

Toiyabe Spotted Frog
Conservation Agreement and Strategy Implementation



2005
Annual Report

Toiyabe Spotted Frog Technical Team

Bureau of Land Management
Nevada Department of Wildlife
Nevada Natural Heritage Program
Nye County, Nevada
US Fish and Wildlife Service
US Forest Service
Brigham Young University

COLUMBIA SPOTTED FROG (TOIYABE SUB-POPULATION) CONSERVATION EFFORTS

Technical Team activities

Two formal meetings of the Toiyabe Spotted Frog Technical Team (TSFTT) were held on March 8 and December 1, 2005 in Reno, Nevada. All signatory participants to the CAS attended those meetings in person or by tele-conference.

TSFTT efforts in 2005 focused primarily on continuation of a formal long-term spotted frog monitoring plan, conservation planning and coordination for monitoring surveys. Additional tasks completed by the team included review and identification of research priorities, an annual review of progress on CAS implementation, and review and adaptive modification of strategy priorities and actions to reflect current species status information and changing field/habitat conditions. The TSFTT developed an action plan for 2006 in December, identifying priority conservation actions to be completed by team participants in 2006. This will be reviewed at each team meeting and adaptively modified as required during the year to insure that implementation activities will focus on the most critical conservation activities using the best and most current information. The draft 2006 action plan is included as Appendix 1.

A long-term monitoring plan for Toiyabe spotted frog populations has entered the first stages of implementation by TSFTT members and other interested parties. This plan was used to establish the framework and protocols for range-wide cooperative monitoring efforts to be conducted beginning in July 2004 and continuing through July 2014.

Monitoring and status assessment

Monitoring activities completed in 2005 included spring egg mass surveys conducted at various times throughout the spring, and adult monitoring surveys conducted in occupied and potential habitats in July 2005. Monitoring and survey activities in 2005 were guided by the Columbia Spotted Frog Toiyabe Great Basin Sub-population Long-term Monitoring Plan (Monitoring Plan).

Egg mass surveys were conducted by USFS personnel in May and June of 2005 at six sentinel locations in Indian Valley with a total of 16 egg masses detected (Table 1). All of the egg masses were found during the May surveys in ponds that had been created or manipulated during habitat restoration efforts implemented in October of 2004. Only adult frogs and tadpoles were observed during the June surveys. No egg masses were observed in stock pond that had been restored in Pasture C (May & June) or Farrington Pond (June) during the surveys. Because of staffing and access issues, no egg mass surveys were conducted at Arc Dome (Upper Reese River), Pastures B and D, Ledbetter or Cloverdale Creeks. Survey protocols for this activity as described in the monitoring plan will be refined as required for 2006 based on the 2005 results.

Adult frog monitoring at Sentinel Sites was completed during the week of July 11-15, 2005 following protocols described in the monitoring plan. This was a cooperative effort with assistance from several individuals representing all CAS participant agencies. Over the one week monitoring period multiple mark-and recapture surveys for adult frogs were completed at seven Sentinel Sites in Indian Valley and Arc Dome identified in the

monitoring plan. The majority of animals were marked using permanent PIT tag markers, although a small number of individuals were marked with toe clips using standard toe clip marking protocols because the higher than anticipated number of captures resulted in a shortage of PIT tags.

Table 1. Summary of 2005 spotted frog monitoring results, Toiyabe Range Sentinel Sites

Survey site	Population estimate	95% conf. intervals	Number of egg masses
Pasture A	125	101-149	11
Farrington Pond	38	41-69	0
Warner's Ranch	32	24-45	6
Jamie's Site	32	24-44	0
Cow Canyon Creek	1 juv. frog observed	No estimate	No survey
Ledbetter Meadows	23	14-39	No survey
Arc Dome	34	9-335	No survey
Pasture B, C, D	No estimate	No estimate	0
Cloverdale Creek	Incomplete survey	No estimate	No survey



Figure 1. Columbia spotted frog egg mass in Pasture A

Overall, total adult frog captures decreased moderately at most monitoring sites compared to available 2004 data, although differences in survey methodology make comparisons at some monitoring sites difficult. Total recaptures in 2005 were similar to the 2004 survey data. With the exception of the Arc Dome site, all sites were

substantially reduced in adult frog numbers compared to 2000 which was the peak year of record. No adult frogs were observed or collected at the Pasture B, C, and D site for the third year in a row, though surveys in these areas were incomplete. Increased precipitation in 2005 translated to a marked improvement in available habitat from the previous years of extended drought, but a significant increase in population numbers for the frogs will be a delayed response and is likely contingent upon continued levels of favorable precipitation. This overall downward trend likely reflects continued response to previous drought conditions and absence of late season standing water which corresponds with observed restriction of available habitat. The 2005 population estimate generated for Farrington Ranch (pond) was significantly lower than the 2004 estimate for this site and again suggests that this location may represent a refugium area for adult frogs at the southern extent of their distribution because of the abundant permanent water available there. A cumulative population estimate of 285 adult frogs was generated for the seven Sentinel Site locations combined (Table 1). No presence/absence surveys were completed for the 2005 survey season using Visual Encounter (VES) methodology as outlined in the monitoring plan. Figures 1 and 2 and Table 2 summarize population estimates from monitoring by sentinel site since 2000.

Figure 2. Spotted Frog Population Estimates 2000-2005

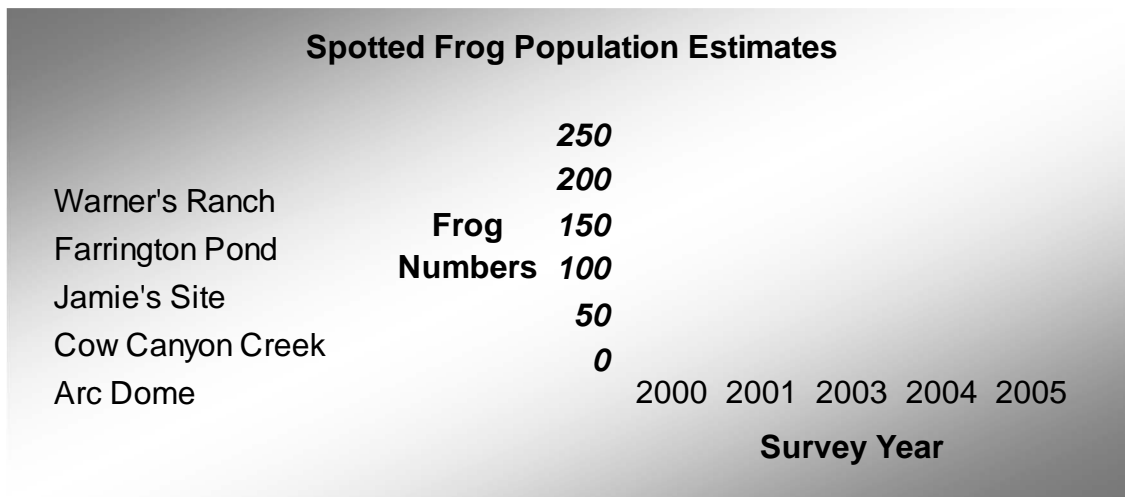
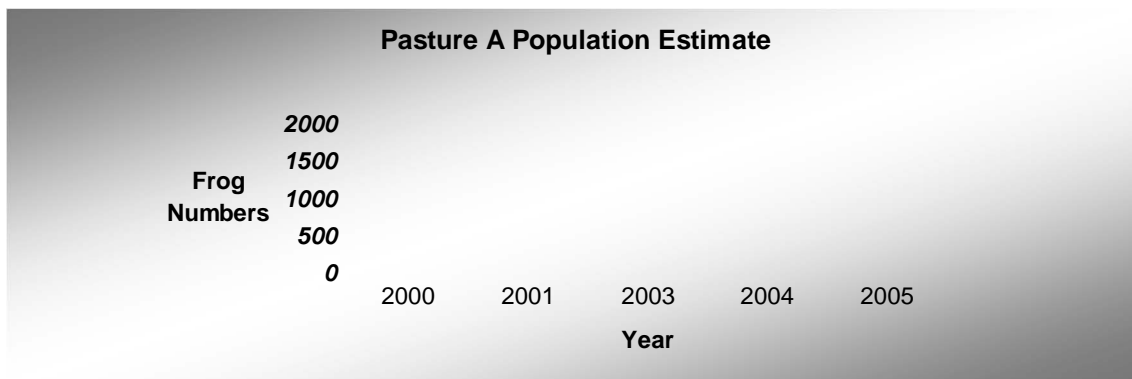


Figure 3. Pasture A Population Estimate 2000-2005



Survey Site	2000	2001	2003	2004	2005
Pasture A	1900	No data	178	226	125
Warner's Ranch	No data	No data	No data	11	32
Farrington Pond	132	45	No data	185	38
Jamie's Site	207	59	43	48	32
Cow Canyon Creek	140	130	0	24	No est.
Arc Dome	No data	No data	No data	7	34

Other conservation actions

Habitat restoration and enhancement

Habitat restoration and enhancement activities were implemented in 2004. In October 2004 a total of 22 new open water pond areas were constructed (17 in Pasture A, 4 in Warner's Pasture and 1 in Pasture C) and existing semi-permanent sites were augmented to increase depth and potential to maintain seasonal open water for a longer period. A variety of experimental pond designs were used and at some constructed sites shallow shelf areas were incorporated into the design with coarse cobble added to enhance spawning and early life stage habitat characteristics. Evaluation of the performance of these improved sites was conducted in 2005 but no new habitat enhancements were constructed pending analysis of the effectiveness of the 2004 actions. The development of habitat monitoring protocols and site evaluation priorities was initiated.

Research activities

Participation in Team activities and species monitoring was maintained by Brigham Young University in 2005. Research needs and priorities were identified by the Team, and development of a challenge cost share agreement to fund additional research actions was initiated by the US Forest Service with funding participation by NDOW, US Fish and Wildlife Service and BLM. This agreement is anticipated to be completed in early 2006 to fund additional actions.

Other activities

An informational pamphlet describing the Columbia spotted frog and the conservation program was developed by the Team under the lead of US Fish and Wildlife Service. This is undergoing final FWS internal review and will be available for public distribution in early 2006.

Additional possible survey locations on BLM lands along the Reese River, downstream of Clear Creek, have been identified for inclusion in future survey efforts. Potential survey locations on private lands along the lower Reese River were identified and initial landowner contacts made. These locations will be considered for inclusion in the 2006 monitoring efforts depending on landowner approval and available staffing.

Implementation of the Toiyabe Spotted Frog Conservation Agreement and Strategy

The Toiyabe Spotted Frog Conservation Strategy identifies 69 actions or tasks to be implemented as ongoing activities or completed during the 10-year implementation period of the Conservation Agreement, which are organized under seven principle conservation objectives and 19 associated strategies. These are summarized in the Strategy document's implementation table. Implementation progress was assessed by the TSFTT in December 2005 as shown in Table 3.

Task or action status	Number of tasks	%
Task/action completed	15	22
Task/action initiated, ongoing for term of CAS	40	58
Task/action initiated, completion date TBD	3	4
Task/action not yet started, initiation date TBD	11	16

At the end of 2005, 22% of the identified tasks/actions had been completed and an additional 62% of the tasks/actions had been implemented at some level, for a total of 84% completed or in progress. The remaining 16% of tasks/actions have been identified for implementation in 2006 or are not yet scheduled for action.

Appendix 1

2006 Toiyabe Spotted Frog conservation action plan (December 2005)

- Conduct egg mass surveys spring 2006
- Identify potential presence/absence survey locations prior to 2006 sentinel site monitoring
- Implement sentinel site and presence/absence monitoring per monitoring plan July 2006
- GPS and map all enhancement pond locations
 - Complete prior to 2006 monitoring efforts
 - Establish fixed names and number all enhancement sites north to south
 - Provide data set to NNHP for database
- Identify potential private land parcels for lower Reese River (north)
- Develop contact list for private lands and Yomba tribe
- Finalize information pamphlet spring 2006 and provide copies for public distribution
- Complete draft species management plan for Team and internal NDOW review
- Complete cost share agreement for research support
- Finalize research prioritization based on available cost share funding