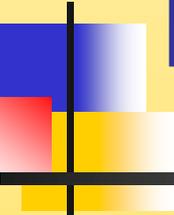


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# Mexican Spotted Owl in Utah

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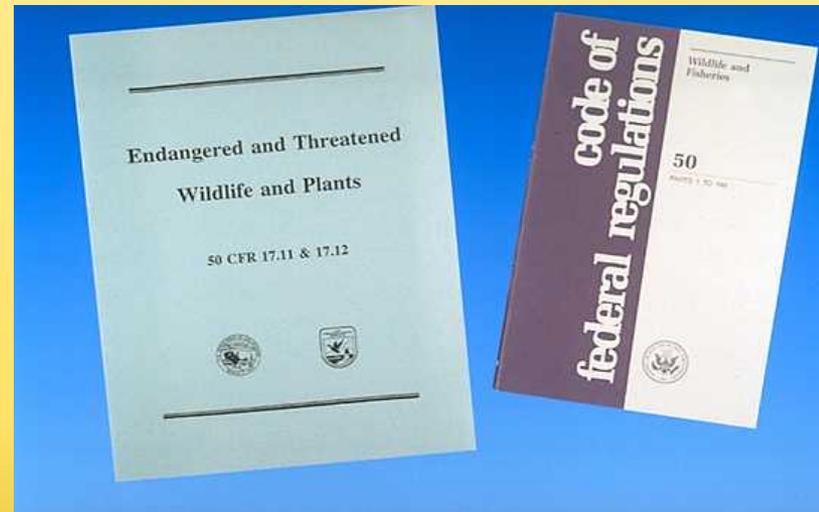


Betsy Herrmann  
U.S. Fish and Wildlife Service  
Ecological Services  
Utah Field Office

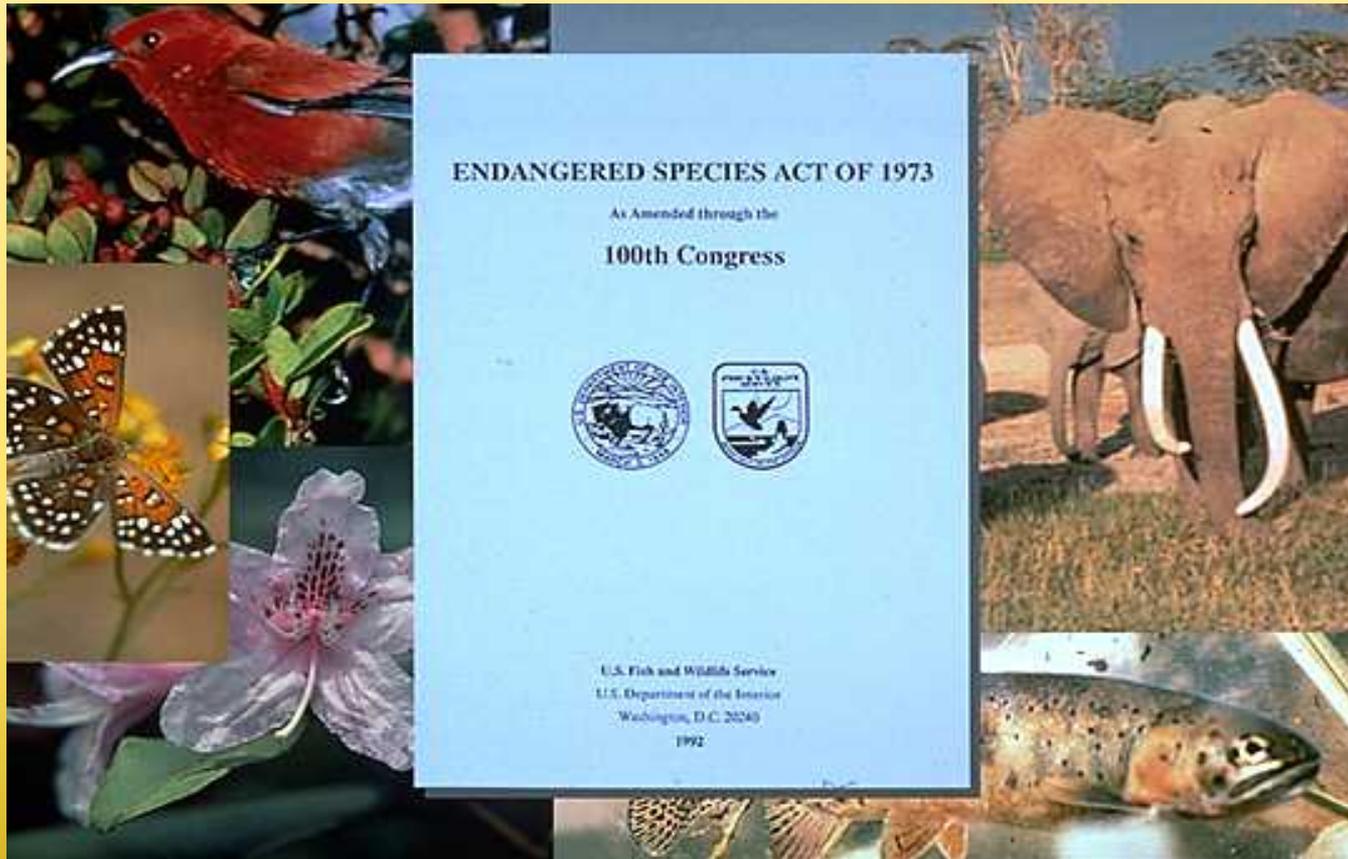


# Laws, Regulations, and Guidelines

- Statutory Authority
  - Endangered Species Act
- Regulations
  - 50 CFR 402
- Consultation Handbook

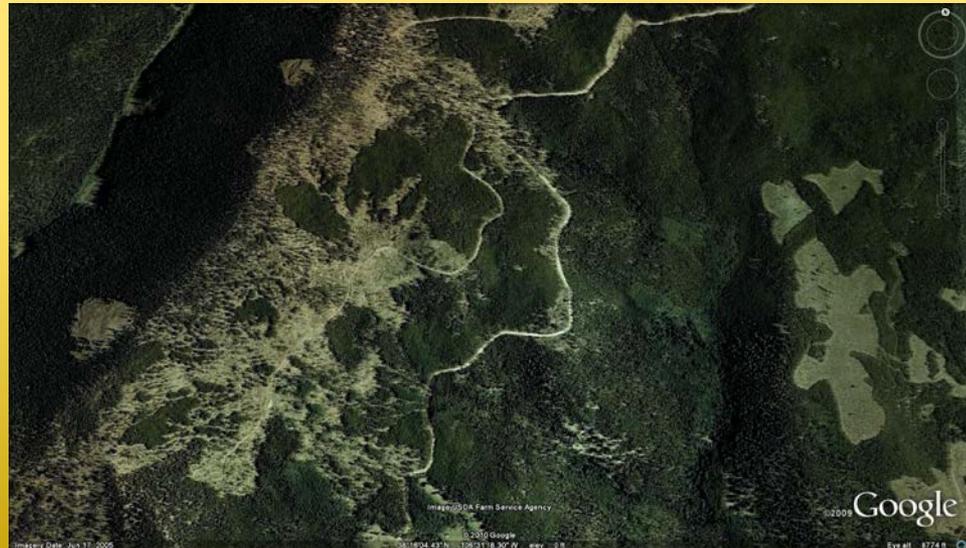


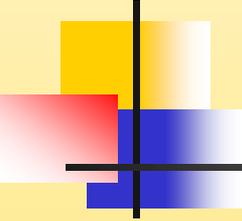
# Listed as threatened in 1993



# Primary Listing Factors for Mexican Spotted Owl

- Timber harvest and fires
- Increased predation associated with habitat fragmentation
- Inadequacy of existing regulatory mechanisms



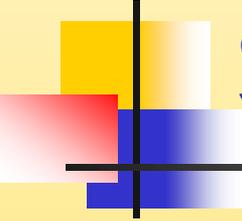


# Listing of the Mexican Spotted Owl

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- Provided protection under the Endangered Species Act
  - Section 9: take prohibitions
  - Section 7: consultation
  - Designation of critical habitat
- Recovery Plan





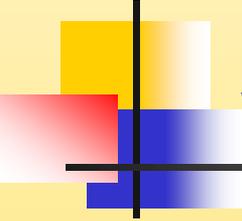
# Section 9 of the Act

---

- Unlawful to “take” any threatened or endangered animal species
- Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Applies to all (private companies, citizens, as well as public agencies)



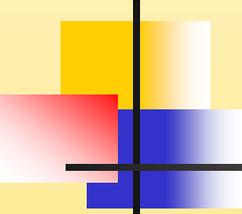


# 50 CFR 17.3

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- Definition of “Harm”
  - Significant habitat modification or degradation that results in death or injury to listed species
- Definition of “Harass”
  - Actions that create the likelihood of injury to listed species





# Section 7

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Actions funded, authorized, or carried out by federal agencies will not:

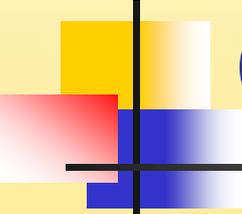
- **Jeopardize the continued existence of listed species**
  - would appreciably reduce the likelihood of the species survival and recovery
- **Destroy or adversely modify critical habitat**
  - would appreciably reduce the value of critical habitat for the survival and recovery of the listed species



# Section 7 Consultation

- Is between Federal action agency and USFWS
- Consultations vary depending on proposed actions and the level of potential impact
- Federal agency makes the determination of effect





# Critical Habitat

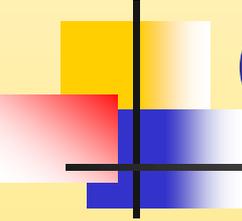
---

Specific geographic areas formally designated by USFWS which contain the physical or biological features (**Primary Constituent Elements**):

- (1) essential to the conservation of the species
- (2) that may require special management considerations or protection

May be within the geographical area occupied by the species at the time of listing or not, if those areas are essential for the conservation of the species.



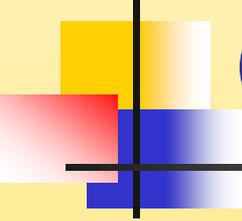


# Critical Habitat

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- 1993 - Not initially designated (found not to be determinable), but USFWS is sued.
- 1995 – CH designated
- 1998 – CH removed because of lack of NEPA compliance; USFWS is then sued again.
- 2000 – USFWS ordered to propose CH (with NEPA)
- 2001 – CH designated, excludes FS lands in AZ & NM
- 2003 – Complaint lodged, court says try again.
- 2004 – 8.6 million acres designated (2,252,857 ac in Utah) – Only on Federal land (BLM, NPS, FS in Utah)





# Critical Habitat

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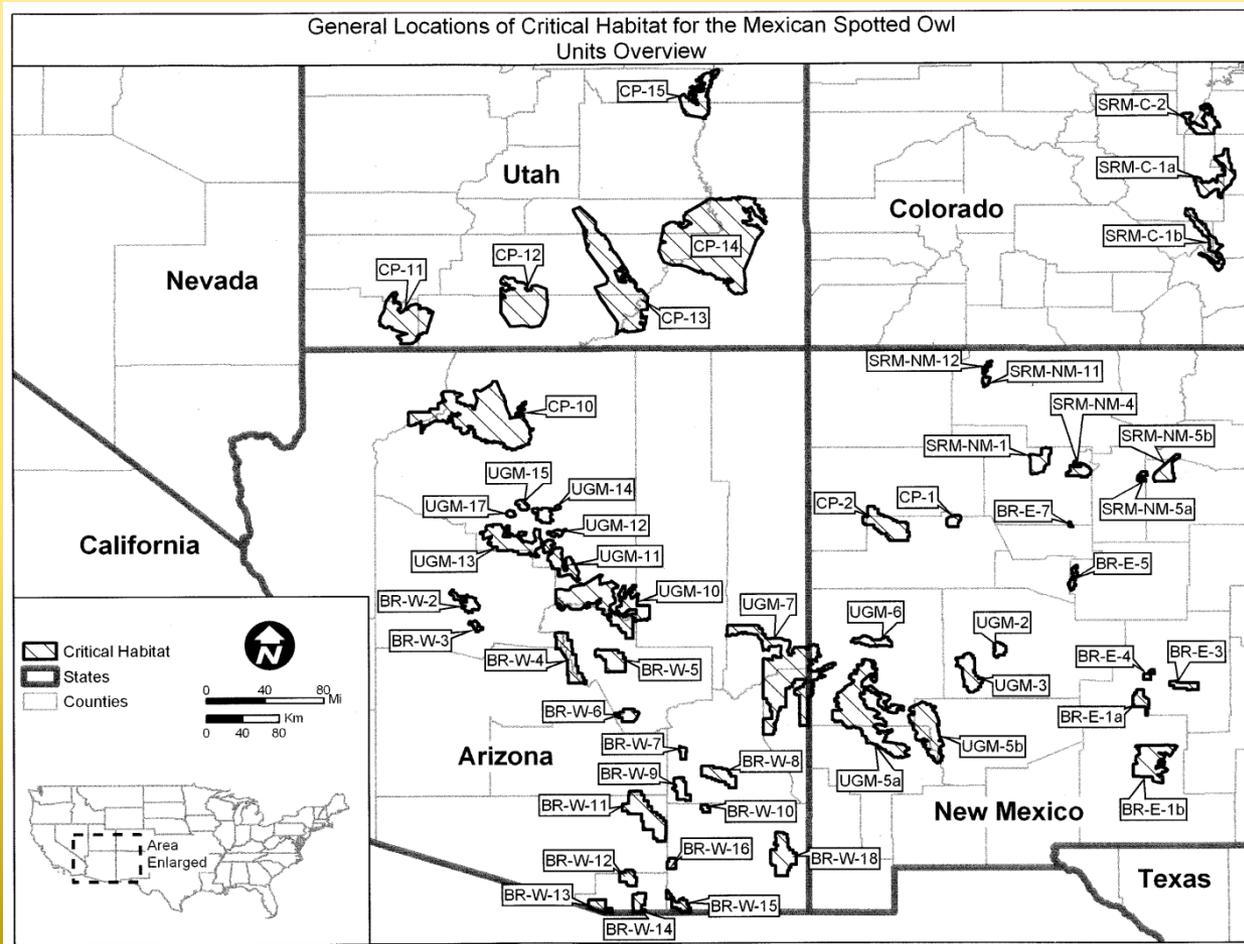
Primary constituent elements (PCEs) related to canyon habitat include one or more of the following:

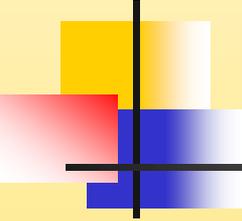
- (1) presence of water (often providing cooler and often higher humidity than the surrounding areas);
- (2) clumps or stringers of mixed conifer, pine-oak, pinyon-juniper, and/ or riparian vegetation;
- (3) canyon wall containing crevices, ledges, or caves; and
- (4) high percent of ground litter and woody debris.



# Critical Habitat

<http://criticalhabitat.fws.gov>





# Recovery Planning

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- 1995 – Original plan for MSO
- 2012 – Plan revised

Goal is to recover owl populations to the point that the owl can be removed from the Federal list of endangered and threatened species.



# Habitat Parameters – Canyon PCEs

- Presence of water-microclimate
- Tree cover/type
- Canyon wall height
- Rock faces contain crevices, ledges, or caves
- Lots of litter/woody debris– food supply



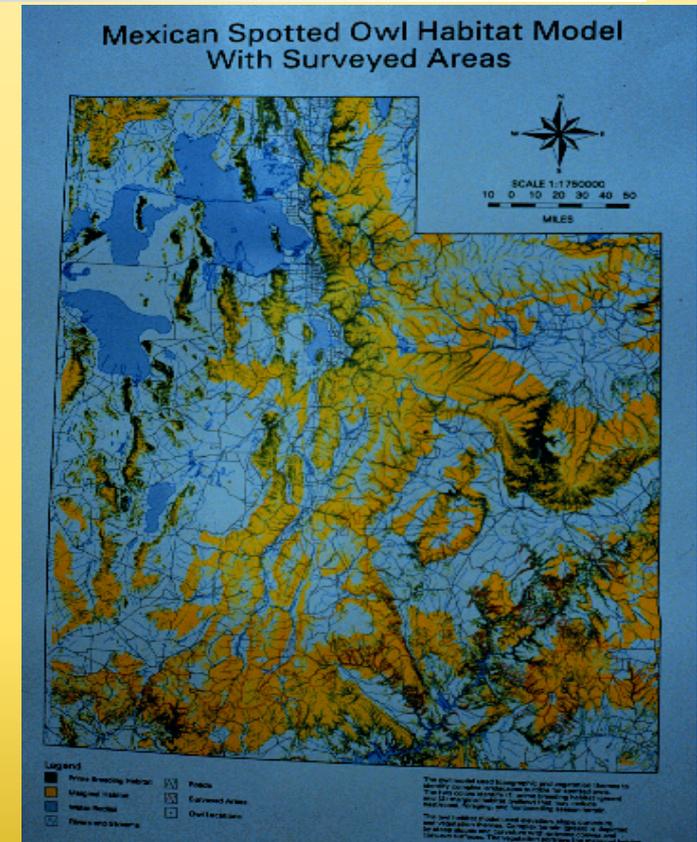
- Canyons Meeting the 2x2 Rule (<2km wide and >2km long)
- Steep Slope Mixed Conifer near Canyons



# Habitat Models

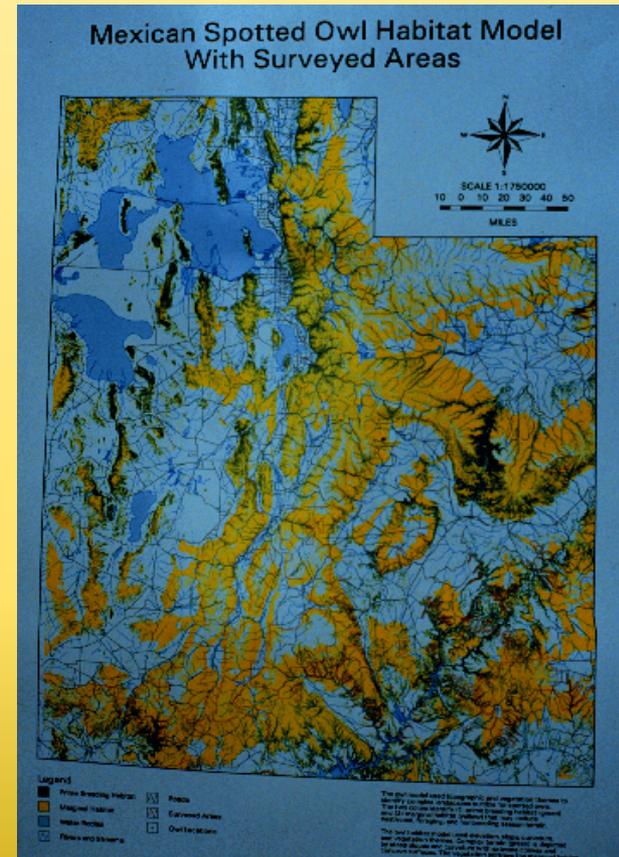
- Willey and Spotskey 1997
  - Based on vegetation, slope, aspect, and ruggedness
  - Depicts possible range of potential habitat
- Willey and Spotskey 2000
  - Refined 1997 model to better define nesting and roosting habitat.

[www.fws.gov/utahfieldoffice](http://www.fws.gov/utahfieldoffice)

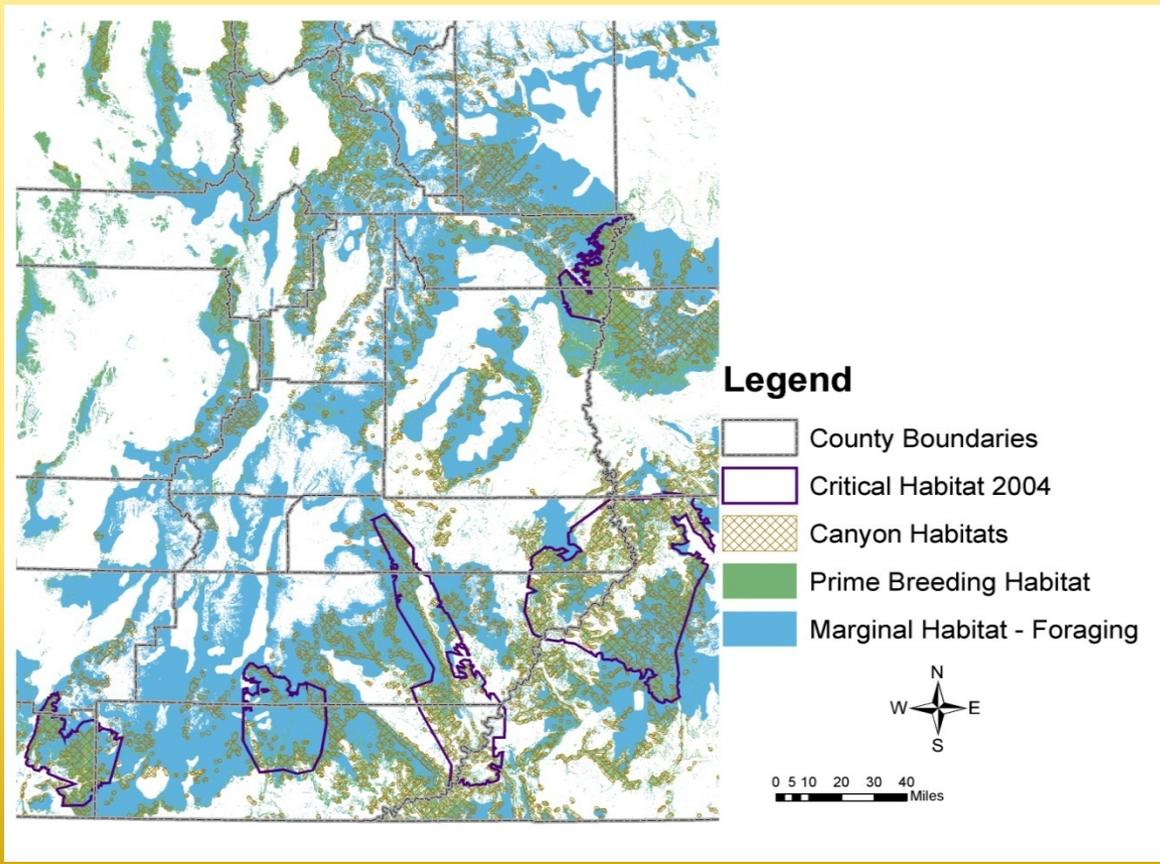
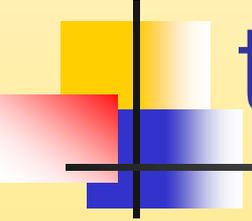


# Suitable Habitat

- How to determine what is Suitable Habitat?
  - Habitat Models- identifies potential nest/roost habitat
  - Field Evaluations – critical!
  - Coordination with Experts



# Critical Habitat Units Relative to Modeled Areas

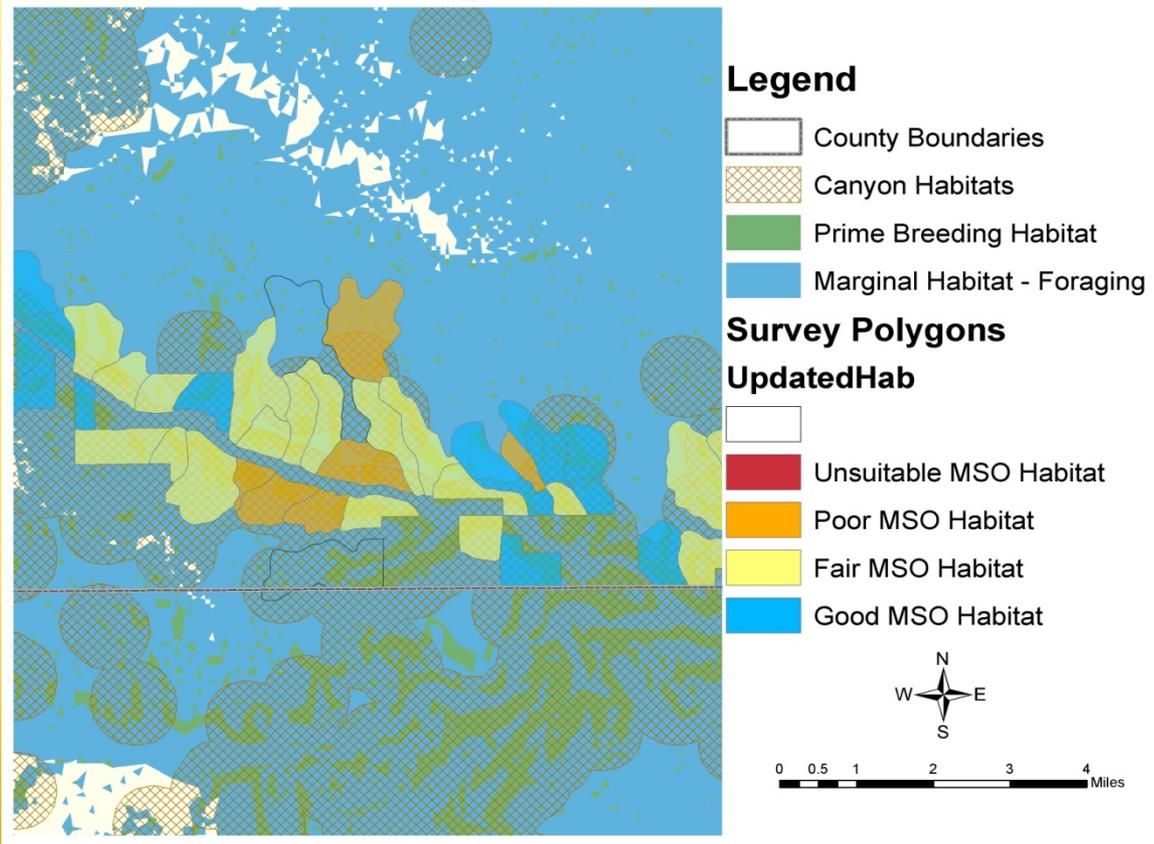


Suitable habitat is not always in designated Critical Habitat.

If MSO status is unknown, survey all areas in 2000 model and canyons meeting 2x2 rule (<2km wide and >2km long)



# Vernal BLM

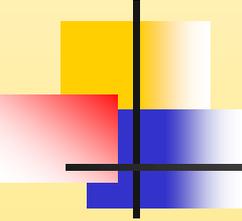


The BLM in Vernal used the models to designate potential habitat within the Field Office area.

This potential habitat was field verified and rankings assigned to habitat polygons

Surveys are required in areas ranked "Fair" or better



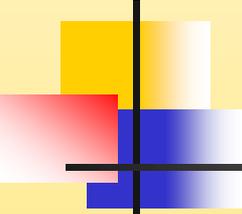


# Endangered Species Act

---

- Prohibits the taking of any federally endangered or threatened animal species.
- Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.



- 
- 
- **Harm** includes significant habitat modification or degradation that results in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.
  - **Harass** is defined as intentional or negligent actions that create the likelihood of injury to listed wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering.



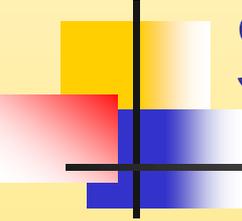
# Section 7(a)(1)

- All Federal agencies shall use their authorities in the furtherance of the purposes of this Act by carrying out programs for the conservation of endangered and threatened species.
- Is where agencies are guided to conserve.



Photo credit: Kyle Flessness





## Section 7(a)(2)

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Each Federal agency must, in consultation with the Service, ensure that any action funded, authorized, or carried out by the agency is not likely to:

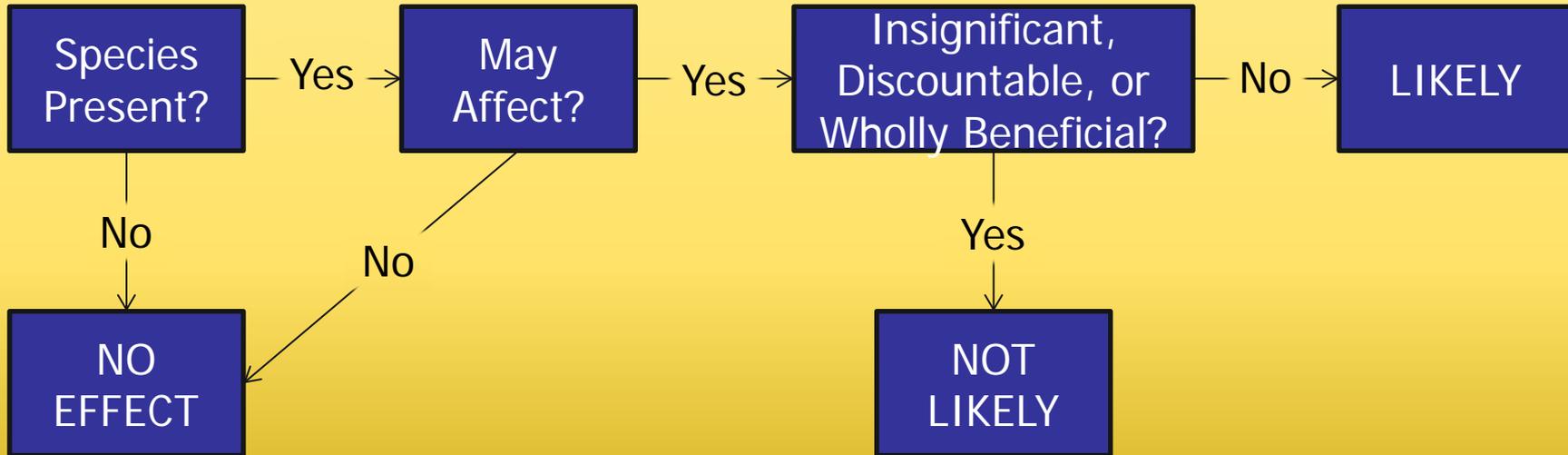
- jeopardize the continued existence of any endangered or threatened species or
- result in the destruction or adverse modification of critical habitat.

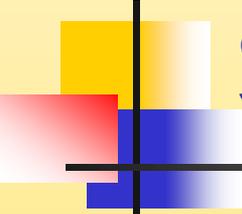
Is where conservation is measured against impacts.



# Section 7 Consultation

- Federal agency considers the effects of their actions on listed species.



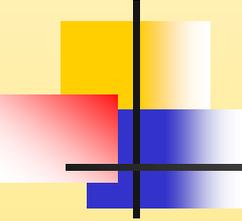


# Section 7 Consultation

---

- What USFWS does:
  - We assist federal agencies in meeting their responsibilities under the Act.
  - Review all information provided by action agency.
  - Evaluate status of species and critical habitat.
  - Evaluate effects of the action.
  - Formulate a biological opinion, regarding jeopardy and adverse modification of critical habitat.
  - Discuss with the action agency the basis of the opinion. (50 CFR § 402.12(g)).



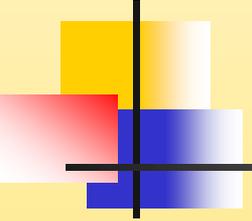


# Section 7 Consultation

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- What we need:
  - Project Description
  - Description of the specific area affected by the action (Action Area)
  - A description of listed species or critical habitat that may be affected (Effects Analysis)

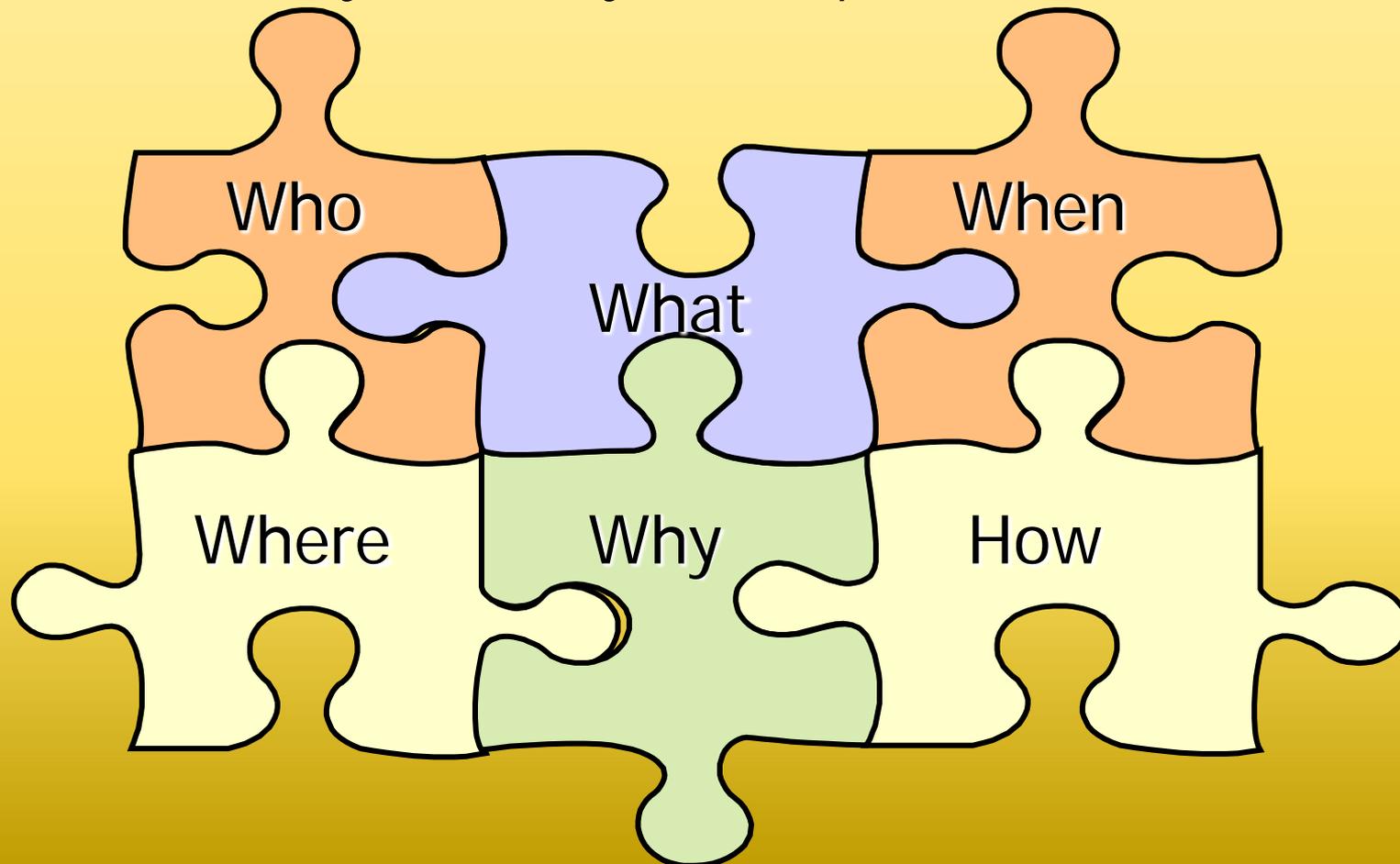




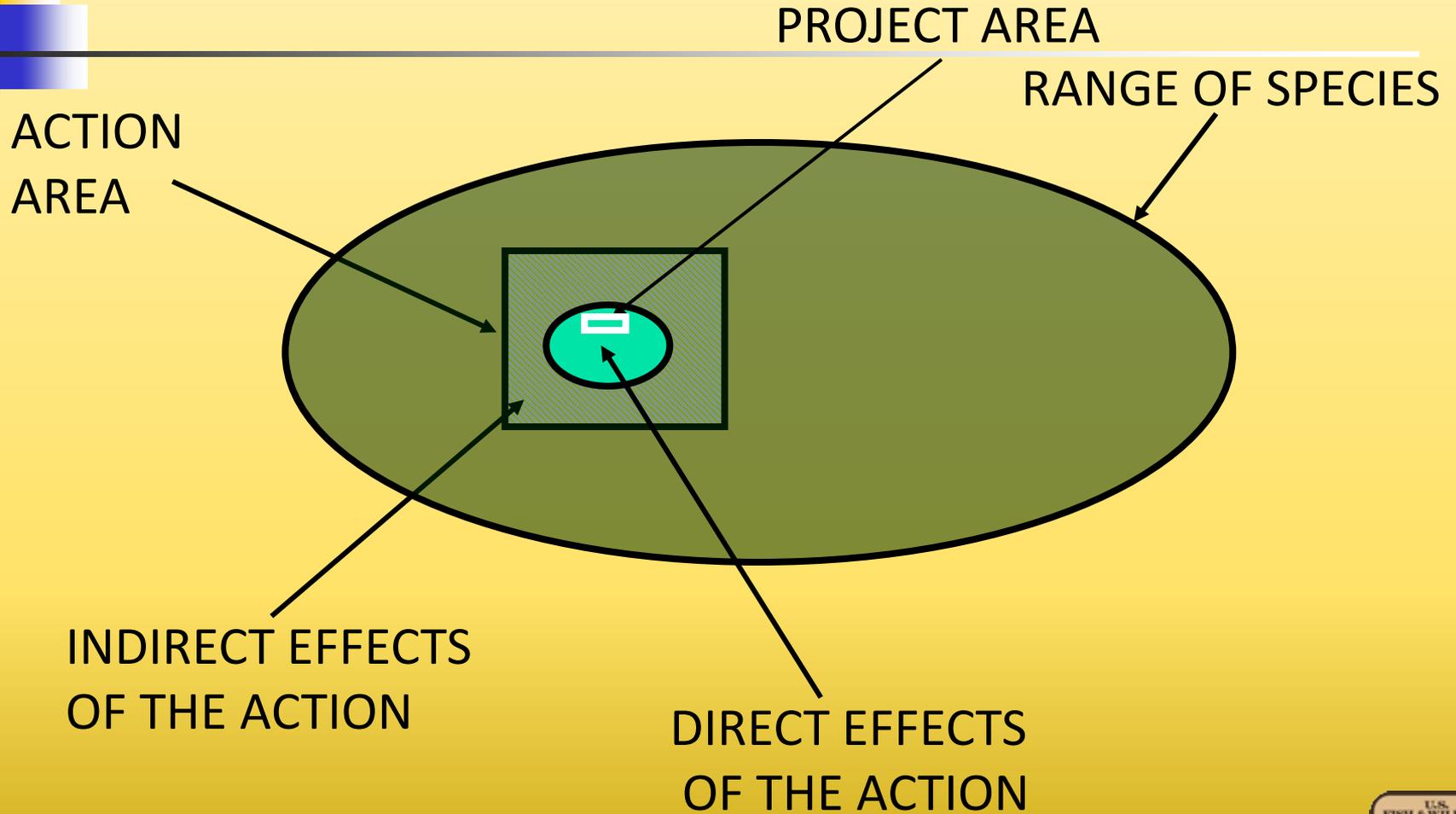
# Project Description

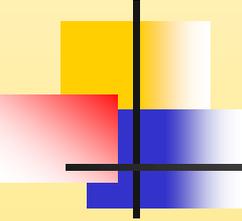
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Includes any measures you will implement to avoid adverse effects



# Action Area





# Effects Analysis

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- Beneficial Effects
- Direct Effects
- Indirect Effects
- Effects of Interrelated Activities
- Effects of Interdependent Activities
- Cumulative Effects



# Evaluating Proposed Projects

## Types of action

- Permanent
  - Carries on for more than one year
  - Permanent habitat loss
  - Permanent structures
- Temporary
  - Completed outside of breeding season
  - No permanent habitat loss



# Evaluating Proposed Projects

- Within ½ mile of suitable habitat?

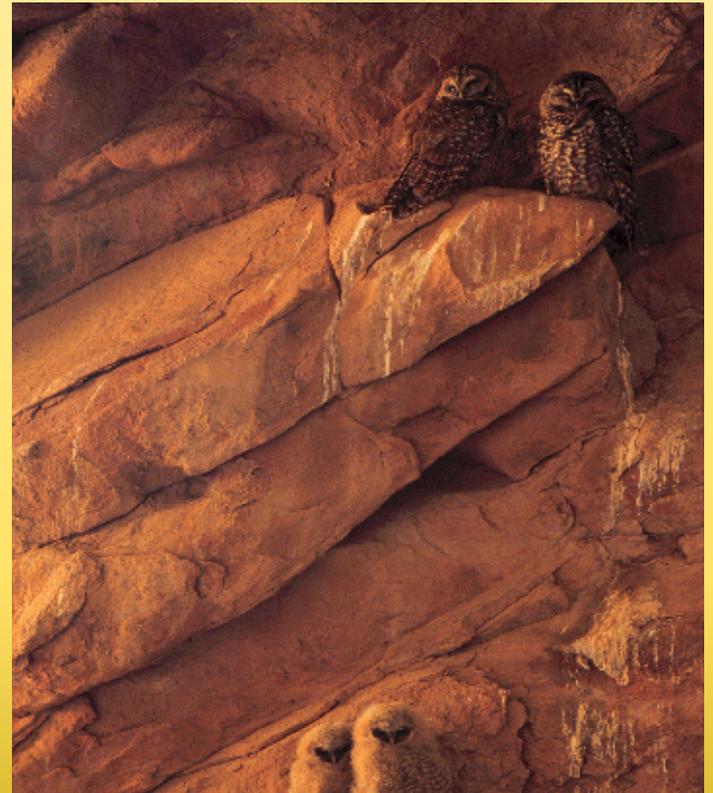
Also look at:

- Noise impacts
- Potential for impacts to expand into habitat in future



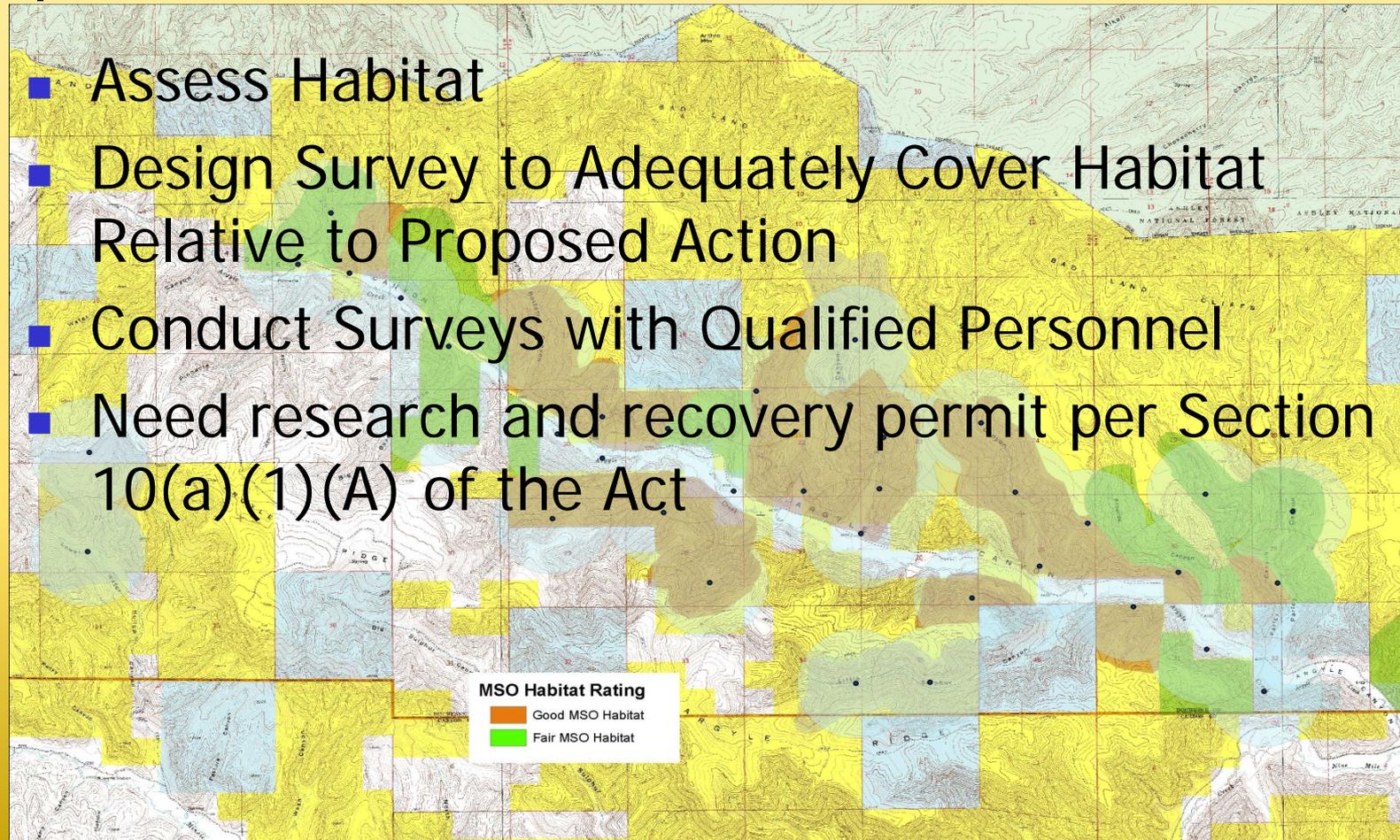
# If impacts to MSO Can't be Avoided

- Is species occupancy and distribution information complete and available ?  
If not...
- Inventory for owls before implementing management actions



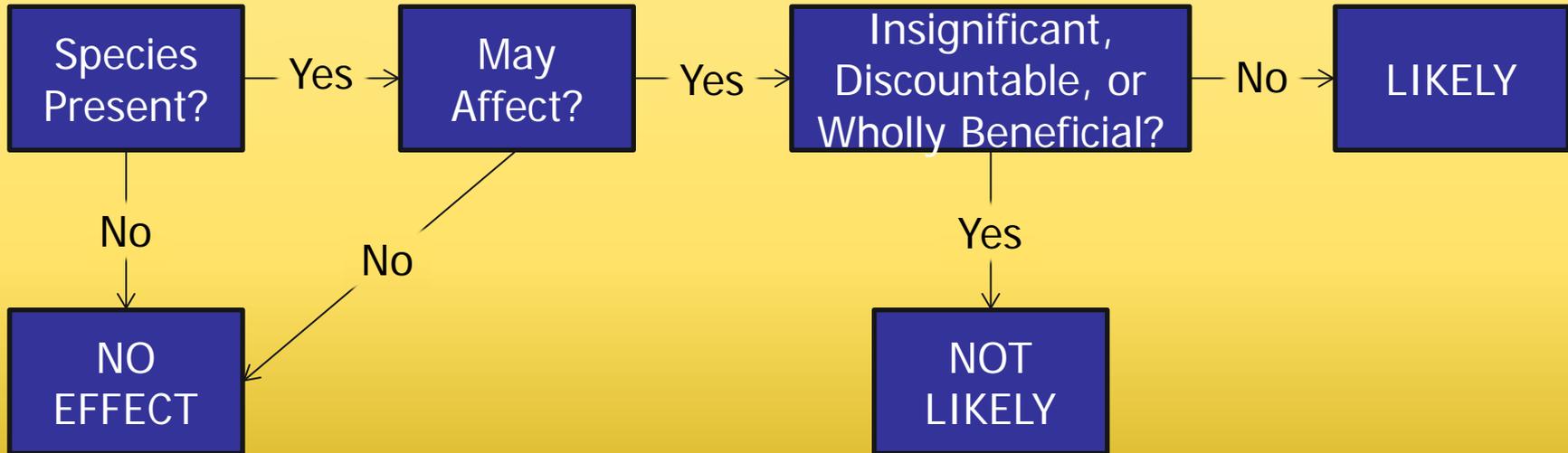
# Survey Requirements

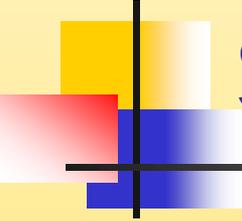
- Assess Habitat
- Design Survey to Adequately Cover Habitat Relative to Proposed Action
- Conduct Surveys with Qualified Personnel
- Need research and recovery permit per Section 10(a)(1)(A) of the Act



# Section 7 Consultation

- Federal agency considers the effects of their actions on listed species.





# Section 7 Consultation - Informal

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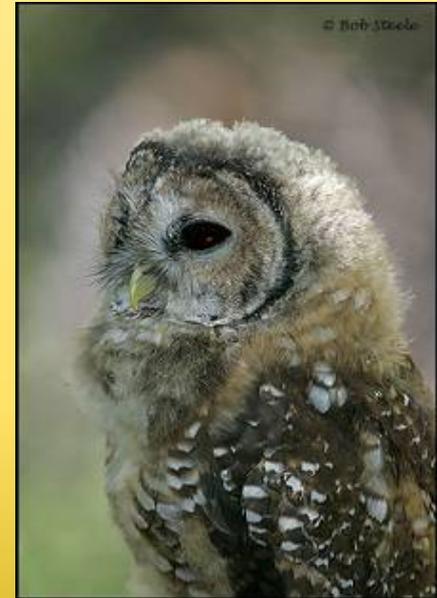
- “No Effect”
  - “No effect” means there are absolutely no effects of the project, positive or negative
- “May Affect, Not Likely to Adversely Affect”
  - Any effect no matter how insignificant
  - An effect exists even if only one individual or habitat segment may be affected
  - Can be beneficial



# Section 7 Consultation - Formal

- “May Affect, Likely to Adversely Affect”
  - Request from Federal Action Agency with adequate Biological Assessment
  - Incidental Take Statement

If Jeopardy → USFWS proposes Reasonable and Prudent Alternatives to the project.



# Impacts to Critical Habitat

- Is the proposed project likely to impact critical habitat?
- If so:
  - Separate effect determination
  - Catalog cumulative impacts per Ecological Management Unit



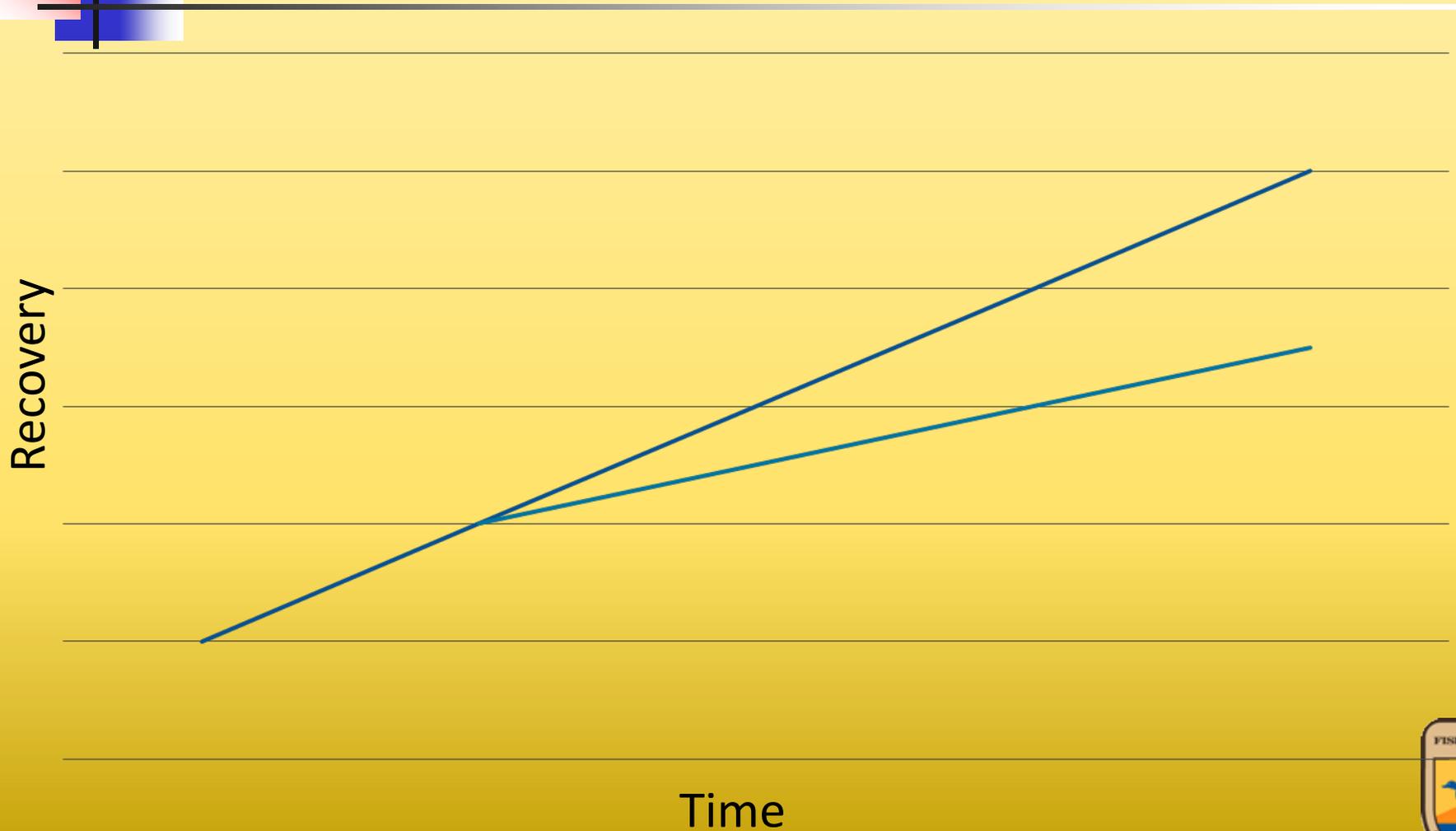
# Death by a Thousand Cuts

Recovery

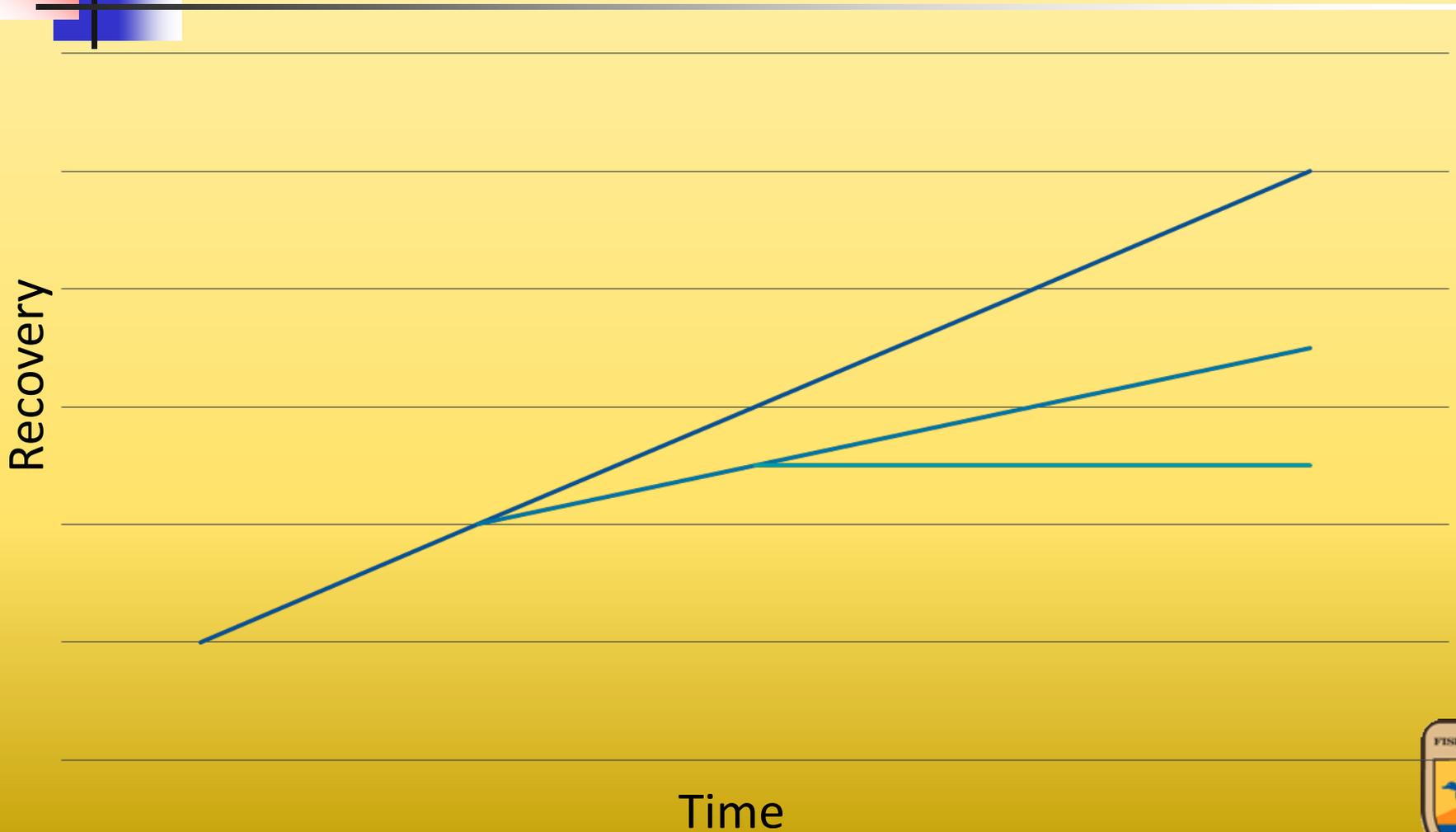
Time



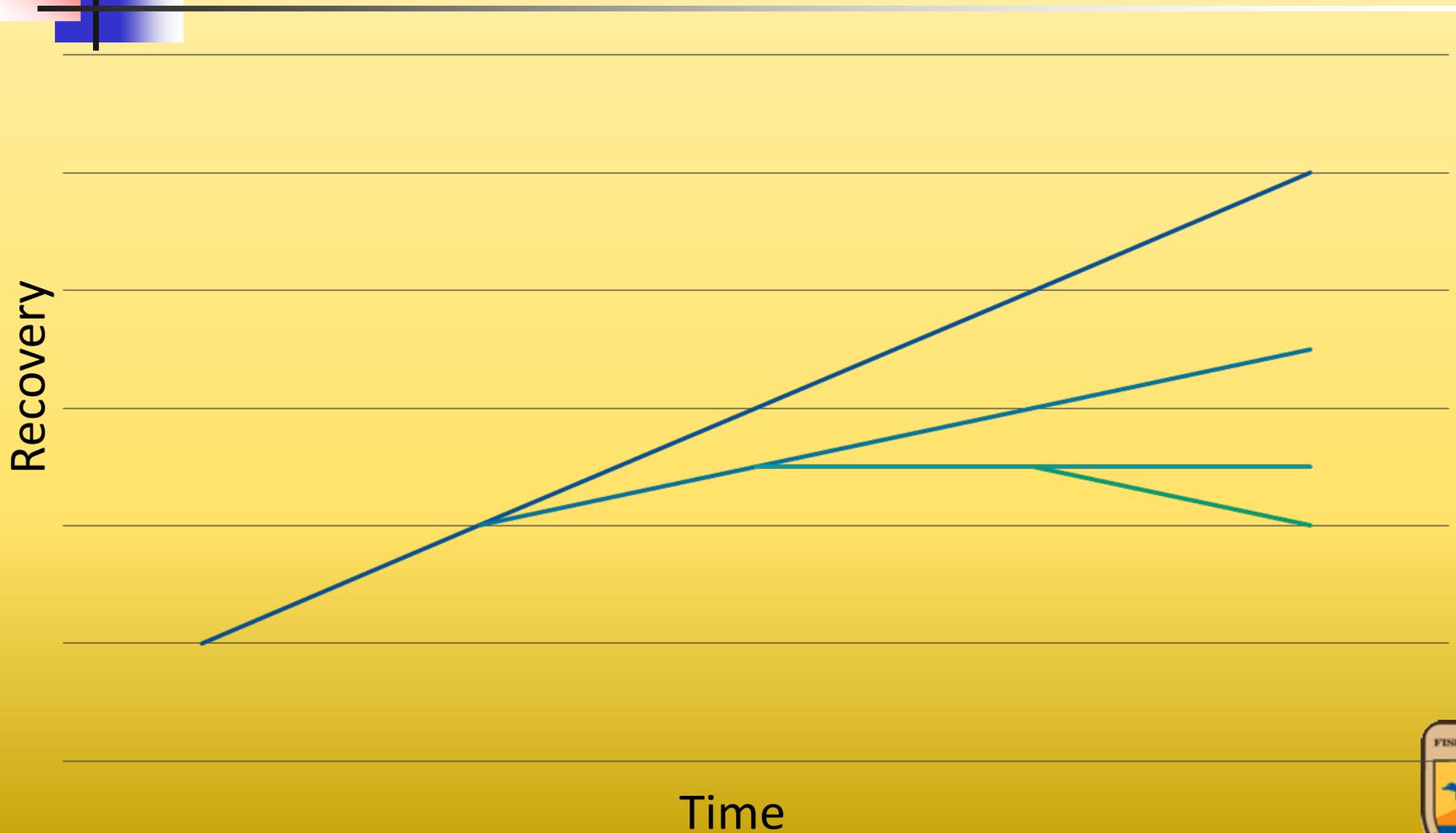
# Death by a Thousand Cuts



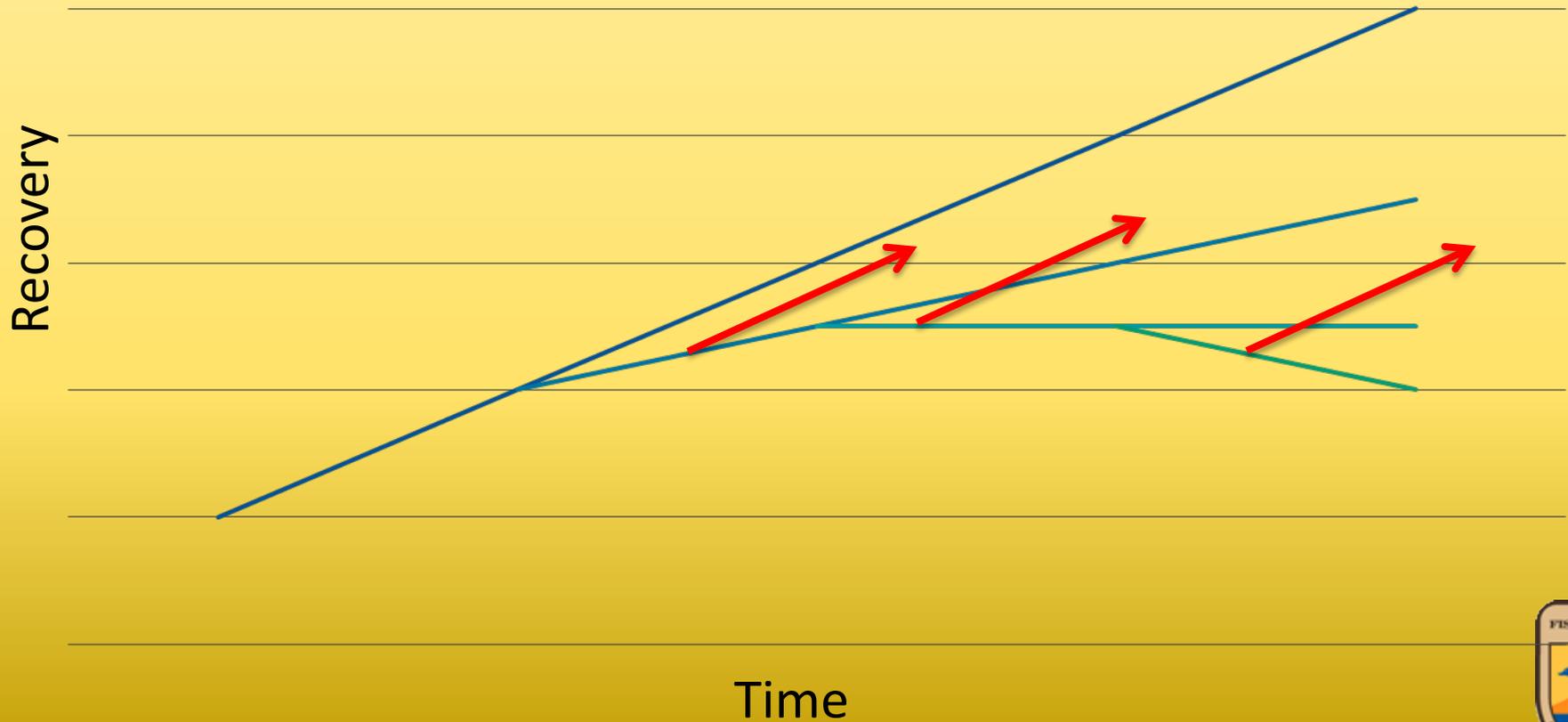
# Death by a Thousand Cuts



# Death by a Thousand Cuts

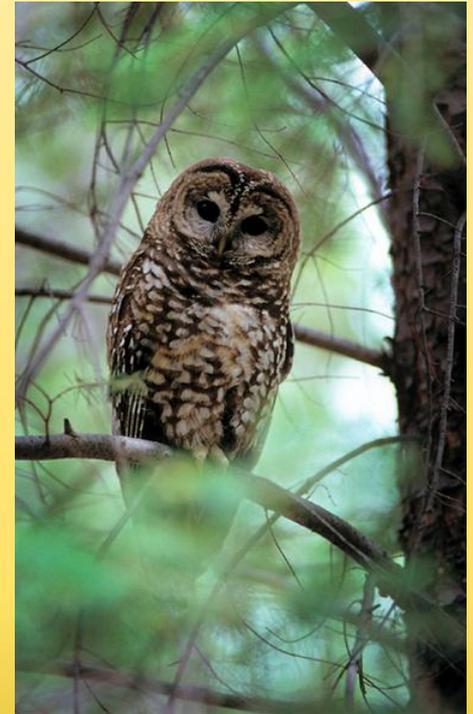


# Integrate Section 7



# Management Considerations if Owls are Present

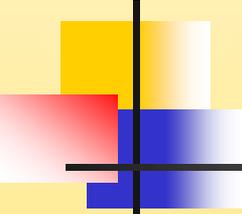
- Minimize impacts to nest sites
  - Seasonal buffers (temporary activities)
  - Spatial buffers (permanent activities)
- Minimize loss of habitat
  - Minimize footprint
  - Revegetation
- Prevent expansion of impacts into habitat



# Management Considerations If No Owls are Present

- Evaluate habitat for importance to recovery of the species
- Minimize loss of suitable habitat





# Recovery Plans

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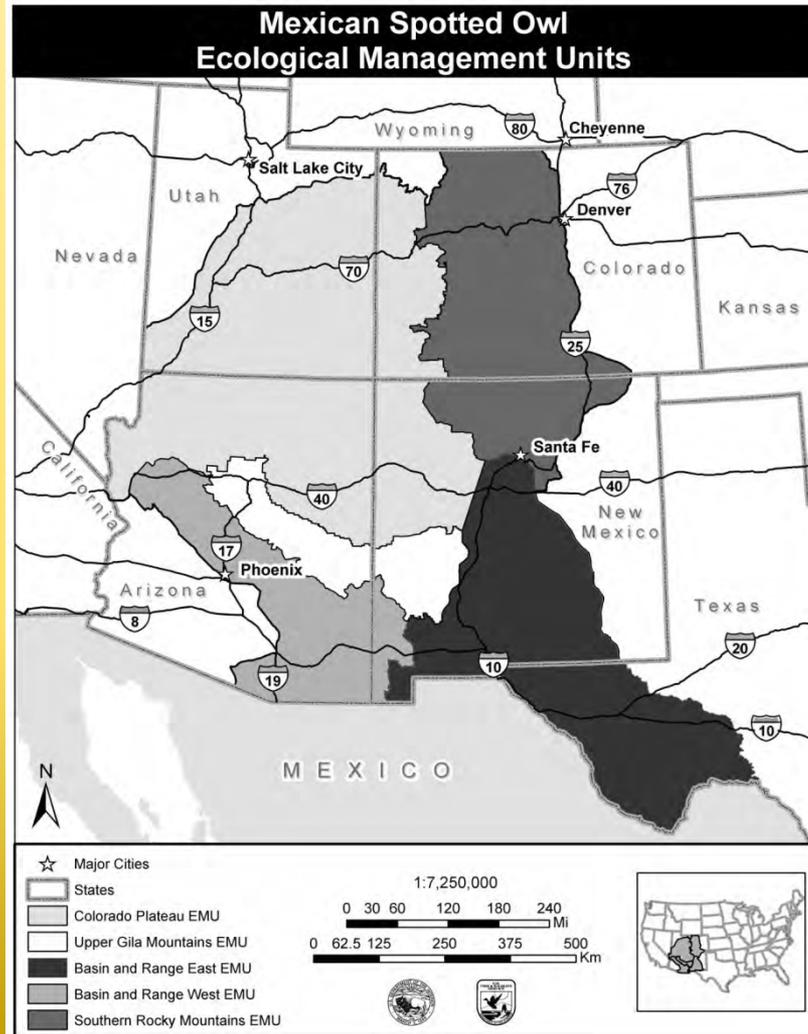
Describe the process to reverse downward trends to ensure long-term survival.

- Site-specific management actions needed to achieve the Plan's goal for the conservation and survival of the species;
- Objective, measurable criteria that, when met, would result in a determination that the species be removed from the list; and
- Estimate resources needed (time and cost) to recover the species.

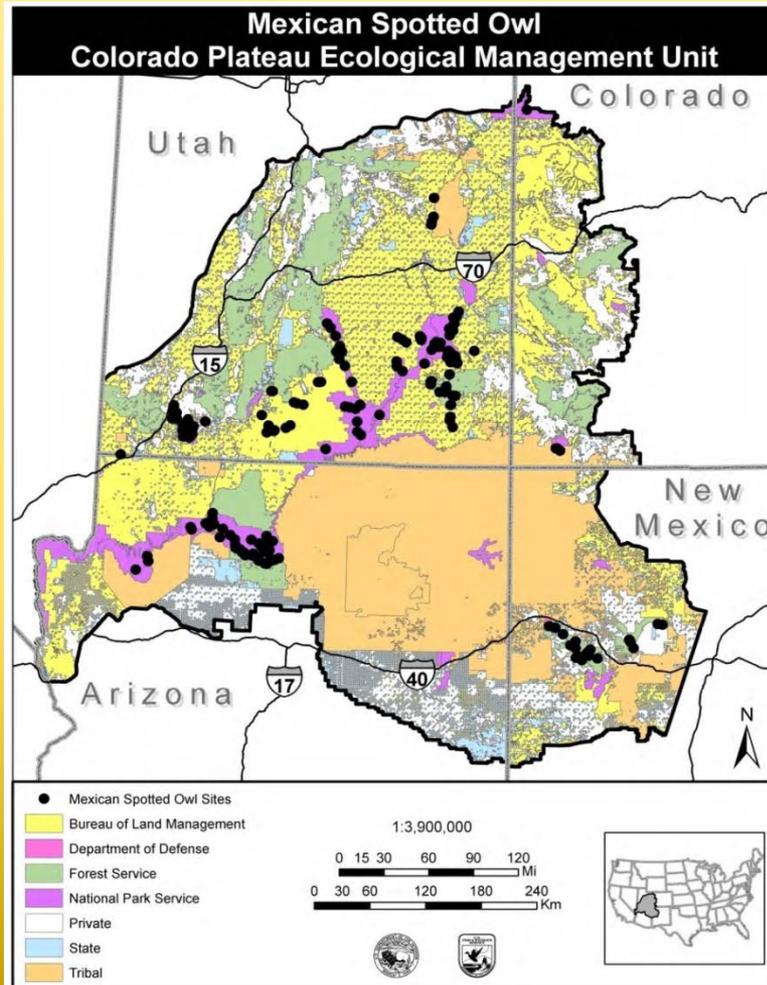
Recovery plans are neither self-implementing nor legally binding.



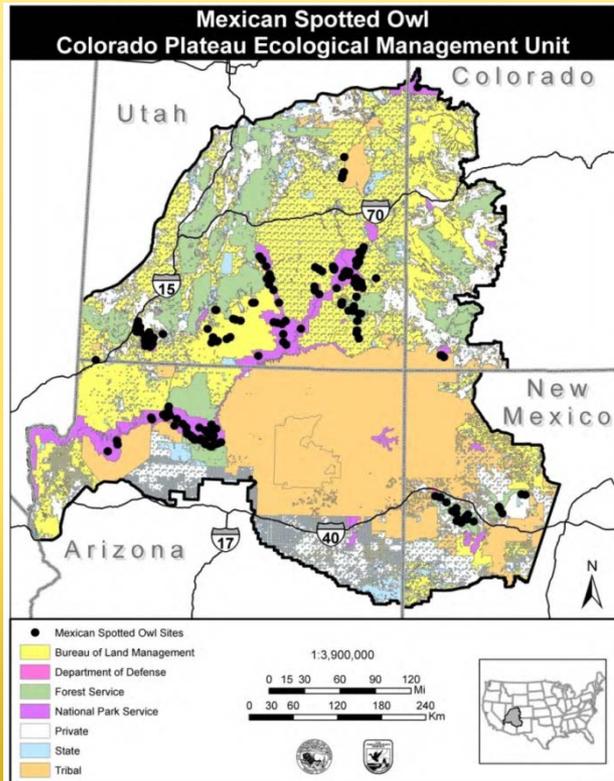
# Ecological Management Units



# Ecological Management Units



# Potential Threats in the Colorado Plateau EMU



- Recreation
- Overgrazing
- Road development in canyons
- Oil, gas, and mining development
- Catastrophic fire, timber harvest in upland forests



# Management Recommendations

## – 3 Categories

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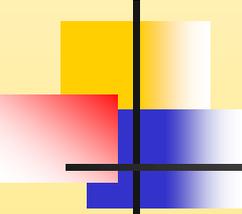
- Protected Activity Centers (PACs)
  - May or may not be known nest site – best nesting/roosting habitat
  - Should also designate a “core” area (100ac)
  - Most protective management recommendations
- Recovery Habitats
  - Potential Nesting and Roosting Habitat
  - Riparian Habitat
- Other Forest and Woodland Types



# Recommended Management Measures within PACs

- At least 600 acres (243 ha) around Core Area
  - All activities within the PAC should undergo consultation with the appropriate FWS office.
  - Mechanical treatments can be conducted in up to 20% of the total non-core PAC area within each EMU (treatments can exceed 20% of the non-core acreage within a single PAC)
  - No mechanical or prescribed fire treatments, or road or trail maintenance should occur within PACs during the breeding season unless it has been determined that the PAC is unoccupied or the owls are not nesting that year as inferred from results of surveys conducted according to protocol.
  - Removal of hardwoods, downed woody debris, snags, and other key habitat variables should occur only when compatible with owl habitat management objectives as documented through reasoned analysis.
  - New road or trail construction is not recommended in PACs
  - Monitor treatment effects as described in Appendix C.
  - See Table C.2 for desired conditions for PACs.





# Recommended Management Measures within Core Areas

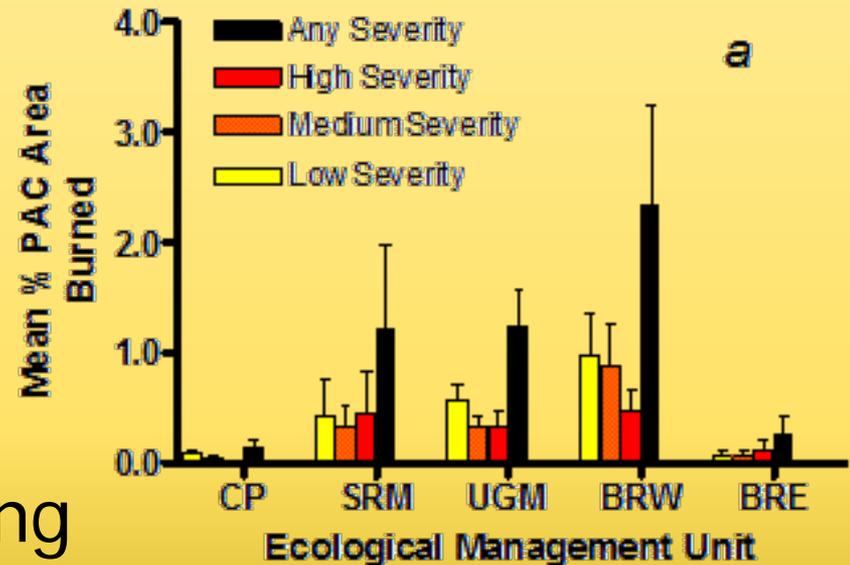
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- 40 ha (100 ac) within PAC & around nest
  - All activities within the core area should undergo consultation with the appropriate FWS office.
  - All management activities should be deferred from the core during the breeding season (March 1 through August 31), except when non-breeding is confirmed or inferred that year per the accepted survey protocol.
  - Planned or unplanned fires should be allowed to enter core areas only if they are expected to burn at low intensity with low severity effects



# Site-Specific Management Actions

- Tie Management Actions to Abating Threats
  - Recreation
  - Forest and fire management
  - Livestock grazing
  - Coal and uranium mining
  - Oil and gas development



# Crosswalk Threats to Management

Table of Crosswalk Between Threats and Management Recommendations

		MANAGEMENT ACTION										
Appendix C Section		C.4.b	C.4.c	C.4.d	C.4.e	C.4.f	C.4.g	C.4.h	C.4.i	C.4.j	C.4.k	C.4.l
Part II Section	THREAT	Insects and disease	Grazing	Energy related development	Land development	Water development	Recreational exploitation	Recreational disturbance	Scientific exploitation	Noise	Climate change	West Nile virus
FACTOR A												
II.H.3.a.i	Stand-replacing Fire	X									X	
II.H.3.a.vii	Grazing		X									
II.H.3.a.viii	Energy Development			X								

- II.H.3.a.viii
  - Part II. Background
  - H. Threats and Threats Assessment
  - 3. Factors Affecting the Mexican Spotted Owl in the United States
  - a. Factor A
  - viii. Energy Development – **page 44**



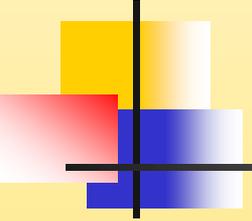
# Crosswalk Threats to Management

Table of Crosswalk Between Threats and Management Recommendations

		MANAGEMENT ACTION										
Appendix C Section		C.4.b	C.4.c	C.4.d	C.4.e	C.4.f	C.4.g	C.4.h	C.4.i	C.4.j	C.4.k	C.4.l
Part II Section	THREAT	Insects and disease	Grazing	Energy related development	Land development	Water development	Recreational exploitation	Recreational disturbance	Scientific exploitation	Noise	Climate change	West Nile virus
FACTOR A												
II.H.3.a.i	Stand-replacing Fire	X									X	
II.H.3.a.vii	Grazing		X									
II.H.3.a.viii	Energy Development			X								

- C.4.d
  - Appendix C – Management Recommendations
  - 4. Threat-specific Management Recommendations
  - d. Energy-Related Development





# Section 10

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- Research and Recovery Permits – 10(a)(1)(A)
- Form 3-200-55
- Takes at least 90 days
- Must show experience and credentials.
  - MSO training plus 32 hours of spotted owl field survey experience.
- <http://www.fws.gov/forms/3-200-55.pdf>

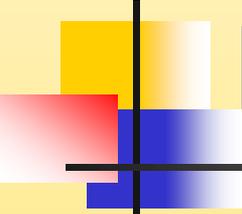


# Final Thoughts



- Pre-consultation during planning phase is important for avoiding/minimizing impacts.
- Coordinate with Federal action agency and USFWS to insure survey will be adequate and will not overlap other surveys.





# More Information

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- Endangered Species Act of 1973
  - [http://caselaw.lp.findlaw.com/cascode/uscodes/16/chapters/35/to\\_c.html](http://caselaw.lp.findlaw.com/cascode/uscodes/16/chapters/35/to_c.html)
- 50 CFR 402
  - <http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200450>
- The Section 7 Consultation Handbook
  - <http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm>
- Additional species information
  - [http://ecos.fws.gov/species\\_profile/SpeciesProfile?spcode=B074](http://ecos.fws.gov/species_profile/SpeciesProfile?spcode=B074)
- Permit Application from the Fish and Wildlife Service
  - <http://forms.fws.gov/3-200-55.pdf>
- Utah Ecological Services ESA MSO Training Page
  - <http://www.fws.gov/utahfieldoffice/MexicanSpottedOwl.html>

