Lake Mead National Recreation Area Sensitive Wildlife Species Monitoring and Analysis: Quarterly Progress Report, Period Ending March 31, 2010

Margaret N. Rees
University of Nevada, Las Vegas, peg.rees@unlv.edu

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Executive Summary

Project 1. Relict Leopard Frog Monitoring, Management, and Research
- All milestones and deliverables are on schedule
- Translocation program initiated for this year with egg mass collections in early spring
- Tadpole rearing underway, first releases schedule for the end of March 2010
- Diurnal egg mass surveys were completed at all sites
- Nocturnal surveys initiated and in progress
- Continuing mark-recapture efforts at Blue Point Spring initiated for spring season
- Data transferred to County completed

Project 2. Bald Eagle Winter Monitoring and Evaluation
- Project has essentially been completed
- All final report deliverables were completed
- Although not specified in the scope of work for this project, an annual eagle count was successfully conducted on January 11, 2010

Project 3. Peregrine Falcon Monitoring and Evaluation
- This project has essentially been completed
- All final report deliverables were completed
- Although not specified in the scope of work for this project, call-broadcast surveys were conducted this quarter to provide a limited assessment of territory occupancy at easily accessed sites along lakes Mead and Mohave

Project 4. Assessment of Six Covered and Three Evaluation Bird Species
- All milestones and deliverables are on schedule
- Targeted historical field surveys are ongoing
- Completed compilation of historic observation data
- Annual summary report provided to the County on modeling efforts
- Habitat modeling of the nine bird species continues to be a major focus of recent efforts

Project 5. Desert Tortoise Monitoring and Management
- Efforts for this project have been completed under this Task Agreement (as modified)

Project 6. Shorebird Monitoring on Lakes Mead and Mohave
- Field efforts under the shorebird project have been completed
- Data summary and analysis for the final report are currently being conducted

Project 7. Desert Bighorn Sheep Habitat Use Monitoring in Relation to Highway Development
- This project has been completed
Program Activities

The Task Agreement was awarded to the University of Nevada, Las Vegas (UNLV) on October 1, 2006. Research, monitoring, and management activities are conducted primarily by UNLV Public Lands Institute (PLI) employees. During the quarter ending on March 31, 2010, activities that have occurred toward meeting actions in the statement of work are described below.

Note that several of the projects cover agreements between Clark County and Lake Mead National Recreation Area (LAME) under the Multiple Species Habitat Conservation Plan (MSHCP). To assist the NPS with reporting requirements and in consultation with Mr. Ross Haley (Task Agreement ATR) and Mr. Kent Turner (LAME Resource Management Chief), the format for reporting on several of these projects has been modified when appropriate to match Clark County quarterly report requirements.

**Project 1. Relict Leopard Frog Monitoring, Management and Research**

The following information has been formatted to meet Clark County quarterly report requirements for the MSHCP project titled ‘Relict Leopard Frog Monitoring and Management’ (2005-NPS-476-P).

**QUESTION 1: What did you accomplish during this reporting period? How did these accomplishments help you reach the goal of your project? If relevant, what indicators or benchmarks were used to determine your progress?**

This quarterly report describes milestones and deliverables as identified and numbered in the Annual Timeline and Work Plan for this project. All milestones and deliverables for this quarter have been accomplished as summarized below or reported previously.

**Deliverable 22. Quarterly Progress Report**

A quarterly report summarizing efforts through December 31, 2009, was submitted to Clark County.

**Deliverable 23. GIS and Data Transfer to County**

Data associated with this project were entered into databases, assessed for quality, and then submitted to the County this quarter.

**Deliverable 24. Annual Work Plan and Detailed Timeline**

An annual work plan and timeline was submitted to the County this quarter.


Partial egg masses were collected from natural sites in the Black Canyon during this quarter as part of the translocation efforts. In association with habitat management and research efforts at Blue Point Spring, three egg masses were also collected from lower Blue Point Spring.
Tadpoles from these egg masses are currently being grown, and the first release of large tadpoles is scheduled at the end of March 2010.


Spring diurnal surveys for egg masses were completed in January and February 2010, at all natural and active translocation sites. Nocturnal surveys these sites were initiated in March following warming temperatures and will continue into April 2010.

**Other activities**

Habitat management teams from the NPS (exotic plant management program) conducted tamarisk reduction efforts within Black Canyon in March. Crews were given updates and cautions regarding Relict Leopard Frogs prior to their field efforts.

A nocturnal survey was conducted at Perkin’s Pond in mid-March 2010, with the BLM biologist associated with the project. No evidence of bullfrogs was found at the site, although some Woodhouse toads were found outside the fence and several Chorus frogs (*Pseudacris*) were heard calling from the pond.

**QUESTION 2: What, if any, problems were encountered? Briefly describe those problems and how they were dealt with.**

None

**QUESTION 3: What, if any, proposed activities were not completed? Briefly describe those activities, the reasons they were not completed and your plans for carrying them out.**

None

**QUESTION 4: What is the calculated percent of work completed?**

There are approximately 14 quarters (some partial) that constitute this project and 11 have been completed; therefore, approximately 79% of the project has been completed.

**QUESTION 5: Do you foresee any upcoming problems with future project activities? If so, how do you propose to overcome those problems?**

Efforts to begin moving tadpoles to Perkin’s Pond were scheduled to begin in early April 2010; however, issues associated with permitting (that are outside the control of personnel on this project) have delayed this action at least until late April 2010. We are now faced with overcrowding in the grow-out tanks. We are moving forward with early releases at other sites to make room, but also need to assess additional actions to mitigate this issue. This delay will result in fewer animals being moved to Perkin’s Pond this year.

**QUESTION 6: Is there anything else you want to tell the DCP about this project?**

No.

**QUESTION 7: What was produced during the reporting period?**
1. Quarterly report (Deliverable 22).
2. Quality assured data associated with this project (Deliverable 23).
3. Annual work plan and detailed timeline (Deliverable 24).
4. Tadpoles for translocations (Milestone 14).
5. Information on egg mass production and frog numbers at sites (Milestone 15).

Please report on the status of each Milestone and Deliverable, indicate whether they are not started, in progress, or completed and provide comments on the status as necessary:

Milestone 1. Contract Award and Mobilization: completed
Milestone 2. Project Kick-off and Training Meeting: completed
Milestone 3. Start of Coordination of Habitat Management Activities: completed
Milestone 5. Start of Assessment and Coordination of Compliance for Future Translocation Sites: completed (progress continuing)
Milestone 10. Start of Translocation Program (2009) Field Season: completed
Milestone 12. End of Translocation Program Field Season: completed
Milestones 16–21. Pending

Deliverable 1. Quarterly Progress Report: completed
Deliverable 2. Annual Work Plan and Detailed Timeline: completed
Deliverable 3. Data Management Plan: completed
Deliverable 4. Quarterly Progress Report: completed
Deliverable 5. Quarterly Progress Report: completed
Deliverable 6. Quarterly Progress Report: completed
Deliverable 7. Quarterly Progress Report: completed
Deliverable 8. Host RLFCT meeting: completed
Deliverable 9. Written Annual Report to RLFCT of Conservation Actions: completed
Deliverable 10. Annual Project Review Presentation: completed
Deliverable 11. Quarterly Progress Report: completed
Deliverable 12. GIS and Data Transfer to County: completed
Deliverable 15. Host RLFCT Meeting: completed
Deliverable 17. Biennium Progress Summary Report: completed
Deliverable 18. Quarterly Progress Report: completed
Deliverable 19. Host Relict Leopard Frog Meeting: completed
Deliverable 21. Annual Project Review Presentation: completed
Deliverable 22. Quarterly Progress Report: completed
Deliverable 23. GIS and Data Transfer to County: completed
Deliverable 25. Quarterly Progress Report: in progress
Deliverable 26–34. Pending

Project 2. Bald Eagle Winter Monitoring and Evaluation

The MSHCP projects titled ‘Bald Eagle Monitoring’ (2005-NPS-476-P) and the associated project ‘Bald Eagle Modeling’ (2005-NPS-609B-P) have essentially been completed this quarter. There is no further quarterly report requirement to Clark County, so the county format has been dropped. A simple summarize actions that were completed towards this project is provided below.

All deliverables and milestones associated with research and modeling have been met. Only administrative tasks remaining, specifically the milestones and deliverables associated with invoicing and final approvals.

This quarter, under Bald Eagle Monitoring 92005-NPS-476-P) the following deliverables were completed:
- Deliverable 18 Final Project Report
- Deliverable 19 Final Biennium Project Summary Report

This quarter, under Bald Eagle Modeling (2005-NPS-609B-P) following deliverables were completed:
- Deliverable 04 Final Project Data
- Deliverable 05 Final Habitat Suitability Model
- Deliverable 06 Final Habitat Suitability Map

Other actions:

Although not within the scope of work specified for this project, the winter eagle count was successfully conducted on January 11, 2010. Personnel under this task agreement coordinated this effort and several of the qualified lead observers and boat drivers.

Project 3. Peregrine Falcon Monitoring and Evaluation

The MSHCP projects titled ‘Peregrine Falcon Monitoring and Evaluation’ (2005-NPS-475-P) and the associated project ‘Peregrine Falcon Modeling’ (2005-NPS-609C-P) have essentially been completed. There is no further quarterly report requirement to Clark County, so the County format has been dropped. A simple summary of actions completed towards this project is provided below.

All deliverables and milestones associated with research and modeling have been met. Only administrative tasks remaining, specifically the milestones associated County approval of the ‘Project Close-out, Final Approval of Deliverables.’

This quarter, under Peregrine Falcon Monitoring (2005-NPS-475-P) the following deliverables were completed:
Deliverable 18. Draft Final Project Report  
Deliverable 19. Final Project Data  
Deliverable 20. Final Project Report  
Deliverable 21. Final Biennium Project Summary Report

This quarter, under Peregrine Falcon Modeling (2005-NPS-609C-P) the following deliverables were completed:

Deliverable 7. Final Project Data  
Deliverable 8. Final Conceptual Model  
Deliverable 9. Final Habitat Suitability Model  
Deliverable 10. Final Habitat Suitability Map: completed

Other actions:

In addition to the efforts discussed above, some field surveys were conducted this spring using the call-broadcast approach to evaluate territory occupancy at known sites with easy access along Lakes Mead and Mohave. Although outside the specified scope of work for this project, the intent of these surveys is to continue with some limited monitoring of peregrine falcons through this year.

**Project 4. Assessment of Six Covered and Three Evaluation Bird Species**

The following information summarizes efforts under the MSHCP projects titled ‘Historical and Current Assessment of Six Covered and Three Evaluation Bird Species’ (2005-NPS-542-P) and the associated project ‘Conceptual and Habitat Models for Six Covered and Three Evaluation Bird Species’ (2005-NPS-609A-P). The information has been formatted to match the quarterly report requirements of the Clark County MSHCP.

**QUESTION 1: What did you accomplish during this reporting period? How did these accomplishments help you reach the goal of your project? If relevant, what indicators or benchmarks were used to determine your progress?**

This quarterly report describes milestones and deliverables as identified and numbered in the Annual Timeline and Work Plan submitted for this project. Also reported here are actions conducted on the associated project, 2005-NPS-609A-P that covers technical aspects of the overall project. All milestones and deliverables identified for this quarter have been accomplished, as summarized below.

Deliverable 19. Quarterly Progress Report

A quarterly report summarizing efforts for the period ending on December 31, 2009, was submitted to Clark County.

Deliverable 20. GIS & Data Transfer

Data associated with this project were entered into databases, assessed for quality, and then submitted to the County this quarter.

An annual work plan and timeline was submitted to the County this quarter.

**Milestone 12. Complete Review and Compilation of Historic Data in Published Literature, Museum Records, and Data Archives**

Compiling, organizing, and filtering historical observation data for nine bird species were completed this quarter. The observations were obtained from a variety of sources including literature reviews, museum specimens, and agency database. For these data a georeferencing database was created, and 445 historical observations were assessed for spatial error.


An annual report was submitted this quarter in which actions associated with various milestones and deliverables were summarized.

**Other actions**

At the request of the Clark County Project Manager, a predictive layer (map) based a preliminary habitat suitability model for Le Conte’s thrasher in Clark County was provided to the County for use in planning activities.

**QUESTION 2: What, if any, problems were encountered? Briefly, describe those problems and how they were dealt with?**

No problems were encountered.

**QUESTION 3: What, if any, proposed activities were not completed? Briefly describe those activities, the reasons they were not completed and your plans for carrying them out.**

All scheduled activities were completed this quarter.

**QUESTION 4: What is the calculated percent of work completed?**

This project has approximately 13 quarters, 10 quarters have been completed; therefore, by this assessment approximately 77% of the project has been completed.

**QUESTION 5: Do you foresee any upcoming problems with future project activities? If so, how do you propose to overcome those problems?**

No problems are foreseen at this time.

**QUESTION 6: Is there anything else you want to tell the DCP about this project?**

No.

**QUESTION 7: What was produced during the reporting period?**

2. Data associated with this project entered into databases and assessed for quality (Deliverable 20).
3. A work plan and timeline update (Deliverable 21).
4. Information from targeted surveys at historical locations (Milestone 10).
6. Activities towards habitat modeling and a preliminary predictive map for Le Conte’s thrasher habitat suitability.

Please report on the status of each Milestone and Deliverable, indicate whether they are not started, in progress, or completed and provide comments on the status as necessary:

**Project 2005-NPS-542-P**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milestone 1.</td>
<td>Contract Award and Mobilization: completed</td>
</tr>
<tr>
<td>Milestone 2.</td>
<td>Project Kickoff &amp; Training Meeting: completed</td>
</tr>
<tr>
<td>Milestone 3.</td>
<td>Begin Review and Compilation of Historical Data: completed</td>
</tr>
<tr>
<td>Milestone 4.</td>
<td>Begin Intensive Area Surveys: completed</td>
</tr>
<tr>
<td>Milestone 11.</td>
<td>Begin Historic Geospatial Analyses: completed</td>
</tr>
<tr>
<td>Milestone 12</td>
<td>Review and Compilation of Historic Data in Published Literature, Museum Records, and Data Archives: completed</td>
</tr>
<tr>
<td>Milestone 13-15</td>
<td>Pending</td>
</tr>
<tr>
<td>Deliverable 1.</td>
<td>Annual Work Plan &amp; Detailed Timeline: completed</td>
</tr>
<tr>
<td>Deliverable 2.</td>
<td>Data Management Plan: completed</td>
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<tr>
<td>Deliverable 3.</td>
<td>Quarterly Progress Report: completed</td>
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<td>Deliverable 5.</td>
<td>Final Detailed Field Study Design and Protocol: completed</td>
</tr>
<tr>
<td>Deliverable 6.</td>
<td>Quarterly Progress Report: completed</td>
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<tr>
<td>Deliverable 7.</td>
<td>Quarterly Progress Report: completed</td>
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<tr>
<td>Deliverable 8.</td>
<td>Annual Project Review and Presentation: completed</td>
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<tr>
<td>Deliverable 10.</td>
<td>Written and Oral Reports: completed</td>
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<tr>
<td>Deliverable 11.</td>
<td>Quarterly Progress Report: completed</td>
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<tr>
<td>Deliverable 12.</td>
<td>GIS and Data Transfer: completed</td>
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<tr>
<td>Deliverable 15.</td>
<td>Biennium Project Summary: completed</td>
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<tr>
<td>Deliverable 17.</td>
<td>Annual Project Review Presentation: completed</td>
</tr>
<tr>
<td>Deliverable 18.</td>
<td>Quarterly Progress Report: completed</td>
</tr>
<tr>
<td>Deliverable 20.</td>
<td>GIS &amp; Data Transfer: completed</td>
</tr>
<tr>
<td>Deliverable 22-30.</td>
<td>Pending</td>
</tr>
</tbody>
</table>

**Project 2005-NPS-609A-P**
| Deliverable 1. | Data Management Plan: completed |
| Deliverable 2. | Draft Conceptual Models: completed |
| Deliverable 3. | Annual Bird Expert Team Meeting: completed |
| Deliverable 4. | Annual Report: completed |
| Deliverable 5. | Annual Bird Expert Team Meeting: completed |
| Deliverable 6. | Annual Report: completed |

**Project 5. Desert Tortoise Monitoring and Management**

Deliverables and reporting for compliance monitoring described for Phase I of the task agreement have been completed. No other activity for this project is planned under the task agreement (as modified).

**Project 6. Shorebird Monitoring on Lakes Mead and Mohave**

The field component has been completed for this project, and efforts continue on an analysis and summary of the data for the final report.

**Project 7. Desert Bighorn Sheep Habitat Use Monitoring in Relation to Highway Development**

Efforts for this project have essentially been completed, and no requests for additional efforts on this project were made this quarter.

**Other Activities Conducted Under or Associated With the Task Agreement**

**Student Opportunities**

A new hourly contract has been provided to an undergraduate student to assist with the frog rearing facility and field surveys. Currently, two undergraduate students and one graduate student assist part-time with efforts under this Task Agreement.

**Personnel Development:**

Mr. Barnes is working on his fourth semester as a graduate student with the School of Life Science, UNLV.

**Technical Assistance and Regional Coordination:**

At the request of Mike Boyles, NPS compliance branch, Dawn Fletcher assisted with the creation of a power point presentation that Mr. Boyles presented at the Nevada State Science Olympiad on March 6, 2010.

Ms. Fletcher assisted with restoration efforts on a LAKE project to monitor illegal ground disturbance in response to management actions. This quarter she hiked a road to access
disturbances from off-road vehicles as well as missing road signs and barricades. At the request
of NPS, she also assisted the NPS restoration crew for one day with repairing fence barriers
and other disturbances.

At the request of Ross Haley, NPS, Mr. Barnes and Dr. Jaeger developed a budget for proposed
Goshawk surveys on the Shivwits Plateau (Grand Canyon-Parashant National Monument).
This work is in preparation for fire treatment in the area by NPS fire management personnel.

Mr. Barnes provided several days of training to Christy Klinger, NDOW wildlife biologist, in
the use of call-broadcast surveys for peregrine falcons. He also assisted with some of the
surveys.

Presentations and Participation At Regional and National Meetings:

Fletcher DM, Thompson DB, Vanier CH, Hutcheson JM, Klicka JT, and Jaeger JR. Modeling
the occurrence of elusive species: Assessing habitat selection of Le Conte's and Crissal
Thrashers in the eastern Mojave Desert. Presentation at the Desert Bird Symposium in Gila
Bend AZ on January 27, 2010.

Fletcher DM, Thompson DB, Vanier CH, Hutcheson JM, Klicka JT, and Jaeger JR.
Distribution and Site Selection of the Le Conte’s and Crissal Thrashers in the Mojave Desert.
Presentation at the Colorado River Terrestrial and Riparian (CRTR) Meeting in Laughlin, NV
on February 3, 2010.

Fletcher DM, Thompson DB, Vanier CH, Hutcheson JM, Klicka JT, and Jaeger JR. Predicting
the Occurrence of Elusive Species: A Multi-Model Approach to Assessing Habitat Selection of
Thrashers. Presentation at the Cooper Ornithological Society, American Ornithologists’
Union, and the Society of Canadian Ornithologists Joint meeting in San Diego, CA on
February 11, 2010.

Barnes J. Peregrine Falcons at Lake Mead National Recreation Area. Guest presentation to
the undergraduate course, Introduction to Human Ecology (BIO 104), School of Life Sciences,
UNLV, on March 9, 2010.

Barnes J, Jaeger J, and Thompson D. Call-broadcast Surveys as an Effective Technique for
Detecting Breeding Peregrine Falcons at Lake Mead National Recreation Area. Presentation at
the annual BIOS Symposium, School of Life Sciences, UNLV on March 12, 2010.

Submitted by:

Margaret N. Rees, Project Administrator

Date

4/01/2010