

Conservation Reliant Species & Conservation-Management Agreements

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Assumptions behind the ESA's understanding of recovery

- Species at risk of extinction are identified
- Needed management action are determined
- Management actions are implemented at ecologically relevant scales
- Species' distribution and numbers increase
- Recovery plan's goals are met
- Species is delisted and existing regulatory mechanisms provide sufficient protection



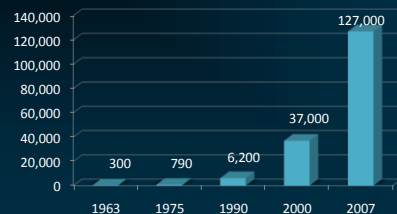
2

Assumptions met for some species...

- Aleutian cackling goose
- Gray whale
- American alligator
- Brown pelican
- Arctic peregrine falcon
- American peregrine falcon



Demographics of Aleutian cackling goose



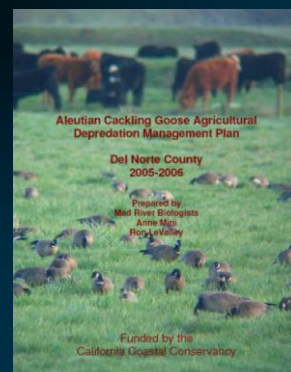
4

Conservation Management for Aleutian cackling goose

Threats	Conservation Management
Habitat loss on breeding grounds	USFWS refuge management statutes
Habitat loss on wintering grounds	Habitat acquisition in fee and easements
Overharvest	Pacific Flyway Council monitoring and bag limits under MBTA

5

The poster child for recovery



6

but the traditional concept of recovery may be an unobtainable goal for other species.

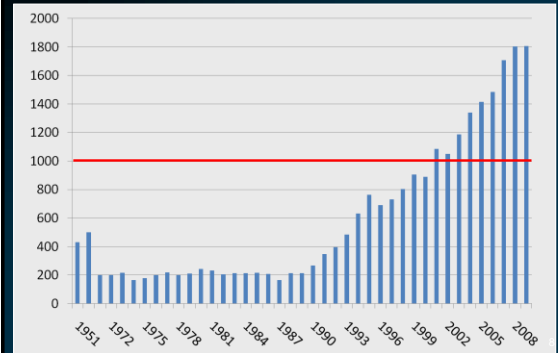


Kirtland's Warbler *Dendroica kirtlandii*

...Some species are conservation reliant,



Demographics of Kirtland's warbler



The warbler requires dense and patchy jack pine stands with low, shrubby ground cover



Historically, the jack pine ecosystem was maintained by extensive, recurrent fires.

Intensive jack pine stand management



Cowbird control

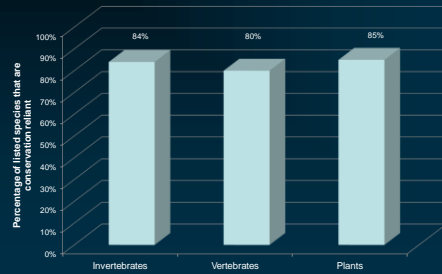


Conservation-reliant species require continuing *management* because they are more likely to

- Be island species
- Occupy early successional stages
- Be dependent upon two or more ecological systems
- Be imperiled by multiple, often recurrent threats

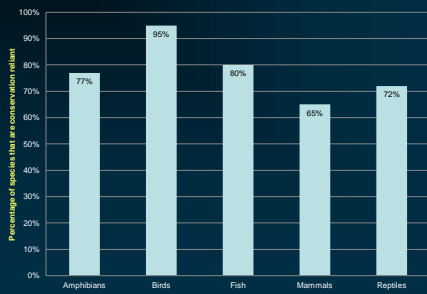
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Taxonomy of Conservation Reliant Species



14
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Conservation Reliance among vertebrates



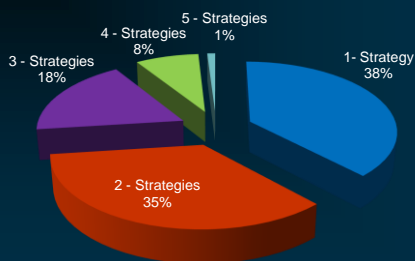
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The most common management actions:

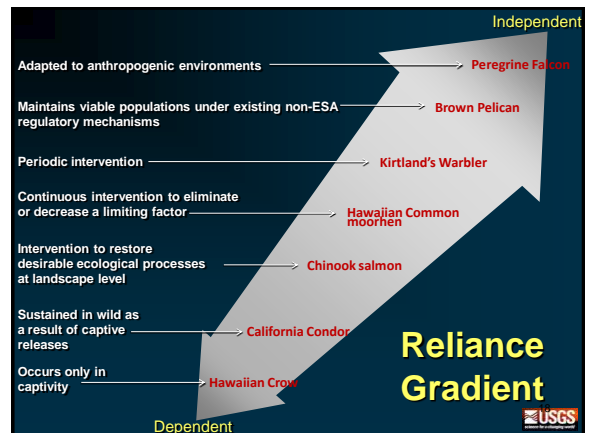
Control exotic fauna	20%
Artificial recruitment	16%
Control exotic flora	14%
Fire management & control	8%
Control human access	7%
Control water systems	5%
Control native fauna	4%
Mechanical control of vegetation	3%
Control ORV access	3%
Manage grazing	3%
Control parasites & disease	2%
Control low impact recreation	2%

16
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Frequency of Management Strategies



17
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Can Conservation Reliant Species be Delisted?



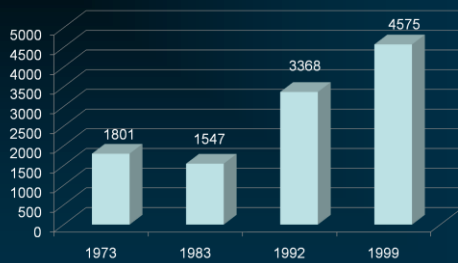
19

Yes, if...

- Biologically defensible recovery goals have been achieved
- There is a conservation manager willing and able to assume responsibility for the species
- There is a formal agreement to continue conservation management after delisting
- There is a secure source of funding for conservation management actions

20

Demographics of Robbins' cinquefoil (adult plants at original site)



Two additional populations also established. Total population of 14,000 adult & juvenile plants

23

Conservation Management for Robbins' cinquefoil

Threats	Conservation Management
Habitat loss due to trampling	Trail rerouted Scree wall constructed and posted Education by naturalist in residence Monitoring by naturalist & by USFS

22

Robbins' cinquefoil CMA

MOU between USFWS & USFS

- establishes an Oversight Committee
- USFS agrees to provide "long-term conservation" pursuant to recovery plan
- long-term monitoring will be initiated by 1996
- committee will make recommendations on any "proposed activities that may affect [the species] or its essential habitat"

23

Conservation Management Agreements (CMAs) will

- identify a conservation manager
- specify biological standards
- specify funding sources
- obligate the manager(s) to carry out the management actions
- provide for monitoring and adaptive management
- include formal sign-on by all relevant parties

24

The biological components of a CMA should specify

- management standards tied to the actions that achieved recovery
- geographic scale of management actions tied to recovery
- minimum demographic targets set above recovery goals
- monitoring and adaptive management requirements

25

The biological components of a Kirtland's warbler CMA:

- habitat management
- cowbird control
- monitoring and adaptive response
- management relevant research

26

A conservation manager under a CMA will

- generally, may be a federal, state, local or tribal agency
- may in some cases, be an NGO or individual with sufficient long-term stability
- may be a diverse group of governmental agencies, landowners, and NGOs
- will have legal authority to manage the species' habitat
- will have sufficient funding to carry out the conservation management

27

The conservation manager for the Kirtland's warbler will include

- existing land management agencies (USFS, MDNR, USFWS, Camp Grayling)
- new land management agencies (Canada, Wisconsin UP, private entities)
- local governmental entities (e.g. Kirtland Community College)
- conservation NGOs (TNC, Audubon, Arbor Day Foundation)

28

Management Relevant Research Needs

- Documentation of vital rate response to management actions
- Documentation of vital rates to threat factors

29

We maintain species we love



Can we expand our concern?



OR?

