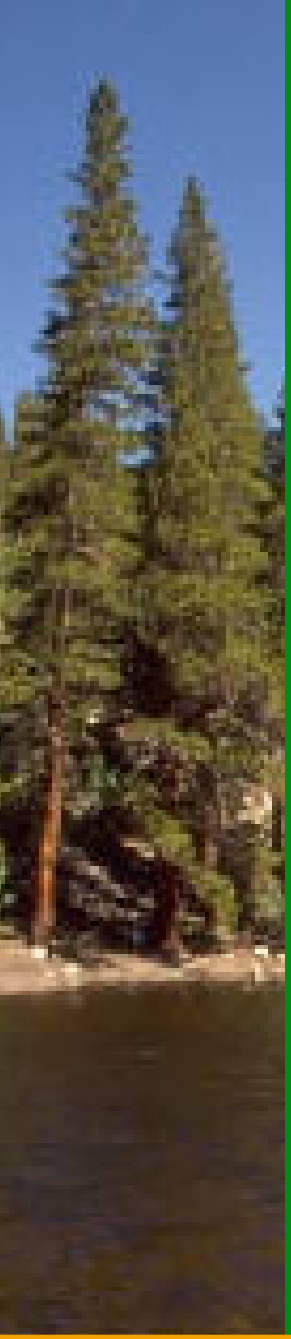
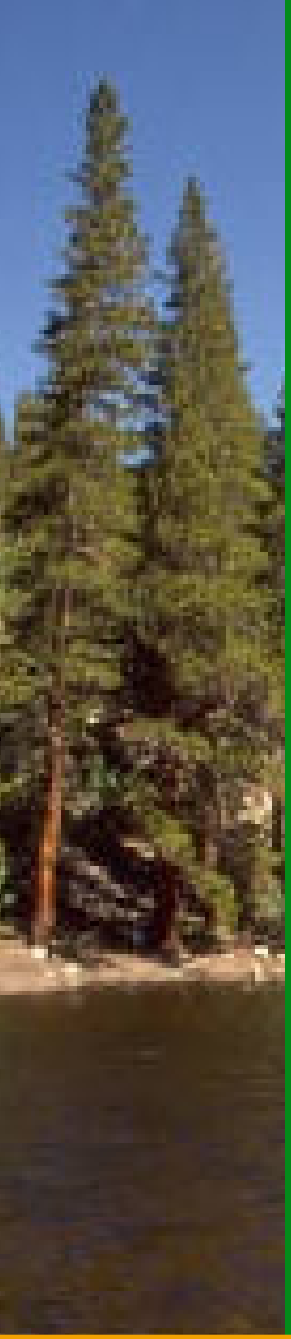


VRI from a User's Perspective

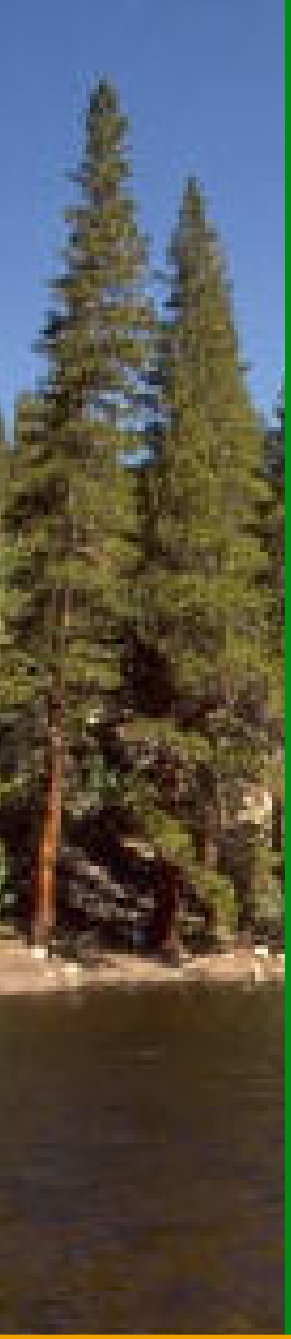
David M. Carson, R.P.F.



Today's Objectives

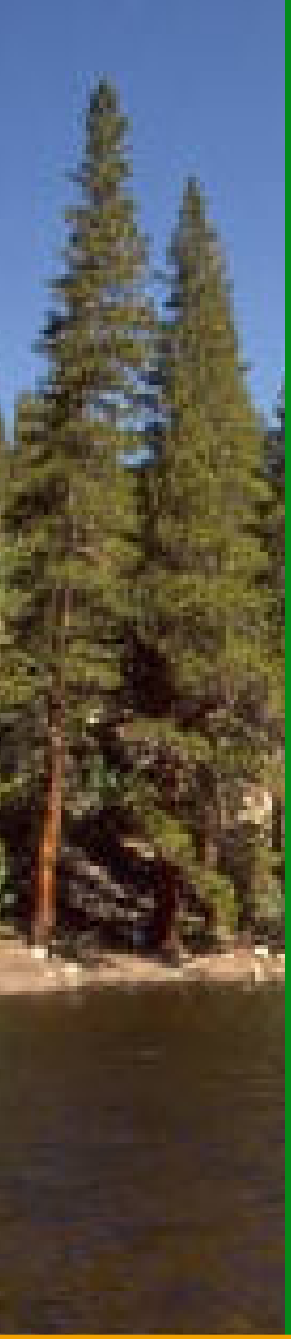
- Feedback on guidebook
- Define the place of VRI in management
- Identify strengths and weaknesses of the VRI

- For my presentation:
  - Two way communication – user to user



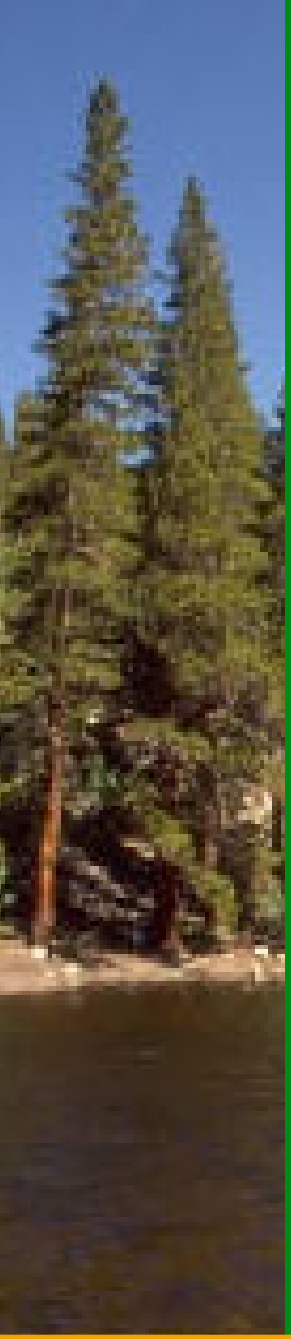
User Needs

- Understand the data
  - Strengths
  - Weaknesses
- Identify key attributes
- Use them appropriately
- Leverage them



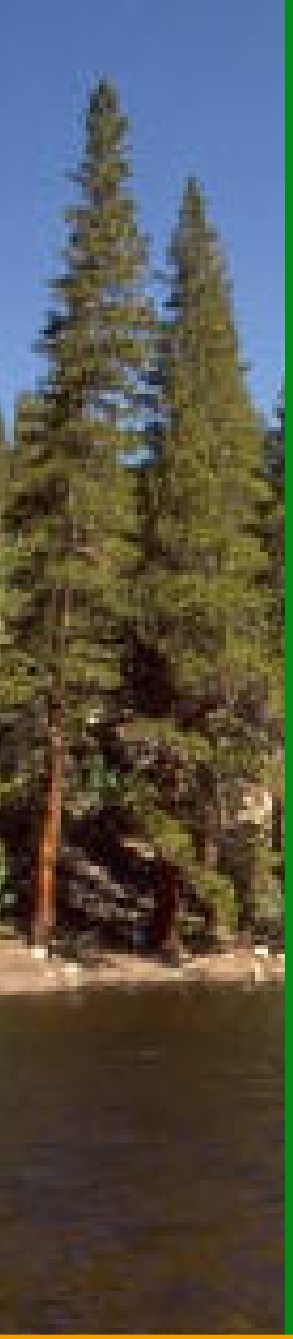
Uses of VRI

- Timber supply review
- Strategic planning
  - Land use
  - Risk assessments
  - Habitat modelling
- Operational planning
- Valuation
- Monitoring for sustainability



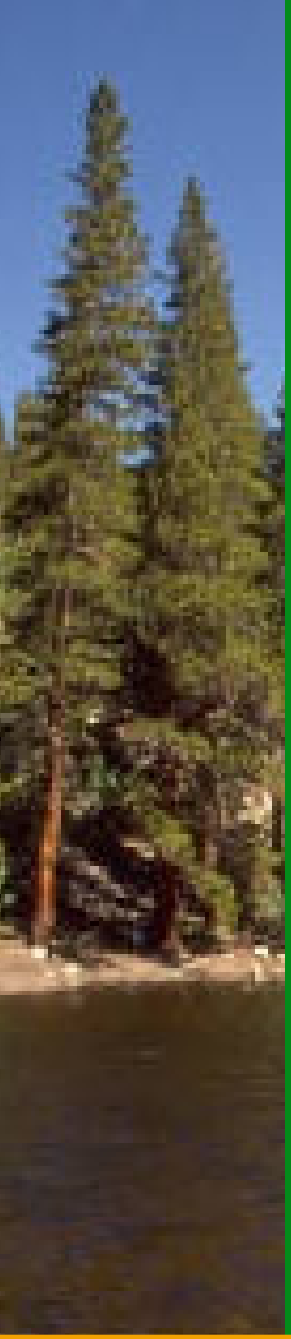
Timber Supply Review

- Uses spatial and tabular VRI data
- VRI:
  - Conditions at a particular time
  - Input to modelling



Timber Supply Review

- Land classification (netdown)
- Land zonation for management
- Stand condition for decision making
  - Species for merchantability
  - Age for retention or harvest
  - Height for green-up
- Initial volume estimates
- Inputs to yield estimates

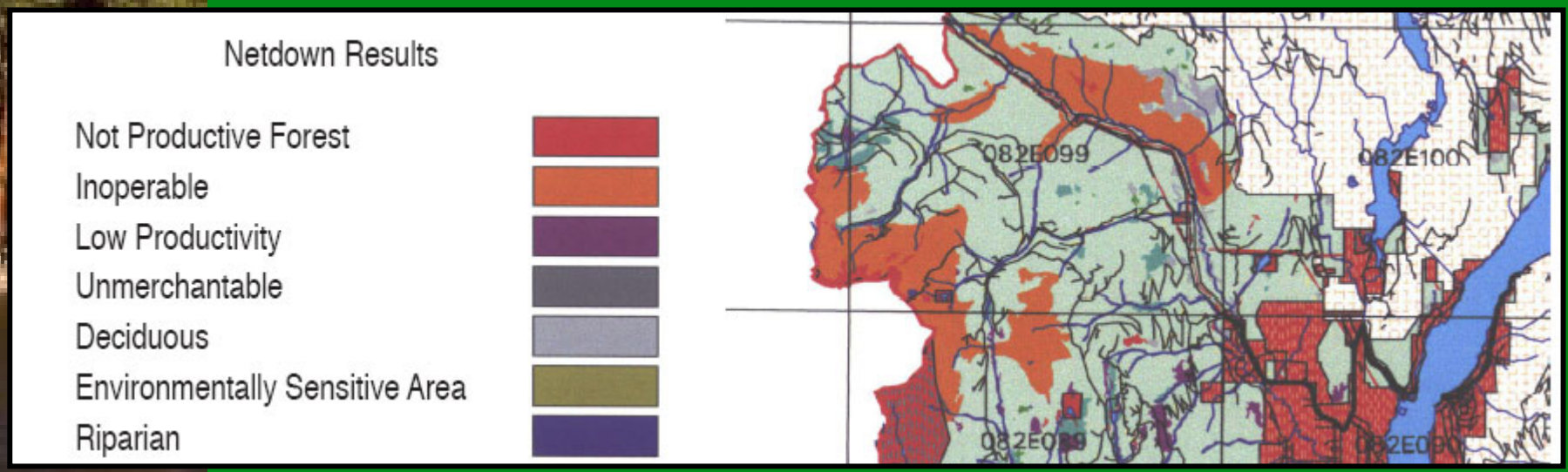


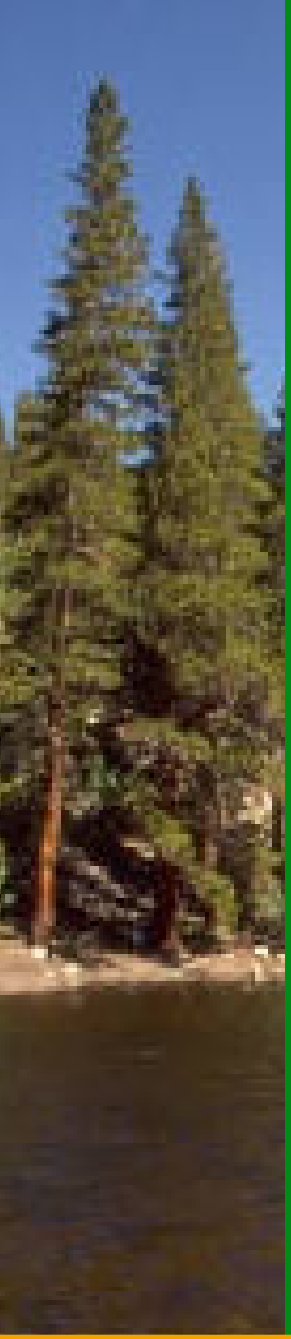
Land Classification

- Case study – Arrow TSA
- VRI philosophy is objective and non-cultural
- Lacks traditional subjective attributes such as “non-productive forest”
- On Arrow TSA, required re-definition of timber harvesting land base

Land Classification

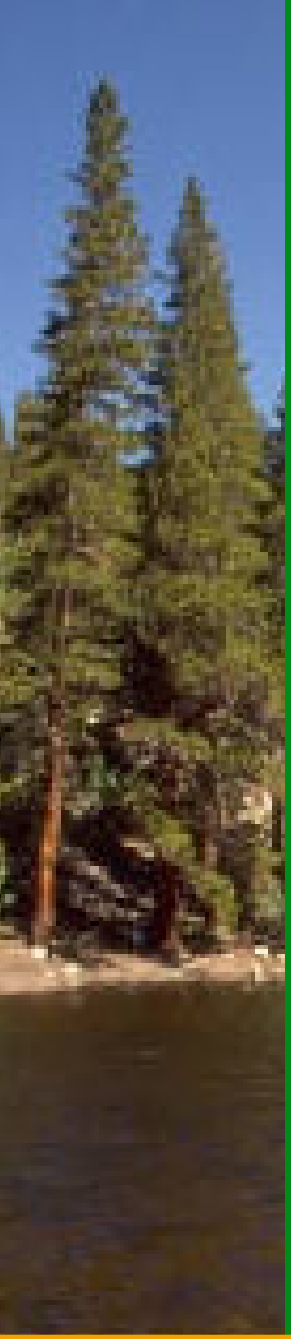
- “Non-productive forest” -> “Vegetated treed” and “Alpine” and “Inoperable”





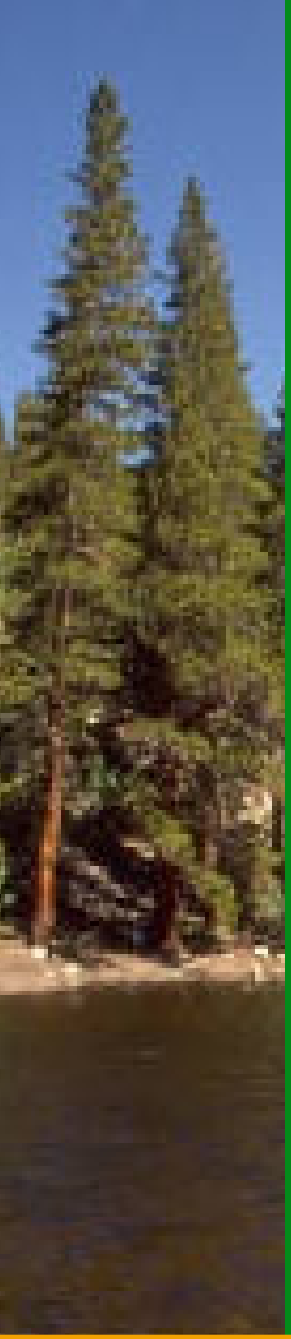
Appropriate Attributes

- Site index
  - Age and height?
  - SIBEC?
  - Growth intercept?
- Age and height
  - Reference?
  - Projected?
  - Adjusted?
  - Adjusted and projected?



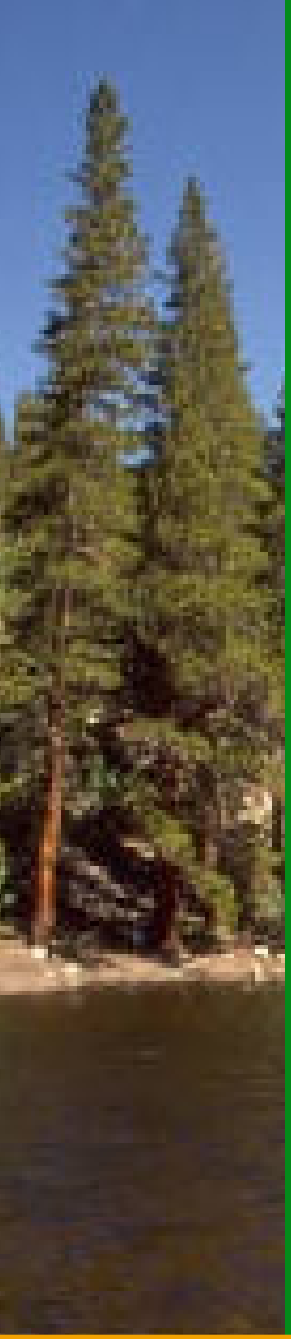
Strategic Planning

- Land use and zonation
- Harvest planning
- Risk assessments
- Habitat modelling
- Watershed assessments



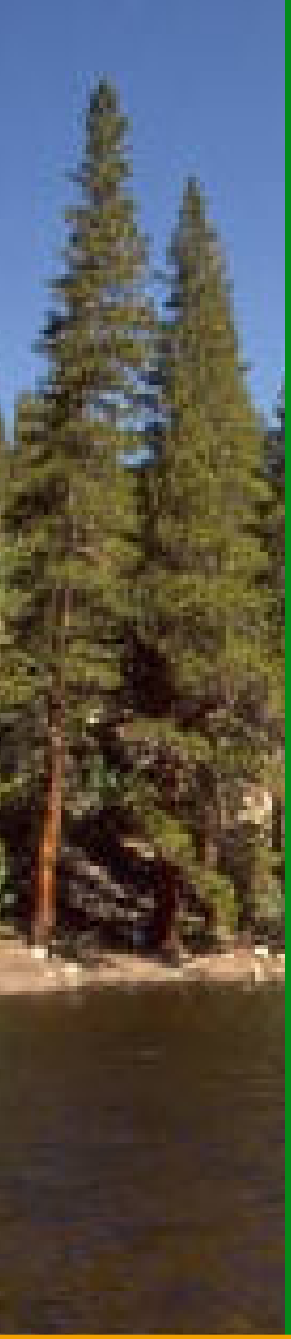
Integration of Ecology

- Case study – Arrow TSA
- Both VRI and PEM (or TEM) are foundation inventories
- Data overlay results in an un-necessarily large and fragmented analysis data set
- Merged the two using only VRI linework but maintaining the integrity of the PEM



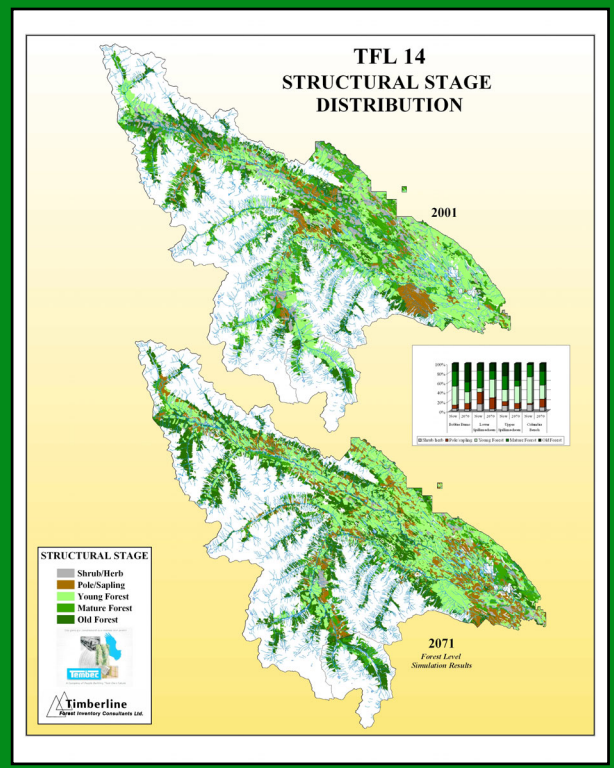
Integration of Ecology

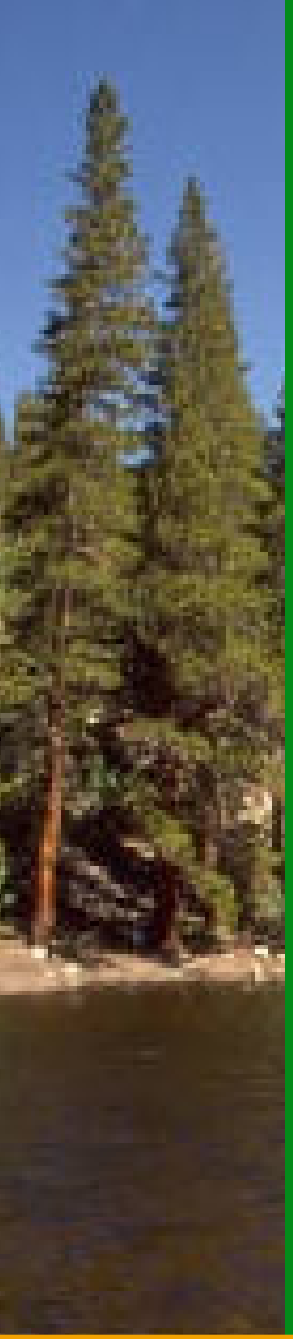
- VRI linework
- PEM attributes merged into VRI polygon
- Ecological units proportional in polygon



Sustainable Forest Management

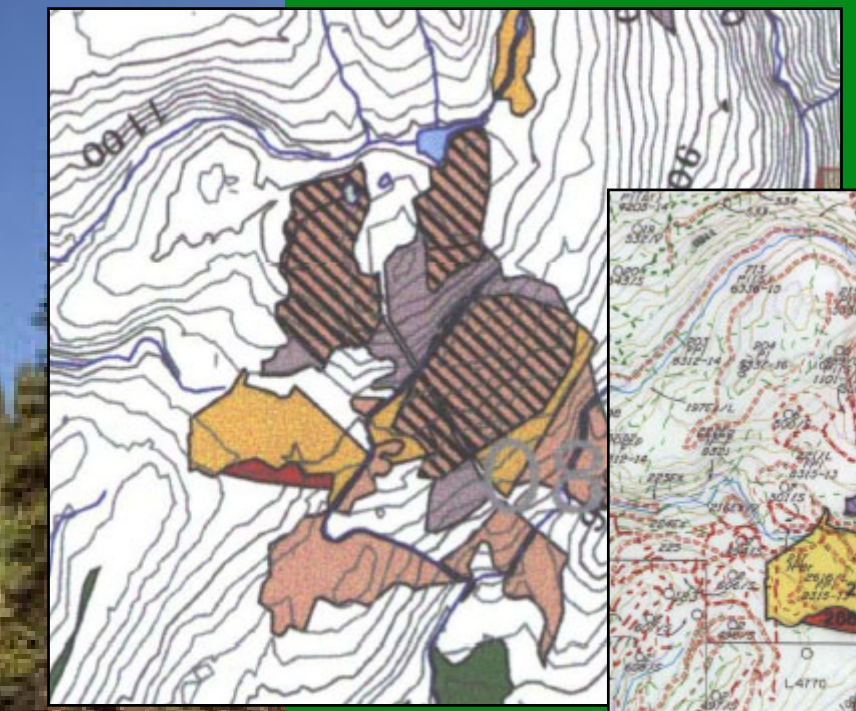
- Identifies and monitors all key resource values
- VRI:
  - Current status
  - Habitat modelling
  - Forecasting future conditions



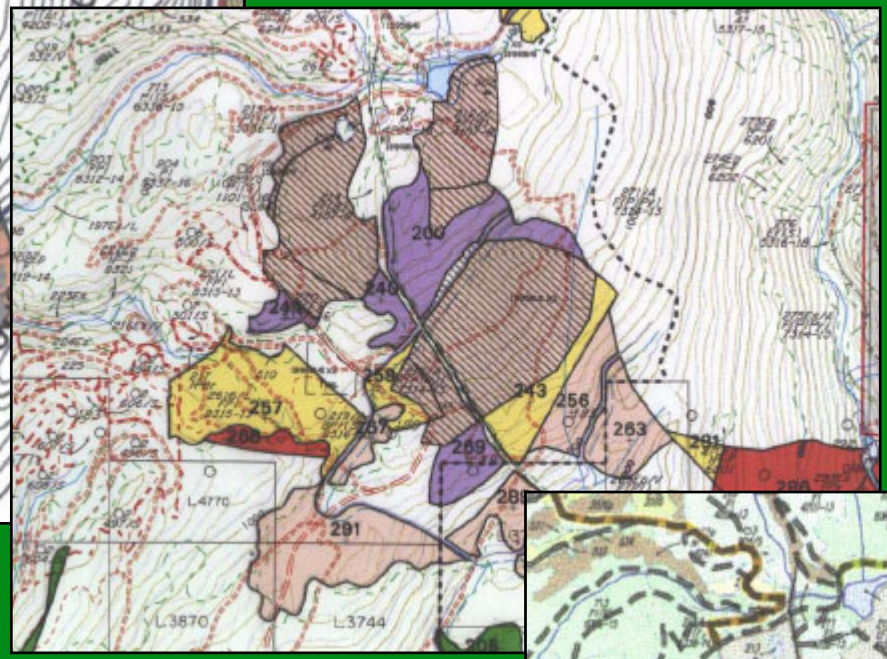


Linking Strategic and Operational

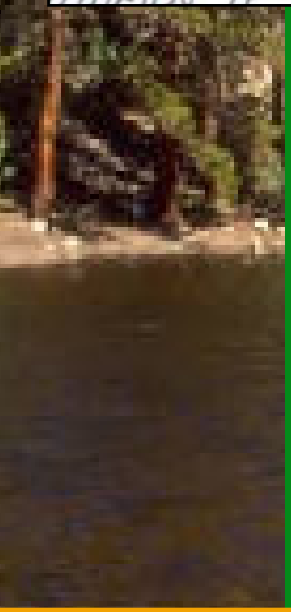
- Case study – Westbank Community Forest
- Spatial timber supply
- Twenty-year spatial feasibility report
- Nominated blocks evaluated for FDP
- Know the limitations of the data



20-year plan map

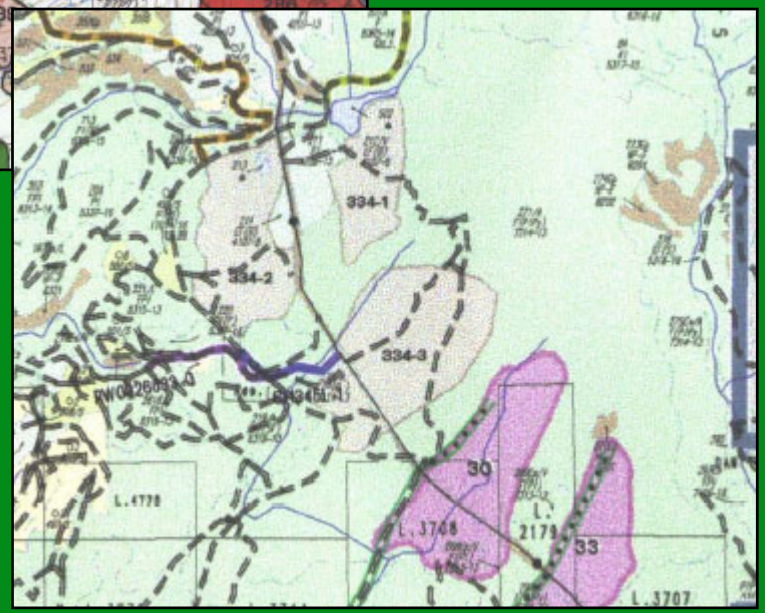


Reconnaissance map

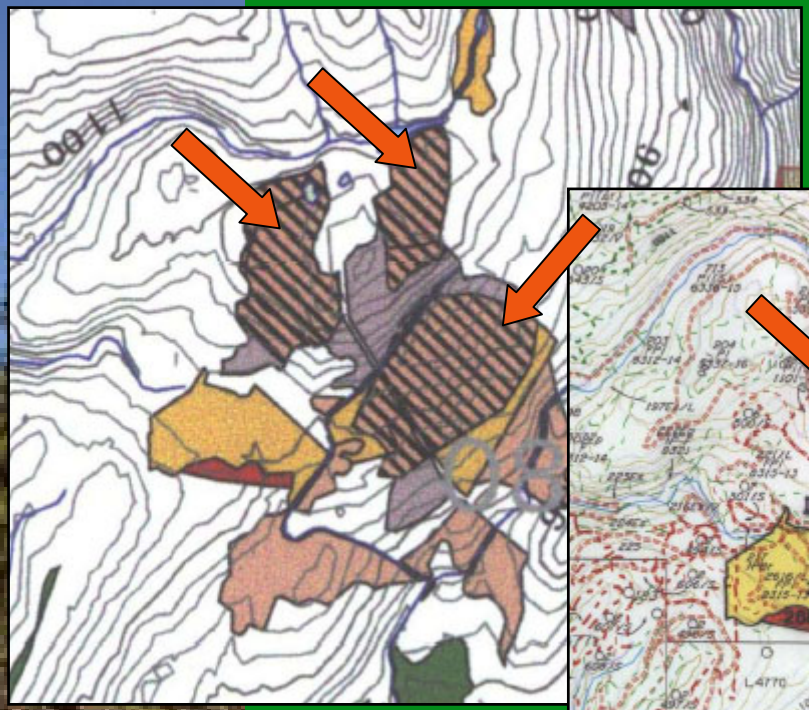


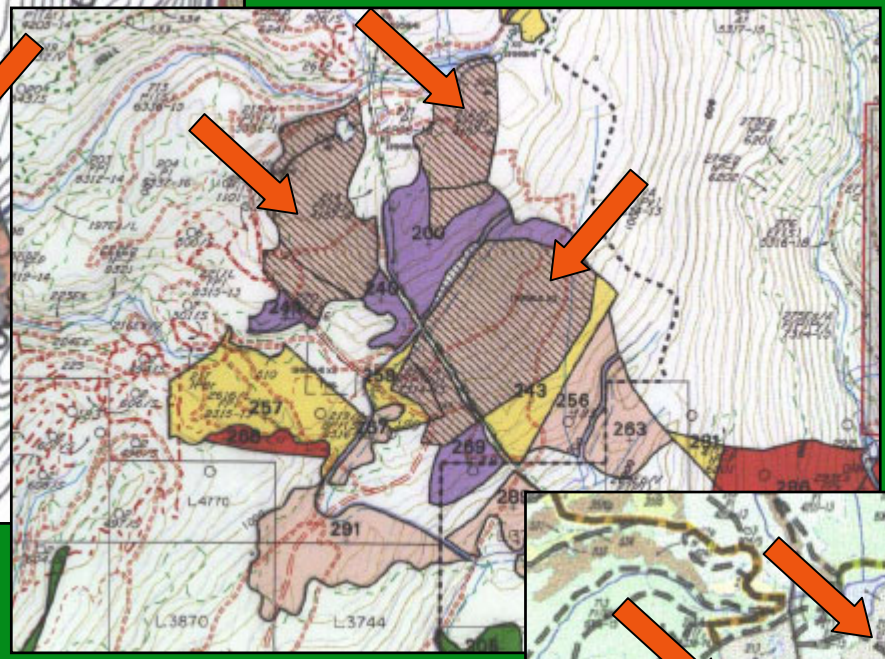
Westbank Community Forest

Development plan map



20-year plan map

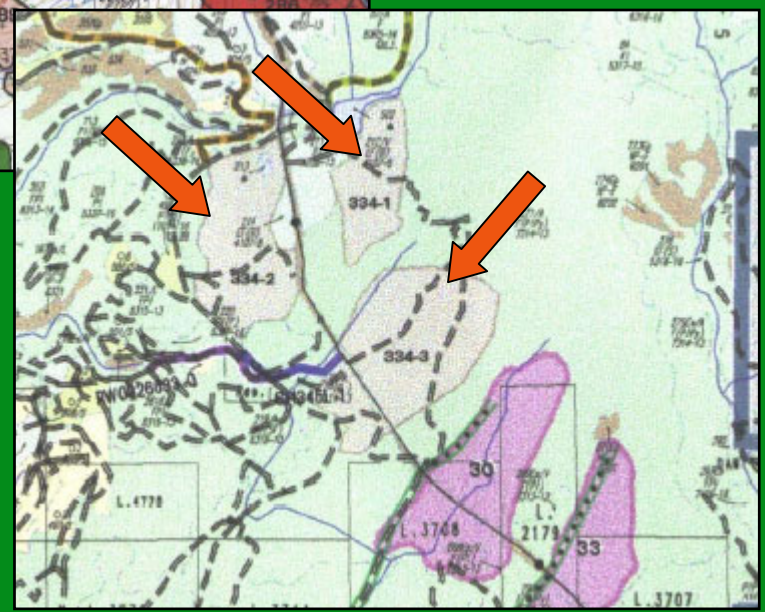


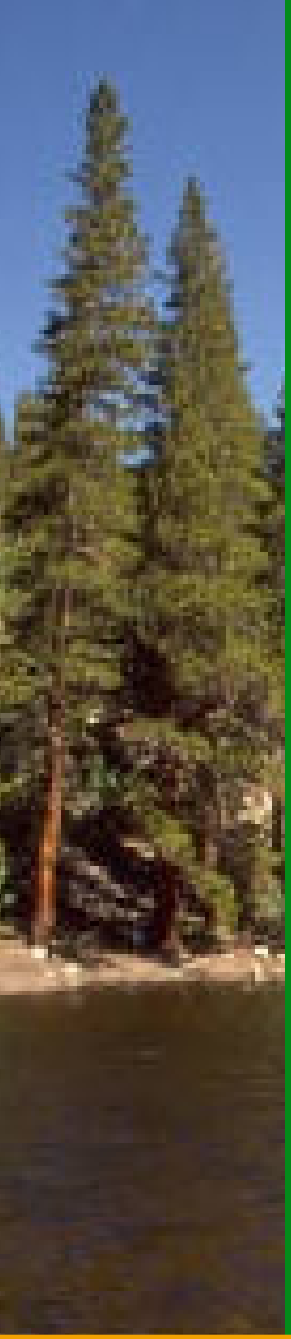


Reconnaissance map

Westbank Community Forest

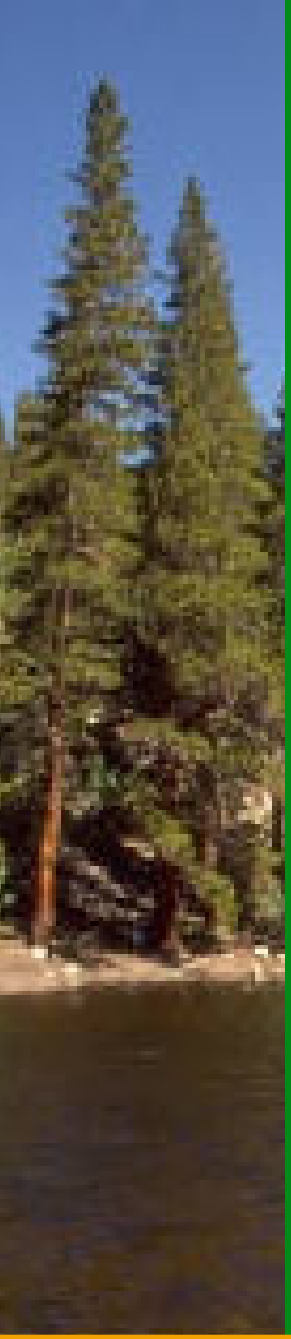
Development plan map





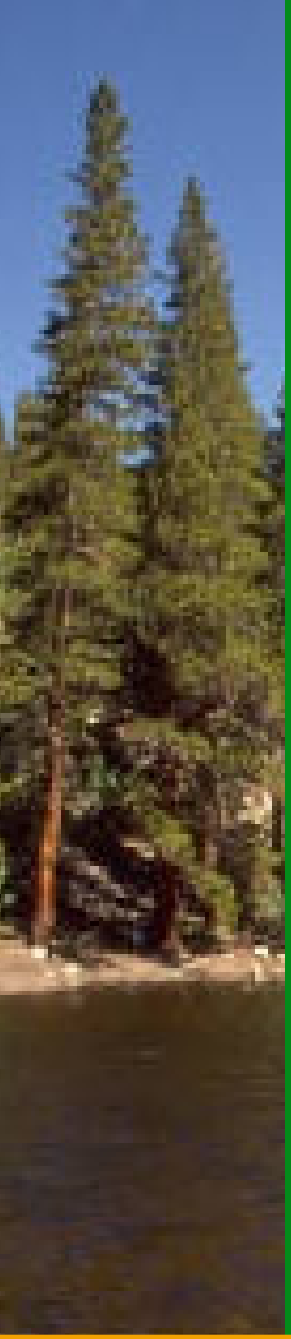
Limitations of the Data

- Case study – Westbank Community Forest
- Spatial location
- Spatial resolution
- Polygon attribute accuracy
- Scale of operability mapping



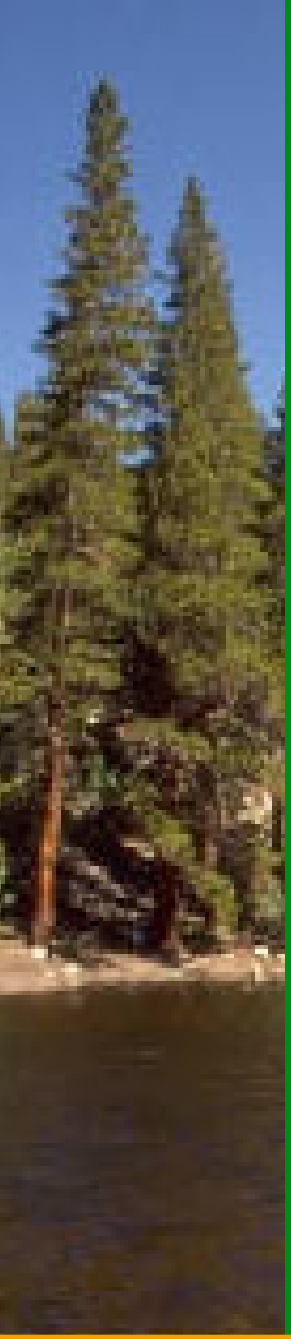
Predictive Mapping

- Use expert knowledge to extract more information from conventional inventories
- Based on understanding relationships between available attributes and the resource of interest
- Application of modelling tools and field verification



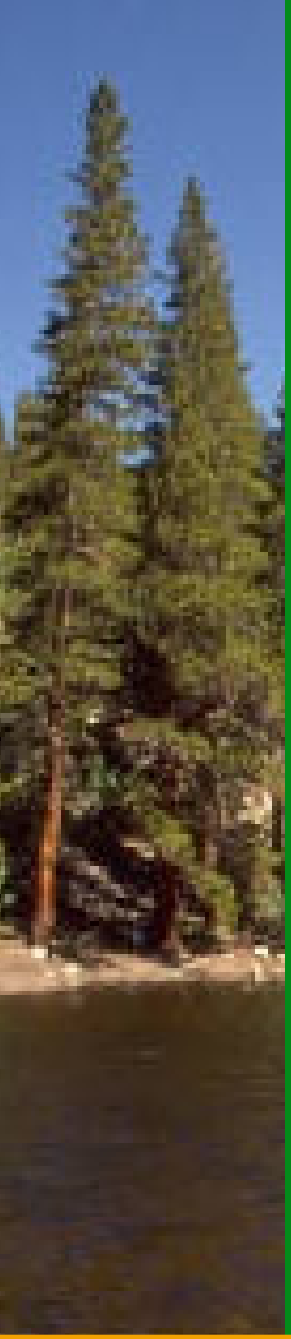
Predicting Ecosystems

- VRI attributes:
  - Land cover
  - Soil moisture
  - Soil nutrients
  - Tree species composition
  - Others



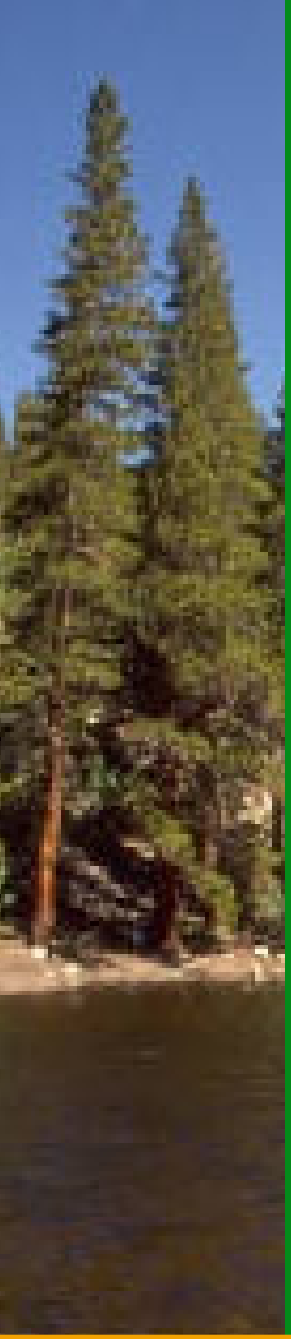
Habitat Mapping

- Habitat potential mapping
- Stand structure
- Ecological attributes
  - *E.g.*: soil moisture
- Landscape context



Botanical Forest Products

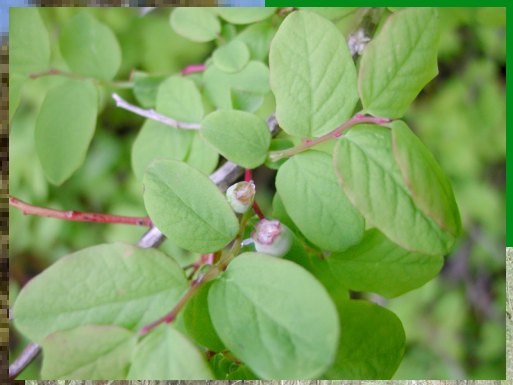
- Non-timber forest products inventory
  - Directly inferred, or
  - Modelled using VRI attributes



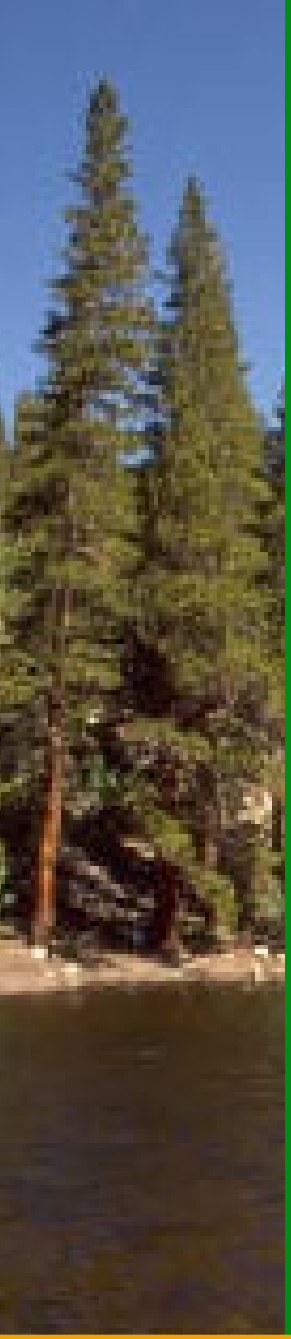
Non-Timber Values Mapping

- Many non-timber related values can be modelled and mapped using data from VRI
  - Monumental cedar
  - Medicinal plants
  - Berry picking
  - High value mushroom stands

Example – Berry Picking



- Good berry sites related to:
  - Site series
  - Crown closure
  - Stand age
  - Slope and aspect
- Generate models
- Map best sites



Thank You

David M. Carson, R.P.F.