

Great Basin Population of Columbia Spotted Frog  
Northeastern Subpopulations  
Conservation Agreement and Strategy Implementation



2005  
Annual Report

Columbia Spotted Frog Technical Team  
Northeastern Nevada Subpopulation

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## **Executive Summary**

In 2005, the Northeast Columbia Spotted Frog Technical Team (Team) implemented many activities in northern Nevada pertinent to the Conservation Agreement and Strategy (CAS). The main participants of this Team include the University of Nevada Reno Cooperative Extension (UNRCE), Nevada Department of Wildlife (NDOW), U.S. Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and Nevada Heritage (Heritage). USFS and NDOW actively conducted surveys specific to Columbia spotted frogs on lands within their jurisdictions. BLM noted presence of CSF incidental to survey efforts of larger scope. USFWS engaged the Duck Valley Tribe to conduct surveys on reservation lands. On two occasions, UNRCE hosted meetings with Team members to coordinate on these efforts and discuss accomplishments. The Team identified work plans for 2006 and will coordinate amongst its members, accordingly. Survey efforts will continue among historic sites and potentially new sites. The Team also plans to diligently monitor progress in relation to the action items identified in the CAS. This report describes the accomplishments and upcoming plans of the Team elapsed during 2005. It also compares the Team's progress to the CAS's timeline. Additional details (e.g., meeting notes) and agency reports are provided as appendices.

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## 1.0 Introduction

The Northeastern Columbia Spotted Frog Technical Team (Team) was established in 1998 as a cooperative effort between State and Federal agencies to complete and implement a comprehensive Conservation Agreement and Strategy (CAS) for the Northeast sub-population of the Columbia Spotted Frog (*Rana luteiventris*), and to develop, coordinate and implement conservation actions and monitoring activities for the Columbia Spotted Frog within areas of its extant and historic range in the Jarbidge-Independence and the Ruby Mountain subpopulation areas, Elko county, Nevada. The CAS, which outlines a variety of actions to be implemented over a 10 year period to effect spotted frog conservation, was completed and signed by participant entities in September 2003. Participant members of the Team include the Bureau of Land Management (BLM), Nevada Department of Wildlife (NDOW), Nevada Natural Heritage Program (Heritage), US Forest Service (USFS), US Fish and Wildlife Service (USFWS), University of Nevada Cooperative Extension (UNCE), and Brigham Young University (BYU). Additional participants assisting with Team activities in 2005 included the Duck Valley Tribe.

### 1.1 Conservation Goals and Objectives

The Northeast Columbia Spotted Frog CAS identifies two conservation goals and seven conservation objectives intended to describe the desired long term outcome of strategy implementation and to assist in identifying, organizing and implementing conservation actions for the sub-population.

The CAS conservation goals are:

- To reduce threats to Columbia spotted frogs and their habitat to the extent necessary to prevent population units from becoming extirpated throughout all or a portion of their historic range.
- To maintain, enhance, and restore a sufficient number of population units of Columbia spotted frogs and their habitat to ensure their continued existence throughout their historic range.

The CAS conservation objectives are:

1. Determine the overall distribution of Columbia spotted frogs.
2. Assess the abundance of Columbia spotted frogs, habitat conditions, and existing and potential threats at occupied sites.
3. Ensure that viable populations and their habitats are managed and enhanced to ensure the continued existence of Columbia spotted frogs throughout their historic range.
4. Conduct research that directly supports conservation and management of Columbia spotted frogs and their habitat.

5. Implement, through administrative procedures, the CAS and incorporate provisions of the Strategy into agency planning documents and budgets to ensure the goals are met in a consistent manner.
6. Develop and Implement an adaptive management framework partnership.
7. Support the CAS by increasing public awareness and appreciation for Columbia spotted frogs and their habitat, and by making data and information available to interested parties and decision makers.

## 2.0 Activities for 2005

### 2.1 Bi-Annual Meetings

Members of the Team met on April 21 and November 30th, 2005. Both meetings were hosted by UNRCE at their Griswold Hall Office in Elko, Nevada. Participants included Kent McAdoo (UNRCE), Pat Coffin (BLM), Chris Drake, John Elliot (NDOW), Maija Meneks (USFS), and David Potter (USFWS). Notes from these meetings are included in Appendices A and B. Discussion topics at these meetings included:

- Genetics, DPS designation, and status;
- 2005 agency work plans;
- 2005 agency accomplishments;
- Adaptive management;
- Budgets, personnel, and equipment needs; and
- Data management.

Team members also identified several action items at the November 30<sup>th</sup> meeting (Table 1; Appendix C).

**Table 1. Action items identified from bi-annual meetings in 2005.**

Action Item	Objective(s)	Imp. Schedule Objective, Strategy, Action No.	Lead <sup>1</sup>	Date Initiated <i>(proposed)</i>	Date Completed <i>(proposed)</i>
Accomplishments Report for 2005	Report on accomplishments for 2005 by Agency	All	FWS	3/16/06	<i>5/1/06</i>
'04-'05 FS Data sheets to Heritage	FS to send data sheets for 2004-2005 to Heritage	1.2.5; 1.2.6; 1.3.5; 1.3.6; 2.4.1; 2.4.2; 7.4.2	FS	11/30/05	2/13/06
Minutes	Record meeting notes, finalize, & distribute to Team	-	BLM	11/30/05	12/15/05

## 2.2 Activities by Agency

### *2.2.1 BLM*

#### ACCOMPLISHMENTS-

BLM accomplishments during 2005 include:

- Riparian fence inspection/maintenance near Anderson Cr./Mary's River/T Cr. area and habitat management.
- Completed lentic PFC assessments on 259 sites (236 acres); no CSF observed.
- Stream survey and lotic PFC on 4 streams and 33 miles of potential habitat in Mary's River Riparian area. CSF found along Chimney Cr., trib. to Mary's River.
- Stream survey and PFC assessment completed on 14 miles in the Maggie Creek subbasin including Indian Jack, James, and Marys creeks. No CSFs detected.
- Surveys on McCann and Waterpipe Canyon creeks (Owyhee subbasin); no CSFs detected.
- CSF found near Willow Cr. (Rock Creek subbasin) and Little Jack Cr. (Maggie Creek subbasin).
- Culvert replacements on Little Jack Creek, Coyote Creek, Beaver Creek and the Maggie Creek diversion (Maggie Creek subbasin) to facilitate connectivity.

#### PLANNED ACTIVITIES-

For 2006, BLM plans to do the following:

- continue additional PFC assessments on ~250 sites and 30 miles of lotic potential habitat.
- Monitor exclosures, riparian habitat etc.
- Continue to maintain water rights for irrigation along the middle reaches of Mary's R. and lower T Creek. Continue contract haying on BLM meadow pastures that are wildlife friendly.

### *2.2.2 NDOW*

#### ACCOMPLISHMENTS-

NDOW conducted amphibian presence/absence surveys on seven historic Columbia Spotted Frog (CSF) sites, with most of the sites located on BLM, USFS and private land. Two of the sites had spotted frogs present, with a total of one adult and 60 egg masses were accounted for at these sites. Visitation to these historic sites was beneficial in differentiating between potential quality frog habitat and limited or restricted habitat types frequented by amphibians. All occupied sites had several common characteristics, including slow moving or lentic water, emergent aquatic vegetation and algae present, shallow water present, and woody debris present in or around the pond. Other sites that did not have spotted frogs were either dry or going dry and lacked suitable amphibian habitat or the historic coordinates were significantly off. More details on NDOW's work are located in Appendix D.

#### PLANNED ACTIVITIES-

For 2006, NDOW plans to do the following:

- Egg mass survey at Poorman Sp., Coleman Cr. and Chicken Cr. in April 2006.
- Survey Mary's River above the Orange Bridge for CSF (depending on Flows)
- CSF survey near Ibapah (NV/Utah line)
- CSF Survey near Willow Cr. and Little Jack Cr.

### 2.2.3 USFS

#### ACCOMPLISHMENTS-

USFS accomplished the following, which are described in greater detail in its 2005 accomplishment report (Appendix E):

- Completed surveys for all Mountain City Ranger District.
- Completed establishment of monitoring sites; visited all monitoring sites.

#### PLANNED ACTIVITIES-

For 2006, USFS plans to:

- Survey for CSF in Copper Basin and "Right Fork" Telephone Creek.
- Complete historic site resurveys of Columbet Creek, Upper O'Neil basin, Jarbidge Wilderness lakes, Ruby Crest lakes and other locations.
- Examine Schoer Creek, Wiseman Creek, and other nearby drainages.
- Continue monitoring activities at established sites.
- Implement a bull frog removal project on CSF occupied habitat the East Fork Owyhee River (in collaboration with NDOW).

### 2.2.4 USFWS

#### ACCOMPLISHMENTS-

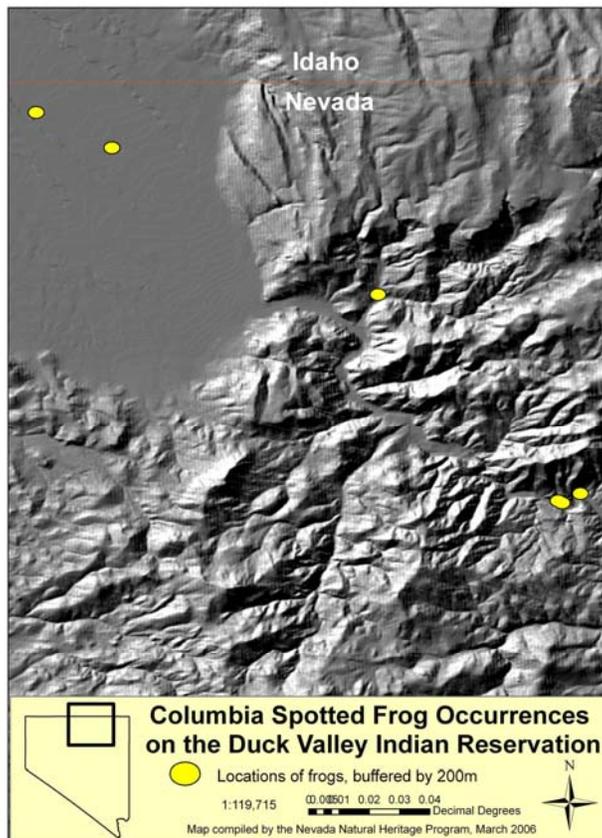
USFWS accomplished the following:

- Collaborated with the Duck Valley Tribe to continue a 2<sup>nd</sup> consecutive year of presence/absence surveys on the southeastern portion of the Reservation (along the Owyhee River). Surveys were conducted on June 21 and 22 along 14 sites, primarily along easily accessible areas adjacent to Highway 267. all life stages of CSFs were detected in 7 of these sites, in isolated ponds, oxbows, and beaver ponds on streams. Fish were not detected in these areas. Raw datasheets were sent to the Tribe and Heritage, which allowed them to generate a map (Figure 1). USFWS will pursue continuing this effort with the tribe's cooperation in 2006.
- USFWS completed an update to the Species Assessment and Listing Priority Assignment; which maintains continuing the candidate status with a Priority of 3.

#### PLANNED ACTIVITIES-

For 2006, USFWS plans to:

- Enroll the cooperation of the Duck Valley Tribe in an effort to continue CSF survey efforts and engage them in Team activities.
- Assist in CSF surveys when requested by other agencies.



**Figure 1. Map of Columbia spotted frog occurrences on the Duck Valley Indian Reservation.**

### 2.2.5 Heritage

#### ACCOMPLISHMENTS-

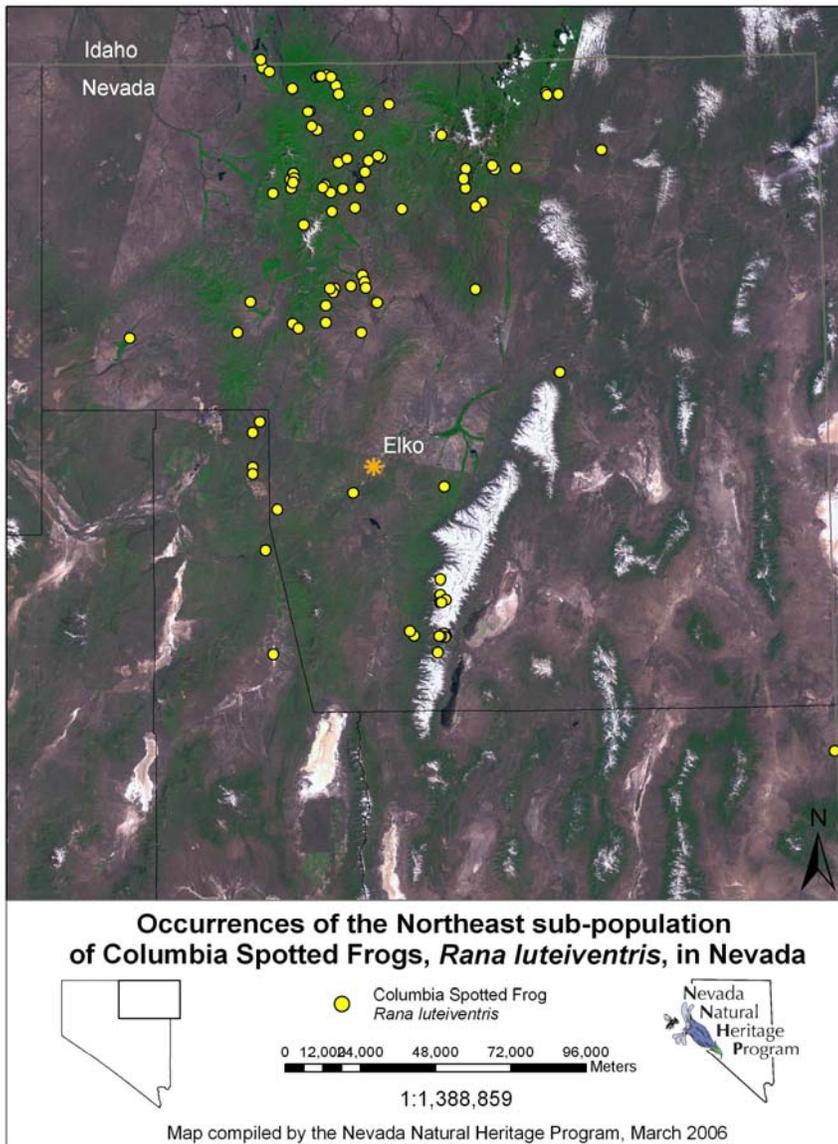
Heritage accomplished the following:

- Updated the CSF map showing recent occurrences (Figure 2).

#### PLANNED ACTIVITIES-

For 2006, Heritage plans to:

- Update their database with historic CSF survey data from USFS.



**Figure 2. Distribution of the Northeast subpopulation of Columbia spotted frogs.**

### 2.3 Collaborative Activities

The Team has identified an interest to develop collaborative activities, but have not yet finalized any ideas.

### **3.0 CAS Implementation Progress**

The Northeast Columbia Spotted Frog Conservation Strategy identifies 72 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 Team in December 2005 (Table 2).

**Table 2. Status of CAS Implementation Table.**

Task or action status	Number of tasks	%
Task/action completed	8	11
Task/action initiated, ongoing for term of CAS	30	42
Task/action initiated, completion date 2005	2	3
Task/action initiated, completion date TBD	0	0
Task/action to be initiated 2005	9	13
Task/action not yet started, initiation date TBD	23	32

At the end of 2005, 11% of the identified tasks/actions had been completed and an additional 45% of the tasks/actions had been implemented at some level, for a total of 56% completed or in progress. A detailed assessment of progress by implementation task or action is included as Appendix F.

The Conservation Agreement and Conservation Strategy for Columbia Spotted Frog, Northeast Basin Sub-population, Nevada (September 2003) document (pdf format) can be viewed and printed at [http://www.ndow.org/wild/conservation/frog/ne/ne\\_plan2.pdf](http://www.ndow.org/wild/conservation/frog/ne/ne_plan2.pdf).

Appendix A. Meeting notes from the April XX, 2005 meeting of the NE Columbia Spotted Frog Technical Team.

~~System~~

4/21/05 - CSF TT - Attending: Pat Coffin (BLM),  
Mark Maloy (USFWS), Chris Drake (NDOW), Maija Menckes (USFS)  
JKM

I. Update Con serv. Strategy

DONE

- get reviewed and sent to Mark by Jun. 1.
- Mark will E-mail this (Table S-2, revised) in WORD

~~(775-861-6338 - Mark M.)~~

II DPS

- genetics is holding up the Strategy draft ~~for~~ - 2 Univs. involved, and this is ~ holding things up. - if not done, no longer a candidate
- USFWS is joining CESU - this should help w/ the communication.

III. Action Plan, 2005

A. BLM - Pat Coffin (see hand-out

See hand-out

[over] →

B. ~~USFS~~ USFS - Maja Menck

- has 2 hires - hoping to also get  
~~to~~ 2 SCA employees  
Emph. historic sites - Bluejacket, Jarbridge,  
but mostly Ruby Mtns.

- new b. estn
- Sentinel (monitoring) sites <sup>extreme</sup>
  - 1. N fork of Green Mtn. (headwaters)
  - 2. Tennessee Gulch (extreme " )
  - 3. Pole Cr. (trib. to O'Neil) below  
Elephant Butte. [note: can't cross  
Canyon Cr. here due to beaver dams]

2 new locations to try:

1. Telephone Cr. (headwaters - Merritt Mtn.)
2. Coon or Copper ~~Cr.~~ Cr.

w. Folk Slaughterhouse Cr. - has sp. frogs  
w/ few spots - will check out.

In Jarbridge area, looking @ candidate  
site for riparian enclosure - Pole Cr.  
(maybe work w/ RMEF).

- Bullfrog removal on lower Owyhee.

C. Chris Drake - NDOW

1. egg mass surveys - next 2 wks  
Poorman Springs; Coleman Cr; Gance Cr.

[note: Jerritt Mine is doing some frog surveys soon  
on Winters Cr.]

Riff

3

Spot checks / suitable habitat checks:

2. Historic sites in Mary's River:  
Anderson Spgs, etc.
3. Riff Cr. / Beaver Cr. -

\* - 3 weeks of field time budgeted for field checks; starting Sp. Mgmt. plan  $\rightarrow$  this fall.

[Note: Mark M. says artificial ponds in Toiyabe area are becoming populated w/ spotted frogs]

IV. Other CAS Requirements

- A. - Adap. Mgmt Actions - ~~see~~ see p. 4 on newly revised table.
- Maja's exclosures (see above)
  - BLM pipe exclosures around ~~spring~~ / springs
  - N. FK (Hum.) - some riparian exclosures

B. Budget Review

- FS  $\Rightarrow$  10%  $\downarrow$  in operation budget
  - so far, no impacts on 2005 FY, but don't know re: 2006
  - NDOW - no summer student -
  - will have to borrow stream survey person.
  - BLM - PFC crews OK  $\leftarrow$  (28 seasons) but still looking to fill - budget is v. tight (static this yr) -
  - USFWS - 0.4 tags purchased, \$ for pit tags [over]  $\rightarrow$
- next yr looking poor  $\rightarrow$

V. Other Agreed Items

A. How to identify threats to frog-inhabited areas?

VI. Next Mtg. 12/1/05 @ 10 AM, UNICE

**Appendix B. Meeting notes from the November 30th, 2005 meeting of the NE Columbia Spotted Frog Technical Team.**

Attendees: David Potter (FWS), Chris Drake (NDOW), Kent McAdoo (UNRCE), Maija Meneks (USFS), Pat Coffin (BLM).

1.) David Potter discussed the status of Distinct Population Segment (DPS) review for Great Basin populations of spotted frog. The five year status review designates Great Basin DPS, but this has not been officially accepted in Washington D. C. FWS office yet. Nevada State Office data supports separate DPS designation unit, but genetic data still open. Status review indicates Great Basin populations are “discrete”. Other DPS units were removed from the candidate list. Still considered priority level 3 – high threat of extinction at subspecies level. Link to Toiyabe populations is limited; distinct range, genetics.

2.) Review of 2005 accomplishments by agencies.

a.) USFS – Handout. All Mountain City Ranger District completed. Blue Jacket Creek and Walker Creek (tributary to Merritt Creek) has spotted frogs. Did not get to as many places as last year. Most resurveys are in remote areas. Want to do Wiseman Creek, Copper Basin and other scattered sites.

Used all 300 pit tags in 2005 Used to track individuals. Wants to continue pit tag use on Green Mountain Creek, Tennessee Gulch, and Pole Creek (O’Neil). All three sites are breeding sites. Frogs were tagged after breeding. Tadpoles were present. They generally remain in the same area. Also discussed elastomere marking of toes as a tracking method. Maija indicated that the pit tag data suggest that we may see only 1/5 of any given population on a perfect day, and less than that other times. Forest Service has a small pond along the Owyhee River near Mountain City that has bullfrogs. Plan on starting to remove bullfrogs in 2006 by physical removal.

Kent asked about transplanting barren sites, or sites with low population numbers. Protocol may or may not allow, depending upon development of plan which NDOW is working on, but has not completed.

Discussed Forest Service protocol for decontaminating equipment (using QUAT128). Other agencies are not using any decontamination process yet.

b.) NDOW – Handout table. Will prepare a Federal Aid to wildlife report later. Will send copies to team members. Chris indicated they found adults and eggs in Poorman and Chicken Creeks. Anita (Cook) Shuel will send out a formal report. Discussed the need for a combined database for all agencies. Maija indicated the Forest Service has a database, which could be used to combine information.

c.) BLM – Handout. Lentic PFC surveys were completed on 259 springs, seeps, and ponds (236 acres) during 2005. No spotted frogs were observed. During stream

survey BLM found spotted frogs in Chimney Creek at three sites (5 frogs). Also found spotted frog in Willow Creek above Willow Creek Reservoir. Replaced three culverts on the Maggie Creek road in the Maggie Creek subbasin with fish and other aquatic life passable culverts. Also replaced the culverts on the Maggie Creek diversion dam making it passable to aquatic life. A spotted frog was found below the Little Jack Creek culvert in 2004. Observations were made along other streams during stream survey, but no spotted frogs were observed.

Continue livestock compliance monitoring in exclosures, riparian pastures, and closed pastures in 2005 and reported any trespass livestock. Exclosure system on Pearl Creek was expanded by about ¼ mile. Potentially opening some riparian pastures and exclosures in the Marys River subbasin to very restricted livestock use in late May and early June for a couple of weeks a year or every other year. No decision made yet.

d.) FWS – Monitoring was completed on the Duck Valley Indian Reservation. May be able to share results. Asked what the group felt about inviting representative from the Duck Valley tribe to meeting. No one had a problem. Not sure how they feel about sharing information concerning spotted frog citations. May be a site on the Duck Valley Indian Reservation with bullfrogs in a pond along the Owyhee River, but not sure if site is the same one the Forest Service has or within reservation boundary. FWS will check out.

### 3.) 2006 Action Plan

a.) Forest Service will have 2 volunteers and 2 student hires again in 2006 to work on spotted frogs. Would like more pit tags from the FWS (500) to continue pit tagging program. Will continue to look at historical sites to determine if spotted frogs are still present. Will also look for new sites and continue monitoring on specific populations. Work on bullfrog elimination in pond near Mountain City on forest.

b.) NDOW will continue to look for spotted frog populations during stream survey. Will check some sites where spotted frogs were noted in the 1970s and 1980s during stream survey. Will do private lands checks with cooperative landowners.

c.) BLM plans on continuing lentic PFC assessments on springs, seeps, and ponds. Will also continue stream survey effort to document status of habitat and any spotted frogs. Will be working on streams in the Gully Allotment including Pole, Wilson/Lime, Dry, and Willow creeks in the O'Neil Basin. Spotted frogs are known to occur in Pole Creek on the Forest Service lands, and also on BLM. Will not get into Canyon Creek this year. BLM will continue to monitor exclosures, riparian pastures, and closed pastures.

BLM will continue contract hay irrigation and cutting on two properties in the Marys River subbasin to maintain water rights and in-stream flows.

d.) FWS may continue working on the Duck Valley Indian Reservation in 2006 looking for spotted frogs.

#### 4.) Adaptive Management and other CAS requirements.

Agencies discussed progress of adaptive management – or implementation of action items identified in CAS plan. David Potter asked what adaptive management meant for spotted frogs. Generally discussed where we planned on going within agencies and flexibility to complete what needs to be completed on an annual basis. Forest Service plans on doing some fencing that should enhance spotted frog habitat. BLM is working on Marys River Complex allotment evaluation decision process for six allotments in the Marys River subbasin. Generally should enhance aquatic and riparian habitats. May authorize some limited use in previously closed areas such as the Hanks Creek enclosure and Marys River Riparian Pasture.

BLM preparing a report on the West Fork Deer Creek comparing three basic grazing strategies. Two enclosures were constructed in 1978 and 1981, a large riparian pasture was added in 1992 with limited authorized grazing, and also a pasture with a longer grazing season. The report will compare 28 years of closure to limited grazing and general grazing.

Budgets for agencies were discussed, and although no agency had an approved budget yet, most anticipated a similar to slightly reduced budget for 2006. The Forest Service indicated they may have a little more funding than anticipated, but the budget was generally static. NDOW indicated their budget would be similar to last years while BLM indicated their fisheries and wildlife budget would be similar to last years. BLM will need to hire a new PFC crew this year. FWS indicated their budget was anticipated to be the same. FWS indicated it was possible to request funding for specific project which they would consider. Generally on the ground type projects rather than salary or research.

#### 5.) Other

David Potter would like to go out on surveys during 2006.

Discussed Heritage Program operated by Nature Conservancy. Need to send data to Heritage Program. Most data is being provided to Heritage Program. Need to send Chimney Creek data.

There will be a rangewide spotted frog meeting in Salt Lake City, Utah in the spring. This meeting is held every other year.

Invite Duck Valley Indian Reservation representative to meetings.

#### 6.) Next meeting date

Will set later when we know when the rangewide meeting is being held. Maybe hold our meeting in conjunction with the rangewide meeting?

**Appendix C. Running list of action items as identified by the Northeast CSF Technical Team during bi-annual meetings.**

Meeting Date	Action Item	Objective(s)	Imp. Schedule Objective, Strategy, Action No.	Lead <sup>1</sup>	Date Initiated <i>(proposed)</i>	Date Completed <i>(proposed)</i>	Comments
11/30/05	Accomplishments Report for 2005	Report on accomplishments for 2005 by Agency	All	FWS	3/16/06	<i>5/1/06</i>	
	'04-'05 FS Data sheets to Heritage	FS to send data sheets for 2004-2005 to Heritage	1.2.5; 1.2.6; 1.3.5; 1.3.6; 2.4.1; 2.4.2; 7.4.2	FS	11/30/05	2/13/06	
	Minutes	Record meeting notes, finalize, & distribute to Team	-	BLM	11/30/05	12/15/05	Next time: FWS

<sup>1</sup> FWS =US Fish and Wildlife Service; FS=US Forest Service; NDOW = Nevada Department of Wildlife; HG=Heritage.

Appendix D. NDOW's Job Progress Report for CSF surveys.

# NEVADA DEPARTMENT OF WILDLIFE STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

2005

Columbia Spotted Frog Survey & Inventory

EASTERN REGION

NEVADA DEPARTMENT OF WILDLIFE, FISHERIES BUREAU  
JOB PROGRESS REPORT

**State:** *Nevada*  
**Project Title:** *Native Fishes/Amphibians*  
**Job Title:** *Survey & Inventory of Columbia Spotted Frog (*Rana luteiventris*)*  
**Subjob Title:** *Survey Historic Sites on BLM land*  
**Report Period:** *January 1, 2005 through December 31, 2005*

**SUMMARY**

During the 2005 field season, Nevada Department of Wildlife (NDOW) personnel conducted amphibian presence/absence surveys on seven historic Columbia Spotted Frog (CSF) sites, with most of the sites located on BLM, USFS and private land. Two of the sites had spotted frogs present, with a total of one adult and 60 egg masses were accounted for at these sites. Visitation to these historic sites was beneficial in differentiating between potential quality frog habitat and limited or restricted habitat types frequented by amphibians. All occupied sites had several common characteristics, including slow moving or lentic water, emergent aquatic vegetation and algae present, shallow water present, and woody debris present in or around the pond. Other sites that did not have spotted frogs were either dry or going dry and lacked suitable amphibian habitat or the historic coordinates were significantly off.

Survey methodology consisted of a two person crew performing a visual encounter survey that was not limited by time and was agreed upon by the Northern Nevada Spotted Frog Technical Team (NNSFTT). Every attempt was made to capture all frogs for identification. Other pertinent information collected at the site included: Global position (UTM's), elevation, water temperature, livestock use, surrounding habitat and vegetation community, water source and pond type, and site physical characteristics (length, width and depth).

**OBJECTIVE**

To coordinate and conduct with other agencies Columbia Spotted Frog habitat and population surveys on historic sites in the Eastern Region of Nevada.

**PROGRESS**

Seven days were spent in historic Columbia Spotted Frog habitats to survey seven identified CSF sites, which resulted in identifying 1 site with spotted frogs present. A total of 61 spotted frog life forms (1 adult, and 60 egg masses) were surveyed during 2005. Most of the sites occurred on BLM or USFS administered lands, and two occurred on private property.

Of the seven sites surveyed and that contained frogs, the most prominent of the sites for both frog populations and suitable habitat was Chicken Creek (Table 1).

## **RECOMMENDATIONS**

Survey Mary's River spotted frog sites and potential sites near the Orange Bridge to document breeding sites and determine population status at this location.

Explore and survey new sites that look like suitable spotted frog habitat, including sites on private property with permission from the landowner.

Assist other agencies with spotted frog surveys and management objectives in 2006 when necessary.

Survey potential spotted frog habitats prior to any Lahontan cutthroat trout recovery work.

Survey known spotted frog habitats in early spring to try to document egg masses and or breeding populations. This will be dependent on access and water flows at the site.

Continue to participate in the Northern Nevada Spotted Frog Technical Team meetings.

Prepared by: Chris Drake  
Fisheries Biologist

*Date: February 28, 2006*

**Table 1**

2005 NDOW Survey Sites for Columbia Spotted Frogs

Date Surveyed	1:100K MAP NAME	Drainage	LEGAL	X_COORD	Y_COORD	RL_ADULTS1	RL_SUB1	RL_LARV1	RL_EGGS1	COMMENTS
5/3/2005	Jarbidge	Poorman Cr. Beaver Pond	T44N,R55E,S3	602651.0	4618702.0	0	0	0	25	Eggs in late stages of development
5/3/2005	Jarbidge	Chiken Cr., Near Coffe Pot homestead	T44N,R54E,S33	602694.0	4621545.0	1	0	0	35	100 yds. Upstream of road xing on S. shoreline
5/5/2005	Jackpot	Shshone Cr., inside school study area	T46N,R15E,S23			0	0	0	0	High School Nature study area. High Flows, no amphibs.
7/1/2005	Crescent Valley	Hot Cr. w/in exclosure	T28N,R52E,S12	579881.0	4463474.0	0	0	0	0	Historic site, no amphibs. Detected
7/19/2005	Jarbidge	Trib. To Beaver Cr.	T43N,R54E,S34	591766.0	4613214.0	0	0	0	0	Old beaver pond on trib to Beaver Cr.
7/19/2005	Jarbidge	Trib. To Beaver Cr.	T43N,R54E,S3	593710.0	4612756.0	0	0	0	0	CSF&PCF found upstream in 2004. ~100 PCF found in 2005
7/28/2005	Jarbidge	Anderson Sp., E. of Mary's River	T42N,R58E,S29	639554.0	4606199.0	0	0	0	0	Nice Pond w/ mature willow trees, 1 gater snake observed.
8/5/2005	Elko	Robinson Lake	T32,R59E,S23	645234.0	4510098.0	0	0	0	0	<i>Bufo borealis</i> found
8/22/2005	Tuscarora	S. Fork Lone Mtn. Cr	T36,R53E,S21	582026.0	4547869.0	0	0	0	0	Resurvey, no amphibs found.
<b>TOTALS 2005</b>						<b>1</b>	<b>0</b>	<b>0</b>	<b>60</b>	

**Appendix E. USFS's 2005 Progress Report for Columbia Spotted Frogs, Northeast Subpopulation.**



**Columbia Spotted Frog (*Rana luteiventris*)  
Northeast Nevada  
2005 Forest Service Summary Report**

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November 30, 2005

## Summary

During the 2005 field season, US Forest Service personnel (1) established one monitoring site for Jarbidge Ranger District for Columbia spotted frog (CSF); (2) surveyed two established monitoring sites, one each Mountain City and Ruby Mountain Ranger Districts; and (3) performed amphibian presence/absence surveys at 63 NE Nevada District locations corresponding to historic CSF sites at 24 streams/springs.

Methodology at historical sites consisted of a two person crew performing a visual encounter survey not limited by time and agreed upon by the Northern Nevada Spotted Frog Technical Team. Attempts were made to capture all frogs, regardless of species or lifestage, for identification. Other data collected at the site included: GPS position in UTM's, elevation, water quality (temperature, pH, turbidity), physical characteristics (length, width, depth, substrate), surrounding habitat and vegetation community, and any information considered pertinent by the survey crew. Photographs were also taken.

At the monitoring sites, an extensive search was performed by a crew of two to five people. An attempt was made to capture all juvenile and adult frogs. CSF greater than 40 mm were PIT (Passive Integrated Transponder) tagged; and those smaller than 40 mm were toe-marked with an elastomere tag. All CSF were weighed (g), measured (snout-to-vent length – mm), individually GPSed, and comments written concerning microhabitat at the capture location. Frogs were then released in the vicinity of their capture. Photographs were taken for general reference, i.e., start and end points, tadpole ponds, other interesting features.

Due to the growing concern of decline of frog populations from chytrid fungus (*Batrachochytrium dendrobatidis*), all equipment that came in contact with water was cleaned or rinsed with a QUAT-128 sanitizer solution to prevent, or at least mitigate, the spread of the fungus. This was done whenever the crew moved to a new site in a different watershed. No infected individuals were detected during the surveys.

### *PIT Tag Monitoring*

A new monitoring site was established on Jarbidge Ranger District at the headwaters of Pole Creek (upper O'Neil Basin) south of Red Elephant Butte. Existing sites on Ruby Mountain and Mountain City Ranger Districts were revisited. This will be the second year of data collection at the already established sites. Depending upon budget, monitoring is envisioned to last a minimum of 3 to 5 years.

PIT tagging CSF at monitoring sites is anticipated to:

- Provide rough population estimates, mortality, juvenile-to-adult recruitment, adult movement, and general habitat preference data at three locations (1 site each Ruby Mountain, Mountain City, and Jarbidge Ranger Districts). The populations to be monitored appear to be robust and of relatively remote access to the general public.
- Return general trend data over a number of years (3-5).

- Gain a better background knowledge of habitat preference and movement (specific to NE Nevada) which will subsequently allow better analyses of project effects.
- Support NEPA-related monitoring activities by providing the opportunity to compare frogs pre- and post-effect at a project to a monitored site.

**SF Green Mountain Creek** (Ruby Mountain Ranger District)

The Ruby Mountain Ranger District CSF monitoring site is located on the headwaters of SF Green Mountain Creek north of Harrison Path (T.29N., R.57E., Sec. 36). It is downslope from Forest Road 107. Total length of the site is approximately 0.5 mile. Elevation ranges from 7520' to 7750'.

The site consists of a series beaver dams, most of which are inactive. The slope adjacent the stream is aspen forest in the process of regenerating from heavy past beaver use. There are many stumps; and downed logs and debris from washed out dams provide a complex in-stream large woody debris environment. Riparian vegetation is typical for the area and includes a diversity of grasses, rushes, sedges, forbs, willow, and young aspen. Non-aspen upslope environs is a sage community with some mountain mahogany.

Comparing 2004 to 2005, some new beaver activity was noted; and previously decaying dams had been shored up or rebuilt. At the time of survey, the largest upstream dam of the complex had recently blown-out and the pond was completely evacuated except for a remnant pool.

Survey date was 6/27/05 through 6/30/05.

Table 1 summarizes the CSF captured at the site. A total of 85 frogs were captured, of which 20 were tagable adults (>40 mm) and 65 were juveniles (<40 mm). A total of 5 frogs were recaptured from the previous year. See Figure 1 for CSF distribution at the site.

	Male	Female	Unknown	Total
<b>Adults (&gt;40 mm)</b>	7	13	-	20
<b>Juveniles (&lt;40 mm)</b>	-	-	65	65
				<b>85</b>
<b>Recapture (2004)</b>	4	1		

**Table 1.** Summary of CSF found at SF Green Mountain Creek monitoring site

Compared to 2004, approximately the same number of adults were caught, but more than twice as many juveniles were captured. Note that in 2004 that only one pass was made through the monitoring site.

A tentative initial population estimate (ignoring missed animals) indicates a total of 205 CSF at the monitoring site (70 adult and 145 juvenile), which expands to an extrapolation of 411 frogs/mile (140 adult and 289 juvenile). The population protocol used was Lincoln-Peterson estimate. The population estimate did not utilize all frogs reported in Table 1, instead calculating

from animals found within a “core” survey region above a rock outcrop (1 adult and 5 juveniles were outside the “core” region).

Of particular interest, no tadpoles were found in 2005. Columbia spotted frogs were known at other locations, more easily accessible in early spring, to have laid eggs in April, but this event was followed by several weeks of cold weather. It is possible that the majority of the April spawn was lost. Additionally, the previously noted blown-out pond hosted tadpoles in 2004. It will be interesting in 2006 to see if there is a lower number of juveniles compared to 2004 or 2005.

Tennessee Gulch (Mountain City Ranger District)

The Mountain City Ranger District CSF monitoring site is located on the headwaters of Tennessee Gulch northeast of Tennessee Mountain (T.45N., R56E, Sec. 10 and 15). The site is adjacent to a spur from Forest Road 056. Total length of the site is approximately 1.0 mile. Elevation ranges from 7150’ to 7600’.

The site consists of a series of beaver dams, many in the process of in-filling to sedge and willow meadows. Current beaver activity was extremely limited and only found in the lowermost part of the monitoring area. Several very large ponds were present, the most prominent of which constituted the downstream boundary of the site. Willows and regenerating aspen is the dominant near-stream woody vegetation; and other riparian plants include grass, sedge, rush, and forbs. The south-facing slope consists of a sage community typical for northeastern Nevada; and the north-facing slopes are largely covered by aspen forest.

Survey date was 7/11/05 through 7/14/05.

Table 2 summarizes CSF captured at the site. A total of 178 frogs were captured, of which 139 were tagable adults and 39 were juveniles. A total of 18 frogs were recaptured from last year. Additionally, three ponds with CSF tadpoles were recorded. Two of the tadpole ponds were at or nearby ponds which in 2004 were recorded to have tadpoles; and the third was upstream, near the start point. A total of 34 frogs were found in one upstream pond, a location in 2005 which also had a high number of animals; and the pond at the end of the survey, a locale with few CSF in 2004, had 36 frogs. See Figure 2 for CSF distribution at the site.

	Male	Female	Unknown	Total
<b>Adults (&gt;40 mm)</b>	73	66	-	139
<b>Juveniles (&lt;40 mm)</b>	-	-	39	39
				<b>178</b>
<b>Recapture (2004)</b>	6	10		

**Table 2.** Summary of CSF found at Tennessee Gulch monitoring site

Compared to 2004, slightly more juveniles were captured, but more than three times as many adults were caught. Note that in 2004 that only one pass was made through the monitoring site.

A tentative initial population estimate (ignoring missed animals) indicates a total of 442 CSF at the monitoring site (374 adult and 68 juvenile), which expands to an extrapolation of 994 frogs/mile (844 adult and 150 juvenile). The population estimate did not utilize all frogs reported in Table 2. Due to time constraints and unexpected large numbers of frogs, the “mark” survey only covered 0.9 mile of the established 1.0 mile site; and the “recapture” survey only 0.45 mile. The frogs present in the recapture area were used to calculate the population estimate (difference is 4 adults and 13 juveniles).

While tadpoles were found at this site, they were very small compared to 2004 and relatively few. The cold weather which appears to have affected CSF at SF Green Mountain Creek likely impacted Tennessee Gulch animals as well. Two distinct size classes of tadpoles were found last year, so it is possible that frogs at this site were able to lay eggs after the first batch was frozen. As with SF Green Mountain Creek, it will be interesting in 2006 to see if there is an impact on the juvenile population compared to 2004 or 2005.

The large numbers of frogs exhausted the PIT tags which were on hand for tagging adults. Elastomere marks were thus used to mark those adults unable to be provided a PIT tag (2 animals). Although precise tracking of individuals will not be possible, they will still be able to provide some data next year.

#### Pole Creek (Jarbidge Ranger District)

The Jarbidge Ranger District CSF monitoring site is located on the headwaters of Pole Creek in upper O’Neil Basin, south of Red Elephant Butte (T.46N., R61E, Sec. 4). The site is upstream from a spur from Forest Road 080. Total length of the site is approximately 0.35 mile. Elevation ranges from 7320’ to 7500’.

The site consists of a two beaver dam complexes, all in the process of in-filling to sedge and willow meadows. The complexes are separated by about 700 feet of non-ponded stream which traverses aspen. There is no current beaver activity; and all signs (i.e., chewed aspen which have suckered) are at least five years old. One very large pond was present. Willow is the dominant near-stream woody vegetation in the vicinity of the ponds, with aspen located further back in most, but not all, areas. Other riparian plants include grass, sedge, rush, and forbs. The west-facing slope consists of a sage community typical for northeastern Nevada; and the east-facing slopes are a combination of aspen at lower elevations and sage higher up.

Survey date was 8/1/05 through 8/4/05.

Table 3 summarizes CSF captured at the site. A total of 225 frogs were captured, of which 153 were tagable adults and 72 were juveniles. Additionally, three ponds with CSF tadpoles were recorded. One pond was near the downstream start point, the second pond the largest of the survey, and the final pond the upstream end point. Frogs were concentrated in all occupied ponds; and evidence of movement between complexes was documented with the capture of two

individuals in habitat unsuitable for long-term occupancy. See Figure 3 for CSF distribution at the site.

	Male	Female	Unknown	Total
<b>Adults (&gt;40 mm)</b>	83	70	-	153
<b>Juveniles (&lt;40 mm)</b>	-	-	72	72
				<b>225</b>

**Table 3.** Summary of CSF found at Pole Creek monitoring site

Originally, the survey was to include all the ponds in the upstream complex. However, due to time constraints, this was not feasible. Additional CSF are known to be present upstream of the survey end point.

A tentative initial population estimate (ignoring missed animals) indicates a total of 332 CSF at the monitoring site (235 adult and 97 juvenile), which expands to an extrapolation of 950 frogs/mile (670 adult and 278 juvenile). The population estimate utilizes all frogs reported in Table 3. Compared to the other two monitoring sites, a greater percentage of the estimated Pole Creek population was caught in the two survey passes.

The large numbers of frogs exhausted the PIT tags which were on hand for tagging adults. Elastomere marks were thus used to mark those adults unable to be provided a PIT tag (54 animals). Although precise tracking of individuals will not be possible, they will still be able to provide some data next year.

*Historical Site Resurvey*

Historical CSF sites surveyed in 2005 were located on all three NE Nevada Districts, with the majority on Ruby Mountain Ranger District. A total of 63 locales upon 24 streams/springs were surveyed. The crew went to the vicinity of the historic site – the original site was not always able to be found due to imprecise descriptions and/or legal locations - and surveyed all suitable habitat. Due to time constraints, the crew was instructed to not go out of their way to search for sites. Surveys started late-June and concluded the end of August 2005. The result was the identification of 2 systems with spotted frogs, of which a total of 5 “species present” GPS points were taken. A total of 19+ spotted frog lifeforms were found (17 adults, 2 juveniles/sub-adults, and “present” tadpoles).

The two systems include: (upper) Blue Jacket Creek and (upper) Walker Creek.

Of these locations, Blue Jacket Creek was most notable for frog populations and habitat.

Scattered historical sites remain to be surveyed on both Jarbidge and Ruby Mountain Ranger Districts. Selected Jarbidge District sites are more likely to have CSF populations due to unsuitable habitat and high elevations expected at the Ruby Mountain locales.

## Projected 2006 Activities

### *Monitoring*

- Projected one week visit (early summer) to each site to:
  - Recapture tagged adults and juveniles
  - Tag frogs larger than 40 mm
  - Elastomere tag frogs less than 40 mm
  - Measure/weigh/GPS all CSF
  - Mark/recapture for a rough population estimate
  - GPS beaver dam locations at SF Green Mountain Creek
- If sufficient time exists during the field season, additionally would like to:
  - Revisit at least one site in late summer/early fall to see if there is any seasonal movement among tagged frogs

### *Historical Site Resurvey*

- Complete survey of remaining historical sites on Jarbidge (<15), and Ruby Mountain (<15) Ranger Districts
  - Priority is Jarbidge sites, as most remaining Ruby Mountain locations are high elevation Wilderness unlikely to be CSF habitat

### *Additional Surveys*

- Begin surveys at new (non-historical) locations. Suggestions include:
  - Telephone Creek (“Right Fork”) headwaters
  - Cornwall Creek
  - Mill Creek (Tennessee Mountain)
  - Badger Creek headwaters (Tennessee Mountain)
  - Copper Creek (Copper Basin) tributaries
  - Coon Creek headwaters
  - Wiseman Creek headwaters

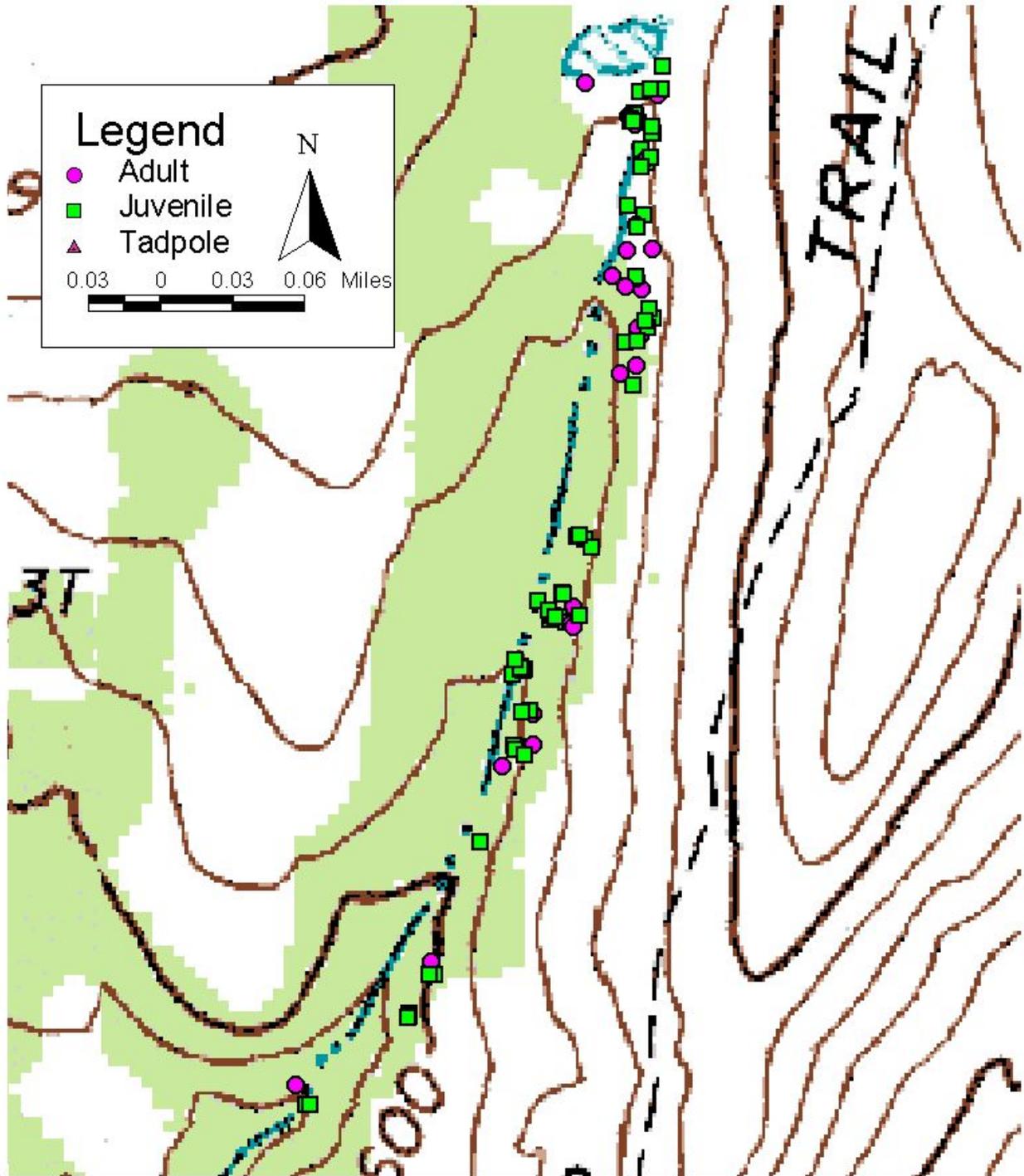


Figure 1: SF Green Mountain Ck PIT Tag Results (2005)

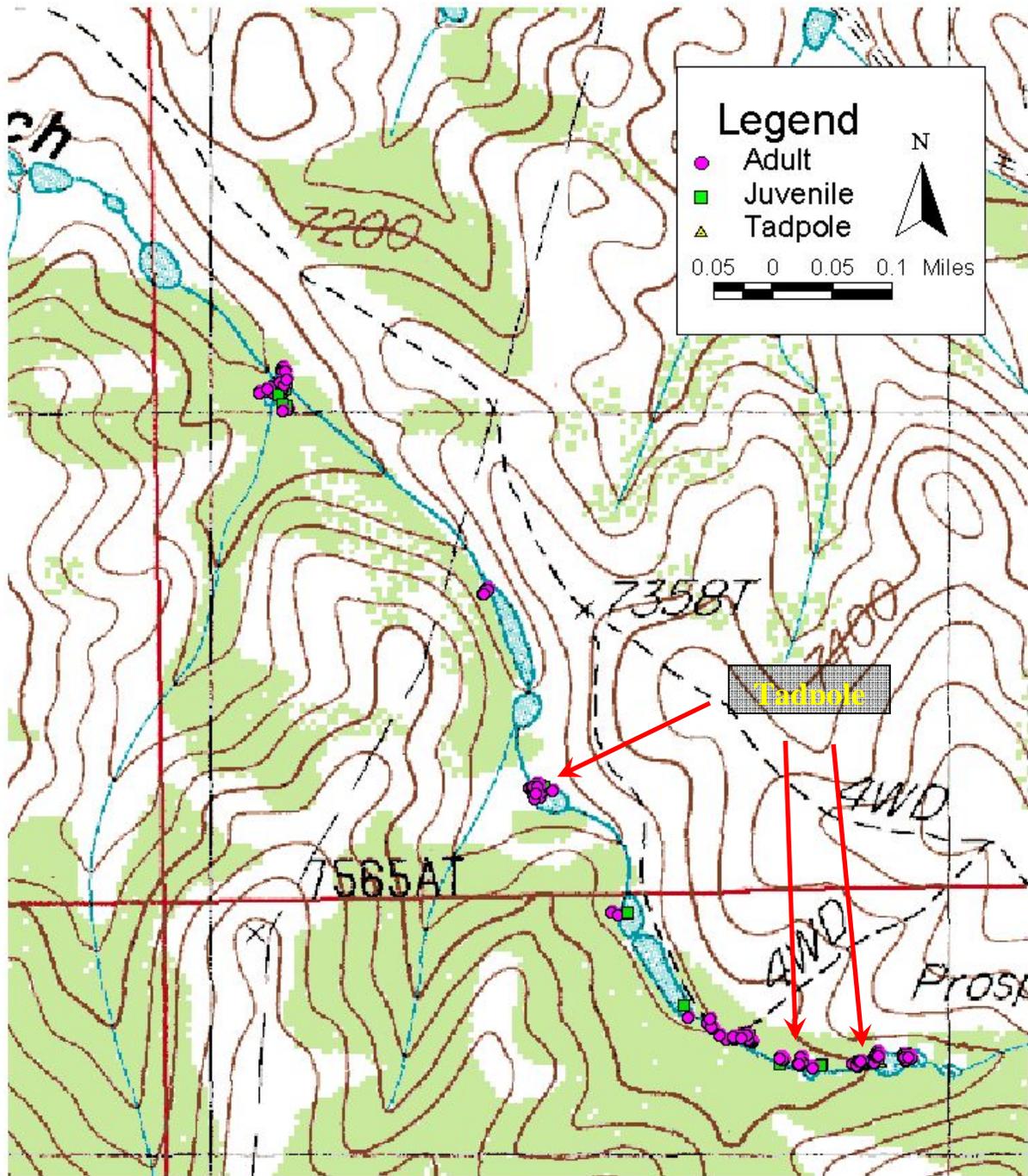


Figure 2: Tennessee Gulch PIT Tag Results (2005)

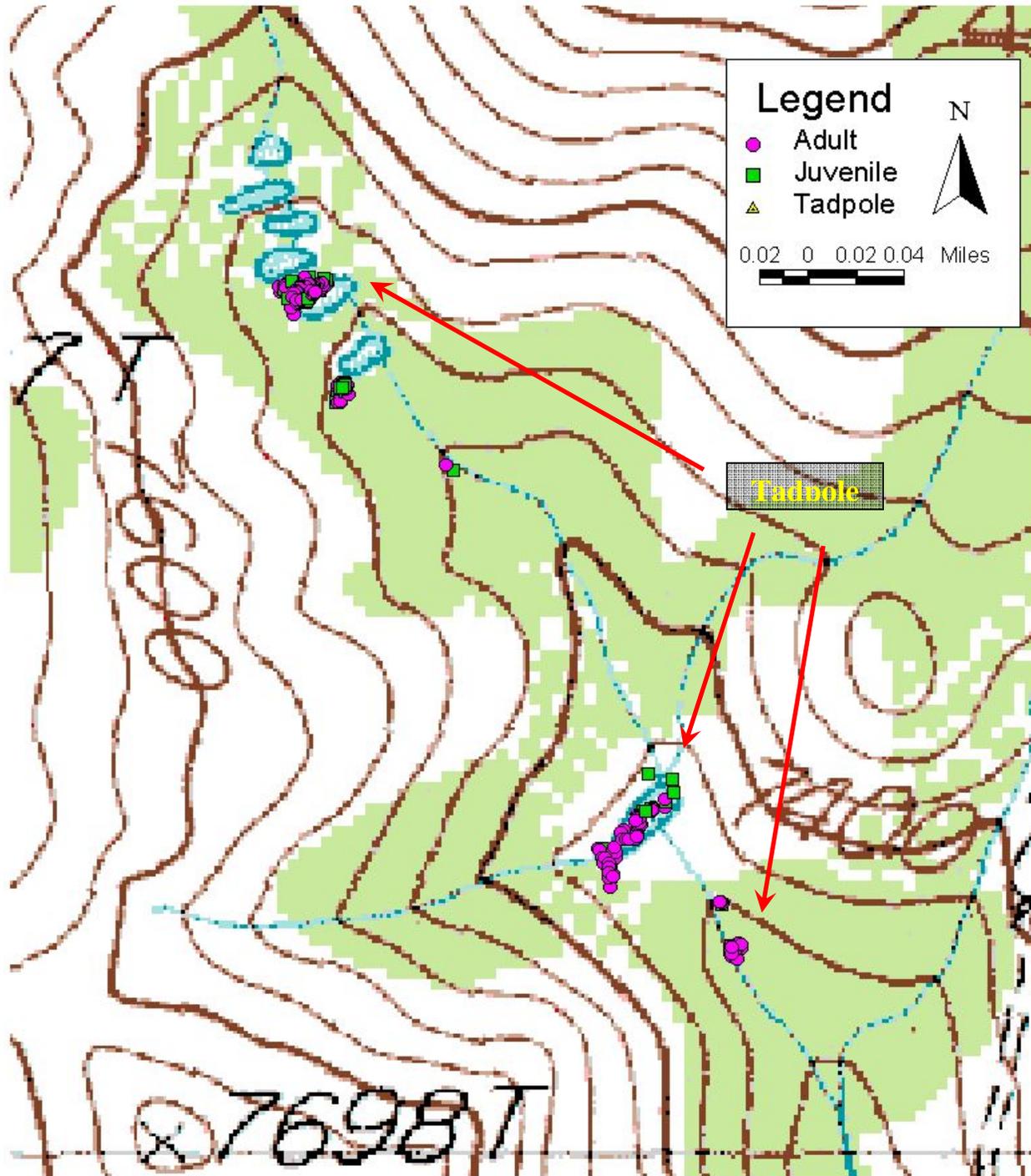


Figure 3: Pole Creek PIT Tag Results (2005)

## Appendix F. CAS Implementation Progress Review

An annual assessment of progress towards implementation of CAS identified tasks and conservation actions was completed by the Team. The implementation table following has been coded to indicate progress on specific tasks:

Table S-2. Conservation Strategy Implementation Schedule CAS Implementation Progress Review (April 2005)					
Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
Objective 1.DETERMINE THE OVERALL DISTRIBUTION OF COLUMBIA SPOTTED FROGS	✓			NDOW, USFS, BLM	
<b>Strategy 1. Adopt a standard protocol for inventory of Columbia spotted frogs.</b>					
Action 1. Develop a standard protocol for presence or absence surveys.	✓		Prior to 1	BRRC	COMPLETED
Action 2. Implement a standard protocol for presence or absence surveys.	✓		1	NDOW, USFS, BLM	COMPLETED
<b>Strategy 2. Determine the distribution of Columbia spotted frogs on Federal land.</b>					
Action 1. Assess the presence or absence of Columbia spotted frogs at all known historic sites.	✓		3 - 4	NDOW, USFS, BLM	INITIATED, ONGOING
Action 2. Develop a method for identifying potential sites.	✓		3	NDOW, USFS, BLM	NOT YET STARTED DATE TBD
Action 3. Assess the presence or absence of Columbia spotted frogs at potential sites.		✓	4 - 5 +	NDOW, USFS, BLM	NOT YET STARTED DATE TBD
Action 4. Verify and delineate conservation units.	✓		3 - 4	NDOW, USFS, BLM,	NOT YET STARTED DATE TBD
Action 5. Create a detailed map of historic and potential sites using GPS and GIS.	✓		2	NDOW, USFS, BLM, NNHP	COMPLETED
Action 6. Maintain a detailed map of historic and potential sites using GPS and GIS.		✓	ALL	NNHP	INITIATED, ONGOING
<b>Strategy 3. Determine the distribution of Columbia spotted frogs on non-federal land.</b>					
Action 1. Identify known and potential Columbia spotted frog sites from existing information.	✓		3 - 4	NDOW, USFS, BLM	NOT YET STARTED DATE TBD
Action 2. Secure permission from willing non-federal landowners or controlling authorities to access property.	✓		2	NDOW, USFS, BLM	PROPOSED IMPLEMENTATION 2005
Action 3. Assess the presence or absence of Columbia spotted frogs at all accessible	✓		2 - 3	NDOW, USFS, BLM	PROPOSED IMPLEMENTATION 2005

Table S-2. Conservation Strategy Implementation Schedule  
CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
sites.					
Action 4. Verify and delineate conservation units.	✓		3 - 4	NDOW, USFS, BLM,	NOT YET STARTED DATE TBD
Action 5. Create a detailed map of these sites using GPS and GIS.	✓		1 - 3	NDOW, USFS, BLM, NNHP	NOT YET STARTED DATE TBD
Action 6. Maintain a detailed map of these sites using GPS and GIS.		✓	ALL	NNHP	NOT YET STARTED DATE TBD
Action 7. Evaluate the significance of Columbia spotted frog populations and habitat on non-federal lands to the conservation of Columbia spotted frogs.	✓		3	SFTT	NOT YET STARTED DATE TBD
<b>Strategy 4. Prevent the spread of frog diseases and pathogens.</b>					
Action 1. Adopt a disease and pathogen protocol for aquatic field crews to prevent the spread of frog diseases and pathogens between populations of Columbia spotted frogs.	✓		1	NDOW, USFS, BLM	COMPLETED
Action 2. Require state and Federal aquatic field crews to implement adopted disease and pathogen protocol for Columbia spotted frog and other aquatic species inventory and monitoring activities.		✓	1	NDOW, USFS, BLM	COMPLETED
Action 3. Incorporate disease and pathogen protocols into research and collection permits issued under state and federal agency authorities.	✓		1	NDOW, USFS, FWS	INITIATED COMPLETION 2005
Objective 2. ASSESS THE ABUNDANCE OF COLUMBIA SPOTTED FROGS, HABITAT CONDITIONS AND EXISTING AND POTENTIAL THREATS AT OCCUPIED SITES.		✓		NDOW, USFS, BLM	
<b>Strategy 1. Monitor occupied sites on accessible lands to assess abundance of Columbia spotted frogs.</b>					
Action 1. Develop a process for prioritizing and monitoring occupied sites on a periodic basis to develop long term trend data.	✓		1 - 2	ALL	COMPLETED
Action 2. Monitor occupied sites using developed prioritization protocol for long term trend data collection.		✓	2 - 10	NDOW, USFS, BLM	INITIATED, ONGOING
Action 3. Establish sentinel sites and		✓	ALL	NDOW, USFS, BLM	INITIATED, ONGOING

Table S-2. Conservation Strategy Implementation Schedule  
CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
conduct annual monitoring to collect long term trend data.					
<b>Strategy 2. Assess and evaluate habitat conditions at potential and occupied sites on accessible lands.</b>					
Action 1. Prioritize potential and occupied sites and develop a process for assessing, evaluating and categorizing habitat conditions at each site on a periodic basis.	✓		2	ALL	PROPOSED IMPLEMENTATION 2005
Action 2. Incorporate standardized habitat monitoring protocols into animal survey and monitoring activities.	✓		2 - 3	ALL	PROPOSED IMPLEMENTATION 2005
Action 3. Identify the range of habitat conditions which are optimum to allow Columbia spotted frog persistence.	✓		3 - 4	ALL	NOT YET STARTED DATE TBD
<b>Strategy 3. Identify and assess the existing and potential threats at each occupied site.</b>					
Action 1. Identify the threats at each occupied site on a periodic basis.		✓	TBD	ALL	NOT YET STARTED DATE TBD
Action 2. Assess the degree and immanency of each threat at each site.		✓	ALL	ALL	NOT YET STARTED DATE TBD
<b>Strategy 4. Create and maintain a database for data and information collected.</b>					
Action 1. Create a data base for the storage of data and information collected.	✓		DONE	NDOW, USFS, BLM, NNHP	COMPLETED
Action 2. Maintain a data base for data and information collected.		✓	ALL	NNHP	INITIATED, ONGOING
Objective 3. ENSURE THAT VIABLE POPULATIONS AND THEIR HABITATS ARE MANAGED AND ENHANCED TO ENSURE THE CONTINUED EXISTENCE OF COLUMBIA SPOTTED FROGS THROUGHOUT THEIR RANGE.		✓		NDOW, USFS, BLM	
<b>Strategy 1. Identify, prioritize and implement site-specific actions to reduce the existing and potential threats to Columbia spotted frogs on Federal lands as identified in Objective 2.</b>					
Action 1. Prioritize conservation units for conservation actions.		✓	3 - 4	ALL	NOT YET STARTED DATE TBD
Action 2. Develop a detailed monitoring	✓		2	NDOW	NOT YET STARTED DATE TBD

Table S-2. Conservation Strategy Implementation Schedule  
 CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
plan for Columbia spotted frog populations and habitats.					
Action 3. Develop a Columbia spotted frog Species Management Plan.	✓		2	NDOW	PROPOSED IMPLEMENTATION 2005
Action 4. Manage, restore, and/or enhance existing riparian and spring ecosystems to benefit all life stages of Columbia spotted frogs.		✓	ALL	USFS, BLM	NOT YET STARTED DATE TBD
Action 5. Identify, restore and/or enhance, and manage areas of historic unoccupied and potential Columbia spotted frog habitat within the presumed historic range of the species to benefit all life stages of Columbia spotted frogs.		✓	ALL	USFS, BLM, NDOW	NOT YET STARTED DATE TBD
Action 6. Identify and manage dispersal corridors, including terrestrial upland habitats, important to Columbia spotted frogs to maximize ecological connectivity between occupied/restored spotted frog habitats.		✓	2 - 10	USFS, BLM	PROPOSED IMPLEMENTATION 2005
Action 7. Implement activities identified in Actions 1 through 5 on an annual basis as defined in the Annual Action Plans developed by the SFTT (Objective 6, strategy 1, Action 6).		✓	ALL	ALL	INITIATED, ONGOING
<b>Strategy 2. Encourage non-Federal landowners to conserve viable populations of Columbia spotted frogs and their habitats.</b>					
Action 1. Identify potential locations and cooperators for conservation efforts on non-federal lands.	✓		2	ALL	NOT YET STARTED DATE TBD
Action 2. Provide technical assistance to willing landowners to develop Candidate Conservation Agreements with Assurances.		✓	ALL	USFWS	NOT YET STARTED DATE TBD
Action 3. Work with landowners to identify and use available public and private incentive programs to protect and restore Columbia spotted frog habitat.		✓	ALL	USFWS, NDOW	NOT YET STARTED DATE TBD
Objective 4. CONDUCT RESEARCH THAT DIRECTLY SUPPORTS CONSERVATION AND MANAGEMENT OF COLUMBIA SPOTTED FROGS AND THEIR HABITAT.		✓		NDOW, USFS, BLM, USFWS	
<b>Strategy 1. Identify and recommend projects to address known research needs and incorporate data into the</b>					

Table S-2. Conservation Strategy Implementation Schedule  
CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
<b>Conservation Strategy through the adaptive management process.</b>					
Action 1. Incorporate identified research needs into SFTT annual action plan commitments (Objective 6, strategy 1, Action 6).		✓	ALL	SFTT	INITIATED, ONGOING
Action 2. Utilize research findings in annual program assessments and adaptive management reviews of conservation strategy.		✓	ALL	SFTT	INITIATED, ONGOING
<b>Strategy 2. Implement and maintain a process for identifying future research needs and incorporating research projects into the Strategy.</b>					
Action 1. Assess research needs on an ongoing basis.		✓	ALL	SFTT	INITIATED, ONGOING
Action 2. Develop a prioritized list of research needs.	✓		1	SFTT	INITIATED, ONGOING
Action 3. Maintain a prioritized list of research needs.		✓	ALL	SFTT	INITIATED, ONGOING
Action 4. Incorporate research needs into Strategy by identifying lead entity(s), budget and time schedule.		✓	ALL	SFTT	INITIATED, ONGOING
Action 5. Implement proposed research actions as approved by the SFTT.		✓	ALL	ALL	INITIATED, ONGOING
Action 6. Incorporate data findings into the Strategy through the adaptive management process to ensure that goals and objectives are ultimately met.		✓	ALL	SFTT	INITIATED, ONGOING
Objective 5. IMPLEMENT THROUGH ADMINISTRATIVE PROCEDURES THE CAS AND INCORPORATE PROVISIONS OF THE STRATEGY INTO AGENCY PLANNING DOCUMENTS AND BUDGETS TO ENSURE THE CONSERVATION GOALS AND OBJECTIVES ARE MET IN A CONSISTENT MANNER.		✓		ALL	
<b>Strategy 1. Enforce and administer existing policies, laws and regulations.</b>					
Action 1. Review existing policies, laws and regulations at least biennially and assess their adequacy to protect Columbia spotted frogs and their habitat.		✓	ALL	ALL	INITIATED, ONGOING
Action 2. Maintain the Columbia spotted		✓	ALL	USFWS, USFS, BLM, NDOW, NNHP	INITIATED, ONGOING

Table S-2. Conservation Strategy Implementation Schedule  
CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
frog on cooperator agency protected or sensitive species lists.					
Action 3. Consult on Section 7 of the ESA as necessary.		✓	TBD	USFWS, USFS, BLM	INITIATED, ONGOING
Action 4. Periodically evaluate species status under Section 4 of the ESA.		✓	TBD	USFWS	INITIATED, COMPLETION 2005
<b>Strategy 2. Identify and implement non-site specific actions, policies, and procedures to reduce or eliminate existing or potential threats to population units of Columbia spotted frogs as identified in Objective 3.</b>					
Action 1. Identify non-site specific actions, policies, and procedures to reduce or eliminate existing or potential threats to Columbia spotted frogs.	✓		1 - 3	USFS, BLM	NOT YET STARTED DATE TBD
Action 2. Implement non-site specific actions, policies, and procedures to reduce or eliminate existing or potential threats to Columbia spotted frogs.	✓		1 - 3	USFS, BLM	NOT YET STARTED DATE TBD
<b>Strategy 3. Review forest, land, and resource management plans periodically for conformance with spotted frog conservation goals, objectives, strategies, and actions.</b>					
Action 1. Incorporate CAS conservation goals, objectives, strategies, and actions, as appropriate, during the Forest Land and Resource Management Plan revision.	✓		4 - 5	USFS	NOT YET STARTED DATE TBD
Action 2. Amend BLM management planning documents as appropriate and necessary to implement CAS conservation goals, objectives, strategies and actions as those planning documents are scheduled for review.		✓	TBD	BLM	NOT YET STARTED DATE TBD
Action 3. Maximize retention of Federal lands containing Columbia spotted frogs or which are potential frog habitat.		✓	ALL	USFS, BLM	INITIATED, ONGOING
<b>Strategy 4. Incorporate goals, objectives, strategies and actions of the CAS into agency budget requests, and based on funding, revise Strategy as necessary to update implementation schedule.</b>					
Action 1. SFTT representatives will conduct annual workload analysis to determine the budgetary and biological staffing needs to accomplish conservation actions identified in the implementation		✓	ALL	ALL	INITIATED, ONGOING

Table S-2. Conservation Strategy Implementation Schedule  
CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
schedule.					
Action 2. SFTT representatives will provide their respective managers with annual conservation action proposals for funding consistent with agency planning and budget processes.		✓	ALL	ALL	INITIATED, ONGOING
Action 3. SFTT representatives will pursue alternative funding strategies and partnerships to supplement agency work programs as opportunities are identified and available.		✓	ALL	ALL	INITIATED, ONGOING
<b>Strategy 5. Ensure implementation of the CAS through the SFTT partnership process.</b>					
Action 1. Implement team responsibilities as defined in the CAS implementation strategy.		✓	ALL	ALL	INITIATED, ONGOING
Objective 6. DEVELOP AND IMPLEMENT AN INTERAGENCY ADAPTIVE MANAGEMENT FRAMEWORK PARTNERSHIP.		✓		ALL	
<b>Strategy 1. Develop an interagency framework process that ensures adaptive management is incorporated into the implementation of the Strategy.</b>					
Action 1. Review Strategy progress and implement any changes through an adaptive management process as needed.		✓	ALL	SFTT	INITIATED, ONGOING
Action 2. Monitor the effectiveness of each action on a set schedule to determine if the expected results are being attained within the given time frame.		✓	ALL	SFTT	INITIATED, ONGOING
Action 3. If actions are not effective, modify the strategy to implement alternative measures to ensure that goals and objectives are ultimately met.		✓	ALL	SFTT	INITIATED, ONGOING
Action 4. Ensure that data from inventory, monitoring, and research efforts are incorporated into the Strategy through the adaptive management framework.		✓	ALL	SFTT	INITIATED, ONGOING
Action 5. Modify and/or update the implementation schedule table yearly.		✓	ALL	SFTT	INITIATED, ONGOING
Action 6. Develop an annual action plan of site-specific management commitments by cooperator, which are keyed to objectives of the Strategy and Species		✓	ALL	SFTT	INITIATED, ONGOING

Table S-2. Conservation Strategy Implementation Schedule  
CAS Implementation Progress Review (April 2005)

Conservation Objectives, Strategies, and Actions	Window for Completion		Target completion Year(s)	Responsible Parties	Conservation Action status
	YRS 1-5	YRS 1-10			
Management Plan, research findings, and adaptive management review.					
Objective 7. SUPPORT THE CAS BY INCREASING PUBLIC AWARENESS AND APPRECIATION FOR COLUMBIA SPOTTED FROGS AND THEIR HABITAT, AND BY MAKING DATA AND INFORMATION AVAILABLE TO INTERESTED PARTIES AND DECISION MAKERS.		✓		ALL	
<b>Strategy 1. Encourage citizen and landowner participation in CAS implementation.</b>					
Action 1. Develop brochures and other materials on the Columbia spotted frog and its management needs for dissemination to the public for education purposes.	✓		1 - 3	ALL	PROPOSED IMPLEMENTATION 2005
Action 2. Distribute informational materials to the general public, recreational users, private landowners and to other customers who may be involved in actions affecting Columbia spotted frogs and their habitat.		✓	3 - on	ALL	PROPOSED IMPLEMENTATION 2005
Action 3. Develop educational and informational materials on Columbia spotted frogs and their habitat/management needs for distribution through other media sources including newspapers and television.		✓	ALL	FWS, NDOW, USFS	PROPOSED IMPLEMENTATION 2005
Action 4. Develop a program to encourage volunteer public and private land conservation efforts.	✓		2	FWS, NDOW, USFS, BLM	NOT YET STARTED DATE TBD
<b>Strategy 2. Develop a process for collecting and maintaining data and information and distribution to stakeholders and decision makers.</b>					
Action 1. Create a depository for storage of data from inventory, monitoring, and research efforts on Columbia spotted frogs.	✓		DONE	NNHP	COMPLETED
Action 2. Maintain the depository.		✓	ALL	NNHP	INITIATED, ONGOING
Action 3. Ensure data and information developed through actions of this strategy are available to and shared among cooperators.		✓	ALL	ALL	INITIATED, ONGOING

NOTES:

**Target Completion Year(s):** Where possible target years for completion over the 10 year life of the CAS have been identified. Actions which will occur continually over the life of the CAS have been identified as ALL. In some cases actions may occur periodically or are dependent on the completion of other actions and the specific timing or sequence cannot yet be determined (TBD).

**Responsible Parties:** Identified cooperators are the Lead or Co-lead agencies for this action. Other cooperators may assist or participate as appropriate.

**Conservation Action Status:** Current status of this task or action based on SFTT assessment 2004

Task completed	
Task initiated, ongoing for term of CAS (no fixed completion date)	
Task initiated, completion date 2005	
Task initiated, completion date TBD	
Task to be initiated 2005	
Task not yet started, initiation date TBD	