Species Status Assessment

What is the SSA?
Benefits

- More rigorous species assessment
- A standardized analytical approach
  - Consistency from office to office & from decision to decision
  - Repeatable, transparent
- Science and Policy in proper context
- Provides efficiency, thus more effective conservation
SSA in ESA Processes

**Species Status Assessment**
- ID data gaps
- data collection

**Project Planning**
- roles and responsibilities
- timeliness
- clarify expectations
- identify needs

**Species Status Assessment Framework**
- shows how information was considered
- focuses discussion on major issues
- recognizes and explains uncertainty
- standardizes status reviews across program (listing, recovery, and consultation)

**Decision Analysis and Support**
- timeliness of decision recommendations
- inclusive of all decision-makers
- achieves agreement early
- document decisions for the admin. record

**Document**
- use expertise
- can utilize tech. writer
- streamlined
- reduce FR costs

**Review and Surname Process**
- clarify expectations
- timeliness

**Who:**
- Regional Office
- Field Office
- State & Other Experts
- Ecological Services ARD
- Ecological Services DARD
- Field Office PL
• The SSA Framework is a different way of thinking about biological status assessments under the ESA.

• Its purpose is to describe the viability of species in a way that supports our ESA decisions.
All SSAs must include the following elements:

1) Life History – Description of species ecology, including requirements for reproduction and survival and ecological relationships between the species and its abiotic and biotic environment.

2) Diagnosis – Description of the species’ current condition and hypothesized causal mechanisms that explain why it is in that condition.

3) Prognosis – A projection of the species’ future condition in response to future scenarios of threats, conservation actions, and changing environment, and an assessment of what that means in terms of risk to the species.
SSA Framework

Viability is the ability of a species to sustain populations in the wild beyond a biologically meaningful time frame.

- Viability is not a specific state; is or is not viable
- Instead, viability is, at a specific point in time, the likelihood of/ability to sustain populations over time

SSA Framework uses the principles of resiliency, representation, and redundancy to characterize a species’ viability at specific points in time.
Resiliency is the ability to withstand environmental stochasticity

– Resiliency means to tolerate natural, annual variation in environment (dry/hot years vs wet/cold years) and recover from periodic disturbances (floods, occasional disease)
Resiliency
Which populations are most likely to bounce back after this storm?

"I see a storm headed our way!"

"Oh, how I wish I had a family!"

"Take cover!"
Redundancy is the ability to withstand catastrophic events

- Redundancy means that not all populations are exposed to catastrophic events concurrently, i.e., spreading the risk
**Representation** is the adaptability or evolvability of the species; “adaptive capacity” or “evolutionary resiliency”

- Representation is the ability to adapt to changing physical (climate, habitat) and biological (diseases, predators) conditions
SSA Framework

Mountain Mouse
Misty Mountain

Paradise Palms Mouse
Treasure Grove
Dead Man Dunes
Realm of Spirits
Snow Melt Thicket

Coastal Mouse
Castaways
Cannibal Cove
Message in a Bottle
Beach Bums

Representation
What diversity do you see among populations?
• So, viability is the ability of the species to maintain multiple (redundancy), sustaining populations (resiliency) across the species’ ecological settings (representation) in order to withstand catastrophes (redundancy), environmental stochasticity (resiliency), and changes in environmental conditions (representation).

Shafer and Stein describe viability simply as “saving some of everything” (REP) and “enough to last” (RES & RED)
Stages of the SSA

Based on existing knowledge/data

Stage 1
Characterize species’ needs & ID factors that influence those needs

Stage 2
Estimate of species’ current status

Stage 3
Prediction of species’ future status given a range of plausible scenarios

Forecasts
Scenarios depend on decision context

- **Listing**
  - Stressors and conservation efforts

- **Recovery**
  - Alternative recovery strategies

- **Consultation**
  - Project vs no project
  - Project design options
  - Reasonable and prudent measures
Working with Partners

Memorandum

To: Assistant Director, Ecological Services.

From: Principal Deputy Director.

Subject: Clarification of Memorandum titled "State Representatives on Species Status Assessment Teams," dated October 13, 2017.

This memo clarifies and supplements my previous memorandum of October 13, 2017, regarding the requirement for state representation on Species Status Assessment (SSA) teams convened to support ESA classification decisions (i.e., listing, delisting, or reclassification decisions).

My expectation is that any SSA developed to support an ESA classification decision should involve the participation from at least one state representative per state. Invitations for participation shall be extended to the Governor’s office or the state agency that has jurisdiction over the species to identify a state employee with necessary expertise to serve as the state representative on the SSA teams. In most cases, the state agency with jurisdiction will be the state fish and wildlife agency, but in some cases may be another state agency, such as a department of agriculture or natural resources. State representatives participating on SSA teams must be State employees (i.e., not a contractor and have relevant expertise in the ecology of the species or similar species), the ecosystem, or the relevant biological stressors being analyzed.

This guidance is effective immediately.

United States Department of the Interior
FISCH AND WILDLIFE SERVICE
Washington, DC 20240

JAN 10, 2018

[Signature]
Our objectives with respect to expert involvement in the SSA process are to:

- Elicit knowledge (information and judgment) from the most qualified experts with regard to the species’ current and future status
- Represent the diversity of expert judgment within the scientific community
- Facilitate open discussion and independent input in a cooperative manner
- Ensure timeliness and efficiency in conducting the assessment
- Safeguard the objectivity, neutrality, and scientific rigor of the assessment
Expert Involvement in the SSA Process

❖ Expert involvement may include the following:
❖ Participation from scientists who provide data, expert judgment, and analytical assistance on species biology, ecology, and/or environmental conditions that influenced viability at the population and species levels
❖ Degrees of involvement from individuals will vary based on expertise, need, and availability
❖ Expert participation may take place in a variety of forms, including group workshops, data delivery, webinars, individual meetings, and review of the SSA and its components at various stages of the process, including review of the final product (expert review is separate from peer review)
How to Start Early

SSA Process

1. Information Management
2. Biological Analysis
3. Communication
4. Decision Analysis

Decision Document
New Info
Peer Review
Reports
Briefing Summary

Literature
Other Data
Expert Knowledge
Concept Models
C&E Tables
Pop Models
Risk Tables
Spatial Analysis

Analytical Effort
SSA Resources

NCTC Course Resources – Introduction to the Species Status Assessment

https://nctc.fws.gov/courses/csp/csp3910/resources/

SSA Short Course

https://sites.google.com/site/r4sdmsssa/