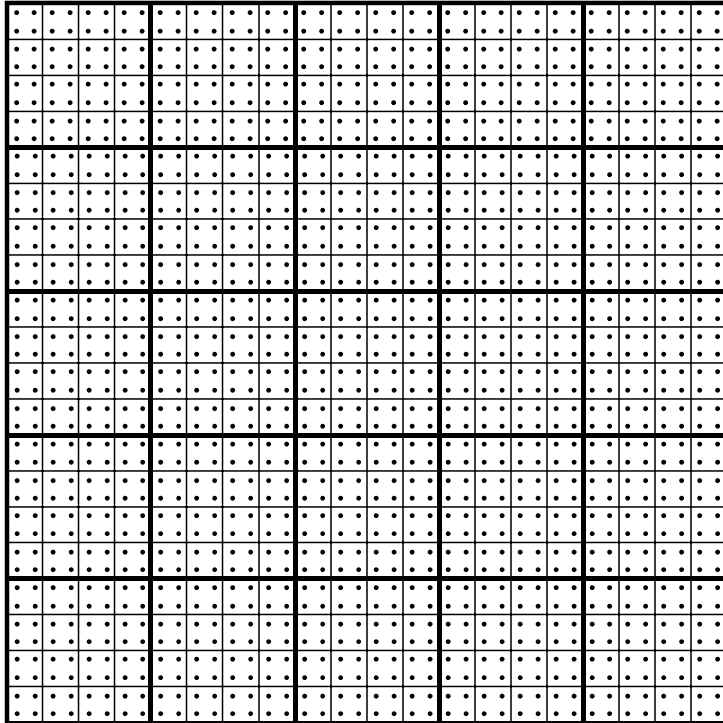
Options

- Vegetation Units
- Mgt Units
- Roads
- Water Features
- Riparian Mgt Areas
- ...



RMP English Area Grid

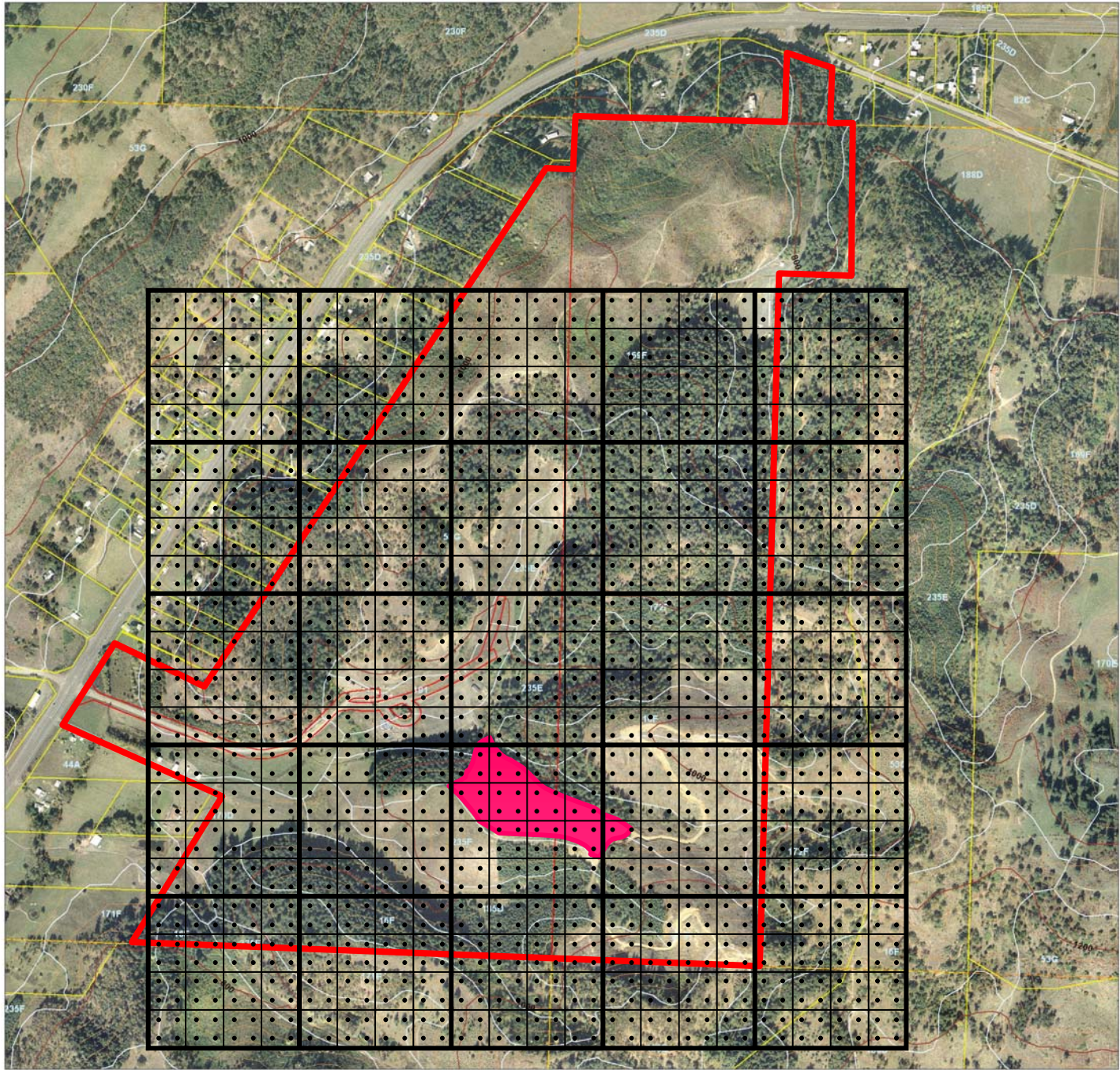
Use to determine surface area in acres. Place randomly over map or photo area, count number of dots, then multiply by the conversion factor (acres per dot) to obtain total acreage.



Conversion Table

| Scale | Ratio | Acres per Dot |
|------------|---------|---------------|
| 1" = 200' | 1:2400 | .01435 |
| 1" = 400' | 1:4800 | .0574 |
| 1" = 500' | 1:6000 | .0897 |
| 1" = 1000' | 1:12000 | .3587 |
| 1" = 2000' | 1:24000 | 1.435 |
| 1" = 5280' | 1:63360 | 10 |
| 1" = X' | 1:12X | $X^2/2787840$ |

Estimate Unit Acreage



APPROX. 1" = 300'

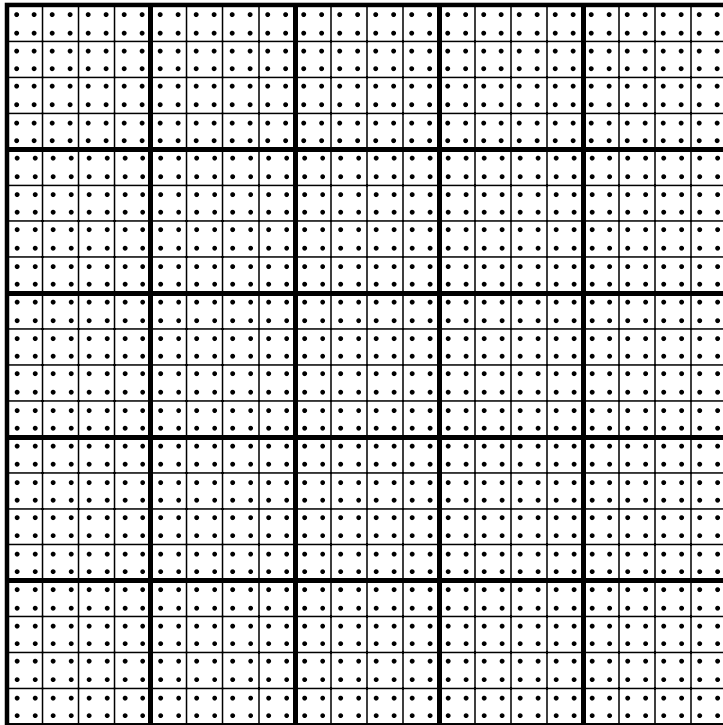
T26S R04W SECS. 15, 21, 22
 SOILS & 40' CONTOURS
 2004 FLIGHT

LINES
 PROTRACTED HEREON
 ARE APPROXIMATE ONLY

- Subject Property
- B.P. Parcel
- Section Lines

RMP English Area Grid

Use to determine surface area in acres. Place randomly over map or photo area, count number of dots, then multiply by the conversion factor (acres per dot) to obtain total acreage.



| Conversion Table | | |
|------------------|---------|-------------------------|
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| 1" = 5280' | 1:63360 | 10 |
| 1" = X' | 1:12X | X ² /2787840 |

Estimate Unit Acreage

$$1'' = X'$$

$$\frac{X^2}{2787840} = \frac{\text{acres}}{\text{grid dot}}$$

Example: 1" = 300'

$$X^2 = 90,000$$

$$90,000 / 2787840 = .0323 \text{ acres/dot}$$

Describing Resources



What's This?



What's This?



Tailor Description to Objectives

| | | | | | |
|-----------|--------------------------------------|----------------------------|---------------------|--------------------------------|--------------------|
| Objective | Basic Forest Mgt | Optimize Timber Growth | Timber & Non-timber | Timber Yield, Value | Research Questions |
| How | Observe, Doc | EC1190 | RMP | Cruise/ Appraisal | Research Design |
| Structure | Purposeful Wandering | Systematic w/ Fixed Plots | | Systematic, Fixed or Var Plots | Random, Stratified |
| Who | You | You, w/ Extension Training | | Pro Forester | Research Tech |
| Plan Type | Tree Farm ————— Stewardship ————— | | | Timber Sale Property Sale | Research Study |

EC1190: A simple technique for **timber** inventory

Stand Volume and Growth: Getting the Numbers

S. Bowers, N. Coleman, R.A. Fletcher

Contents

| | |
|--|-------|
| Key numbers that you'll generate ... | 2 |
| Measuring stand volume and growth | 3 |
| Calculating stand volume and growth | 8 |
| Using the numbers | 10 |
| Where to go from here | 13 |
| For further reading | 14 |
| Appendices A1–A6 (Tariff access tables) | 15–20 |
| Appendices B1–B3 (Tree volume tables) | 21–23 |
| Appendix C (Tree Tally Card) | 24 |
| Appendix D (Volume Computation Form) ... | 25 |

The procedures outlined in this publication show you how to estimate standing volume and annual growth of timber *stands*—areas that are uniform in age, stand characteristics, and species. Estimates of volume and growth are helpful in planning when to harvest or how much to remove in a thinning operation. These estimates also can assist you with financial analysis and the tax implications of a timber harvest.

Don't confuse the simplified procedure that we describe for collecting and analyzing tree volumes with the more complex and precise techniques that professional foresters use to estimate timber values for sales, land appraisals, or legal purposes. Our system allows you to get reasonably accurate gross volumes of timber but does not address net volumes, log grades, or monetary values.

Volume and growth numbers generated by any tree measuring system are estimates. You usually can't afford the time and money to measure all your trees, so you'll measure a few sample trees. You'll use the sample to obtain an index called a *tariff number*, which will be used to compute individual tree and stand volumes.

Of European origin, the tariff system was adapted for Pacific Northwest use by the State of Washington. The tariff system shows the gross volume of trees based on species, tree diameter, and total height. It's one of several types of tree-volume tables. The tree-volume tables supported by this publication are for Douglas-fir, grand fir, western hemlock, ponderosa pine, western redcedar, and red alder.

If you have a question about the appropriateness of the tariff system for management decisions regarding your timber stand—or if you need help with a complex situation—contact the Extension forestry agent who serves your county, or your state service forester from the Oregon Department of Forestry, or a consulting forester.

Steve Bowers, Extension forestry agent, Lane County, Oregon State University; Nate Coleman, OSU Extension Master Woodland Manager volunteer, Lane County; Richard A. Fletcher, Extension forestry agent, Linn and Benton counties, Oregon State University.





Business & Legal Considerations



**Resource Management Planning
Business & Legal Considerations Checklist**

Boundaries and Easement Tasks:

- ___ *Locate copies of existing surveys/ property descriptions.*
- ___ *Locate property corners and witness trees, and refresh existing markings.*
- ___ *Locate property boundaries and refresh existing markings.*
- ___ *If necessary, hire professional surveyor to do property survey.*
- ___ *Locate copies of all existing easements for property and record below.*
- ___ *Plan and execute needed easements to implement RMP.*

*Property Survey Information: (List all surveys done and where copies are located)

*Existing Easements (List all easements by purpose, location, parties involved, date executed and where copy is stored):

*Needed Easements (List all needed easements including purpose, location, parties involved and when they will be executed):

* Resources (List names and contact information for surveyors and other professionals contacted):





After you have...

- Developed your maps
- Inventoried your resources
- Summarized your inventory data

**...it's time to identify
implications, actions, and constraints**



Implications

Problems

- Noxious weeds
- 100% crown cover
- Small crown ratios
- Extensive deer browse
- Slumping road
- Blocked fish passage
- Fence down

Opportunities

- Stand ready to thin
- Stand ready to harvest
- Hunting area identified
- Good spring located
- Edible mushrooms
- Floral greenery

RMP



Identifying Implications

- Work from your unit descriptions and plot notes
- Make a list for each unit
- Get help if needed





Management Actions



What you need to do to fix a problem or take advantage of an opportunity

- Thin a stand
- Conduct a salvage/sanitation harvest
- Harvest mushrooms or floral greenery
- Repair/improve a road segment
- Replace a stream crossing culvert
- Control unwanted vegetation



Identifying Actions

- Make a list for each unit
- Consider your options
- Get help if needed





Constraints

Things that will limit your ability to take action

- Lack of money
- Lack of time
- Lack of expertise
- Poor health
- Laws/rules





Addressing Constraints

- Make a list for each action
- Decide which constraints are unchangeable – **discard those action items**
- Identify which constraints are changeable – **create new action items to address the constraints**



Prioritize

- Identify the most critical action items for each stand/unit
- Create a prioritized action list for the property as a whole





Develop a Timeline

- Determine when each item should be completed.

| Priority | Action Item | Action Date |
|----------|---------------------|-------------|
| 1 | Repair main Road | Nov 2002 |
| 2 | Control Scotchbroom | May 2003 |
| 3 | Thin Unit B | Sept 2003 |
| 4 | Harvest Unit C | Sept 2003 |



Assign Responsibility

| Priority | Action Item | Action Date | Work to be done by... |
|----------|---------------------|-------------|--|
| 1 | Repair main Road | Nov 2002 | Self – hand tools |
| 2 | Control Scotchbroom | May 2003 | Self – borrow backpack sprayer from Service Forester |
| 3 | Thin Unit B | Sept 2003 | Contract w/ logger |
| 4 | Harvest Unit C | Sept 2003 | Contract w/ logger |



Action Plan



- Your management plan should include a detailed action plan that will help you achieve your objectives.

