



Unleashing the Potential of Stakeholder Participation

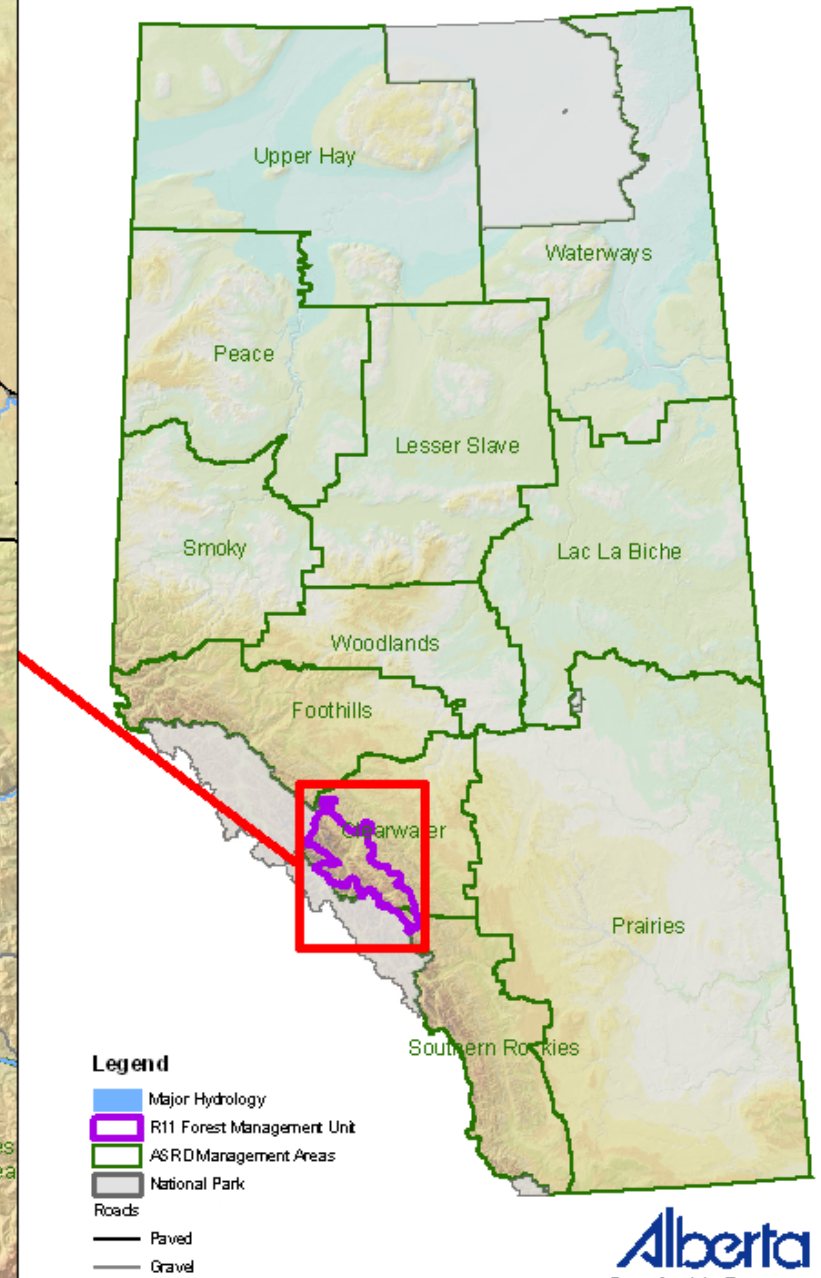
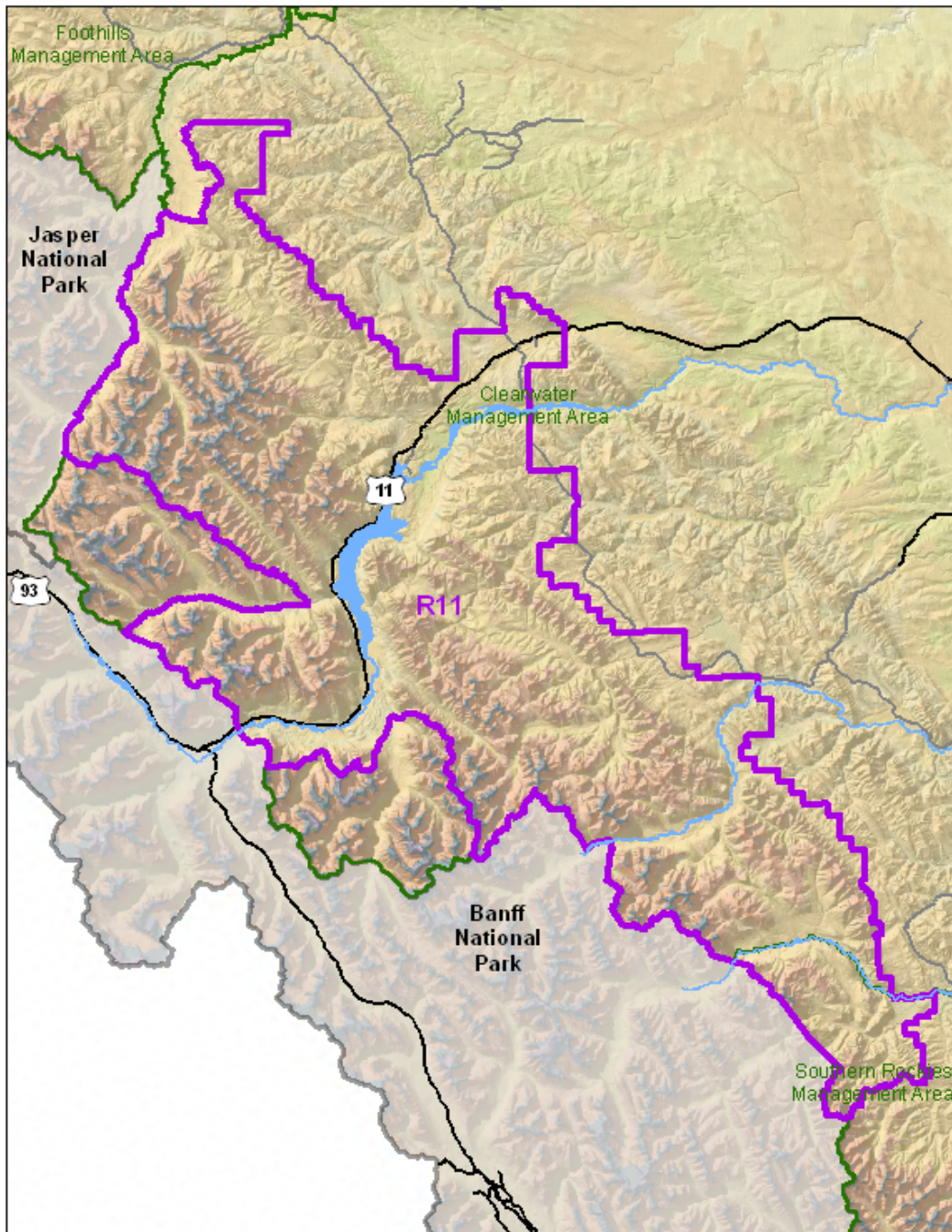
R11 Forest Management Plan

Kevin Gagne RPF

Senior Forester, Clearwater Area

Alberta Environment and Sustainable Resource Development

For Wildland Fire Canada Conference 2012



Legend

- Major Hydrology
- R11 Forest Management Unit
- ASRD Management Areas
- National Park
- Roads
 - Paved
 - Gravel

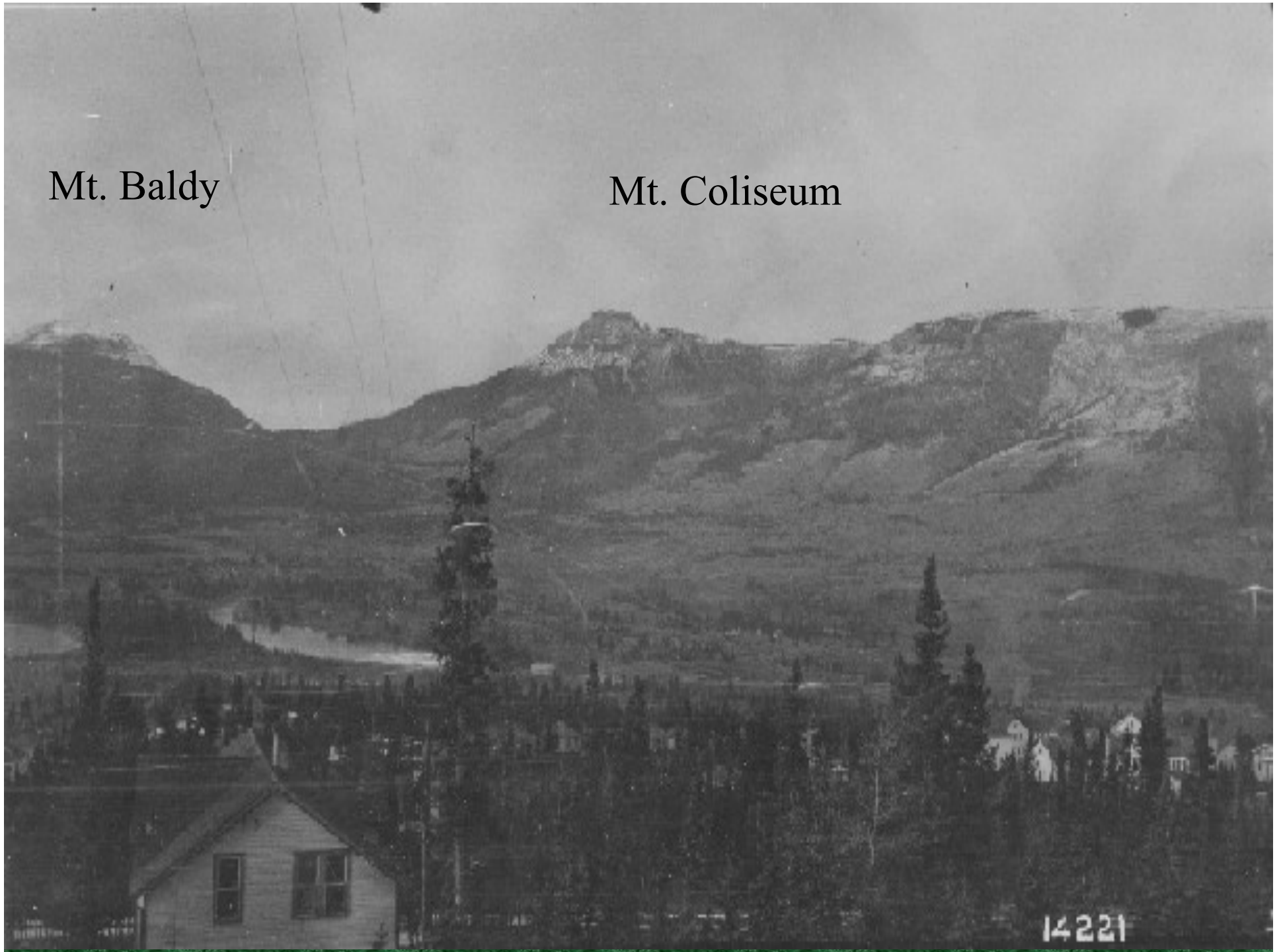
1905

The Problem

1998

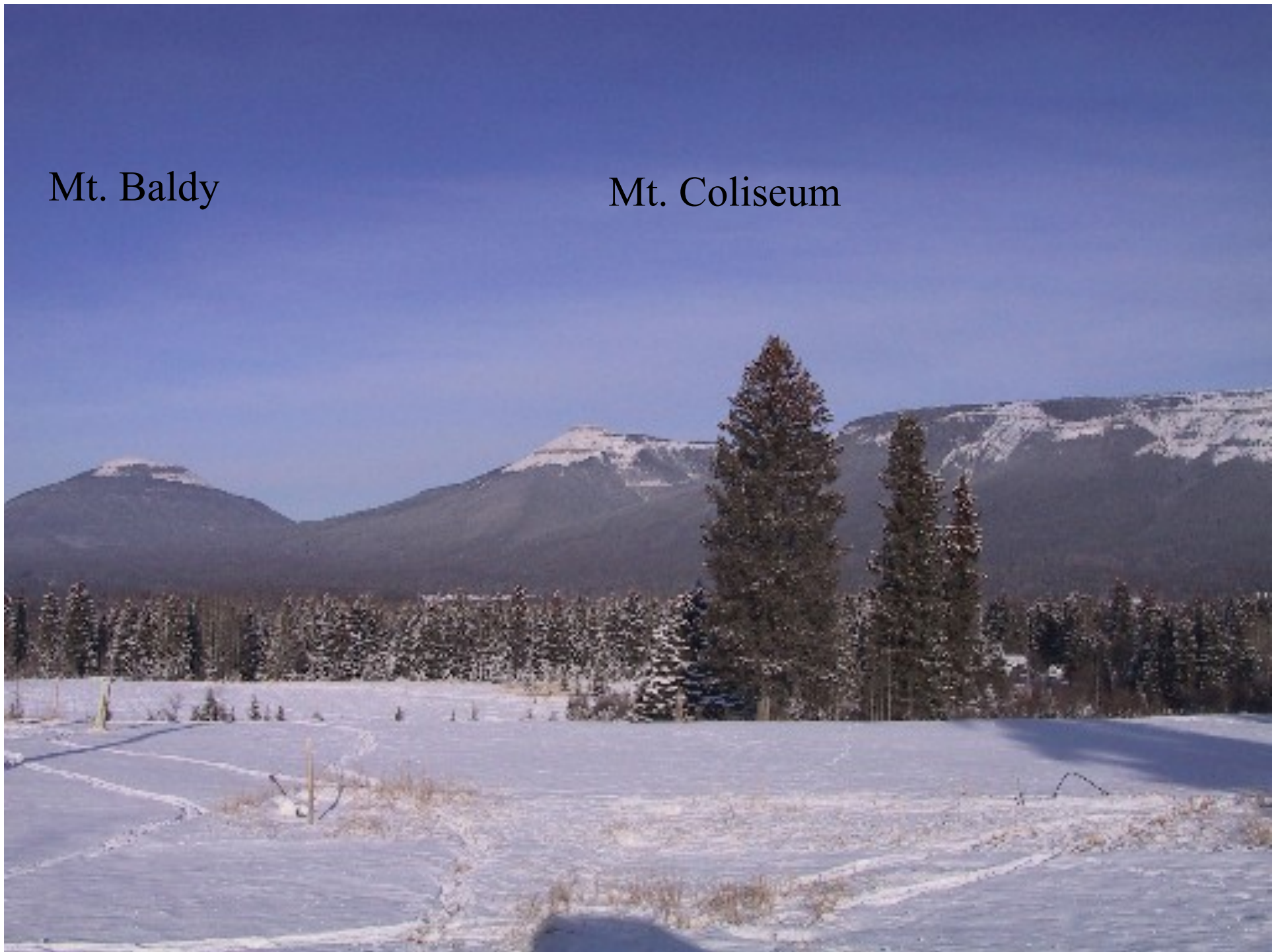
Mt. Baldy

Mt. Coliseum

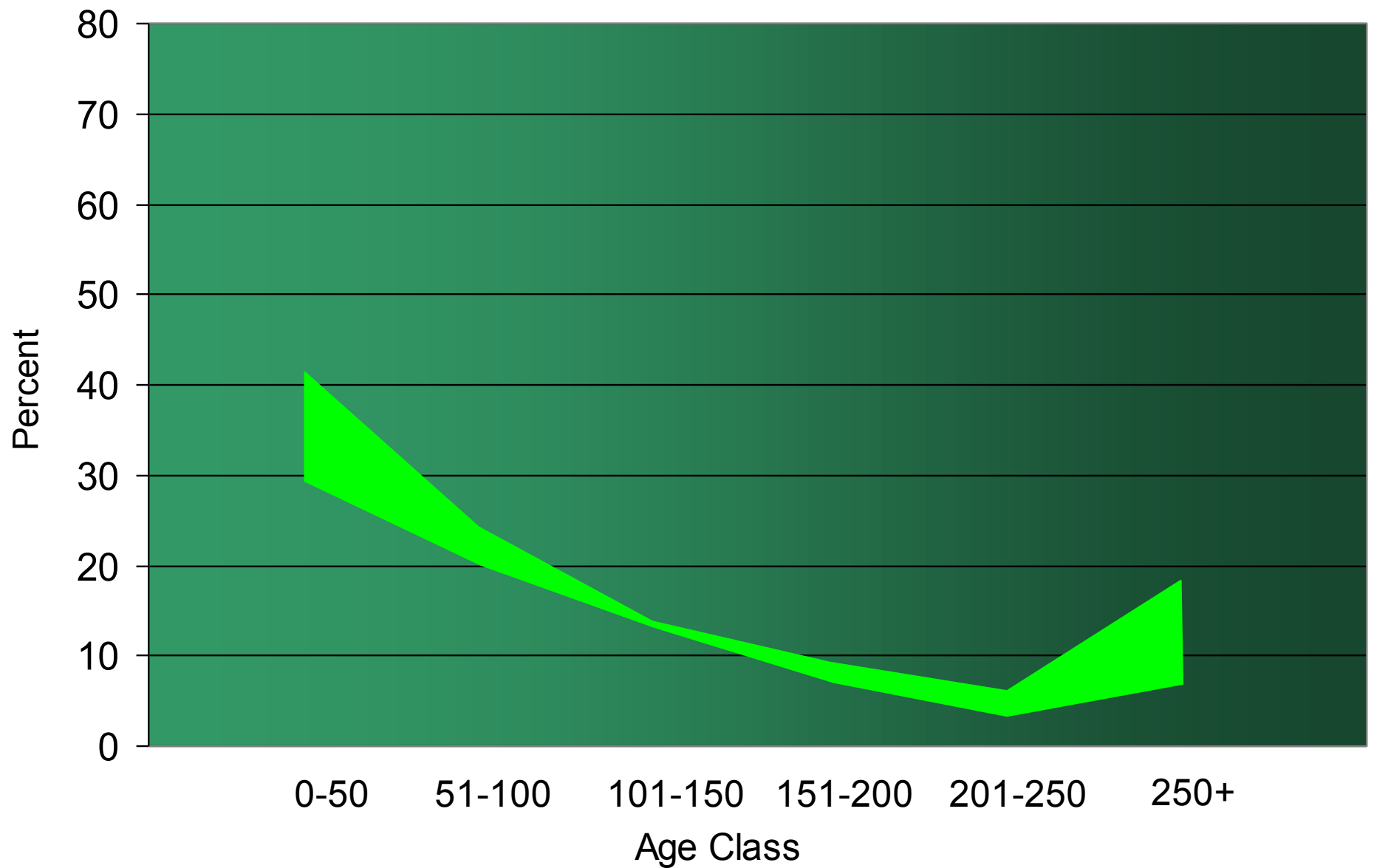


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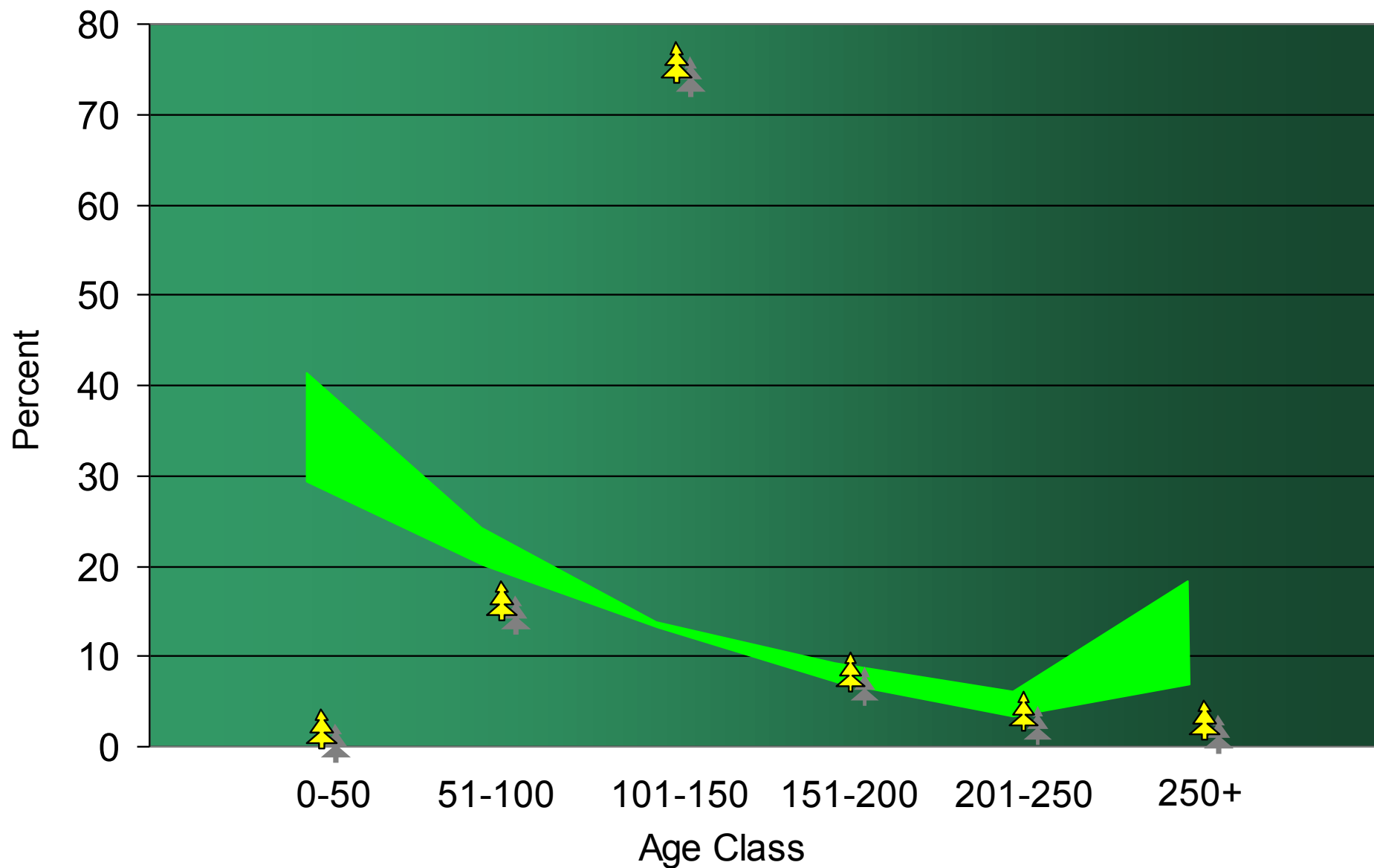


Natural Range of Age Classes in the Montane



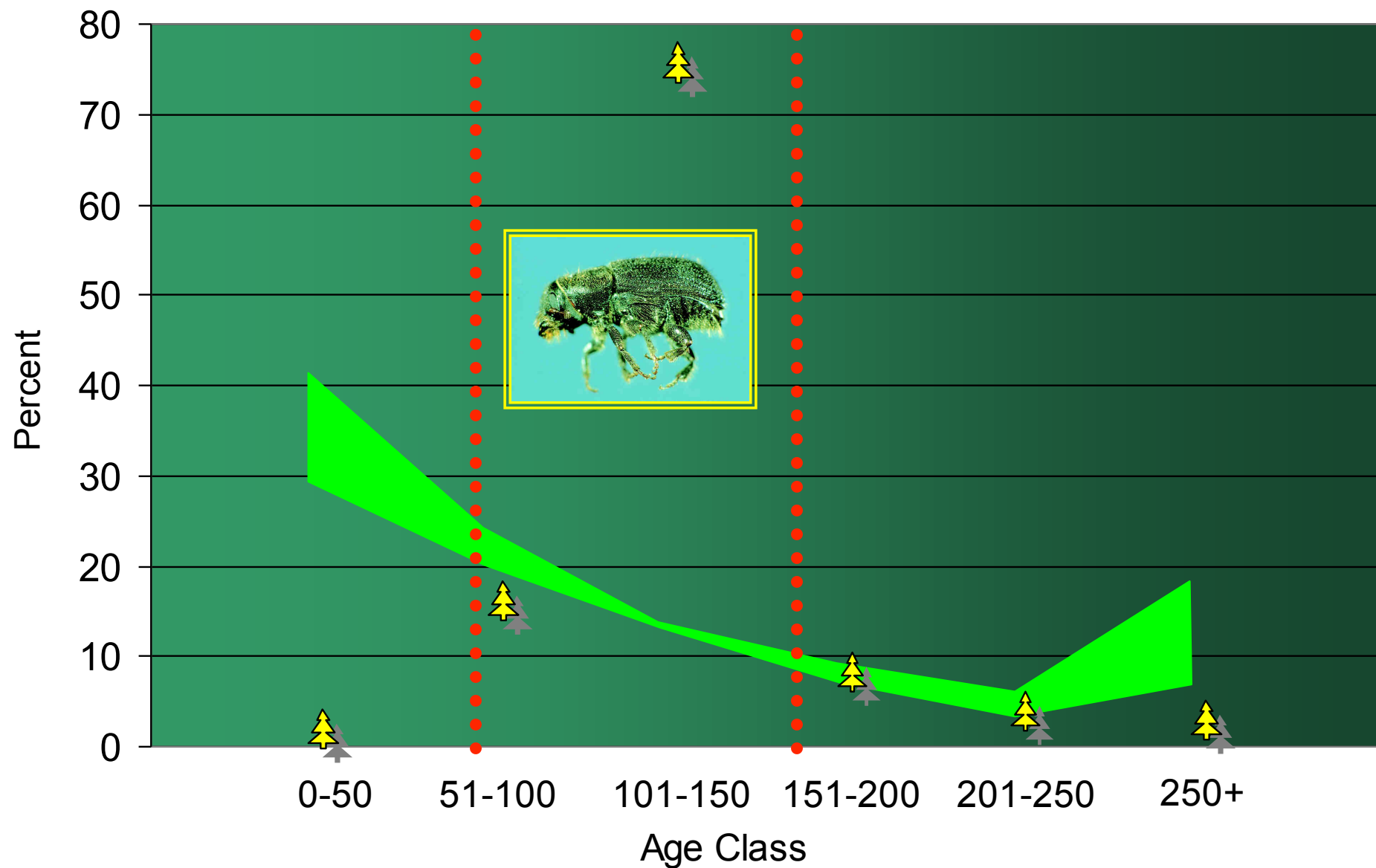
Natural Range of Age Classes in the Montane

With Current Age Class

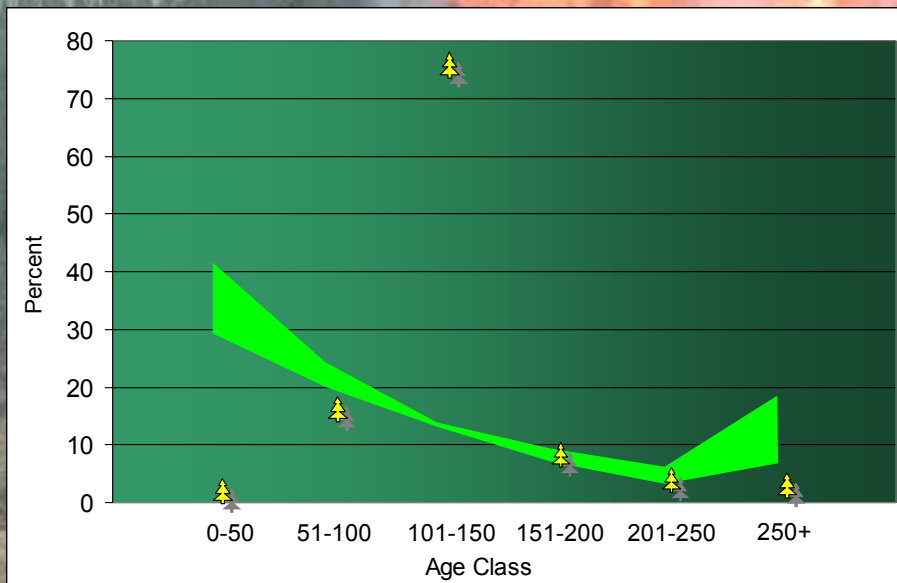


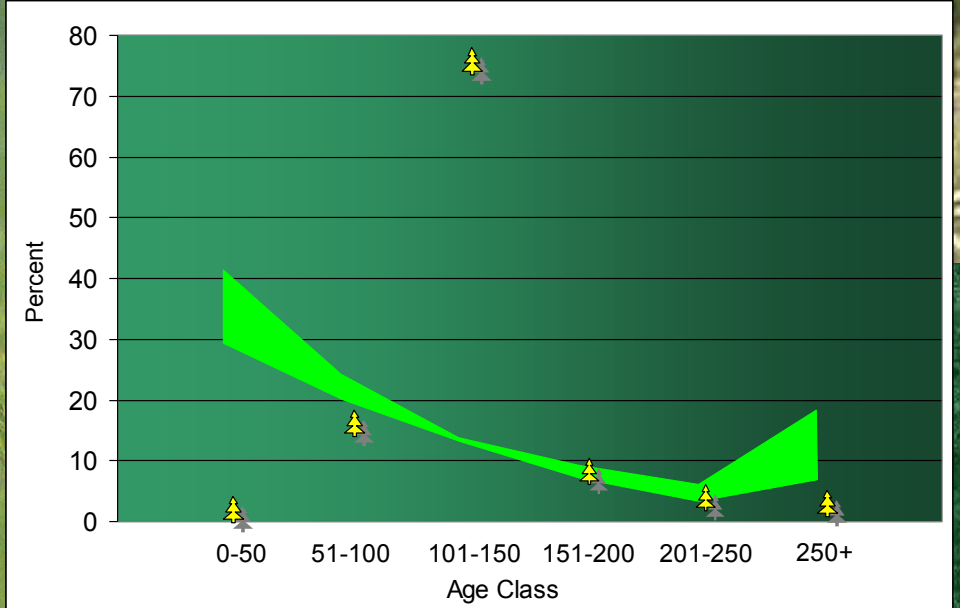
Natural Range of Age Classes in the Montane

With Current Age Class



WILDFIRE THREAT





Project Goals

- **Reduce the threat of escaped wildfire**
- **Reduce the threat of a pine beetle outbreak**
- **Increase amount of Grizzly Bear and Elk habitat**
- **Maintain visual qualities of the landscape**
- **Diversify stand ages and tree species to provide habitat to a wide range of organisms**
- **Maintains water quality and fish habitat.**

Timeline

Sept 2004



July 2007



Sept 2012

- Develop Terms of Reference / Goals
- **Initiate Public Involvement**
- Charrette
 - List of VOIT' s
 - Conceptual map
- Assess impacts of Plan on VOIT' s
- Approval
- Implementation
- Detailed Fire Regime Analysis
- 5 Year Report and Plan updates

Identified Stakeholders and Initial Contact

- 64 Letters sent out to:
 - Adjacent Land Managers
 - Commercial (accommodations, trappers, industry)
 - Environmental/Cultural
 - Fish and Wildlife Associations
 - Municipal and Provincial Governments
 - Recreational Groups

Initial Meetings (25 out of 64 participated)

“From your group’s perspective, what are the important factors that should be considered when planning and implementing the R11 Forest Management Plan””

“Ideally, how would your stakeholder group envision the R11 area in 20 years?”

Initial Meeting Results

- List of 18 Values and Objectives
- Participants forwarded names for Charrette participation

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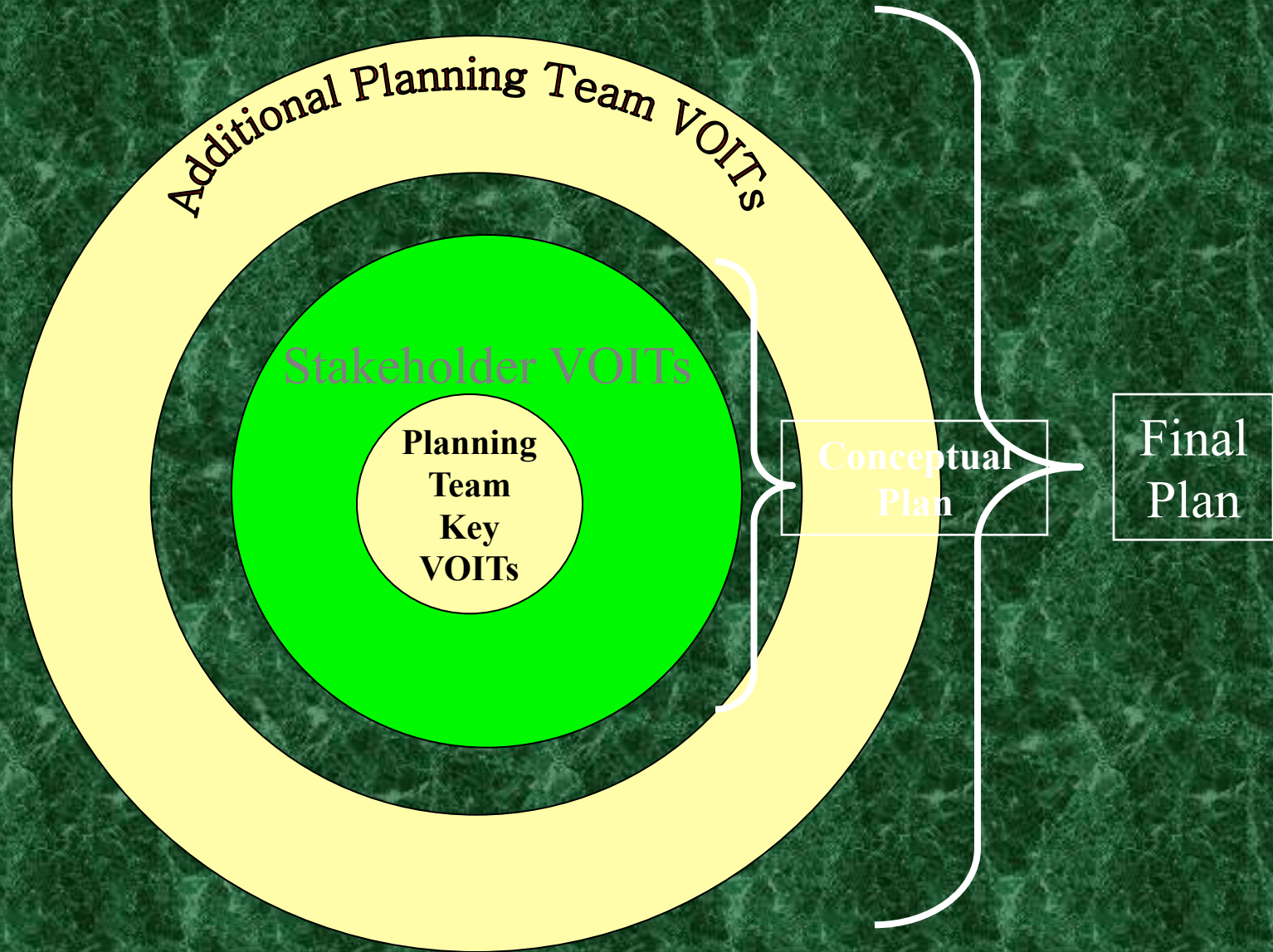


The Charrette

Goldeye Center

The Charrette

The General Idea



Planning team sets RULES and KEY VOITs as guidelines for the Charrette

- ✓ **Plan must respect IRP's, legislation, and any existing landscape plan for the area.**
- ✓ **No new permanent access.**
- ✓ **Must reduce number of high/extreme fire risk stands by 5%.**

✓ **Must reduce the threat of escape wildfire to:**

- **Surrounding forests outside of the R11 area**
- **Community of Nordegg**
- **Bighorn Reserve**
- **Resorts, campgrounds, and lodges in the R11.**

✓ **No prescribed burn ignitions in
Wilderness Areas.**

Charette Participants:

- Area Residents
- Commercial recreation/eco-tourism
- Resorts/campgrounds
- Trappers
- County
- National Parks
- Fish and Game
- Watershed Alliance
- AB Environment
- ACA



PUBLIC
SAFETY
17

SAFETY
LIABILITY &
EMERGENCY
RESPONSE
PLANS

SMOKE DENSITY
REL. ED TO
POWERLINES &
COMMUNITIES

SAFETY UP FOOT
ACCESS IN BURNS

Kms or Kile
Small powder

Identification of
five types of
burn/ignition

to 1000's
Inches from
powerline

Warning to fire

V

"Ecological Integrity"

FOREST
HEALTH
2

WILDFIRE
THREAT
9

O

RECOGNIZE
ROLE OF PESTS,
CLIMATE CHANGE
2.1

MOUNTAIN
PINE BEETLE
2.2

IMPACTS ON
ADJACENT
TIMBER SUPPLY
9.2

Integrate fire
management activities
with overall landscape
management objectives
9.1

DEVELOPERS
ASSUME LEVEL
OF RISK
9.1

RISK TO
ADJACENT
TIMBER SUPPLY
9.1

EXISTING
INITIATIVES RE:
VEGETATION CONTROL
9.1

I

Develop a list
of current
native species
2.1.1

Inventories and
Distribution of invasive
non-native species
2.1.2

Hazard
Rating
Model
2.2

List of areas
at risk in the
RIL (e.g., West Coast)
2.2.1

Distribution
of
Tree Ages
2.2.3

Response
Zoning
Map
9.1

The number of
"Fire Smart"
initiatives
9.1

Project
area
9.1

T

Maintain list
of current
native species
2.1

Dev. a management
Plan for non-native
species
2.1

Reduction in
Pine Beetle
Hazard and
2.2.1

Achieve the historic
range of age class
variability
2.2.3

Have a "Fire Smart"
program for all
communities and
places in the RIL
9.1

Get a "Fire Smart"
landscape in
place in the RIL
9.1

Develop a
project
9.1

Develop a
project
9.1

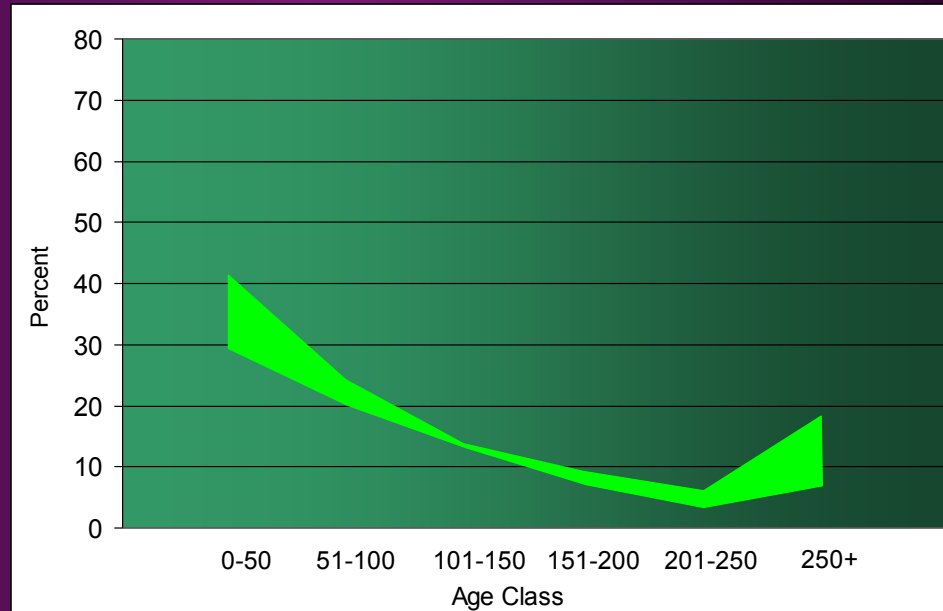




Charette results:

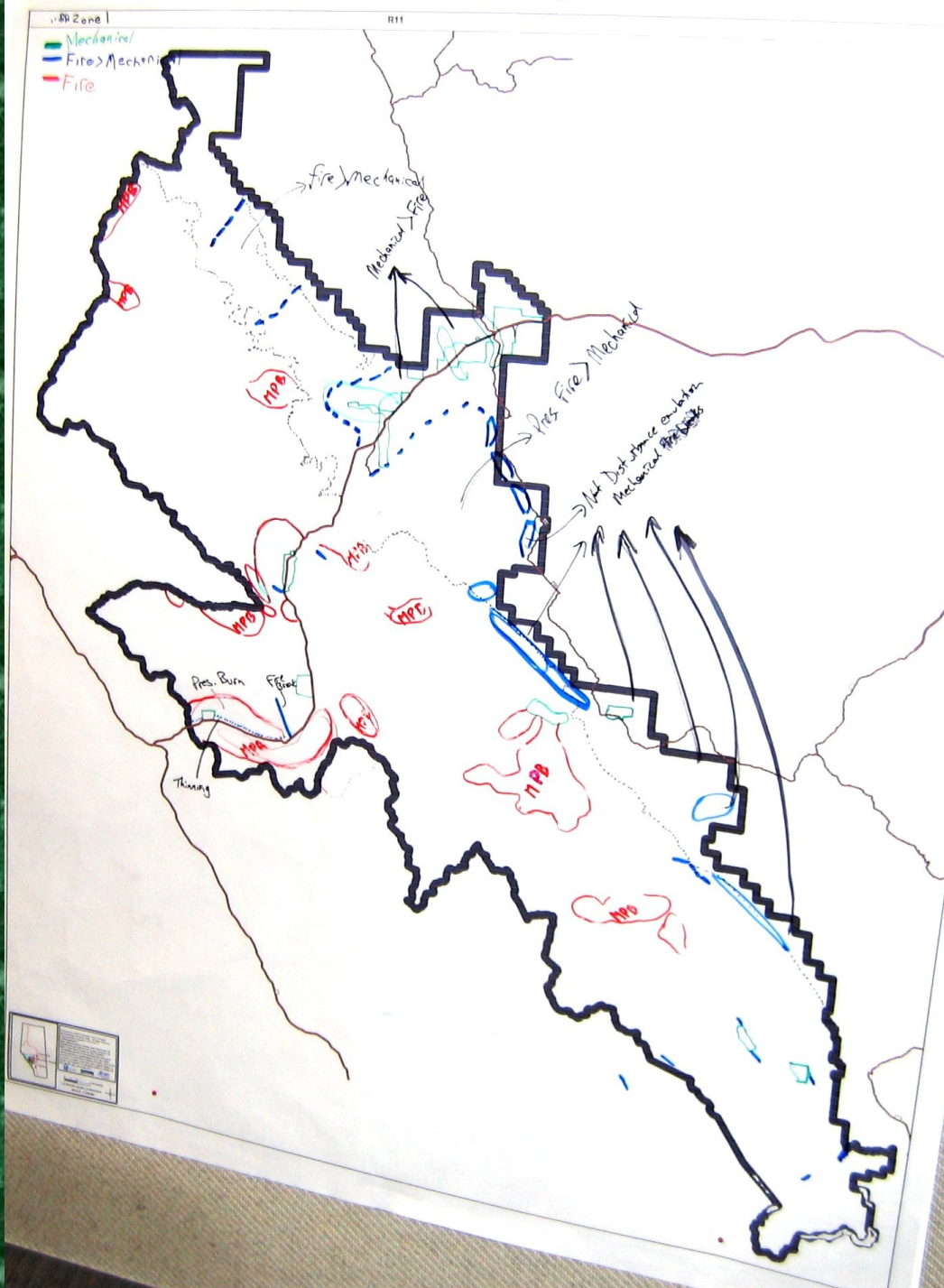
1. Comprehensive table of VOIT's

- Pine beetles, Fire, Natural Range of Variability are the drivers



2. Conceptual map

3. Public Support



Gentlemen, I wanted to pass on to you how pleased I am to have participated in this ground breaking Charrette.

... this process with what I believe to be outstanding results. I think this exemplifies what I have said and believe to be true; people are more on the same page than they are not. I look forward to being part of more Charrettes as we move forward into programs such as ILM and the likes.

Congratulations to (SRD)... for having the courage to step outside the box.

Cheers Cal Rakach
AOHVA - President

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- **Assess impacts of Plan on VOIT's**

July 2007



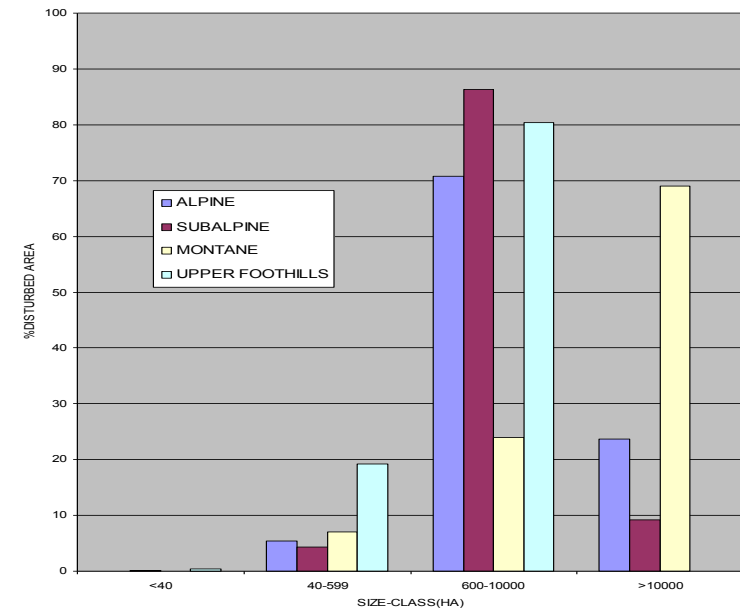
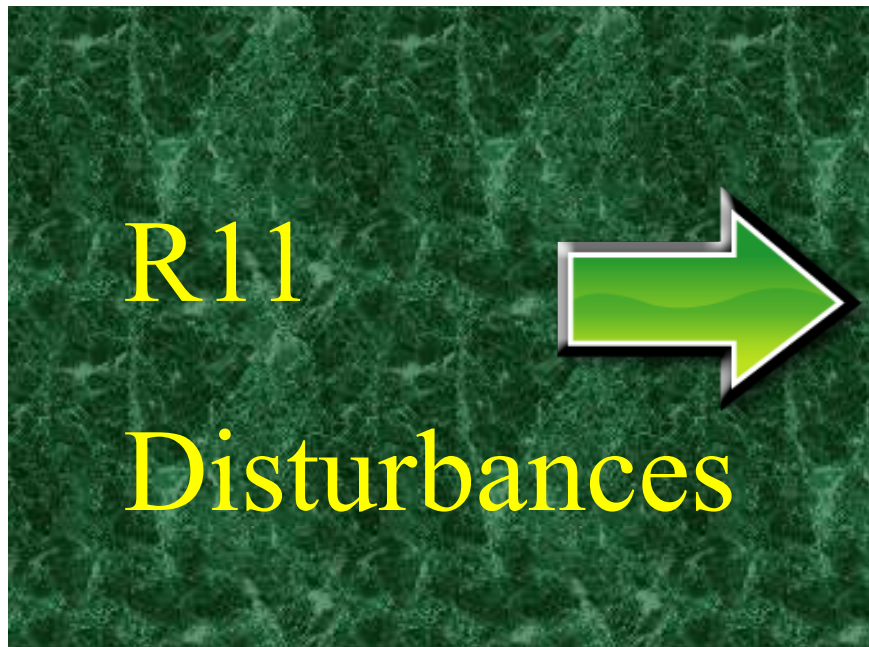
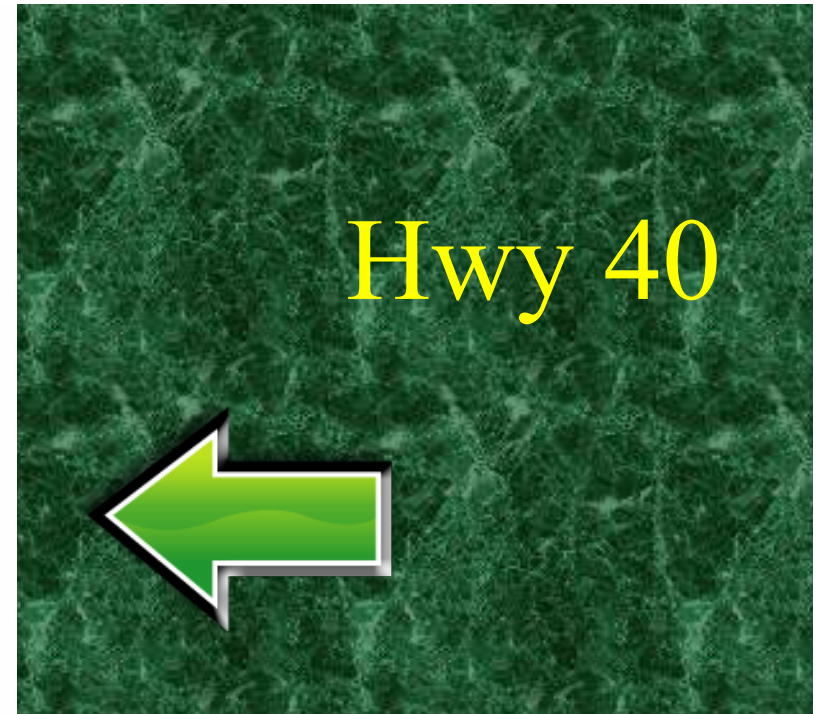
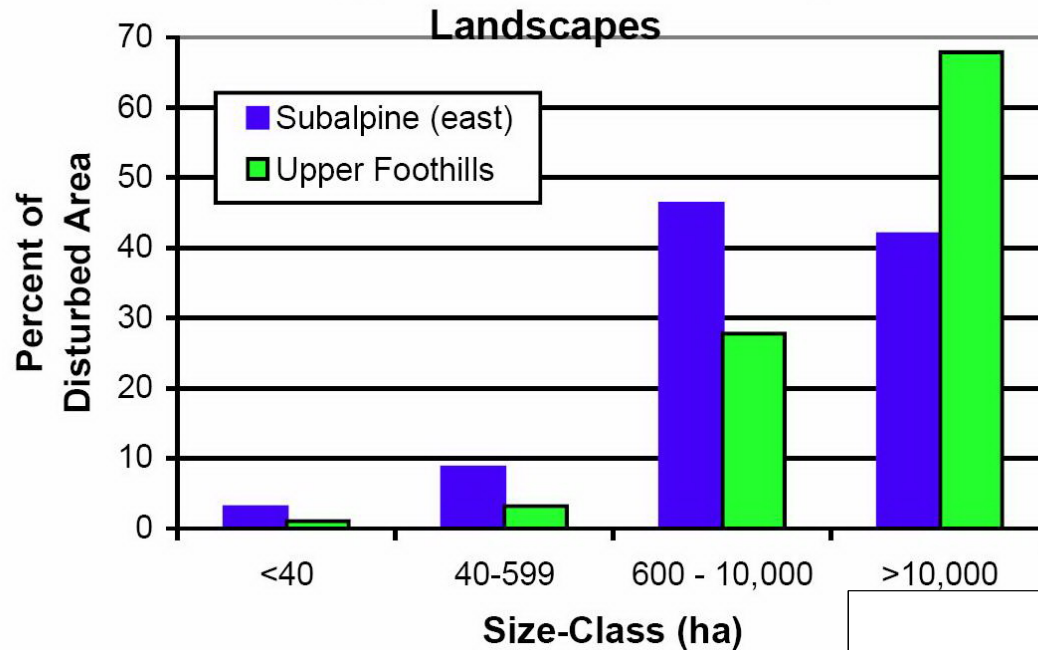
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Key VOIT: NATURAL DISTURBANCE EMULATION

- Forecasted rate of disturbance to return each natural subregion to within NRV.
- Planning Team opted to follow assessment guidelines identified by Foothills Model Forest Highway 40 project.

Historical Disturbance Event Size Distribution in the Upper Foothills and Subalpine

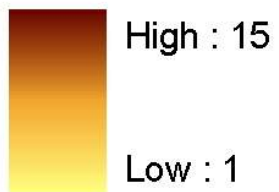


R11 Planning Unit: RSF Surface



Legend

RSF Values



Drawn By: J. Cranston
Date Drawn: Feb 18, 2005

Equivalent Clearcut Area Simulator Alberta (ECA-Alberta)



Cumulative Watershed Disturbance & Hydrologic Recovery Simulator

About ECA-Alberta

Version 1.0

Dr. Uldis Silins, Dept. of Renewable Resources, University of Alberta

Stand Hydrologic Recovery Function

- ☐ Based on basal area growth
☒ Based on annual volume growth

Help

Stand Attributes

Range containing species code

FMU R11!\$B\$11:\$B\$19

Range containing stand area (ha)

FMU R11!\$E\$11:\$E\$19

Range containing year of disturbance

FMU R11!\$D\$11:\$D\$19

Range containing site quality (g,m,f)

FMU R11!\$C\$11:\$C\$19

Stand Input Help

Next >

Cancel

Age at Full Hydrologic Utilization (Rotation)

- ☐ White/engelman spruce, upland larches, fir
☐ Black spruce and tamarack
☐ Lodgepole and jack pine
☐ Hardwoods

Help

Regeneration Lag

- ☐ Include Regen Lag in Simulation

- ☐ White/engelman spruce, upland larches, fir
☐ Black spruce and tamarack
☐ Lodgepole and jack pine
☐ Hardwoods

Help

Equivalent Clearcut Area Simulator Alberta (ECA-Alberta)

Watershed Input and Simulation Options

Simulation Type

- ☐ Equivalent clearcut area only
☒ Equivalent clearcut area and projected change in annual water yield

Simulation Duration

2005 Starting year of scenario

20 Simulation duration (years)

1 Simulation time step (years)
(default 1 year steps)

Watershed information

65811 Watershed area (ha)

597 Average precipitation (mm)

294 Average streamflow (mm)

Help

Output Range

Specify starting cell of output range

FMU R11!\$G\$12

Note: You must specify a starting cell for simulation output

0 %

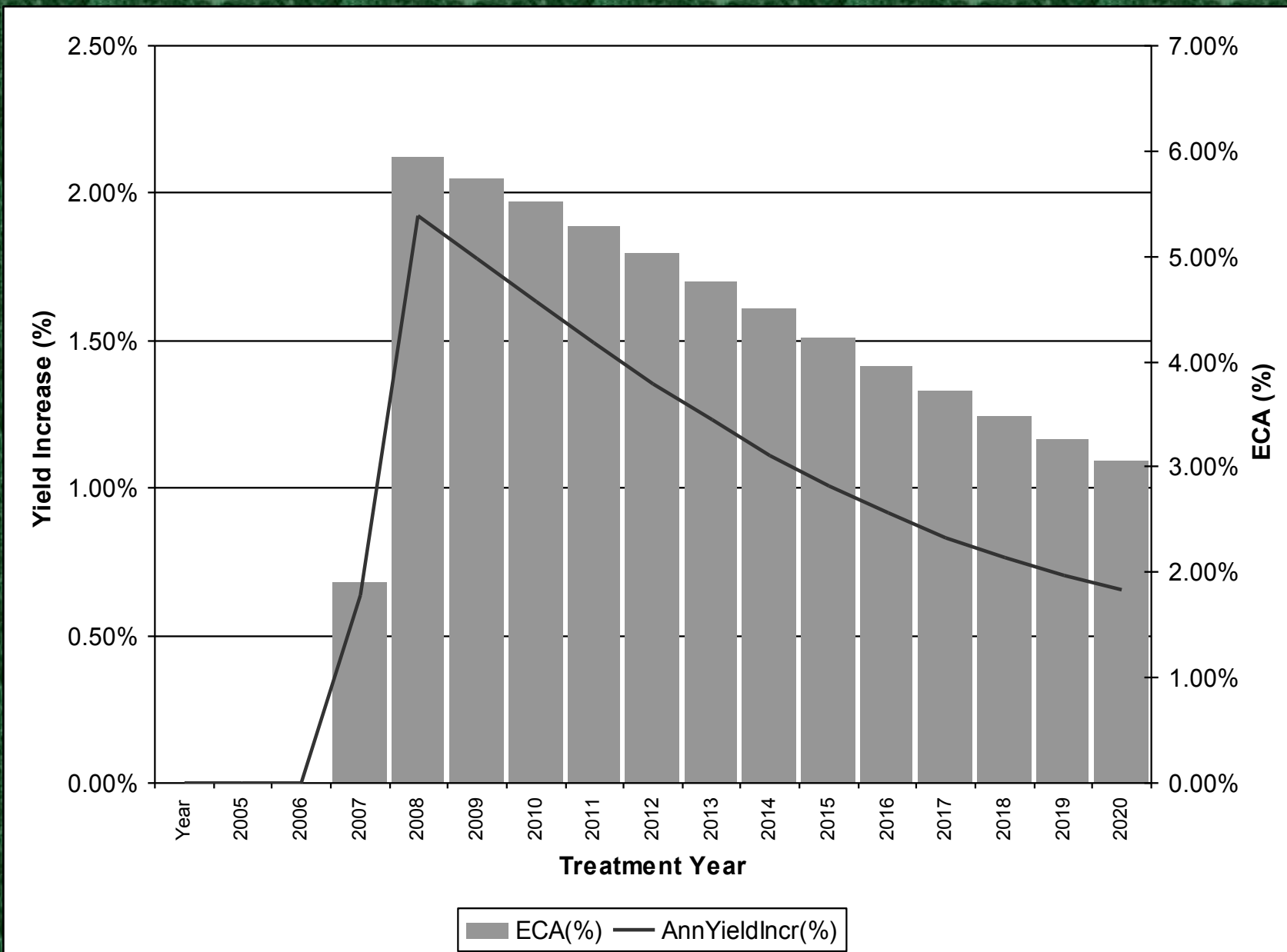
Back <

Cancel

OK

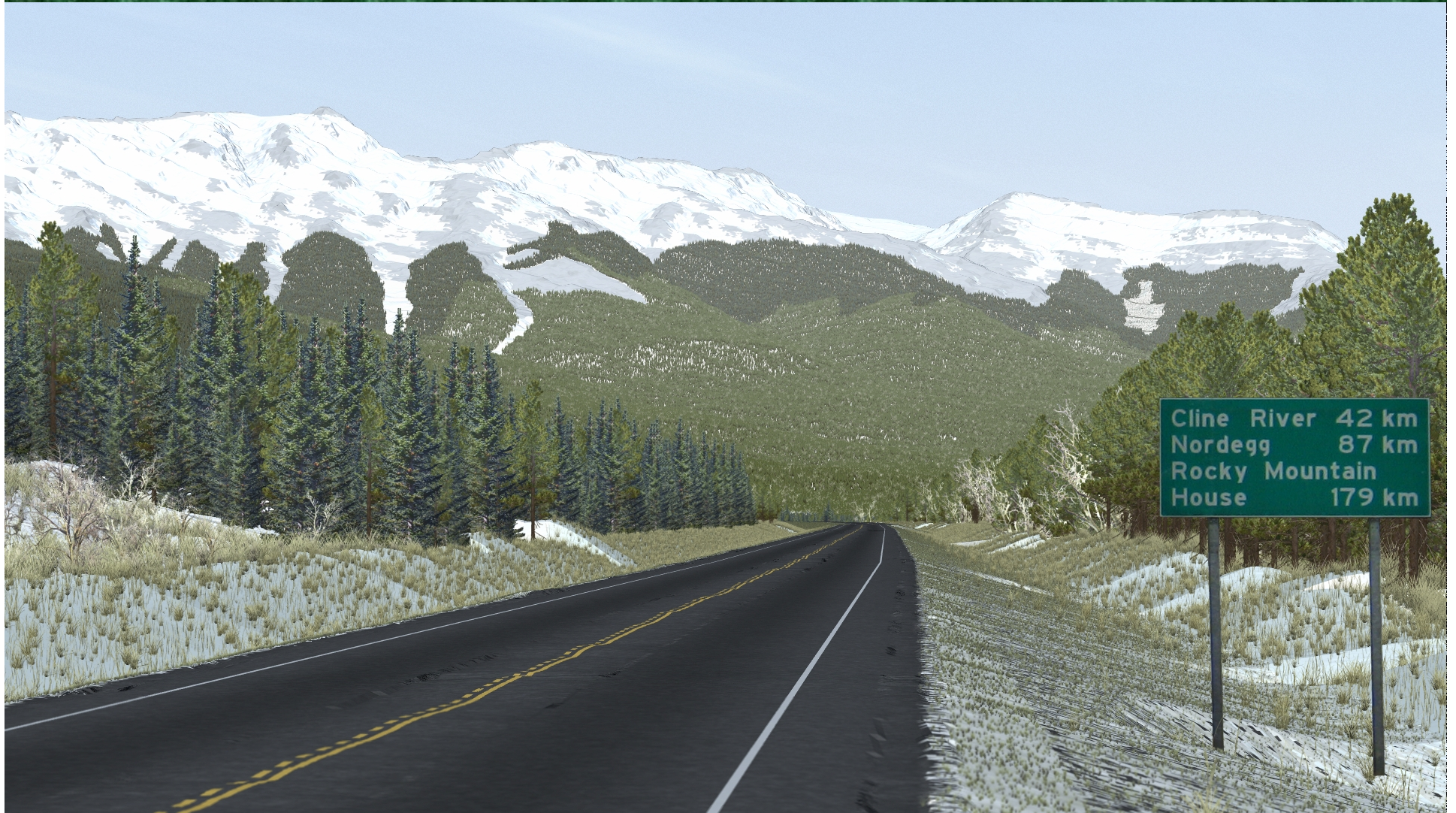
Watershed Assessments

North Ram River Watershed Annual Flow Increase

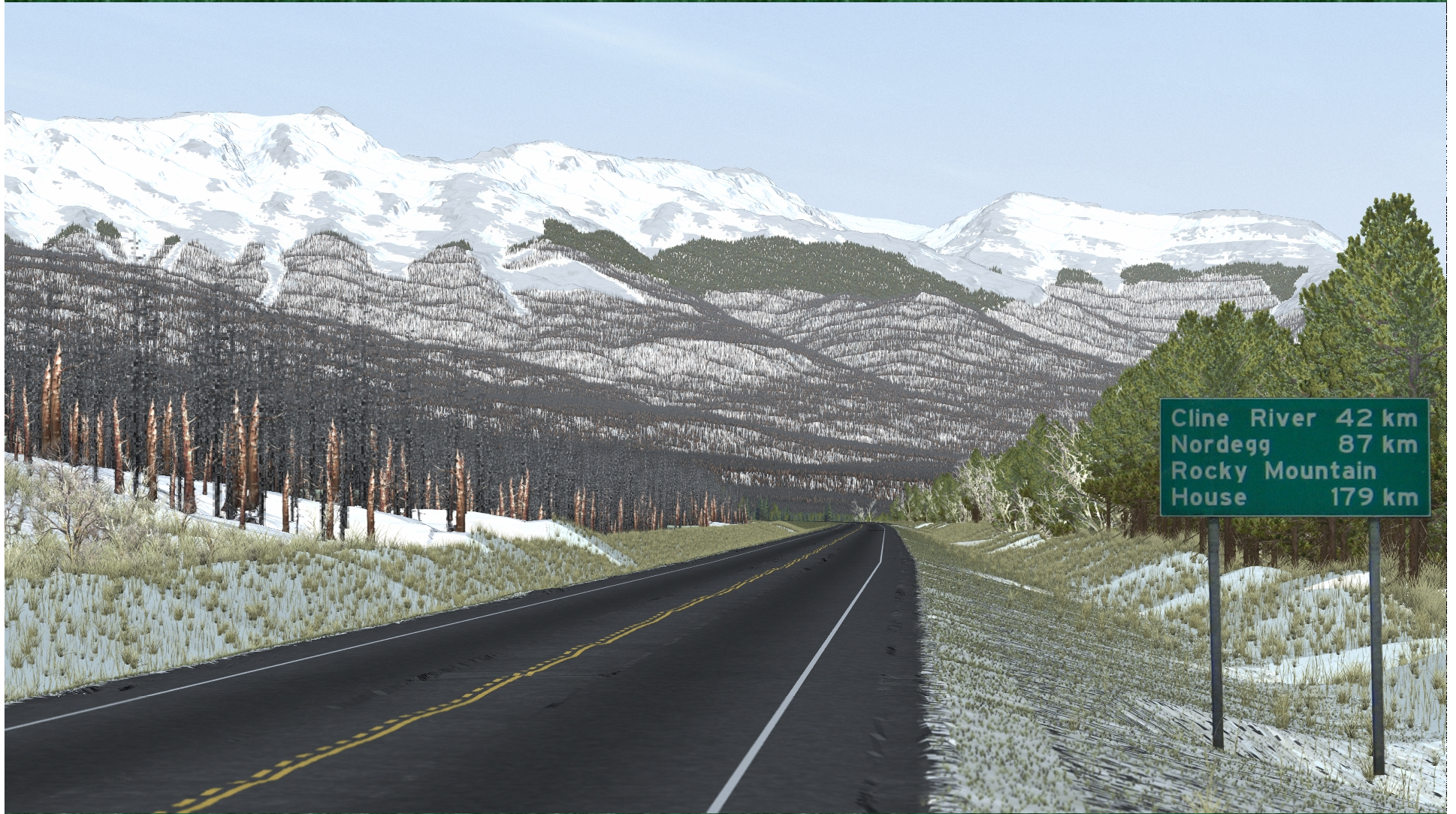




Banff Boundary - Before



Banff Boundary - After





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Implementation

- Timber harvesting





An aerial photograph of a mountain valley. In the background, a range of rugged mountains with snow-dusted peaks is visible under a clear sky. The middle ground features a large, dark, forested valley floor, possibly a burn area, with patches of lighter-colored vegetation and exposed rock. A river winds through the valley, with several small, white, snow-like patches along its banks. The foreground shows a dense forest of evergreen trees, with a road or path visible on the right side. The overall scene is a mix of natural beauty and geological features.

Capping Unit Strategy







Timeline

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Sept 2012

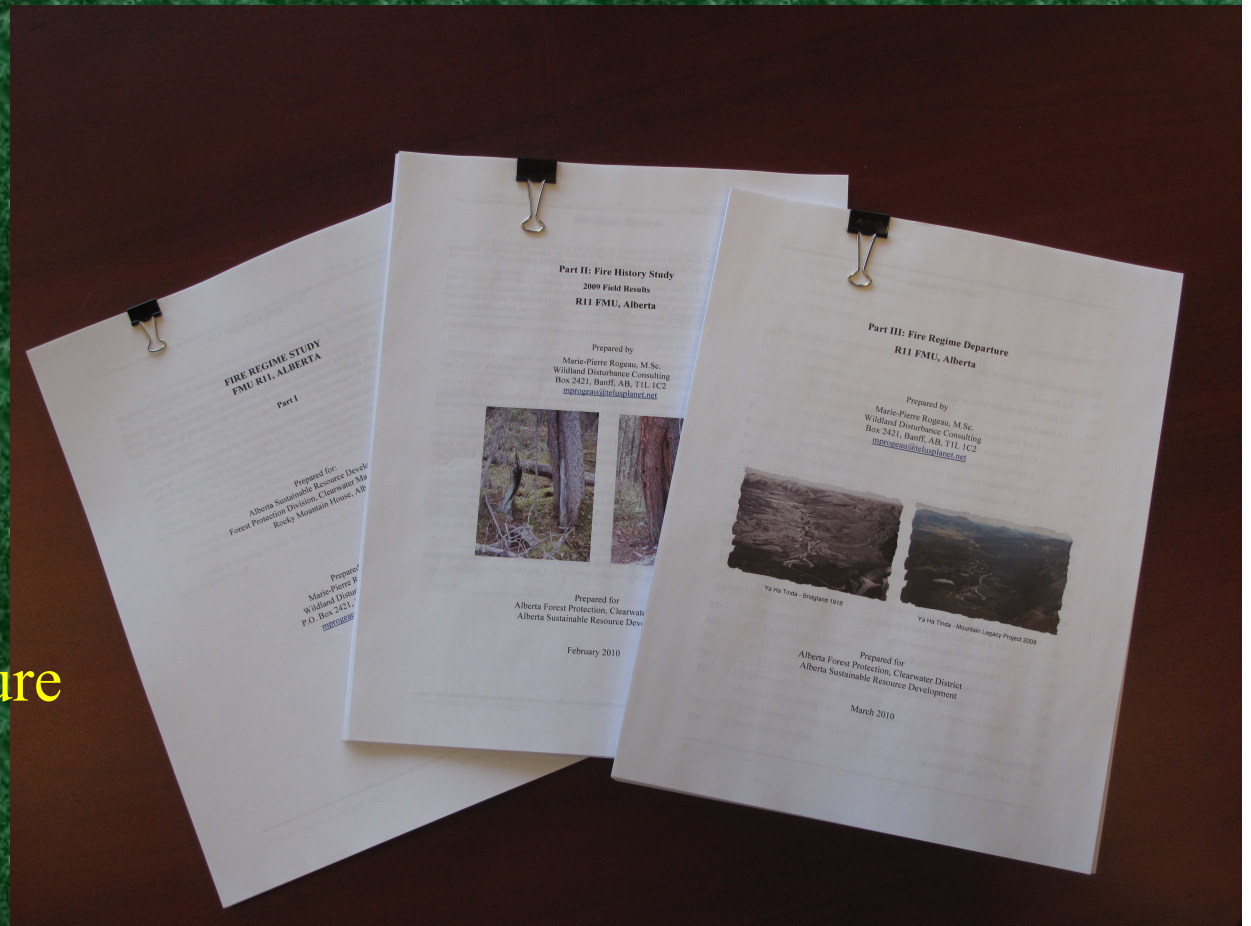
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Detailed Fire Regime Study

M.P. Rogeau
contracted
2009/10

Included:

- Fire Regime Study
- Fire History Study
- Fire Regime Departure



Fire Regime Departure Elements

- Fire Cycle (50%)
- Cause (10%)
- Size (10%)
- Severity (15%)
- Seasonality (15%)

Fire Regime Departure

Results:

- R11 subdivided into 7 watershed units
- All units showed moderate or high departure
- R11 disturbance targets moved from balancing age class distributions, to restoring fire regimes.

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5 Year Report

- Complete Oct 2012
- Reported on original Indicators and Targets
- Adjusted / Updated Targets
- Moved from “Natural Range of Age Classes” to “Restoring Fire Cycle”



Limber Pine and Whitebark Pine

- Listed as Endangered
- Some burned in Upper Sask Prescribed burn
- Surveys show both species regenerating in burn





[http://www.srd.alberta.ca/LandsForests/ForestManagement/
ForestManagementPlans/ForestManagementUnitR11.aspx](http://www.srd.alberta.ca/LandsForests/ForestManagement/ForestManagementPlans/ForestManagementUnitR11.aspx)

Kevin.Gagne@gov.ab.ca

