

## **PSP and LDS Monitoring Evaluation and Integration**

### **Background and Problem Statement**

Currently two separate efforts are being employed to monitor the status and trends of desert tortoise populations and habitat. A series of long-term Permanent Study Plots (PSP) were established in the 1970's in various locations throughout the desert. Since that time, information related to desert tortoise mortality, habitat condition, disease, and numbers have been collected periodically at the PSP's. This information provides the basis for most of the current estimates of population status and trends. Beginning in 2001, Line Distance Sampling (LDS) was implemented to provide statistically supportable population density estimates that will be used to assess progress towards meeting recovery goals established for each Recovery Unit. The Desert Tortoise Recovery Plans (1994) recommends both population trend monitoring (i.e., LDS) and maintenance of long term study plots.

Currently, the two monitoring efforts are administered separately. In California, approximately \$1.0M was spent on LDS; and \$200K was spent on PSP monitoring in FY 02. The DMG concluded that both efforts yield valuable data, but had concerns that the programs were not coordinated, may be duplicative, and that the relative priority for LDS and PSP monitoring had not been agreed to.

### **Goals**

1. Identify opportunities to individually and collectively leverage LDS and PSP efforts to 1) produce the best data in the most cost effective manner possible; and 2) to further our collective understanding and achieve recovery of desert tortoise populations and their habitat.
2. Provide a method by which managers can prioritize funding for PSPs and LDS.

### **Tasks**

1. FWS will provide a representative sample of PSP annual reports and the draft methods section of the FY 2001 LDS Report to Redlands by Oct 1.
2. By Nov 1, RI will summarize the types of data that (a) have been collected at the Permanent Study Plots (PSP) in the California deserts, (b) are currently collected with LDS, (c) could potentially be collected with modification of current LDS procedures, and (d) provide maps depicting the general location of PSP and the distribution of LDS transects.
3. Send RI summary to principal investigator/developer for review: LDS—Steve Corn, Phil Medica and Dick Tracy, PSP—Kristin H. Berry. Complete review by Nov 15.
4. Create an ad hoc group of managers, field biologists, and bio-statisticians. Suggested group members include:
  - **Managers:** Jim Kenna, Mary Martin, Larry Foreman, Becky Jones, Sherri Dufault, Bob Williams, Ray Bransfield, and Mickey Quillman
  - **Field Biologists/Researchers:** Kristin Berry, Ed LaRue, Pete Woodman, Debra Hughson, Dick Tracy, David Morafka, Jim Weigand, Phil Medica.
  - **Statisticans:** Robert Fisher, Ross Kiester

- **Other:** John Hamill, Clarence Everly
- **Facilitator:** Jill S. Heaton

5. By Dec 1, Ad Hoc Group meets to
  - Evaluate RI summary and comments provided by reviewers
  - Identify opportunities to leverage LDS and PSP efforts to 1) produce the best data in the most cost effective manner possible; and 2) to further our collective understanding of desert tortoise populations and their habitat.
  - Provide a method by which managers can prioritize funding for PSPs and LDS..
6. Present findings and recommendations to DMG (Dec 3-4, 2002)