2007 Monitoring Report

Columbia Spotted Frog

Dry Creek, Oregon

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PREFACE

This study was initiated in 2001 by the Vale District Bureau of Land Management and Janice Engle from the U.S. Fish and Wildlife Service's Snake River Fish and Wildlife Office in Boise, Idaho in order to monitor long-term population trends, demographics and movement patterns for Columbia spotted frogs in Dry Creek. The Snake River Fish and Wildlife Office was responsible for the monitoring along Dry Creek until Janice Engle's departure to Sacramento, California in 2006 (Janice was able to conduct surveys in June and August of 2006). In 2007, the U.S. Fish and Wildlife Service's La Grande Field Office took over responsibility for the monitoring and reporting of the Dry Creek Columbia spotted frog monitoring study. This report constitutes the 2007 annual report for the long-term population monitoring study along Dry Creek and fulfills the annual reporting requirement under Intra-Governmental Order #HVI070006.

1. Introduction

1.1 Dry Creek

Dry Creek is a tributary to the Owyhee River and located in Malheur County in southeast Oregon. Dry Creek is characterized by steep canyons, scour pools, and narrow stream reaches with boulders, cobbles, and sandy substrate. Vegetation along Dry Creek consists of sedges, rushes, forbs and occasional willows and cattails. Dry Creek has the largest known Columbia spotted frog (*Rana luteiventris*) population on the Vale Bureau of Land Management (BLM) District (excluding the Baker Resource Area, which is most likely comprised of the Northern population segment of the Columbia spotted frog). Dry Creek was chosen for long-term population monitoring not only for its large population of Columbia spotted frogs, but also because the population is relatively isolated with no connectivity to other watersheds. These conditions create a unique opportunity to monitor population trend and age class survival within a population. In addition, much of the land along Dry Creek is in public ownership; therefore, management and grazing utilization can be monitored and modified if needed.

Oxbows and side pools along Dry Creek provide slack water and good habitat for breeding Columbia spotted frogs and developing tadpoles. The periodic deep pools in Dry Creek contain large trout and may negatively affect and/or limit movement of frogs along the creek between breeding, foraging, and hibernation sites due to predation by large fish.

Columbia spotted frogs in Dry Creek have been surveyed twice each year since 2001 (via mark-recapture surveys in June and recruitment surveys in August of each year). In 2007, Marisa Meyer, Gary Miller, Ruth Brandt-Miller, and Shaney Rockefeller visited Dry Creek from June 4 through June 8 to conduct the mark-recapture survey, measure habitat parameters, and complete maintenance on the three exclosures that were constructed in 2006. On August 8, 2007, Marisa Meyer, Ruth Brandt-Miller, Shaney Rockefeller, and Dan Thomas visited Dry Creek to determine annual recruitment success and to score habitat parameters. Figure 1 shows the survey transects, photo point locations and water quality testing locations.

Three additional studies have been coordinated with the spotted frog survey work in Dry Creek: 1) Chytrid fungus analysis (June 2005) by US Geological Survey; 2) Genetic research (August 2006) by US Geological Survey; and 3) Fish health by the US Fish and Wildlife Service (August 2006). However, this report only summarizes the results from the 2007 Dry Creek monitoring project for Columbia spotted frogs. Protocols followed for these surveys are described in the Methods section of this report and in Appendix I.

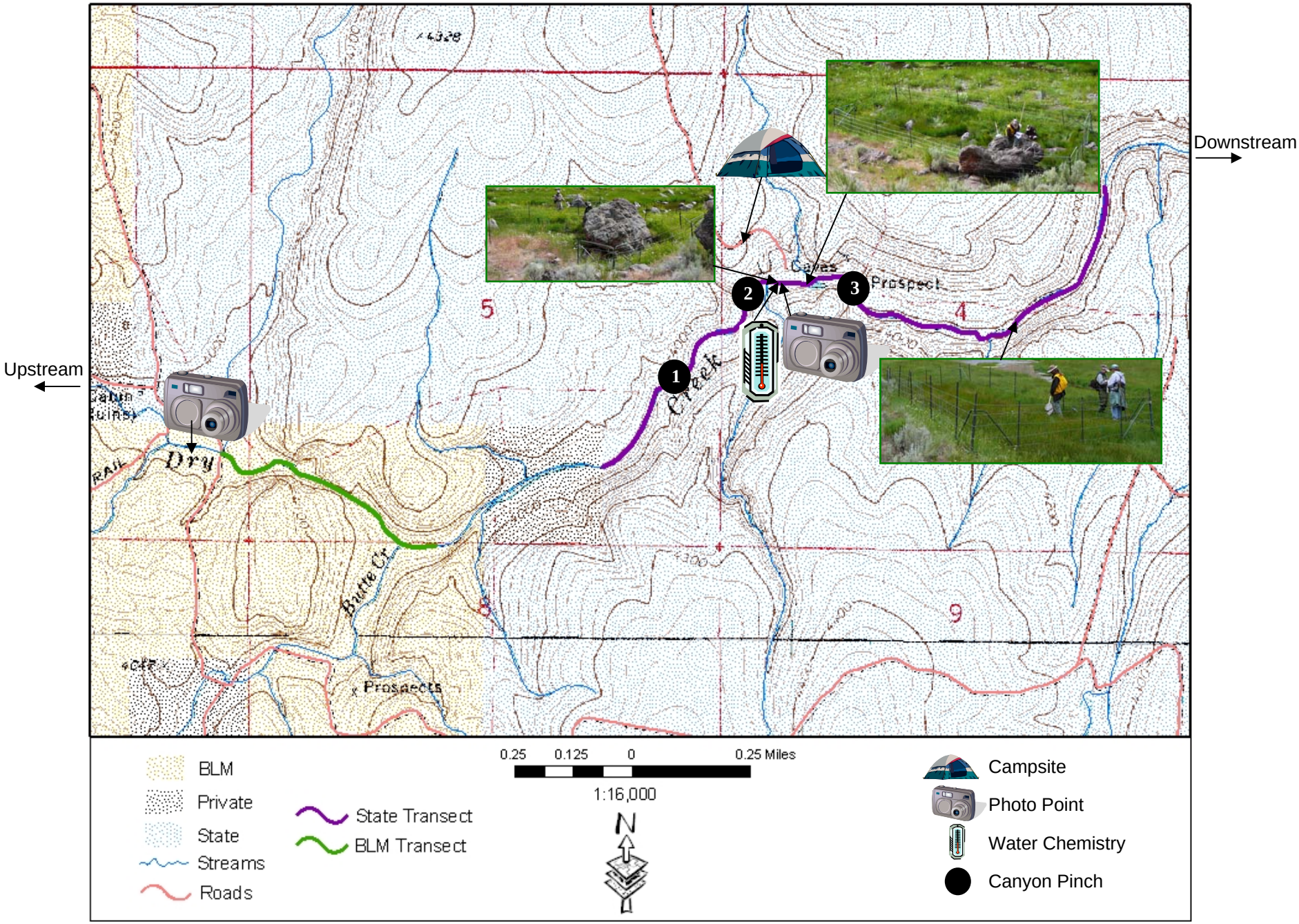

Figure 1. Landmark locations for the Columbia spotted frog survey transect along Dry Creek, Malheur County, Oregon.

1.2 Columbia Spotted Frogs

Columbia spotted frogs were formerly classified as part of *Rana pretiosa*, or Spotted frogs. However, Spotted frogs are now classified as two separate species, the Oregon spotted frog (*Rana pretiosa*) and the Columbia spotted frog (*Rana luteiventris*) (Green *et al.* 1997). Researchers found that while the two species are nearly identical morphologically, they differ genetically and occupy different ranges (Green *et al.* 1997). In addition, genetic evidence indicates that *Rana luteiventris* may be one species with three subspecies or several weakly-differentiated species (Green *et al.* 1997). There are currently four recognized populations of Columbia spotted frogs: Northern, Great Basin, Wasatch, and West Desert. Columbia spotted frogs occur from Alaska and most of British Columbia to Washington east of the Cascade Mountains, Idaho, the Bighorn Mountains in Wyoming, the Mary's, Reese, and Owyhee River systems in Nevada, the Wasatch Mountains, and the western desert of Utah (Green *et al.* 1997).

Columbia spotted frogs within the Northern population are considered to be abundant (Gomez 1994). However, the other three populations (Great Basin, Wasatch, and West Desert) are declining or almost extirpated (Gomez 1994). The causes of decline are not fully understood, but like most amphibians a major threat is the destruction, fragmentation and degradation of wetlands. The introduction of non-native predators such as bullfrogs, bass and predatory freshwater fish species are believed to contribute to their decline. Because of their current status, the Great Basin Columbia spotted frog is designated as a Federal candidate species. The U.S. Fish and Wildlife Service has sufficient information on the biological status and threats for Great Basin Columbia spotted frog to propose them as endangered or threatened under the Endangered Species Act; however, development of a listing regulation is precluded by other higher priority listing activities (USDI 1993).

Great Basin Columbia spotted frogs (spotted frogs) are highly aquatic and live in or near permanent bodies of water, including lakes, ponds, slow streams and marshes; movements of spotted frogs are limited to wet riparian corridors. Spotted frogs occur in riparian areas, where emergent vegetation and standing water are present, within the sage-juniper shrublands (Engle 2001). Standing water, flooded meadows, and willows provide breeding, foraging, and overwintering habitat. Most spotted frogs hibernate and aestivate; hibernation occurs in spring-fed ponds with willows (Engle 2001).

Spotted frog adults are light to dark brown, gray, or olive green with dark spots on the back, sides and legs. The number of spots and spotting pattern varies. The undersides of the legs are orange or yellow; this color may extend up to the chin or be replaced by a light, mottled gray on the chin, chest, and/or belly. Adult body length is 46 to 90 mm (Engle 2001). Spotted frogs breed during a short, two-week breeding window anywhere from early April to early June. Eggs are laid at the water surface in large, globular masses of 200 to 500 eggs (Engle 2001). Tadpoles are black after hatching and their eyes are located on the top of the head. Tadpoles are approximately 8 to 10 mm in length at hatching and commonly metemorphose at 70 to 75 mm (Engle 2001). Metamorphosis usually occurs from late July until freezing weather. The lifespan of spotted frogs can be seven to nine years (Engle 2001). Spotted frog diets can vary widely. Adults eat insects, mollusks, crustaceans, and arachnids; larvae eat algae and organic debris. Predators of spotted frog adults include herons and garter snakes, and the recently introduced

bullfrogs. In addition, larvae may be consumed by the larvae of dragon flies, predacious diving beetles, fish and garter snakes.

2. Methods

Two population estimate methods are used in this monitoring strategy: 1) mark-recapture, and 2) visual encounter surveys. Mark-recapture methods provide accurate estimates of population size within the constraints of the following assumptions:

1. Immigration and emigration must not exist;
2. Recruitment must not occur; and
3. Each individual has the equal probability of being caught.

Visual encounter surveys provide an estimate of relative abundance as long as every individual is equally likely to be observed (regardless of weather, season, or other variables) and each frog is recorded only once so there are no observer-related effects.

These two methods are used to provide comparative numbers across 10 years for the Dry Creek monitoring site. The goal is to accurately detect trends in numbers at the site over the long-term. Mark-recapture numbers are used to calculate the Lincoln-Peterson population estimate to estimate *occurrence size* in the spring and visual encounter numbers to assess *breeding success* in the late summer.

Surveyors visit the site three times each year: twice in the spring for a mark-recapture population estimate and habitat analysis and once in the late summer for an assessment of breeding success and habitat analysis. Beginning and ending point (determined by ownership, accessibility, and occurrence boundaries from previous surveys) GPS locations are recorded. Attempts are made to capture every frog within the delimited area within a specified time frame. Frogs are tagged with Passive Integrated Transponder (PIT) tags. (Toe-clipping was discontinued in 2003; however, some toe samples were again gathered in 2006 for a separate genetics study.)

Parameters measured during each survey, once in the spring and once in the late summer include:

- Water chemistry: dissolved oxygen, temperature, pH, and conductivity; and
- Habitat/land use: streambank alteration (SSAR) and vegetation use by animals (VUBA) (Platts 1987)[1]

Data are recorded in a standard log book and the site is photographed from a standard point in the spring and late summer. A report is compiled annually and submitted to the BLM. The report consists of tables summarizing population numbers and maps of the area surveyed. Water chemistry and habitat/land use measures are discussed along with their relevance to population trends; raw data and field notes are included as appendices.

[1] Platts W. S. 1987. Methods for evaluating riparian habitat with applications to management. USFS Intermountain Forest and Range Experiment Station. Ogden, Utah. GTR INT-221.

3. Results

3.1 Exclosures

On June 5, 2007, there were poor weather conditions for surveying (i.e., high winds and rain), so instead of surveying, time was spent performing maintenance on the three exclosures constructed in 2006. The exclosures were generally in good condition; however, most every wire needed tightening. In addition, an upper wire was added to the exclosures where it was obvious the livestock had been reaching over the top wires.

In 2006, three exclosures were constructed around habitat known to be essential to the Columbia spotted frog population within the survey transect. The "Campsite Oxbow" exclosure is located just south of the campsite. This oxbow has had consistent capture success over the past seven years. However, due to its close proximity to a livestock trail, it had received a high amount of disturbance from trampling and vegetation loss. In June 2006, the exclosure was constructed and willows and cattails were transplanted into the exclosure. This exclosure provides aquatic habitat for foraging and overwintering frogs. As of 2007, Columbia spotted frog breeding has not been documented in this oxbow; however, tree frog tadpoles were observed there. Figure 2 shows the Campsite Oxbow Exclosure in June 2007 with live willows and cattails.

Figure 2. Campsite Oxbow Exclosure in June 2007 along Dry Creek, Malheur County, Oregon.

The "Barrel Spring" Exclosure is located between the second and third pinches. This pool is a recharge area where water percolates back up to the surface in a cool, clear pool. This area reliably provides wet habitat connectivity when water is limited in late summer and it is possible that the pool serves as an overwintering site (if interstitial spaces are large enough for frogs). Metamorph captures have been high in August of most years. In June 2006, the exclosure was constructed and willows and cattails were transplanted into the exclosure. As of 2007, Columbia spotted frog breeding has not been documented in this pool. Figure 3 shows the Barrel Spring Exclosure in June 2007 with live willows and cattails.

Figure 3. Barrel Spring Exclosure in June 2007 along Dry Creek, Malheur County, Oregon.

The "Skeleton Scar" Exclosure is located downstream of the third pinch and is a documented breeding site. The Skeleton Scar Exclosure is a small, incised side channel that is usually isolated from the main channel. It usually remains approximately 18 inches deep throughout the year. Because of its rare connectivity to the main channel, any tadpoles that develop here are usually isolated until they metamorphose and predation by snakes can be extremely high in such a concentrated pool. This exclosure was completed in August 2006; however, no willows or cattails were transplanted. Figure 4 shows the Skeleton Scar Exclosure in June 2007 with abundant sedges and rushes.

Figure 4. Skeleton Scar Exclosure in June 2007 along Dry Creek, Malheur County, Oregon.

There were noticeably more seed heads on the sedges and rushes inside all three of the exclosures versus outside the exclosures. This was particularly interesting since there had been very little grazing along the portions of Dry Creek in June where the three exclosures were

constructed. Figure 5 shows an example of the difference in the vegetation both inside and outside the Skeleton Scar Exclosure (i.e., notice more brown seed heads inside the exclosure than in the upper and right portions of the picture).

Figure 5. Skeleton Scar Exclosure with noticeably more seed heads inside the exclosure than outside in June 2007 along Dry Creek, Malheur County, Oregon.

The willows and cattails that were transplanted into the Campsite Oxbow and Barrel Spring Exclosures in 2006 appeared to be alive in June and August 2007. In addition, the Skeleton Scar Exclosure was almost completely over-grown with sedges and rush in June 2007. As the vegetation continues to become more established and expand in these exclosures, the vegetation will need to be monitored to ensure it is providing the frogs with quality habitat rather than taking over the exclosures and reducing the available habitat for frogs.

3.2 Mark-recapture Surveys

The spring of 2007 was a low water year and no scouring of the streambanks was evident in June. Aquatic habitat was uniform and well-connected in June; however, livestock use along Dry Creek was varied. In areas where there had been little to no grazing, frogs were noticeably less nervous and easier to catch than in areas where there had been moderate grazing. In areas where there had been moderate utilization, frogs disappeared underwater when the surveyors were still quite far away. This made catching frogs more difficult in these areas. Also, there seemed to be more algae along the transect than in past years. This algal mat made capturing frogs quite challenging as they had many areas to hide under water and the algal mat.

The survey began where the trail leading from the campsite intersects Dry Creek on June 6, 2007 at 0930 hrs. The weather was partly cloudy and breezy. The survey proceeded east from this point downstream to the east end of the State transect. However, the survey extended beyond the eastern endpoint of the State land down to a side pool (the frogs captured along the ‘extra’ portion of the survey are not included in the Lincoln-Peterson population estimate). The survey began again where the trail leading from the campsite intersects Dry Creek and continued west to the second pinch. The first pass of the survey was completed at 1800 hrs.

The second pass of the lower State transect began on June 7 at 0900 hrs. The weather again was partly cloudy and breezy. The second pass of the survey started at the same point, continued in the same direction as the first pass and ended the survey at the same pool as the day before. However, after the second pass to the second pinch was completed, the first pass from the second pinch to the west end of the BLM transect was started. This portion of the survey was completed at 1900 hrs.

On June 8, the survey began at 0900 hrs and the second pass from the second pinch to the west end of the BLM transect was completed at 1220 hrs. The weather was mostly sunny, but became partly cloudy by early afternoon.

A total of 27 frogs were caught in the exclosures. One male was caught in the Campsite Oxbow Exclosure, 23 subadults were caught in the Barrel Spring Exclosure, and three subadults were caught in the Skeleton Scar Exclosure. It is not clear if there was a preference for the exclosure sites since these sites were important frog capture areas in previous years prior to being fenced off from grazing.

Along the entire transect, including the 'extra' portion on the east end of the State transect, a total of 185 individual frogs were recorded (i.e., 16 males, 10 females, 150 subadults, and 9 uncaptured frogs). The majority of the frogs were caught along the main channel; however, when there was a side pool or oxbow present, several frogs were using them. Very few frogs were recorded on BLM land (14 frogs total) and on State land down to the second pinch; most frogs were caught after the second pinch down to the end of the State land transect. Only one adult male (# 465950262B) was recaptured in the 'extra' portion of the survey. This male was caught in 2006 as a subadult during the expanded survey effort downstream of the east end of the State transect; this male was caught in 2007 approximately 108 meters upstream from where he was captured in 2006. Figure 6 shows the capture locations of all frogs recorded along the mark-recapture survey route in June 2007.

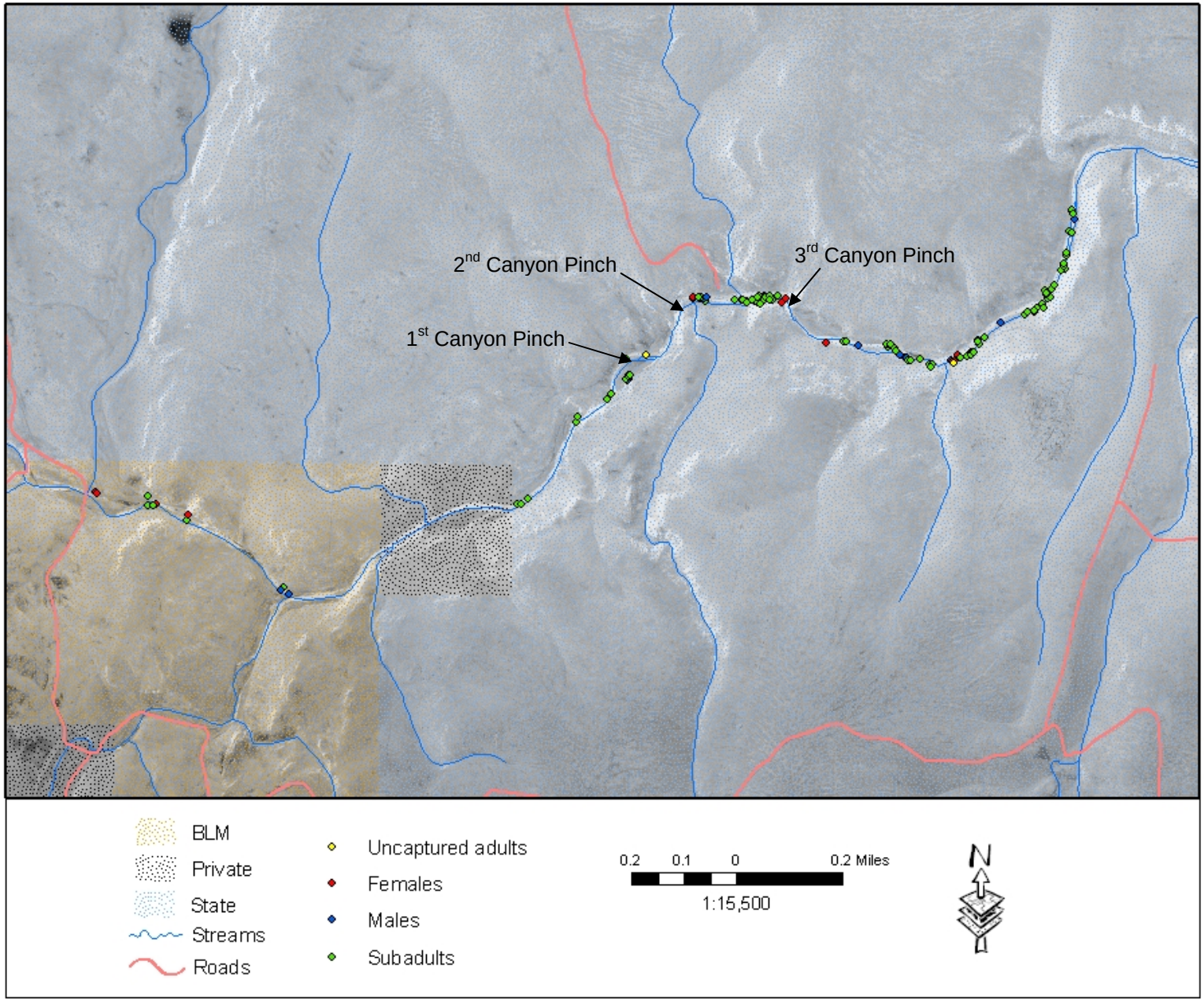

Figure 6. Columbia spotted frog capture locations for the June 2007 mark-recapture survey along Dry Creek, Malheur County, Oregon.

3.2.1 Lincoln-Peterson Population Estimate

Population estimates are calculated for the State transect using the Lincoln-Peterson population estimate technique. This technique involves collecting a sample from the population, marking this sample, and then releasing the sample back into the population. This creates a ratio of marked to unmarked individuals in the population. After a period of time, a second collection is made and the ratio of marked to unmarked individuals is calculated. This ratio is then used to estimate the total population size. The Lincoln-Peterson technique uses the following assumptions:

- no immigration or emigration between the time of marking and the time of recapture;
- no recruitment (reproduction) between the time of marking and the time of recapture; and
- each individual has the equal probability of being caught.

The Lincoln-Peterson population estimate is calculated as follows:

$$N = (r)(n)/m$$

Where:

N = population estimate
r = number of frogs caught, marked, and released on day #1
n = number of frogs caught on day #2
m = total number of marked frogs caught on day #2

Lincoln-Peterson population estimates are not calculated for the BLM transect because not enough frogs are captured on that transect to calculate a statistically valid population estimate. Additionally, frogs captured on the BLM transect cannot be combined with frogs captured on the State transect because of the intervening private land and the confluence of Butte Creek with Dry Creek. These existing conditions make it is impossible to ensure no individuals enter or leave the BLM transect during the survey period; therefore, it impossible to ensure all assumptions of the Lincoln-Peterson method are accurate and true.

A total of 135 individual frogs were recorded (i.e., 11 males, 7 females, 108 subadults, and 9 uncaptured frogs) along the State transect in June 2007. Table 1 shows the age and gender distribution of the frogs caught on the State transect from 2001 to 2007. The number of frogs caught on the State transect reached the highest documented numbers in 2005. However, by 2006, the number of frogs caught was again low. In 2007, the number of frogs caught rebounded to the second highest documented numbers since the survey began in 2001.

	Year						
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Females	9	9	9	26	18	22	7
Males	2	2	2	10	8	10	11
Subadults	39	20	41	61	119	25	108
Uncaptured	5	8	9	14	18	1	9
TOTAL	**55**	**39**	**61**	**111**	**163**	**58**	**135**

Table 1. Gender and age distribution for the June Columbia spotted frog mark-recapture surveys on the State transect along Dry Creek from 2001 to 2007, Malheur County, Oregon.

Using the data from Table 1 (and recapture data not shown in Table 1), the 2007 Lincoln-Peterson population estimate for the State transect is calculated as follows:

N = (72) (89) / 36
N = 178 frogs

Figure 7 shows the Lincoln-Peterson population estimates for the State transect from 2001 to 2007. A Lincoln-Peterson estimate was not calculated for 2002 due to the PIT-tag reader failure during the mark-recapture survey. Population estimates reached the highest documented number in 2005. However, by 2006, the population estimate was again low. The high water event of early 2006, combined with a small metamorph cohort of 2005 could be the reason for such a small population estimate in 2006. In 2007, the population estimate rebounded to the second highest documented numbers since the survey began in 2001. The relatively high number of metamorphs found in 2006 and the low water year in the spring of 2007 might help explain why the population estimate rebounded so well in 2007.

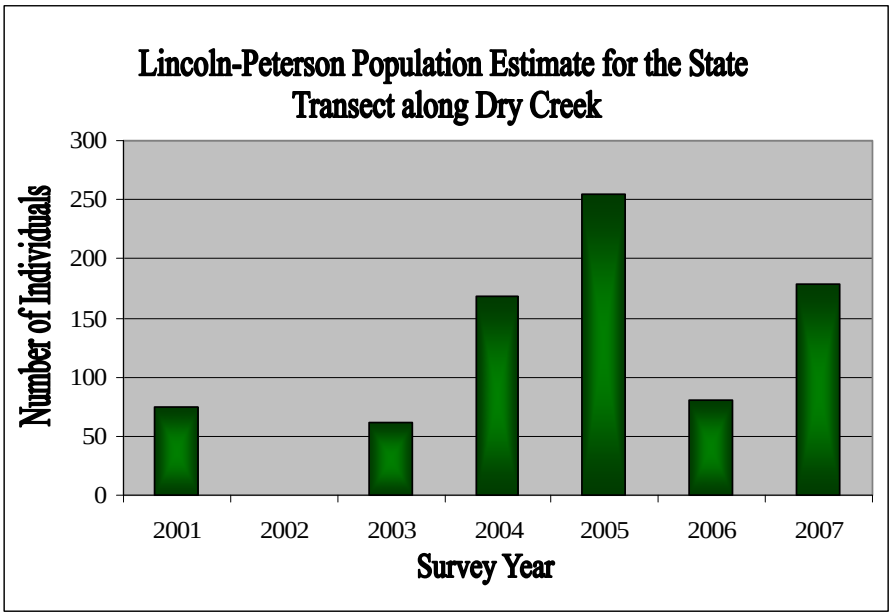

Figure 7. Lincoln-Peterson population estimates for Columbia spotted frogs on the State transect along Dry Creek from 2001 to 2007, Malheur County, Oregon. Note: Data from 2002 were not compiled.

3.2.2 Other Observations

Garter snakes are a known predator for Columbia spotted frogs. Snake numbers have been documented during the mark-recapture surveys each year since 2001 in an attempt to determine if predation is an important factor in spotted frog survival along Dry Creek. In June 2007, a total of 35 snakes were observed along the State transect (30 Western terrestrial garter snakes, two Racers, two Gopher snake , and one Western rattlesnake). Snake numbers appear to be cyclic. Table 2 shows how the number of snakes observed in 2007 compares to other survey years.

	Survey Year						
Species	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Western terrestrial garter snake	0	14	40	14	15	58	30
Common garter snake	0	1	2	0	0	0	0
Gopher snake	2	1	4	0	0	5	2
Racer	2	1	2	1	1	1	2
Western rattlesnake	2	0	1	0	1	0	1
TOTAL	**6**	**17**	**49**	**15**	**17**	**64**	**35**

Table 2. Snake observations from the June Columbia spotted frog mark-recapture surveys along Dry Creek from 2001 to 2007, Malheur County, Oregon.

Additionally, western meadowlarks, chukar, rock doves, prairie falcons, great horned owls, California quail, horned larks, common nighthawks, red-winged blackbirds, brown-headed cowbirds, bank swallows, mallards, green-winged teal, mule deer, pronghorn antelope, and black-tailed jackrabbits were observed along the transect.

3.3 Recruitment Surveys

Again, livestock use along Dry Creek was varied. In areas that had been lightly grazed, frogs were noticeably less nervous and easier to catch than in areas where there had been heavy grazing. In areas where there had been heavier utilization, frogs disappeared underwater when the surveyors were still quite far away. This made catching frogs more difficult in these areas. Heavy livestock use was evident along the BLM portion of the survey and livestock were present along the BLM portion of the transect. There seemed to be even more algae along the transect than in June or in past years. This algal mat made capturing frogs quite challenging as they had many areas to hide under water and the algal mat. Figure 8 shows a representative algal mat found along the survey transect in August.

Figure 8. Typical algal mat found in August 2007 along Dry Creek, Malheur County, Oregon.

The survey started 0815 at the upstream BLM start point and finished at the end of the State transect at 1720. The weather was clear, calm, and warm. Despite wide wet connectivity in June, most of the BLM section was now completely dry. Figure 9 shows a portion of the BLM transect in August 2007 where there was no wet connectivity.

Figure 9. Dry portion of the BLM transect in August 2007 along Dry Creek, Malheur County, Oregon.

Along the entire transect, a total of 256 individual frogs were recorded (i.e., 2 males, 1 female, 28 subadults, and 225 metamorphs). The majority of the frogs were caught along the main channel; however, when there was a side pool or oxbow present, several frogs were using them. Again, very few frogs were caught on BLM land and on State land down to the second pinch; most frogs were caught after the second pinch down to the end of the State land transect. Figure 10 shows the capture locations of all frogs recorded along the recruitment survey route in August 2007.

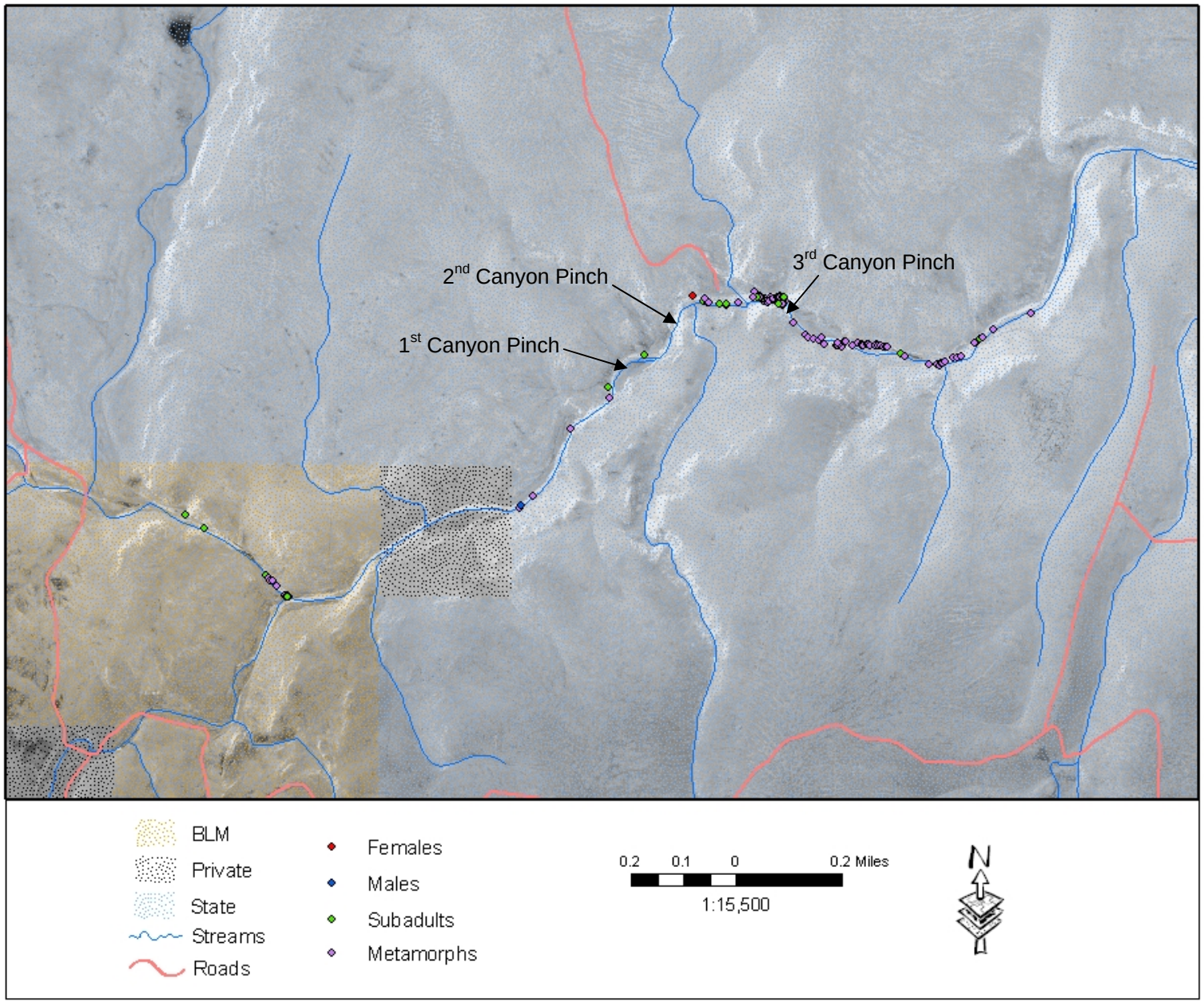

Figure 10. Columbia spotted frog capture locations for the August 2007 annual recruitment survey along Dry Creek, Malheur County, Oregon.

3.4 Water Quality Results

Water quality parameters were recorded at the standard water chemistry point along Dry Creek mid-way on the State transect. Results from the 2007 surveys appear to be similar to other years. Table 3 shows the results of the water quality tests conducted from 2001 to 2007. Figure 1 shows the location of the standard water quality and photo point.

Table 3. Habitat ratings and water quality monitoring results for the Dry Creek Columbia spotted frog surveys from 2001 to 2007, Malheur County, Oregon.

Date	Time	Water Temp (˚C)	DO	Conductivity (ppm)	pH	SSAR (percent streambank soil alteration rating)	VUBA (percent vegetation use by animals)
June 6, 2001	1310	17.3	14.7	192	9.2	0-25	0-25
August 4, 2001	1335	22.3	16.5	246	9.3	26-50	76-100
June 6, 2002	1315	22.5	*	*	*	26-50	51-75
August 11, 2002	1300	21.8	**	340	8.9	51-75	76-100
June 6, 2003	1200	20.9	12.6	270	9.1	51-75	0-25
August 9, 2003	1355	24.9	16.3	310	8.9	51-75	26-50
June 6, 2004	1515	22.2	13.8	250	8.9	51-75	51-75
August 20, 2004	1440	26.0	14.8	280	9.0	26-50	26-50
June 6, 2005	1730	17.0	14.4	230	8.9	0-25	0-25
August 11, 2005	1249	21.0	15.4	260	9.1	51-75	76-100
June 3, 2006	1330	17.0	10.0	250	10.4	76-100	0-25
August 10, 2006	1302	22.0	7.5	280	8.4	76-100	76-100
June 6, 2007	1700	16.0	12.3	200	9.1	51-75	0-25
August 8, 2007	1210	19.0	9.0	190	8.1	51-75	76-100

*** equipment failure**
**** not recorded**

3.5 Habitat Ratings

Vegetation use along Dry Creek in June varied, making it difficult to determine habitat ratings. The BLM land and the State land down to the second pinch showed signs of light to moderate grazing in June. There was very light use between the second and third pinches and no evidence of recent use by livestock. Between the third pinch and the fence line near the east end of the State transect, there was light to moderate utilization. However, after crossing the fence line, there was heavier use by livestock than on any other sections of the State land. Along most of the transect, there was evidence the streambanks were stabilizing and revegetating from the 2006 spring flows. Table 3 shows the percent streambank soil alteration rating (SSAR) and the percent vegetation use by animals (VUBA) results of the habitat ratings from 2001 to 2007.

Again, vegetation use along Dry Creek in August varied, making it difficult to determine habitat ratings. Most areas along the transect had received heavy utilization by August; however, the area between the second and third pinches was only lightly grazed. Livestock were present on the BLM land and on the State transect above the second pinch and from the fence line near the east end of the State transect down to the end of the State transect. Table 3 shows the SSAR and VUBA results of the habitat ratings from 2001 to 2007.

Lincoln-Peterson population estimates were plotted on the same graph as the habitat measures in hopes that a relationship could be detected between frog numbers and habitat conditions. However, habitat conditions have been found to fluctuate greatly *within* each year, depending on the timing of livestock use. Therefore, the ability to determine if a relationship exists is limited. Figure 11 shows the habitat ratings and the Lincoln-Peterson population estimates from 2001 to 2007. Population estimates reached record documented numbers in 2005 when habitat ratings in June and August were at their best possible ratings; however, no other relationships are obvious at this time.

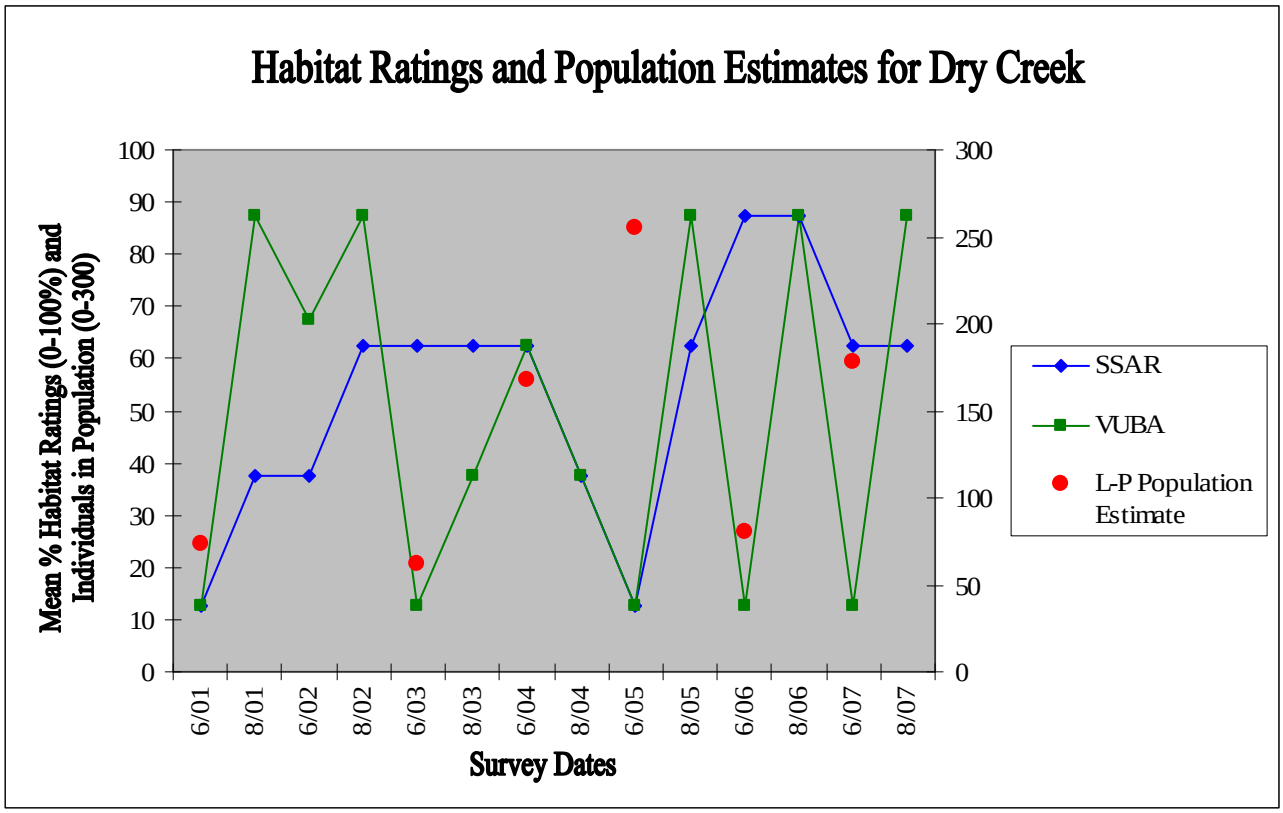

Figure 11. Habitat measures and Columbia spotted frog population estimates observed along Dry Creek from 2001 to 2007, Malheur County, Oregon. Habitat measures are plotted as means of their percentages (0-25% is plotted as 12.5%; 26-50% is plotted as 37.5%; 51-75% is plotted as 62.5%; and 76-100% is plotted as 87.5%) . See Appendix II for rating criteria. For both habitat ratings depicted here, higher percentages represent poorer habitat conditions.

4. Discussion

This monitoring effort has been ongoing for seven years and almost 600 Columbia spotted frogs have been PIT-tagged through 2007. Figure 12 shows all capture locations for each frog recorded on the survey route from 2001 to 2007. Through the life of the survey, several general observations have been made. The following observations are noted at this time:

- Observations of all life stages of frogs from 2001 to 2007 have increased (with yearly fluctuations).
- Only three known communal egg-laying sites exist and the numbers of egg masses at these sites are low. Similar sites in other spotted frog populations support 25-50 egg masses each; the largest communal site in Dry Creek contained seven egg masses (2004 data).
- Number of PIT-tagged frogs that have been recaptured two or more years is low.
- Survival rates for mature frogs are low. Mortality rates among all age classes are high; especially among subadults.
- Relatively few adults in late summer are observed along the stream.
- The distribution of tadpoles, metamorphs, and subadults is directly related to wet habitat connectivity. It is likely that tadpoles are less susceptible to predation and disease if they can spread out across a larger habitat space.
- Only one frog (an adult male in 2007) has been recaptured outside of the normal transect route.
- Habitat connectivity (wet corridor) varies from year to year.
- Woody vegetation has been increasing in density and height in the natural exclosure.
- Suitable breeding sites are widespread, but not being used and therefore are not considered a limiting factor.
- Suitable overwintering sites seem limited and may vary from year to year depending on grazing regime, spring flow events, etc.
- It is important to have hibernacula (overwintering sites) in close proximity to breeding sites, and suitable migratory corridors with no barriers to movement. Spotted frogs have a relatively short (2 week) breeding window in the spring; thus if individuals do not make it back to their natal sites within that time period, they may not reproduce in a given year.
- Frogs show increased vigilance in areas where there has been moderate to heavy grazing.
- Predator numbers (garter snakes) have been cyclic (low in 2001, 2002 and 2005, high in 2003, 2006, and 2007).
- Symptoms of disease have been observed in frogs (chytrid fungus) and fish (both fungal and bacterial forms).

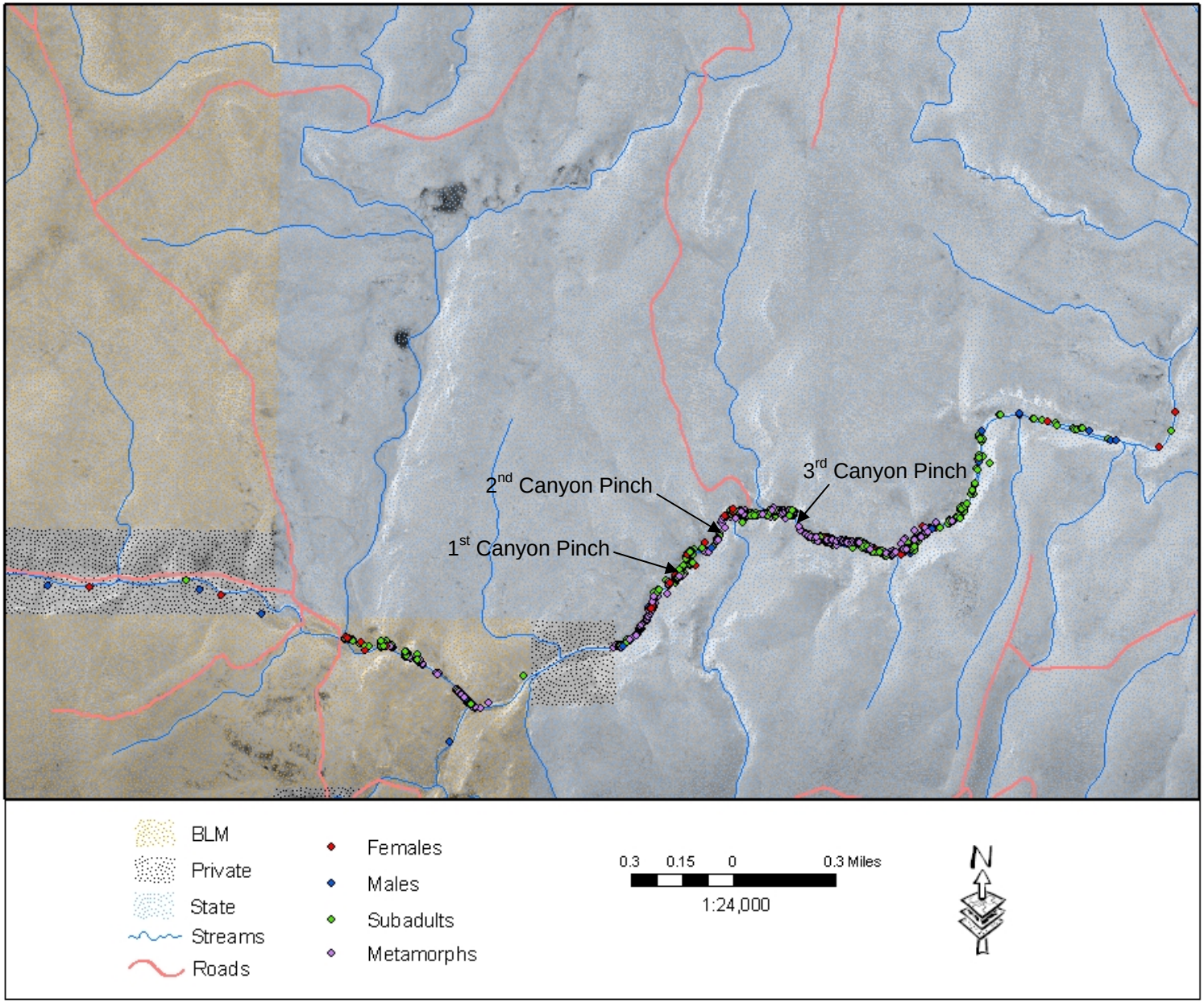

Figure 12. Columbia spotted frog capture locations (by gender and age class) from 2001 to 2007 along Dry Creek, Malheur County, Oregon.

4.1 Recapture Data

Although 597 frogs have been PIT-tagged in the Dry Creek survey area over seven years, only 41 have been captured in more than one year (i.e., 11 males and 30 females). Table 4 is organized by PIT-tag number and shows the recapture results for the Dry Creek surveys from 2001 to 2007. Most of the recaptured frogs were captured first as subadults, and subsequently as adults (when gender could be determined).

Only nine frogs have been captured across three or more years, and only one of those were adults at their first capture. Female # 434E2B7F25 was at least in her third year in 2002; however, she has not been recaptured since 2004 (this female was in at least her fifth year at her last capture). The other frogs, three males and five females, were in their fourth year at their last capture; no other frogs could be verified as over three years in age. For the purposes of this report, "age" is defined as follows:

- 1st year: first calendar year of life (egg, tadpole, metamorph stages)
- 2nd year: second calendar year of life (previous year's metamorphs, now subadults)
- 3rd year: third calendar year of life (previous year's subadult cohort, now adults)
- 4th year: fifth calendar year of life

Table 4. Recapture data results (organized by PIT-tag number) for the Dry Creek Columbia spotted frog surveys from 2001 to 2007, Malheur County, Oregon.

Date	Hour	Gender	Mass (g)	Snout-vent length (mm)	PIT tag number	UTM (Easting)	UTM (Northing)	Distance from one capture to the next (m)
06/06/01	1546	SA	9.7	49	41620A620B	442454	4817407	
06/08/01	1237	SA	9.3	49	41620A620B	442447	4817424	18.4
08/04/01	1217	F	23.6	65	41620A620B	442407	4817306	124.6
06/06/02	1105	F	30.1	70	41620A620B	442442	4817419	78.5
06/07/01	1103	SA	14.7	56	42384B4216	442745	4817588	
06/06/02	1157	F	36.5	73	42384B4216	442682	4817602	64.5
06/07/02	1050	F	35.0	74	42384B4216	442682	4817603	1.0
06/09/01	1152	F	26.0	68	423D334857	443803	4817873	
06/06/02	1652	F	39.7	75	423D334857	443824	4817870	21.2
06/06/03	1532	SA	12.0	51	433C5D7064	443181	4817455	
06/07/03	1142	SA	11.5	52	433C5D7064	443174	4817464	11.4
06/07/04	1353	F	32.5	68	433C5D7064	443201	4817460	27.3
08/20/04	1308	F	28.5	67	433D052673	442344	4817270	
06/07/05	1503	F	24.0	67	433D052673	442254	4817154	146.8
08/11/02	1507	F	38.8	73	434E2B7F25	443169	4817464	
06/07/03	1147	F	36.0	74	434E2B7F25	443165	4817469	6.4
06/06/04	1304	F	48	78	434E2B7F25	443293	4817422	136.4
06/07/04	1316	F	48	78	434E2B7F25	443306	4817425	13.3

Green = Subadult
Red = Female
Blue = Male

Date	Hour	Gender	Mass (g)	Snout-vent length (mm)	PIT tag number	UTM (Easting)	UTM (Northing)	Distance from one capture to the next (m)
06/07/03	1003	SA	9.5	48	43504D4627	443489	4817431	
06/06/04	1102	F	27.5	67	43504D4627	443486	4817438	7.6
06/07/04	1130	F	28	67	43504D4627	443484	4817409	29.1
06/05/05	1526	F	29.5	72	43504D4627	443448	4817431	42.2
06/07/02	1309	F	34.5	75	4350506E41	441100	4816940	
06/07/03	1554	F	30.5	75	4350506E41	441097	4816938	3.6
06/08/03	1553	SA	11.5	50	43512B2A78	441030	4816970	
08/20/04	835	F	25	65	43512B2A78	441103	4816942	78.3
06/06/04	1235	SAF	13	52	435243287E	443356	4817414	
06/04/05	1520	F	27.5	67	435243287E	443318	4817419	38.3
06/07/03	1002	SA	14.0	52	43573B5E21	443489	4817431	
06/06/04	1104	F	28	66	43573B5E21	443486	4817438	7.6
06/08/03	1036	SA	12.0	51	435777396C	442695	4817595	
06/07/04	910	F	29	66	435777396C	442681	4817613	22.8
08/20/04	1709	F	34.5	71	435777396C	442676	4817611	5.4
06/04/05	1904	F	34.5	71	435777396C	442686	4817607	10.8
06/06/03	1212	SA	10.5	42	43577A5D43	442839	4817608	
06/04/05	1747	F	29.0	72	43577A5D43	442842	4817607	3.2
06/07/02	1230	F	14.5	54	4358056A44	440900	4816950	
06/07/03	1514	F	27.5	69	4358056A44	440804	4817010	113.2
08/11/05	1431	F	18	60	43583D555E	443287	4817445	
06/02/06	1321	F	21.0	64	43583D555E	443272	4817434	18.6
06/06/07	1352	F	32.0	72	43583D555E	443448	4817419	176.3
06/07/07	1209	F	32.0	72	43583D555E	443438	4817407	15.6
08/09/03	1007	F	29	67	435852595C	441143.09	4816909	
06/05/04	1453	F	24	68	435852595C	441163	4816902	21.1
06/07/04	1750	F	24	68	435852595C	441163	4816902	0.0
06/06/04	1240	SA	8.5	45	43595D7C2A	443345	4817422	
06/07/04	1300	SAF	8.5	45	43595D7C2A	443331	4817420	14.1
06/05/05	1622	M	12.0	54	43595D7C2A	443275	4817438	58.8
06/02/06	1325	M	14.0	56	43595D7C2A	443266	4817440	9.2
06/06/03	1215	SA	11.0	44	435A336346	442839	4817608	
06/07/03	1249	SA	11.0	44	435A336346	442839	4817608	0.0
06/06/04	1410	F	30.5	69	435A336346	442843	4817613	6.4
06/06/03	1436	SAM	12.5	50	435A3B583D	443730	4817622	
06/07/03	907	SA	12.5	51	435A3B583D	443721	4817609	15.8
06/07/04	1110	M	19	57	435A3B583D	443662	4817552	82.0
06/06/04	1416	SA	10	48	435A4C6906	442733	4817601	
06/04/05	1851	M	16.0	56	435A4C6906	442686	4817607	47.4
06/05/05	1908	M	16.0	56	435A4C6906	442684	4817606	2.2
06/07/02	1311	M	18.0	52	435B2A2063	441100	4816940	
06/07/03	1559	M	18.5	58	435B2A2063	441097	4816938	3.6

Green = Subadult
Red = Female
Blue = Male

Date	Hour	Gender	Mass (g)	Snout-vent length (mm)	PIT tag number	UTM (Easting)	UTM (Northing)	Distance from one capture to the next (m)
06/08/03	1034	SA	10.5	49	435B2B0157	442695	4817595	
06/04/05	1852	F	31.0	70	435B2B0157	442686	4817607	15.0
06/05/05	1900	F	31.0	70	435B2B0157	442684	4817606	2.2
08/11/05	1259	F	34	73	435B2B0157	442681	4817603	4.2
06/05/05	1705	SA	7.5	43	462E30242A	443244	4817461	
06/02/06	1240	M	16.0	56	462E30242A	443499	4817471	255.2
06/03/06	1408	F	23.0	68	462E5C0309	442508	4817461	
08/10/06	1241	F	36.0	75	462E5C0309	442641	4817604	195.3
06/06/07	1754	F	41.0	78	462E5C0309	442665	4817604	24.0
06/06/05	1144	SA	11.0	50	4658221C3D	442498	4817430	
06/07/05	1735	SA	11.0	50	4658221C3D	442498	4817438	8.0
08/11/05	1150	M	16.5	56	4658221C3D	442500	4817426	12.2
06/04/06	1025	m	18.0	58	4658221C3D	442381	4817297	175.9
06/07/07	1650	M	21.0	62	4658221C3D	442440	4817359	86.7
06/08/07	929	M	21.0	62	4658221C3D	442442	4817355	4.5
06/05/05	1748	SA	8.0	45	4658264149	443026	4817471	
06/01/06	1441	F	24.0	65	4658264149	442844	4817613	230.8
08/10/06	1619	F	31.0	72	4658264149	442768	4817593	78.5
06/06/05	1158	SAF	13.0	50	4658346141	442419	4817388	
06/04/06	954	F	32.0	70	4658346141	442442	4817421	40.2
08/10/06	1157	F	46.0	79	4658346141	442500	4817425	58.1
06/05/05	1352	SA	9.5	45	46584C0261	443545	4817495	
06/02/06	1121	M	15.0	54	46584C0261	443531	4817492	14.3
06/07/07	1250	M	17.0	57	46584C0261	443582	4817528	62.5
06/04/05	1755	SA	6.0	40	465850322B	442842	4817607	
06/05/05	1826	SA	6.0	40	465850322B	442848	4817615	10.0
06/03/06	1310	M	13.0	55	465850322B	442839	4817612	9.5
06/05/05	1635	SA	7.5	45	4658573143	443264	4817444	
06/01/06	1327	F	21.0	62	4658573143	443200	4817459	39.0
06/06/05	1106	SA	5.5	39	46590B3B03	442579	4817496	
06/01/06	1434	F	15.0	60	46590B3B03	442844	4817613	289.7
06/03/06	1311	F	17.0	59	46590B3B03	442843	4817609	4.1
08/10/06	1240	F	29.5	68	46590B3B03	442641	4817604	202.1
06/06/05	1204	SA	10.5	49	46591B1427	442454	4817367	
06/07/05	1800	SA	10.5	49	46591B1427	442454	4817369	2.0
06/03/06	1345	F	23.0	65	46591B1427	442665	4817605	316.6
06/04/06	1205	F	32.0	70	46591F142B	440882	4816991	
06/08/07	1145	F	41.0	78	46591F142B	441099	4816944	221.9
06/07/05	1504	F	35.0	75	4659370702	442258	4817157	
06/03/06	1512	F	40.0	80	4659370702	442258	4817164	7.0
06/04/06	1049	F	39.0	80	4659370702	442254	4817151	13.6

Green = Subadult
Red = Female
Blue = Male

Date	Hour	Gender	Mass (g)	Snout-vent length (mm)	PIT tag number	UTM (Easting)	UTM (Northing)	Distance from one capture to the next (m)
06/06/05	1545	SAF	13.0	52	4659407C32	440827	4817005	
06/03/06	1632	F	30.0	72	4659407C32	440823	4817013	8.9
06/04/06	1212	F	29.0	70	4659407C32	440815	4817015	8.3
06/02/06	1415	F	23.0	66	4659484C18	443188	4817465	
06/06/07	1235	F	36.0	74	4659484C18	443051	4817467	137.1
06/02/06	1310	SAF	13.0	52	46594D193E	443351	4817410	
06/06/07	1740	F	51.0	75	46594D193E	442644	4817605	733.3
06/07/07	1600	F	51.0	75	46594D193E	443643	4817606	1.4
08/08/07	1140	F	50.0	81	46594D193E	442644	4817618	12.1
06/04/05	1701	F	19.0	62	46594E4D50	443084	4817488	
06/02/06	1327	F	22.0	67	46594E4D50	443262	4817447	182.7
06/05/06	938	SA	10.0	48	465950262B	443809	4817952	
06/07/07	1432	M	21.0	59	465950262B	443808	4817844	108.2
08/10/06	1252	M	17.5	59	47173C7B66	442683	4817609	
06/07/07	1555	M	22.0	62	47173C7B66	442684	4817607	2.2
08/10/06	1251	SAM	12.0	53	471A0E376D	442683	4817612	
06/06/07	1711	M	17.0	56	471A0E376D	442677	4817605	9.2

Green = Subadult
Red = Female
Blue = Male

Table 4 also shows the distances traveled by each frog that has been recaptured two or more years during the life of the survey. Based upon the distances these frogs traveled (straight line between GPS points), the furthest distances traveled were 316.6 meters by female # 46591B1427 and 733.3 meters by female # 46594D193E. Female # 46591B1427 was found in the isolated oxbow pools between the second pinch and natural exclosure in 2005. High water flows in early 2006 scoured that area (no frogs were found there in the June 2006 survey), so it is possible she passively rode the high water flows to the next suitable habitat, the oxbow pools below the campsite. Female # 46594D193E was just upstream from the Skeleton Scar Exclosure in 2006. High water flows in early 2006 scoured that area, so it is possible she was swept downstream during the 2006 high water flows and was making her way back upstream to her natal rearing site (in the oxbow pools below the campsite) in 2007. Several other frogs have moved over 100 meters during the life of the survey; however, when the extended surveys were completed in 2006, no frogs were detected outside the survey transect.

4.2 Survivability

Adult survivorship in Dry Creek appears to be lower than other Great Basin Columbia spotted frog occurrences; therefore, it is important to monitor yearly recruitment (i.e., metamorophs) into the population. Table 5 shows the number of metamorphs observed along the transect each August.

Results from the 2007 survey show an increase from the highest number of metamorphs observed in 2004. However, the 2004 survey was not completed due to time constraints; therefore, the number of metemorphs along the entire survey route would most likely be higher for 2004. During the life of the survey, there have been years where the annual recruitment was low and years where the annual recruitment was high; therefore, it is difficult to determine if there is a trend in the number of metamorphs. More survey years are needed to determine if there is a trend in the annual recruitment.

Table 5. Number of Columbia spotted frog metamorphs observed along the entire transect on Dry Creek from 2001 to 2007, Malheur County, Oregon.

Date	Number of Metamorphs
August 4, 2001	37
August 11, 2002	71
August 9, 2003	98
August 20, 2004	223*
August 11, 2005	100
August 10, 2006	152
August 8, 2007	225

*** entire transect was not completed**

Another measure of recruitment success is to identify the number of metamorphs that survived their first winter and were observed the following year as subadults. Table 6 relates the number of subadults to the number of previous year's metamorphs.

Table 6. The relationship between the number of Columbia spotted frog metamorphs and subadults observed on Dry Creek from 2001 to 2007, Malheur County, Oregon.

Year	Number of Subadults	Number of Metamorphs (from previous year)
June 2001	41	-
June 2002	34	37
June 2003	54	71
June 2004	84	98
June 2005	148	223*
June 2006	30	100
June 2007	125	152

*** entire transect was not completed**

Subadult frogs reached high numbers in June 2005, following the August 2004 peak in metamorph numbers. However, by 2006, subadult numbers were down to the lowest documented numbers. The high water event of early 2006, combined with a smaller metamorph cohort of 2005 could be the reason for such a small number of subadults in 2006. In 2007, the number of subadults rebounded to relatively high numbers. The relatively high number of metamorphs found in 2006 and the low water year in the spring of 2007 (i.e., 2007 had less water to scour the area and wash frogs downstream) might help explain why the number of subadults rebounded so well in 2007.

To determine cohort survival along Dry Creek across years, it is important to determine age classes appropriately. Due to individual variability in growth, size ranges cannot always predict age with certainty. However, it is safe to say that an 80 mm female is older than a 50 mm female in June of any given year. The breaks in age class in Table 7 are based upon recapture data for known subadults (when 2nd year could be assigned with certainty to a PIT-tagged individual), males and females caught along Dry Creek from 2001 to 2005. In addition, the following criteria, based upon capture data, can be used to infer survivability trends:

- Uncaptured subadults and adults are not included since there is a possibility that they may be captured and counted another time in any given year;
- Uncaptured metamorphs are included because they are only viewed once (in the last survey of the year);
- Recaptured frogs are only counted on the first capture of the year (when it is easiest to determine subadult age class);
- Frogs 42 mm and under in August are considered metamorphs; and
- Females captured in August are adjusted for annual growth; however, males caught in August are not adjusted for annual growth. (Females will continue to grow rapidly between June and August. Males do not have as fast of growth rate between June and August; therefore, males do not need to be adjusted for annual growth when captured in August).

Table 7. Columbia spotted frog cohort survival across years observed on Dry Creek from 2001 to 2007, Malheur County, Oregon. Note: Data in table were revised in 2007 to exclude frogs captured outside the normal transect route.

Life Stage		Cohort/"Birth" year									
		1998 cohort	**1999 cohort**	**2000 cohort**	**2001 cohort**	**2002 cohort**	**2003 cohort**	**2004 cohort**	**2005 cohort**	**2006 cohort**	**2007 cohort**
1st year of life	**Egg masses**	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	12 masses, at least 6,000 individuals	Unknown	Unknown	Unknown
1st year of life	**Metamorphs** (Gosner stage 47 to 45mm in August)	Unknown	Unknown	Unknown	(2001 survey) **37**	(2002 survey) **71**	(2003 survey) **98**	(2004 survey) **223***	(2005 survey) **100**	(2006 survey) **152**	(2007 survey) **225**
2nd year of life	**Subadults** (39-60mm in June; no males over 53mm; females to 69mm in August)	Unknown	Unknown	(2001 survey) **41**	(2002 survey) **34**	(2003 survey) **54**	(2004 survey) **84**	(2005 survey) **148**	(2006 survey) **30**	(2007 survey) **125**	
3rd year of life	**Adults** (females 61-75mm in June; females 70-75mm in August; males 54-57mm)	Unknown	(2001 survey) 3 females 0 males **3 TOTAL**	(2002 survey) 7 females 3 males **10 TOTAL**	(2003 survey) 11 females 3 males **14 TOTAL**	(2004 survey) 18 females 8 males **26 TOTAL**	(2005 survey) 16 females 6 males **22 TOTAL**	(2006 survey) 19 females 11 males **30 TOTAL**	(2007 survey) 8 females 8 males **16 TOTAL**		
4th year of life or older	**Adults** (females 76+ mm; males 58+ mm)	(2001 survey) 4 females 3 males **7 TOTAL**	(2002 survey) 1 female 1 male **2 TOTAL**	(2003 survey) 0 females 3 males **3 TOTAL**	(2004 survey) 1 female 1 male **2 TOTAL**	2005 survey) 0 females 0 males **0 TOTAL**	(2006 survey) 1 females 4 males **5 TOTAL**	(2007 survey) 2 females 6 males **8 TOTAL**			

*** entire transect was not completed**

Using the data from Table 7, a graph can show the survivability of cohort members across years and the stages where mortality is greatest, as well as if there is a greater influence in any given year (for example, from habitat conditions) for all age classes. Figure 13 shows cohort survival between age classes for 2001 to 2007. However, because the survey has only seven years of data, only four cohorts (i.e., 2001, 2002, 2003, and 2004) can be tracked from the metamorph through the 4+ adult stage.

There appears to be an increasingly lower survival rate as the cohort ages, with an extremely low number of frogs surviving to the 4+ adult stage (for the four cohorts that can be tracked from the metamorph through the 4+ adult stage). However, more years of surveying are needed to document trends in survivability.

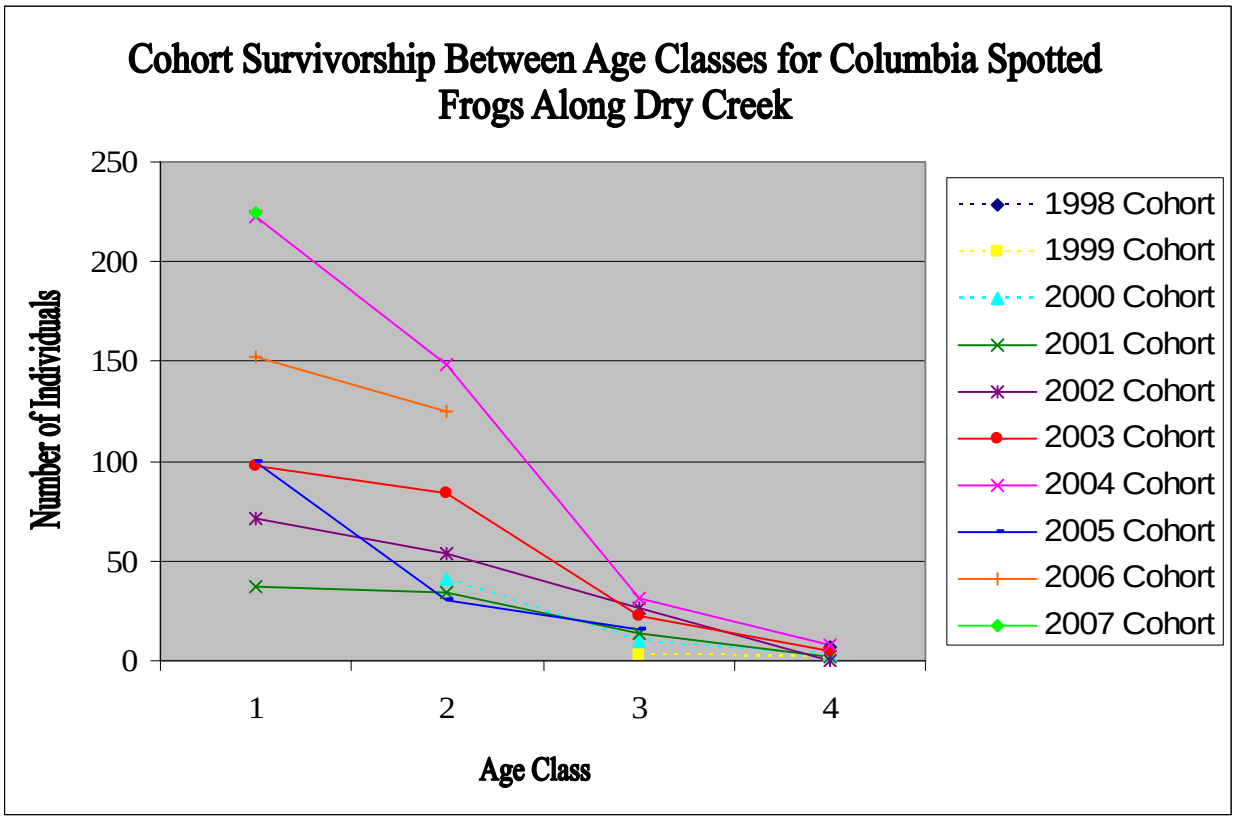

Figure 13. Columbia spotted frog cohort survivorship observed along the entire transect on Dry Creek from 2001 to 2007, Malheur County, Oregon.

Figure 14 is similar to the previous graph, but shows how age classes fluctuate across years. Again, there appears to be a lower survival rate for the older age classes.

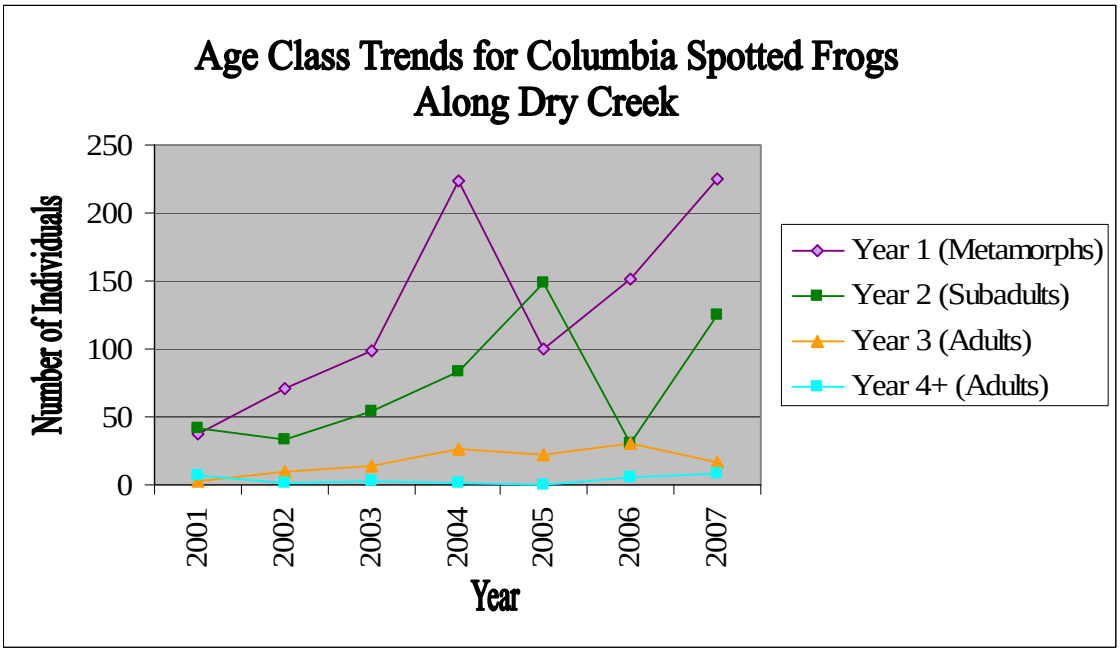

Figure 14. Columbia spotted frog age class trends observed along the entire transect on Dry Creek from 2001 to 2007, Malheur County, Oregon.

Figure 15 shows the total of each age class present in the population (all frogs recorded along survey routes) each survey year. In most years, more females have been recorded along the transect route than males. However, in 2007, more males were caught than females along the transect. Also, in 2007, more total frogs were recorded than any of the previous years.

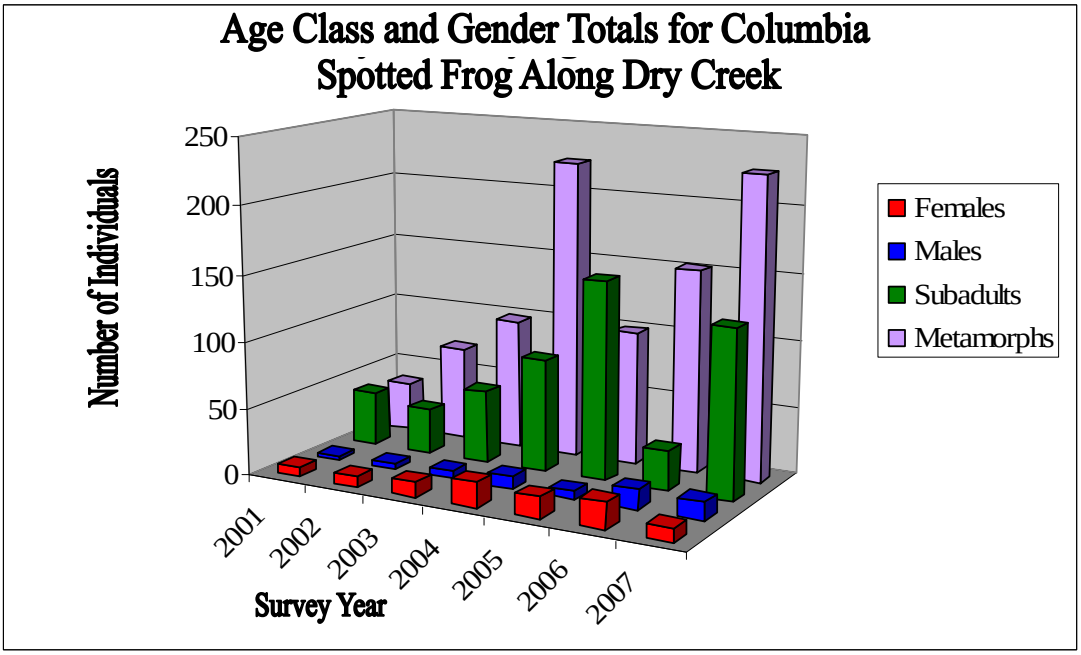

Figure 15. The total of each age class present in the Columbia spotted frog population along Dry Creek from 2001 to 2007, Malheur County, Oregon.

5. Conclusion

Population trend and likelihood of long-term persistence of Columbia spotted frogs in Dry Creek are unknown at this time. It is unclear whether there is an overall increasing trend in the frog population or if the population is more cyclic in nature. More survey years are needed to infer trend and long-term persistence. In addition, questions such as size at maturity, mortality between age classes, and the extent to which out-migration occurs across different age class (if at all) can only be answered by collecting additional data.

In addition, the following recommendations should be considered for future years:

- Enlargements of the exclosures should be considered along with changes in the grazing management (e.g., winter-use only has proven beneficial on BLM lands downstream) if the small exclosures appear to be beneficial by creating diverse and reliable frog habitat.

- Monitoring of vegetation in the exclosures is needed to ensure it is providing quality habitat for frogs rather than taking over the exclosures and reducing the available habitat for frogs. Measures to remove some aquatic vegetation within the exclosures should be taken, if needed.

- Establishment of woody vegetation is needed in the Skeleton Scar Exclosure in order to keep open water for breeding within the exclosure.

- Additional expanded surveys, both upstream and downstream, are needed to determine if frogs are being lost from the transect through dispersal.

- Additional egg mass surveys are needed to document current breeding sites.

- Additional water quality analyses are needed.

- Strategies for improving ecosystem health, consistent with land use objectives, are needed.

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Green, D. M.; H. Kaiser; T.F. Sharbel; J. Kearsley; K. R. McAllister. 1997. Cryptic Species of Spotted Frogs, *Rana pretiosa* Complex, in Western North America. Copeia 1997:1-8.

USDI. U.S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife and plants; 12-month finding on petition to list the spotted frog. Federal Register 58:27260-27263. May 7, 1993.

APPENDIX I
Habitat/Land Use Ratings
FROM:

Platts W. S. 1987. Methods for evaluating riparian habitat with applications to management. USFS Intermountain Forest and Range Experiment Station. Ogden, Utah. GTR INT-221.

Streambank soil alteration rating (SSAR)

Rating (%)	Description
0	Streambanks are stable and are not being altered by water flows or animals.
1-25	Streambanks are stable, but are being lightly altered along the transect line. Less than 25% of the streambank is receiving any kind of stress and if stress is being received, it is very light. Less than 25% of the streambank is false, broken down, or eroding.
26-50	Streambanks are receiving only moderate alteration along the transect line. At least 50% of the streambank is in a natural stable condition. Less than 50% of the streambank is false, broken down, or eroding. False banks are rated as altered. Alteration is rated as natural, artificial, or a combination of the two.
51-75	Streambanks have received major alteration along the transect line. Less than 50% of the streambank is in a stable condition. Over 50% of the streambank is false, broken down, or eroding. A false bank that may have gained some stability and cover is still rated as altered. Alteration is rated as natural, artificial, or a combination of the two.
76-100	Streambanks along the transect line are severely altered. Less than 25% of the streambank is in a stable condition. Over 75% of the streambank is false, broken down, or eroding. A past damaged bank, now classified as a false bank, that has gained some stability and cover is still rated as altered. Alteration is rated as natural, artificial, or a combination of the two.

Vegetation use by animals (VUBA)

Rating (%)	Description
0-25 (light)	Vegetation use is very light or none at all. Almost all of the potential plant biomass at present stage of development remains. The vegetative cover is very close to that which would occur naturally without use. If bare areas exist (i.e., bedrock), they are not because of loss of vegetation from past grazing use.
26-50 (moderate)	Vegetation use is moderate and at least one-half of the potential plant biomass remains. Average plant stubble height is greater than half of its potential height at its present stage of development. Plant biomass no longer on site because of past grazing is considered as vegetation that has been used.
51-75 (high)	Vegetative use is high and less than half of the potential plant biomass remains. Plant stubble height averages over two inches. Plant biomass no longer on site because of past grazing is considered as vegetation that has been used.
76-100 (very high)	Use of the streamside vegetation is very high. Vegetation has been removed to two inches or less in average stubble height. Almost all of the potential vegetative biomass has been used. Only the root system and part of the stem remains. That potential biomass that is now non-existent because of past elimination but grazing is considered vegetation that has been used.

APPENDIX II
2001-2007 Capture Data

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1	06/06/01	1248					*Coluber constrictor*	442427	4817548	
2	06/06/01	1259					*Pituophis catenifer*	442201	4817175	
3	06/06/01	1310					**west end of state transect**	442073	4816978	large boulder in creek, near private boundary
4	06/06/01	1350	M	21.0	62	No	4239200D12	442241	4817159	oxbow
5	06/06/01	1417	SA	9.5	47	No	42393C281F	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
6	06/06/01	1419	SA	11.6	52	No	422D3F633E	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
7	06/06/01	1422	SA	13.7	53	No	4238663773	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
8	06/06/01	1424	SA	10.1	49	No	42392F2C1A	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
9	06/06/01	1426	SA	12.6	52	No	422D47213E	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
10	06/06/01	1428	F	45.7	82	No	4238327125	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
11	06/06/01	1500	SA	14.0	53	No	42384B6336	442373	4817305	in inaccessible (for livestock) cattail pool; sa's are probably females
12	06/06/01	1517	F	40.0	80	No	422D285922	442407	4817317	eddy
13	06/06/01	1536	SAF	16.6	58	No	42391D6023	442437	4817405	had swollen toe on right rear
14	06/06/01	1546	SA	9.7	49	No	41620A620B	442454	4817407	stream
15	06/06/01	1551	SA	13.1	51	No	423827112B	442457	4817427	stream
16	06/06/01	1601	SA	12.1	53	No	423831600B	442503	4817431	stream
17	06/06/01	1605	SA	10.7	50	No	4238737469	442502	4817435	stream
18	06/06/01	1852					*Sceloporus occidentalis*	442671	4817752	at campsite
19	06/06/01						**photo point**	442164	4817129	at the edge of rock outcrop, facing east (downstream)
20	06/07/01	1012	SA	10.0	49	No	4238262558	442687	4817555	oxbow; just north of the first pinched canyon
21	06/07/01	1028	SA	10.0	48	No	422D22746E	442681	4817607	sidebow
22	06/07/01	1035	F	25.4	66	No	42381F0D25	442681	4817600	oxbow
23	06/07/01	1036	M	19.5	60	No	4238596109	442681	4817600	oxbow
24	06/07/01	1037	SA	6.6	44	No	4238167710	442681	4817600	oxbow
25	06/07/01	1041	SA	9.0	47	No	41617D627D	442681	4817600	oxbow
26	06/07/01	1103	SA	14.7	56	No	42384B4216	442745	4817588	stream
27	06/07/01	1115	SA	13.7	53	No	42393F033E	442821	4817592	stream
28	06/07/01	1144	SA	11.3	49	No	4238517003	442843	4817601	sidebow

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
29	06/07/01	1145	SAM	11.1	48	No	422D3B1E49	442843	4817601	sidebow
30	06/07/01	1159				No	uncaptured	442891	4817575	sidebow; PDOP 18
31	06/07/01	1210	SAF	13.5	55	No	423832241B	442918	4817603	stream; PDOP 10
32	06/07/01	1347	SAF	14.0	53	No	4239154360	443233	4817452	oxbow
33	06/07/01	1353	SAF	10.1	49	No	42392B780B	443254	4817447	sidebow
34	06/07/01	1405				No	uncaptured	443259	4817439	sidebow
35	06/07/01	1410					breeding site; large tads	443259	4817439	sidebow; photo
36	06/07/01	1411	SAF	15.0	54	No	416201747F	443270	4817429	sidebow
37	06/07/01	1435	SA			No	uncaptured	443486	4817432	sidebow
38	06/07/01	1439					*Pituophis catenifer*	443499	4817448	
39	06/07/01	1443	SA	9.0	47	No	4238436C2A	443516	4817474	stream
40	06/07/01	1520					*Coluber constrictor*	443909	4818119	75m North of endpoint
41	06/07/01	1531					breeding site?; tadpoles	443807	4817944	sidebow
42	06/07/01	1536	SA	9.6	50	No	423917671E	443806	4817960	sidebow
43	06/07/01	1546	SA	10.2	49	No	432B183D72	443805	4817970	sidebow
44	06/07/01	1550	SAM	18.2	50	No	4238796209	443809	4817959	sidebow
45	06/07/01	1608	SA	9.1	46	No	42384A5F03	443903	4818064	stream
46	06/07/01	1612					**endpoint**	443909	4818069	large boulder in creek; photo
47	06/08/01	1045	M	22.0	63	Yes	4239200D12	442252	4817148	sidebow
48	06/08/01	1122	SA	10.0	48	Yes	42393C281F	442371	4817295	natural exclosure
49	06/08/01	1156	SAF	10.5	50	No	422D340B26	442407	4817347	pool in stream
50	06/08/01	1205	SAF	15.3	53	No	42386B5F00	442405	4817354	stream
51	06/08/01	1212	SAF	17.0	58	Yes	42391D6023	442421	4817395	stream
52	06/08/01	1220	SAF	17.5	58	No	42390D7E59	442429	4817411	stream
53	06/08/01	1237	SA	9.3	49	Yes	41620A620B	442447	4817424	stream
54	06/08/01	1300	SAM	9.5	48	Yes	4238262558	442587	4817555	oxbow
55	06/08/01	1313	SA	9.4	47	Yes	422D22746E	442669	4817601	oxbow
56	06/08/01	1319	SA	9.0	47	Yes	41617D627D	442676	4817608	oxbow
57	06/08/01	1320	F	37.0	78	No	4238333D14	442676	4817608	oxbow
58	06/08/01	1322	SA	6.5	43	Yes	4238167710	442676	4817608	oxbow
59	06/08/01	1330	F	24.5	65	Yes	42381F0D25	442676	4817608	oxbow
60	06/08/01	1545	SA	12.3	53	Yes	42393F033E	442814	4817611	stream
61	06/08/01	1555	SA	11.6	52	No	4238291117	442842	4817610	sidebow
62	06/08/01	1605	SAM	11.1	48	Yes	422D3B1E49	442881	4817602	sidebow
63	06/08/01	1614	SA	13.0	53	Yes	423832241B	442921	4817612	stream
64	06/09/01	925			~24"		*Crotalus viridis*	442793	4817580	on west-facing slope
65	06/09/01	950			~42"		*Crotalus viridis*	443011	4817493	along stream, drinking water
66	06/09/01	955	SA			?	uncaptured	443099	4817475	sidebow
67	06/09/01	956					R. lut tadpoles	443099	4817475	sidebow

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
68	06/09/01	1006	F	29.5	71	No	423925196E	443175	4817473	stream; scour pool
69	06/09/01	1015	SA	10.3	49	No	423922023E	443258	4817453	stream
70	06/09/01	1018	SAF	13.6	52	No	42384A5A3A	443240	4817457	sidebow
71	06/09/01	1026	SAM	10.8	48	No	42383E6217	443250	4817447	sidebow
72	06/09/01	1032	SA	10.1	49	Yes	42392B780B	443256	4817455	stream
73	06/09/01	1041	SA	11.1	50	No	4238330E7E	443262	4817451	stream
74	06/09/01	1045	SAM	12.6	52	No	42387B2D5C	443265	4817443	sidebow
75	06/09/01	1100	SAM	11.0	53	No	4238426A10	443300	4817425	stream; scour pool
76	06/09/01	1115	SA	10.0	49	No	432D723A12	443528	4817493	in stream at fence
77	06/09/01	1140			68		R. lut tadpoles	443804	4817858	stream; scour pool
78	06/09/01	1145	F			?	uncaptured	443800	4817855	sidebow
79	06/09/01	1151	F	36.0	77	No	4328535D4D	443803	4817873	sidebow
80	06/09/01	1152	F	26.0	68	No	423D334857	443803	4817873	sidebow
81	06/09/01	1214	SA	10.2	48	No	42391A493A	443810	4817948	sidebow
82	08/04/01	1135	SA			?	uncaptured	442198	4817052	sidebow
83	08/04/01	1200	F			?	uncaptured	442371	4817309	natural exclosure
84	08/04/01	1217	F	23.6	65	Yes	41620A620B	442407	4817306	in rainpool in rock next to sidebow, covered in duckweed
85	08/04/01	1255	MT	4.5	36	No	too little	442582	4817555	oxbow; toe clipped #1
86	08/04/01	1307	MT			No	uncaptured	442631	4817585	stream
87	08/04/01	1311	MT	4.0	31	No	too little	442650	4817596	stream; toe clipped #1
88	08/04/01	1318	MT			No	uncaptured	442679	4817597	stream
89	08/04/01	1324	SAM	11.9	50	No	432C2C0452	442677	4817613	oxbow with big boulder below campsite
90	08/04/01	1330	MT	4.5	33	No	too little	442699	4817617	stream; toe clipped #1
91	08/04/01	1334	MT			No	uncaptured	442699	4817617	stream
92	08/04/01	1342	MT	5.5	38	No	too little	442757	4817589	stream; toe clipped #1
93	08/04/01	1347	MT			No	uncaptured	442843	4817605	sidebow
94	08/04/01	1348	MT	5.0	37	No	too little	442843	4817605	sidebow; toe clipped #1
95	08/04/01	1353	MT	4.5	35	No	too little	442878	4817595	oxbow; toe clipped #1
96	08/04/01	1354	MT			No	uncaptured	442878	4817595	oxbow
97	08/04/01	1355	MT			No	uncaptured	442878	4817595	oxbow
98	08/04/01	1356	MT			No	uncaptured	442878	4817595	oxbow
99	08/04/01	1357	MT			No	uncaptured	442931	4817587	before third pinch along bank
100	08/04/01	1408	MT	4.2	35	No	too little	442979	4817508	stream; toe clipped #1
101	08/04/01	1415	MT			No	uncaptured	443050	4817488	stream; scour pool
102	08/04/01	1416	MT			No	uncaptured	443048	4817471	stream; scour pool
103	08/04/01	1418	F			?	uncaptured	443054	4817485	floating on algal matt in scour pool; very skittish, did Not resurface
104	08/04/01	1419	MT	3.0	29	No	too little	443057	4817482	stream; scour pool; toe clipped #1
105	08/04/01	1420	MT			No	uncaptured	443048	4817471	stream; scour pool

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
106	08/04/01	1421	MT			No	uncaptured	443048	4817471	stream; scour pool
107	08/04/01	1422	MT			No	uncaptured	443091	4817484	stream
108	08/04/01	1432	MT	3.8	34	No	too little	443131	4817464	stream; toe clipped #1
109	08/04/01	1438	MT	3.4	31	No	too little	443172	4817470	stream; toe clipped #1
110	08/04/01	1439	MT	3.0	30	No	too little	443172	4817470	stream; toe clipped #1
111	08/04/01	1445	MT	3.1	30	No	too little	443173	4817463	stream; toe clipped #1
112	08/04/01	1447	MT			No	uncaptured	443182	4817465	stream
113	08/04/01	1455	MT			No	uncaptured	443194	4817464	stream
114	08/04/01	1456	F	23.8	65	No	4239154360	443191	4817458	stream
115	08/04/01	1457	MT			No	uncaptured	443202	4817464	stream; toe clipped #1
116	08/04/01	1507	MT	4.7	35	No	too little	443362	4817400	stream; toe clipped #1
117	08/04/01	1510	M	22.0	63	No	4238206F38	443369	4817405	stream
118	08/04/01	1516	MT	3.1	33	No	too little	443392	4817401	stream; toe clipped #1
119	08/04/01	1532	MT	4.1	35	No	too little	443488	4817428	oxbow; toe clipped #1
120	08/04/01	1533	MT	3.3	28	No	too little	443488	4817428	oxbow; toe clipped #1
121	08/04/01	1534	MT	2.7	29	No	too little	443488	4817428	oxbow; toe clipped #1
122	08/04/01	1535	MT	3.1	30	No	too little	443488	4817428	oxbow; toe clipped #1
123	08/04/01	1536	MT	3.1	32	No	too little	443488	4817428	oxbow; toe clipped #1
124	08/04/01	1537	MT	2.5	30	No	too little	443488	4817428	oxbow; toe clipped #1
125	08/04/01	1538	MT	2.1	28	No	too little	443488	4817428	oxbow; toe clipped #1
126	06/06/02	908	SAF	14.5	54	No	43573E2B04	442156	4817005	possibly 2001 cohort
127	06/06/02	930	SA			?	uncaptured	442240	4817155	possibly 2001 cohort
128	06/06/02	936	M			?	uncaptured	442242	4817155	possibly 2001 cohort
129	06/06/02	957	SAM	10.8	48	No	4358466D5B	442284	4817230	possibly 2001 cohort
130	06/06/02	1004	F	33.8	73	No	435B5B1B41	442284	4817240	older female
131	06/06/02	1007	SAF	16.4	54	No	433C76775A	442284	4817240	possibly 2001 cohort
132	06/06/02	1044	SA	8.4	41	No	43595D277C	442325	4817283	possibly 2001 cohort
133	06/06/02	1105	F	30.1	70	Yes	41620A620B	442442	4817419	SA last year, so probably 2 yr old (2000 cohort). Captured as SA last year in same section of stream (within 15m), between the first pinch (barrier?) natural exclosure and the second pinch (barrier?).
134	06/06/02	1122	SA			?	uncaptured	442545	4817440	possibly 2001 cohort
135	06/06/02	1150	SAM	23.5	51	No	43581B2B4E	442671	4817605	possibly 2001 cohort
136	06/06/02	1156	SAM	14.2	53	No	434D7C023F	442682	4817603	possibly 2001 cohort; appeared sick/lethargic. Blood vessels apparent on ventral surface - gave reddish appearance to skin.
137	06/06/02	1157	F	36.5	73	Yes	42384B4216	442682	4817602	SA last year, so probably 2 yr old (2000 cohort). Captured as SA last year in same section of stream between second and third pinch. Scars on back, possibly from snake.

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
138	06/06/02	1158	F				uncaptured	442683	4817608	
139	06/06/02	1335	SA			?	uncaptured	442737	4817588	
140	06/06/02	1352	SAM	12.3	52	No	435100720A	442802	4817600	possibly 2001 cohort
141	06/06/02	1411	SAF	19.5	52	No	4350522037	442839	4817603	possibly 2001 cohort
142	06/06/02	1415	SAF	14.0	48	No	433C7B7D67	442839	4817603	possibly 2001 cohort
143	06/06/02	1417				?	uncaptured	442839	4817603	
144	06/06/02	1434	SA	11.5	48	No	43583D0143	442846	4817614	possibly 2001 cohort
145	06/06/02	1435	SAM	13.3	51	No	435B363109	442846	4817614	possibly 2001 cohort
146	06/06/02	1440	SAF	19.0	56	No	4350310C6D	442852	4817615	possibly 2001 cohort
147	06/06/02	1517	SAF	13.9	49	No	43592B4460	443213	4817459	possibly 2001 cohort
148	06/06/02	1540	SAF	12.0	50	No	433D537612	443301	4817430	possibly 2001 cohort
149	06/06/02	1600	SAF	15.0	51	No	43523F2657	443483	4817430	possibly 2001 cohort
150	06/06/02	1603	SAM	10.5	49	No	4358415C7A	443483	4817430	possibly 2001 cohort
151	06/06/02	1613	SAF	16.9	57	No	43574A2354	443498	4817476	possibly 2001 cohort
152	06/06/02	1632	SAF	15.0	54	No	43583B5969	443732	4817618	possibly 2001 cohort
153	06/06/02	1638	SA	12.0	51	No	433F535452	443773	4817708	possibly 2001 cohort
154	06/06/02	1650	SAM	12.0	50	No	434E16172D	443824	4817870	possibly 2001 cohort
155	06/06/02	1652	F	39.7	75	Yes	423D334857	443824	4817870	this is most likely frog #432D334857 from last year - PIT# probably recorded incorrectly (should be 423, not 432). Possibly cohort of 1999 or 2000. Found along same stretch of stream, within 20 m.
156	06/06/02	1654	SA	10.5	47	No	433C69682B	443824	4817870	possibly 2001 cohort
157	06/06/02	1656	SAF	11.5	50	No	434D404937	443824	4817870	possibly 2001 cohort
158	06/06/02	1712	SAM	10.5	43	No	43525C3E6A	443816	4817939	possibly 2001 cohort
159	06/06/02	1715	SAM	9.0	47	No	4358000343	443826	4817948	possibly 2001 cohort
160	06/07/02	935	F	33.2	72	Yes	435B5B1B41	442284	4817240	same place as yesterday
161	06/07/02	957	F			?	uncaptured	442407	4817306	this could be 41620A620B from 2001, but we did not capture her yesterday, and today she was extremely skittish.
162	06/07/02	1020	SA			?	uncaptured	442545	4817440	probably the same uncaptured as yesterday: 1122
163	06/07/02	1050	F	35.0	74	Yes	42384B4216	442682	4817603	same place as yesterday (oxbow below campsite).
164	06/07/02	1230	SAF	14.5	54	Yes	4358056A44	440900	4816950	UTMs hand calculated on map, app. 100m east of road crossing (BLM); tagged by Wendy on 15 May 2002 at Brown Cabin (440852, 4816996).
165	06/07/02	1240	F	32.5	70	No	4358077338	441000	4816995	UTMs hand calculated on map. stream under first cliff (BLM)
166	06/07/02	1245	SA			?	uncaptured	441000	4816995	UTMs hand calculated on map. stream under first cliff (BLM)

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
167	06/07/02	1255	SA	11.0	48	No	43584B4765	441650	4816830	UTMs hand calculated on map. in canyon by BLM fence
168	06/07/02	1305	SA			?	uncaptured	441150	4816935	UTMs hand calculated on map. second oxbow pool under first cliff on north side of stream
169	06/07/02	1309	F	34.5	75	No	4350506E41	441100	4816940	UTMs hand calculated on map. oxbow pool under first cliff on north side of stream
170	06/07/02	1310	SA			?	uncaptured	441100	4816940	UTMs hand calculated on map. oxbow pool under first cliff on north side of stream
171	06/07/02	1311	SAM	18.0	52	No	435B2A2063	441100	4816940	UTMs hand calculated on map. oxbow pool under first cliff on north side of stream
172	06/07/02	1315	SA	9.5	49	No	435844657A	441100	4816940	UTMs hand calculated on map. oxbow pool under first cliff on north side of stream
173	08/11/02	925	M	15.0	54	No	434F6A0E13	441095	4816924	(BLM section) stream pool
174	08/11/02	926	MT	5.0	35	#2	too little	441098	4816922	(BLM section) stream
175	08/11/02	935	M	15.7	57	Yes	435B441931	441158	4816896	(BLM section) stream; PIT-tagged by Wendy's crew on 15 May 2002 at 440610, 4817071 (SVL was 48)
176	08/11/02	936	MT	3.2	32	#2	too little	441176	4816884	(BLM section)
177	08/11/02	949	MT	4.5	37	#2	too little	441176	4816884	(BLM section)
178	08/11/02	955	M	16.8	59	No	4357453E7D	441176	4816884	(BLM section)
179	08/11/02	956	M	14.0	54	No	435B4F6D0B	441176	4816884	(BLM section)
180	08/11/02	1002	MT	3.2	32	#2	too little	441176	4816884	(BLM section)
181	08/11/02	1012	MT	3.0	32	#2	too little	441176	4816884	(BLM section)
182	08/11/02	1019	MT	4.7	38	#2	too little	441095	4816924	(BLM section) stream pool
183	08/11/02	1020	MT	4.0	35	#2	too little	441095	4816924	(BLM section) stream pool
184	08/11/02	1021	MT	3.9	36	#2	too little	441095	4816924	(BLM section) stream pool
185	08/11/02	1022	MT	4.0	34	#2	too little	441095	4816924	(BLM section) stream pool
186	08/11/02	1023	MT			No	uncaptured	441095	4816924	(BLM section) stream pool
187	08/11/02	1033	F	28.7	66	No	433F524022	441106	4816943	(BLM section) big oxbow pool
188	08/11/02	1044	MT			No	uncaptured	441032	4816969	(BLM section) big slough upper reach
189	08/11/02	1045	MT	4.0	34	#2	too little	441032	4816969	(BLM section) big slough upper reach
190	08/11/02	1047	F			?	uncaptured	441032	4816969	(BLM section) big slough upper reach
191	08/11/02	1048	F	44.0	80	No	4357454011	441032	4816969	(BLM section) big slough upper reach; appears gravid; bone sticking out of #1 (previous toe clip?) trimmed.
192	08/11/02	1049	F	22.5	63	No	43574E6F7D	441032	4816969	(BLM section) big slough upper reach
193	08/11/02	1100	MT			No	uncaptured	441032	4816969	(BLM section) big slough upper reach
194	08/11/02	1127	MT	4.0	34	#2	too little	442104	4816973	stream
195	08/11/02	1230	MT	6.5	40	No	43596E6C5C	442590	4817550	in second pinch; UTMs hand-calculated.
196	08/11/02	1240	MT			No	uncaptured	442610	4817580	just below second pinch; UTMs hand-calculated.
197	08/11/02	1250	MT	4.0	36	#2	too little	442699	4817617	below campsite; UTMs hand-calculated.

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
198	08/11/02	1310	MT			No	escaped	442754	4817594	
199	08/11/02	1317	MT	4.0	36	#2	too little	442803	4817598	5 chukar
200	08/11/02	1321	MT	4.0	36	#2	too little	442803	4817598	
201	08/11/02	1325	MT	5.0	38	#2	too little	442843	4817602	stream
202	08/11/02	1326	MT	4.5	36	#2	too little	442842	4817613	side pool of stream
203	08/11/02	1327	MT	3.0	32	#2	too little	442842	4817613	side pool of stream
204	08/11/02	1328	MT	4.5	35	#2	too little	442842	4817613	side pool of stream
205	08/11/02	1335	MT	3.0	29	#2	too little	442842	4817613	side pool of stream
206	08/11/02	1336	MT	2.7	32	#2	too little	442842	4817613	side pool of stream
207	08/11/02	1337	MT	5.0	36	#2	too little	442842	4817613	side pool of stream
208	08/11/02	1341	MT	3.5	33	#2	too little	442853	4817607	side channel
209	08/11/02	1344	MT	7.5	40	No	43523D785F	442853	4817607	side channel
210	08/11/02	1349	MT	4.5	34	#2	too little	442853	4817607	side channel
211	08/11/02	1353	MT	4.0	35	#2	too little	442875	4817606	stream
212	08/11/02	1359	MT			No	uncaptured	442875	4817606	
213	08/11/02	1402	MT	3.5	34	#2	too little	442920	4817600	third pinch; UTMs hand-calculated.
214	08/11/02	1412	MT	4.1	35	#2	too little	442920	4817600	third pinch; UTMs hand-calculated.
215	08/11/02	1413	MT			No	uncaptured	442920	4817600	third pinch; UTMs hand-calculated.
216	08/11/02	1414	MT			No	uncaptured	442920	4817600	third pinch; UTMs hand-calculated.
217	08/11/02	1425	MT	5.0	42	No	435A311B63	443079	4817466	wide slough (scour pool)
218	08/11/02	1430	MT	5.0	37	#2	too little	443079	4817466	wide slough (scour pool)
219	08/11/02	1431	MT			No	uncaptured	443079	4817466	wide slough (scour pool)
220	08/11/02	1432	MT			No	uncaptured	443116	4817456	head of scour pool
221	08/11/02	1444	MT			No	uncaptured	443116	4817456	head of scour pool
222	08/11/02	1447	MT	2.5	28	#2	too little	443130	4817465	small stream connecting scour pools
223	08/11/02	1449	MT	2.5	30	#2	too little	443130	4817465	small stream connecting scour pools
224	08/11/02	1452	MT	4.0	34	#2	too little	443130	4817465	small stream connecting scour pools
225	08/11/02	1453	MT	2.5	29	#2	too little	443130	4817465	small stream connecting scour pools
226	08/11/02	1457	MT	3.1	34	#2	too little	443138	4817462	small stream connecting scour pools
227	08/11/02	1500	MT	4.0	34	#2	too little	443157	4817471	
228	08/11/02	1507	F	38.8	73	No	434E2B7F25	443169	4817464	probably gravid
229	08/11/02	1512	MT			No	uncaptured	443169	4817464	
230	08/11/02	1513	MT			No	uncaptured	443169	4817464	
231	08/11/02	1525	MT			No	uncaptured	443363	4817405	approximately 25 chukar
232	08/11/02	1526	MT			No	uncaptured	443363	4817405	
233	08/11/02	1530	MT	2.5	28	#2	too little	443398	4817410	
234	08/11/02	1535	MT	4.0	35	#2	too little	443398	4817410	
235	08/11/02	1537	MT	2.8	30	#2	too little	443398	4817410	
236	08/11/02	1544	MT	2.7	32	#2	too little	443491	4817460	

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
237	08/11/02	1545	MT	3.0	33	#2	too little	443491	4817460	
238	08/11/02	1550	MT	3.0	36	#2	too little	443491	4817460	
239	08/11/02	1552	MT	3.5	33	#2	too little	443491	4817460	
240	08/11/02	1555	MT	3.0	32	#2	too little	443491	4817460	
241	08/11/02	1556	MT	3.5	33	#2	too little	443491	4817460	
242	08/11/02	1600	MT	5.0	39	#2	too little	443504	4817465	
243	08/11/02	1603	MT	5.0	37	#2	too little	443504	4817465	
244	08/11/02	1604	MT	4.0	34	#2	too little	443504	4817465	
245	08/11/02	1607	MT	4.5	39	#2	too little	443552	4817531	
246	08/11/02	1608	MT	5.0	38	#2	too little	443552	4817531	
247	08/11/02	1609	MT	3.4	33	#2	too little	443552	4817531	
248	08/11/02	1610	MT	3.5	33	#2	too little	443552	4817531	
249	08/11/02	1611	MT			No	too little	443570	4817530	did not capture; UTMs hand-calculated
250	08/11/02	1612	MT			No	too little	443570	4817530	did not capture; UTMs hand-calculated
251	08/11/02	1613	MT			No	too little	443570	4817530	did not capture; UTMs hand-calculated
252	08/11/02	1614	MT			No	too little	443570	4817530	did not capture; UTMs hand-calculated
253	08/11/02	1618	F	25.1	68	No	434D623F6D	443599	4817530	over 50 chukar
254	08/11/02	1625				?	uncaptured	443669	4817557	
255	06/06/03	950					*Pituophis catenifer*	442360	4817286	no frogs between start point and 1st pinch
256	06/06/03	1002	SA	11.0	49	No	433D0C3905	442363	4817276	along bank in natural exclosure
257	06/06/03	1020					*Pituophis catenifer*	442391	4817334	just below natural exclosure
258	06/06/03	1032	F	34.5	75	No	4334374261	442503	4817423	oxbow pool
259	06/06/03	1033	SAF	16.0	57	No	435A112676	442503	4817423	oxbow pool
260	06/06/03	1110	SA	7.0	43	No	434E080F45	442675	4817596	stream below campsite
261	06/06/03	1115					*Pituophis catenifer*	442680	4817602	between the stream & the oxbow
262	06/06/03	1116	M	14.5	55	No	4357461251	442681	4817602	oxbow pool
263	06/06/03	1118	SA	9.5	42	No	4352582D0F	442681	4817602	oxbow pool
264	06/06/03	1126	SA	7.0	43	No	435B585523	442685	4817605	oxbow pool
265	06/06/03	1205	SA	9.5	48	No	43583B5B5D	442821	4817594	stream down from fenceline
266	06/06/03	1211	SA	8.5	44	No	43577D7F0B	442839	4817608	oxbow pool
267	06/06/03	1212	SA	10.5	42	No	43577A5D43	442839	4817608	oxbow pool
268	06/06/03	1213	F	32.0	72	No	434E367F06	442839	4817608	oxbow pool
269	06/06/03	1214	SA	6.5	42	No	435A00426E	442839	4817608	oxbow pool
270	06/06/03	1215	SA	11.0	44	No	435A336346	442839	4817608	oxbow pool
271	06/06/03	1216	SA	9.0	43	No	43506C2D0F	442839	4817608	oxbow pool
272	06/06/03	1217	SA	12.0	49	No	434E100116	442839	4817608	oxbow pool
273	06/06/03	1240	SA	9.5	42	No	4357442D00	442846	4817611	oxbow pool before 3rd pinch
274	06/06/03	1241	SA	8.5	45	No	43523B046C	442846	4817611	oxbow pool before 3rd pinch
275	06/06/03	1251	SA	11.5	51	No	434F5C3850	442846	4817611	oxbow pool before 3rd pinch

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
276	06/06/03	1252	SA	9.5	47	No	435926650F	442846	4817611	oxbow pool before 3rd pinch
277	06/06/03	1256	SA	9.5	49	No	4357474242	442846	4817611	oxbow pool before 3rd pinch
278	06/06/03	1301	SA	8.0	42	No	435035032A	442857	4817608	stream backwater towards oxbow
279	06/06/03	1302	SA	10.0	49	No	433C5E0E7B	442857	4817608	stream backwater towards oxbow
280	06/06/03	1303	SA	12.0	50	No	434F5D5462	442857	4817608	stream backwater towards oxbow
281	06/06/03	1311				?	uncaptured	442857	4817608	stream backwater towards oxbow
282	06/06/03	1313	SA	12.0	49	No	4358044215	442857	4817608	stream backwater towards oxbow
283	06/06/03	1359	SA	11.0	50	No	433D197477	443180	4817455	stream just above 3rd pinch
284	06/06/03	1408	SA	9.0	44	No	435236220E	442881	4817598	isolated oxbow
285	06/06/03	1409	SA	8.0	45	No	435975480D	442881	4817598	isolated oxbow
286	06/06/03	1410				?	uncaptured	442881	4817598	isolated oxbow
287	06/06/03	1436	SAM	12.5	50	No	435A3B583D	443730	4817622	end point; worked back from here
288	06/06/03	1506	SA	10.5	51	No	433D0D0E61	443366	4817400	creeks subs out after 2nd scour pool
289	06/06/03	1517					tadpoles	443266	4817445	scour pool
290	06/06/03	1521	SA	10.0	46	No	435809763D	443255	4817455	
291	06/06/03	1525	SA			?	uncaptured	443256	4817455	
292	06/06/03	1532	SA	12.0	51	No	433C5D7064	443181	4817455	
293	06/07/03	902					*Crotalus viridis*	443693	4817588	warming at the toe of the slope; photo; went to drink
294	06/07/03	907	SA	12.5	51	Yes	435A3B583D	443721	4817609	oxbow pool at endpoint
295	06/07/03	935	SA	14.0	51	No	4350710E38	443583	4817529	stream
296	06/07/03	936				?	uncaptured	443583	4817529	stream
297	06/07/03	937					tadpoles	443583	4817529	stream
298	06/07/03	1000	SA	9.5	45	No	434E372C02	443489	4817431	isolated oxbow
299	06/07/03	1001	F	34.0	72	No	435B372040	443489	4817431	isolated oxbow
300	06/07/03	1002	SA	14.0	52	No	43573B5E21	443489	4817431	isolated oxbow
301	06/07/03	1003	SA	9.5	48	No	43504D4627	443489	4817431	isolated oxbow
302	06/07/03	1005					PTF tadpoles	443489	4817431	isolated oxbow
303	06/07/03	1046	SA	10.5	46	No	435B340B61	443471	4817433	stream below scour pool
304	06/07/03	1052	SA	10.0	47	No	433F46666F	443482	4817435	
305	06/07/03	1056	F	27.5	67	No	4357742A76	443462	4817424	temperature: 20.7C
306	06/07/03	1102	F	29.5	68	No	435A093D62	443459	4817432	
307	06/07/03	1112	SA			?	uncaptured	443369	4817404	recharge pool temp: 58.4C
308	06/07/03	1118	SA	11.5	50	Yes	433D0D0E61	443365	4817401	
309	06/07/03	1128	SAF	10.0	48	No	4350101C5F	443259	4817451	
310	06/07/03	1129				?	uncaptured	443253	4817461	
311	06/07/03	1142	SA	11.5	52	Yes	433C5D7064	443174	4817464	
312	06/07/03	1147	F	36.0	74	Yes	434E2B7F25	443165	4817469	
313	06/07/03	1153	F	25.0	67	No	4357473D0D	443096	4817474	

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314	06/07/03	1159	SA	12.0	50	No	435A4A1B5D	443089	4817485	
315	06/07/03	1203	F	26.0	71	No	435B5C5301	443056	4817491	
316	06/07/03	1216	SA	11.5	49	Yes	433D197477	442899	4817604	
317	06/07/03	1221	SA	8.0	43	Yes	435236220E	442890	4817596	
318	06/07/03	1224	SA	8.5	45	Yes	435975480D	442890	4817596	
319	06/07/03	1229	SA	9.5	44	Yes	435035032A	442856	4817615	
320	06/07/03	1230	SA	14.0	50	Yes	434F5D5462	442856	4817615	
321	06/07/03	1231	SA	11.0	48	Yes	433C5E0E7B	442856	4817615	
322	06/07/03	1235	SA	11.5	50	Yes	434F5C3850	442850	4817611	oxbow pool
323	06/07/03	1236	SA	11.0	50	Yes	4357474242	442850	4817611	oxbow pool
324	06/07/03	1240	SA	9.0	41	Yes	435926650F	442839	4817608	oxbow pool
325	06/07/03	1241	SA			Yes	4357442D00	442839	4817608	oxbow pool
326	06/07/03	1242	SA			Yes	43506C2D0F	442839	4817608	oxbow pool
327	06/07/03	1249	SA			Yes	435A336346	442839	4817608	oxbow pool
328	06/07/03	1250	SA			Yes	434E100116	442839	4817608	oxbow pool
329	06/07/03	1251	SA			Yes	43577D7F0B	442839	4817608	oxbow pool
330	06/07/03	1252	SA			Yes	435A00426E	442839	4817608	oxbow pool
331	06/07/03	1458	SA	9.5	48	No	2003 toe clip	440976	4816988	isolated oxbow
332	06/07/03	1513					PTF tadpoles	440976	4816988	isolated oxbow
333	06/07/03	1514	F	27.5	69	Yes	4358056A44	440804	4817010	temperature: 25.8C
334	06/07/03	1518	SA	9.5	46	No	2003 toe clip	440803	4817004	
335	06/07/03	1523	SA	12.0	52	No	2003 toe clip	440843	4816999	
336	06/07/03	1524	M	15.0	56	No	2003 toe clip	440843	4816999	small, but could be breeding size; prominent thumb pads
337	06/07/03	1530	SA	8.5	44	No	2003 toe clip	440847	4817002	
338	06/07/03	1537					*Coluber constrictor*	440970	4816964	
339	06/07/03	1538	SA	12.0	50	No	2003 toe clip	440975	4816969	
340	06/07/03	1539	SA	11.5	50	No	2003 toe clip	440975	4816969	
341	06/07/03	1546	SA	7.0	44	No	2003 toe clip	441031	4816966	
342	06/07/03	1554	F	30.5	75	Yes	4350506E41	441097	4816938	oxbow pool
343	06/07/03	1559	M	18.5	58	Yes	435B2A2063	441097	4816938	oxbow pool
344	06/07/03	1623					*Pituophis catenifer*	441319	4816774	dry creek bed
345	06/08/03	1034	SA	10.5	49	No	435B2B0157	442695	4817595	oxbow pool
346	06/08/03	1035	M	15.5	56	Yes	4357461251	442695	4817595	oxbow pool
347	06/08/03	1036	SA	12.0	51	No	435777396C	442695	4817595	oxbow pool
348	06/08/03	1045	SA	10.0	47	Yes	4352582D0F	442695	4817595	oxbow pool
349	06/08/03	1050	SA	10.0	47	No	433D0A5071	442660	4817609	
350	06/08/03	1205	SA	19.5	58	Yes	435A112676	442501	4817428	
351	06/08/03	1206				?	uncaptured	442497	4817418	

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
352	06/08/03	1530	SA	11.5	51	No	4350163107	440824	4817009	windy
353	06/08/03	1544	SA	10.0	48	No	435A447A38	441030	4816966	
354	06/08/03	1550	SA	12.0	53	No	435A3B5B2A	441030	4816970	across canyon from oxbow pool
355	06/08/03	1553	SA	11.5	50	No	43512B2A78	441030	4816970	across canyon from oxbow pool
356	06/08/03	1618	SA	7.5	43	Yes	435B4C0467	441029	4816976	toe clip yesterday; PIT tag today
357	06/08/03	1630	SA			?	uncaptured	440804	4817010	oxbow pool; became extrememely windy; no frogs up
358	08/09/03	945	M	21	60	no	43501D783F	441101	4816936	oxbow pool
359	08/09/03	946				?	uncaptured	441101	4816936	oxbow pool
360	08/09/03	947				?	uncaptured	441101	4816936	oxbow pool
361	08/09/03	948				?	uncaptured	441101	4816936	oxbow pool
362	08/09/03	1001	MT	4	36	No		441111	4816920	stream
363	08/09/03	1002	MT			No		441111	4816920	stream
364	08/09/03	1003	MT			No		441115	4816918	stream
365	08/09/03	1004	MT			No		441111	4816920	stream
366	08/09/03	1007	F	29	67	No	435852595C	441143	4816909	scour pool
367	08/09/03	1012	MT			No		441148	4816905	scour pool
368	08/09/03	1013	MT			No		441151	4816907	scour pool
369	08/09/03	1014				?	uncaptured	441151	4816907	scour pool
370	08/09/03	1015				?	uncaptured	441151	4816907	scour pool
371	08/09/03	1019	M	16.5	58	No	433D004E57	441149	4816901	scour pool
372	08/09/03	1027	M	16	56	Yes	433F522442	441177	4816891	scour pool-toe clipped 2002
373	08/09/03	1028	MT			No		441177	4816891	scour pool
374	08/09/03	1037	MT			No		441239	4816847	scour pool
375	08/09/03	1040	MT			No		441243	4816841	scour pool
376	08/09/03	1047	MT			No		441371	4816729	scour pool
377	08/09/03	1048	MT			No		441388	4816716	scour pool
378	08/09/03	1058	MT			No		441423	4816683	scour pool
379	08/09/03	1101	MT			No		441445	4816682	scour pool
380	08/09/03	1103	MT			No		441487	4816704	oxbow pool
381	08/09/03	1104				?	uncaptured	441487	4816704	oxbow pool
382	08/09/03	1106	MT			No		441487	4816704	oxbow pool
383	08/09/03	1135	MT			No		442079	4816967	stream - start point
384	08/09/03	1137	MT		34	No		442093	4816972	stream
385	08/09/03	1140	MT			No		442101	4816973	stream
386	08/09/03	1141	MT			No		442105	4816970	oxbow pool
387	08/09/03	1142	MT			No		442105	4816970	oxbow pool
388	08/09/03	1143	MT			No		442105	4816970	oxbow pool
389	08/09/03	1144	MT			No		442107	4816976	stream

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
390	08/09/03	1146	MT			No		442111	4816969	stream
391	08/09/03	1147	MT			No		442111	4816969	stream
392	08/09/03	1149	MT			No		442123	4816977	stream
393	08/09/03	1150	MT			No		442123	4816977	stream
394	08/09/03	1151	MT			No		442127	4816978	stream
395	08/09/03	1152	MT			No		442127	4816978	stream
396	08/09/03	1153	MT			No		442127	4816978	stream
397	08/09/03	1154	MT			No		442127	4816978	stream
398	08/09/03	1155	MT			No		442159	4817006	stream
399	08/09/03	1156	MT			No		442177	4817020	stream
400	08/09/03	1200	MT			No		442208	4817052	scour pool
401	08/09/03	1205	MT			No		442233	4817102	stream
402	08/09/03	1207	MT			No		442252	4817143	oxbow pool
403	08/09/03	1210	MT			No		442255	4817158	oxbow pool
404	08/09/03	1212	MT			No		442258	4817174	stream
405	08/09/03	1214	MT			No		442279	4817211	stream
406	08/09/03	1215	MT			No		442279	4817211	stream
407	08/09/03	1257	MT			No		442377	4817291	natural exclosure
408	08/09/03	1303	MT			No		442387	4817304	just downstream of NE
409	08/09/03	1304	MT			No		442387	4817304	just downstream of NE
410	08/09/03	1305	MT			No		442387	4817304	just downstream of NE
411	08/09/03	1312	MT			No		442407	4817312	hole in rock
412	08/09/03	1313				Hyla tadpoles		442407	4817312	hole in rock
413	08/09/03	1330	MT			No		442579	4817498	just above 2nd pinch
414	08/09/03	1351	MT			No		442682	4817589	oxbow pool
415	08/09/03	1410	MT			No		442853	4817593	stream
416	08/09/03	1414	MT			No		442843	4817590	stream
417	08/09/03	1415	MT			No		442839	4817597	oxbow pool
418	08/09/03	1416	MT			No		442840	4817604	oxbow pool
419	08/09/03	1417	MT			No		442840	4817604	oxbow pool
420	08/09/03	1417	MT			No		442841	4817606	oxbow pool
421	08/09/03	1419	MT			No		442843	4817604	oxbow pool
422	08/09/03	1420	MT			No		442843	4817604	oxbow pool
423	08/09/03	1421	MT			No		442846	4817608	oxbow pool
424	08/09/03	1422	MT			No		442853	4817607	oxbow pool
425	08/09/03	1423	M	14.5	56	Yes	433D197477	442853	4817609	oxbow pool
426	08/09/03	1424	MT			No		442853	4817609	oxbow pool
427	08/09/03	1427	MT			No		442861	4817604	oxbow pool

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
428	08/09/03	1431	MT			No		442863	4817607	oxbow pool
429	08/09/03	1435	F			?	uncaptured	442846	4817607	oxbow pool (near source pool)
430	08/09/03	1440	SAF	14.5	56	No	435236220E	442878	4817597	oxbow pool
431	08/09/03	1441				?	uncaptured	442878	4817597	oxbow pool
432	08/09/03	1442	MT			No		442891	4817576	Pool at side rock before 3rd pinch
433	08/09/03	1443	MT			No		442891	4817576	Pool at side rock before 3rd pinch
434	08/09/03	1444	MT			No		442891	4817576	Pool at side rock before 3rd pinch
435	08/09/03	1447	MT			No		442907	4817617	stream
436	08/09/03	1450	MT			No		442909	4817612	stream
437	08/09/03	1457	MT			No		442959	4817525	just after 3rd pinch - stream
438	08/09/03	1505	MT			No		443111	4817462	oxbow pool
439	08/09/03	1506	MT			No		443111	4817462	oxbow pool
440	08/09/03	1507	MT			No		443113	4817457	oxbow pool
441	08/09/03	1508	MT			No		443128	4817466	stream
442	08/09/03	1513	MT			No		443133	4817465	stream
443	08/09/03	1514	MT			No		443133	4817465	stream
444	08/09/03	1515	MT			No		443245	4817464	stream
445	08/09/03	1516	MT			No		443257	4817458	stream
446	08/09/03	1517	MT			No		443259	4817453	stream
447	08/09/03	1518	MT			No		443262	4817453	stream
448	08/09/03	1519	MT			No		443262	4817453	stream
449	08/09/03	1520	MT			No		443262	4817453	stream
450	08/09/03	1521	MT			No		443262	4817453	stream
451	08/09/03	1522	MT			No		443262	4817453	stream
452	08/09/03	1523	MT			No		443262	4817453	stream
453	08/09/03	1524	MT			No		443262	4817453	stream
454	08/09/03	1525	MT			No		443267	4817450	stream
455	08/09/03	1527	MT			No		443445	4817430	scour pool
456	08/09/03	1528	MT			No		443451	4817418	scour pool
457	08/09/03	1529	MT			No		443451	4817418	scour pool
458	08/09/03	1530	MT			No		443483	4817437	stream
459	08/09/03	1531	MT			No		443504	4817461	stream
460	08/09/03	1532	MT			No		443504	4817461	stream
461	08/09/03	1533	MT			No		443508	4817471	stream
462	08/09/03	1537	MT			No		443559	4817517	stream
463	08/09/03	1539	MT			No		443566	4817519	stream
464	08/09/03	1540	MT			No		443571	4817523	stream
465	08/09/03	1541	MT			No		443578	4817531	stream
466	08/09/03	1542	MT			No		443587	4817534	stream

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
467	08/09/03	1543	MT			No		443589	4817535	stream
468	08/09/03	1544	MT			No		443605	4817544	stream
469	08/09/03	1545	MT			No		443668	4817570	scour pool
470	08/09/03	1546	MT			No		443696	4817582	stream
471	08/09/03	1550	SAF	20	60	No	435A2E0F43	443726	4817616	oxbow pool
472	06/05/04	1415	SA	9.5	48	No	435A4C176A	440842	4817004	stream
473	06/05/04	1427	SAF	13	53	No	4358487820	440975	4816984	previously toe clipped? oxbow pool
474	06/05/04	1428	SA			?	uncaptured	440975	4816984	oxbow pool
475	06/05/04	1447	SAF	13.5	53	No	4350605B7E	441162	4816901	stream - canyon, very windy
476	06/05/04	1453	F	24	68	Yes	435852595C	441163	4816902	stream, canyon
477	06/06/04	950		45-55mm			tadpoles - breeding site	443806	4817950	1 scoop, 6 tadpoles
478	06/06/04	1005	SA	7	42	No	43584B4A1A	443855	4817837	stream - check point on map - last number missing on UTME.
479	06/06/04	1020	Adult			?	uncaptured	443719	4817615	sidebow channel
480	06/06/04	1036	SA	11.5	50	No	433F506668	443535	4817493	stream, skin tear at PIT incision
481	06/06/04	1042	SA			?	uncaptured	443517	4817466	small oxbow, very skittish
482	06/06/04	1048	SAF	10.5	50	No	435B2A4C45	443499	4817468	oxbow pool
483	06/06/04	1049	SA	6.5	41	No	435805161C	443499	4817468	oxbow pool
484	06/06/04	1102	F	27.5	67	Yes	43504D4627	443486	4817438	oxbow pool, breeding site - but no tads this time, water 62 degrees F
485	06/06/04	1103	SAF	10.5	48	No	434D7E1408	443486	4817438	oxbow pool
486	06/06/04	1104	F	28	66	Yes	43573B5E21	443486	4817438	oxbow pool
487	06/06/04	1106	SAF	15	56	No	435A2F2A6D	443486	4817438	oxbow pool
488	06/06/04	1132	F	36	74	No	4350004104	443486	4817438	oxbow pool; toe clipped RR 03
489	06/06/04	1135	SA	6.5	42	No	43583F562E	443487	4817438	oxbow pool
490	06/06/04	1138	SAM	12	50	No	43594F5E16	443489	4817429	oxbow pool
491	06/06/04	1142	F			?	uncaptured	443491	4817429	oxbow pool
492	06/06/04	1145	M	15.5	56	No	4350583657	443491	4817429	oxbow pool
493	06/06/04	1146	SAM	9	45	No	43525C583E	443489	4817429	oxbow pool
494	06/06/04	1151	M	26.5	57	No	433F443021	443489	4817429	oxbow pool
495	06/06/04	1152	SA			?	uncaptured	443489	4817429	oxbow pool
496	06/06/04	1205	SAM	13	51	No	43524B7551	443467	4817459	stream
497	06/06/04	1212	SA	11	49	No	43594B5151	443467	4817456	stream
498	06/06/04	1213	SA			?	uncaptured	443467	4817459	stream
499	06/06/04	1220	SAF	9	47	No	435035787F	443454	4817415	stream - injury on right eye
500	06/06/04	1232	SA	7	43	No	43583B0706	443362	4817403	braid channel
501	06/06/04	1235	SAF	13	52	No	435243287E	443356	4817414	braid channel
502	06/06/04	1240	SA	8.5	45	No	43595D7C2A	443345	4817422	sidebow channel - PIT could be 43595D7C2A
503	06/06/04	1243	SAF	23	53	No	43574C7516	443345	4817422	sidebow channel

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
504	06/06/04	1300			60mm		tadpole	443295	4817421	breeding site - scour pool - algal mat, emergent veg
505	06/06/04	1301	SAF	16	57	No	433F39023D	443295	4817422	breeding site - scour pool
506	06/06/04	1302	SAF	12.5	53	No	435A3A290E	443296	4817422	breeding site - scour pool
507	06/06/04	1303	F	35	73	No	435A3B015F	443295	4817423	breeding site - scour pool
508	06/06/04	1304	F	48	78	Yes	434E2B7F25	443293	4817422	breeding site - scour pool
509	06/06/04	1316	SA	7.5	45	No	433F1F312B	443276	4817451	stream - No right eye (photos)
510	06/06/04	1322	SA	9	47	No	434D480652	443273	4817454	stream
511	06/06/04	1331	SAF	10.5	52	No	434E2A2A0F	443253	4817439	sidebow channel
512	06/06/04	1405	M	15.5	55	No	433C734E5A	442837	4817612	oxbow pool
513	06/06/04	1410	F	30.5	69	Yes	435A336346	442843	4817613	oxbow pool, toe clip left front -2002?
514	06/06/04	1416	SA	10	48	No	435A4C6906	442733	4817601	stream
515	06/06/04	1422	SAF	10	48	No	435A330B7A	442680	4817605	oxbow pool below camp
516	06/06/04	1423	SAF	17	55	No	43580F6E6E	442681	4817606	stream
517	06/06/04	1427	SA	8.5	46	No	435056787A	442681	4817605	oxbow pool below camp
518	06/06/04	1432	SA	9	47	No	435B363A58	442678	4817614	oxbow pool below camp
519	06/06/04	1433	SAF	15.5	55	No	43511A7F29	442678	4817613	oxbow pool below camp
520	06/06/04	1443	F	28.5	69	No	435A011F02	442681	4817607	stream
521	06/06/04	1526	SAM	11.5	51	No	4358410944	442681	4817615	oxbow pool below camp
522	06/06/04	1531	F	29.5	68	No	4358482376	442681	4817613	oxbow pool below camp
523	06/06/04	1537	SA			?	uncaptured	442681	4817613	oxbow pool below camp
524	06/06/04	1542	SA	9	46	No	43597F5C59	442623	4817599	stream - shedding skin
525	06/06/04	1620	SAM	10.5	49	No	43597C431F	442378	4817297	in cattails (N) in natural exclosure
526	06/06/04	1621	SA			?	uncaptured	442377	4817296	in cattails (N) in natural exclosure
527	06/06/04	1634	SAF	14.5	53	No	435246634E	442371	4817274	in cattails (S), natural exclosure
528	06/07/04	910	F	29	66	Yes	435777396C	442681	4817613	oxbow below camp - recapture from previous year, not first pass
529	06/07/04	912	M	23	62	No	43505D364F	442681	4817615	oxbow pool below camp
530	06/07/04	915	SAM	10	49	No	433C6F5C27	442681	4817613	oxbow pool below camp
531	06/07/04	920	F	29	69	Yes	4358482376	442681	4817613	oxbow pool below camp
532	06/07/04	922	SAM	12	49	No	4334476D33	442681	4817613	oxbow pool below camp
533	06/07/04	926	SAM	18	51	No	43593D5237	442681	4817613	oxbow below camp - frog emptied stomach contents - photo
534	06/07/04	930	SA	11	48	No	435803326E	442681	4817615	oxbow pool below camp
535	06/07/04	935	SA	9	46	Yes	435056787A	442681	4817613	oxbow pool below camp
536	06/07/04	937	SA	11	48	Yes	435A330B7A	442681	4817613	oxbow pool below camp
537	06/07/04	940	SA			?	uncaptured	442681	4817615	oxbow pool below camp
538	06/07/04	1030					START STATE TRANSECT - East	443805	4817879	moved upstream from 2001 point
539	06/07/04	1037				?	uncaptured	443805	4817879	sidebow pool - skittish

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
540	06/07/04	1041	SA	8	43	No	4352346333	443803	4817874	sidebow pool
541	06/07/04	1042					tadpole	443803	4817874	sidebow pool
542	06/07/04	1045	Adult			?	uncaptured	443803	4817872	sidebow pool
543	06/07/04	1050	SA	10	48	No	***	443807	4817872	***ran out of PIT tags - no marks
544	06/07/04	1110	M	19	57	Yes	435A3B583D	443662	4817552	dark color, cold - stream (photo); recapture from previous year
545	06/07/04	1118	SAF	10.5	49	No	***	443539	4817537	stream
546	06/07/04	1119	SAF	14.5	53	No	***	443539	4817537	stream
547	06/07/04	1123	SAF	9	49	Yes	433F506668	443538	4817493	stream
548	06/07/04	1130	F	28	67	Yes	43504D4627	443484	4817409	oxbow breeding site (east end)
549	06/07/04	1131	SAM	13	50	No	***	443484	4817409	oxbow pool
550	06/07/04	1132	M	17	57	No	***	443484	4817409	oxbow pool
551	06/07/04	1135	M	16	58	Yes	4350583657	443484	4817409	oxbow pool
552	06/07/04	1144	SAF	15	51	No	***	443484	4817409	oxbow pool; regurgitated damselfly larvae
553	06/07/04	1147	M	16	54	Yes	433F443021	443484	4817409	oxbow pool
554	06/07/04	1150	SAM	13.5	51	No	***	443484	4817426	oxbow pool (west end)
555	06/07/04	1200	SA	11.5	48	Yes	434D7E1408	443484	4817426	oxbow pool (west end)
556	06/07/04	1204	SAM	11	48	No	***	443484	4817426	oxbow pool (west end)
557	06/07/04	1207	SAF	17	55	No	***	443484	4817426	oxbow pool (west end)
558	06/07/04	1208				?	uncaptured	443484	4817426	oxbow pool (west end)
559	06/07/04	1223	SAM	13	50	No	***	443469	4817435	stream
560	06/07/04	1226	SAF	12	48	No	***	443469	4817435	stream
561	06/07/04	1228	SA	10	49	Yes	43594B5151	443467	4817438	stream
562	06/07/04	1229	SAM	10.5	48	No	***	443465	4817430	stream
563	06/07/04	1235	SAF	15	53	No	***	443459	4817431	stream
564	06/07/04	1236	SA			?	uncaptured	443450	4817416	stream
565	06/07/04	1242	SAF	14	52	No	***	443365	4817402	stream
566	06/07/04	1252	SAF	11	49	No	***	443365	4817402	stream
567	06/07/04	1256	SAF	13.5	52	Yes	43574C7516	443348	4817419	stream
568	06/07/04	1300	SAF	8.5	45	Yes	43595D7C2A	443331	4817420	PIT could be 43595D7C2E
569	06/07/04	1301			79		tadpole	443331	4817420	stream
570	06/07/04	1305	SAF	14	52	No	***	443316	4817422	stream
571	06/07/04	1306	SAF	13	52	No	***	443316	4817422	stream
572	06/07/04	1312	F	34	74	Yes	435A3B015F	443306	4817425	stream - scour pool
573	06/07/04	1313	SA	8.5	45	No	***	443306	4817425	stream - scour pool
574	06/07/04	1316	F	48	78	Yes	434E2B7F25	443306	4817425	stream - scour pool
575	06/07/04	1320	SA	12	50	Yes	435A3A290E	443306	4817425	stream - scour pool
576	06/07/04	1326	SAF	7.5	45	No	***	443267	4817439	stream
577	06/07/04	1328	F	36	75	No	***	443263	4817438	stream

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
578	06/07/04	1329	SA			?	uncaptured	443265	4817436	stream
579	06/07/04	1330	Adult			?	uncaptured	443265	4817436	stream
580	06/07/04	1335	SAF	12	49	No	***	443247	4817442	stream
581	06/07/04	1337	SAF	10	45	No	***	443252	4817435	side channel
582	06/07/04	1338				?	uncaptured	443252	4817435	side channel
583	06/07/04	1345	SAF	12	48	No	***	443265	4817454	stream
584	06/07/04	1348	SA			?	uncaptured	443240	4817459	stream
585	06/07/04	1353	F	32.5	68	Yes	433C5D7064	443201	4817460	recapture from 2003 - stream
586	06/07/04	1356	SA	10	46	No	***	443177	4817471	stream
587	06/07/04	1402	SAF	14	52	No	***	443103	4817479	stream
588	06/07/04	1403	SAF	12.5	51	No	***	443104	4817470	stream
589	06/07/04	1413	SAM	12.5	50	No	***	443093	4817478	side channel
590	06/07/04	1414	SAF	11.5	50	No	***	443079	4817489	stream
591	06/07/04	1416	SAM	9	48	No	***	443071	4817482	stream
592	06/07/04	1417	SA			?	uncaptured	443071	4817482	stream
593	06/07/04	1423	F	32.5	70	No	***	443071	4817483	stream
594	06/07/04	1428	SAF	12	51	No	***	443067	4817484	stream
595	06/07/04	1429			58		tadpole	443066	4817485	probable breeding area - scour pool side
596	06/07/04	1430	F	32.5	68	No	***	443056	4817487	stream
597	06/07/04	1433	F	33	68	No	***	443054	4817490	stream
598	06/07/04	1446				?	uncaptured	442899	4817613	stream - new cattails in this area
599	06/07/04	1450	SA	6.5	41	No	***	442879	4817597	oxbow pool
600	06/07/04	1451	SAM	10	46	No	***	442879	4817597	oxbow pool
601	06/07/04	1452	SAM	10	47	No	***	442879	4817597	oxbow pool
602	06/07/04	1508	SAM	11	50	No	***	442682	4817594	stream, rugose skin
603	06/07/04	1510	F	29	70	Yes	435A011F02	442682	4817594	stream
604	06/07/04	1547	SA	10	47	No	***	442667	4817602	stream
605	06/07/04	1551	SA	10	46	No	***	442662	4817606	side pool - thumb & index on rt hand okay, all other fingers gone (photo)
606	06/07/04	1554	SA	11.5	46	No	***	442662	4817606	side pool
607	06/07/04	1620	SAF	18	57	No	***	442497	4817433	oxbow pool
608	06/07/04	1621	M	12.5	54	No	***	442503	4817430	oxbow pool - no spots
609	06/07/04	1634	SAM	11	49	Yes	43597C431F	442378	4817297	natural exclosure - cattails
610	06/07/04	1639	SAF	15.5	55	Yes	435246634E	442373	4817286	natural exclosure - cattails
611	06/07/04	1640				?	uncaptured	442373	4817286	natural exclosure - cattails
612	06/07/04	1700					SPECIES?	442250	4817155	backwater channel SPECIES QUESTION - young bullfrog?
613	06/07/04	1750	F	24	68	Yes	435852595C	441163	4816902	stream, canyon
614	06/07/04	1800				?	uncaptured	441097	4816938	oxbow pool - very windy, frog skittish
615	08/20/04	827	M	13	54	No	4357430966	441095	4816942	oxbow pool; dead fish present

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
616	08/20/04	835	F	25	65	Yes	43512B2A78	441103	4816942	oxbow pool
617	08/20/04	840	SAM	15.5	51	No	4357371A19	441103	4816942	oxbow pool
618	08/20/04	841	F	40	75	No	4358513A42	441099	4816942	GRAVID female; oxbow pool
619	08/20/04	846	M	14	54	No	43505C5415	441103	4816939	oxbow pool
620	08/20/04	856				?	uncaptured	441103	4816939	oxbow pool
621	08/20/04	859	MT	7	41	No	43573B5B18	441096	4816937	stream
622	08/20/04	900	MT	4	34	No	too little	441099	4816921	stream
623	08/20/04	903	MT			No	uncaptured	441103	4816921	stream
624	08/20/04	904	MT			No	uncaptured	441103	4816932	stream
625	08/20/04	908	MT	5.5	36	No	too little	441111	4816921	stream
626	08/20/04	909	MT	5	38	No	too little	441111	4816921	stream
627	08/20/04	914	MT	4	38	No	too little	441159	4816910	stream
628	08/20/04	916	MT			No	uncaptured	441159	4816910	stream
629	08/20/04	925	MT			No	uncaptured	441250	4816842	recharge pool
630	08/20/04	927	MT	2.5	30	No	too little	441247	4816838	recharge pool
631	08/20/04	932	MT	6	39	No	too little	441340	4816761	stream
632	08/20/04	933	MT			No	uncaptured	441340	4816762	stream
633	08/20/04	935	MT	6.5	39	No	too little	441344	4816761	stream
634	08/20/04	938	MT	6.5	38	No	too little	441366	4816742	stream
635	08/20/04	939	MT			No	uncaptured	441366	4816744	stream
636	08/20/04	940	MT			No	uncaptured	441366	4816744	stream
637	08/20/04	943	MT	6	38	No	too little	441372	4816733	stream
638	08/20/04	944	MT	5.5	38	No	too little	441372	4816733	stream
639	08/20/04	945	MT	4.5	37	No	too little	441377	4816728	stream
640	08/20/04	946	MT	4.5	38	No	too little	441377	4816728	stream
641	08/20/04	950	MT			No	DEAD MT - collected	441381	4816725	stream
642	08/20/04	955	MT	6	39	No	too little	441393	4816715	stream
643	08/20/04	956	MT	5.5	38	No	too little	441392	4816711	stream
644	08/20/04	958	MT	5	37	No	too little	441393	4816715	stream
645	08/20/04	1001	MT	4.5	36	No	too little	441397	4816708	stream
646	08/20/04	1002	MT	8	42	No	43526A4A64	441397	4816708	stream
647	08/20/04	1006	MT	6.5	39	No	too little	441401	4816704	stream
648	08/20/04	1007	MT			No	uncaptured	441401	4816704	stream
649	08/20/04	1008	MT	5.5	38	No	too little	441401	4816704	stream
650	08/20/04	1009	MT	4	37	No	too little	441396	4816696	stream
651	08/20/04	1012	MT	4.5	36	No	too little	441404	4816696	stream
652	08/20/04	1026	MT	3.5	34	No	too little	442088	4816976	stream
653	08/20/04	1029	MT			No	uncaptured	442103	4816981	stream
654	08/20/04	1030	MT	4	35	No	too little	442105	4816970	sidebow channel

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
655	08/20/04	1031	MT	4.5	36	No	too little	442105	4816970	sidebow channel
656	08/20/04	1032	MT			No	uncaptured	442105	4816970	sidebow channel
657	08/20/04	1033	MT	5	38	No	too little	442105	4816970	sidebow channel
658	08/20/04	1036	MT			No	uncaptured	442121	4816972	stream
659	08/20/04	1038	MT	4	31	No	too little	442124	4816979	stream
660	08/20/04	1040	MT			No	uncaptured	442125	4816982	stream
661	08/20/04	1041	MT			No	uncaptured	442135	4816992	stream
662	08/20/04	1044	MT			No	uncaptured	442155	4817000	stream
663	08/20/04	1045	MT			No	uncaptured	442155	4817000	stream
664	08/20/04	1046	MT			No	uncaptured	442167	4817013	stream
665	08/20/04	1047	MT	5	36	No	too little	442167	4817013	stream
666	08/20/04	1048	MT	3.5	35	No	too little	442172	4817014	stream
667	08/20/04	1049	MT			No	uncaptured	442174	4817017	stream
668	08/20/04	1050	MT	4	35	No	too little	442174	4817017	stream
669	08/20/04	1055	MT	3.5	33	No	too little	442191	4817030	stream
670	08/20/04	1057	MT	3.5	34	No	too little	442198	4817047	stream
671	08/20/04	1100	MT	3.5	33	No	too little	442202	4817053	stream
672	08/20/04	1103	MT	4	34	No	too little	442202	4817062	stream
673	08/20/04	1104	MT			No	uncaptured	442202	4817064	stream
674	08/20/04	1105	MT			No	uncaptured	442202	4817064	stream
675	08/20/04	1107	MT	4	37	No	too little	442203	4817069	scour pool
676	08/20/04	1108	MT	2	24	No	too little	442210	4817076	scour pool
677	08/20/04	1111	MT	4	34	No	too little	442212	4817077	scour pool
678	08/20/04	1113	MT	3	34	No	too little	442221	4817086	scour pool
679	08/20/04	1115	MT			No	uncaptured	442227	4817094	scour pool
680	08/20/04	1120	MT	3.5	33	No	too little	442236	4817091	scour pool
681	08/20/04	1121	MT	3.5	34	No	too little	442237	4817101	stream
682	08/20/04	1126	MT	3.5	35	No	too little	442237	4817113	stream
683	08/20/04	1127	MT	4.5	35	No	too little	442239	4817110	stream
684	08/20/04	1130	MT	2	27	No	too little	442239	4817111	stream
685	08/20/04	1131	MT			No	uncaptured	442241	4817113	stream
686	08/20/04	1133	MT	4	35	No	too little	442248	4817127	stream
687	08/20/04	1136	MT			No	uncaptured	442247	4817137	stream
688	08/20/04	1137	MT	5	38	No	too little	442242	4817141	stream
689	08/20/04	1140	MT			No	uncaptured	442262	4817143	sidebow pool
690	08/20/04	1141	MT	4	36	No	too little	442250	4817150	stream
691	08/20/04	1143	MT			No	uncaptured	442270	4817156	sidebow pool
692	08/20/04	1146	MT	3.5	33	No	too little	442271	4817177	stream
693	08/20/04	1147	MT			No	uncaptured	442260	4817174	stream

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
694	08/20/04	1150	MT	4.5	36	No	too little	442267	4817200	stream
695	08/20/04	1151	MT	4.5	38	No	too little	442275	4817195	stream
696	08/20/04	1154	MT	4	36	No	too little	442276	4817202	stream
697	08/20/04	1155	MT	5	39	No	too little	442276	4817203	stream
698	08/20/04	1156	MT	5.5	38	No	too little	442285	4817208	stream
699	08/20/04	1244	MT	4	35	No	too little	442377	4817291	natural exclosure - cattails
700	08/20/04	1247	F	28	68	No	435B55694D	442394	4817301	natural exclosure - cattails
701	08/20/04	1252	MT			No	uncaptured	442369	4817289	natural exclosure - cattails
702	08/20/04	1253	MT			No	uncaptured	442369	4817289	natural exclosure - cattails
703	08/20/04	1256	MT	4.5	37	No	too little	442335	4817257	natural exclosure
704	08/20/04	1259	MT			No	uncaptured	442335	4817262	natural exclosure
705	08/20/04	1300	MT	3	34	No	too little	442338	4817262	natural exclosure
706	08/20/04	1301	MT	3	33	No	too little	442338	4817262	natural exclosure
707	08/20/04	1305	MT	5.5	37	No	too little	442337	4817277	natural exclosure
708	08/20/04	1308	F	28.5	67	No	433D052673	442344	4817270	natural exclosure
709	08/20/04	1320	MT			No	uncaptured	442386	4817306	natural exclosure
710	08/20/04	1321	MT			No	uncaptured	442386	4817308	natural exclosure
711	08/20/04	1322	MT	4.5	38	No	too little	442390	4817304	natural exclosure
712	08/20/04	1323	MT			No	too little	442390	4817304	natural exclosure
713	08/20/04	1324	MT			No	too little	442390	4817308	natural exclosure
714	08/20/04	1325	MT			No	too little	442395	4817308	natural exclosure
715	08/20/04	1326	MT			No	too little	442395	4817308	natural exclosure
716	08/20/04	1333	MT			No	too little	442399	4817305	natural exclosure
717	08/20/04	1334	MT			No	too little	442402	4817315	natural exclosure
718	08/20/04	1335	MT			No	too little	442402	4817315	natural exclosure
719	08/20/04	1336	MT			No	too little	442402	4817315	natural exclosure
720	08/20/04	1337	MT			No	too little	442405	4817315	rock pool below exclosure
721	08/20/04	1338	MT			No	too little	442405	4817315	rock pool below exclosure
722	08/20/04	1339	MT			No	too little	442405	4817315	rock pool below exclosure
723	08/20/04	1340	MT			No	too little	442402	4817331	scour pool below exclosure
724	08/20/04	1342	MT			No	too little	442442	4817358	isoloated oxbow
725	08/20/04	1349				?	uncaptured	442496	4817425	oxbow pool
726	08/20/04	1352	MT			No	too little	442517	4817414	stream
727	08/20/04	1356	MT			No	too little	442569	4817476	stream
728	08/20/04	1357	MT			No	too little	442571	4817475	stream
729	08/20/04	1358	MT			No	too little	442567	4817483	stream
730	08/20/04	1359	MT			No	too little	442579	4817500	stream
731	08/20/04	1400	MT			No	too little	442579	4817500	stream
732	08/20/04	1401	MT			No	too little	442576	4817508	stream

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
733	08/20/04	1402	MT		40	No	too little	442576	4817506	stream
734	08/20/04	1405	MT			No	too little	442602	4817532	2nd pinch - couldn't get reading - extrapolated in ArcGIS
735	08/20/04	1411	MT			No	too little	442591	4817572	stream
736	08/20/04	1415	MT			No	too little	442596	4817583	stream
737	08/20/04	1416	MT			No	too little	442613	4817587	stream
738	08/20/04	1417	MT			No	too little	442608	4817587	stream
739	08/20/04	1418	MT			No	too little	442623	4817593	stream
740	08/20/04	1419	MT			No	too little	442623	4817593	stream
741	08/20/04	1420	MT			No	too little	442625	4817594	stream
742	08/20/04	1421	MT			No	too little	442625	4817594	stream
743	08/20/04	1422	MT			No	too little	442632	4817598	stream
744	08/20/04	1423	MT			No	too little	442638	4817604	stream
745	08/20/04	1424	MT			No	too little	442637	4817606	oxbow pool
746	08/20/04	1425	MT			No	too little	442637	4817606	oxbow pool
747	08/20/04	1426	MT			No	too little	442656	4817604	stream
748	08/20/04	1427	MT			No	too little	442675	4817612	oxbow pool
749	08/20/04	1428	MT			No	too little	442675	4817612	oxbow pool
750	08/20/04	1437	MT			No	too little	442675	4817612	oxbow pool
751	08/20/04	1438	MT			No	too little	442675	4817612	oxbow pool
752	08/20/04	1439	MT			No	too little	442699	4817596	stream
753	08/20/04	1441	MT			No	too little	442703	4817596	stream
754	08/20/04	1450	MT			No	too little	442711	4817599	stream
755	08/20/04	1459	MT			No	too little	442739	4817591	stream
756	08/20/04	1500	MT			No	too little	442750	4817596	stream
757	08/20/04	1501	MT			No	too little	442751	4817595	stream
758	08/20/04	1503	MT			No	too little	442759	4817597	stream
759	08/20/04	1505	MT			No	too little	442790	4817602	stream
760	08/20/04	1506	MT			No	too little	442805	4817600	stream
761	08/20/04	1507	MT			No	too little	442805	4817599	stream
762	08/20/04	1508	MT			No	too little	442809	4817597	stream
763	08/20/04	1509	MT			No	too little	442815	4817599	stream
764	08/20/04	1510	MT			No	too little	442823	4817598	stream
765	08/20/04	1511	MT			No	too little	442824	4817590	stream
766	08/20/04	1512	MT			No	too little	442823	4817598	stream
767	08/20/04	1513	MT			No	too little	442830	4817596	stream
768	08/20/04	1514	MT			No	too little	442844	4817607	recharge pool
769	08/20/04	1515	MT			No	too little	442844	4817607	recharge pool
770	08/20/04	1516	MT			No	too little	442842	4817611	recharge stream

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771	08/20/04	1517	MT			No	too little	442844	4817614	recharge stream
772	08/20/04	1518	MT			No	too little	442845	4817610	recharge stream
773	08/20/04	1519	MT			No	too little	442859	4817605	stream
774	08/20/04	1520	MT			No	too little	442853	4817598	stream
775	08/20/04	1521	MT			No	too little	442851	4817603	stream
776	08/20/04	1522	MT			No	too little	442848	4817600	stream
777	08/20/04	1523	MT			No	too little	442845	4817599	stream
778	08/20/04	1524	MT			No	too little	442880	4817600	sidebow pool
779	08/20/04	1525	MT			No	too little	442892	4817601	stream
780	08/20/04	1526	MT			No	too little	442905	4817615	stream
781	08/20/04	1527	MT			No	too little	442907	4817614	stream
782	08/20/04	1528	MT			No	too little	442920	4817607	stream
783	08/20/04	1529	MT			No	too little	442917	4817609	stream
784	08/20/04	1534	MT			No	too little	443033	4817473	stream
785	08/20/04	1536	MT			No	too little	443053	4817473	stream
786	08/20/04	1539	MT			No	too little	443098	4817461	scour pool
787	08/20/04	1540	MT			No	too little	443098	4817461	scour pool
788	08/20/04	1541	MT			No	too little	443102	4817459	stream
789	08/20/04	1542	MT			No	too little	443110	4817455	stream
790	08/20/04	1544	MT			No	too little	443113	4817475	stream
791	08/20/04	1545	MT			No	too little	443113	4817475	stream
792	08/20/04	1546	MT			No	too little	443121	4817469	stream
793	08/20/04	1547	MT			No	too little	443133	4817463	stream
794	08/20/04	1548	MT			No	too little	443138	4817462	stream
795	08/20/04	1549	MT			No	too little	443153	4817465	scour pool
796	08/20/04	1550	MT			No	too little	443167	4817460	scour pool
797	08/20/04	1551	MT			No	too little	443191	4817457	scour pool
798	08/20/04	1552	MT			No	too little	443193	4817456	scour pool
799	08/20/04	1553	MT			No	too little	443207	4817455	scour pool
800	08/20/04	1554	MT			No	too little	443211	4817455	scour pool
801	08/20/04	1555	MT			No	too little	443232	4817456	scour pool
802	08/20/04	1556	MT			No	too little	443201	4817467	scour pool
803	08/20/04	1557	MT			No	too little	443201	4817467	scour pool
804	08/20/04	1558	MT			No	too little	443216	4817459	scour pool
805	08/20/04	1559	MT			No	too little	443241	4817462	scour pool
806	08/20/04	1602	MT			No	too little	443266	4817453	stream
807	08/20/04	1605	MT			No	too little	443302	4817423	scour pool
808	08/20/04	1608	MT			No	too little	443368	4817409	recharge pool
809	08/20/04	1609	MT			No	too little	443368	4817409	recharge pool

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810	08/20/04	1610	MT			No	too little	443368	4817409	recharge pool
811	08/20/04	1611				?	uncaptured	443370	4817401	recharge pool
812	08/20/04	1613	MT			No	too little	443378	4817409	recharge pool
813	08/20/04	1614	MT			No	too little	443378	4817409	recharge pool
814	08/20/04	1615	MT			No	too little	443381	4817402	recharge pool
815	08/20/04	1616	MT			No	too little	443390	4817407	recharge pool
816	08/20/04	1617	MT			No	too little	443398	4817410	recharge pool
817	08/20/04	1619	MT			No	too little	443414	4817414	recharge pool
818	08/20/04	1620	MT			No	too little	443461	4817432	scour pool
819	08/20/04	1621	MT			No	too little	443462	4817429	scour pool
820	08/20/04	1622	MT			No	too little	443463	4817426	scour pool
821	08/20/04	1623	MT			No	too little	443462	4817432	scour pool
822	08/20/04	1624	MT			No	too little	443466	4817427	scour pool
823	08/20/04	1625	MT			No	too little	443469	4817428	scour pool
824	08/20/04	1626	MT			No	too little	443470	4817432	scour pool
825	08/20/04	1627	MT			No	too little	443470	4817432	scour pool
826	08/20/04	1628	MT			No	too little	443461	4817428	scour pool
827	08/20/04	1629	MT			No	too little	443487	4817438	scour pool
828	08/20/04	1630	MT			No	too little	443462	4817437	scour pool
829	08/20/04	1631	MT			No	too little	443500	4817439	breeding oxbow
830	08/20/04	1632	MT			No	too little	443500	4817439	breeding oxbow
831	08/20/04	1633	MT			No	too little	443500	4817439	breeding oxbow
832	08/20/04	1634	MT			No	too little	443500	4817439	breeding oxbow
833	08/20/04	1635	MT			No	too little	443490	4817440	breeding oxbow
834	08/20/04	1636	MT			No	too little	443487	4817432	breeding oxbow
835	08/20/04	1637	MT			No	too little	443487	4817432	breeding oxbow
836	08/20/04	1638	MT			No	too little	443496	4817434	stream
837	08/20/04	1639	MT			No	too little	443497	4817443	stream
838	08/20/04	1640	MT			No	too little	443500	4817439	breeding oxbow
839	08/20/04	1641	MT			No	too little	443510	4817467	stream
840	08/20/04	1642	MT			No	too little	443514	4817474	stream
841	08/20/04	1643	MT			No	too little	443516	4817475	stream
842	08/20/04	1644	MT			No	too little	443526	4817486	stream
843	08/20/04	1645	MT			No	too little	443533	4817493	stream
844	08/20/04	1646	MT			No	too little	443529	4817487	stream
845	08/20/04	1647	MT			No	too little	443529	4817487	stream
846	08/20/04	1648					END TRANSECT	443537	4817494	END POINT (TIME LIMITED) fence line
847	08/20/04	1649	MT			No	too little	443503	4817481	oxbow
848	08/20/04	1650	MT			No	too little	443503	4817481	oxbow

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
849	08/20/04	1709	F	34.5	71	Yes	435777396C	442676	4817611	oxbow below campsite; gravid
850	06/04/05	1339	F	27.0	70	No	435B582858	443725	4817632	sidebow pool at endpoint
851	06/04/05	1340	SA	12.0	53	No	43583A3141	443725	4817632	sidebow pool at endpoint
852	06/04/05	1408	SA	6.5	42	No	4358474B62	443506	4817473	oxbow pool
853	06/04/05	1409	SA	7.0	44	No	43504F125D	443506	4817473	
854	06/04/05	1410	SA	8.0	46	No	435A074332	443506	4817473	
855	06/04/05	1412	SA	8.5	47	No	435A316B67	443506	4817473	
856	06/04/05	1415	SA			?	uncaptured	443506	4817473	
857	06/04/05	1427	SA	7.0	46	No	4357447775	443487	4817431	breeding site side channel
858	06/04/05	1428	SA	9.5	48	No	4359431B0D	443493	4817435	breeding site side channel
859	06/04/05	1429	SA	6.0	41	No	435848755F	443493	4817435	breeding site side channel
860	06/04/05	1439	SA	10.0	49	No	433C7B3255	443497	4817422	breeding site side channel
861	06/04/05	1500	F	25.0	66	No	4358363A4B	443310	4817429	swollen digit
862	06/04/05	1515	SA			?	uncaptured	443310	4817429	
863	06/04/05	1516	F	22.0	67	No	4358091D16	443307	4817438	
864	06/04/05	1520	F	27.5	67	Yes	435243287E	443318	4817419	main stem pool
865	06/04/05	1521	SA	8.5	48	No	433D072E52	443318	4817419	main stem pool
866	06/04/05	1529	SAF	16.5	54	No	434E296A05	443318	4817429	main stem pool
867	06/04/05	1543	F	27.5	69	Yes	434F600B1A	443306	4817424	recapture? Check PIT tags from Wendy?
868	06/04/05	1555	SA	9.5	50	No	435A4B413C	443273	4817448	channel bank
869	06/04/05	1600	SA	7.5	44	No	434F5C7829	443224	4817467	channel bank
870	06/04/05	1608	F	33.0	74	No	4357526964	443224	4817467	channel bank
871	06/04/05	1621	SA	9.5	48	No	433D024C04	443115	4817448	side slough
872	06/04/05	1622	SA	6.5	43	No	4658516238	443115	4817448	side slough
873	06/04/05	1623	SA	9.0	46	No	4658470E19	443115	4817448	side slough
874	06/04/05	1630				?	uncaptured	443115	4817448	side slough
875	06/04/05	1640	M	19.5	57	No	4658216A64	443096	4817482	
876	06/04/05	1641	SAM	8.5	47	No	4658377641	443096	4817482	
877	06/04/05	1642	SA	8.0	45	No	463717682F	443096	4817482	
878	06/04/05	1645	SA	6.5	44	No	4658432C22	443096	4817482	
879	06/04/05	1646	SAM	10.5	49	No	4659484D3B	443096	4817482	
880	06/04/05	1700	SA	9.0	46	No	46365D1F13	443096	4817487	
881	06/04/05	1701	F	19.0	62	No	46594E4D50	443084	4817488	
882	06/04/05	1725	SA	6.5	42	No	4658495B1B	442878	4817602	off-stream pool
883	06/04/05	1726	SA	6.0	40	No	4658456C30	442878	4817602	off-stream pool
884	06/04/05	1730	SA	5.0	39	No	4620611F3E	442878	4817602	off-stream pool
885	06/04/05	1733	SA	7.5	45	No	46584E1B1D	442878	4817602	off-stream pool
886	06/04/05	1740	SA	6.0	39	No	46583B7323	442854	4817600	side channel
887	06/04/05	1741	SA	7.0	42	No	4658404360	442854	4817600	side channel

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888	06/04/05	1746	SA	7.0	41	No	462E4F5B57	442848	4817608	side channel
889	06/04/05	1747	F	29.0	72	Yes	43577A5D43	442842	4817607	side channel
890	06/04/05	1755	SA	6.0	40	No	465850322B	442842	4817607	side channel
891	06/04/05	1756	SA	7.0	43	No	4658494A46	442843	4817604	side channel
892	06/04/05	1757	SA			?	uncaptured	442843	4817604	side channel
893	06/04/05	1758	SA			?	uncaptured	442843	4817604	side channel
894	06/04/05	1805	SAM	10.5	47	No	4658640853	442840	4817600	side channel
895	06/04/05	1807	SA	6.5	41	No	4658367776	442840	4817600	side channel
896	06/04/05	1812	SA			?	uncaptured	442838	4817612	side channel
897	06/04/05	1815	SA	8.0	43	No	46592F104A	442818	4817598	main channel
898	06/04/05	1820	SA	10.5	48	No	46583C0661	442751	4817602	main channel
899	06/04/05	1825	SA	10.5	46	No	462E621213	442736	4817593	main channel
900	06/04/05	1827	SA	8.5	44	No	465852270B	442731	4817596	main channel
901	06/04/05	1832	SA	9.0	44	No	46585B3D44	442724	4817600	in channel normally dry
902	06/04/05	1834	SA	7.5	44	No	46582A0F03	442711	4817593	in channel normally dry
903	06/04/05	1837	SAF	11.0	50	No	4658451A1A	442708	4817585	main channel
904	06/04/05	1838				?	uncaptured	442708	4817585	main channel
905	06/04/05	1850	SA	9.5	46	No	4658417A6C	442686	4817607	oxbow pool below camp
906	06/04/05	1851	M	16.0	56	Yes	435A4C6906	442686	4817607	oxbow pool below camp
907	06/04/05	1852	F	31.0	70	Yes	435B2B0157	442686	4817607	oxbow pool below camp
908	06/04/05	1854	SA	7.0	44	No	465941515A	442686	4817607	oxbow pool below camp
909	06/04/05	1855	SA	8.5	46	No	4658376D6E	442678	4817611	oxbow pool below camp
910	06/04/05	1856	SAF	12.0	50	No	465830125E	442678	4817611	oxbow pool below camp
911	06/04/05	1857	SA	6.0	40	No	4659360B4A	442678	4817611	oxbow pool below camp
912	06/04/05	1858	SA	6.5	41	No	4658236914	442678	4817611	oxbow pool below camp
913	06/04/05	1859	SA	7.5	46	No	4658463F53	442678	4817611	oxbow pool below camp
914	06/04/05	1900	SA	9.0	47	No	465927247A	442686	4817607	oxbow pool below camp
915	06/04/05	1901	SA	10.0	48	No	4658571A11	442686	4817607	oxbow pool below camp
916	06/04/05	1902	SA	7.5	43	No	463770097F	442686	4817607	oxbow pool below camp
917	06/04/05	1903	SA	6.0	41	No	4658526D00	442686	4817607	oxbow pool below camp
918	06/04/05	1904	F	34.5	71	Yes	435777396C	442686	4817607	oxbow pool below camp
919	06/04/05						large tadpoles	443310	4817429	
920	06/04/05						tadpoles	443096	4817482	
921	06/04/05						tiny tadpole	443487	4817431	breeding site side channel
922	06/05/05	1335	SAM	12.5	53	No	4658203D7A	443656	4817549	main channel bank
923	06/05/05	1338	SAF	9.5	46	No	46584A0F75	443620	4817532	grassy side channel;injured right thumb (photo)
924	06/05/05	1346	SA			?	uncaptured	443560	4817501	channel
925	06/05/05	1352	SA	9.5	45	No	46584C0261	443545	4817495	grassy side pool
926	06/05/05	1353	SA	10.0	49	No	46214C7110	443545	4817495	grassy side pool

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927	06/05/05	1405	SA	8.5	47	Yes	435A316B67	443502	4817470	side pool
928	06/05/05	1406	SA	8.0	46	Yes	435A074332	443502	4817470	side pool
929	06/05/05	1407	SA	9.0	45	No	4658387164	443502	4817470	side pool
930	06/05/05	1408	SA	8.0	45	No	465853125B	443502	4817470	side pool
931	06/05/05	1409	SA	6.5	42	Yes	4358474B62	443502	4817470	side pool
932	06/05/05	1434	SA	9.5	48	Yes	4359431B0D	443486	4817430	oxbow breeding site; connected during this survey
933	06/05/05	1435	SA	5.5	42	No	4658532854	443486	4817430	oxbow breeding site; connected during this survey
934	06/05/05	1436	SA	7.0	46	Yes	4357447775	443487	4817428	oxbow breeding site; connected during this survey
935	06/05/05	1437	SA	7.5	42	No	4658774D0C	443487	4817428	oxbow breeding site; connected during this survey
936	06/05/05	1438	SA	10.0	49	Yes	433C7B3255	443487	4817428	oxbow breeding site; connected during this survey
937	06/05/05	1439	SA	5.5	41	No	46584F7101	443487	4817428	oxbow breeding site; connected during this survey
938	06/05/05	1440	SA	6.5	42	No	46594F6A4A	443487	4817428	oxbow breeding site; connected during this survey
939	06/05/05	1441	SA	11.0	49	No	4659443F50	443487	4817428	oxbow breeding site; connected during this survey
940	06/05/05	1442	SA	6.0	42	No	46581D361F	443487	4817428	oxbow breeding site; connected during this survey
941	06/05/05	1443	M	16.5	57	No	4637051371	443487	4817428	oxbow breeding site; connected during this survey
942	06/05/05	1515	M	15.0	57	No	462E7C5319	443449	4817428	main channel
943	06/05/05	1526	F	29.5	72	Yes	43504D4627	443448	4817431	main channel
944	06/05/05	1536	SA	9.0	46	No	4658737B53	443364	4817408	braided channel
945	06/05/05	1541	SA	6.5	43	No	4621545332	443326	4817422	main channel; wide spot breeding site along edge
946	06/05/05	1547	F			?	uncaptured	443304	4817428	main channel; wide spot breeding site along edge
947	06/05/05	1559	SA	8.5	47	No	465939627D	443285	4817432	main channel; wide spot breeding site along edge
948	06/05/05	1600	SA	11.0	47	No	46590E0871	443285	4817432	main channel; wide spot breeding site along edge
949	06/05/05	1601	SAF	15.5	54	No	462E57466D	443285	4817432	main channel; wide spot breeding site along edge
950	06/05/05	1609				?	uncaptured	443285	4817432	main channel; wide spot breeding site along edge
951	06/05/05	1614	SA	11.0	49	No	462F0A2526	443275	4817432	back channel
952	06/05/05	1618	SA	7.5	44	No	4659441A6A	443271	4817431	back channel
953	06/05/05	1620	SA	5.0	41	No	46317E0D72	443275	4817438	back channel
954	06/05/05	1622	M	12.0	54	Yes	43595D7C2A	443275	4817438	back channel
955	06/05/05	1629	SA	6.5	42	No	4658464228	443207	4817439	back channel
956	06/05/05	1632	SA	6.5	40	No	464D221C23	443264	4817444	back channel missing pinky finger right hand
957	06/05/05	1633	SA	9.0	46	No	465835365F	443264	4817444	back channel

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958	06/05/05	1634	SA	9.0	46	No	46581B381C	443264	4817444	back channel
959	06/05/05	1635	SA	7.5	45	No	4658573143	443264	4817444	back channel
960	06/05/05	1645	SAM	11.0	52	No	4658315629	443286	4817444	main channel
961	06/05/05	1646	SA	6.5	43	No	4658360F34	443254	4817455	side back channel
962	06/05/05	1655	SA	8.5	45	No	46593E6321	443255	4817457	main channel
963	06/05/05	1702	SA	8.0	45	No	4658366126	443257	4817459	main channel
964	06/05/05	1705	SA	7.5	43	No	462E30242A	443244	4817461	main channel
965	06/05/05	1714	SA			?	uncaptured	443212	4817463	main channel
966	06/05/05	1730	SAM	8.5	47	Yes	4658377641	443091	4817482	small side channel
967	06/05/05	1731	SAM	10.5	49	Yes	4659484D3B	443091	4817482	small side channel
968	06/05/05	1732	SA	7.0	45	No	4659433A16	443091	4817482	small side channel
969	06/05/05	1743	SA			?	uncaptured	443077	4817487	main/side pool
970	06/05/05	1745	SA			?	uncaptured	443077	4817487	main/side pool
971	06/05/05	1748	SA	8.0	45	No	4658264149	443026	4817471	main/side pool at merganser rock
972	06/05/05	1806	SA	12.5	51	No	4658294276	442985	4817505	main channel
973	06/05/05	1813	SA	3.0	37	No	too little	442920	4817610	main channel; bones exposed left hand missing thumb and finger, right missing all (photo)
974	06/05/05	1822	SA	6.0	39	Yes	46583B7323	442858	4817611	side,back channel/rock pool
975	06/05/05	1826	SA	6.0	40	Yes	465850322B	442848	4817615	side,back channel/rock pool
976	06/05/05	1828	SA	8.5	47	No	4659001A07	442849	4817611	side,back channel/rock pool
977	06/05/05	1829	SA	7.0	43	Yes	4658494A46	442849	4817611	side,back channel/rock pool
978	06/05/05	1836	SA	8.0	43	Yes	46592F104A	442820	4817599	main channel
979	06/05/05	1837	SA	6.5	40	No	465827324E	442820	4817599	main channel
980	06/05/05	1845	SA	7.0	42	No	46583A617D	442773	4817595	main channel
981	06/05/05	1846	SA	10.5	46	Yes	462E621213	442734	4817597	main channel
982	06/05/05	1900	F	31.0	70	Yes	435B2B0157	442684	4817606	oxbow pool below camp
983	06/05/05	1901	SA	6.0	41	Yes	4658526D00	442684	4817606	oxbow pool below camp
984	06/05/05	1902	SA	9.5	46	Yes	4658417A6C	442682	4817609	oxbow pool below camp
985	06/05/05	1903	SA	7.5	46	Yes	4658463F53	442682	4817609	oxbow pool below camp
986	06/05/05	1904				?	uncaptured	442682	4817609	oxbow pool below camp
987	06/05/05	1905	SAF	12.0	50	Yes	465830125E	442680	4817613	oxbow pool below camp
988	06/05/05	1906	SA	9.0	47	Yes	465927247A	442680	4817613	oxbow pool below camp
989	06/05/05	1907				?	uncaptured	442680	4817613	oxbow pool below camp
990	06/05/05	1908	M	16.0	56	Yes	435A4C6906	442684	4817606	oxbow pool below camp
991	06/06/05	1020	SA	8.5	45	No	46593D1162	442672	4817601	main channel
992	06/06/05	1022	SAM	8.5	46	No	4659422620	442669	4817603	main channel
993	06/06/05	1030	SAF	13.0	51	No	4658535301	442654	4817603	main channel
994	06/06/05	1032	SA	9.0	46	No	465840723E	442630	4817614	side pool/oxbow breeding site (second oxbow below camp)

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995	06/06/05	1033	SA	6.5	42	No	46581E7D44	442630	4817614	side pool/oxbow breeding site (second oxbow below camp)
996	06/06/05	1034	SA	9.5	47	No	4637101854	442630	4817614	side pool/oxbow breeding site (second oxbow below camp)
997	06/06/05	1100	F	23.5	65	No	465907312A	442602	4817587	main channel
998	06/06/05	1105	SA	10.5	48	No	4658224903	442579	4817496	second pinch point bar pool
999	06/06/05	1106	SA	5.5	39	No	46590B3B03	442579	4817496	second pinch point bar pool
1000	06/06/05	1134	SA	11.0	49	No	4658373135	442575	4817479	main channel
1001	06/06/05	1141	SA	9.0	45	No	46384C783D	442501	4817427	oxbow pool
1002	06/06/05	1142	SA	8.5	47	No	4659302B22	442501	4817427	oxbow pool
1003	06/06/05	1143	SA			?	uncaptured	442501	4817427	oxbow pool
1004	06/06/05	1144	SA	11.0	50	No	4658221C3D	442498	4817430	oxbow pool
1005	06/06/05	1158	SAF	13.0	50	No	4658346141	442419	4817388	main Channel
1006	06/06/05	1203	SA	10.5	49	No	462E40094C	442454	4817367	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1007	06/06/05	1204	SA	10.5	49	No	46591B1427	442454	4817367	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1008	06/06/05	1205	SAF	11.5	52	No	465828456F	442454	4817367	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1009	06/06/05	1206	SA	8.5	45	No	465912115D	442454	4817367	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1010	06/06/05	1207	SA	10.0	49	No	46591F216F	442454	4817367	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1011	06/06/05	1210	SA	11.5	50	No	46583C535F	442452	4817363	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1012	06/06/05	1211	SA	10.5	48	No	4659265B21	442452	4817363	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1013	06/06/05	1212	SAF	14.5	52	No	46370E7A4A	442452	4817363	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1014	06/06/05	1215	SA	10.5	48	No	4658476F40	442443	4817362	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1015	06/06/05	1216	SA	9.0	45	No	46584A5D46	442443	4817362	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1016	06/06/05	1220	SA			?	uncaptured	442441	4817357	isolated side channel pool (opposite valley from main channel. Appears to be connected at higher flow.
1017	06/06/05	1248	M	12.5	54	No	4658264B3B	442410	4817315	pool below natural exclosure; red swollen spot on throat (photo)
1018	06/06/05	1305	SA			?	uncaptured	442376	4817299	natural exclosure cattails
1019	06/06/05	1500	SA	10.5	47	No	4658321700	440993	4816991	spring pool outflow channel
1020	06/06/05	1501				No	tadpoles	440977	4816993	spring pool
1021	06/06/05	1505	SAF	12.0	52	No	4658525844	440977	4816993	spring pool
1022	06/06/05	1506	SAM	10.0	48	No	46584F6F17	440977	4816993	spring pool
1023	06/06/05	1507	SA	6.0	42	No	4632506455	440977	4816993	spring pool
1024	06/06/05	1508	SA	10.0	48	No	46594C4B19	440977	4816993	spring pool
1025	06/06/05	1509	SA	10.0	49	No	46375C6436	440977	4816993	spring pool
1026	06/06/05	1530	SA	11.0	50	No	4659284A40	440922	4816974	main channel
1027	06/06/05	1537	SA	8.0	44	No	4658272127	440879	4816985	main channel
1028	06/06/05	1545	SAF	13.0	52	No	4659407C32	440827	4817005	main channel
1029	06/07/05	1237	SAM	10.0	48	Yes	46584F6F17	440975	4816995	spring outflow oxbow
1030	06/07/05	1238	SA	6.0	42	Yes	4632506455	440975	4816995	spring outflow oxbow
1031	06/07/05	1240	SA	10.0	49	Yes	46375C6436	440975	4816995	spring outflow oxbow
1032	06/07/05	1250	SAF	12.0	52	Yes	4658525844	440975	4816995	spring outflow oxbow
1033	06/07/05	1300	SA	8.0	46	No	4658306828	440919	4816973	main channel flooded willow clump
1034	06/07/05	1301	SA	9.0	49	No	46582A3116	440919	4816973	main channel flooded willow clump
1035	06/07/05	1302	SA	10.0	48	No	464A144861	440919	4816973	main channel flooded willow clump
1036	06/07/05	1313	SA	12.0	51	No	465841376A	440847	4816998	main channel (photo) small sore on dorsal
1037	06/07/05	1346	SA	9.0	47	No	4637126152	440975	4816995	spring outflow oxbow
1038	06/07/05	1503	F	24.0	67	Yes	433D052673	442254	4817154	back channel
1039	06/07/05	1504	F	35.0	75	No	4659370702	442258	4817157	back channel
1040	06/07/05	1516	SA	8.0	47	No	4621071416	442264	4817185	main channel; photo, legs appeared red
1041	06/07/05	1526	SA	8.0	43	No	4659447B33	442270	4817226	side channel
1042	06/07/05	1640	SAF	11.0	51	No	465826437D	442381	4817299	natural exclosure cattails
1043	06/07/05	1641	SAF	15.0	54	No	465931555A	442381	4817299	natural exclosure cattails
1044	06/07/05	1655	SA	12.0	49	No	4658361847	442375	4817288	natural exclosure cattails
1045	06/07/05	1710	SA	9.5	47	No	4659355E07	442436	4817413	main channel
1046	06/07/05	1715	SA	7.0	44	No	4659367A6D	442446	4817421	main channel
1047	06/07/05	1725	SA	11.0	48	No	46593F4867	442499	4817431	oxbow
1048	06/07/05	1726	SA	10.0	47	No	4658397A21	442499	4817431	oxbow
1049	06/07/05	1727	SAM	10.0	47	No	46584A6270	442499	4817431	oxbow
1050	06/07/05	1728	F			?	uncaptured	442499	4817431	oxbow
1051	06/07/05	1730	SA	9.0	45	Yes	46384C783D	442498	4817438	oxbow
1052	06/07/05	1735	SA	11.0	50	Yes	4658221C3D	442498	4817438	oxbow

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1053	06/07/05	1750	SA			?	uncaptured	442499	4817431	oxbow
1054	06/07/05	1800	SA	10.5	49	Yes	46591B1427	442454	4817369	oxbow on far side of floodplain
1055	06/07/05	1801	SA	10.0	49	Yes	46591F216F	442454	4817369	oxbow on far side of floodplain
1056	06/07/05	1802	SA	8.5	45	Yes	465912115D	442454	4817369	oxbow on far side of floodplain
1057	06/07/05	1803	SA	10.5	49	Yes	462E40094C	442454	4817369	oxbow on far side of floodplain
1058	06/07/05	1804	SA	11.5	50	Yes	46583C535F	442454	4817369	oxbow on far side of floodplain
1059	06/07/05	1805	SA	10.5	48	Yes	4659265B21	442454	4817369	oxbow on far side of floodplain
1060	06/07/05	1807	SA	9.0	45	Yes	46584A5D46	442441	4817358	oxbow on far side of floodplain
1061	06/07/05	1808	SA	10.0	48	No	46584F051F	442441	4817358	oxbow on far side of floodplain
1062	06/07/05	1809	SA	11.0	51	No	4658294D3D	442441	4817358	oxbow on far side of floodplain
1063	06/07/05	1820	SA	8.5	47	Yes	4659302B22	442499	4817431	oxbow
1064	06/07/05	1838	SA	7.0	42	No	46581B3D25	442571	4817478	main channel
1065	06/07/05	1852	SA	8.0	45	No	46587F4024	442627	4817593	main channel
1066	08/11/05	922	SAM	13	53	No	4659021131	441093	4816925	spring pool off main channel
1067	08/11/05	1008	MT		31	No		442135	4816988	main stream
1068	08/11/05	1009	MT		30	No		442137	4816990	main stream
1069	08/11/05	1010	MT		32	No		442137	4816992	main stream
1070	08/11/05	1011	MT		30	No		442139	4816992	main stream
1071	08/11/05	1012	MT		35	No		442139	4816993	main stream
1072	08/11/05	1015	MT			No		442159	4817006	main stream
1073	08/11/05	1016	MT		29	No		442165	4817012	main stream
1074	08/11/05	1018	MT		33	No		442186	4817027	main stream
1075	08/11/05	1019	MT		29	No		442183	4817026	main stream
1076	08/11/05	1020	MT			No		442183	4817026	main stream
1077	08/11/05	1028	MT		34	No		442268	4817203	main stream
1078	08/11/05	1052	MT			No		442376	4817299	natural exclosure cattails
1079	08/11/05	1055				?	uncaptured	442334	4817274	adult in vegetation in deep water
1080	08/11/05	1118	F		62	Yes	4659355E07	442429	4817403	main stream
1081	08/11/05	1119	F	23.5	64	Yes	46583C535F	442451	4817364	isolated oxbow pool
1082	08/11/05	1120	F	22	63	No	4658253407	442446	4817372	isolated oxbow pool
1083	08/11/05	1121	SAF	16	56	No	4658464170	442458	4817362	isolated oxbow pool
1084	08/11/05	1122	F	24	67	Yes	4658294D3D	442462	4817356	isolated oxbow pool
1085	08/11/05	1150	M	16.5	56	Yes	4658221C3D	442500	4817426	oxbow near stream
1086	08/11/05	1151	SAM	14	53	Yes	4659302B22	442500	4817428	oxbow near stream
1087	08/11/05	1152	MT			No		442500	4817428	oxbow near stream
1088	08/11/05	1153	MT			No		442500	4817428	oxbow near stream
1089	08/11/05	1154	MT			No		442500	4817428	oxbow near stream
1090	08/11/05	1155	MT			No		442500	4817428	oxbow near stream
1091	08/11/05	1205	MT		33	No		442568	4817467	main stream

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1092	08/11/05	1259	F	34	73	Yes	435B2B0157	442681	4817603	oxbow below campsite; gravid
1093	08/11/05	1303	SAM	14	52	No	46594C3E24	442682	4817607	oxbow below campsite
1094	08/11/05	1305	M	14.5	54	Yes	4658571A11	442680	4817607	oxbow below campsite
1095	08/11/05	1309	F	22.5	62	No	4658300971	442680	4817610	oxbow below campsite; gravid
1096	08/11/05	1311	SAM	12.5	50	Yes	4659360B4A	442680	4817610	oxbow below campsite
1097	08/11/05	1312	MT		33	No		442651	4817602	side pool off cahnnel
1098	08/11/05	1314	MT		32	No		442651	4817602	side pool off cahnnel
1099	08/11/05	1318	MT			No		442677	4817595	main stream
1100	08/11/05	1319	MT			No		442674	4817594	main stream
1101	08/11/05	1320	MT			No		442673	4817597	main stream
1102	08/11/05	1321	MT			No		442684	4817594	main stream
1103	08/11/05	1322	F	22	63	Yes	465830125E	442692	4817593	main stream
1104	08/11/05	1325	MT			No		442697	4817597	main stream
1105	08/11/05	1326	MT			No		442706	4817588	main stream
1106	08/11/05	1327	MT			No		442710	4817588	main stream
1107	08/11/05	1328	MT			No		442713	4817587	main stream
1108	08/11/05	1330	MT			No		442726	4817590	main stream
1109	08/11/05	1332	MT			No		442765	4817594	main stream
1110	08/11/05	1333	MT			No		442775	4817594	main stream
1111	08/11/05	1335	MT			No		442813	4817595	main stream
1112	08/11/05	1337	MT			No	uncaptured	442839	4817608	recharge pool
1113	08/11/05	1338	MT			No	uncaptured	442839	4817608	recharge pool
1114	08/11/05	1339	MT			No		442839	4817608	recharge pool
1115	08/11/05	1340	MT			No		442843	4817609	recharge pool
1116	08/11/05	1341	MT			No		442852	4817607	side channel
1117	08/11/05	1342	MT			No		442872	4817601	main channel
1118	08/11/05	1343	MT			No		442876	4817604	main channel
1119	08/11/05	1344	MT			No		442876	4817606	main channel
1120	08/11/05	1345	MT			No		442879	4817607	main channel
1121	08/11/05	1346	MT			No		442886	4817608	main channel
1122	08/11/05	1347	MT			No		442900	4817604	main channel
1123	08/11/05	1348	MT			No		442901	4817609	main channel
1124	08/11/05	1349	MT			No		442906	4817610	main channel
1125	08/11/05	1350	MT			No		442906	4817610	main channel
1126	08/11/05	1351	MT			No		442907	4817605	main channel
1127	08/11/05	1352	MT			No		442915	4817614	main channel
1128	08/11/05	1353	MT			No		442911	4817609	main channel
1129	08/11/05	1354	MT			No		442916	4817609	main channel
1130	08/11/05	1358	MT			No		442919	4817589	main channel

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1131	08/11/05	1359	MT			No		442963	4817519	main channel
1132	08/11/05	1402	MT			No		443032	4817488	main channel
1133	08/11/05	1403	MT			No		443076	4817485	main channel
1134	08/11/05	1404	MT			No		443076	4817485	main channel
1135	08/11/05	1405	MT			No		443076	4817484	main channel
1136	08/11/05	1406	MT			No		443091	4817482	main channel
1137	08/11/05	1407	MT			No		443091	4817477	main channel
1138	08/11/05	1408	MT			No		443093	4817474	main channel
1139	08/11/05	1409	MT			No		443093	4817474	main channel
1140	08/11/05	1410	MT			No		443095	4817474	main channel
1141	08/11/05	1411	MT			No		443105	4817458	side bow
1142	08/11/05	1412	MT			No		443108	4817475	main channel
1143	08/11/05	1413	MT			No		443116	4817471	main channel
1144	08/11/05	1414	MT			No		443116	4817471	main channel
1145	08/11/05	1415	MT			No		443121	4817469	main channel
1146	08/11/05	1416	MT			No		443118	4817467	main channel
1147	08/11/05	1417	MT			No		443125	4817465	main channel
1148	08/11/05	1418	MT			No		443125	4817465	main channel
1149	08/11/05	1419	MT			No		443130	4817464	main channel
1150	08/11/05	1420	MT			No		443138	4817460	main channel
1151	08/11/05	1421	MT			No		443146	4817466	main channel
1152	08/11/05	1422	MT			No		443158	4817464	main channel
1153	08/11/05	1423	MT			No		443226	4817457	main channel
1154	08/11/05	1424	MT			No		443246	4817443	main channel
1155	08/11/05	1425	MT			No		443259	4817435	side bow off channel
1156	08/11/05	1426	MT			No		443259	4817435	side bow off channel
1157	08/11/05	1427	MT			No		443265	4817439	side bow off channel
1158	08/11/05	1428	MT			No		443262	4817441	side bow off channel
1159	08/11/05	1429	MT			No		443270	4817439	side bow off channel
1160	08/11/05	1430	MT			No		443273	4817434	side bow off channel
1161	08/11/05	1431	SAF	18	60	Yes	43583D555E	443287	4817445	main channel (PDOP high)
1162	08/11/05	1432	MT			No		443283	4817429	main channel (PDOP high)
1163	08/11/05	1433	MT			No		443283	4817429	main channel (PDOP high)
1164	08/11/05	1434	MT			No		443280	4817445	main channel (PDOP high)
1165	08/11/05	1435	MT			No		443287	4817443	main channel (PDOP high)
1166	08/11/05	1444	MT			No		443290	4817443	main channel (PDOP high)
1167	08/11/05	1445	MT			No		443340	4817419	main channel (PDOP high)
1168	08/11/05	1446	MT			No		443340	4817419	main channel (PDOP high)
1169	08/11/05	1447	MT			No		443340	4817419	main channel (PDOP high)

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1170	08/11/05	1450	MT			No		443402	4817412	main channel (PDOP high)
1171	08/11/05	1454	MT			No		443500	4817449	~10 yds. upstream of oxbow breeding site, main channel
1172	08/11/05	1455	MT			No		443448	4817428	across from oxbow breeding site, main channel
1173	08/11/05	1458	MT			No		443484	4817438	oxbow breeding site
1174	08/11/05	1459	MT			No		443486	4817428	oxbow breeding site
1175	08/11/05	1502	MT			No		443500	4817449	main channel (10 yds upstream from next point)
1176	08/11/05	1504	MT			No		443508	4817467	main channel (PDOP high)
1177	08/11/05	1505	MT			No		443508	4817467	main channel (PDOP high)
1178	08/11/05	1515	MT			No		443523	4817486	main channel (PDOP high)
1179	08/11/05	1516	MT			No		443539	4817500	main channel (PDOP high)
1180	08/11/05	1517	MT			No		443539	4817500	main channel (PDOP high)
1181	08/11/05	1523	MT			No		443719	4817616	sidebow pool at endpoint
1182	06/01/06	1230	SA	7.0	45	No	462E5E4539	443482	4817432	skeleton scar breeding site
1183	06/01/06	1234	SAF	12.0	53	No	4658575139	443480	4817426	skeleton scar breeding site
1184	06/01/06	1247	F	21.0	64	No	4658534A1A	443344	4817412	main stream
1185	06/01/06	1252	M	14.0	56	No	46581F6265	443335	4817425	main stream
1186	06/01/06	1255					breeding site	443258	4817440	upper end of scour pool, backwater arm
1187	06/01/06	1300	SAM	10.0	48	No	4658231D0A	443249	4817438	upper end of scour pool, backwater arm
1188	06/01/06	1320	SAF	12.0	52	No	4659413314	443240	4817461	main stream
1189	06/01/06	1327	F	21.0	62	Yes	4658573143	443200	4817459	main stream
1190	06/01/06	1343	SA	8.0	45	No	46583D1D5A	443113	4817481	main stream
1191	06/01/06	1353	F	22.0	65	No	4658260B42	443114	4817463	side backwater
1192	06/01/06	1400	SAM	10.5	46	No	4659195B72	443004	4817499	main stream
1193	06/01/06	1412	F	24.0	72	No	46582C6F12	442931	4817586	scoured pool next to boulder at 3rd pinch
1194	06/01/06	1426	SAM	11.0	53	No	46592E4B08	442860	4817616	side channel; barrel exclosure
1195	06/01/06	1434	SAF	15.0	60	Yes	46590B3B03	442844	4817613	side channel; water temp 19C; barrel exclosure
1196	06/01/06	1435	SA			?	uncaptured	442845	4817612	side channel; barrel exclosure
1197	06/01/06	1441	F	24.0	65	Yes	4658264149	442844	4817613	side channel; barrel exclosure
1198	06/01/06	1456	SA	6.0	42	No	46582B0565	442678	4817612	campsite oxbow pool
1199	06/01/06	1620	SAM	11.0	49	No	46583D3D59	442678	4817610	campsite oxbow pool
1200	06/01/06	1621	SAM	11.5	50	No	4659292D23	442679	4817611	campsite oxbow pool
1201	06/01/06	1622	M	15.0	55	No	4658412C45	442679	4817610	campsite oxbow pool
1202	06/02/06	1121	M	15.0	54	Yes	46584C0261	443531	4817492	main stream; UTMs in Sac GPS file
1203	06/02/06	1130	F	20.0	63	No	46594D1562	443525	4817486	main stream; UTMs in Sac GPS file
1204	06/02/06	1240	M	16.0	56	Yes	462E30242A	443499	4817471	oxbow pool
1205	06/02/06	1250	SA	9.5	46	No	4659203061	443368	4817402	side channel
1206	06/02/06	1255	F	20.0	62	Yes	4658534A1A	443350	4817408	braided channel
1207	06/02/06	1300	SAM	11.0	48	No	4658340E70	443348	4817421	braided channel

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1208	06/02/06	1310	SAF	13.0	52	No	46594D193E	443351	4817410	scour pool
1209	06/02/06	1315	F	30.0	71	No	462E2E6D66	443280	4817439	scour pool south side
1210	06/02/06	1321	F	21.0	64	Yes	43583D555E	443272	4817434	scour pool south side
1211	06/02/06	1325	M	14.0	56	Yes	43595D7C2A	443266	4817440	breeding end of scour pool
1212	06/02/06	1326	SAM	10.5	50	Yes	4658231D0A	443262	4817446	breeding end of scour pool
1213	06/02/06	1327	F	22.0	67	Yes	46594E4D50	443262	4817447	breeding end of scour pool
1214	06/02/06	1332	M	15.0	57	No	46581A635E	443266	4817441	breeding end of scour pool
1215	06/02/06	1410	SAF	14.0	51	Yes	4659413314	443239	4817469	channel; end of scour pool
1216	06/02/06	1415	F	23.0	66	No	4659484C18	443188	4817465	scour channel
1217	06/02/06	1420	SA	8.0	47	Yes	46583D1D5A	443142	4817469	main channel
1218	06/02/06	1425	M	13.0	56	No	462E6C330F	443102	4817481	main channel
1219	06/02/06	1440	SA	7.0	42	Yes	462E5E4539	443482	4817430	skeleton scar breeding site
1220	06/02/06	1500	F	22.0	65	Yes	4658260B42	443100	4817472	side channel; windy, starting to sprinkle
1221	06/02/06	1504	SAF	20.0	60	No	4658252906	443069	4817488	scour pool; north side
1222	06/02/06	1505	SAM	13.0	52	No	46597B2C4C	443057	4817490	scour pool; south side
1223	06/02/06	1512	SA	9.5	46	Yes	4659195B72	442999	4817490	main channel below 3rd pinch
1224	06/02/06	1515	SA	9.0	48	No	4658396F66	442986	4817501	main channel below 3rd pinch
1225	06/03/06	1235	M	14.0	55	No	4658780F69	442877	4817595	3rd pinch oxbow at base of south cliff
1226	06/03/06	1236	SAF	12.0	50	No	462F18240E	442879	4817603	3rd pinch oxbow at base of south cliff
1227	06/03/06	1245	SAF	16.5	56	No	4658440121	442901	4817596	3rd pinch; new oxbow on gravel bar
1228	06/03/06	1246	F	25.0	64	No	4658276544	442901	4817598	3rd pinch; new oxbow on gravel bar
1229	06/03/06	1300	F	22.5	65	No	46366F795B	442934	4817606	north side of pool at 3rd pinch
1230	06/03/06	1310	M	13.0	55	Yes	465850322B	442839	4817612	side pool; barrel exclosure
1231	06/03/06	1311	SAF	17.0	59	Yes	46590B3B03	442843	4817609	side channel; barrel exclosure
1232	06/03/06	1313	F	24.0	63	No	4659265A02	442787	4817598	main stream; foraging in grass 1m from water
1233	06/03/06	1314	F	22.0	64	No	46592B1923	442776	4817597	main stream; foraging in grass 1m from water
1234	06/03/06	1338	SA	7.0	42	No	46594A1024	442667	4817599	main stream
1235	06/03/06	1340	SA	7.0	42	Yes	46582B0565	442665	4817607	2nd oxbow below campsite; west of exclosure
1236	06/03/06	1343	SAF	20.0	60	No	465823477F	442665	4817606	2nd oxbow below campsite; west of exclosure
1237	06/03/06	1345	F	23.0	65	Yes	46591B1427	442665	4817605	2nd oxbow below campsite; west of exclosure
1238	06/03/06	1355	SA	7.0	45	No	4659366558	442681	4817606	campsite exclosure
1239	06/03/06	1358	SAM	12.0	51	Yes	4659292D23	442684	4817608	campsite exclosure
1240	06/03/06	1408	F	23.0	68	No	462E5C0309	442508	4817461	stream in canyon just below 2nd pinch
1241	06/03/06	1440	SA	10.5	47	No	46587F3D5F	442413	4817318	edge of pool below 1st pinch
1242	06/03/06	1512	F	40.0	80	Yes	4659370702	442258	4817164	side channel
1243	06/03/06	1522	SAF	15.0	54	No	4659220776	442142	4816995	main channel
1244	06/03/06	1527	SAM	9.5	49	No	4659377B5A	442128	4816987	main channel
1245	06/03/06	1625	SAF	10.0	50	No	46584E2031	440892	4816981	main channel (BLM)
1246	06/03/06	1632	F	30.0	72	Yes	4659407C32	440823	4817013	main channel (BLM)

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1247	06/04/06	921	SA	7.0	42	Yes	46594A1024	442666	4817598	main channel
1248	06/04/06	923	SA	7.0	42	Yes	46582B0565	442670	4817607	2nd oxbow below campsite; west of exclosure
1249	06/04/06	925	SAF	19.0	60	Yes	465823477F	442660	4817610	2nd oxbow below campsite; west of exclosure
1250	06/04/06	930	SAF	15.0	55	No	46367E3C63	442637	4817594	stream channel
1251	06/04/06	954	F	32.0	70	Yes	4658346141	442442	4817421	stream; foraging in grass on bank
1252	06/04/06	958	F	24.0	68	No	46594A3A55	442442	4817417	stream; foraging in grass on bank
1253	06/04/06	1025	m	18.0	58	Yes	4658221C3D	442381	4817297	base of natural exclosure
1254	06/04/06	1049	F	39.0	80	Yes	4659370702	442254	4817151	side backwater
1255	06/04/06	1100	SAF	14.0	57	Yes	4659220776	442140	4817005	bank of main channel
1256	06/04/06	1205	F	32.0	70	No	46591F142B	440882	4816991	main channel (BLM)
1257	06/04/06	1212	F	29.0	70	Yes	4659407C32	440815	4817015	main channel (BLM)
1258	06/04/06	1250					water chemistry	440688	4817004	main channel - road crosses creek
1259	06/04/06	1315					Butte Creek	440699	4816110	upstream extent of wet connectivity
1260	06/04/06	1321					breeding site?	440402	4817161	oxbow pool
1261	06/04/06	1344	SA	11.0	47	No	4658625C25	440059	4817285	King Brown Cabin; LaGrande GPS has UTMs
1262	06/04/06	1359	M	26.0	60	No	4719170E49	441304	4816524	narrow channel of main stream, Butte Creek
1263	06/04/06	1421	M	16.0	55	No	4658502B30	439404	4817255	King Brown Cabin; LaGrande GPS has UTMs
1264	06/04/06	1434					Dry Creek	439264	4817297	upstream extent of survey
1265	06/04/06	1438	F	20.0	62	No	465948674A	439598	4817253	King Brown Cabin; LaGrande GPS has UTMs
1266	06/04/06	1509	M	15.0	54	No	46583D7B0E	440120	4817237	King Brown Cabin; LaGrande GPS has UTMs
1267	06/04/06	1516	F	29.0	67	No	4658252063	440222	4817213	King Brown Cabin; LaGrande GPS has UTMs
1268	06/04/06	1529	M	16.0	55	No	46377C3426	440411	4817122	King Brown Cabin; LaGrande GPS has UTMs
1269	06/05/06	915					start downstream	443727	4817622	downstream Dry Creek
1270	06/05/06	935					breeding site	443804	4817946	no tads
1271	06/05/06	938	SA	10.0	48	No	465950262B	443809	4817952	main channel
1272	06/05/06	941	M	17.0	56	No	471626646B	443817	4817988	main channel
1273	06/05/06	950	SA	7.5	43	No	4716244D6A	443904	4818064	back water
1274	06/05/06	958	SAF	11.5	49	No	47172B2217	443998	4818063	main channel
1275	06/05/06	1005	M	17.0	56	No	47171C0729	443998	4818070	main channel
1276	06/05/06	1012	SAF	13.5	52	No	4719390707	444061	4818047	main channel
1277	06/05/06	1013	SA	7.5	45	No	47154E2119	444063	4818046	main channel
1278	06/05/06	1018					breeding site	444070	4818046	spotted frog tads
1279	06/05/06	1022	F	21.0	63	No	4719354E40	444101	4818039	oxbow pool
1280	06/05/06	1023	SAM	11.5	50	No	471A0A752C	444104	4818041	main channel
1281	06/05/06	1034	F	26.0	69	No	47173B7A3A	444131	4818035	main channel
1282	06/05/06	1035	SAF	18.0	60	No	4719191825	444132	4818035	main channel
1283	06/05/06	1044	SAF	12.5	50	No	4717504649	444169	4818025	main channel
1284	06/05/06	1047	SAF	10.0	48	No	47190F5A6F	444173	4818015	main channel
1285	06/05/06	1058	SAF	12.0	50	No	47191D6766	444252	4818000	main channel

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1286	06/05/06	1101	SA	11.0	47	No	471A134273	444259	4817998	main channel
1287	06/05/06	1104	SAF	10.0	49	No	471A081705	444271	4817997	main channel; PDOP 15
1288	06/05/06	1106	SA	8.0	44	No	4717681929	444290	4817999	side channel; PDOP 15
1289	06/05/06	1107	SA	8.5	43	No	47161A5E44	444291	4817999	side channel; PDOP 15
1290	06/05/06	1111	M	16.0	54	No	4715661E6F	444323	4817986	main channel; PDOP 15
1291	06/05/06	1121	SAF	13.0	50	No	47163C321E	444413	4817948	main channel; PDOP 15
1292	06/05/06	1125	SAM	11.0	51	No	47177F2864	444418	4817949	main channel; PDOP 15
1293	06/05/06	1126	F	28.0	68	No	4719295E09	444425	4817947	main channel; PDOP 15
1294	06/05/06	1129	M	17.0	56	No	471A3B4233	444425	4817947	main channel; PDOP 15
1295	06/05/06	1131	M	17.0	56	No	471741422B	444450	4817944	main channel; PDOP 15
1296	06/05/06	1148	F	26.0	64	No	471A0B0E6D	444654	4817913	main channel; PDOP 15
1297	06/05/06	1157	SAF	15.0	53	No	47023C6C0B	444711	4817990	main channel; PDOP 15
1298	06/05/06	1201	F	29.0	66	No	471561407F	444734	4818078	side channel; PDOP 15
1299	06/05/06	1205					end Dry Creek	444731	4818071	Dry Creek survey end; PDOP 10
1300	08/10/06	928	MT	4.0	37	No	too little	440995	4816975	stream channel
1301	08/10/06	929	MT			No	too little	440999	4816975	stream channel
1302	08/10/06	938	MT	4.0	36	No	too little	441019	4816972	stream channel
1303	08/10/06	1001	MT	5.0	39	No	4718021576	441334	4816769	stream channel
1304	08/10/06	1002	MT	3.5	35	No	too little	441334	4816769	stream channel
1305	08/10/06	1003	MT	3.5	35	No	too little	441335	4816767	stream channel
1306	08/10/06	1004	MT	4.5	40	No	4716225000	441337	4816767	stream channel
1307	08/10/06	1005	MT	3.5	36	No	too little	441338	4816766	stream channel
1308	08/10/06	1006	MT	3.5	34	No	too little	441338	4816763	stream channel
1309	08/10/06	1007	MT	3.0	32	No	too little	441340	4816764	stream channel
1310	08/10/06	1008	MT	3.0	34	No	too little	441336	4816765	stream channel
1311	08/10/06	1009	MT	4.0	36	No	too little	441338	4816764	stream channel
1312	08/10/06	1010	MT	3.0	34	No	too little	441337	4816763	stream channel
1313	08/10/06	1011	MT	3.0	34	No	too little	441339	4816764	stream channel
1314	08/10/06	1012	MT	2.5	32	No	too little	441337	4816763	stream channel
1315	08/10/06	1013	MT	3.0	33	No	too little	441338	4816768	stream channel
1316	08/10/06	1014	MT	3.5	32	No	too little	441336	4816767	stream channel
1317	08/10/06	1038	MT			No	too little	441341	4816763	stream channel
1318	08/10/06	1039	MT			No	too little	441341	4816763	stream channel
1319	08/10/06	1040	MT			No	too little	441342	4816762	stream channel
1320	08/10/06	1041	MT			No	too little	441342	4816762	stream channel
1321	08/10/06	1042	MT			No	too little	441344	4816761	stream channel
1322	08/10/06	1043	MT			No	too little	441344	4816761	stream channel
1323	08/10/06	1044	MT			No	too little	441343	4816761	stream channel
1324	08/10/06	1045	MT			No	too little	441344	4816759	stream channel

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1325	08/10/06	1046	MT			No	too little	441345	4816758	stream channel
1326	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1327	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1328	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1329	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1330	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1331	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1332	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1333	08/10/06	1047	MT			No	too little	441346	4816758	stream channel; 8 metamorphs, one location
1334	08/10/06	1048	MT			No	too little	441344	4816756	stream channel; 3 metamorphs, one location
1335	08/10/06	1048	MT			No	too little	441344	4816756	stream channel; 3 metamorphs, one location
1336	08/10/06	1048	MT			No	too little	441344	4816756	stream channel; 3 metamorphs, one location
1337	08/10/06	1049	MT			No	too little	441351	4816753	stream channel; 2 metamorphs, one location
1338	08/10/06	1049	MT			No	too little	441351	4816753	stream channel; 2 metamorphs, one location
1339	08/10/06	1050	MT			No	too little	441353	4816753	stream channel; 5 metamorphs, one location
1340	08/10/06	1050	MT			No	too little	441353	4816753	stream channel; 5 metamorphs, one location
1341	08/10/06	1050	MT			No	too little	441353	4816753	stream channel; 5 metamorphs, one location
1342	08/10/06	1050	MT			No	too little	441353	4816753	stream channel; 5 metamorphs, one location
1343	08/10/06	1050	MT			No	too little	441353	4816753	stream channel; 5 metamorphs, one location
1344	08/10/06	1051	MT	5.5	41	No	47161E072A	441355	4816749	stream channel; 2 metamorphs, one location
1345	08/10/06	1051	MT			No	too little	441355	4816749	stream channel; 2 metamorphs, one location
1346	08/10/06	1052	MT			No	too little	441356	4816745	stream channel; 6 metamorphs, one location
1347	08/10/06	1052	MT			No	too little	441356	4816745	stream channel; 6 metamorphs, one location
1348	08/10/06	1052	MT			No	too little	441356	4816745	stream channel; 6 metamorphs, one location
1349	08/10/06	1052	MT			No	too little	441356	4816745	stream channel; 6 metamorphs, one location
1350	08/10/06	1052	MT			No	too little	441356	4816745	stream channel; 6 metamorphs, one location
1351	08/10/06	1052	MT			No	too little	441356	4816745	stream channel; 6 metamorphs, one location
1352	08/10/06	1053	MT			No	too little	441358	4816747	stream channel; 6 metamorphs, one location
1353	08/10/06	1053	MT			No	too little	441358	4816747	stream channel; 6 metamorphs, one location
1354	08/10/06	1053	MT			No	too little	441358	4816747	stream channel; 6 metamorphs, one location
1355	08/10/06	1053	MT			No	too little	441358	4816747	stream channel; 6 metamorphs, one location
1356	08/10/06	1053	MT			No	too little	441358	4816747	stream channel; 6 metamorphs, one location
1357	08/10/06	1053	MT			No	too little	441358	4816747	stream channel; 6 metamorphs, one location
1358	08/10/06	1054	MT			No	too little	441357	4816742	stream channel; 5 metamorphs, one location
1359	08/10/06	1054	MT			No	too little	441357	4816742	stream channel; 5 metamorphs, one location
1360	08/10/06	1054	MT			No	too little	441357	4816742	stream channel; 5 metamorphs, one location
1361	08/10/06	1054	MT			No	too little	441357	4816742	stream channel; 5 metamorphs, one location
1362	08/10/06	1054	MT			No	too little	441357	4816742	stream channel; 5 metamorphs, one location
1363	08/10/06	1055	MT			No	too little	441363	4816745	stream channel; 2 metamorphs, one location

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1364	08/10/06	1055	MT			No	too little	441363	4816745	stream channel; 2 metamorphs, one location
1365	08/10/06	1056	MT			No	too little	441367	4816738	stream channel; 3 metamorphs, one location
1366	08/10/06	1056	MT			No	too little	441367	4816738	stream channel; 3 metamorphs, one location
1367	08/10/06	1056	MT			No	too little	441367	4816738	stream channel; 3 metamorphs, one location
1368	08/10/06	1057	MT			No	too little	441367	4816736	stream channel; 3 metamorphs, one location
1369	08/10/06	1057	MT			No	too little	441367	4816736	stream channel; 3 metamorphs, one location
1370	08/10/06	1057	MT			No	too little	441367	4816736	stream channel; 3 metamorphs, one location
1371	08/10/06	1058	MT			No	too little	441371	4816730	stream channel
1372	08/10/06	1059	MT			No	too little	441374	4816726	stream channel
1373	08/10/06	1100	MT			No	too little	441377	4816724	stream channel; 2 metamorphs, one location
1374	08/10/06	1100	MT			No	too little	441377	4816724	stream channel; 2 metamorphs, one location
1375	08/10/06	1101	MT			No	too little	441378	4816721	stream channel; 2 metamorphs, one location
1376	08/10/06	1101	MT			No	too little	441378	4816721	stream channel; 2 metamorphs, one location
1377	08/10/06	1102	MT			No	too little	441384	4816725	stream channel
1378	08/10/06	1103	MT			No	too little	441383	4816716	stream channel; 3 metamorphs, one location
1379	08/10/06	1103	MT			No	too little	441383	4816716	stream channel; 3 metamorphs, one location
1380	08/10/06	1103	MT			No	too little	441383	4816716	stream channel; 3 metamorphs, one location
1381	08/10/06	1104	MT			No	too little	441384	4816706	stream channel; 2 metamorphs, one location
1382	08/10/06	1104	MT			No	too little	441384	4816706	stream channel; 2 metamorphs, one location
1383	08/10/06	1105	MT			No	too little	441383	4816717	stream channel; 2 metamorphs, one location
1384	08/10/06	1105	MT			No	too little	441383	4816717	stream channel; 2 metamorphs, one location
1385	08/10/06	1106	MT			No	too little	441392	4816707	stream channel; 2 metamorphs, one location
1386	08/10/06	1106	MT			No	too little	441392	4816707	stream channel; 2 metamorphs, one location
1387	08/10/06	1107	MT			No	too little	441399	4816705	stream channel
1388	08/10/06	1108	MT			No	too little	441399	4816700	stream channel; 3 metamorphs, one location
1389	08/10/06	1108	MT			No	too little	441399	4816700	stream channel; 3 metamorphs, one location
1390	08/10/06	1108	MT			No	too little	441399	4816700	stream channel; 3 metamorphs, one location
1391	08/10/06	1109	MT			No	too little	441402	4816703	stream channel; 4 metamorphs, one location
1392	08/10/06	1109	MT			No	too little	441402	4816703	stream channel; 4 metamorphs, one location
1393	08/10/06	1109	MT			No	too little	441402	4816703	stream channel; 4 metamorphs, one location
1394	08/10/06	1109	MT			No	too little	441402	4816703	stream channel; 4 metamorphs, one location
1395	08/10/06	1110	MT			No	too little	441405	4816700	stream channel; 3 metamorphs, one location
1396	08/10/06	1110	MT			No	too little	441405	4816700	stream channel; 3 metamorphs, one location
1397	08/10/06	1110	MT			No	too little	441405	4816700	stream channel; 3 metamorphs, one location
1398	08/10/06	1111	MT			No	too little	441412	4816688	stream channel
1399	08/10/06	1112	MT			No	too little	441420	4816689	stream channel
1400	08/10/06	1113	MT			No	too little	442114	4816973	stream channel
1401	08/10/06	1114	MT			No	too little	442129	4816987	stream channel
1402	08/10/06	1115	MT			No	too little	442143	4816994	stream channel; 2 metamorphs, one location

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1403	08/10/06	1115	MT			No	too little	442143	4816994	stream channel; 2 metamorphs, one location
1404	08/10/06	1116	MT			No	too little	442146	4816996	stream channel
1405	08/10/06	1124	MT			No	too little	442260	4817180	stream channel
1406	08/10/06	1125	MT			No	too little	442260	4817180	stream channel; 2 metamorphs, one location
1407	08/10/06	1125	MT			No	too little	442260	4817180	stream channel; 2 metamorphs, one location
1408	08/10/06	1128	MT			No	too little	442286	4817228	stream channel
1409	08/10/06	1139	MT			No	too little	442334	4817221	gravel bar at head of exclosure
1410	08/10/06	1141	MT			No	too little	442379	4817299	natural exclosure tail end
1411	08/10/06	1146	MT			No	too little	442398	4817313	main channel
1412	08/10/06	1148	MT			No	too little	442399	4817318	duck weed pool in rock at end of nat. exclosure
1413	08/10/06	1149	MT			No	too little	442408	4817312	stream channel, 2 metamorphs, one location
1414	08/10/06	1149	MT			No	too little	442408	4817312	stream channel, 2 metamorphs, one location
1415	08/10/06	1157	F	46.0	79	Yes	4658346141	442500	4817425	oxbow pool; gravid female
1416	08/10/06	1158	MT			No	too little	442497	4817436	oxbow pool; two metamorphs, one location
1417	08/10/06	1158	MT			No	too little	442497	4817436	oxbow pool; two metamorphs, one location
1418	08/10/06	1206	MT			No	too little	442500	4817425	oxbow pool
1419	08/10/06	1220	MT			No	too little	442527	4817418	stream channel
1420	08/10/06	1222	M	15.0	55	No	4718044217	442543	4817434	stream channel
1421	08/10/06	1228	MT			No	too little	442571	4817476	stream channel
1422	08/10/06	1240	F	29.5	68	Yes	46590B3B03	442641	4817604	oxbow pool; gravid female
1423	08/10/06	1241	F	36.0	75	Yes	462E5C0309	442641	4817604	oxbow pool; gravid female
1424	08/10/06	1248	MT			No	too little	442669	4817607	main channel
1425	08/10/06	1249	MT			No	too little	442669	4817607	main channel
1426	08/10/06	1250	MT			No	too little	442673	4817607	stream channel, 2 metamorphs, one location
1427	08/10/06	1250	MT			No	too little	442673	4817607	stream channel, 2 metamorphs, one location
1428	08/10/06	1251	SAM	12.0	53	No	471A0E376D	442683	4817612	camp exclosure
1429	08/10/06	1252	M	17.5	59	No	47173C7B66	442683	4817609	camp exclosure
1430	08/10/06	1253	M	14.5	54	No	4717256C3A	442683	4817604	camp exclosure
1431	08/10/06	1309	MT			No	too little	442699	4817594	main channel
1432	08/10/06	1514					start	443644	4817604	main channel
1433	08/10/06	1517	MT			No	too little	443604	4817555	main channel
1434	08/10/06	1520	MT			No	too little	443550	4817534	stream channel, 3 metamorphs, one location
1435	08/10/06	1520	MT			No	too little	443550	4817534	stream channel, 3 metamorphs, one location
1436	08/10/06	1520	MT			No	too little	443550	4817534	stream channel, 3 metamorphs, one location
1437	08/10/06	1523	MT			No	too little	443503	4817517	stream channel, 2 metamorphs, one location
1438	08/10/06	1523	MT			No	too little	443503	4817517	stream channel, 2 metamorphs, one location
1439	08/10/06	1526	MT			No	too little	443457	4817483	main channel
1440	08/10/06	1528	MT			No	too little	443450	4817477	main channel
1441	08/10/06	1530	MT			No	too little	443435	4817452	sidepool; 3 metamorphs, one location

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1442	08/10/06	1530	MT			No	too little	443435	4817452	sidepool; 3 metamorphs, one location
1443	08/10/06	1530	MT			No	too little	443435	4817452	sidepool; 3 metamorphs, one location
1444	08/10/06	1532	MT			No	too little	443401	4817422	main channel
1445	08/10/06	1534	MT			No	too little	443403	4817416	Skeleton Scar breeding site; 5 metamorphs
1446	08/10/06	1534	MT			No	too little	443403	4817416	Skeleton Scar breeding site; 5 metamorphs
1447	08/10/06	1534	MT			No	too little	443403	4817416	Skeleton Scar breeding site; 5 metamorphs
1448	08/10/06	1534	MT			No	too little	443403	4817416	Skeleton Scar breeding site; 5 metamorphs
1449	08/10/06	1534	MT			No	too little	443403	4817416	Skeleton Scar breeding site; 5 metamorphs
1450	08/10/06	1536	MT			No	too little	443383	4817418	main channel; 4 metamorphs, one location
1451	08/10/06	1536	MT			No	too little	443383	4817418	main channel; 4 metamorphs, one location
1452	08/10/06	1536	MT			No	too little	443383	4817418	main channel; 4 metamorphs, one location
1453	08/10/06	1536	MT			No	too little	443383	4817418	main channel; 4 metamorphs, one location
1454	08/10/06	1538	MT			No	too little	443371	4817411	main channel; 2 metamorphs, one location
1455	08/10/06	1538	MT			No	too little	443371	4817411	main channel; 2 metamorphs, one location
1456	08/10/06	1539	MT			No	too little	443362	4817415	
1457	08/10/06	1546	MT			No	too little	443131	4817451	
1458	08/10/06	1600	SAF	21.0	64	No	4719227923	442840	4817582	main channel
1459	08/10/06	1606	MT			No	too little	442822	4817584	main channel
1460	08/10/06	1609	M	16.0	59	No	4717424A1E	442800	4817586	side pool at third pinch
1461	08/10/06	1616	F	31.0	72	Yes	4658440121	442776	4817593	side channel to barrel exclosure
1462	08/10/06	1619	F	31.0	72	Yes	4658264149	442768	4817593	side channel to barrel exclosure
1463	08/10/06	1628	MT			No	too little	442655	4817578	side channel to barrel exclosure
1464	06/06/07	932	SAF	10.0	48	No	47193C2857	442772	4817598	main channel
1465	06/06/07	940	SA			No	uncaptured	442772	4817598	main channel
1466	06/06/07	943	SAF	10.0	50	No	4716200559	442791	4817598	main channel
1467	06/06/07	957	SA			No	uncaptured	442802	4817596	main channel
1468	06/06/07	1000	SAF	9.0	48	No	471A152D29	442806	4817596	main channel
1469	06/06/07	1009	SAF	12.0	50	No	4719351601	442833	4817596	main channel
1470	06/06/07	1010	M	13.0	55	No	4717141D72	442833	4817596	main channel
1471	06/06/07	1025	SAF	11.0	50	No	47023E035D	442862	4817611	Barrel Spring exclosure; tadpoles in exclosure pool
1472	06/06/07	1026	SA			No	uncaptured	442862	4817611	Barrel Spring exclosure
1473	06/06/07	1032	SAF	9.0	48	No	47160D6458	442855	4817608	Barrel Spring exclosure
1474	06/06/07	1035	SA	6.0	42	No	4717146E61	442853	4817608	Barrel Spring exclosure
1475	06/06/07	1042	SA	5.0	40	No	4715664234	442853	4817608	Barrel Spring exclosure
1476	06/06/07	1053	SA	4.0	36	No	too little	442840	4817609	Barrel Spring exclosure
1477	06/06/07	1054	SA	5.0	38	No	too little	442840	4817609	Barrel Spring exclosure
1478	06/06/07	1055	SAF	10.0	50	No	471A303942	442840	4817609	Barrel Spring exclosure
1479	06/06/07	1057	SAF	14.0	51	No	4658575634	442840	4817609	Barrel Spring exclosure

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1480	06/06/07	1058	SAF	9.0	47	No	47177A1C1B	442840	4817609	Barrel Spring exclosure
1481	06/06/07	1059	SA	6.0	41	No	4658433123	442840	4817609	Barrel Spring exclosure
1482	06/06/07	1100	SA	5.0	39	No	4659197103	442840	4817609	Barrel Spring exclosure
1483	06/06/07	1116	SA	8.0	45	No	4717100D00	442845	4817605	Barrel Spring exclosure
1484	06/06/07	1117	SA	8.0	45	No	471A087072	442845	4817605	Barrel Spring exclosure
1485	06/06/07	1118	SAF	7.0	47	No	47161C5F0C	442845	4817605	Barrel Spring exclosure
1486	06/06/07	1132	SAF	8.0	46	No	4716232856	442844	4817614	Barrel Spring exclosure
1487	06/06/07	1133	SA	6.0	39	No	471A047C41	442844	4817614	Barrel Spring exclosure
1488	06/06/07	1141	SAM	10.0	49	No	47171B1332	442876	4817609	main channel
1489	06/06/07	1142	SA			No	uncaptured	442876	4817609	
1490	06/06/07	1150	SA	9.0	45	No	47190D2369	442886	4817599	main channel
1491	06/06/07	1204	F	35.0	71	No	46581F5F67	442925	4817605	main channel
1492	06/06/07	1235	F	36.0	74	Yes	4659484C18	443051	4817467	main channel
1493	06/06/07	1243	SAF	20.0	60	No	47170E0601	443101	4817473	main channel
1494	06/06/07	1247	SAM	10.0	46	No	4717432418	443111	4817473	main channel
1495	06/06/07	1255	M	17.0	58	No	471A126E38	443149	4817462	main channel
1496	06/06/07	1304	SAF	11.0	50	No	47192F365E	443237	4817457	main channel
1497	06/06/07	1312	SAM	13.0	50	No	4717646B42	443254	4817455	main channel
1498	06/06/07	1322	SAM	12.0	51	No	471635625A	443263	4817445	main channel
1499	06/06/07	1329	M	13.0	57	No	4717124D1E	443277	4817431	main channel
1500	06/06/07	1339	SAF	13.0	52	No	4702310824	443364	4817403	main channel
1501	06/06/07	1342	SAM	11.0	50	No	47171D7E5C	443375	4817404	main channel
1502	06/06/07	1347	M	20.0	61	No	4715590E42	443430	4817415	main channel
1503	06/06/07	1352	F	32.0	72	Yes	43583D555E	443448	4817419	main channel
1504	06/06/07	1400	SAF	20.0	58	No	4717630222	443454	4817423	main channel
1505	06/06/07	1406	SAF	13.0	52	No	471A2D1C5B	443458	4817424	main channel
1506	06/06/07	1412	SAM	12.0	52	No	4713514516	443492	4817438	main channel
1507	06/06/07	1414	SAF	8.0	48	No	471802127B	443496	4817439	main channel
1508	06/06/07	1421	SAF	15.0	54	No	471A2B2A63	443512	4817475	main channel
1509	06/06/07	1425	SAF	12.0	49	No	47190A0853	443519	4817465	main channel
1510	06/06/07	1426	SAF	9.0	48	No	471567525E	443519	4817465	main channel
1511	06/06/07	1430	SA			No	uncaptured	443519	4817465	main channel
1512	06/06/07	1446	SA			No	uncaptured	443534	4817486	main channel
1513	06/06/07	1452	SAM	11.0	50	No	4718041C78	443726	4817604	main channel
1514	06/06/07	1456	SA			No	uncaptured	443726	4817604	main channel
1515	06/06/07	1457	SA			No	uncaptured	443721	4817615	main channel
1516	06/06/07	1458	SAF	12.0	51	No	4719150A34	443719	4817627	main channel
1517	06/06/07	1459	SAF	13.0	51	No	471A3C7E6D	443719	4817627	main channel
1518	06/06/07	1512	SA			No	uncaptured	443780	4817693	main channel

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1519	06/06/07	1519	SA			No	uncaptured	443793	4817810	main channel
1520	06/06/07	1524	SA			No	uncaptured	443802	4817870	pond
1521	06/06/07	1527	SAF	10.0	48	No	4719063107	443802	4817872	pond
1522	06/06/07	1528	SAF	10.0	48	No	4717150067	443802	4817876	pond
1523	06/06/07	1530	SA	8.0	45	No	424C762B1A	443802	4817876	pond
1524	06/06/07	1535	SA	6.0	45	No	4250006167	443802	4817876	pond
1525	06/06/07	1540	SA	10.0	45	No	424D451720	443802	4817876	pond
1526	06/06/07	1550	SAF	9.0	49	No	47190C5474	443802	4817876	pond
1527	06/06/07	1551	SA	6.0	42	No	424E395D79	443802	4817876	pond
1528	06/06/07	1552	SAF	11.0	47	No	471A0D206D	443802	4817876	pond
1529	06/06/07	1600	SA			No	uncaptured	443802	4817876	pond
1530	06/06/07	1605	SA	10.0	44	No	424F11693A	443802	4817876	pond
1531	06/06/07	1606	SAF	10.0	48	No	471A16126C	443802	4817876	pond
1532	06/06/07	1610	SA	7.0	42	No	424F7F525C	443802	4817876	pond
1533	06/06/07	1612	SAF	10.0	48	No	4717167010	443802	4817876	pond
1534	06/06/07	1615	SAM	9.0	45	No	4256481B0C	443802	4817876	pond
1535	06/06/07	1620	SA			No	uncaptured	443802	4817876	pond
1536	06/06/07	1621	SA			No	uncaptured	443802	4817876	pond
1537	06/06/07	1635	SA			No	uncaptured	443482	4817427	Skeleton Scar breeding site/exclosure
1538	06/06/07	1639	SAF	10.0	46	No	4717335E74	443482	4817427	Skeleton Scar breeding site/exclosure
1539	06/06/07	1709	SAF	14.0	55	No	471A192534	442682	4817594	main channel
1540	06/06/07	1711	M	17.0	56	Yes	471A0E376D	442677	4817605	Oxbow exclosure
1541	06/06/07	1740	F	51.0	75	Yes	46594D193E	442644	4817605	small side pond
1542	06/06/07	1745	SAM	12.0	51	No	4719332A4B	442665	4817604	main channel
1543	06/06/07	1747	SAM	13.0	52	No	471A092255	442665	4817604	main channel
1544	06/06/07	1754	F	41.0	78	Yes	462E5C0309	442665	4817604	PIT tag in left hind leg (thigh); could not get it to back; missing right front little toe
1545	06/07/07	906	SAF	10.0	48	Yes	47193C2857	442667	4817607	main channel
1546	06/07/07	907	SAF	18.0	55	No	471A125D52	442667	4817607	main channel
1547	06/07/07	911	SA			?	uncaptured	442796	4817598	main channel
1548	06/07/07	914	SAF	9.0	48	Yes	471A152D29	442806	4817591	main channel
1549	06/07/07	916	SA	9.0	43	No	47191E2061	442823	4817600	main channel
1550	06/07/07	917	SAF	15.0	54	No	4719196370	442823	4817600	main channel
1551	06/07/07	922	SAF	10.0	47	No	471803393D	442841	4817592	main channel
1552	06/07/07	925	SA	9.0	44	No	4716324012	442841	4817592	main channel
1553	06/07/07	928	SA	6.0	39	No	too little	442848	4817588	main channel
1554	06/07/07	930	SA	6.0	42	Yes	4717146E61	442862	4817599	main channel
1555	06/07/07	932	SAF	10.0	50	No	4719242C76	442863	4817606	Barrel Springs exclosure
1556	06/07/07	940	SAF	11.0	50	Yes	47023E035D	442863	4817606	Barrel Springs exclosure

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1557	06/07/07	941	SA	5.0	39	No	too little	442845	4817611	Barrel Springs exclosure
1558	06/07/07	942	SA	6.0	41	Yes	4658433123	442844	4817614	Barrel Springs exclosure
1559	06/07/07	943	SAF	8.0	46	Yes	4716232856	442844	4817614	Barrel Springs exclosure
1560	06/07/07	945	SA	4.0	36	Yes	too little	442840	4817609	Barrel Springs exclosure; likely re-cap from previous day
1561	06/07/07	946	SAF	9.0	47	Yes	47177A1C1B	442840	4817609	Barrel Springs exclosure
1562	06/07/07	947	SA	5.0	38	Yes	too little	442840	4817609	Barrel Springs exclosure; likely re-cap from previous day
1563	06/07/07	948	SA	6.0	39	Yes	471A047C41	442840	4817609	Barrel Springs exclosure
1564	06/07/07	950	SA	5.0	39	No	too little	442840	4817609	Barrel Springs exclosure
1565	06/07/07	952	SA	8.0	45	Yes	471A087072	442840	4817609	Barrel Springs exclosure
1566	06/07/07	1000	SAF	10.0	50	Yes	471A303942	442840	4817609	Barrel Springs exclosure
1567	06/07/07	1001	SA	5.0	39	Yes	4659197103	442840	4817609	Barrel Springs exclosure
1568	06/07/07	1002	SA	5.0	39	No	471A154602	442840	4817609	Barrel Springs exclosure
1569	06/07/07	1008	SA			?	uncaptured	442840	4817609	Barrel Springs exclosure
1570	06/07/07	1017	SAM	10.0	49	Yes	47171B1332	442876	4817611	Barrel Springs exclosure
1571	06/07/07	1018	SAF	12.0	49	No	471A337437	442876	4817611	Barrel Springs exclosure
1572	06/07/07	1020	SA	8.0	45	Yes	4717100D00	442876	4817611	Barrel Springs exclosure
1573	06/07/07	1025	SA	9.0	45	Yes	47190D2369	442879	4817601	small pond
1574	06/07/07	1027	SAM	10.0	48	No	47155B5664	442879	4817601	small pond
1575	06/07/07	1032	SAF	13.0	48	No	4717380D40	442903	4817611	main channel
1576	06/07/07	1044	F	35.0	71	Yes	46581F5F67	442913	4817592	above pinch
1577	06/07/07	1102	SAF	18.0	58	No	4715354E16	443234	4817466	below pinch
1578	06/07/07	1103	SAM	13.0	51	No	471A22544C	443234	4817466	main channel
1579	06/07/07	1109	SAF	21.0	58	No	4718031178	443245	4817464	main channel
1580	06/07/07	1112	SAM	11.0	50	No	470B3A5722	443248	4817461	main channel
1581	06/07/07	1116	SA			?	uncaptured	443248	4817465	main channel
1582	06/07/07	1122	SAM	13.0	50	Yes	4717646B42	443257	4817452	main channel
1583	06/07/07	1124	SAM	12.0	51	Yes	471635625A	443261	4817445	main channel
1584	06/07/07	1125	SAF	14.0	50	No	42556D2731	443261	4817445	main channel
1585	06/07/07	1133	SAF	13.0	55	No	424E4B3B50	443291	4817425	main channel
1586	06/07/07	1137	M	18.0	59	No	424E1E5763	443296	4817422	main channel
1587	06/07/07	1140	SAM	12.0	48	No	425466736C	443299	4817417	main channel
1588	06/07/07	1142	SAM	11.0	48	No	424E247458	443299	4817417	main channel
1589	06/07/07	1146	SAF	15.0	57	No	4256051364	443306	4817417	main channel
1590	06/07/07	1147	SA	10.0	48	No	424D3E0643	443306	4817417	main channel
1591	06/07/07	1152	SAF	12.0	50	No	424F120D29	443335	4817420	main channel
1592	06/07/07	1156	SAM	11.0	50	Yes	47171D7E5C	443368	4817395	main channel
1593	06/07/07	1202	F	34.0	74	Yes	465842506E	443437	4817412	main channel
1594	06/07/07	1203	SAF	20.0	58	Yes	4717630222	443451	4817431	main channel

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1595	06/07/07	1207	F	18.0	62	No	42554F6873	443451	4817431	main channel
1596	06/07/07	1209	F	32.0	72	Yes	43583D555E	443438	4817407	main channel
1597	06/07/07	1220	Adult			?	uncaptured	443438	4817407	main channel
1598	06/07/07	1223	SAF	17.0	54	No	424D596309	443459	4817423	main channel
1599	06/07/07	1231	SAF	12.0	50	No	4255712D74	443493	4817433	Exclosure
1600	06/07/07	1232	SAF	10.0	46	Yes	4717335E74	443493	4817433	main channel
1601	06/07/07	1238	SAF	8.0	48	Yes	471802127B	443499	4817441	main channel
1602	06/07/07	1240	SAF	18.0	59	No	424D5D152F	443514	4817471	main channel
1603	06/07/07	1241	SAF	15.0	54	Yes	471A2B2A63	443514	4817471	main channel
1604	06/07/07	1244	SAF	15.0	55	No	424E2E690D	443532	4817486	at fence; main channel
1605	06/07/07	1250	M	17.0	57	Yes	46584C0261	443582	4817528	main channel
1606	06/07/07	1252	SAM	14.0	53	No	4255514648	443582	4817528	main channel
1607	06/07/07	1310	SAF	12.0	54	No	424D522A31	443656	4817553	main channel
1608	06/07/07	1316	SAF	14.0	55	No	424D32561F	443664	4817562	main channel
1609	06/07/07	1317	M	22.0	61	No	424F285717	443684	4817564	main channel
1610	06/07/07	1318	SAM	9.0	49	No	4256496F06	443712	4817586	main channel
1611	06/07/07	1320	SAF	11.0	48	No	42565A1810	443694	4817575	tadpoles--not sure if spotted frog or not
1612	06/07/07	1324	SAM	12.0	52	No	424E4F2150	443687	4817565	main channel
1613	06/07/07	1333	SAF	17.0	57	No	424E782405	443713	4817574	main channel
1614	06/07/07	1342	SAF	15.0	55	No	424B214A09	443734	4817606	main channel
1615	06/07/07	1343	SAF	13.0	51	Yes	471A3C7E6D	443721	4817616	main channel
1616	06/07/07	1344	SAF	8.0	43	No	424E5D2F33	443721	4817616	main channel
1617	06/07/07	1345	SAF	12.0	54	No	4250033B61	443727	4817619	main channel
1618	06/07/07	1346	SAF	12.0	51	Yes	4719150A34	443722	4817622	main channel
1619	06/07/07	1350	SAM	10.0	48	No	424E3A1416	443739	4817632	main channel
1620	06/07/07	1355	SAF	13.0	53	No	424E567441	443746	4817646	main channel
1621	06/07/07	1356	SA			?	uncaptured	443746	4817646	main channel
1622	06/07/07	1359	SA			?	uncaptured	443767	4817688	main channel
1623	06/07/07	1405	SAM	10.0	50	No	424E126B19	443776	4817703	main channel
1624	06/07/07	1412	SAF	10.0	43	No	47172D7358	443774	4817709	main channel
1625	06/07/07	1414	SAM	9.0	46	No	42556E7E20	443774	4817709	main channel
1626	06/07/07	1419	SA			?	uncaptured	443783	4817736	main channel
1627	06/07/07	1422	SAM	12.0	50	No	42501D7B48	443785	4817742	main channel
1628	06/07/07	1427	SAF	16.0	56	No	42502F6C27	443799	4817803	main channel
1629	06/07/07	1432	M	21.0	59	Yes	465950262B	443808	4817844	main channel
1630	06/07/07	1440	SAM	9.0	46	No	42556E1325	443804	4817864	main channel
1631	06/07/07	1441	SAF	10.0	50	No	424D77535F	443804	4817864	pond
1632	06/07/07	1442	SAF	9.0	49	No	424D347C05	443804	4817864	pond
1633	06/07/07	1443	SAF	9.0	46	No	4256627B51	443804	4817864	pond

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1634	06/07/07	1444	SA			?	uncaptured	443804	4817864	pond
1635	06/07/07	1450	SA	6.0	45	Yes	4250006167	443804	4817864	pond
1636	06/07/07	1451	SAF	9.0	49	Yes	47190C5474	443804	4817864	pond
1637	06/07/07	1452	SA	10.0	44	Yes	424F11693A	443804	4817864	pond
1638	06/07/07	1453	SA	6.0	38	No	too little	443804	4817864	pond
1639	06/07/07	1454	SA	8.0	45	Yes	424C762B1A	443804	4817864	pond
1640	06/07/07	1455	SAF	10.0	48	Yes	471A16126C	443804	4817864	pond
1641	06/07/07	1456	SAF	11.0	47	Yes	471A0D206D	443804	4817864	pond
1642	06/07/07	1457	SAF	10.0	48	Yes	4717167010	443804	4817864	pond
1643	06/07/07	1458	SAF	8.0	43	No	42570D6921	443804	4817864	pond
1644	06/07/07	1459	SAM	10.0	50	No	424D710114	443804	4817864	pond
1645	06/07/07	1509	SA	9.0	45	Yes	4256481B0C	443804	4817864	pond
1646	06/07/07	1510	SA	10.0	45	Yes	424D451720	443804	4817864	pond
1647	06/07/07	1511	SA	7.0	42	Yes	424F7F525C	443804	4817864	pond
1648	06/07/07	1514	SA	11.0	49	No	424F2A507D	443804	4817864	pond
1649	06/07/07	1515	SA			No	uncaptured	443804	4817864	pond
1650	06/07/07	1516	SA	6.0	42	Yes	424E395D79	443804	4817864	pond
1651	06/07/07	1520	SA			?	uncaptured	443804	4817864	pond
1652	06/07/07	1555	M	22.0	62	Yes	47173C7B66	442684	4817607	Exclosure
1653	06/07/07	1559	SAF	15.0	55	No	424D55203C	442659	4817608	small pond; prolapsed vent
1654	06/07/07	1600	F	51.0	75	Yes	46594D193E	442643	4817606	
1655	06/07/07	1604	SAM	13.0	52	Yes	471A092255	442659	4817608	
1656	06/07/07	1634	Adult			?	uncaptured	442500	4817430	above pinch
1657	06/07/07	1650	M	21.0	62	Yes	4658221C3D	442440	4817359	small pond
1658	06/07/07	1651	SAF	15.0	48	No	4256281726	442440	4817359	small pond
1659	06/07/07	1652	SA			?	uncaptured	442446	4817358	
1660	06/07/07	1700	SAF	18.0	59	No	424E354023	442448	4817368	small pond
1661	06/07/07	1702	SAF	17.0	58	No	4256286A5D	442448	4817368	small pond
1662	06/07/07	1705	SAF	18.0	59	No	4256301529	442448	4817368	small pond
1663	06/07/07	1706	SAM	10.0	48	No	4257143F27	442448	4817368	small pond
1664	06/07/07	1730	SAF	20.0	59	No	424E650679	442287	4817227	main channel
1665	06/07/07	1740	SA	10.0	48	No	424E1A6B4E	442107	4816975	side pool
1666	06/07/07	1745	SAM	12.0	48	No	424E36667D	442107	4816975	side pool
1667	06/07/07	1805	M	13.0	55	No	4256380F72	441408	4816702	
1668	06/07/07	1812	M	13.0	54	No	424D353117	441392	4816720	
1669	06/07/07	1813	SA	11.0	48	No	424E56472B	441392	4816720	
1670	06/07/07	1830	SAF	14.0	54	No	424B285A34	441096	4816927	
1671	06/07/07	1838	SAF	13.0	55	No	424D7F6A10	440979	4816973	side pool
1672	06/07/07	1839	SAF	20.0	58	No	424F235507	440979	4816973	side pool

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1673	06/07/07	1845	F	21.0	61	No	423F2E036D	440818	4817013	main channel
1674	06/08/07	918	SA			?	uncaptured	442437	4817420	
1675	06/08/07	929	M	21.0	62	Yes	4658221C3D	442442	4817355	small pond
1676	06/08/07	930	SAF	15.0	48	Yes	4256281726	442440	4817357	small pond
1677	06/08/07	935	SAM	10.0	48	Yes	4257143F27	442447	4817365	second small pond
1678	06/08/07	936	SAF	17.0	58	Yes	4256286A5D	442447	4817364	second small pond
1679	06/08/07	937	SAF	18.0	59	Yes	424E354023	442447	4817364	second small pond
1680	06/08/07	938	SAM	10.0	49	No	424F330C09	442445	4817366	second small pond
1681	06/08/07	939	SAF	19.0	58	No	424F187478	442445	4817366	second small pond
1682	06/08/07	940	SAF	12.0	51	No	42556F2F10	442446	4817365	second small pond
1683	06/08/07	951	SAF	15.0	54	No	424B324A16	442451	4817369	second small pond
1684	06/08/07	1000	Adult			?	uncaptured	442498	4817433	small pond
1685	06/08/07	1009	SAF	20.0	60	No	42555B3B03	442392	4817313	natural exclosure
1686	06/08/07	1014	SAF	17.0	55	No	4256103709	442380	4817295	natural exclosure
1687	06/08/07	1026	SAF	20.0	59	Yes	424E650679	442291	4817242	side pool above pinch/exclosure
1688	06/08/07	1042	SAF	13.0	51	No	4256153E74	442139	4816991	
1689	06/08/07	1044	SAF	17.0	58	No	42564E142C	442119	4816974	
1690	06/08/07	1049	SA	9.0	48	No	424E1A6B4E	442119	4816974	lost PIT tag inserted on 6/7/07…could see cut on back from day before (424F2F5065); replaced with new PIT tag (424E1A6B4E)
1691	06/08/07	1051	SAM	12.0	48	Yes	424E36667D	442119	4816974	
1692	06/08/07	1100	SA			?	uncaptured	442119	4816974	
1693	06/08/07	1119	M	13.0	54	Yes	424D353117	441384	4816714	
1694	06/08/07	1121	SA	11.0	48	Yes	424E56472B	441382	4816715	
1695	06/08/07	1126	SAM	12.0	53	No	424E13760C	441382	4816715	
1696	06/08/07	1140	SAF	14.0	54	Yes	424B285A34	441096	4816928	side pool above pinch
1697	06/08/07	1145	F	41.0	78	Yes	46591F142B	441099	4816944	side pool above pinch
1698	06/08/07	1152	M	14.0	55	No	424D62457B	441001	4816974	
1699	06/08/07	1153	F	22.0	65	No	424E121575	441001	4816974	
1700	06/08/07	1159	SAF	18.0	57	No	4256601407	440993	4816972	
1701	06/08/07	1208	SAF	19.0	58	No	4255725919	440976	4816999	side pool
1702	06/08/07	1209	SAF	14.0	52	No	424B413009	440976	4816999	side pool
1703	06/08/07	1212	SAF	20.0	58	Yes	424F235507	440976	4816999	side pool
1704	06/08/07	1219	F	20.0	61	Yes	423F2E036D	440820	4817008	main channel
1705	06/08/07							443730	4817622	END POINT-East State Land
1706	08/08/07	840	SA			?	uncaptured	441094	4816946	
1707	08/08/07	850	SA			?	uncaptured	441149	4816908	
1708	08/08/07	905	MT	3.0	40	No	too little	441337	4816762	
1709	08/08/07	910	SA			?	uncaptured	441337	4816762	
1710	08/08/07	915	MT			No	too little	441347	4816754	

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1711	08/08/07	921	MT			No	too little	441351	4816745	
1712	08/08/07	924	MT			No	too little	441351	4816745	
1713	08/08/07	925	MT	6.0	41	No	too little	441359	4816745	
1714	08/08/07	931	MT			No	too little	441372	4816730	
1715	08/08/07	937	MT			No	too little	441397	4816703	
1716	08/08/07	939	MT			No	too little	441404	4816703	
1717	08/08/07	940	MT			No	too little	441407	4816699	
1718	08/08/07	941	MT			No	too little	441407	4816699	
1719	08/08/07	942	MT			No	too little	441400	4816697	
1720	08/08/07	943	SA			?	uncaptured	441402	4816697	
1721	08/08/07	1000	MT			No	too little	442114	4816966	
1722	08/08/07	1003	M	14.0	56	Yes	424E1A6B4E	442120	4816974	
1723	08/08/07	1014	MT			No	too little	442155	4817003	
1724	08/08/07	1029	MT			No	too little	442269	4817210	
1725	08/08/07	1030	MT			No	too little	442269	4817210	
1726	08/08/07	1042	MT			No	too little	442387	4817305	
1727	08/08/07	1043	MT			No	too little	442387	4817305	
1728	08/08/07	1050	SA			?	uncaptured	442386	4817336	
1729	08/08/07	1116	SA			?	uncaptured	442494	4817436	
1730	08/08/07	1140	F	50.0	81	Yes	46594D193E	442644	4817618	
1731	08/08/07	1155	SAF	13.0	55	No	424D347F12	442676	4817601	
1732	08/08/07	1205	MT			No	too little	442689	4817595	
1733	08/08/07	1207	MT			No	too little	442694	4817597	
1734	08/08/07	1215	MT			No	too little	442679	4817608	
1735	08/08/07	1217	SAF	13.0	54	No	424E7E3256	442725	4817591	
1736	08/08/07	1220	MT			No	too little	442745	4817589	
1737	08/08/07	1222	MT			No	too little	442745	4817589	
1738	08/08/07	1227	SA			?	uncaptured	442746	4817591	
1739	08/08/07	1230	SA			?	uncaptured	442746	4817591	
1740	08/08/07	1231	MT			No	too little	442784	4817596	
1741	08/08/07	1239	MT			No	too little	442863	4817606	
1742	08/08/07	1240	MT			No	too little	442863	4817606	
1743	08/08/07	1243	SAF	20.0	63	Yes	471A337437	442866	4817609	
1744	08/08/07	1244	SAF	17.0	59	No	424E020119	442863	4817609	
1745	08/08/07	1248	MT			No	too little	442863	4817606	
1746	08/08/07	1250	MT			No	too little	442860	4817601	
1747	08/08/07	1251	MT			No	too little	442855	4817610	
1748	08/08/07	1252	MT			No	too little	442855	4817610	
1749	08/08/07	1253	MT			No	too little	442855	4817610	

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1750	08/08/07	1254	MT			No	too little	442855	4817610	
1751	08/08/07	1255	MT			No	too little	442855	4817610	
1752	08/08/07	1256	MT			No	too little	442855	4817610	
1753	08/08/07	1257	SA			?	uncaptured	442855	4817610	
1754	08/08/07	1258	MT			No	too little	442850	4817616	
1755	08/08/07	1259	MT			No	too little	442850	4817616	
1756	08/08/07	1300	SAM	13.0	53	No	424B193A21	442850	4817616	
1757	08/08/07	1301	SAM	12.0	51	No	424D694252	442851	4817611	
1758	08/08/07	1310	MT			No	too little	442841	4817612	
1759	08/08/07	1311	SA			?	uncaptured	442850	4817616	
1760	08/08/07	1312	SA			?	uncaptured	442850	4817616	
1761	08/08/07	1313	SAM	14.0	51	No	4256463C3E	442839	4817613	
1762	08/08/07	1320	M	15.0	54	No	424F10692E	442839	4817613	
1763	08/08/07	1321	MT			No	too little	442849	4817614	
1764	08/08/07	1322	MT			No	too little	442849	4817614	
1765	08/08/07	1325	SAF	24.0	66	No	4658575634	442839	4817613	barrel springs exclosure
1766	08/08/07	1329	MT			No	too little	442834	4817627	broken leg; dispatched-barrel springs exclosure
1767	08/08/07	1330	MT			No	too little	442829	4817611	barrel springs exclosure
1768	08/08/07	1331	MT			No	too little	442829	4817611	barrel springs exclosure
1769	08/08/07	1332	MT			No	too little	442829	4817611	barrel springs exclosure
1770	08/08/07	1333	MT			No	too little	442829	4817611	barrel springs exclosure
1771	08/08/07	1334	MT			No	too little	442829	4817611	barrel springs exclosure
1772	08/08/07	1335	MT			No	too little	442829	4817611	barrel springs exclosure
1773	08/08/07	1336	MT			No	too little	442829	4817611	barrel springs exclosure
1774	08/08/07	1337	MT			No	too little	442829	4817611	barrel springs exclosure
1775	08/08/07	1338	MT			No	too little	442827	4817612	barrel springs exclosure
1776	08/08/07	1339	MT			No	too little	442827	4817612	barrel springs exclosure
1777	08/08/07	1340	MT			No	too little	442827	4817612	barrel springs exclosure
1778	08/08/07	1341	MT			No	too little	442827	4817612	barrel springs exclosure
1779	08/08/07	1342	MT			No	too little	442827	4817612	barrel springs exclosure
1780	08/08/07	1343	MT			No	too little	442872	4817596	
1781	08/08/07	1344	MT			No	too little	442876	4817606	
1782	08/08/07	1345	MT			No	too little	442876	4817606	
1783	08/08/07	1346	MT			No	too little	442876	4817604	
1784	08/08/07	1347	MT			No	too little	442875	4817603	
1785	08/08/07	1348	MT			No	too little	442880	4817611	
1786	08/08/07	1349	MT			No	too little	442880	4817611	
1787	08/08/07	1350	MT			No	too little	442880	4817611	
1788	08/08/07	1351	MT			No	too little	442882	4817611	

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1789	08/08/07	1352	MT			No	too little	442882	4817611	
1790	08/08/07	1353	MT			No	too little	442882	4817611	
1791	08/08/07	1354	MT			No	too little	442882	4817611	
1792	08/08/07	1355	MT			No	too little	442882	4817611	
1793	08/08/07	1356	MT			No	too little	442882	4817611	
1794	08/08/07	1357	MT			No	too little	442882	4817611	
1795	08/08/07	1358	MT			No	too little	442884	4817604	
1796	08/08/07	1359	MT			No	too little	442884	4817604	
1797	08/08/07	1400	MT			No	too little	442884	4817604	
1798	08/08/07	1401	MT			No	too little	442884	4817604	
1799	08/08/07	1402	MT			No	too little	442884	4817604	
1800	08/08/07	1403	MT			No	too little	442884	4817604	
1801	08/08/07	1404	MT			No	too little	442882	4817602	
1802	08/08/07	1405	MT			No	too little	442879	4817601	
1803	08/08/07	1406	MT			No	too little	442879	4817601	
1804	08/08/07	1407	MT			No	too little	442879	4817601	
1805	08/08/07	1408	MT			No	too little	442879	4817601	
1806	08/08/07	1409	MT			No	too little	442879	4817601	
1807	08/08/07	1410	MT			No	too little	442888	4817605	
1808	08/08/07	1411	MT			No	too little	442896	4817605	
1809	08/08/07	1412	MT			No	too little	442897	4817602	
1810	08/08/07	1413	MT			No	too little	442897	4817602	
1811	08/08/07	1414	MT			No	too little	442902	4817601	
1812	08/08/07	1415	MT			No	too little	442902	4817601	
1813	08/08/07	1416	MT			No	too little	442902	4817601	
1814	08/08/07	1417	MT			No	too little	442902	4817601	
1815	08/08/07	1418	MT			No	too little	442904	4817610	
1816	08/08/07	1419	MT			No	too little	442904	4817610	
1817	08/08/07	1420	MT			No	too little	442904	4817610	
1818	08/08/07	1421	MT			No	too little	442904	4817610	
1819	08/08/07	1422	MT			No	too little	442902	4817602	
1820	08/08/07	1423	MT			No	too little	442902	4817602	
1821	08/08/07	1424	MT			No	too little	442902	4817602	
1822	08/08/07	1425	MT			No	too little	442902	4817602	
1823	08/08/07	1426	MT			No	too little	442902	4817602	
1824	08/08/07	1427	MT			No	too little	442902	4817602	
1825	08/08/07	1428	MT			No	too little	442894	4817610	
1826	08/08/07	1429	MT			No	too little	442888	4817610	
1827	08/08/07	1430	MT			No	too little	442888	4817610	

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Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1828	08/08/07	1431	MT			No	too little	442888	4817610	
1829	08/08/07	1432	MT			No	too little	442902	4817614	
1830	08/08/07	1433	MT			No	too little	442902	4817614	
1831	08/08/07	1434	MT			No	too little	442902	4817614	
1832	08/08/07	1435	MT			No	too little	442908	4817615	
1833	08/08/07	1436	MT			No	too little	442907	4817611	
1834	08/08/07	1437	MT			No	too little	442907	4817611	
1835	08/08/07	1438	MT			No	too little	442910	4817614	
1836	08/08/07	1439	MT			No	too little	442910	4817614	
1837	08/08/07	1440	MT			No	too little	442910	4817614	
1838	08/08/07	1441	MT			No	too little	442919	4817611	
1839	08/08/07	1442	MT			No	too little	442919	4817611	
1840	08/08/07	1443	SAF	15.0	56	Yes	471A087072	442919	4817611	
1841	08/08/07	1444	MT			No	too little	442920	4817610	
1842	08/08/07	1446	SAF	14.0	55	No	424F184712	442923	4817607	
1843	08/08/07	1447	MT			No	too little	442926	4817599	
1844	08/08/07	1448	MT			No	too little	442908	4817593	
1845	08/08/07	1449	MT			No	too little	442908	4817593	
1846	08/08/07	1450	MT			No	too little	442908	4817593	
1847	08/08/07	1451	MT			No	too little	442911	4817598	
1848	08/08/07	1452	MT			No	too little	442918	4817601	
1849	08/08/07	1453	MT			No	too little	442918	4817601	
1850	08/08/07	1454	MT			No	too little	442924	4817608	
1851	08/08/07	1455	MT			No	too little	442924	4817608	
1852	08/08/07	1456	MT			No	too little	442917	4817594	
1853	08/08/07	1457	MT			No	too little	442917	4817594	
1854	08/08/07	1458	MT			No	too little	442917	4817594	
1855	08/08/07	1459	MT			No	too little	442917	4817594	
1856	08/08/07	1500	MT			No	too little	442917	4817594	
1857	08/08/07	1501	MT			No	too little	442917	4817594	
1858	08/08/07	1502	MT			No	too little	442917	4817594	
1859	08/08/07	1503	MT			No	too little	442917	4817594	
1860	08/08/07	1504	MT			No	too little	442917	4817594	
1861	08/08/07	1505	MT			No	too little	442917	4817594	
1862	08/08/07	1506	MT			No	too little	442919	4817587	
1863	08/08/07	1507	MT			No	too little	442919	4817587	
1864	08/08/07	1508	MT			No	too little	442919	4817587	
1865	08/08/07	1509	MT			No	too little	442919	4817587	
1866	08/08/07	1510	MT			No	too little	442919	4817587	

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1867	08/08/07	1511	MT			No	too little	442918	4817590	
1868	08/08/07	1512	MT			No	too little	442898	48417579	
1869	08/08/07	1513	MT			No	too little	442898	48417579	
1870	08/08/07	1514	MT			No	too little	442898	48417579	
1871	08/08/07	1515	MT			No	too little	442898	48417579	
1872	08/08/07	1516	MT			No	too little	442898	48417579	
1873	08/08/07	1517	MT			No	too little	442898	48417579	
1874	08/08/07	1518	MT			No	too little	442906	4817591	
1875	08/08/07	1519	SA			?	uncaptured	442906	4817591	
1876	08/08/07	1520	MT			No	too little	442951	4817536	
1877	08/08/07	1521	MT			No	too little	442988	4817499	
1878	08/08/07	1522	MT			No	too little	442996	4817491	
1879	08/08/07	1523	MT			No	too little	442996	4817491	
1880	08/08/07	1524	MT			No	too little	442996	4817491	
1881	08/08/07	1525	MT			No	too little	443012	4817485	
1882	08/08/07	1526	MT			No	too little	443012	4817485	
1883	08/08/07	1527	MT			No	too little	443029	4817479	
1884	08/08/07	1528	MT			No	too little	443029	4817479	
1885	08/08/07	1529	MT			No	too little	443029	4817479	
1886	08/08/07	1530	MT			No	too little	443029	4817479	
1887	08/08/07	1531	SA			?	uncaptured	443204	4817467	
1888	08/08/07	1532	MT			No	too little	443204	4817467	
1889	08/08/07	1533	MT			No	too little	443045	4817470	
1890	08/08/07	1534	MT			No	too little	443045	4817470	
1891	08/08/07	1535	MT			No	too little	443083	4817464	
1892	08/08/07	1536	MT			No	too little	443085	4817464	
1893	08/08/07	1537	MT			No	too little	443097	4817460	
1894	08/08/07	1538	MT			No	too little	443089	4817469	
1895	08/08/07	1539	MT			No	too little	443089	4817469	
1896	08/08/07	1540	MT			No	too little	443088	4817474	
1897	08/08/07	1541	MT			No	too little	443105	4817475	
1898	08/08/07	1542	MT			No	too little	443105	4817475	
1899	08/08/07	1543	MT			No	too little	443109	4817475	
1900	08/08/07	1544	MT			No	too little	443109	4817475	
1901	08/08/07	1545	MT			No	too little	443113	4817475	
1902	08/08/07	1546	MT			No	too little	443130	4817466	
1903	08/08/07	1547	MT			No	too little	443149	4817471	
1904	08/08/07	1548	MT			No	too little	443160	4817467	
1905	08/08/07	1549	MT			No	too little	443160	4817467	

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1906	08/08/07	1550	MT			No	too little	443159	4817465	
1907	08/08/07	1551	MT			No	too little	443159	4817465	
1908	08/08/07	1552	MT			No	too little	443163	4817465	
1909	08/08/07	1553	MT			No	too little	443163	4817465	
1910	08/08/07	1554	MT			No	too little	443163	4817465	
1911	08/08/07	1555	MT			No	too little	443163	4817465	
1912	08/08/07	1556	MT			No	too little	443175	4817468	
1913	08/08/07	1557	MT			No	too little	443175	4817468	
1914	08/08/07	1558	MT			No	too little	443175	4817468	
1915	08/08/07	1559	MT			No	too little	443175	4817468	
1916	08/08/07	1600	MT			No	too little	443175	4817468	
1917	08/08/07	1601	MT			No	too little	443175	4817468	
1918	08/08/07	1602	MT			No	too little	443175	4817469	
1919	08/08/07	1603	MT			No	too little	443181	4817467	
1920	08/08/07	1604	MT			No	too little	443185	4817464	
1921	08/08/07	1605	MT			No	too little	443185	4817464	
1922	08/08/07	1606	MT			No	too little	443201	4817463	
1923	08/08/07	1607	MT			No	too little	443201	4817463	
1924	08/08/07	1608	MT			No	too little	443201	4817463	
1925	08/08/07	1609	MT			No	too little	443208	4817465	
1926	08/08/07	1610	MT			No	too little	443208	4817465	
1927	08/08/07	1611	MT			No	too little	443208	4817465	
1928	08/08/07	1612	MT			No	too little	443216	4817464	
1929	08/08/07	1613	MT			No	too little	443226	4817462	
1930	08/08/07	1614	MT			No	too little	443233	4817462	
1931	08/08/07	1615	MT			No	too little	443240	4817462	
1932	08/08/07	1616	MT			No	too little	443278	4817441	
1933	08/08/07	1617	SA			?	uncaptured	443278	4817441	
1934	08/08/07	1618	MT			No	too little	443293	4817432	
1935	08/08/07	1619	MT			No	too little	443365	4817408	
1936	08/08/07	1620	MT			No	too little	443365	4817408	
1937	08/08/07	1621	MT			No	too little	443390	4817405	
1938	08/08/07	1622	MT			No	too little	443390	4817405	
1939	08/08/07	1623	MT			No	too little	443390	4817405	
1940	08/08/07	1624	MT			No	too little	443397	4817404	
1941	08/08/07	1625	MT			No	too little	443397	4817404	
1942	08/08/07	1626	MT			No	too little	443402	4817409	
1943	08/08/07	1627	MT			No	too little	443405	4817410	
1944	08/08/07	1628	MT			No	too little	443413	4817415	

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

Number	Date	Hour	Gender	Mass	SVL	Recapture	PIT	UTME	UTMN	Comments
1945	08/08/07	1629	MT			No	too little	443440	4817427	
1946	08/08/07	1630	MT			No	too little	443440	4817427	
1947	08/08/07	1631	MT			No	too little	443450	4817428	
1948	08/08/07	1632	MT			No	too little	443450	4817428	
1949	08/08/07	1633	MT			No	too little	443463	4817431	
1950	08/08/07	1634	SA			?	uncaptured	443510	4817472	
1951	08/08/07	1635	SA			?	uncaptured	443523	4817486	
1952	08/08/07	1636	MT			No	too little	443530	4817487	
1953	08/08/07	1637	MT			No	too little	443561	4817515	
1954	08/08/07	1638	MT			No	too little	443678	4817562	
1955	08/08/07	1639	MT			No	too little	443503	4817473	
1956	08/08/07	1640	SAF	24.0	65	Yes	4255712D74	443503	4817473	
1957	08/08/07	1641	MT			No	too little	443503	4817473	
1958	08/08/07	1642	MT			No	too little	443503	4817473	
1959	08/08/07	1643	MT			No	too little	443503	4817473	
1960	08/08/07	1644	MT			No	too little	443038	4817487	
1961	08/08/07	1720	SAF	19.0	62	Yes	4719242C76	442924	4817612	caught on return trip

Green = Subadult; Red = Female; Blue = Male; Purple = Metamorph

APPENDIX III
2007 Survey Photos

barrel springs exclosure.JPG

BLM2.JPG

BLM3.JPG

BLM4.JPG

BLM.JPG

camp2007.JPG

campsite oxbow2.JPG

campsite oxbow3.JPG

campsite oxbow4.JPG

campsite oxbow.JPG

camp-storm.JPG

collecting data2.JPG

collecting data3.JPG

collecting data4.JPG

collecting data5.JPG

collecting data6.JPG

collecting data7.JPG

collecting data8.JPG

collecting data9.JPG

collecting data10.JPG

collecting data11.JPG

collecting data12.JPG

collecting data13.JPG

collecting data 14.JPG

collecting data.JPG

crunching data.JPG

Dry Creek2.JPG

Dry Creek3.JPG

Dry Creek4.JPG

Dry Creek5.JPG

Dry Creek6.JPG

Dry Creek7.JPG

Dry Creek8.JPG

Dry Creek9.JPG

Dry Creek10.JPG

Dry Creek11.JPG

Dry Creek12.JPG

Dry Creek13.JPG

Dry Creek14.JPG

Dry Creek15.JPG

Dry Creek16.JPG

Dry Creek17.JPG

Dry Creek18.JPG

Dry Creek19.JPG

Dry Creek20.JPG

Dry Creek21.JPG

Dry Creek22.JPG

Dry Creek23.JPG

Dry Creek.jpg

Dry Creek_BLM2.JPG

Dry Creek_BLM3.JPG

Dry Creek_BLM4.JPG

Dry Creek_BLM5.JPG

Dry Creek_BLM6.JPG

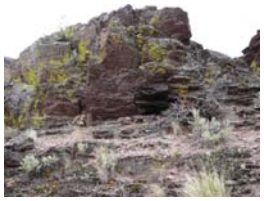
Dry Creek_BLM7.JPG

Dry Creek_BLM.JPG

fenceline on state land2.JPG

fenceline on state land3.JPG

fenceline on state land.JPG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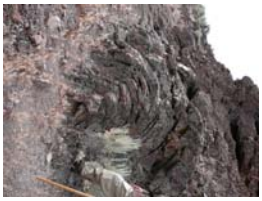
firepit.JPG

first pinch.JPG


folded rock near camp.JPG

frog2.JPG

frog3.JPG

frog4.JPG

frog5.JPG

frog6.JPG

frog7.JPG

frog8.JPG

frog9.JPG

frog10-PIT in thigh.JPG

frog.JPG

gary marisa_natural exclosure2.JPG

gary marisa_natural exclosure3.JPG

gary marisa_natural exclosure.JPG

gary-natural exclosure.JPG

GPSing2.JPG

GPSing.JPG

June2007crew2.JPG

June2007crew.JPG

killdeer.JPG

king brown cabin2.JPG

king brown cabin.JPG

natural exclosure2.JPG

natural exclosure3.JPG

natural exclosure4.JPG

natural exclosure5.JPG

natural exclosure.JPG

nest2.JPG

nest.JPG

photopoint_downstream2.JPG

photopoint_downstream3.JPG

photopoint_downstream4.JPG

photopoint_downstream.JPG

PITtagging2.JPG

PITtagging3.JPG

PITtagging4.JPG

PITtagging5.JPG

PITtagging6.JPG

PITtagging7.JPG

PITtagging8.JPG

PITtagging9.JPG

PITtagging10.JPG

PITtagging11.JPG

PITtagging.JPG

pond near campsite.JPG

pool before natural exclosure2.jpg

pool before natural exclosure3.JPG

pool before natural exclosure4.JPG

pool before natural exclosure5.JPG

pool before natural exclosure.jpg

rayless_daisy-camp2.JPG

rayless_daisy-camp.JPG

shaney on a rock.JPG

shaney's pond.JPG

skeleton scar2.JPG

skeleton scar3.JPG

skeleton scar.JPG

stat land beyond 3rd pinch.JPG

state land2.JPG

state land.JPG

storm2.JPG

storm.JPG

surveying2.JPG

surveying3.JPG

surveying4.JPG

surveying5.JPG

surveying6.JPG

surveying7.JPG

surveying9.JPG

surveying state land2.JPG

surveying state land.JPG

surveying.JPG

swallows2.JPG

swallows3.JPG

swallows4.JPG

swallows5.JPG

swallows.JPG

unknown plant.JPG

waders.JPG

west end of state land4.JPG

west end of transect_state2.JPG

west end of transect_state3.JPG

west end of transect_state.JPG

barrel springs exclosure2.JPG

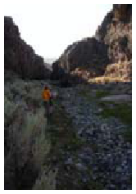
barrel springs exclosure3.JPG

barrel springs exclosure4.JPG

barrel springs exclosure5.JPG

barrel springs exclosure6.JPG

barrel springs exclosure7.JPG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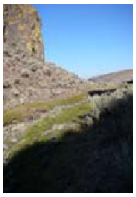
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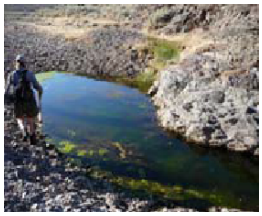
Aug_BLM5.JPG

Aug_BLM6.JPG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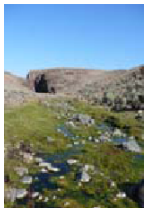
Aug_BLM10.JPG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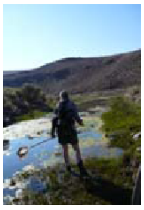
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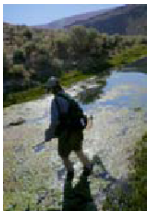
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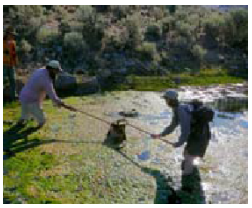
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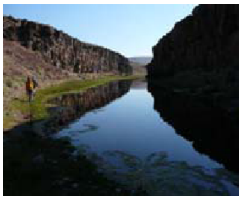
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Aug_BLM.JPG

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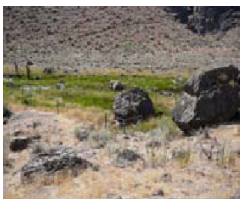
Aug_campsite oxbow4.JPG

Aug_campsite oxbow5.JPG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Aug_collecting data.JPG

Aug_Dry Creek2.JPG

Aug_Dry Creek3.JPG

Aug_Dry Creek4.JPG

Aug_Dry Creek.JPG

Aug_first pinch.JPG

Aug_frog in pond2.JPG

Aug_frog in pond3.JPG

Aug_frog in pond.JPG

Aug_iridescent tree frog2.JPG

Aug_iridescent tree frog.JPG

Aug_photopoint_upstream2.JPG

Aug_photopoint_upstream.JPG

Aug_pinch crossing2.JPG

Aug_pinch crossing3.JPG

Aug_pinch crossing4.JPG

Aug_pinch crossing5.JPG

Aug_pinch crossing.JPG

Aug_PITtagging2.JPG

Aug_PITtagging3.JPG

Aug_PITtagging4.JPG

Aug_PITtagging.JPG

Aug_state.JPG

Aug_waterbug2.JPG

Aug_waterbug.JPG

P1010162.JPG

Aug_GPSing.JPG

Aug_state land.JPG

Aug_skeleton scar.JPG

Aug_skeleton scar2.JPG

Aug_skeleton scar and Dry Creek.JPG

Aug_Dry Creek5.JPG

Aug_Dry Creek6.JPG

Aug_Dry Creek7.JPG

Aug_Dry Creek8.JPG

Aug_Dry Creek9.JPG

Aug_east end state land.JPG

Aug_east end state land2.JPG

Aug_cattle on BLM.JPG