

Standards for Science



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Standards for Science

- The USFWS is required to consider the “best scientific and commercial data available” when determining whether to list, downlist or determine a species recovered

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This “best scientific and commercial data available” is also referenced in :

- Information Quality Act Guidelines
- Policy on Information Standards under the Act
- Policy for Evaluating Conservation Efforts (PECE)

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The Scientific Process

- A clear statement of objectives
- A framework for testing hypotheses
- Good experimental design and standardized methods for collecting data
- Statistical rigor and sound logic in analysis & interpretation
- Clear documentation of methods, results and conclusions
- Peer review

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The data/information must have:

- Objectivity
- Utility
- Integrity

It must be repeatable, verifiable and defensible

It must be from primary and original sources

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To be objective -

- The data must be accurate, clear and complete
- It must be unbiased and credible
- Its limitations and assumptions must be stated

It must have utility (ie. relevance) to the intended users and be based on reliable and accurate sources (have integrity).

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The “best scientific and commercial data available” is the best effort of scientists to analyze and explain the available information.

Since decisions must be made in real time, the “best...data available” is that which follows sound scientific principles and is accurate, credible and repeatable.

The Peer review process is a way of documenting this.

Questions ?



Conservation Planning and the PECE policy



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Conservation Planning

Section 4(b)(1)(A) of the
Endangered Species Act:

□ requires consideration of non-regulatory and voluntary efforts to protect species

Conservation Planning

Early conservation efforts for proposed and candidate species, and species likely to become candidates can,

in some cases,
preclude or remove the need to list these species

Policy for the Evaluation of Conservation Efforts

Purpose

Identifies criteria USFWS will use in determining whether formalized conservation efforts contribute to making a species listing unnecessary

Policy for the Evaluation of Conservation Efforts

Purpose (continued)

- Ensures consistent and adequate evaluation of conservation efforts
- Facilitates development of conservation efforts

Policy for the Evaluation of Conservation Efforts

- Published March 2003 in Federal Register
- Abbreviated “PECE”

Evaluation of Conservation Plans

- Likelihood the conservation efforts will be implemented
- Likelihood the conservation efforts will be effective

Likelihood of Implementation

1. The plan identifies *responsible parties*; staffing and other resources necessary to implement the plan; and *funding level* and sources necessary for implementation;

Likelihood of Implementation

2. The *legal authority* of the parties to implement the formalized effort and *commitment to proceed* with conservation efforts are described ;

Likelihood of Implementation

3. *Legal requirements* necessary for implementation are identified (required permits, access permission, etc.), and information provided indicating fulfillment of these requirements does not preclude commitment to the effort;

Likelihood of Implementation

4. *Authorizations* (permits, access permission, etc.), necessary to implement conservation effort are identified and *high level of certainty* provided that authorizations will be obtained;

Likelihood of Implementation

5. *Type and Level* of *voluntary* participation from private parties to implement conservation measures and *certainty* that participation will occur should be identified;

Likelihood of Implementation

6. All *laws and regulations* necessary to implement the conservation effort *are in place*;

Likelihood of Implementation

7. High level of *certainty* that necessary *funding to implement* each conservation measure can be provided;

Likelihood of Implementation

8. There is an *implementation schedule* (including completion dates);

Likelihood of Implementation

9. The conservation effort is *signed/approved* by all responsible parties.

Likelihood of Effectiveness

1. The conservation plan *describes* the nature and extent of the *threats being addressed* and *how* the conservation *effort reduces* the threat(s);

Likelihood of Effectiveness

2. The conservation effort establishes *explicit objectives*, and *time frames* for achieving those objectives;

Likelihood of Effectiveness

3. The conservation effort identifies *steps* necessary to *implement* conservation *objectives*;

Likelihood of Effectiveness

4. The plan identifies quantifiable scientifically valid *parameters* that will demonstrate *achievement* of *objectives*, and *standards* for *measuring* the parameters;

Likelihood of Effectiveness

5. The plan includes provisions for *monitoring and reporting* progress on implementation and effectiveness;

Likelihood of Effectiveness

6. Principles of *adaptive management* are incorporated into the conservation plan.

Likelihood of Effectiveness

The effectiveness of conservation efforts will depend on species, habitat, location and action-specific factors.

Therefore, satisfaction of the criteria alone may not provide certainty that the conservation effort will be effective

Other Factors

- Single or multiple efforts that will benefit the species can be considered
- The listing process cannot be delayed to allow additional time to complete development of a conservation effort

Acceptance of Conservation Efforts

To determine if a formalized conservation effort(s) contributes to forming a basis for not listing a species,

The Service must find that the conservation effort(s) is

- ☐ sufficiently certain to be implemented and effective and
- ☐ contribute to the elimination or adequate reduction of one or more threats to the species identified through the section 4(a)(1) analysis (the status review)

Acceptance of Conservation Efforts

If conservation efforts preclude or remove the need to list a species,

- the Service will monitor the status of the species and the progress of implementation of the effort

IF ... in that monitoring effort the Service finds:

- Insufficient implementation progress or success in achieving objectives;
- Failure to modify the effort to adequately address a new threat or increase in the severity of an existing threat; and/or
- The conservation effort is unable to address a threat to the species...

THEN...

The Service will evaluate the status of the species and consider initiating a listing process

Guarantees?

Although the Service recognizes implementation of conservation agreements can have enormous benefits for a species, we cannot guarantee that implementation of these efforts will preclude a listing action.