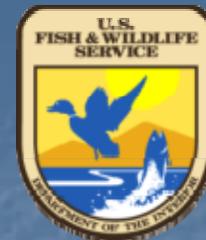


# Revised Recovery Plan for the Mojave Desert Tortoise

Highlights of Changes between  
2008 and 2011 Final Plan



# BACKGROUND



# 2002

- Listing, CH, Recovery Plan reasonable
- Recovery action effectiveness unknown
- Coordinated strategy to link mgmt with research

GAO

United States General Accounting Office  
Report to Congressional Requesters

December 2002

## ENDANGERED SPECIES

Research Strategy and  
Long-Term Monitoring  
Needed for the Mojave  
Desert Tortoise  
Recovery Program



GAO-03-23



# 2004

DTRPAC Report

page 1

## Desert Tortoise Recovery Plan Assessment

Tracy, C.R., R. Averill-Murray, W. I. Boarman, D. Delehanty, J. Heaton, E. McCoy, D. Morafka, K. Nussear, B. Hagerty, P. Medica



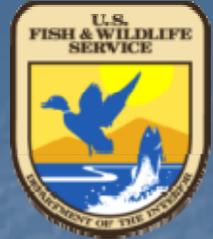
- 1994 RP strong
- Strategies for more cohesive, scientifically powerful recovery program
- Desert Tortoise Recovery Office

# Recovery Plan Revision: 2005-10 Stakeholder/Public Input Summary



- Science Advisory Committee
- 4 planning workshops + 2 open houses
- 3 iterations of informal review/comment
- Formal public review (44 letters)
- Peer review (4 reviews)
- FWS inter-region review

# Comments on 2008 Draft Revision



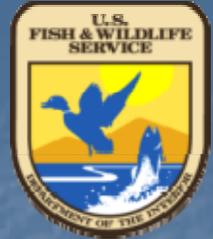
## U.S. Fish & Wildlife Service

**Draft Revised Recovery Plan  
for the Mojave Population  
of the Desert Tortoise  
(*Gopherus agassizii*)**



- 44 unique letters + >6000 form letters
- 4 peer reviews
- ~250 individual comments (combined)

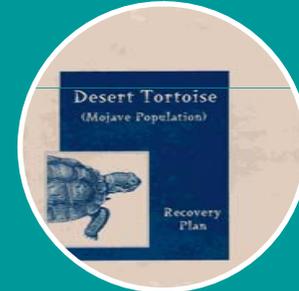
# Overall Impressions from Comments



Watered  
down 1994  
plan



Model for  
recovery  
efforts



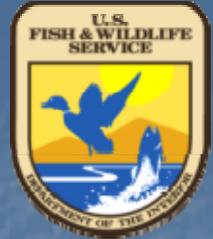
Simple  
reproduction  
of 1994 plan





# HIGHLIGHTED CHANGES

# Literature



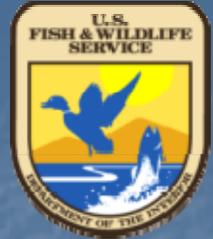
## Draft

- Body
  - 189 references
- Appendix A - Threats
  - 164 references

## Final

- Body
  - 246 references (+30%)
- Appendix A - Threats
  - 202 references (+23%)

# Range-wide Monitoring



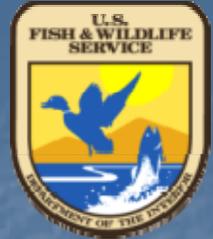
## Draft

- 2001-2005

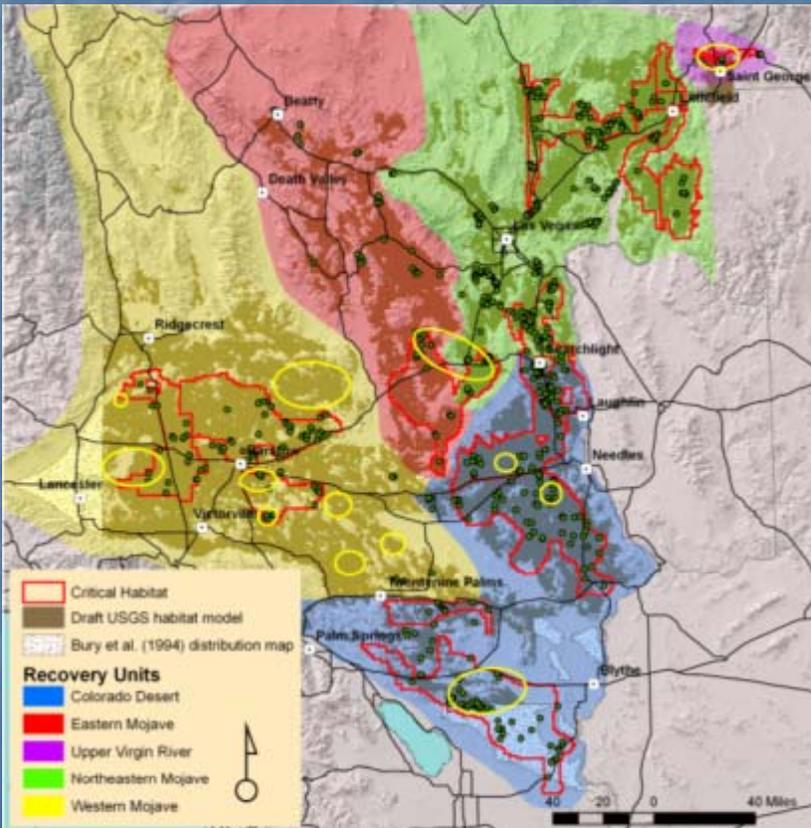
## Final

- +2007
- 2008-2010 now available in reports on DTRO website
- Updated/revised background information

# Recovery Units



## Draft



## Final

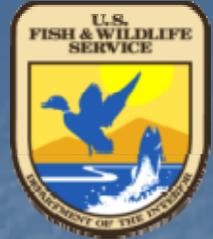


# 1994 vs. 2011



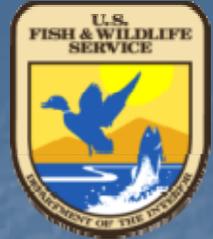
Recovery Action	1994	2011	Notes
Partnerships		X	
Secure habitat	X	X	+ connect
Env't'l education	X	X	+ DTCC
Vehicles off roads	X	X	
Habitat destruct.	X	X	
Mining		X	
Livestock grazing	X	X	
Horse/burros	X	X	
Veg. harvest	X		

# 1994 vs. 2011



Recovery Action	1994	2011	Notes
Collection	X	X	LE
Dumping/littering	X	X	LE
Release captives	X	X	LE
Uncontrolled dogs	X	X	LE
Firearms	X	X	LE
New roads	X	X	
Designated routes	X	X	
Emergency closures	X	X	
Fence roads	X	X	
Speed limits		X	

# 1994 vs. 2011



Recovery Action	1994	2011	Notes
<b><u>Restoration</u></b>	X	X	
Eradicate weeds		X	
Nutritive plants		X	
Remove toxicants		X	
Sign/fence bounds	X	X	+impacted areas
Urban barriers		X	
Administration	X	X	RITs
Modify activities	X	X	

# 1994 vs. 2011



Recovery Action	1994	2011	Notes
Minimize disease		X	
Minimize predation		X	
Develop SDSS		X	
Population augmentation		X	
<b><u>Monitoring</u></b>			
Population growth	X	X	
Population distribution		X	
Habitat		X	
<b><u>Research</u></b>			
URTD epidemiology	X	X	+11 new specifics
Population structure	X		

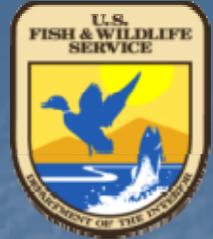
# 1. RIT structure/function

## 6. Adaptive management



- Additional details added to final plan
- SDSS much refined
- Upcoming agenda item

## 2.2 Minimize ... disease



### Draft

- Remove released captives from wild
- Do not remove individuals from populations with endemic disease
- Remove infected individuals from "uninfected" populations

### Final – added:

- Consider site quarantines for acute outbreaks
- Require health assessments prior to translocation
- Research and disease minimization measures

## 2.5 ... fence roads



Recovery Unit	Roads and Railways where Tortoise Fence is Needed		
		<i>kilometers</i>	<i>miles</i>
Western Mojave	Road	178	110
	Rail	72	45
North-East Mojave	Road	186	116
	Rail	142	88
Colorado Desert	Road	271	168
	Rail	154	96
Upper Virgin River	Road	17	11
	Rail	0	0
<b>Total</b>	<b>Road</b>	<b>652</b>	<b>405</b>
	<b>Rail</b>	<b>368</b>	<b>229</b>

## 2.6 Restore habitat



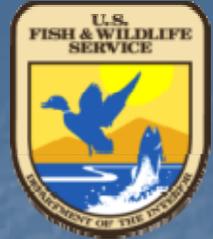
### Draft

- Eradicate/suppress invasive weeds
- Revegetate degraded areas with nutritious native plants
- Remove toxicants

### Final – added:

- Collect native seed
- Obscure closed roads

# 2.14 Minimize predation



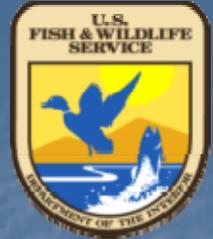
## ■ Draft

- Emphasize removing subsidies
- Problem areas
- Temporary solution; widespread, long-term lethal control not appropriate

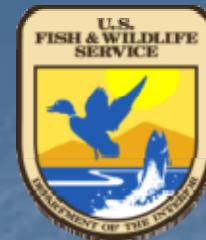
## ■ Final – added:

- Offending individuals
- Emphasize raven EA

# Additional/updated information



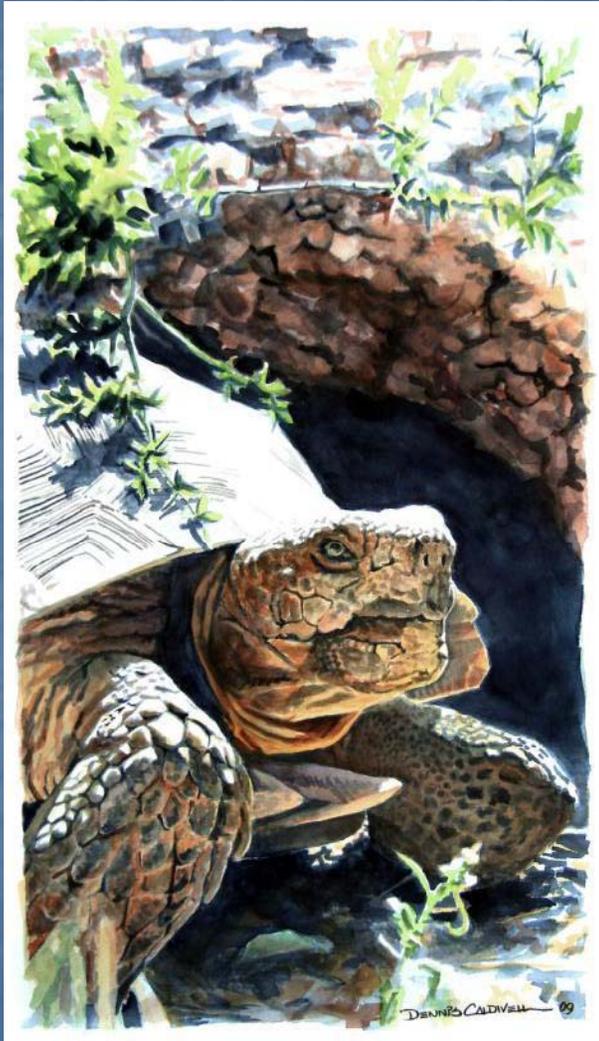
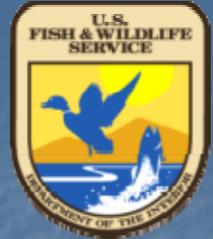
- Finalized USGS habitat model
- Energy development
- Climate change
- Appendix summarizing major comments



# Revised Recovery Plan for the Mojave Desert Tortoise

## Overview of Recovery Strategy

# Recovery Strategy



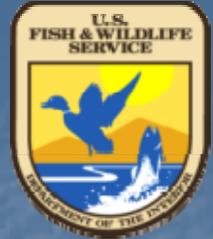
- 1) Develop partnerships
- 2) Protect populations & habitat
- 3) Augment depleted populations
- 4) Monitor progress
- 5) Conduct applied research & modeling
- 6) Implement adaptive management program

# SE 1: Develop, Support, & Build Partnerships to Facilitate Recovery

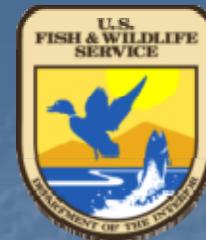


- Recovery Implementation Teams
  - Agencies and stakeholders
  - Recovery-action plans
  - Emphasize up-to-date information
    - Threats
    - Recovery implementation
    - Implementation effectiveness

# SE 2: Protect Existing Populations and Habitat



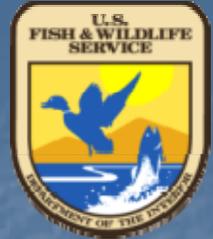
- GAO audit supports continuation of 1994 recovery actions
- Primary actions that RITs will be prioritizing
- Effectiveness needs to be better evaluated
- Focus recovery on habitat within *tortoise conservation areas*
  - Critical habitat, DWMMAs, ACECs, DNWR, NPS lands, RCDR, & private conservation areas or easements
  - Other areas identified by RITs



## Strategic Elements 3-5

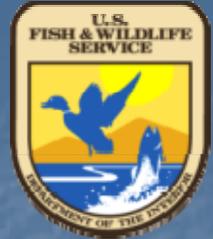
- SE 3: Augment depleted populations through a strategic program
- SE 4: Monitor progress toward recovery
- SE 5: Conduct applied research and modeling in support of recovery efforts within a strategic framework

# SE 6: Implement an Adaptive Management Program



- Revise and continue development of DSS
  - Within 1<sup>st</sup> year, update underlying data for at least 2 RUs (all RUs within 2<sup>nd</sup> year).
  - Within 2<sup>nd</sup> year, DTRO, SAC, other reviewers evaluate underlying models.
- Recovery action plans
  - Report progress to MOG annually.

# Recovery Plan and Renewable Energy



- SE 1: Partnerships
  - RITs coordinate with landscape/regional alternative-energy coordination efforts
- SE 2: Protect Populations and Habitat
  - Linkages between conservation areas



