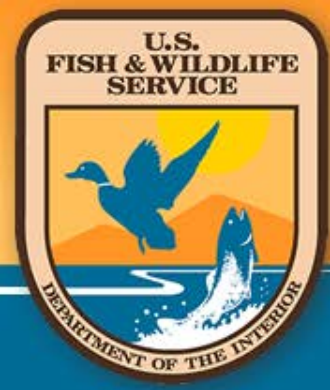




Species Status Assessment

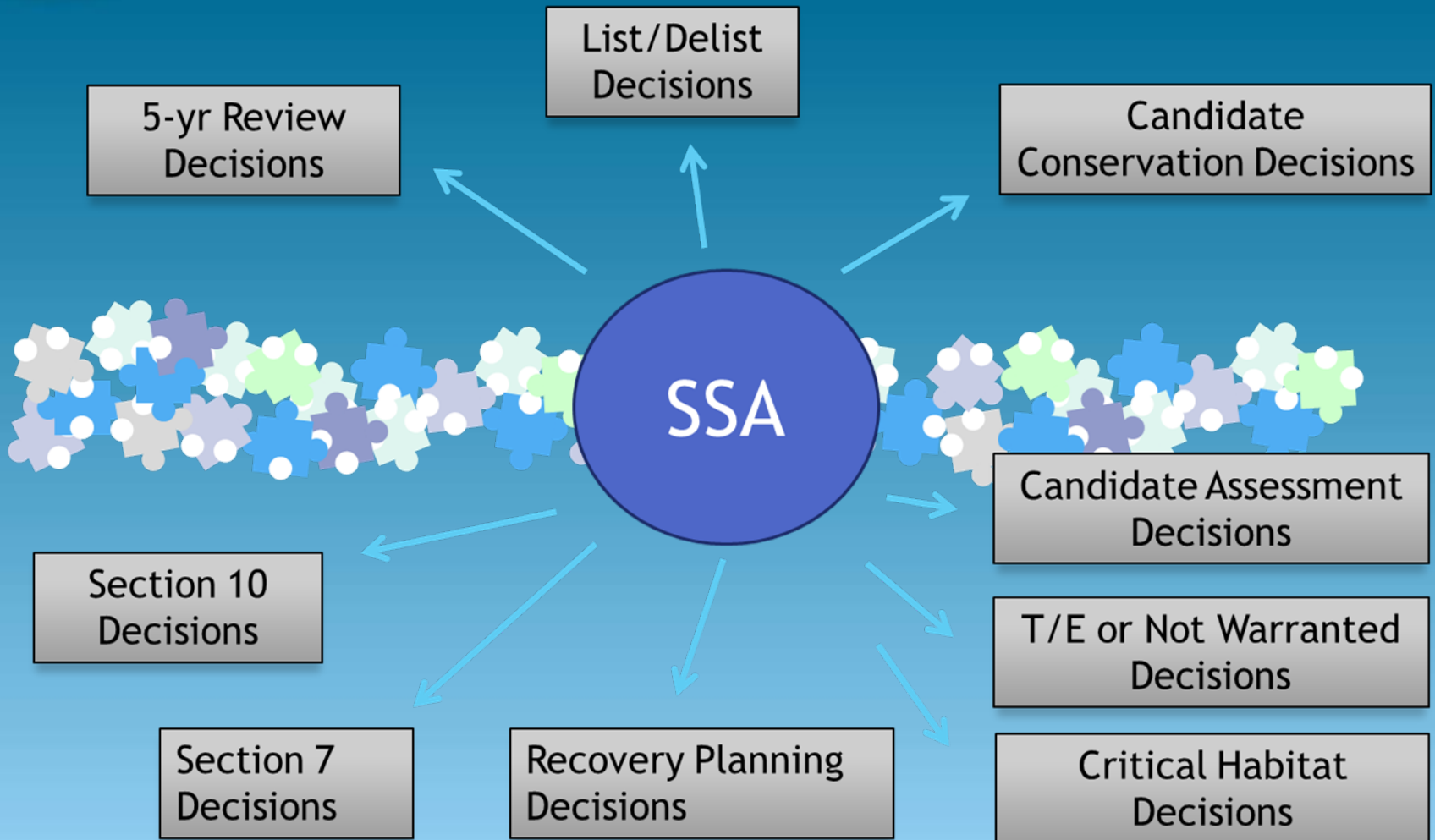
What is the SSA?





Species Status Assessment

BIG PICTURE





Species Status Assessment Framework

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

Start Early!

Species 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

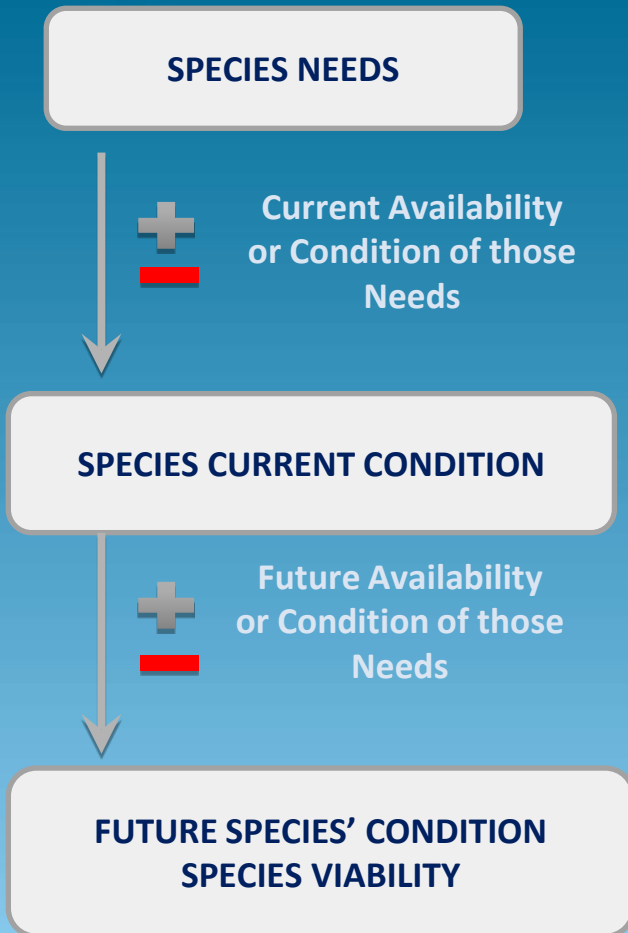
Who:
Regional Office
Field Office

Who:
Field Office
Regional Office
State & Other Experts

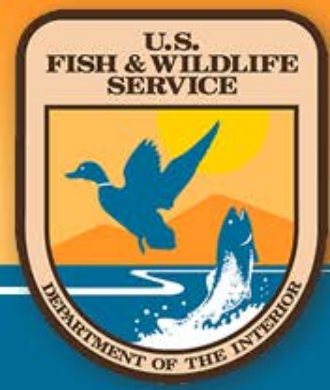
Who:
Ecological Services ARD
Ecological Services DARD
Field Office PL



SSA Framework



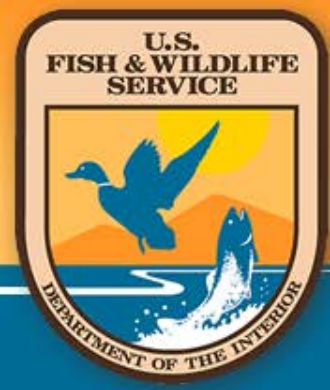
- The SSA Framework is a different way of thinking about biological status assessments under the ESA.
- Its purpose is to describe the viability of species in a way that supports our ESA decisions.



Minimum Requirements

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.

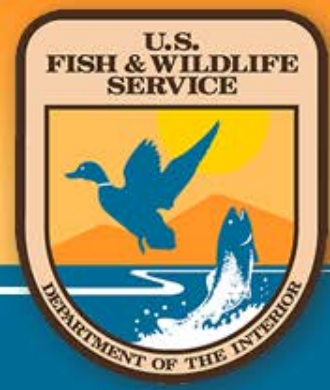


SSA Framework

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.



SSA Framework

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)



"TAKE COVER!"

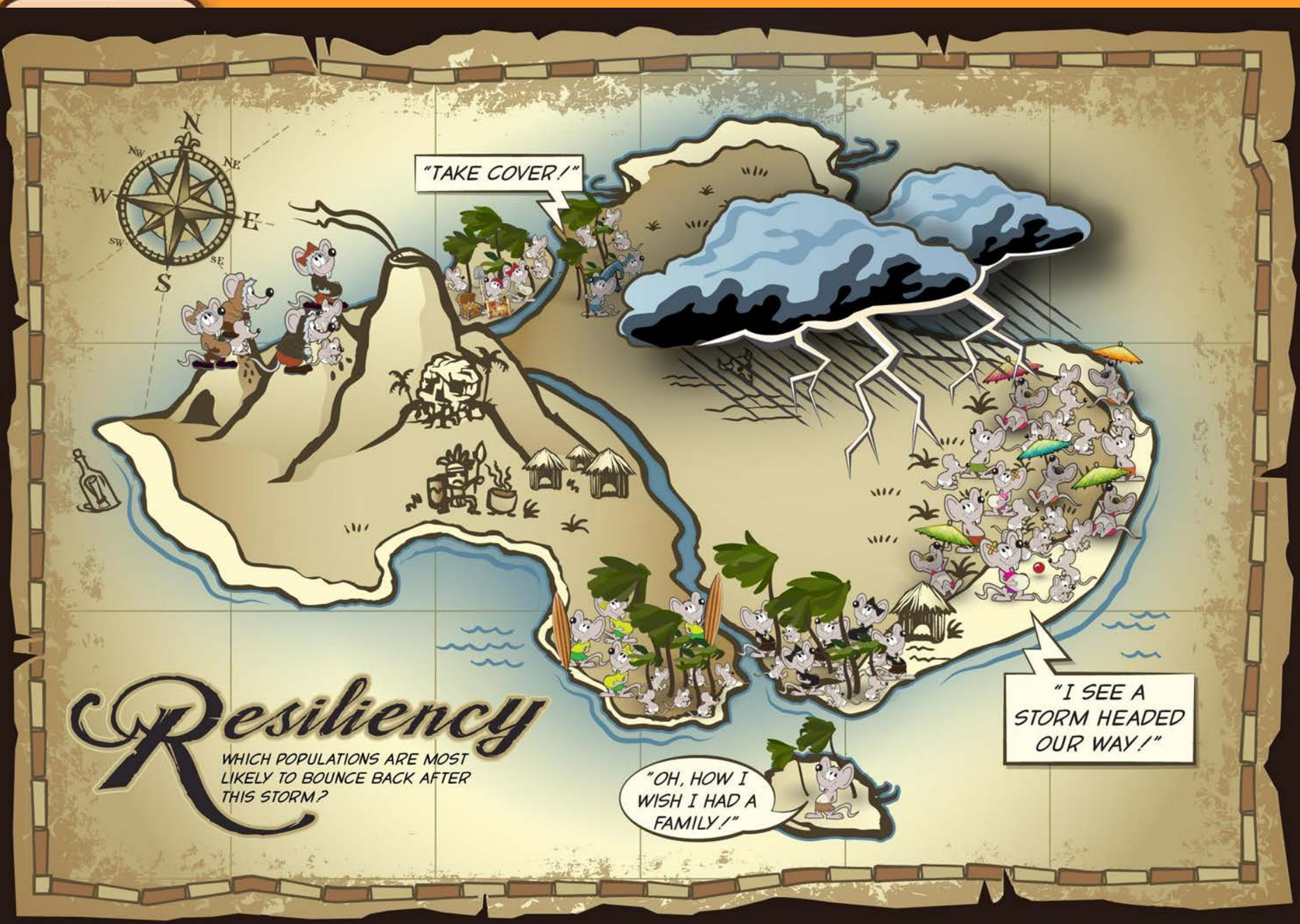


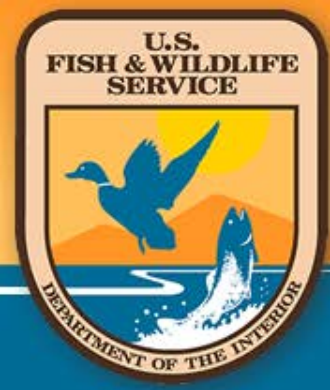
"I SEE A STORM HEADED OUR WAY!"

"OH, HOW I WISH I HAD A FAMILY!"

Resiliency

WHICH POPULATIONS ARE MOST LIKELY TO BOUNCE BACK AFTER THIS STORM?





SSA Framework

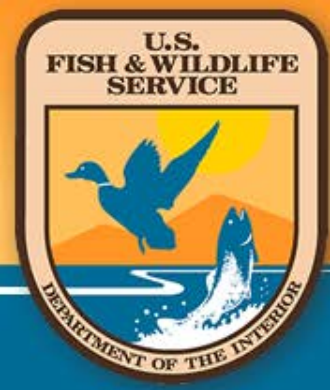
Redundancy is the ability to withstand catastrophic events

- Redundancy means that not all populations are exposed to catastrophic events concurrently, i.e., spreading the risk



Redundancy

HOW MANY MICE ARE LIKELY TO SURVIVE
THE TSUNAMI AND RECOLONIZE THE ISLAND?



SSA Framework

Representation is the adaptability or evolvability of the species; “adaptive capacity” or “evolutionary resiliency”

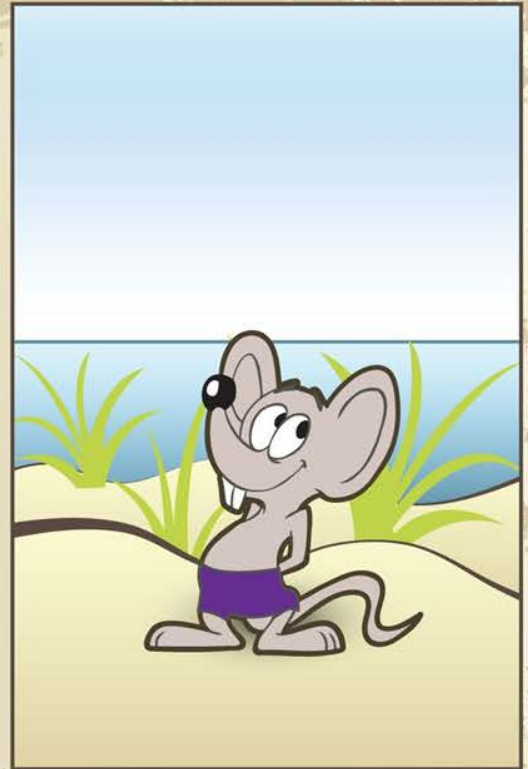
- Representation is the ability to adapt to changing physical (climate, habitat) and biological (diseases, predators) conditions



MOUNTAIN MOUSE



PARADISE PALMS MOUSE



COASTAL MOUSE



DARLOST'S
DOME



MISTY
MOUNTAIN



TREASURE
GROVE



DEAD MAN
DUNES



REALM OF
SPIRITS



SNOW MELT
THICKET



CASTAWAYS



CANNIBAL
COVE



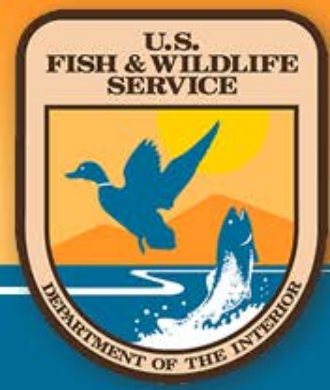
MESSAGE IN
A BOTTLE



BEACH
BUMS

Representation

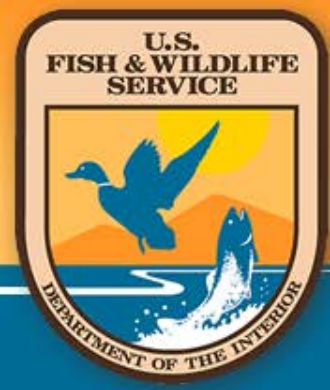
WHAT DIVERSITY DO YOU SEE AMONG POPULATIONS?



What is viability?

- 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

Forecasts

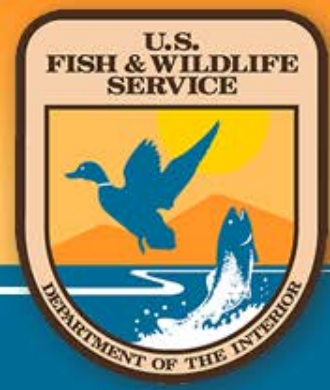
Stage 1
Characterize species' needs & ID factors that influence those needs



Stage 2
Estimate of species' current status



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



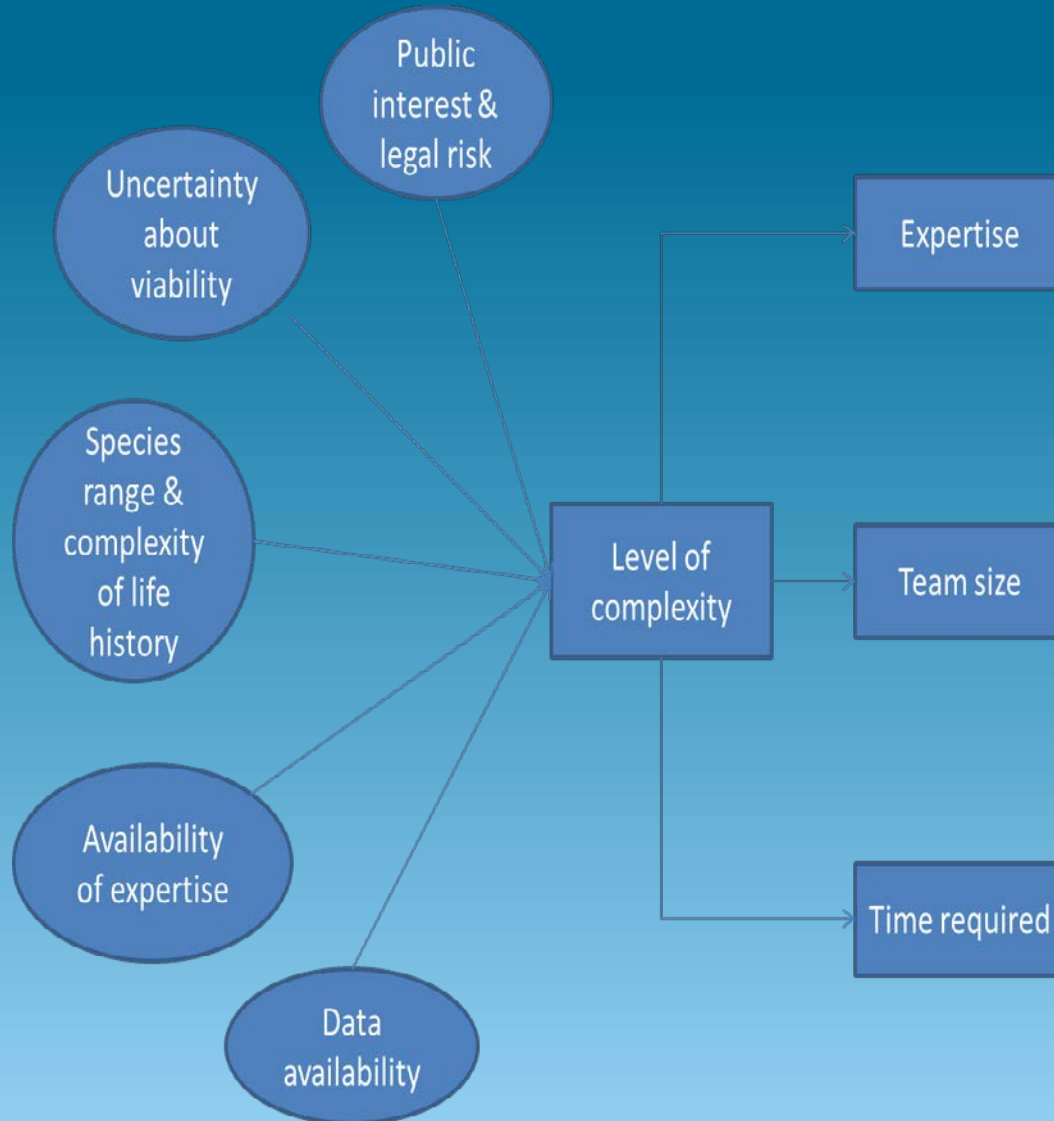
Stage 3: Future Condition

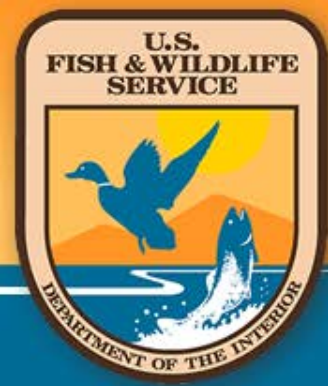
Scenarios depend on decision context

- **Listing**
 - Stressors and conservation efforts
- **Recovery**
 - Alternative recovery strategies
- **Consultation**
 - Project vs no project
 - Project design options
 - Reasonable and prudent measures



Scalability





Working with Partners



United States Department of the Interior


FISH AND WILDLIFE SERVICE
Washington, D.C. 20240



In Reply Refer To:
FW/A5/DOCCB/PS007181

JAN 16 2018

Memorandum

To: Assistant Director, Ecological Services
From: Principal Deputy Director 
Subject: Clarification of Memorandum Titled "State Representation on Species Status Assessment Teams," dated October 13, 2017

This 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).

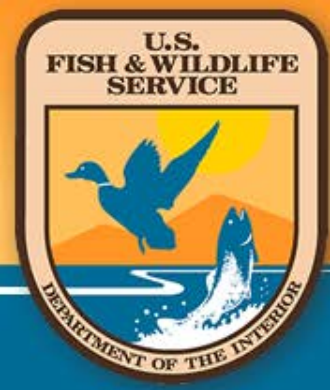
My expectation is that any SSA developed to support an ESA classification decision should invite participation from at least one state representative per state. Invitations for participation shall be extended to the Governor's office or the state agency that has jurisdiction over the species to identify a state employee with necessary expertise to serve as the state representative on the SSA team. 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 a State employee (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.



Expert Involvement in the SSA Process

- ❖ 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



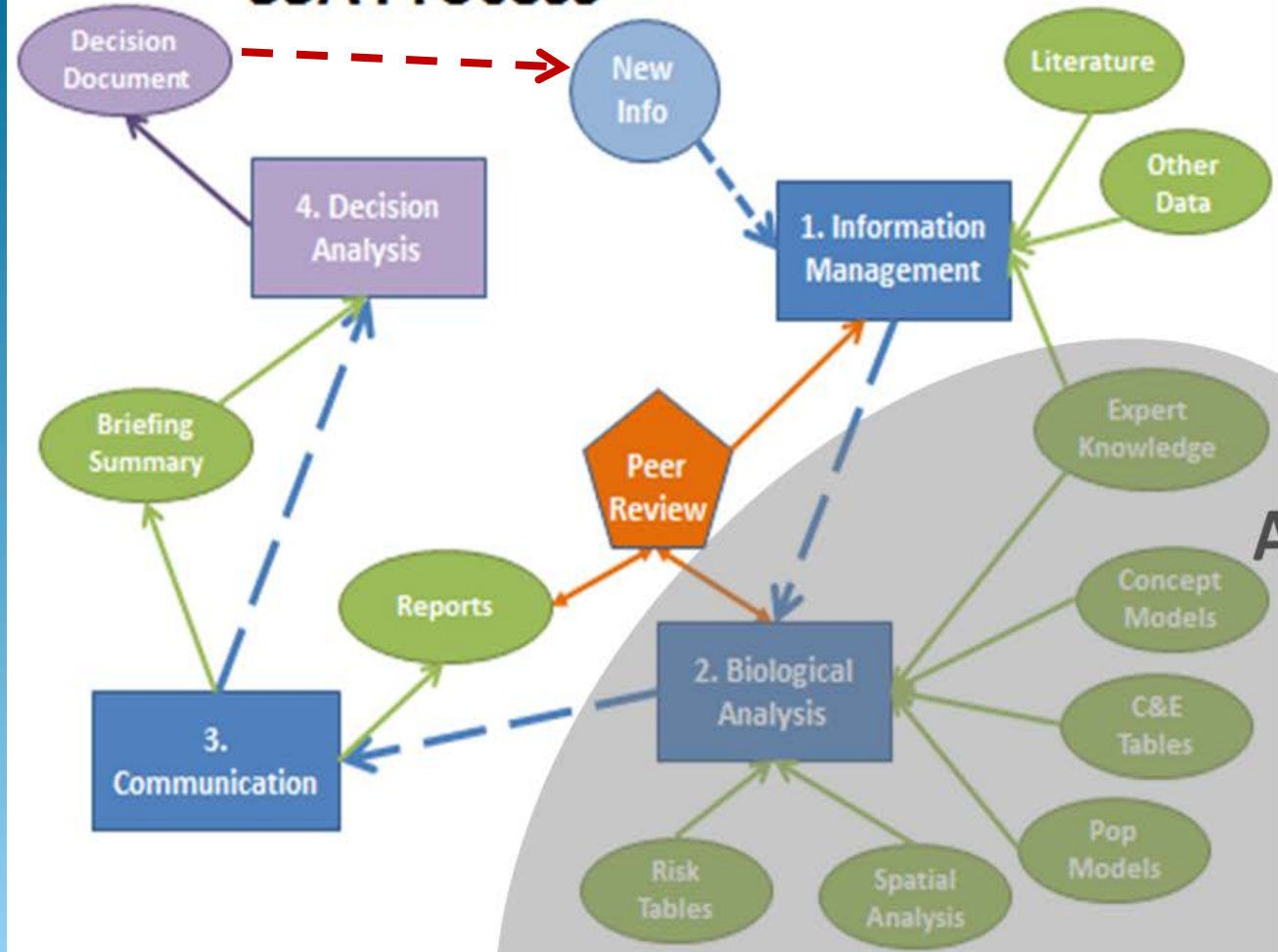
Expert Involvement in the SSA Process

- ❖ 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



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/r4sdmssa/>

