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Adaptive Management Program

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August 22, 2013





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Adaptive Management Program:
Objective

Presentation Objectives:

- Define Adaptive Management
- What is the Adaptive Management Program
- Who is involved with the Adaptive Management Program
- Effectiveness and Efficiency
- Reducing Uncertainty
- Increasing Transparency
- Next Steps



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Adaptive Management Program:
What is it?

Adaptive Management is...

...the use of evidence-based data and best scientific knowledge to improve management and programmatic actions and reduce the uncertainty inherent in those actions.

Four Steps:

1. Plan and Design
2. Implement Actions
3. Assess Effectiveness and Efficiency
4. Refine/Modify

It doesn't matter how many resources you have.



If you don't know how to use them,
it will never be enough.



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Adaptive Management Program:
What is it?

The Adaptive Management Program Supports the DCP by:

- Provides objective, science-based approach to the implementation of the MSHCP
- Helps direct expenditures
- Leads projects that further the MSHCP
- Maintains a database on all Covered Species
- Ensures an adaptive management approach to all actions
- Funded by MSHCP Mitigation Fee Section 10 funds (2009-CC-801)



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Adaptive Management Program:
Who is it?

Who is the MSHCP Adaptive Management Program?

- ✓ DCP Staff
- ✓ Science Advisor
- Agency Experts
- Academics
- Land Managers
- Decision Makers
- All Symposium Participants



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Adaptive Management Program:
Who is it?

Science Advisor

- Ongoing program and project involvement and review
- Sound science research
- Advice on new and proposed projects



Products:

Occupancy Sampling

Covariate Studies

Management Plans

Tortoise Translocation Monitoring

Protocol





- Monitor effectiveness of specific conservation actions
 - Traffic on and south of BCCE, modify law enforcement patrols, signage and road closures
 - Revegetation on Muddy and Virgin River properties
 - Revegetation on BCCE



Outcomes:

Better management practices, cost savings

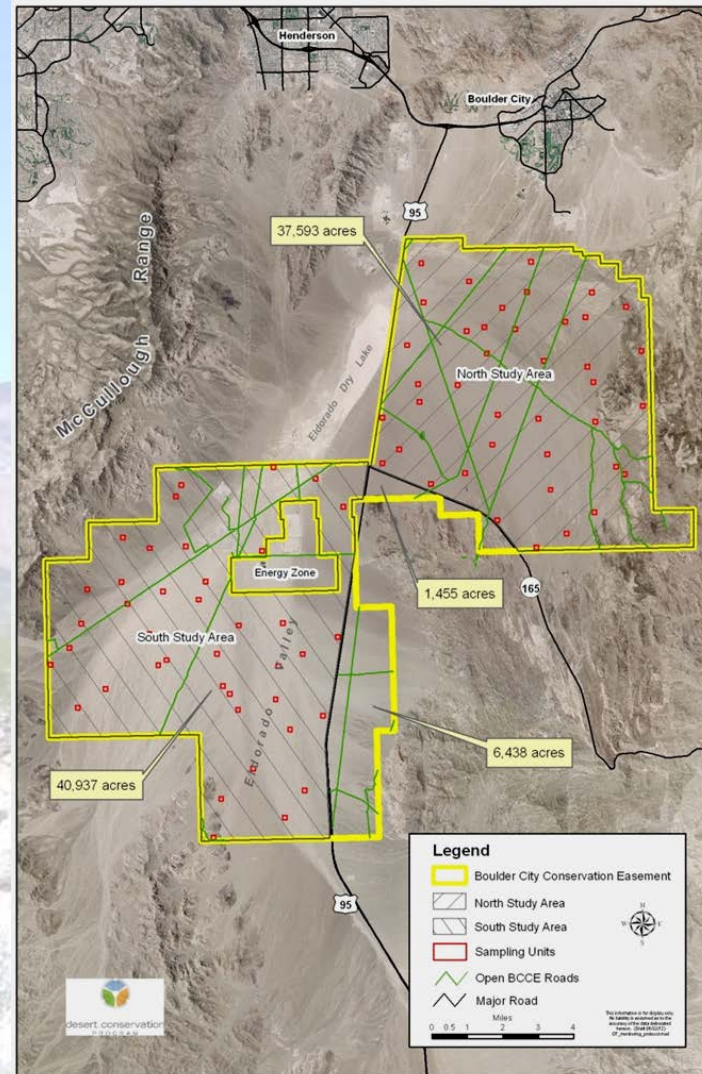


- Monitoring evaluation and design
 - Desert Tortoise Occupancy Sampling Pilot Study
 - 1st field season completed
 - Lessons learned and modifications

Outcomes:

Potentially a more precise and efficient method of monitoring DT populations

A fine-scale predictive model of DT occurrence in the BCCE and similar habitats





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Adaptive Management Program: Effectiveness and Efficiency

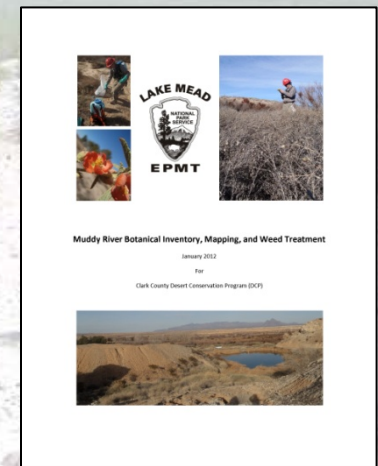
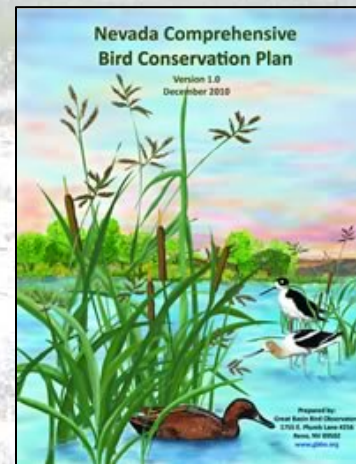
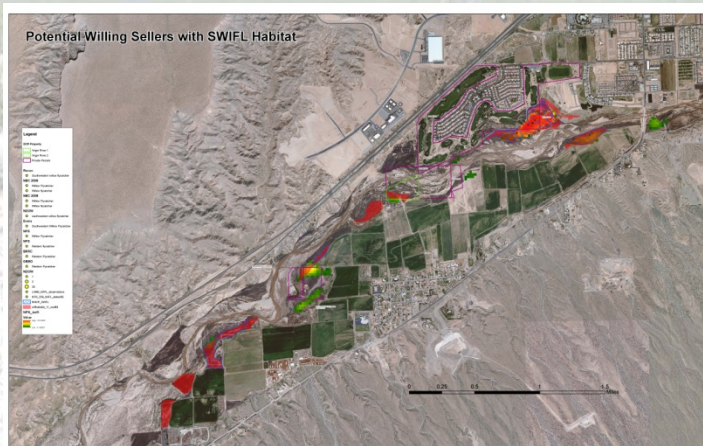
- Sahara Mustard (NPS)
- Species Updates (NNHP)
- Relict Leopard Frog Conservation Team (UNLV & NPS)
- Post-Fire Restoration Research (USGS)
- Public Outreach (CC & Red Rock)
- Roads Monitoring (BLM & Pacific)



Reducing Uncertainty by Obtaining New Data

– GIS support

- Reviews of proposed third party projects on reserve areas and other MSHCP mitigation areas
- MSHCP product /design review and adaptive management analyses
- Property management support





Transparency and Accessibility of Products

- Symposia
 - Annual, open to public
 - Presentations made available on website
- Science Advisor reviews
- 33 written reviews of presentations, documents and data requests in past year

Products:

This symposium, archives of presentations, written comments, resulting improvements in other products





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Adaptive Management Program:
Increasing Transparency

Transparency and Accessibility of Products

- Clark County DCP Website
- Data Sharing with Various Agencies
 - Sharing species data and reports
 - 17 data requests in past year
- Recovery/Implementation Teams
- BLM RMP/SEZ
- Private Industry



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Adaptive Management Program:
Next Steps

Next Steps

- Tortoise Translocation Monitoring Protocols
- Property Management Plans
- Occupancy Sampling Protocol
- Covariant Project
- Desert Tortoise Habitat Model
- Property Acquisition
- Implementation Database



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Muddy River Weed Management 2011-NPS-915a Curt Deuser, National Park Service





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Developing Habitat Models and Monitoring Techniques for Nine Bird Species in Clark County

2005-GBBO-581

Elisabeth Ammon, Great Basin Bird Observatory



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Relict Leopard Frog Conservation 2009-NPS-810a

Rebecca Rivera, University of Nevada Las Vegas

