

RECOVERY PLANNING



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What is “***RECOVERY?***”

The process by which the decline of an endangered or threatened species is arrested or reversed, and the threats to its survival are neutralized, so that its long term survival *in nature* can be ensured.

(1990 FWS Recovery Planning Guidelines)





Goal of Recovery

The goal of the recovery program is to restore listed species to a point where they are secure, self-sustaining components of their ecosystem, so that the protections of the ESA are no longer required.





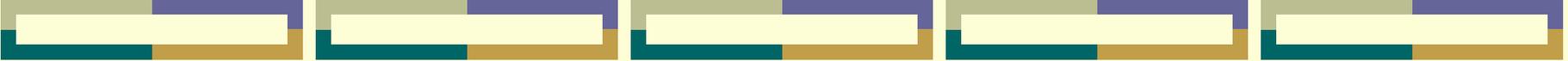
A Recovery Plan structures and organizes the recovery effort.

- delineates, justifies, prioritizes, and schedules the research and management actions necessary to support recovery of a species
 - specifies monitoring (biological and recovery tasks) needed to track progress
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Format of a Recovery Plan

- Title Page
 - Disclaimer
 - Acknowledgements
 - Executive Summary
 - Table of Contents
 - **Part 1. Background**
 - Description /Taxonomy
 - Distribution/Population trends
 - Habitat Characteristics
 - Life History/Ecology
 - Reasons for Listing
 - Ongoing Conservation Efforts
 - Strategy for Recovery
 - **Part 2. Recovery**
 - Recovery Objective and Criteria
 - Narrative Outline
 - Literature Cited
 - **Part 3. Implementation**
 - List of Reviewers
 - Appendices
-



Background

- acquaints readers with the species, its status, and threats.
 - touches on all relevant research and management information, but
 - is more a review than a “dissertation.”
 - provides easily accessible information for decision-makers.
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Background

- Status of species and reasons for listing (5.1 and 5.2 in Terms of Reference)
 - Ongoing conservation efforts
 - Recovery strategy
- 



Recovery Strategy

- encapsulates all that's gone before in the Background section.
 - synthesizes this information (particularly threats, research needs, ongoing conservation efforts) into a structured, logical approach.
 - justifies this approach to recovery.
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Recovery

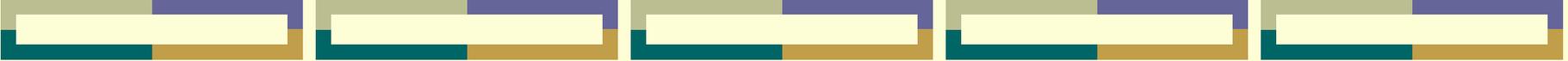
The “Nuts and Bolts” of a Recovery Plan





Objectives and Criteria

- An objective is a simple, concise statement to downlist or delist a species based on specific criteria.
 - Accompanying text should include a summary of material used to justify the objective, if available. If the information is not available, then develop interim objectives.
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Objectives and Criteria

● Interim objectives:

- are generally immediate goals needed to prevent extinction of the species.
 - should also address how to obtain information necessary for identifying the ultimate objective of downlisting/ delisting the species.
 - Can also be intermediate goals that measure recovery progress.
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Objectives and Criteria

- Criteria are the specific measures that are used to determine when a species has met the objective and can be downlisted or delisted.
 - Criteria should be objective and measurable (see ESA, section 4(f)(1)(B)(ii)), but not necessarily simply numerical.
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● Criteria must relate back to the 5 factors considered in the listing package:

- Habitat loss
 - Over-utilization
 - Disease or predation
 - Inadequate regulations
 - Other factors
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RP TASK TABLE

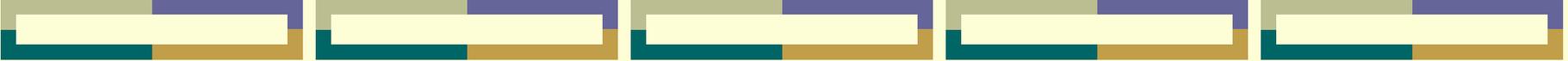
#	Pri.	Description	Related Threats
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1 Plan or 2??



At a minimum, must develop separate criteria addressing each DPS



Criteria can consider:

- *self-sustaining populations over key habitats*
 - *stable or increasing populations (should be defined) over specified periods of time*
 - *probability of population persistence over a specified period of time.*
 - *populations meeting specified reproductive and recruitment rates.*
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Criteria can consider:

- *decrease in threats* (e.g. “The threats that led to listing, and any new threats, no longer affect the species’ long-term probability of survival.”)
 - Amount and quality of *habitat protected* for the species (not limited to public ownership - can include private lands with conservation easements, for example).
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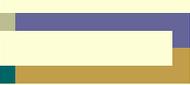


Criteria can consider:

- a number of specified *recovery units* throughout the species' range
- = units documented as necessary to both the survival and recovery of a species in a final recovery plan.

(This guidance first appeared in the 1998 joint FWS/NMFS Consultation Handbook (p. 4-36))







Recovery Units...

- can be used as a basis for jeopardy determinations in consultations (ESA section 7)
 - cannot be downlisted or delisted separately unless they meet the Distinct Population Policy criteria.
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Steller sea lion recovery units?

- Current recovery plan recommends evaluating population status in six geographic units. (p.49)
 - Team could consider specifying recovery units for one or both DPSs.
 - Remember, must clearly state how each RU is necessary for both survival and recovery of the DPS.
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Recovery Program (= Narrative Outline/Tasks)

In general, recovery tasks fall within certain familiar categories, such as:

- habitat conservation and restoration
 - research
 - surveys & monitoring
 - population management (supplementation/disease control)
 - regulatory compliance
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Monitoring

- Population (monitoring plan)
 - To meet recovery criteria
 - Post-delisting (not necessary to specify in RP)
 - Recovery implementation
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Recovery Program (= Narrative Outline/Tasks)

Generally arranged in “step-down” format

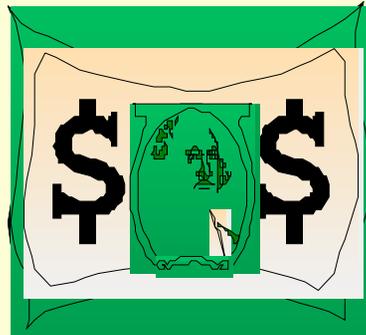
e.g.

- 1. Secure habitat and manage populations
 - 1.1 Manage and monitor populations within X Watershed
 - 1.1.1. Manage populations within X Watershed
 - 1.1.1.1. Update X Watershed Fisheries Mgt. Plan
 - 1.1.1.2. Develop habitat management plans with willing landowners
 - 1.1.1.2.1. Contact landowners with potential habitat
 - 1.1.1.2.2. Develop plans
 - 1.1.1.2.3. Implement Plans
 - 1.1.2 Monitor populations within X Watershed
 - 1.2 Manage and monitor populations within Y watershed



Narrative Outline/Tasks

- Only the “innermost” tasks will show up in the implementation schedule.
- Try to break down tasks into “fundable chunks.”





1. Determine factors limiting population growth

- 1.1. Study Diet

- 1.1.1. Study diet of pups post-weaning
- 1.1.2. Study diet of reproductive females
- 1.1.3. Investigate diet/ habitat partitioning of adult males and females

- 1.2. Investigate sources of pup mortality prior to, and following weaning.

- 1.2.1. eastern stock
- 1.2.2. western stock

- 1.3 Investigate sources of adult mortality





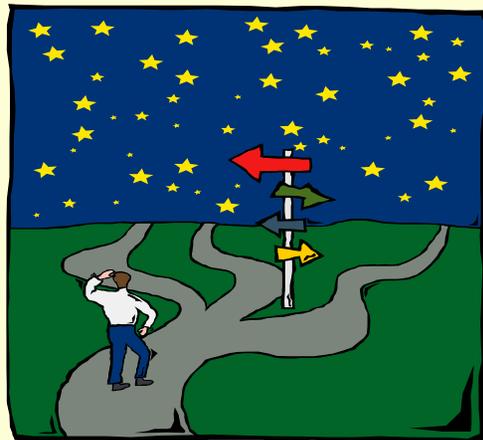
Implementation

Task Priorities

- **Priority 1** – actions that must be taken to prevent extinction or irreversible decline
 - **Priority 2** – actions that must be taken to prevent significant decline/adverse impact short of extinction
 - **Priority 3** – all other actions needed for full recovery
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Implementation Schedule

- ...is used to secure funds, establish management priorities, provide the basis for tracking implementation
- i.e. is the roadmap that guides recovery





Implementation Schedule

- presents tasks in priority (not numerical) order.
 - *Identifies* lead agencies for each task, but does not *obligate* these agencies to participate.
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List of Reviewers

- *Per* 1994 policy, Services are required to “actively solicit independent peer review during the development of draft recovery plans” in order to:
 - obtain all pertinent available data
 - review data relating to the selection or implementation of specialized recovery tasks
- Also required to summarize reviewers’ opinions in the final plan

article on peer review in October 2001 *Conservation Biology* 15(5)





Appendices

● Can be used to:

- include information that is too long or detailed for the body of the plan (e.g. data)
 - provide readily accessible information for some sub-section of the plan (e.g. research or monitoring plan)
 - provide information to readers about related Service mandates or programs (e.g. HCPs)
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This is a Revision

- Build on existing information (don't start from scratch where not necessary).
 - Update and expand sections as necessary.
 - Amend criteria as appropriate to reflect new information.
 - Focus on specificity:
 - Site-specific management actions
 - Add detail to tasks and monitoring protocols
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