Wildlife Monitoring


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Executive Summary

Project 1. Relict Leopard Frog Monitoring, Management, and Research
- Translocation program initiated this quarter, egg mass collections completed, tadpole rearing underway.
- Egg mass surveys at Blue Point Spring conducted approximately weekly; one egg mass collected from site for headstarting.
- Spring nocturnal surveys in progress.
- Coordination for potential translocation sites on BLM lands ongoing.
- Habitat improvements coordinated and conducted at one new translocation site on BLM lands in the Gold Butte; site scheduled to receive frogs in April.
- All milestones and deliverables associated with the MSHCP project on schedule.

Project 2. Bald Eagle Winter Monitoring and Evaluation
- Winter bald eagle count successfully completed, largest count ever (116 confirmed bald eagle sightings, not counting unidentified and golden eagles).
- Annual Work Plan and Detailed Timelines for the associated MSHCP projects completed; all MSHCP milestones and deliverables on schedule.

Project 3. Peregrine Falcon Monitoring and Evaluation
- Peregrine falcon monitoring activities initiated.
- New call-broadcast methodology under evaluation, results promising.
- Work plan and detailed timelines for the associated MSHCP projects completed ahead of schedule – on schedule for all MSHCP milestones and deliverables.

Project 4. Assessment of Six Covered and Three Evaluation Bird Species
- Work on thrasher modeling ongoing.
- Intensive area search plots identified for MSHCP projects.
- Field protocols associated with MSHCP project completed; on schedule for all MSHCP milestones and deliverables.
- Surveys initiated early at one intensive area site to evaluate thrasher-breeding activity.
- Undergraduate student hired part-time this spring to assist with intensive area surveys.

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
- Twenty-one surveys of regularly monitored sites on Lakes Mead and Mohave conducted this quarter; five additional surveys conducted.
Surveys within Black Canyon to count all aquatic birds from Willow Beach to Hoover Dam initiated on a monthly basis.

**Project 7. Desert Bighorn Sheep Habitat Use Monitoring in Relation to Highway Development.**
- Efforts to retrieve GPS collars released last quarter hampered by battery failures in both satellite and VHF units.
- Technical assistance in the form of data summaries and maps provide.

**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 March 31, 2008, activities that have occurred toward meeting deliverables in the statement of work are described below.

Note that several of the projects are now covered under activate 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 to match Clark County quarterly report requirements.

**Hiring and Student Opportunities**

We hired an undergraduate student to assist part-time this spring in conducting intensive areas surveys for songbirds.

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

The MSHCP project titled ‘Relict Leopard Frog Monitoring and Management’ (2005-NPS-476-P) was initiated on September 4, 2007. The following information has been formatted to meet Clark County quarterly report requirements.

**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.


Partial egg masses were collected from natural sites in the Black Canyon during January and February 2008 as part of the translocation efforts. In association with habitat management and research efforts at Blue Point Spring, an egg mass was also collected from lower Blue Point Spring on March 15; this egg mass has just started to hatch out. Approximately 1100 tadpoles are currently being reared for release at existing translocation sites and at a newly approved site in Gold Butte, as well as back to augment the population at Blue Point.

Nocturnal surveys at natural and translocation sites began following warming temperatures in March and will continue through April. Surveys at several sites have been completed by the time of this reporting. Details from these surveys will be reported to the Relict Leopard Frog Conservation Team (RLFCT) at the next team meeting.

**Deliverable 4. Quarterly Progress Report**

A quarterly report summarizing efforts was submitted to Clark County by the due date of January 1, 2008.

**Other activities**

Under project objectives to assist with assessment and coordination of future translocation sites and to coordinate habitat management activities, UNLV personnel under this project assisted BLM personnel with compliance activity for a translocation site in the Gold Butte. Compliance was completed by BLM personnel in early spring, and UNLV personnel coordinated with BLM to organize and assist a Nevada Conservation Corps field crew with habitat improvements at the site on March 10-11, 2008. We anticipate conducting translocation of frogs to this site sometime in April.

Representatives from BLM and Arizona Game and Fish Department (AZGFD) have surveyed springs in the Black Mountains, Arizona for potential sites to be reviewed for translocation. A field visit to the most promising site was provided to RLFCT members, including UNLV personnel on January 17, 2008, and compliance activity for this site is currently underway by BLM personnel.

A representative from the Desert Springs Preserve was invited to RLFCT meeting in December 2007 to discuss the potential of establishing a refuge population of Relict Leopard Frogs at the Desert Springs Preserve. A field visit to the site was made by members of the RLFCT, including UNLV personnel, on January 25, 2008.

Representatives from BLM and Nevada Department of Wildlife (NDOW) have identified areas near Moapa for potential sites for Relict Leopard Frog translocations. A field visit was conducted to two of these sites by representatives from the RLFCT, including UNLV personnel on March 5, 2008. Field surveys need to be conducted at the sites to determine presence of invasive potential predators/competitors before initiating further efforts.

Habitat management teams from the NPS (exotic plant management program) were given updates and cautions regarding Relict Leopard Frogs prior to tamarisk reduction activities within Black Canyon.

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

No problems were encountered this quarter.

**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.**
Efforts to estimate populations at Rogers Spring have been suspended because no frogs have
been encountered. We will conduct additional field surveys this spring in coordination with
experimental efforts to improve habitat at this site.

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

There are approximately 14 quarters (some partial) that constitute this project and 3 have been
completed; therefore, approximately 21% 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?

Identification of appropriate translocation sites within the Potential Management Zone for the
Relict Leopard Frog has been a continuing challenge because of the limited availability of
appropriate sites. Coordination and collaboration through the RLFCT with cosignatory state
and federal agencies to the Conservation Assessment Strategy is continuing towards the
objective of establishing two new sites this year.

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

No, but see discussion in Question 1 above.

QUESTION 7: What was produced during the reporting period?

1. The second quarterly report (Deliverable 4)
2. Tadpoles headstarted for eventual translocations during 2008 (Milestone 6)
3. Observations on the status of natural and experimental populations (Milestone 7)
4. Identification and compliance on a future translocation site (assistance provided under this
project)
4. Habitat improvements at existing natural sites and at a future translation site (assistance
provided under this project)

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 (actions
continuing)
Milestone 4. Start of Collaboration and Oversight of Population Estimation at Targeted
Springs: completed (actions continuing)
Milestone 5. Start of Assessment and Coordination of Compliance for Future Translocation
Sites: completed (actions continuing)
continuing)
continuing)
Milestone 8 – 21: not initiated

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: in process
Deliverable 6 – 34: not initiated

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 been initiated. A summary of products as described in the task agreement is provided here. The following 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 Plans for the projects, Bald Eagle Monitoring. Also included herein is a report on milestones and deliverables for the associated project, Bald Eagle Modeling (2005-NPS-609B-P) that covers technical aspects of this project. All milestones and deliverables for this quarter have been accomplished, as summarized below.

**Milestone 1. Contract Award and Mobilization**

Contract awards and mobilizations occurred on January 2, 2008.

**Milestone 2. Project Kick-off Meeting**

The kick-off meeting for these projects was held on February 1, 2008.

**Deliverable 1. Work Plan**

An Annual Work Plan was completed and submitted to Clark County on February 1, 2008.

**Deliverable 2. Detailed Timeline**

Two detailed timelines were completed and submitted to Clark County on February 1, 2008 (for projects 2005-NPS-540-P and 2005-NPS-609B-P).

**Deliverable 3. Data Management Plan**

Two data management plans were completed and submitted to Clark County on February 1, 2008 (for projects 2005-NPS-540-P and 2005-NPS-609B-P).

**Milestone 3. Conduct 2008 Bald Eagle Count**

The 2008 winter bald eagle count was conducted on January 7. A total of eight boats with 46 participants surveyed the routes on Lakes Mead and Mohave. A record number of bald eagles were counted, with a total of 116 confirmed bald eagle sightings (not including unidentified
In preparation for the count, group training was provided on January 4 to data recorders for each survey route.

Since the Overton survey route typically has the highest eagle count; pre- and post-surveys of this route were performed (on January 3 and 14, respectively). These surveys were conducted in an effort to gain insight on the potential variation in the eagle count.

All spatial and tabular data from the survey routes were entered into a geo-spatial database. Quality assurance, as described in the Data Management Plan for this project, was performed on all survey data to ensure standardization, and at least 10% of each route's observations were checked for attribute accuracy and completeness against their original survey data sheets. After being spatially digitized, all observation locations were audited against original recording maps by an independent data technician.

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

No problems were encountered during this quarter.

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.

As defined in the Annual Timeline, all scheduled activities were completed this quarter.

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

This project has approximately 12 quarters. The first quarter has been completed; therefore, approximately 8% 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?

1. Annual Work Plan (Deliverable 1, 2005-NPS-540-P)
2. Detailed Timeline (Deliverable 1, 2005-NPS-609B-P)
3. Detailed Timeline (Deliverable 2, 2005-NPS-540-P)
5. Data Management Plan (Deliverable 2, 2005-NPS-609B-P)
6. Observations on bald eagle winter use and numbers on Lakes Mead and Mohave.

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:
For Project, 2005-NPS-540-P

Milestone 1. Contract Awards and Mobilization: completed
Milestone 2. Project Kickoff & Training Meeting: completed
Milestone 3. Conduct 2008 Bald Eagle Count: completed
Milestone 4 – 5: Not initiated

Deliverable 1. Work Plan: completed
Deliverable 2. Detailed Timeline: completed
Deliverable 3. Data Management Plan: completed
Deliverable 4. Quarterly Report: In progress
Deliverable 5 – 25: Not initiated

For Project, 2005-NPS-609B-P

Milestone 1. Contract Awards and Mobilization: completed
Milestone 2: Not initiated

Deliverable 1. Detailed Timeline: completed
Deliverable 2. Data Management Plan: completed

Project 3. Peregrine Falcon Monitoring and Evaluation

The MSHCP projects titled ‘Peregrine Falcon Monitoring’ (2005-NPS-475-P) and the associated project ‘Peregrine Falcon Modeling’ (2005-NPS-609C-P) were initiated on March 3, 2008. The following information has been formatted to meet Clark County quarterly report requirements.

**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. Also covered are actions conducted under the associated project, Peregrine Falcon Modeling (2005-NPS-609C-P) that covers technical aspects of the project. All milestones and deliverables for this quarter have been accomplished, as summarized below.

**Milestone 1. Contract Award and Mobilization**

The original contract awards and mobilization occurred on March 3, 2008.

**Milestone 2. Project Kick-off and Training Meeting**

The Project Kick-off and Training Meeting was completed on March 18, 2008.

**Milestone 3. Begin Peregrine Falcon Monitoring**

Preliminary testing of the new call-broadcast survey method was initiated during the courtship period, beginning on February 13, 2008. This followed surveys at four sites conducted in January to evaluative initiation of territorial breeding behavior. Six incidental sightings were
also documented prior to the onset of the breeding season in early March. Monitoring of peregrine falcons during the breeding season began on March 4, 2008. All historically known peregrine territories within Lake Mead National Recreation Area have been visited at least once, with return visits to sites determined on a site-by-site basis depending on previous results. To date, 64 surveys have been conducted at 32 different sites during 2008.

**Deliverable 2. Work Plan**

An Annual Work Plan was completed and submitted to Clark County before the due date on April 4, 2008.

**Deliverable 3. Detailed Timeline**

A Detailed Timeline was completed and submitted to Clark County before the due date on April 4, 2008. A timeline for the associated project, 2005-NPS-609C, also was delivered.

**Deliverable 4. Data Management Plan**

Development of a Data Management Plan was initiated early for this project in association with early data collection; this deliverable is not due until April 19, 2008.

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

No problems were encountered this quarter.

**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.

As defined in the Annual Timeline and Work Plan, all scheduled activities were completed this quarter.

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

There are approximately 9 quarters (some partial) that constitute this project and one partial quarter has been completed; therefore, approximately 11% 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.

**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. Annual Work Plan (Deliverable 1, 2005-NPS-475-P)
2. Detailed Timeline (Deliverable 2, 2005-NPS-475-P)
3. Detailed Timeline (Deliverable 1, 2005-NPS-609C)
4. Observations on peregrine falcon breeding activities within LMNRA.

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-475-P**

Milestone 1. Contract Award and Mobilization: completed
Milestone 2. Project Kick-off and Training Meeting: completed
Milestone 3. Begin Peregrine Falcon Monitoring: completed (actions continuing)
Milestone 4. Data Management Plan: in progress
Milestone 5-7: not initiated

Deliverable 1. Quarterly Progress Report: in progress
Deliverable 2. Annual Work Plan: completed
Deliverable 3. Detailed Timeline: completed
Deliverable 4 – 21: not initiated

**Project 2005-NPS-609C-P**

Milestone 1. Contract Awards and Mobilization: completed
Milestone 2. Not initiated

Deliverable 1. Detailed Timeline: completed
Deliverable 2 – 10: not initiated

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

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) have been initiated. The following 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 project. All milestones and deliverables identified for this quarter have been accomplished, as summarized below.

**Deliverable 3. Quarterly Progress Report**

A quarterly report was completed and submitted to Clark County by the due date of January 1, 2008.
Deliverable 4. Draft Detailed Field Study Design and Protocol

A draft document describing the field study design was completed and submitted to Clark County on February 15, 2008.

Deliverable 5. Final Detailed Field Study Design and Protocol

A final detailed field study design was completed and submitted to Clark County by the due date of March 31, 2008.

Milestone 3. Begin Review and Compilation of Historical Data in Published Literature, Museum Records, and Data Archives

Compilation of historical data began on February 15, 2008 with the assessment of museum sources available on the Internet and development of data searching protocol for recording data mining activities. Data mining is currently underway.

Milestone 4. Begin Intensive Area Surveys

We have identified the four intensive survey areas and initiated weekly field surveys associated with this project at one site. The monitoring activity is earlier than scheduled and is aimed at gaining a better understanding breeding activities of the Le Conte’s thrasher, one of species targeted for intensive area monitoring.

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

No problems were encountered during this quarter.

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.

As defined in the Annual Timeline and Work Plan, all scheduled activities were completed this quarter.

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

This project has approximately 13 quarters, two quarters have been completed; therefore, by this assessment approximately 15% 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?
1. Quarterly Progress Report (Deliverable 3)
2. Draft Detailed Field Study Design and Protocol (Deliverable 4)
3. Final Detailed Field Study Design and Protocol (Deliverable 5)

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:

For Project 2005-NPS-542-P

Milestone 1. Contract Award and Mobilization: completed
Milestone 2. Project Kickoff & Training Meeting: completed
Milestone 3. Begin Review and Compilation of Historical Data: initiation completed
Milestone 4. Begin Intensive Area Surveys: initiated – in progress
Milestone 5 – 15: not initiated

Deliverable 1. Annual Work Plan & Detailed Timeline: completed
Deliverable 2. Data Management Plan: completed
Deliverable 3. Quarterly Progress Report: completed
Deliverable 5. Final Detailed Field Study Design and Protocol: completed
Deliverable 6. Quarterly Progress Report: in progress
Deliverable 7 – 30: not initiated

For Project 2005-NPS-609A-P

Deliverable. Data Management Plan: 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 following information summarizes products as described in the task agreement. This is not an MSHCP project, thus the information herein is not presented in the format associated with those reporting requirements.

Monthly inventory and monitoring surveys – Ongoing monthly surveys were conducted on the regular seven intensively monitored sites on Lakes Mead and Mohave throughout the quarter with a total of 21 surveys completed (Table 1). Monthly surveys were initiated in January in a new Black Canyon site (from the Willow Beach Fish Hatchery north to the Hoover Dam) in order to better characterize this area’s importance to aquatic birds; surveys here will continue monthly at least through the end of 2008. Exploratory surveys were conducted in the north end of Gregg Basin and the length of Iceberg Canyon on March 4, 2008. This was done in order to evaluate aquatic bird presence in the area prior to the Colorado River High Flow Experiment as planned for mid-March and will be followed up on during the coming quarter. Several major spring migration events of snow geese and gulls were
documented incidentally in late February and during the month of March. All data collected during these surveys were entered into a database.

Table 1. Survey sites and numbers of surveys conducted for aquatic and shorebirds on Lakes Mead and Mohave since March 2004 and during the current quarter.

<table>
<thead>
<tr>
<th>Lake and Site</th>
<th>Number of Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>March 04 – December 07</td>
</tr>
<tr>
<td>Lake Mead</td>
<td></td>
</tr>
<tr>
<td>Las Vegas Bay</td>
<td>49</td>
</tr>
<tr>
<td>Muddy River</td>
<td>47</td>
</tr>
<tr>
<td>Virgin River</td>
<td>47</td>
</tr>
<tr>
<td>Grand Wash</td>
<td>29</td>
</tr>
<tr>
<td>Bonelli Bay</td>
<td>11</td>
</tr>
<tr>
<td>Misc. sites</td>
<td>11</td>
</tr>
<tr>
<td>Lake Mohave</td>
<td></td>
</tr>
<tr>
<td>Arizona Bay</td>
<td>47</td>
</tr>
<tr>
<td>Nevada Bay</td>
<td>47</td>
</tr>
<tr>
<td>Willow Beach</td>
<td>44</td>
</tr>
<tr>
<td>Black Canyon</td>
<td>0</td>
</tr>
<tr>
<td>Misc. sites</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>347</td>
</tr>
</tbody>
</table>

In addition to the actions described above, a literature search and review of snowy plovers in western North America was completed in early January (initiated after the observation of breeding on Lake Mead). The results of the literature review are reflected in the development of an electronic database of literature on the subject, as well as a database containing a summary of all sources for future reference.

**Water Grab samples** – No water samples were requested this quarter.

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

The following information summarizes products as described in the task agreement. This is not an MSHCP project.

**GPS location data from collars on sheep will be downloaded weekly and converted into a format recognized by ArcGIS** – GPS collars were released last quarter and information from these collars is still being sent from Argos; however, this data has not proved particularly useful in locating the missing collars. Much of the information received either is for collars that have already been retrieved from the field, or is data associated with bad GPS location information.

**Field retrieval of collars will be attempted on all dead animals** – Over the past few weeks, time has been spent reviewing the current data sent from Argos in order to identify any locations of released collars for retrieval; however, as reported above few new data have been transmitted as batteries on the satellite collars failed. In addition, it appears that the VHF radio units in the collars have also failed, again as batteries life may not have been as long as
projected. Without location data or radio signals, retrieval of most of these collars will not be possible.

**Provide technical assistance for project assessments and report** – This quarter, as requested by Mr. Haley, PLI personnel working with GIS staff at LMNRA (Joe Hutcheson) provided the following information for the desert bighorn sheep project: (1) total number of fixes collected for each collar/sheep from the beginning of the study to present; (2) range of dates for which each collar has been collecting data; (3) the collar/sheep status to date; and (4) the approximate home range of each animal from aerial estimates.

**Other Activities Conducted under the Task Agreement**

**Technical Assistance and Regional Coordination** –

At Mr. Haley’s request, UNLV Wildlife Research Assistants (Joe Barnes and Dawn Fletcher) provided several days assistance with fish management activities (Razorback Roundup).

Coordination has been ongoing with Mark Sappington (NPS, GIS/data management specialist), and others, on the development of a predictive GIS-based habitat model for peregrines within LMNRA. An organizational meeting of NPS and UNLV personnel involved with the modeling project was held on January 28, 2008. Mr. Barnes also met with Stacey Provincial (a GIS/data management specialist currently with USBOR assisting on this project) on two other occasions for technical discussions on the development of the peregrine model. To gain further experience with raptor field studies, Mr. Barnes assisted the raptor specialist, Mr. Al Hinde, on personal time during January 11-13, 2008.

At Mr. Haley’s request, UNLV wildlife research assistants (Mr. Barnes and Ms. Fletcher) attended the Arizona Coordinated Bird Monitoring meeting in Kingman, Arizona on January 31, 2008. Updates were given for ongoing and planned riparian and aquatic bird surveys throughout Arizona. Particular attention was paid to standardize survey methods across multiple government and non-profit agencies.

At the request of Mr. Haley, UNLV research assistant Fletcher, attended the Lower Colorado River Terrestrial and Riparian Biology Meeting hosted by Bureau of Reclamation in Laughlin on January 29, 2008. The day that Ms. Fletcher attended, the focus was on study design and survey techniques for songbirds along the Lower Colorado River. Ms. Fletcher also attended a meeting for the Mohave Inventory and Monitoring Network on January 28, 2008 at NPS offices in Boulder City to provide information on the NPSpecies database.

At the request of Mr. Kent Turner, Dr. Jaeger as well as research assistant Fletcher attended portions of the Clark County MSHCP Ecosystem Health Workshop hosted by the Desert Research Institute on January 29-31, 2008 in Las Vegas, Nevada.

**Additional Personal Development** –

Research Assistants Dana Drake and Dawn Fletcher completed B3 Combination Helicopter and Airplane Safety Training, at Lake Mead National Recreation Area, on March 12, 2008.

Mr. Barnes was admitted to the M.S. program in Ecology and Evolutionary Biology at the School of Life Sciences, UNLV.
Professional Presentations and Public Outreach – The following professional presentations, describing work conducted under the task agreement, were given this quarter.


Barnes, J. Peregrine Falcons: Their Story at Lake Mead National Recreation Area. Public lecture given at the Boulder City Public Library in collaboration with the National Park Service, Interpretive Division. February 12, 2008. Boulder City, NV.

The following additional professional presentations were given this quarter by individuals associated with this task agreement (identified by underlining).


News Coverage – The following is a list of news articles on the winter bald eagle count conducted this quarter This project was also covered by the local reporter George Knapp for a television story on Channel Eight News.

- Eagle Count Sets Record, Fred Couzens, The Boulder City View.

Submitted by:  
Margaret N. Rees, Project Administrator  
Date: 3/31/2008