



Alberta Whitebark and Limber Pine Recovery Planning

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Whitebark Pine Science and Management Workshop
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Outline

Background

- Provincial status

Recovery planning

- Process
- Objectives, strategies, action plan
- Information gaps and research needs, current work
- Policy



Provincial endangered status

- Whitebark pine (*Pinus albicaulis*) and limber pine (*Pinus flexilis*) are designated as *Endangered* under Alberta's *Wildlife Act*
 - Listed on September 9, 2009
- Based on “an ongoing and projected decline across the species’ provincial range, caused by the introduced WPBR and MPB”
- *Endangered* designation means... “a species facing imminent extirpation or extinction”
- Recovery plan to be prepared within 12 months of the species listing

Provincial endangered status

- No stand-alone SAR legislation
- Wildlife Act is not rigorous
 - Only endangered animals protected
 - Vertebrates that are not human or fish
 - No automatic provision to protect critical habitat



Alberta distribution

General separation of range
(with some overlap)

Whitebark—higher elevations

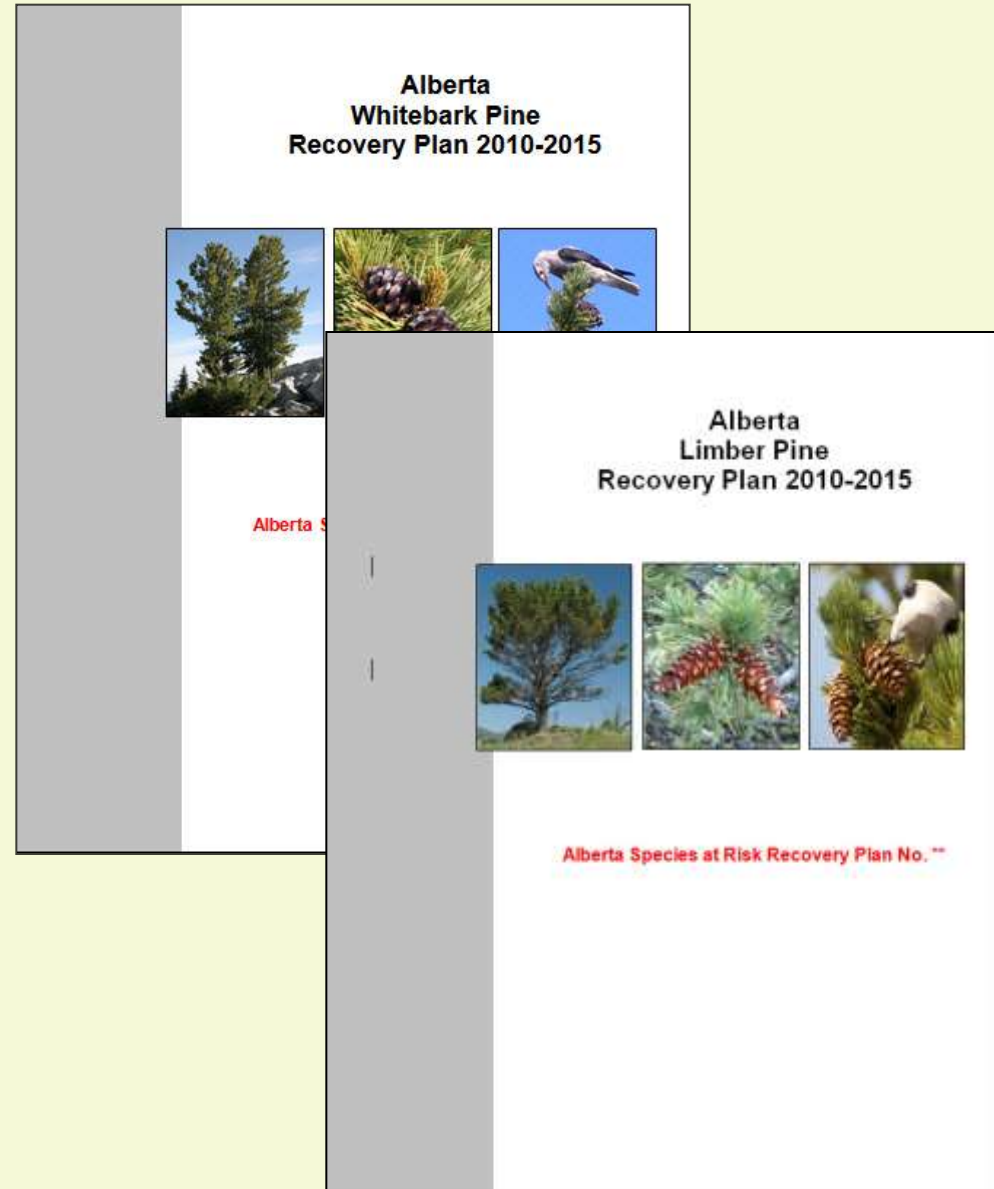
Limber—lower elevations



Recovery planning process

Recovery plans

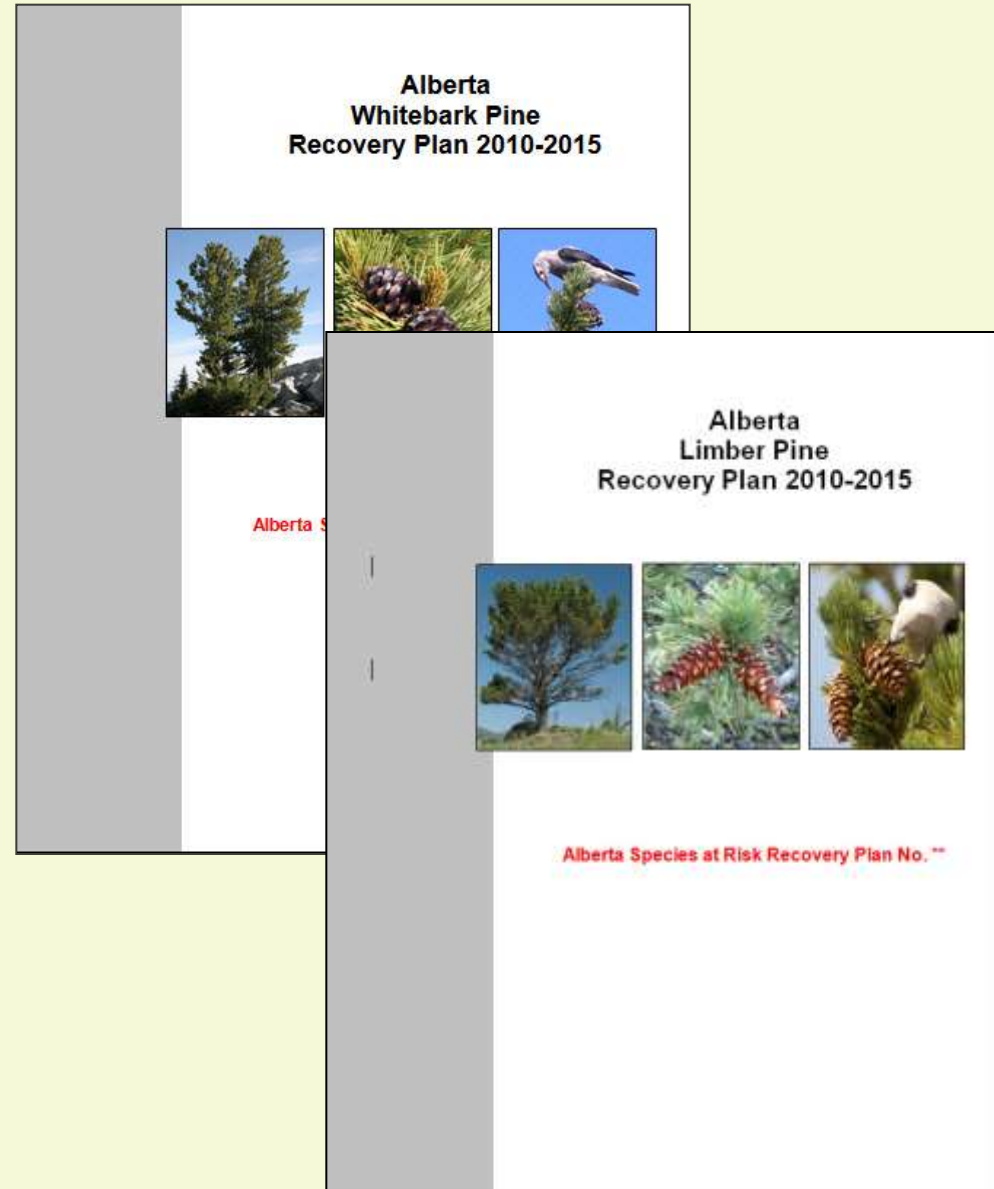
- One team, two plans
- Fosters team approach to conservation (i.e. inter-jurisdictional)
- Builds on recovery work being done prior to initiation of process



Recovery planning process

Recovery plans

- Serves as advice to the minister
- Provide clear direction for recovery
- Not legal document
- Plans nearing completion...



Recovery goal:

To ensure self-sustaining populations.....remain on the Alberta landscape and that the species persists in sufficient numbers to continue functioning in it's ecological role.

Five core objectives for both species:

1. Reduce direct mortality
 - High-value stands and trees?
2. Develop and introduce rust-resistant strains
3. Conserve genetic diversity
4. Manage habitat and natural regeneration
5. Improve knowledge of potential climate change effects

Strategies for recovery

Four core strategies for both species:

1. Population monitoring (inventory and assessment)
2. Protection of stands and individual trees (high value)
3. Conserve genetic resources; screen, propagate, and deploy
4. Habitat and natural regeneration management

Five other “supporting” strategies



Action plan

Many actions needed to achieve recovery

For both species:

- Strategies outline actions:
 - Approximately 75 actions for whitebark pine
 - Slightly less for limber pine



Information gaps and research needs

Many gaps and needs!

- Alberta populations at northeastern edge of both species' range
 - Does the existing literature always apply up here?

High priority examples:

- Distribution; community types; define high-value
- Identify, test and propagate genetically resistant stock
- WPBR: health assessments; non-lethal effects
- Characterize regeneration sites
- Current and future habitat

Examples of research

- Carmen Wong (UBC)
 - Stand dynamics in whitebark pine in Willmore
- Evan Esch (UA)
 - Phenology of mountain pine beetle in whitebark and lodgepole
- Vern Peters (King's University College)
 - Seed predation and regeneration (whitebark and limber)
- Adam McLane/Andrew Befus (UC)
 - Predictive modeling of distribution of whitebark and limber
- Tracy McKay and Karen Graham (FRI)
 - Grizzly bear utilization of whitebark
- Joyce Gould/Ellen Macdonald (AB Parks/UA) - in-house
 - Identification of whitebark regeneration sites

Alberta Tree Improvement and Seed Center

Leonard Barnhardt, Manager (leonard.barnhardt@gov.ab.ca)

Seeds:

- Whitebark: 38.57 kg
- Limber: 135.9 kg
- Germination issues, more so for whitebark,
 - Premature collection at higher elevations?
 - Pollination/fertilization problem?



Alberta Tree Improvement and Seed Center

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Both whitebark and limber pine:

- Pilot stock types for clone banking; outplanting is successful
- Grafting project meeting with success and next step is to outplant

First *in situ* reserve for limber pine established, looking for candidates for both species

First shipment of limber pine restoration stock going to Waterton as part of joint agreement

Policy

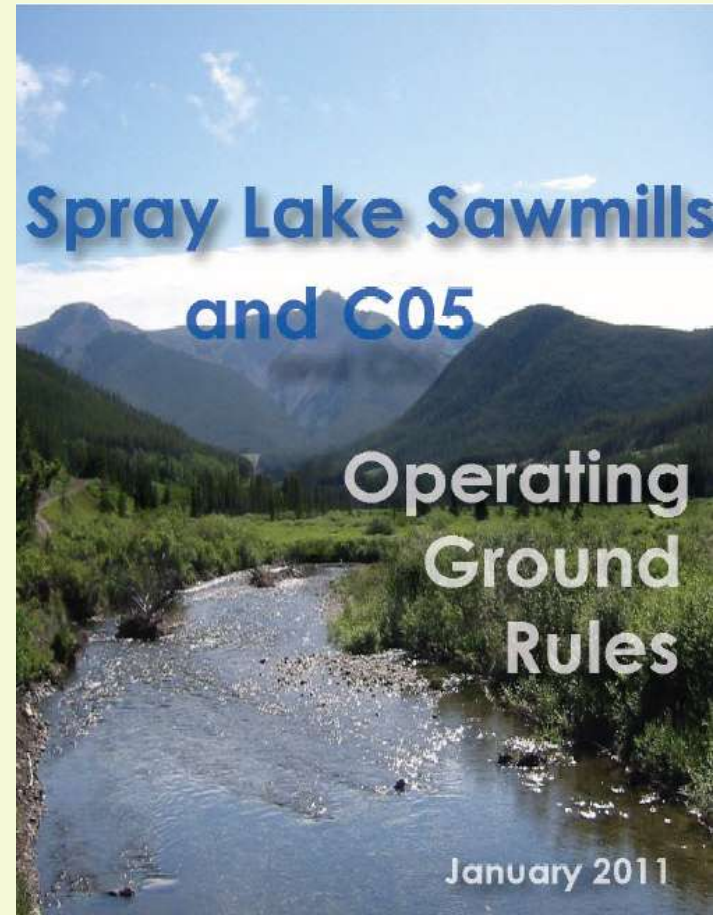
Incorporation of protection of whitebark and limber pine into provincial policy and guidelines

Operating ground rules

Land-Use Framework

Enhanced Approval Process

Ultimately, what does policy absolutely need to protect? What is high-value?



Soooo.....

Whitebark pine in the “working forest” is

- relatively abundant and widespread
- mostly diseased and high mortality rate

Habitat overlaps with industrial activity

However, it is a provincially and federally listed species

Can you destroy them?



Which trees and stands are considered high-value and can not be destroyed?



Thank you Cyndi!





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www.srd.alberta.ca/FishWildlife/SpeciesAtRisk
www.whitebarkfound.org