

**PROJECT TITLE:**

Spotted Frog Inventory of Southern Oregon  
Combined report for 2005 and 2006

**PROJECT LEADS AND UNIT:**

Jill Oertley, Wildlife Biologist, Project Lead  
Fremont-Winema National Forests  
Chemult Ranger District

Brent D. Frazier, Budget Contact, Forest Biologist  
Fremont-Winema National Forests

**ABSTRACT****SUMMARY**

Surveys for Spotted Frogs (both Oregon and Columbia) were conducted between 18 July and 14 September, 2005, and between 31 of July and 5 of September, 2006. Crews consisted of between 2 and 6 surveyors, depending on personnel availability and complexity of habitats to survey. Surveys were led by wildlife biologists or technicians (Jill Oertley, Eric Esselstyn, Tom Gorman, and/or Amy Anderson) that had experience with occupied spotted frog sites, and trained the less experienced crew members. Survey times (totals obtained by multiplying survey time by number of crew members) for a site ranged from 1.5 hours for a small spring area to 75.5 hours for a segment of river. In 2005, 361 survey hours were spent surveying and in 2006, 130 survey hours. Habitat types surveyed included lakes, reservoirs, streams, rivers, wetlands, ponds, irrigation canals and ditches. Crew members who made this possible are listed in *Appendix A1 and A2*.

**BACKGROUND**

Prioritization for survey sites had been conducted by biologists from various agencies and locales in southern Oregon. They recommended (high and medium priority) sites for potential spotted frog habitat, most of which had never been surveyed for spotted frogs, as far as we know.

**METHODS AND RESULTS**

In 2005, 28 different sites in Lake, Klamath and Jackson counties were surveyed within the following jurisdictions: Fremont and Winema National Forests including former reservation lands, BLM (Lakeview and Ashland resource areas), Bureau of Reclamation, and private. Refer to *Appendix B1* for all 2005 sites surveyed. Several (9) sites that had been recommended were investigated, and found to be unsuitable, since they were dry and therefore do not provide the needed perennial habitat. These are listed in a later section.

In 2006, 23 different sites in Lake and Klamath counties were surveyed in Lakeview BLM resource area, Fremont and Winema National Forests, and Sycan Marsh Nature

Conservancy property. Sites surveyed in 2006 are in *Appendix B2*. Three additional locations were dry and not surveyed.

According to the protocol (see *Appendix C*) surveys were conducted between 9:30 am and 6 p.m., and crew members either worked in tandem or independently to search in habitat defined as less than one meter depth of water. Date, location, surveyors, start/end times and UTM's, weather conditions, temperature of water, types of habitat searched, types of aquatic vegetation, amphibians, and fish (if known), numbers of garter snakes, presence of other predators, cows, beaver, observed mollusks, and average and maximum water depth surveyed, were recorded for each site.

One site (with 2 segments) that was surveyed in 2005, had a small previously known and surveyed population of Columbia spotted frogs on the Lakeview Resource Area of BLM. Before surveying, we discussed the plan of clipping a toe with the BLM biologist, Todd Forbes, who agreed we could collect one toe for the whole population, which we did.

Three segments of the Williamson River were surveyed in 2005, one of which had a documented account of Oregon spotted frogs. Although over 129 person hours were spent surveying 3 segments of this river, no spotted frogs were observed.

In all the other sites (49 in both years with 491 survey hours), no new occupied spotted frog habitat was located during the surveys.

Several sites that were surveyed were results of recommendations of potential habitat made by Marc Hayes and Stewart Reid from a survey they conducted in 1998. Some of these previously surveyed sites, marked with \* below, were no longer potential habitat as they were dry in 2005.

#### RECOMMENDED HABITAT THAT WAS DRY IN 2005

##### On the Fremont NF Bly District:

Mallory Reservoir  
Beaverdam Lake  
Klippel Lake \*  
Pitt Lake

##### On the Fremont NF Silver Lake District:

Cold Spring

##### On the Fremont NF Paisley District:

Louse Lake (muddy, but no water) \*  
Kingry Marsh (one watering hole for cattle)

##### On the Fremont NF Lakeview District:

White Pine Marsh  
Honey Creek

## RECOMMENDED HABITAT THAT WAS DRY IN 2006

### On the Fremont NF Bly District:

Upper Quartz Creek  
Longbranch Creek

### On the Fremont NF Lakeview District:

Dog Mountain Creek (inlet to Dog Lake)

## NEW HABITAT RECOMMENDATIONS FROM FIELD CREWS

Upper Little Deschutes River (Crescent RD, Deschutes)

\*Morgan Creek (Fremont NF)

\*Dog Lake (Lakeview district Fremont NF)

\*Campbell Reservoir near Bly

\*Sycan River south of Sycan Guard station

\*Sycan River north of Sycan Flat

Possibly drainage emerging from 13 mile spring on Silver Lake district,

\*Guyer Creek

\*W and N Fork Silver Cr along 3038 RD

\*Wooley Creek near Paisley

\* areas that are further described in Appendix D

## POTENTIAL HABITAT TO SURVEY IN THE FUTURE, WHICH ARE ON PRIVATE LANDS:

Pole Creek (pvt) T37S., R14E., Sec 23

3753 Rd (pvt) T37S, R14E, Sec. 34.

Private sections of South Creek

Private section of Big Valley in the Warner Mtns.

Private sections of Drew Valley Ranch west of Lakeview

## RECOMMENDED HABITAT THAT STILL NEEDS TO BE SURVEYED

Horse Canyon- Gerber area

Fishhole Lake Basin (part of this was surveyed by a Fremont Winema crew in 2002, and no spotted frogs were found, but the habitat looked excellent and should be resurveyed in the future.)

Angel Spring west of Lakeview

\*Buck Creek- up and down from 2804 Road- Silver Lake district

Horse Canyon Creek Gerber Area

\*Frog Ponds (although may be too small) Silver Lake district

La Brie Lake Silver lake district

Buckaroo Lake Silver Lake district

Indian Creek Silver lake district

\*Coffeepot Creek near Paisley

Angel Springs drainage Bly district

\* areas that are further described in Appendix D

#### RECOMMENDED ACTIONS FROM 2005 THAT WERE IMPLEMENTED IN 2006 :

- Pre-season reconnaissance of many of the recommended habitat areas, was conducted by biologists knowledgeable with occupied spotted frog habitat. In this way, the list was refined to those areas that looked the most probable. In addition, access points were scouted. All of this made the survey season much more efficient and productive. (See *Appendix D* for areas that were reconned and dropped as priority to survey.)
- Survey Priority 1 areas that were recommended by multi-agency biologist group, that were not surveyed in 2005, were surveyed in 2006.
- Thermographs (2) were placed in Silver Creek Marsh (West fork Silver Creek) in the fall producing overwinter temperature graphs (*Appendix E*). Spring egg mass surveys were conducted in 2006 and no egg masses were found.
- Completed surveys on BLM portion of Camas Creek.

#### RECOMMENDATIONS FROM 2005 THAT WERE NOT CARRIED FORWARD

due to lack of time and budget:

- Continue incomplete surveys on Sycan River at Teddy Powers Mdw and Coyote Creek.
- Repeat summer adult survey on Silver Creek Marsh.
- Repeat survey at Deep Creek segment of Williamson River in best habitat.
- Repeat survey at Royce Tract of Williamson River, where frogs have been documented in past. (although the USGS crew will be doing this in September).
- Resurvey BOR Agency Lake Ranch tract at night, using an eyeshine survey, to ascertain whether any of the frogs present might be spotted frogs vs. bullfrogs.

#### POTENTIAL HABITAT AREA HIGHLIGHTS AND RECOMMENDATIONS

Silver Creek Marsh/ West Fork of Silver Creek. This location seemed to have some of the best habitat traits for spotted frog presence, except that no amphibians or garter snakes were seen. However, there are several low gradient channels, and a large boggy area with braided channels and numerous beaver dams and ponds of varying ages. This makes the habitats diverse in depth, and micro-habitat types (ponds, pools, bogs, shallow wetlands, oxbows, creeks, etc). The large and dense willows, and diversity of water depths and ground stability made surveying difficult, and impossible to cover all aspects of the potential habitat. Recommendation: Place multiple thermographs at Silver Creek marsh in various water bodies (beaver ponds, marshy areas, channels) this fall to get additional water temperature records. This will be done by Terry Smith, Fish Biologist, Fremont Winema National Forest.

Another site that seemed very high potential for spotted frogs and should be resurveyed was a stretch of the Williamson River on the "Deep Creek" section, especially in a wide area with a lot of beaver activity, and slow areas at the edge with a lot of duckweed, and logs.

South Creek on the Paisley District of the Fremont National Forest also seemed to have a high potential. However, the stream channel morphology is greatly altered with 8 to 12 foot cut banks. There are redband trout and dace. This portion of the creek was recently transferred from private to Forest Service jurisdiction. There are plans to do some stream restoration work when funds become available. Some of the most promising aspects of South Creek for potential frog habitat, is the presence of a perched bog adjacent to the creek and fed by an uphill spring. There are also some segregated pools, that are providing current habitat for tree frogs farther away from the creek channel, that may have been connected in the past, or possibly in springtime, and could potentially provide spotted frog breeding habitat.

Recommendations for South Creek include the reintroduction of beaver, and erosion control with grazing improvements.

Watson Creek, northwest of the Gearhart Wilderness is another area that warrants some habitat improvements and further surveys. However, there are many large brook trout in the system. About a mile west of the 3372 road, the creek winds through an open meadow area with lots of willow and old beaver sign. Recommendations include reintroducing beaver, and putting tighter controls on the grazing practices (the bankside vegetation was cropped very short, and banks were starting to incise).

Thomas Creek was one of the most promising areas we surveyed, but again, the morphology has been altered, with high cut banks, and shallow, wide channels. Lamprey, small fish and tree frogs were observed and beavers currently occupy the system, but grazing impacts are highly evident. A side channel downstream from the ford was additional potential habitat

An inlet to Cottonwood Meadows lake that is unnamed on the maps (but labeled as "Beaverskull Creek" in the table in *Appendix B2*) is another high potential habitat area. Brook trout were noted and the "plop" of an unobserved amphibian. The water temperature may be too cold in the spring however. Recorded temperatures on 1<sup>st</sup> of August were 12 to 15 degrees C.

Dent Creek offers potential, but has high cut banks, and highly visible cattle grazing. Similar is Quartz Creek which has eroded banks and cattle presence, but not as pronounced as Dent Creek.

Big Swamp Creek has potential, except that it is currently very wide and shallow, and has some bullfrogs.

The best looking potential sites were the ponds on the northwest of Sycan Marsh. There was good water depth with Potamogeton, rushes, pond lilies, and other aquatic vegetation. Curiously, however, no amphibians or even aquatic invertebrates were observed. The reasons for this are unknown.

The areas surveyed in 2006 that are probably too cold to provide spotted frog habitat include: Cold Creek, Chewaucan River (surveyed segment), Dairy Creek, and Bridge Creek.

Survey areas that did not provide continuous enough water sources include the Drake Creek (Lakeview BLM) and the Potholes section of the N Fk Willow Creek.

#### RECOMMENDATIONS FOR FUTURE FUNDERS OF SURVEYS

Adequate presence/absence surveys for frogs realistically should include both breeding (egg mass) surveys and summer (adult) surveys. This proposal, as funded, did not have adequate resources to accomplish both seasons of needed surveys. Adequate funding to cover both types of survey should be considered as high priority in the future.

#### NRIS (fauna) DATA INPUT ESTIMATE

The results of the 2005 survey are currently in the database. The estimate for the completion of 2006 input is December, 2006. The ISSSSP committee will be alerted upon the completion of the data entry. The photos from the 2006 season will be included in a separate document that could be appended to this one.

#### RESULTS OF CONCURRENT FROG SURVEYS FROM 2005 and 2006

The Chemult District of the Winema National Forest continued their Jack Creek Oregon spotted frog population mark-recapture monitoring in 2005 and 2006. In 2005, a slight northern extension of the known occupied habitat was found. However, numbers of observations/captures were drastically lower than previous years, with 12 observations total in 2005 vs. over 100 annually from 2000-2002 in the same transect.

In 2006, permission was granted to USGS frog crews to survey the private property portion of the Jack Creek habitat. A full egg mass survey was conducted on the entire habitat transect, and was the first time since 2003. Only 11 egg masses were counted, compared with over 300 in 1999 and 2000, 165 in 2001, 67 in 2002, and 70 in 2003. The mark-recapture survey in 2006 was similar in results to 2005 with only 12 observations. Although the USGS crew also surveyed the private portion, where in past years there were many more frogs than on the FS segment, they saw only one adult frog in 2006. Curiously, though, many metamorphosing frogs and juveniles were seen on the FS segment and private portion, indicating a good recruitment rate so far, despite the small number of egg masses.

The Jack Creek survey was funded with district wildlife allocated dollars, but contributes to overall knowledge of spotted frog status.

APPENDIX A1: 2005 Surveyors

<b>Initials</b>	<b>Name</b>	<b>Employer</b>
EE	Eric Esselstyn	Winema/Chemult FS Wildlife
ED	Erin Daley	Winema/K Falls FS Rec
TG	Tom Gorman	Winema/ K Falls FS Fish
JO	Jill Oertley	Winema/Chemult FS Wildlife
BP	Brandi Powers	Fremont/Bly FS Wildlife
JW	John Whiteclay	Fremont/Bly FS Wildlife
JB	Jordan Bybee	Fremont/Bly FS Wildlife
AA	Amy Anderson	Fremont/Bly FS Wildlife
LA	Lester Atterberry	Winema/K Falls FS botany
JC	Jim Chambers	Winema/K Falls FS botany
MH	Mike Hiatt	Winema/Chiloquin FS wildlife
CR	Chris Runnels	Winema/Chiloquin FS wildlife
CM	Christine Maynard	Winema/Chiloquin FS wildlife
DG	Don Gentry	Klamath Tribes Natural Res
JK	Julie Kyniston	
JS	Jessie Smith	Winema/ K Falls FS Botany
DS	Drew Shepard	Klamath Tribes Natural Res
TS	Terry Simpson	Winema/Chemult FS Wildlife
AM	Amy Markus	Fremont/ Silver Lake FS Wildlife
RJ	Ryan Jacobsen	Fremont/ Silver Lake FS Wildlife
TD	Tami Dark	Fremont/ Silver Lake FS Wildlife
LL	Lisa Lyon	Fremont/ Silver Lake FS Wildlife
KH	Kristin Hiatt	BLM-K Falls wildlife
CC	Carrie Cribbs	Volunteer Winema FS
ME	Marilyn Elston	Fremont/ Silver Lake FS Wildlife
JN	Jim Niles	Fremont/ Silver Lake FS Wildlife
LK	Leah Kenney	volunteer Fremont/ Silver Lake FS Wildlife

APPENDIX A2: 2006 Surveyors

<b>Initials</b>	<b>Name</b>	<b>Employer</b>
TG	Tom Gorman	Winema/ K Falls FS Fish
JO	Jill Oertley	Winema/Chemult FS Wildlife
AA	Amy Anderson	Fremont/Bly FS Wildlife
AT	Amy Tyson	Fremont/Bly FS Wildlife
TS	Terry Smith	Winema/ K Falls FS Fish
BF	Brent Frazier	Fre-Win Wildlife
ML	Michelle daLuz	Fre-Win Planning
CB	Craig Benz	Nature Conservancy-Sycan Marsh
MS	Mark Swift	Winema/ Chemult FS Archeology
LL	Lisa Lyon	Fremont/ Silver Lake FS Wildlife

APPENDIX B1: 2005 Survey Summary

NAME OF AREA (unsurveyed dry areas in parentheses)	DATE	# Surv-eyors	# Hrs. surveyed	TOT. Survey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Comments
<b>Wilson Lk</b>	7/18/2005	4	0.5	2	0	2	4681744	658025	4681744	658025	Cows, Potam.
<b>(Mallory Res)</b>	7/18/2005				Not surveyed-dry						
<b>Spring Creek</b>	7/19/2005	3	1.5	4.5	0	2	4685106	667856	4686286	667114	water temp 21-26C. Brook T., dace, mussels, crawdads
<b>Blue Monday Pond</b>	7/20/2005	3	1.2	3.5	1 ad Treefrog	1	4673679	679655	4673679	679655	appears good hab, but almost no sign of aquatic inverts. Potam, cowpies
<b>(Pitt Lake)</b>					Not surveyed-dry						
<b>Holbrook Reservoir</b>	7/21/2005	5	1.75	8.75	Ad W. Toads, 10-20 Ad. bullfrogs	156					ospreys, B. eagles, pelicans, kingfishers, cormorants, cows
<b>Beaverdam Cr/ inflow to Holbrook Res</b>	7/21/2005	5	2	10	W. Toads, 5-8 Bullfrog Ad.	6?					Spring near inflow to reservoir. Cows present in large numbers
<b>(Beaverdam Lk)</b>	7/21/2005				Not surveyed-dry						
<b>Fivemile Cr.</b>	7/25/2005	3	1.5	4.5	0	1	4712125	654622	4711290	654035	Brook T, dace, crawdads, cows excluded
<b>Cottonwood Spgs</b>	7/28/2005	3	0.75	2.25	tadpoles salamanders, tadpoles Treefrog	0	4696117	680168	4696117	680168	Site probably not lg. enough (9X10 meters) to provide habitat

NAME OF AREA (unsurveyed dry areas in parentheses)	DATE	# Surv-eyors	# Hrs. surveyed	TOT. Survey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Comments
<b>Big Swamp Res</b>	7/28/2005	3	3	9	Treefrog ad. + tadpoles, W. Toad, Ad. Bullfrogs (5?)	24	4678859	678254	4678859	678254	Potam. Cow pies
<b>(Louse Lk)</b>					Not surveyed-dry						Surveyed in 1998 by Hayes + Reid as habitat
<b>(Klipple Lk)</b>					Not surveyed-dry						Surveyed in 1998 by Hayes + Reid as habitat
<b>Williamson-Royce Tract</b>	8/1/2005	6	5	30	Treefrog tadpole	12	4752865	624139			Trout, chubs
<b>Williamson-Royce Segment 2</b>	8/2/2005	6.5	7	45.5	0	2	4753794	623683	4754463	623865	Tui + blue chubs, dace, Rainbow, Brook T, lamprey?, voles, coyote. No side channels
<b>Rocky Ford</b>	8/2/2005	6.5	1.75	11.35	1 bullfrog, 1 unk tadpole	2	4751348	624860	4750819	625379	No side channels. Tui chubs, dace, Rainbow, Brook T, lamprey, leech, mussels, voles. Gt blue heron. 1st photo labelled RF Williamson, taken at end of trasect.
<b>Williamson-Deep Creek 1</b>	8/3/2005	5	3.25	16.25	1 Treefrog, 2 probable bullfrogs	1	4744562	625599	4743500	625991	Many fish. Otter or muskrat. Otter scat. No cows.
<b>Williamson Deep Creek 2</b>	8/4/2005	5	5.25	26.25	4 W. Toads, 1 Treefrog	11	4743505	625942	4742523	626251	Potam. Should resurvey esp near end where beaver activity and shallow edges.

NAME OF AREA (unsurveyed dry areas in parentheses)	DATE	# Surv-eyors	# Hrs. surveyed	TOT. Survey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Comments
<b>W Fork Silver Cr</b>	8/9/2005	5	3.5	17.5	0	0	4762625	651918	4763145	652577	Best looking OSF hab. Very complex for adequate survey. <b>Resurvey in spring for egg masses.</b> Lots of beav ponds of all ages. Braided channels, Flam Owl
<b>Coyote Creek</b>	8/10/2005	4	3.25	13	0	3	4748658	647508	4748498	647979	Lots of fish/trout. Beaver sign, shrews, grouse. Very healthy str. No cows.
<b>Coyote Creek</b>	8/11/2005	3	4	12	0	1	4748498	647979	4748118	648630	Lots of trout (brook + maybe others). Potam. Old cow evidence. Recent beaver activ. Should continue where left off.
<b>Sycan River upstream from 3380 Road</b>	8/15/2005	3	2.5	7.5	W. Toads ad + tadpoles	0	4726579	679299	4726384	679811	Brook T., minimal aquatic veg (sedges). Meandering stream with mdw
<b>Sycan River</b>	8/16/2005	3	3	9	Treefrogs, W Toads	1	4726384	679811	4725945	680811	Very little aquatic veg (sedges, algae). Lots of Brook T-many dying with wounds on sides
<b>Lee Thomas Mdws</b>	8/17/2005	3	2	6	4 Treefrogs	5	4717420	677449	4716802	677637	Very few emergents. Duck-weed-like spp. 4 of 5 snakes were eating rodents. Cows. Riparian looks healthy. Beaver-new dams and ponds. Willow, bog birch. 7C.
<b>Lee Thomas Mdws-Sprague E-W section</b>	8/18/2005	4		10.75	20 Treefrogs, mostly juv, 1 metamorph	10	4717590	677496	4717419	678623	Potam. Braided channels with willows. Beavers, cows.
<b>Camas Creek</b>	8/23/2005	5	2.5	12.5	0	0	4677523	731757	4677361	732906	Dace, a few unk trout. Skink. Cows adjacent but fenced off riparian.

NAME OF AREA (unsurveyed dry areas in parentheses)	DATE	# Surv-eyors	# Hrs. surveyed	TOT. Survey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Comments
<b>Parsnip Cr. I Bridge Sec</b>	8/24/2005	5	3.5	17.5	1 Colum. Spotted frog	7	4877759	743743			Brook T, old beaver sign, lots of bedrock. Gt horned owl
<b>Parsnip Cr. Lower (II)</b>	8/24/2005	5	1.75	8.75	6 Colum. Spotted frog	3	4676575	746277	4676800	745564	Brook T, old beaver sign incl. ponds, lots of bedrock. Potam.
<b>Parsnip Cr. III</b>	8/25/2005	3	3.25	9.75	5 Colum. Spotted frog	3	4676800	745564	4677004	744896	Brook T, dace or chubs. Potam.
<b>Willow Creek I</b>	8/25/2005	3	1	3	0	0	4664447	731939	4664706	732199	Some deep pools. Rocky, gravelly. Many Brook T all sizes. Fresh cow prints. Old beaver dams. Lg willow, and bog birch.
<b>Willow Creek II</b>	8/30/2005	2	1.75	3.5	0	0	4664706	732199	4664968	732895	Cows. Old beaver dams. Skink.
<b>Deep Creek</b>	8/31/2005	2	1	2	0	0	4660428	705100	4660758	735642	Very sm. Fish. Old beav sign. Cows. Lg. Cottonwoods, willows. Rel. fast flow. Deep pools. Rock and cobble bottom
<b>Mud Creek I</b>	8/31/2005	2	1.5	3	1 W. Toad	5	4684835	730247	4684525	730761	Potam. Many trout, waterbugs. Rel. fast water. Cows. Silty to rocky bottom. Goshawk
<b>Mud Creek II</b>	9/1/2005	2	2.5	5	0	0	4684525	730761	4684143	731081	Potam. Rel. fast water. Cows. Beaver sign. Cobble to rock bottom
<b>(White Pines Cr)</b>	9/1/2005				Not surveyed-dry						
<b>(Honey Cr)</b>	9/1/2005				Not surveyed-dry						

NAME OF AREA (unsurveyed dry areas in parentheses)	DATE	# Surv-eyors	# Hrs. surveyed	TOT. Survey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Comments
<b>Agency Ranch: 7-mile canal + ditches</b>	9/7/2005	4.5		14.75	100's bullfrogs	3	4717001	582368	bridge 7-mile canal crossing		Very deep. Surveyed edges by canoe. Lots of fish. Potam. Muskrat
<b>Agency Ranch: ditch</b>	9/7/2005	5	0.5	2.5	scores of bullfrogs, several unk frog eyes protruding	0	4715791	583434			Bank walking survey. Saw some eyes that did not look like angular bullfrog eyes, but too far from shore to catch. <b>Should resurvey at night for eyeshine.</b> Too much duckweed to see fish.
<b>Agency Lk Ranch canals and ditches</b>	9/8/2005	5	3	15	100+ bullfrogs, 1 metamorph bullfrog, Unk frogs	2	4716970	582340	4712829	583792	Canoe survey. Less density of bullfrogs than 7-mile canal yesterday. Some plops from bank without telltale bullfrog squeak, therefore some frogs unid. Potam. Night herons, COHA, lots of ducks.
<b>Larkin Creek</b>	9/12/2005	4	2.75	11	1 ad Treefrog	0	4722607	593576	pvt fence under 2nd power line		Rel. fast except upper portion with beaver ponds. Redband, fathead minnows, dace, redds, crawdads, mussels. Recent beaver. Raccoon + otter scat. No Potam!
<b>Short Creek</b>	9/12/2005	4	1	4	0	0	4724900	575310	at 7mile rd		Super clear, cold (5-10C) water, with springs, v. little aq. Veg. <b>Should better survey the braided warmer section near road.</b> Spruce, alder.
<b>Teddy Powers-Sycan Riv south of pvt</b>	9/13/2005	3	4	12	1 Lg W Toad	20	4722548	635030	4721454	634202	Suckers, unid sm. Fish, snails, fresh beav sign. Potam. Should continue survey from stop point. GBH

NAME OF AREA (unsurveyed dry areas in parentheses)	DATE	# Surv-eyors	# Hrs. surveyed	TOT. Survey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Comments
<b>2 Ponds btwn Tubb Spr + Parsnip Lks</b>	9/14/2005	5	3.25	16.25	many Treefrogs, 1 metamorph	0	4661557	545522	4661570	545400	Potam. Some cow sign. Have directions to actual Parsnip Lks.

Tot survey hours

361.35

Potam.= Potamogeton veg

APPENDIX B2: 2006 Survey Summary

NAME OF AREA	DATE	# Surv-eyors	# Hrs. sur-veyed	TOT. Sur-vey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Elev(s) in feet	Comments	Photo ?
<b>Sycan Pond NW 1</b>	7/31/2006	4	1.75	7	0	0	4747088	656674	same		4983	Habitat looked good. No herps, and very few inverts. Potam, rushes, pond lily, bladderworts. 16 C	y
<b>Sycan Pond NW 2</b>	7/31/2006	4	1.75	7	0	0	4747463	654910	same		4974	Habitat looked good. No herps, and very few inverts. Potam, rushes, pond lily, bladderworts.	y
<b>Pole Cr-Sycan Marsh</b>	7/31/2006	4	1	4	0	0	4747121	653358	same		5014	Potam. Also surveyed flooded ditch/pond on other side of road from Pole Creek.	y
<b>Pole Creek-Bly Dist</b>	8/1/2006	2	1.5	3	2 ad tree frogs	0						Bedrock substrate with pools in channel. Ave width 1 m, Max width 4 m. Ave. depth 36 cm. Duckweed	
<b>Beaverskull Cr 1</b>	8/1/2006	3	1.5	4.5	3 ad tree frogs	0	4683228	694275	4683365	694393	6213, 6121	Cr does not have name on map. SW inlet to Cottonwood Mdws Lk. Lots of old beaver sign. Brook trout. 12.5 C	y
<b>Beaverskull Cr 2</b>	8/1/2006	3	2	8	1 unk	2	4683228	694275	4683123	693424	6213, 6228	No recent or obvious beaver sign. Light grazing. Brook trout. Unk amphib plop. 12-15C	y
<b>Thomas Cr 2- downstream from ford to side channel</b>	8/2/2006	3	1	3	4 ad tree frogs	9	4683342	699768	4688183	700162	5554, 5552	2 Goose Lk Lamprey. 1" fish (dace?), 3 inch fish with black spots. Several sm dead fish. Cow tracks and sign. Potam. 15-20 C, 27 C in side channel	y
<b>Thomas Cr 1- upstream from ford</b>	8/3/2006	3	2	6	0	20	4683342	699768	4688804	698860	5554, 5741	1-2 in. fish. 2 more lampreys. Cut banks, cow sign; Tailings near end of survey. Old and current beaver sign. Potam	y

NAME OF AREA	DATE	# Surv-eyors	# Hrs. sur-veyed	TOT. Sur-vey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Elev(s) in feet	Comments	Photo ?
<b>Thomas Cr. 3- side channel and cont'd downstream in main channel</b>	8/7/2006	3	1.5	4.5	1 ad tree frogs	16	4688172	700158	4687905	701176	5547, 5535	Slow water; many pools, algae, emerg veg. Sm dace, recent beaver activity (willow chews), recent cow activity. Potam. End of transect rocky, faster, no emerg veg, shallow with no pools.	y
<b>Quartz Cr 1</b>	8/8/2006	3	1	3	2 ad tree frogs, 1 tree frog tadpole	2	4684249	683780	4683447	684046	5353, 5318	Flat snail, caddisfly larvae, 1.5" unk fish, Potam. Cow sign. 15 C	y
<b>(Upper Quartz)</b>	8/8/2006						4686838	681046			5346	Dry, Not surveyed	y
<b>Dent Creek 2</b>	8/8/2006	3	1	3	0	4	4676149	684983	4676283	685636	5020, 4980	High cut banks, Cows. Mostly 1.5" fish, some 4" fish. Bivalves, pointed snails, Grape algae (volvox?) 20 C	y
<b>Dent Creek 1</b>	8/9/2006	2	2	4	0	2	4676141	684980	4675085	684243	4984, 5053	Lots of sm-med fish. Cow sign. 15-24 C	y
<b>Dent Cr 3</b>	8/9/2006	2	1	2	0	2	4676278	685628	4676652	636274	5023, 4982	Grape algae, bivalve shells, snails (pointy), noxious musk thistle on banks. 15-19 C	y
<b>Lapham Cr</b>	8/9/2006	2	0.75	1.5	11 ad bullfrogs, 1 tree frog	1	4672671	676073	4672936	676491	5250, 5307	Many small fish, many dead crawdads, caddisfly larvae. 20 C	y
<b>Big Swamp Pond and Cr</b>	8/9/2006	2	0.5	1	4 ad tree frogs	0	4677978	679229	same		5955	Old beaver sign. Fresh cow sign. Lots of inverts. 15C	y
<b>Dairy Creek downstr from 28 bridge</b>	8/10/2006	3	0.5	1.5	1 huge toad	0	4704214	694011	4704171	694188	5209, 5205	Fresh beaver cuttings, beaver runs, lodge. Gravelly and cobbly substrate. 10 C	y

NAME OF AREA	DATE	# Surv-eyors	# Hrs. sur-veyed	TOT. Sur-vey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Elev(s) in feet	Comments	Photo ?
<b>Dairy Creek upstr from 28 bridge</b>	8/10/2006	3	1	3	1 ad tree frog	3	4704214	694011	4704537	693451	5209, 5231	Recent beaver cuttings, runs. Lots of recent bank slumps. Bivalves. Sm. Fish, 1 lg.	y
<b>Dairy Cr 3</b>	8/10/2006	3	1	3	3 ad tree frogs	3	4704677	693352	4704710	692825	5521, 5218	Bivalves, caddisfly larvae. Cow activity. Recent bank slumps. Sm fish. Emerg veg only in side pools. 14 C	y
<b>Bridge Cr BLM</b>	8/14/2006	2	1	2	0	0	4773762	651517	400 ft from ford		4529	Few lg 5-7 inch fish. Old beaver sign-chews, lodge, dams. Stopped 400 ft from ford, (too shady, cool + fast). Surveyed the ditch back-better habitat- slower but no deep pools or hiding cover. No fish seen in ditch. Penny algae. 12 C + 15.5 in ditch	y
<b>Buck Cr-BLM</b>	8/14/2003	2	2.5	5	10 ad tree frogs	1 Lg	4777745	654292	4778078	653405	4397,	Sm 1-2 in fish, Lg 5-8 in fish. Redband trout @ sign. Very old beaver sign. Alders being defoliated by 3 types of caterpillars. 1 crawdad claw seen. Big aspens, alders, willows, prunus, PIPO, PICO Juniper. Sand, cobble, bedrock. A few penny algae. 15-17 C	y

NAME OF AREA	DATE	# Surv-eyors	# Hrs. sur-veyed	TOT. Sur-vey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Elev(s) in feet	Comments	Photo ?
<b>South Cr 1</b>	8/16/2006	2	2.5	5	11 ad tree frogs, many tadpoles in one pool, 1 toad	4	4696779	692888	4695955	691700	4878, 5382	Dace and redband (from fish bio's report). Cows. Recent slumping of banks. Some 12 ft high cutbanks.. Perched marshy area, very warm temps 20+, boggy ground, fed by uphill spring from aspen grove. Segregated pool (old beaver pond?) loaded with algae, emerg veg, and tree frog tadpoles. Other old wet spring perched above banks, but no longer connected to channel, or persistent. 18 C	y
<b>North Fork Willow Creek</b>	8/17/2003	3	2.5	7.5	8 ad bullfrogs, many tadpoles, 3 ad tree frogs, many tadpoles, 2 rubber boas	6	040 rd		4681780	682508	5276	Many dace, all sizes of green sunfish. Extensive grazing. Sedges, cattails, rushes, potam. 17 C. Ave depth 4 to 6 inches; max depth 2 m.	y
<b>North Fork Willow Creek-Potholes Area</b>	8/21/2006	3	1.75	5.25	15 bullfrogs, 13 tree frogs + many tadpoles	0	4652146	683442	?		5207	Dace and green sunfish all sizes. Peaclams. Extensive grazing including sedges in channel. Series of potholes of various sizes and depth in creek channel with dry segments in between. 18 C in channel, 14 C in seep.	y

NAME OF AREA	DATE	# Surv-eyors	# Hrs. sur-veyed	TOT. Sur-vey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Elev(s) in feet	Comments	Photo ?
<b>Green Creek</b>	8/21/2006	3	1	3	0	2	4657153	687928	4658989	688484	5233	Rushes, sedges, duckweed. Cows. Many unk spp of fish. 14 C.	y
<b>South Cr 2</b>	8/22/2006	3	3	9	4 ad tree frogs	3	4696737	692682	4697520	693665	5275,	Bivalves with purple inside. Globular attached algae. Sm fish and some 5. May have surveyed sm bit of pvt. Side channel surveyed-good habitat too. 12-15 C	d
<b>Watson Cr</b>	8/23/2006	3	0.5	1.5	0	5	4721371	672732	4721733	672401	6115, 6110	Walked in> 1 mi from road to open meadowy area. Pools, cobble, bedrock. Lg brook trout. Old beaver sign, new cow sign. Short cropped veg on banks, some slumped areas, and cutbanks. Lots of willow. Should survey more of this. 16-18 C	d
<b>Cold Creek</b>	8/23/2006	3	2	4.5	4 ad tree frogs	1	4717049	673020	4716987	673465	6150, 6163	A few fish, some lg. Old beaver runs old pools. No recent sign. Recent cows. Veg shorter on other side of fence (in Gearhart Wilderness). Temp 8 to 10 degrees C	d
<b>Camas Creek</b>	8/24/2006	3	2	6		5	4676740	741186	4675186	7424271	5465	Tiny and lg (6") fish. Bivalves, muskrat sign, sage grouse, recent cow activity. Temp. 12 to 14 C.	d
<b>Drake Creek</b>	8/28/2006	3	1	3		6	468330	744788	4682375	744688	5614, 5597	Pools only, segregated by dry stretches. 18 C. rushes, sedges, algae, speckled dace, snails, antelope. /depth 5cm to 30 cm.	d
<b>(Dog Mtn Cr)</b>	8/30/2006	2					4661389	689069			5224	Dry-not surveyed.	

NAME OF AREA	DATE	# Surv-eyors	# Hrs. sur-veyed	TOT. Sur-vey Hours	Amphibs	Garter Snakes	UTM's Northing Start	UTM's Easting Start	UTM's Northing End	UTM's Easting End	Elev(s) in feet	Comments	Photo ?
<b>Fishhole Cr Sec 26</b>	8/30/2006	2	1.75	3.5	4 ad bullfrogs, 1 tadpole	3	4678180	672045	4677650	672432	5158, 5002	Many crawdads. Sm-med unk fish. Willows. Most of scgment ungrazed (fenced). Willows. Cobbles, boulders. 15.5 C.	d
<b>Ponded area above Fishhole Survey Sec 26</b>	8/30/2006	1	0.75	0.75	2 bullfrogs, 1 tadpole	2	4678455	671960			5155	Artificial ponded area (did not survey pvt portion) above suveyed cr, and cr down to fence. Grazing evident. 1st pond 9+m wide, 2nd pond 15m wide. Lots of potam. 0.5m deep, 20 C. Sm-med fish. Sandhill crane feather.	no
<b>Chewaucan River</b>	8/31/2006	3	2.5	7.5	4 ad tree frogs	18	4702582	698230	4703615	698785	5237, 5293	10 C start, 15 C end. Some pools over 3 m deep. Rocky.. Ave width 5 m. Dace, Dipper, Rushes, sedges, elodea. Side channel with redband..Lots of stabilization attempts with anchored juniper. Cow sign, but not recent.	d
<b>Sprague River-Bly</b>	9/5/2006	1	2	2	2 bullfrogs	1	4693754	666977	4692843	667636	4448, 4468	Sedges, rushes, elodea, crawdads, bivalves, many sm fish, 1 dead sculpin. Max width 5m ave width 1.2m . Ave depth 30 cm, Max depth 2 m	y

Total Survey Hours for 2006 is 129.5 hours

Potam.= Potamogeton vegetation

d in photo column, indicates film being developed.

## APPENDIX C: Protocol, Data forms

### **Protocol for Spotted Frog Inventory Priority One Sites (for Summer season only)**

Priority one sites were identified as those that were either historically occupied or have not been determined to be occupied by Oregon spotted frogs. Goals for Priority One Sites:

For sites that are not known to be currently occupied: Determine presence in historic sites and potential habitat. *This will involve searching in shallow water, taking representative samples (genetic tissue and measurements) of target Ranids, location data by capture, and habitat description for area.*

The survey season will be from Mid-July to mid September. Surveys will be done twice, if possible in all areas that are surveyed, and at least one week apart.

#### **Survey timing, conditions and method:**

(from Hayes, 1998, Olson, Leonard and Bury, 1997, USGS ARMI SOP 110)

Surveys will start after 9:30 am, and be completed before 6:30 pm. Surveys should not be done during heavy rain, high winds, or cold overcast times, because these conditions reduce the activity level of amphibians, and reduce the observability.

Site forms will be completed on arrival to track crew members, time, location, general habitat and environmental description, and weather conditions.

Visual encounter surveys with up to a crew of 3-6. First the crew members will use binoculars from afar so as not to disturb animals, and scan the habitat for amphibians, before approaching. Survey zones that will be covered are the water's edge, and shallow water less than 1 meter. (Hayes, 1997) Each crew member will carry a dip net. Survey Patterns used will include "Survey patterns for 2 people working in tandem", "Survey pattern for 2 or more people working independently" and "Survey pattern for a homogenous wetland" from Olson et al., *Sampling Amphibians in Lentic Habitats*, pg 40.

Where a locality (such as the Pothole Lake area) is extensive, and would take the majority of the entire season's survey time, a number of widely scattered sites will be surveyed to represent different variables affecting amphibian distribution and abundance, such as places with and without introduced fish or bullfrogs, a range of elevations, sites which include a range of aquatic habitats (such as ponds of different depths, lakes, streams and meadows.) The use of representative sites allows a flexible approach and for a field crew to adjust the amount of effort according to the quality of habitat and amphibians found. Where habitat sites are small enough, complete surveys will be done. (Olson et al, 1997)

#### **Capturing and frog data collection**

When an amphibian is encountered, crew members will attempt to capture it by net or hand, and misses will be tallied. Any new crew members will be trained by experienced OSF capturer/handlers in the art of successful captures. The captured amphibians will be identified to species, if possible using keys. If the frog is a non-bullfrog Ranid, it will be identified to life form (adult, larva, metamorph) and sexed if an adult.

#### **Measurements and tissue collection**

Measurements (total SUL or snout to urostyle length, leg shank length and mass) will be taken from the first 5 individuals within a non-bullfrog ranid species per site to get a representative sample of measurements. However, as soon as an Oregon spotted frog juvenile or adult is caught, and a tissue sample is collected, the search for further frogs can stop. Frog capture site information to be collected is described in a later section.

A tissue sample will be collected from non-bullfrog Ranids. If tadpoles are present, representative samples for genetic testing will be done on a limited basis (one sample per species per locality) since the removal of the tip of the tail will not aid in future identification of the individual. One toe will be clipped from each adult or juvenile Ranid for genetic testing and for future identification., using a unique toe for 2005 frog captures(RR4). Clippers or scissors will be cleaned with >70% alcohol or bleach solution (1 oz bleach to 1 liter water) between uses. If bleeding occurs, Bactene will be applied to the amphibian's wound. Tissue samples will be stored in labeled vials of dessicant.

Any dead specimens of Ranid species in good condition will also be collected for genetic or pathological testing. Blood samples may be taken opportunistically (such as when a frog bleeds from a toe clip) to be used for pathological or other tests.

### **Capture location data at ranid sites**

GPS (utm's and elevation)

Position/ behavior: Floating at surface, swimming under water, on shore, at bottom, etc.

Association with veg or substrate: on Potamageton, among emergent vegetation, on a log, onshore in grass, open water, etc.

### **Handling considerations for the health of the amphibians- all sites**

Surveyors will remove any insect repellent or sunscreen from their hands before handling. Hands should be kept moist during handling procedures. Tadpoles should not be removed from water, but rather examined in plastic containers in a small amount of water, and precautions (changing water) should be practiced when the water could overheat. Other safety methods (sanitizing scissors, spraying bactene on wounds) were covered in an earlier section

Boots and nets will be sanitized using a bleach mixture between water bodies.

### **Safety precautions for crew members**

Will go over and sign a job hazard analysis specific to this survey.

Water contamination is a strong possibility in this area, so crew members are advised to wash hands with handi-wipes or cleansing solution after immersing them in water, before handling food.

Hayes, Marc 1998, Protocol for identification and sampling of OSF.

Olson, Deanna, Leonard and Bury, 1997. Sampling amphibians in lentic habitats

Pearl and Hayes, 2004, Habitat associations of OSF: A literature review.

USGS, ARMI Standard Operating Procedure No. 110, 2001, Toe-clipping of frogs and toads

USGS, ARMI Standard Operating Procedure No. 105, 2001, Collection, preservation and mailing of amphibians for diagnostic examinations.

FIELD SITE FORM OSF SURVEY

Date: \_\_\_\_\_ Observers: \_\_\_\_\_

Location: \_\_\_\_\_

Location Code: (Paisley and number) \_\_\_\_\_

Air Temp: \_\_\_\_\_ % cloud cover: \_\_\_\_\_ Wind speed: 0, 1-4, 5-9, 10-14

(circle as many as apply)

Aquatic Habitat Description: linear stream, linear river, ditch, pond, lake, wetland, wet meadow, reservoir

Other: \_\_\_\_\_

Perceived water level: High Moderate Low Dry(no survey possible)

Habitat shape and size (Draw shape and include width measurements. Include the habitat that will be surveyed, and if only a portion will be surveyed, describe any remaining unsurveyed habitat and size on back Draw survey route and start point)

UTM and elevation of start point: N \_\_\_\_\_ E \_\_\_\_\_ elev \_\_\_\_\_

Type of survey (circle # of people and "check" type of survey used):

\_\_\_ 2, 3, 4 people working in tandem (for Priority 1 sites)

\_\_\_ 2,3, 4 people working independently (for Priority 1 sites)

Any potential frogs or turtles seen in habitat from a distance? (circle) Y N

Start Time: \_\_\_\_\_

(the remainder of this form may be filled out after the actual survey)

Water Temp:

Max depth surveyed:

Ave depth surveyed:

Aquatic plants present (circle):

Emergent: rushes cattails sedges pond lily Other \_\_\_\_\_

Aquatic: Potomageton duckweed Other \_\_\_\_\_

Algae: (circle) Brown filamentous Green filamentous Green slimy completely contained in water column Green slimy completely at surface Green slimy comes to surface Gr slimy surface and bubbly With black flecks

Amphibians captured:

# known Ranids (list species and #): \_\_\_\_\_ # Ranids unknown spp: \_\_\_\_\_

# of tissue samples collected: \_\_\_\_\_ Vial numbers of samples: \_\_\_\_\_

Not captured:

Other amphibians noted: (type, number, and life stage) \_\_\_\_\_

Number of potential target ranid (all Ranids except bullfrogs) observed but not captured: \_\_\_\_\_

Other herps (esp garter snakes): \_\_\_\_\_

**Fish:** (quantity and type if possible): \_\_\_\_\_

**Other animals of interest** (frog predators, beaver sign, cows, etc.) \_\_\_\_\_

**Notes:** \_\_\_\_\_

**Survey Stop Time:** \_\_\_\_\_ **End UTM (if different)** \_\_\_\_\_

(note: 10 acres = 210m x 210 m or 40,464m<sup>2</sup>. Minimum time for searching 10 acres is 2 hours, unless an OSF is found before that)

**Rana Observation Record (for captures and misses) Southern Oregon frog survey**  
**If the capture is a Ranid (excluding Bullfrogs) and either a juvenile or adult, clip RR4 and measure**

Date \_\_\_\_\_ Observers \_\_\_\_\_ Location \_\_\_\_\_

Code \_\_\_\_\_

.....  
Capture or Miss (*circle*) Estimated length if miss \_\_\_\_\_ Suspected Species if miss \_\_\_\_\_

Capture # \_\_\_\_\_ Time \_\_\_\_\_ Life Stage Adult, Juvenile, Metamorph

Sex \_\_\_\_\_

Measured Length \_\_\_\_\_ Mass \_\_\_\_\_ Lower Leg Length \_\_\_\_\_ Upper Leg Length \_\_\_\_\_

Toe clip ID \_\_\_\_\_ H2O depth at frog \_\_\_\_\_ Distance from shore \_\_\_\_\_ Behavior \_\_\_\_\_ Species (if

known) \_\_\_\_\_ Type of emergent/aquatic/terrest veg within 1 m of frog

\_\_\_\_\_  
Comments \_\_\_\_\_

APPENDIX D:

**Pre-Season Habitat Recon Notes resulting in either lowered priority for survey, or eliminated as potential habitat in July, 2006, and have not been surveyed**

**Silver Lake RD**

Pool by Road 2408 1 mi south of first crossing. On east side of road. Evidence of cows but sedges or rushes throughout, Anacharis, and small leafed potamogeton. Pond about 10 by 10 m and not connected to any other water, so probably too small. Pond on west side of road, filled with cows.

Buck creek at 2804. YES! Took a road to the “end” probably Rd 126 or 122 about 1 mile from 015 road. GPS pt SL-1: 639185, 4765445 6031 ft. Can’t actually see creek from here down in the canyon but may be able to hike in/out of cyn from here. Or just survey from 2804 road and back.

Buck Cr at 7645 Rd. No! Too high gradient- no mellow floodplains, pushes a lot of water.

Bridge Cr at 7645 and Yamsay bdry- no- too steep

Bridge Cr at 2804 hairpin, sec. 29. Possibly—it’s in a canyon but may have floodplain or side channels. Med priority

Buck Creek at 2804. Downstream. Although main channel rather fast, has side channels that look good. Survey up and down cr from 2804 .5- 1mi each.

Thompson res, Rd 256? .8 mi S of 592 road. Unnumbered toward powerline and edge of res. Probably pvt. Some nice looking habitat! No other road exists on the west side of res to access. All great looking creeks in mdws, are on private

West fork of Silver Creek on 2917 Road- Yes! 2 – (3) people

Silver Creek on 2917- too fast. However, did not check down road to north. (low – mod priority)

Auger Valley/Cr 064 spur off 28 Road. NO! Dry

Frog Pond(s) (found only 1 near 014 road) may be too small—30 X 60 m. Potamogeton, tadpoles, Adult tree frogs, 5 garter snakes in short time and space. Giant diving beetles. Would not take long for 2 people to survey this to verify that tadpoles were tree frogs. Could look for additional ponds.

Strawberry Cr- on 3038 road. Yes, although may be too shady and steep in most places. 5 Toads at culvert. Mod-low priority. Lots of riparian shade. Small creek. 2-3 people.

Guyer Cr on 3038 road. Too fast and shady. Very forested creek. No.

W. fork silver Cr on 3038 Rd. med priority

N. Fork of Silver Cr on 3038, No.

**Chiloquin Dist:**

Wildhorse spring- nice pond but saw NO amphib. No potential.

**Paisley Dist:**

Sycan River at WinFre boundary on Rd 27 to Sycan Guard Station near bridge at 3207-011 road. YES! Both directions from 27 bridge. Need at least 3 people. (consider using canoes for this stretch from gd sta). Since this recon, however, a knowledgeable employee suggested that this would be too dry in August. We did not confirm this.

Shake Cr SE of Sycan Marsh- No. dry, rocky, full of cows.

Sycan River on 3239 Road. Shallower, less veg but easier to survey. Lower priority than other sec at Rd 27. Can drive 0.25 mi down 217 to park another rig too. Might also want to check out where powerline crosses river in Sec 22.

Shoestring Creek-Very cobbly, no emergent veg. Low priority

Rock Cr, top end, and pond. Big rocks, slow cr, looks like it dries up. Water bugs. Did not see fish.

Sycan on 28 Road near Rock Cr Forest Camp. Too fast and rocky. No

Sycan Riv along 28 Road and 3380 crossing. Fast, cobbly. Only sm amts of habitat. Other parts of Sycan look much more likely. Low priority/probability.

East Witham is a "babbling brook" with cobbles. Cows present but in good shape. Looks more like habitat from a distance. No emergent veg or slow stretches, also cold. No

Wildhorse Cr- even less potential than E. Witham

North Cr on 28 near 3411. Slower but still cobbly/gravelly. No big pools or emerg veg.

Elder Cr off 3300-015 Could not find access that didn't go through posted private land. Did not recon

Whitehorse Creek near 3411- Habitat inside fence looks good, except cold. 5 degrees C at 8:15am on 7/25/2006.

Slide Lake, Withers Lake, Deadhorse lake, Campbell Lake- Large fish, may freeze solid, little habitat with emergent veg. Seems very unlikely.

Wooley Creek- near Paisley. From a distance, looks like it has potential.

Morgan Creek- Yes, should be high priority for surveying in the future. Meanders through meadows with willow, slow flow.

### **Bly District**

Ponds by Campbell Res on BLM. Lg fence blocking access, but could see one from fence. Appeared to have marshy plants, but not holding water. No potential. What about reservoir itself? Edges looked good now, but don't know what they do with the water levels and when. (Water still looked high at end of August in reservoir.)

Deming Cr in southern portion of sec 18 (n. of Campbell Res) a short section of FS. Too steep.

Deming Cr at end of Rd 018 (trailhead) No habitat . Too cold, too fast, too shady. Bull Trout habitat! Deming Cr along Rd 018 (in or near sec 9 FS) same as above.

Sprague riv at Mitchell Monument. Too cold, too fast, too shady.

Creek at 024 and 3660 Road (Pothole?) warm enough but cobbly and fast here. If this is Pothole, check it out farther.

Pothole Creek- no emerg veg or veg on banks. Very rocky bottom and edges. Lg rocks, fast flow. No.

Big Swamp Creek at Long Prairie- dry

Fishhole Cr (upper section by Devil lake) Medium flow, no emerg veg, rocky bottom, sedge on banks. Low priority

Fishhole Cr T38 R15E sec 35- Med to fast flow, rocky bottom in some areas, silty in tohers. No emerg veg. Low priority

### **Lakeview District**

Drew's Creek- unlikely. Very muddy from siltation coming out of Drew's res.

Dog Lake- looked awesome! Lots of marshy edges with lots of veg. Even a flock of Pelicans in the south part. However, Terry Smith says that they will be draining that very soon into Drew's Res for irrigation. (When crews went back to survey a creek near Dog Lake at the end of August, Dog Lake looked like it was still full! Should check out in future years)

Wildhorse Creek on Calif border- dry

Unnamed pond on 3724-013, about 3 mi from 28 rd. Low-med priority

T38S R16E sec 1, Quartz Cr or its trib, FS behind fence. Can park across bridge on east side (gravel road). Small, low gradient, grassy. 2 people only.

**BLM**

Campbell Reservoir near Bly (much of it is private, but some BLM) Emerg veg on edges, horsetail, algae on west side. Water has receded (7/25). Fish jumping. Low priority.

**Places that were not reconned or surveyed in 2006:**

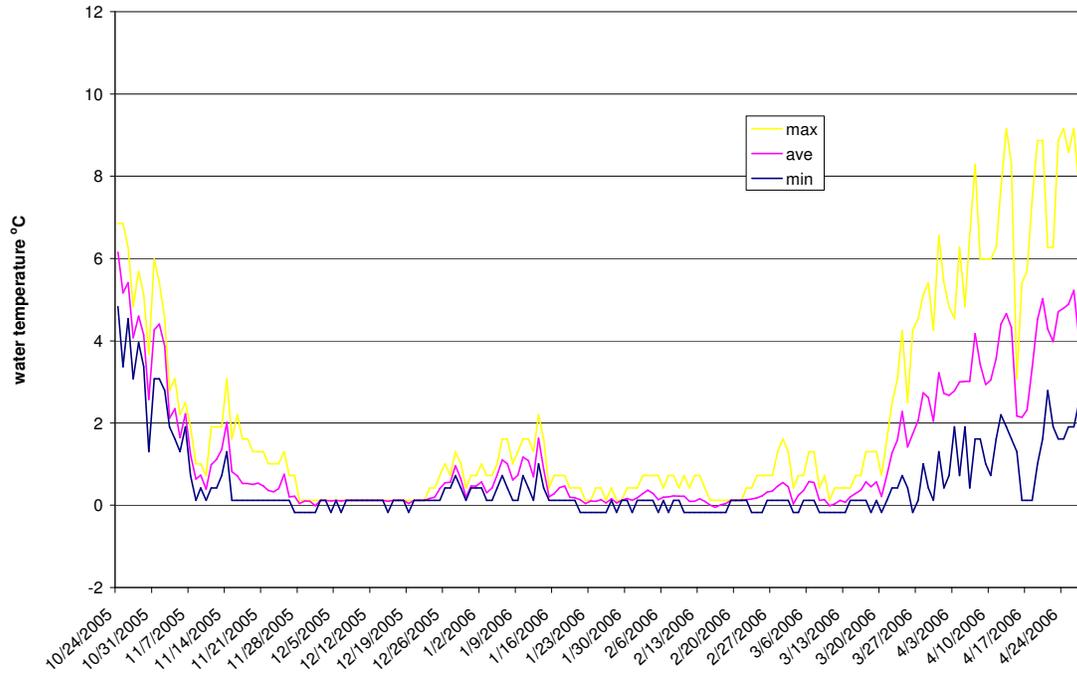
**Silver Lake District:**

- Buckaroo Lake
- La Brie Lk
- Indian Creek

APPENDIX E:

Thermograph readings from 2 locations at Silver Creek Marsh winter 2005-6

WF Silver Creek fence line north of Silver Marsh campground



WF Silver Creek pond

