



Prepared for the Vale District Bureau of Land Management

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Introduction

This report summarizes the results of the fourth year of the Dry Creek Monitoring project for Columbia spotted frogs (*Rana luteiventris*), with incidental observations of other herpetofauna. The protocol followed for this survey is described in Appendix I.



Figure 1. Wet habitat connectivity in 2004.

Although the summer of 2004 was another drought year, aquatic habitat connectivity was not as limited as that observed in 2001, 2002, and 2003, and ambient air temperatures during surveys were considerably cooler. Most noteworthy this year was that several stream reaches that were dry in August of previous years maintained water (Figure 1). The only dry stretch of the survey transect was on the BLM section, between the road crossing and the first scour pool before the canyon. Additionally, this year, egg mass deposition was documented by Cynthia Tait, fisheries biologist, Vale District BLM. These observations, along with subsequent capture locations are combined in this report to describe new information on breeding and habitat connectivity.

Dry Creek was visited three times this summer; by Cynthia Tait on April 5 for breeding site identification, from June 5 through June 7 to conduct the mark-recapture survey (three days to make two complete passes) and measure habitat parameters; and then on August 20 to determine annual recruitment success and to measure habitat parameters again.

Monitoring Results

Date	Time	Water	DO	Con	pН	SSAR	SVSR	VUBA	L-P	Recruitment
		temp							Population Estimate	
									Esumate	
6 Jun 01	1310	17.3C	14.65	191.5	9.2	1-25%	4	0-25%	74	-
4 Aug 01	1335	22.3C	16.46	246.4	9.3	26-50%	2	76-100%	-	yes
6 Jun 02	1315	22.5	*	*	*	26-50%	3	51-75%	**	-
11 Aug 02	1300	21.8	***	340	8.9	51-75%	2	76-100%	-	yes
6 Jun 03	1200	20.9	12.6	270	9.1	51-75%	4	0-25%	62	-
9 Aug 03	1355	24.9	16.3	310	8.9	51-75%	3	26-50%	-	yes
6 Jun 04	1515	22.2C	13.8	250	8.9	51-75%	3	51-75%	168	_
20 Aug 04	1440	26C	14.8	280	9.0	26-50%	3	26-50%	-	yes

Table 1. Monitoring data.

(for description of habitat measures, see Appendix I.) *equipment failure **unable to calculate LP due to PIT-tag reader failure

***not recorded

Standard photo point and water chemistry point is mid-way of the State transect (Figure 2).



Figure 2. Dry Creek standard photo point, June 6, 2004, and August 20, 2004.

APRIL 2004

On April 5, the following breeding sites were observed: the confluence of Dry Creek and Butte Creek (one egg mass), Dry Creek scour pool below the third pinch (seven egg masses), and Dry Creek near the end of the State transect (three to four egg masses).

JUNE 2004

We began our survey of the Dry Creek transect on June 5, 2004 at 1410 hrs (flat tire on the way in delayed survey start). The weather was cool (80's) and windy. Proceeding east from the BLM start point, we surveyed to the confluence with Butte Creek in one hour. Only four

subadults and one adult female were observed. The female was a recapture from August 2003. Our capture success in this stream reach seems to be related to wind conditions. The windier it is, the fewer frogs that we observe, and this is the windiest section of the entire survey transect. We saw one great horned owl on the cliff (same location as previous years). Between the canyon and Butte Creek, we observed an injured coyote attempting to walk by balancing on its two front legs. Both rear legs were broken mid-femur and bone and muscle tissues were exposed (Figure 3). The coyote was found dead on our second pass two days later.



Figure 3. Injured coyote.

The second day (June 6), we hiked downstream to the State transect endpoint to work our way back towards camp. The previous night was very windy and cold; therefore, we waited to begin the survey until 1000, when sunlight reached the canyon floor. The water temperature was 11.1C. As in previous years, many fish had a fungus; but crayfish and snails were not as abundant as in 2003.

During this survey, most of the frogs observed were in oxbows, sidebow channels, or along the edge of scour pools (36), as opposed to in the main stream channel (14). Fourteen adult females were captured, four of which were previously PIT-tagged (Table 2). One of these females was first captured as an adult on August 11, 2002 (making her from the cohort of 2001

or earlier). This is the first individual in Dry Creek documented as over two years in age, and it is likely that she was at least four years old, because her at her first capture in August of 2002, she was fully mature and possibly gravid. On the first pass through the State section, only four adult males were captured, all new captures, in oxbow pools. Twenty-three subadults were captured on June 6.

DATE	HOUR	GEN.	MASS	SVL	Recap?	PIT tag #	UTM-E	UTM-N	comment
7-Jun-03	1003	sa	9.5	48	no	43504D4627	443489	4817431	isolated oxbow
6-Jun-04	1102	F	27.5	67	YES	43504D4627	443486	4817438	oxbow pool, breeding site
7-Jun-04	1130	F	28	67	YES	43504D4627	443489	4817431	oxbow breeding site
7-Jun-03	1002	sa	14.0	52	no	43573B5E21	443489	4817431	isolated oxbow
6-Jun-04	1104	F	28	66	YES	43573B5E21	443486	4817438	oxbow pool
6-Jun-03	1215	sa	11.0	44	no	435A336346	442839	4817608	oxbow pool
7-Jun-03	1249	sa	11.0	44	YES	435A336346	442839	4817608	oxbow pool
6-Jun-04	1410	F	30.5	69	YES	435A336346	442843	4817613	oxbow pool
11-Aug-02	1507	F	38.8	73	no	434E2B7F25	443169	4817464	probably gravid
7-Jun-03	1147	F	36.0	74	YES	434E2B7F25	443165	4817469	
6-Jun-04	1304	F	48	78	YES	434E2B7F25	443293	4817422	breeding site - scour pool
7-Jun-04	1316	F	48	78	YES	434E2B7F25	443306	4817425	stream - scour pool

Table 2. Females from first pass that were recaptured across years.

On June 7, we conducted the second pass through the State transect. The weather was again cooler than normal, with some periods of clouds and drizzle. Because frogs were already up at 0900 at the oxbow pool below the campsite, we surveyed there before heading down to the transect endpoint. Sixteen adult female and eight adult male frogs were captured throughout the transect on June 7; two females and one male were from 2003 (not included in the June 6 total or in Table 2). So, a total of six adult females and one adult male were captured in at least one previous year. Forty-eight subadults were captured on June 7. Because we ran out of PIT-tags, forty-two captured frogs were not PIT-tagged. However, this did not affect the population estimate because all individuals captured on the first pass were marked. The Lincoln-Peterson Population estimate for the State transect was calculated as follows:

First pass x second pass / recaptures = $42 \times 68 / 17 = 168$.

The gender and age distribution data for the State section is listed in Table 3.

YEAR	FEMALES	MALES	SUBADULTS	UNCAPTURED
2001	9	2	39	5
2002	9	2	20	8
2003	9	2	41	9
2004	26	10	61	14

Table 3. State section population (June survey results) 2001-2004.

One unidentified frog was observed on June 7. Between the first pinch and the start point, an adult-sized frog jumped from the bank into a sidebow channel in a fashion similar to that of a bullfrog (skipping across the surface). Because the manner in which it flushed was so different from spotted frogs (which usually just dive), we waited approximately 20 minutes for it to resurface. Spotted frogs usually resurface within 5 minutes, bullfrogs commonly stay down. This frog did not resurface; efforts to scoop through the substrate were not successful in capturing it either. Because bullfrogs are known to be present at lower elevations downstream, it is possible that one may have traveled upstream to this point.

Two subadult spotted frogs were observed with deformities (Figure 4). The right eye of one subadult was absent and the skin covering was closed. The other frog was missing multiple digits on both hands (may not have been due to predators). One subadult was observed with



Figure 4. Deformities observed in the June surveys.



Figure 5. Frog with funguslike skin condition.



Figure 6. Stomach contents. Fly and damselfly recognizable.

sloughing skin, similar to that of frogs diagnosed with Chytridiomycosis (Figure 5). No subsurface hemorrhaging was noted, so the frog was not collected.

Two subadult frogs regurgitated their stomach contents during measuring. This is an uncommon occurrence during handling; photos were taken to document the variety of insect prey (Figure 6).

As in 2001 and 2003, snakes were counted in the first pass of the June survey. Totals for all species are included in Table 4.

Table 4. Snake observations 2001-2004.

	Thamnophis elegans	Thamnophis sirtalis	Pituophis catenifer	Coluber constrictor	Crotalus viridis
2001	*	*	2	2	2
2002	14	1	1	1	0
2003	40	2	4	2	1
2004	14	0	0	1	0

*estimate 50 T. elegans + T. sirtalis – exact numbers not recorded in 2001.

Other species observed during the spring survey included:

Pacific treefrog (Figure 7) Blackbird Fence lizard (Figure 7) Killdeer Kingfisher Chukar Prairie falcon Poorwill California quail Flicker **S**wallows Starlings Horned lark Canyon wren Kestrel Turkey vulture Rock Dove Muskrat Coyote Cottontail Badger White-tailed antelope squirrel Golden mantled ground squirrel Swarm of bees Approximately 8 16"-20" redband trout

Green-winged teal (nesting) (Figure 7) Great horned owl Piute ground squirrel



Figure 7. Green-winged teal nest under sagebrush, Pacific treefrog, and fence lizard.

Woody vegetation continued to increase in height on the deposition bar in the natural exclosure. Willows that were knee-height in 2001 varied in height from four to ten feet (Figure 8). Cattails continue to thrive in the natural exclosure, but new plants were observed in the second section of the State transect, just upstream of the third pinch. Additionally, cuttings from cattail plants were noted in an oxbow, possibly from muskrat activity (Figure 9). Muskrat runs under banks still appear to be a likely hibernation option for spotted frogs in this transect (Figure 10).



Figure 8. Willows in natural exclosure.



Figure 10. Muskrat run under bank.



Figure 11. Surface water was no longer available on part of the BLM section.



Figure 9. Cattail cuttings in oxbow pool.

AUGUST 2004

We began our survey of the Dry Creek transect on August 20, 2004 at 0815 hrs, beginning at the BLM section and proceeding east. The weather was cool with an occasional light breeze. As in 2003, we noted the absence of biting flies (which were horrendous in August 2001 and 2002). Varied levels of livestock use were observed in every pasture throughout the transect; on August 20, cattle were present on the BLM section at King Brown cabin and at Butte Creek, and on the State section between the start point and the campsite.

The only dry portion of the survey transect in August 2004 was the first hundred yards of the BLM section (Figure 11). From that point downstream to the end of the State transect, the stream corridor maintained wet connectivity. All adult frogs (5 females and 3 males) captured during the recruitment survey were found in pool-type habitat or in the natural exclosure. However, of 223 metamorphs that were observed, 186 (83%) were located in stream-type habitats (stream channel, side channels, scour pools in main channel, recharge streams, and along the edge in the natural exclosure), distributed throughout most



Figure 12. This female may be a breeder in 2005.

Dead fish (2-4" size range) were encountered throughout the survey transect in August. Fungal infections were common on fish and one redband trout appeared to have an infection on an eye injury (Figure 14). of the survey transect. Two of the five adult females appeared to be gravid (Figure 12). One was captured at the oxbow pool on the BLM transect, and the other was captured in the oxbow pool below the campsite on the State transect.

One dead metamorph was collected and sent for necropsy. This individual was found floating on an algal mat (Figure 13) in the large scour pool in the BLM transect. Because *Chytridiomycosis* has been documented in other spotted frog populations, and symptoms have been observed in Dry Creek, these test results will be important to report if they come back positive for the fungus.



Figure 13. Dead metamorph collected for necropsy.



Figure 14. Large redband trout with eye injury.

Vegetation in the natural exclosure was increasing in height, density, and diversity (Figure 15). Spotted frogs were observed in the thick cattails as well as along the edge of the stream channel and backwater pool. It is very likely that more frogs were present in this area – cover was very thick and made capturing difficult. There was evidence of deer use in the natural exclosure – both fecal pellets and beds – however, there were no signs that livestock were present between the rock barriers.



Figure 15. The natural exclosure in August 2004, showing the cattails in the foreground of the left photo. Woody species observed here included willow, rose, and dogwood.

Within the survey transect, Dry Creek has numerous recharge areas. These are probably due to springs or subsurface stream flow that resurfaces. The water emerges in isolated pools, side channels, and in the main channel, and can be easily observed because of water clarity, substrate, and temperature differences. Metamorphs were commonly observed in the recharge pools and sidebow channels. One particular recharge pool on the State section has been noted to have a high density of subadult and metamorph frogs across the survey years (Figure 16). It is possible that it could serve as a hibernation site if adequate interstitial spaces are present.



Figure 16. Recharge pool below campsite in June (left) and August (right). The outflow from this pool creates a channel that connects to the main stream. Young spotted frogs are commonly observed in this habitat.

Because of the high number of metamorphs observed this year, we were unable to complete the entire survey transect in one day. We ended the survey at the eastern fence on the State transect at 1650 hrs, however it is very likely that more metamorphs would have been observed between

there and the transect end because the last breeding site was located in that section. Realizing that numbers were much higher this year, we did not weigh and measure every metamorph, either. Only GPS locations were recorded for most metamorphs. Although the August survey is intended to only document successful recruitment, numbers of observations can still result in relative trends (Table 5).

YEAR	NUMBER OF METAMORPHS
August 4, 2001	37
August 11, 2002	71
August 9, 2003	98
August 20, 2004	223*

Table 5	Numbers of metamor	nhs observed	2001-2004	(entire survey	transect)
radic J.	rumbers of metamor	phis observed.	2001-200 1	Chunc Survey	uanseet).

*the 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 these two data sets.

Table 6. The relationship between the number of metamorphs observed and the number of subadults observed the following year (entire survey transect).

YEAR	NU	MBER OF SUBADULTS
June 2001	53	(? metamorphs in 2000)
June 2002	29	(37 metamorphs in 2001)
June 2003	73	(71 metamorphs in 2002)
June 2004	74	(98 metamorphs in 2003)

Capture locations for all age classes for both the June and August 2004 surveys are included in Figure 17. Figure 18 shows the relationship between capture locations for metamorphs across years.

×

Figure 17. Capture locations for 2004.

Figure 18. Metamorph locations each August, 2001-2004.

×

Discussion

Four of the five years of this monitoring effort have been completed and the following conditions are noted at this time:

- There has been an increase in numbers of observations of all life stages.
- Habitat connectivity (wet corridor) has increased in 2003 and 2004.
- Ambient temperatures were milder in 2004.
- Predator (garter snake) numbers cycled high (2001)-low (2002)-high (2003)-low (2004).
- Vegetative cover along the riparian corridor has improved since 2002.
- Woody vegetation is increasing in density and height in the natural exclosure.
- Symptoms of disease have been observed.
- Suitable breeding sites are widespread, but not being used (not a limiting factor).

A common misconception is that spotted frogs require ponds or oxbows for breeding. In the 2002 Monitoring Report, it was stated that "oxbow and sidebow pools provide slack water for frog breeding and tadpole development, but deep pools with vertical canyon walls contain large trout and may negatively affect continuous movement of frogs along the creek between breeding, foraging, and hibernation sites due to predation." This statement can no longer be supported by recent observations.

The 2001 Monitoring Report documented two sites along the State transect that were predicted to be breeding sites due to tadpole concentrations. Both sites were confirmed by egg mass observation in 2004, and both sites are connected to the main stream channel. Although oxbow ponds are available throughout the survey area, none appear to be breeding sites at this time. An additional breeding site was observed at the confluence of Butte Creek with Dry Creek, but it is also an example of egg deposition in slack water along the main stream, as opposed to in an oxbow pool. It is possible that oxbow pools may have once been used as breeding sites; however, their isolated nature does not allow tadpole dispersal, concentrates individuals (resulting in greater predation pressure), and could facilitate the spread of disease. Because spotted frogs exhibit natal site fidelity, the loss of all individuals at an oxbow pool (from any of the reasons mentioned above) could result in a low likelihood of that breeding site's persistence over time. Tadpoles have been observed continuously along the stream channel, further supporting the importance of a connected wet corridor for breeding and tadpole development (as opposed to oxbow and sidebow pools).

Large redband trout inhabit the deep pools with vertical canyon walls, as well as scour pools and stream reaches with adequate water. However, it is not likely that these fish are preying upon large quantities of tadpoles or frogs. Dry Creek supports a variety of macroinvertebrates and a healthy scud population, favored prey species of redband trout. Thus, trout are probably not affecting frog movement in Dry Creek. The 2005 survey will include an analysis of stomach contents of the large redband trout (stomach pump individuals caught by line).

The distribution of tadpoles, metamorphs, and subadults is directly related to wet habitat connectivity. Because a wet migratory corridor was maintained along most of the survey transect in 2004, distribution of frogs and tadpoles was more widespread than in previous years.

It is likely that tadpoles are less susceptible to predation and disease if they can spread out across a larger habitat space. The high number of metamorphs in 2004 may be a result of lower tadpole mortality. Although predator numbers were low in 2004 (supporting this conclusion), it should also be noted that as vegetation increased along the survey transect, predators were more difficult to observe. They also were not as likely to be concentrated in easily-visible pools (if their prey was spread out across wider habitat areas). The importance of wet connectivity between suitable habitat patches cannot be underestimated as tadpoles transform and metamorphs begin to forage and seek hibernation sites (from July to November). If the habitat at that time provides adequate cover from predators, suitable microclimate conditions, foraging opportunities, and wet connectivity to overwintering sites, then the likelihood of survivability across the winter increases. Because the youngest (smallest) frogs are the ones active during this time period, effects of dessication and extreme temperatures are much greater than it would be on the larger-bodied adults. The subadult cohort of 2005 is predicted to be larger than those of 2001-2004 because water remained in the migratory corridor, riparian vegetative cover improved (in most areas), and metamorph numbers were high.

Numerous sites that appear to be suitable for breeding are not being used by frogs in this transect. This is not surprising for a species with strong natal site fidelity. Oxbow pools, backwater eddies, sidebow channels, scour pools, and streambanks are widely available, but only three communal egg-laying sites are known (and the numbers of egg masses there are low). Similar sites in other spotted frog populations support 25-50 egg masses each, where the largest communal site in Dry Creek contained seven egg masses. It is likely that the individuals in this occurrence are all closely related; cohorts return to their natal sites where breeding opportunities are more likely to be successful. Adult numbers are low compared to other spotted frog occurrences; thus it is very important for the habitat to facilitate movement to breeding sites and throughout the frog's migratory routes. Spotted frogs have a relatively short 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. (Thus the importance of hibernacula in close proximity to breeding sites, and suitable migratory corridors with no barriers to movement.)

Adults in late summer are rarely observed along the migratory corridor (the stream), but instead they are found in oxbow pools, or more likely are not observed at all. It is possible that they have already traveled to their overwintering sites and have attained sufficient metabolic reserves to make it through hibernation. The migratory corridors become avenues for foraging and movement for the young of the year, to gain body mass and find locations to hibernate. It is possible that most of the Dry Creek survey transect is within migratory routes of frogs that breed and hibernate at sites upstream (most likely) or downstream. 2001-2004 data suggests that metamorphs and subadults tend to migrate upstream (the initial segment of migratory routes), but recapture rates after two years are too infrequent to identify return migration to natal sites.

One interesting habitat characteristic of the Dry Creek system is the frequency of water recharge areas. Several pools remain clear, at a constant depth, with a cobble substrate, and their temperature remains constant despite changing habitat conditions. Recharge also occurs along the bottoms of some of the scour pools, as evidenced by substrate sorting. The extent to which water is filtered in the subterranean flow is unknown, but temperature is modified and it appears clear upon resurfacing. The ability of the system to improve its own water quality may be very

important in a desert ecosystem such as this. Whether or not these recharge areas are used by frogs as hibernations sites is unknown; however, adults have not been observed staging there in late summer.

The fifth and final year of this monitoring study will be in 2005. In addition to following the general protocol, the survey will focus on the following information needs:

- survivorship from metamorph to subadult to adult,
- egg deposition, breeder identification (if possible), and
- analysis of large trout stomach contents.

APPENDIX I.

MONITORING METHODS

Two population estimate methods will be used in this Monitoring Plan: mark-recapture and visual encounter surveys. Mark-recapture methods can provide accurate estimates of population size within the constraints of the following assumptions: boundaries must be accurately assessed, and ideally, immigration and emigration must not exist, and births and deaths must not occur. 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; each frog is recorded only once; and there are no observer-related effects. These two methods will be 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 will be used to calculate the Lincoln Index (Peterson Estimate) to estimate *occurrence size* in the spring and visual encounter numbers to assess *breeding success* in the late summer. The Lincoln-Peterson Index is calculated as follows:

N=rn/m

N=occurrence size 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

For example, if on the first day 30 frogs are captured, marked, and released and on the second day, 28 frogs are caught, of which 20 had been previously marked, then using the equation, N=(30)(28)/20, N=42.

Two people will 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 points (determined by ownership, accessibility, and occurrence boundaries from previous surveys) will be staked and flagged, and GPS locations will be recorded at the first survey in the spring of 2001. Attempts will be made to capture every frog within the delimited area within a specified time frame. Frogs will be toe-clipped according to the Hero toe–clipping system (or tagged with Passive Integrated Transponder tags, if available). All clips will represent the year of capture:



As of 2003, toe-clip marking will no longer be used at this monitoring site.

Parameters to be measured at each monitoring site, once in the spring and once in the late summer include: •Water chemistry: dissolved oxygen, temperature, pH, and conductivity

•Habitat/land use: streambank alteration, vegetative stability, and vegetation use by animals (Platts 1987).

Data will be recorded in a standard log book. The site will be photographed in the spring and late summer from a standard point (to be staked and flagged in the spring of 2001).

A report will be compiled annually and submitted to the BLM. The report will consist of tables summarizing population numbers and maps of the area surveyed. Water chemistry and habitat/land use measures will be discussed along with their relevance to population trends. Raw data and field notes will be included as appendices.

APPENDIX II 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.

Streambank vegetative stability rating (SVSR)

Rating	Description
4 (excellent)	Over 80% of the streambank surfaces are covered by vegetation in vigorous condition or by boulders and rubble. If the streambank is not covered by vegetation, it is protected by materials that do not allow bank erosion.
3 (good)	50-79% of the streambank surfaces are covered by vegetation or by gravel or larger material. Those areas not covered by vegetation are protected by materials that allow only minor erosion.
2 (fair)	25-49% of the streambank surfaces are covered by vegetation or by gravel or larger material. Those areas not covered by vegetation are covered by materials that give limited protection.
l (poor)	Less than 25% of the streambank surfaces are covered by vegetation or by gravel or larger material. That area not covered by vegetation provides little or no control over erosion and the banks are usually eroded each year by high water flows.

APPENDIX II (continued)

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.

date	hour	gender	mass	SVL	recapture	PIT	UTME	UTMN	comments
6-Jun-01	1248					Coluber constrictor	442427	4817548	
6-Jun-01	1259					Pituophis catenifer	442201	4817175	
						start & water			
6-Jun-01	1310					chemistry	442073	4816978	large boulder in creek, near private boundary
6-Jun-01	1350	m	21.0	62	no	4239200D12	442241	4817159	oxbow
6-Jun-01	1417	sa	9.5	47	no	42393C281F	442373	4817305	natural exclosure; sa's are probably females
6-Jun-01	1419	sa	11.6	52	no	422D3F633E	442373	4817305	natural exclosure; sa's are probably females
6-Jun-01	1422	sa	13.7	53	no	4238663773	442373	4817305	natural exclosure; sa's are probably females
6-Jun-01	1424	sa	10.1	49	no	42392F2C1A	442373	4817305	natural exclosure; sa's are probably females
6-Jun-01	1426	sa	12.6	52	no	422D47213E	442373	4817305	natural exclosure; sa's are probably females
6-Jun-01	1428	f	45.7	82	no	4238327125	442373	4817305	Natural exclosure
6-Jun-01	1500	sa	14.0	53	no	42384B6336	442373	4817305	natural exclosure; sa's are probably females
6-Jun-01	1517	f	40.0	80	no	422D285922	442407	4817317	eddy
6-Jun-01	1536	f	16.6	58	no	42391D6023	442437	4817405	had swollen toe on right rear
6-Jun-01	1546	sa	9.7	49	no	41620A620B	442454	4817407	stream
6-Jun-01	1551	sa	13.1	51	no	423827112B	442457	4817427	stream
6-Jun-01	1601	sa	12.1	53	no	423831600B	442503	4817431	stream
6-Jun-01	1605	sa	10.7	50	no	4238737469	442502	4817435	stream
6-Jun-01	1852				no	Sceloporus occidentalis	442671	4817752	at campsite
									at the edge of rock outcrop, facing east
6-Jun-01						photo point	442164	4817129	(downstream)
7-Jun-01	1012	sa	10.0	49	no	4238262558	442582	4817555	oxbow; just north of the first pinched canyon
7-Jun-01	1028	sa	10.0	48	no	422D22746E	442681	4817607	sidebow
7-Jun-01	1035	f	25.4	66	no	42381F0D25	442681	4817600	oxbow
7-Jun-01	1036	m	19.5	60	no	4238596109	442681	4817600	oxbow
7-Jun-01	1037	sa	6.6	44	no	4238167710	442681	4817600	oxbow
7-Jun-01	1041	sa	9.0	47	no	41617D627D	442681	4817600	oxbow
7-Jun-01	1103	sa	14.7	56	no	42384B4216	442745	4817588	stream
7-Jun-01	1115	sa	13.7	53	no	42393F033E	442821	4817592	stream
7-Jun-01	1144	sa	11.3	49	no	4238517003	442843	4817601	sidebow
7-Jun-01	1145	sam	11.1	48	no	422D3B1E49	442843	4817601	sidebow
7-Jun-01	1159					uncaptured	442878	4817597	sidebow; PDOP 18
7-Jun-01	1210	saf	13.5	55	no	423832241B	442918	4817603	stream; PDOP 10
7-Jun-01	1347	saf	14.0	53	no	4239154360	443233	4817452	oxbow

APPENDIX III

7-Jun-01	1353	saf	10.1	49	no	42392B780B	443254	4817447	sidebow
7-Jun-01	1405					uncaptured	443259	4817439	sidebow
						breeding site; large			
7-Jun-01	1410					tads	443259	4817439	sidebow; photo
7-Jun-01	1411	saf	15.0	54	no	416201747F	443270	4817429	sidebow
7-Jun-01	1435	sa				uncaptured	443486	4817432	sidebow
7-Jun-01	1439					Pituophis catenifer	443499	4817448	
7-Jun-01	1443	sa	9.0	47	no	4238436C2A	443516	4817474	stream
7-Jun-01	1520					Coluber constrictor	443909	4818119	75m north of endpoint
						breeding site?;			
7-Jun-01	1531					tadpoles	443807	4817944	sidebow
7-Jun-01	1536	sa	9.6	50	no	423917671E	443806	4817960	sidebow
7-Jun-01	1546	sa	10.2	49	no	432B183D72	443805	4817970	sidebow
7-Jun-01	1550	sam	18.2	50	no	4238796209	443809	4817959	sidebow
7-Jun-01	1608	sa	9.1	46	no	42384A5F03	443903	4818064	stream
7-Jun-01	1612					endpoint	443909	4818069	large boulder in creek; photo
8-Jun-01	1045	m	22.0	63	R	4239200D12	442252	4817148	sidebow
8-Jun-01	1122	sa	10.0	48	R	42393C281F	442371	4817295	natural exclosure
8-Jun-01	1156	saf	10.5	50	no	422D340B26	442407	4817347	pool in stream
8-Jun-01	1205	saf	15.3	53	no	42386B5F00	442405	4817354	stream
8-Jun-01	1212	saf	17.0	58	R	42391D6023	442421	4817395	stream
8-Jun-01	1220	saf	17.5	58	no	42390D7E59	442429	4817411	stream
8-Jun-01	1237	sa	9.3	49	R	41620A620B	442447	4817424	stream
8-Jun-01	1300	sam	9.5	48	R	4238262558	442587	4817555	oxbow
8-Jun-01	1313	sa	9.4	47	R	422D22746E	442669	4817601	oxbow
8-Jun-01	1319	sa	9.0	47	R	41617D627D	442676	4817608	oxbow
8-Jun-01	1320	f	37.0	78	no	4238333D14	442676	4817608	oxbow
8-Jun-01	1322	sa	6.5	43	R	4238167710	442676	4817608	oxbow
8-Jun-01	1330	f	24.5	65	R	42381F0D25	442676	4817608	oxbow
8-Jun-01	1545	sa	12.3	53	R	42393F033E	442814	4817611	stream
8-Jun-01	1555	sa	11.6	52	no	4238291117	442842	4817610	sidebow
8-Jun-01	1605	sam	11.1	48	R	422D3B1E49	442881	4817602	sidebow
8-Jun-01	1614	sa	13.0	53	R	423832241B	442921	4817612	stream
9-Jun-01	925			~24"		Crotalus viridis	442793	4817850	on west-facing slope
9-Jun-01	950			~42"		Crotalus viridis	443011	4817493	along stream, drinking water
9-Jun-01	955	sa				uncaptured	443099	4817475	sidebow
9-Jun-01	956					R. lut tadpoles	443099	4817475	sidebow

9-Jun-01	1006	f	29.5	71	no	423925196E	443175	4817473	stream; scour pool
9-Jun-01	1015	sa	10.3	49	no	423922023E	443258	4817453	stream
9-Jun-01	1018	saf	13.6	52	no	42384A5A3A	443240	4817457	sidebow
9-Jun-01	1026	sam	10.8	48	no	42383E6217	443250	4817447	sidebow
9-Jun-01	1032	sa	10.1	49	R	42392B780B	443256	4817455	stream
9-Jun-01	1041	sa	11.1	50	no	4238330E7E	443262	4817451	stream
9-Jun-01	1045	sam	12.6	52	no	42387B2D5C	443265	4817443	sidebow
9-Jun-01	1100	sam	11.0	53	no	4238426A10	443300	4817425	stream; scour pool
9-Jun-01	1115	sa	10.0	49	no	432D723A12	443528	4817493	in stream at fence
9-Jun-01	1140			68		R. lut tadpoles	443804	4817858	stream; scour pool
9-Jun-01	1145	f				uncaptured	443800	4817855	sidebow
9-Jun-01	1151	f	36.0	77	no	4328535D4D	443803	4817873	sidebow
9-Jun-01	1152	f	26.0	68	no	432D334857	443803	4817873	sidebow
9-Jun-01	1214	sa	10.2	48	no	42391A493A	443810	4817948	sidebow
4-Aug-01	1135	sa				uncaptured	442198	4817052	sidebow
4-Aug-01	1200	f				uncaptured	442371	4817309	natural exclosure
									in rainpool in rock next to sidebow, covered in
4-Aug-01	1217	f	23.6	65	R	41620A620B	442407	4817306	duckweed
1 Aug 01	1055	mat	4 E	26	no; toeclip	too littlo	440590	4047555	avbau
4-Aug-01	1200	mt	4.5		#1		442002	4017535	OXDOW otroom
4-Aug-01	1307	m			no: tooolin	uncaptured	442031	4017000	Stream
4-Aug-01	1311	mt	4.0	31	#1	too little	442650	4817596	stream
4-Aug-01	1318	mt	-			uncaptured	442679	4817597	stream
4-Aug-01	1324	m	11.9	50	no	432C2C0452	442677	4817613	oxbow with big boulder below campsite
Ŭ					no; toeclip				
4-Aug-01	1330	mt	4.5	33	#1	too little	442699	4817617	stream
4-Aug-01	1334	mt				uncaptured	442699	4817617	stream
					no: toeclip				
4-Aug-01					no, tooonp				
4-Aug-01	1342	mt	5.5	38	#1	too little	442757	4817589	stream
	1342 1347	mt mt	5.5	38	#1	too little uncaptured	442757 442843	4817589 4817605	stream sidebow
1 Aug 04	1342 1347	mt mt	5.5	38	mo; toeclip	too little uncaptured	442757 442843	4817589 4817605	sidebow
4-Aug-01	1342 1347 1348	mt mt mt	5.5 5.0	38	no; toeclip #1	too little uncaptured too little	442757 442843 442843	4817589 4817605 4817605	stream sidebow sidebow
4-Aug-01 4-Aug-01	1342 1347 1348 1353	mt mt mt	5.5 5.0 4.5	38 37 35	no; toeclip #1 no; toeclip #1 no; toeclip #1	too little uncaptured too little too little	442757 442843 442843 442878	4817589 4817605 4817605 4817595	stream sidebow sidebow oxbow
4-Aug-01 4-Aug-01 4-Aug-01	1342 1347 1348 1353 1354	mt mt mt mt	5.5 5.0 4.5	38 37 35	no; toeclip #1 no; toeclip #1 no; toeclip #1	too little uncaptured too little too little uncaptured	442757 442843 442843 442878 442878	4817589 4817605 4817605 4817595 4817595	stream sidebow sidebow oxbow oxbow
4-Aug-01 4-Aug-01 4-Aug-01 4-Aug-01	1342 1347 1348 1353 1354 1355	mt mt mt mt mt	5.5 5.0 4.5	38 37 35	no; toeclip #1 no; toeclip #1 #1	too little uncaptured too little too little uncaptured uncaptured	442757 442843 442843 442878 442878 442878 442878	4817589 4817605 4817605 4817595 4817595 4817595	stream sidebow sidebow oxbow oxbow oxbow oxbow
4-Aug-01 4-Aug-01 4-Aug-01 4-Aug-01 4-Aug-01	1342 1347 1348 1353 1354 1355 1356	mt mt mt mt mt mt	5.5 5.0 4.5	38 37 35	no; toeclip #1 no; toeclip #1 #1	too little uncaptured too little too little uncaptured uncaptured uncaptured	442757 442843 442843 442878 442878 442878 442878 442878	4817589 4817605 4817605 4817595 4817595 4817595 4817595	stream sidebow sidebow oxbow oxbow oxbow oxbow oxbow

4 Aug 04	4057	ing t				un conturo d	140000	4047004	before third pinch along bank; pdop too high
4-Aug-01	1357	mt			nou topolin	uncaptured	442892	4817601	
4-Aug-01	1408	mt	42	35	#1	too little	442979	4817508	stream
4-Aug-01	1415	mt				uncaptured	443050	4817488	stream: scour pool
4-Aug-01	1416	mt				uncaptured	443048	4817471	stream: scour pool
i i i i i i i i i i i i i i i i i i i									floating on algal matt in scour pool; very skittish,
4-Aug-01	1418	f				uncaptured	443054	4817485	did not resurface
					no; toeclip				
4-Aug-01	1419	mt	3.0	29	#1	too little	443057	4817482	stream; scour pool
4-Aug-01	1420	mt				uncaptured	443048	4817471	stream; scour pool
4-Aug-01	1421	mt				uncaptured	443048	4817471	stream; scour pool
4-Aug-01	1422	mt				uncaptured	443091	4817484	stream
					no; toeclip				
4-Aug-01	1432	mt	3.8	34	#1	too little	443131	4817464	stream
4 Aug 01	1/20	mt	2.4	21	no; toeclip #1	too littlo	112172	4917470	stroom
4-Aug-01	1430	IIIt	3.4	51	# I		443172	4017470	Stiealli
4-Aug-01	1439	mt	3.0	30	#1	too little	443172	4817470	stream
			0.0		no; toeclip				
4-Aug-01	1445	mt	3.1	30	#1	too little	443173	4817463	stream
4-Aug-01	1447	mt				uncaptured	443182	4817465	stream
4-Aug-01	1455	mt				uncaptured	443194	4817464	stream
4-Aug-01	1456	f	23.8	65	no	4239154360	443191	4817458	stream
4-Aug-01	1457	mt				uncaptured	443202	4817464	stream
					no; toeclip				
4-Aug-01	1507	mt	4.7	35	#1	too little	443362	4817400	stream
4-Aug-01	1510	m	22.0	63	no	4238206F38	443369	4817405	stream
4.4	4540		0.4		no; toeclip		4.400.000	4047404	
4-Aug-01	1516	mt	3.1	33		too little	443392	4817401	stream
4-Aug-01	1532	mt	4 1	35	10, toechp #1	too little	443488	4817428	oxbow
+ Aug of	1002	int	7.1		no: toeclin	too intic		4017420	UXDOW
4-Aug-01	1533	mt	3.3	28	#1	too little	443488	4817428	oxbow
Ŭ					no; toeclip				
4-Aug-01	1534	mt	2.7	29	#1	too little	443488	4817428	oxbow
					no; toeclip				
4-Aug-01	1535	mt	3.1	30	#1	too little	443488	4817428	oxbow
1 1	4500	in t	0.4	20	no; toeclip	to o little	140400	4047400	extreme
4-Aug-01	1536	mt	3.1	32	#1	too little	443488	4817428	OXDOW

					no; toeclip				
4-Aug-01	1537	mt	2.5	30	#1	too little	443488	4817428	oxbow
4-Aug-01	1538	mt	2.1	28	no; toeclip #1	too little	443488	4817428	oxbow
4-Aug-01	1545					finished			clouds threatening
6-Jun-02	908	SAF	14.5	54	no	43573E2B04	442156	4817005	possibly 2001 cohort
6-Jun-02	930	SA				uncaptured	442240	4817155	possibly 2001 cohort
6-Jun-02	936	M?				uncaptured	442242	4817155	possibly 2001 cohort
6-Jun-02	957	SAM	10.8	48	no	4358466D5B	442284	4817230	possibly 2001 cohort
6-Jun-02	1004	F	33.8	73	no	435B5B1B41	442284	4817240	older female
6-Jun-02	1007	F	16.4	54	no	433C76775A	442284	4817240	possibly 2001 cohort
6-Jun-02	1044	SA	8.4	41	no	43595D277C	442325	4817283	possibly 2001 cohort
6-Jun-02	1105	F	30.1	70	recap from 2001	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?).
6-Jun-02	1122	SA				uncaptured	442545	4817440	possibly 2001 cohort
6-Jun-02	1150	SAM	23.5	51	no	43581B2B4E	442671	4817605	possibly 2001 cohort
6-Jun-02	1156	Μ	14.2	53	no	434D7C023F	442682	4817603	possibly 2001 cohort; appeared sick/lethargic. Blood vessels apparent on ventral surface - gave reddish appearance to skin.
6-Jun-02	1157	F	36.5	73	recap from 2001	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.
6-Jun-02	1158	F				uncaptured	442683	4817608	
6-Jun-02	1335	SA				uncaptured	442737	4817588	
6-Jun-02	1352	SAM	12.3	52	no	435100720A	442802	4817600	possibly 2001 cohort
6-Jun-02	1411	F	19.5	52	no	4350522037	442839	4817603	possibly 2001 cohort
6-Jun-02	1415	SAF	14.0	48	no	433C7B7D67	442839	4817603	possibly 2001 cohort
6-Jun-02	1417					uncaptured	442839	4817603	
6-Jun-02	1434	SA	11.5	48	no	43583D0143	442846	4817614	possibly 2001 cohort
6-Jun-02	1435	SAM	13.3	51	no	435B363109	442846	4817614	possibly 2001 cohort
6-Jun-02	1440	F	19.0	56	no	4350310C6D	442852	4817615	possibly 2001 cohort
6-Jun-02	1517	SAF	13.9	49	no	43592B4460	443213	4817459	possibly 2001 cohort
6-Jun-02	1540	SAF	12.0	50	no	433D537612	443301	4817430	possibly 2001 cohort
6-Jun-02	1600	SAF	15.0	51	no	43523F2657	443483	4817430	possibly 2001 cohort
6-Jun-02	1603	SAM	10.5	49	no	4358415C7A	443483	4817430	possibly 2001 cohort

6-Jun-02	1613	SAF	16.9	57	no	43574A2354	443498	4817476	possibly 2001 cohort
6-Jun-02	1632	SAF	15.0	54	no	43583B5969	443732	4817618	possibly 2001 cohort
6-Jun-02	1638	SA	12.0	51	no	433F535452	443773	4817708	possibly 2001 cohort
6-Jun-02	1650	SAM	12.0	50	no	434E16172D	443824	4817870	possibly 2001 cohort
									this is most likely frog #432D334857 from last
									year - PIT# probably recorded incorrectly
									(should be 423, not 432). Possibly cohort of
C hum 00	4050	-	20.7	75	recap	4000004057	440004	4047070	1999 or 2000. Found along same stretch of
6-Jun-02	1002		39.7	10	11011 2001	423D334637	443024	4017070	Stream, within 20 m.
6-Jun-02	1654	SA	10.5	47	no	433C69682B	443824	4817870	possibly 2001 conort
6-Jun-02	1656	SAF	11.5	50	no	434D404937	443824	4817870	possibly 2001 conort
6-Jun-02	1712	SAM	10.5	43	no	43525C3E6A	443816	4817939	possibly 2001 cohort
6-Jun-02	1/15	SAM	9.0	47	no	4358000343	443826	4817948	possibly 2001 cohort
7-Jun-02	935	F	33.2	72	yes	435B5B1B41	442284	4817240	same place as yesterday
									this could be 41620A620B from 2001, but we
7 Jun 02	057	-				uppoptured	442407	4917206	did not capture ner yesterday, and today sne
7-Jun-02	907	Г				uncaptureu	442407	4017300	was extremely skillish.
7-Jun-02	1020	SA				uncaptured	442545	4817440	1122
									same place as vesterday (oxbow below
7-Jun-02	1050	F	35.0	74	yes	42384B4216	442682	4817603	campsite).
									UTMs hand calculated on map. app. 100m east
									of road crossing (BLM); tagged by Wendy on 15
7-Jun-02	1230	F	14.5	54	Wendy	4358056A44	440900	4816950	May 2002 at Brown Cabin (440852, 4816996).
									UTMs hand calculated on map. stream under
7-Jun-02	1240	F	32.5	70	no	4358077338	441000	4816995	first cliff (BLM)
7 1 00	40.45	~ ^					444000	4040005	UTMs hand calculated on map. stream under
7-Jun-02	1245	SA				uncaptured	441000	4816995	TIFSt CIIIT (BLM)
7- lup-02	1255	SV	11.0	48	no	1358/B1765	441202	4816887	BLM fence
7-5011-02	1233	54	11.0	40	110	4000404700	441202	4010007	
7- lup-02	1305	S٧				uncaptured	111150	4816035	o i ivis nano calculated on map, second oxbow
7-5011-02	1303	54				uncaptureu	441130	4010933	
7- lup-02	1300	F	34.5	75		1350506E11	441100	4816040	Utivis nand calculated on map. oxbow pool
	1308	I.	04.0	10	10	400000E41	441100	4010340	
7- lup-02		C A					444400	4040040	Utivis nand calculated on map. oxpow pool
1-JUII-02	1210	\sim \wedge						18164/11	
	1310	SA				uncaptured	441100	4816940	Under first cill on horth side of stream
7 Jun 02	1310	<u>5A</u>	10.0	50	20		441100	4816940	UTMs hand calculated on map. oxbow pool

									UTMs hand calculated on map. oxbow pool
7-Jun-02	1315	SA	9.5	49	no	435844657A	441100	4816940	under first cliff on north side of stream
11-Aug-02	925	Μ	15.0	54	no	434F6A0E13	441095	4816924	(BLM section) stream pool
11-Aug-02	926	MT	5.0	35	#2	too little	441098	4816922	(BLM section) stream
								1010000	(BLM section) stream; PIT-tagged by USGS on
11-Aug-02	935	M	15.7	57	recapture	435B441931	441158	4816896	15 May 2002 at 440610, 4817071 (SVL was 48)
11-Aug-02	936	MI	3.2	32	#2	too little	441176	4816884	(BLM section)
11-Aug-02	949	MI	4.5	37	#2	too little	441176	4816884	(BLM section)
11-Aug-02	955	M	16.8	59	no	4357453E7D	441176	4816884	(BLM section)
11-Aug-02	956	M	14.0	54	no	435B4F6D0B	441176	4816884	(BLM section)
11-Aug-02	1002	MT	3.2	32	#2	too little	441176	4816884	(BLM section)
11-Aug-02	1012	MT	3.0	32	#2	too little	441176	4816884	(BLM section)
11-Aug-02	1019	MI	4.7	38	#2	too little	441095	4816924	(BLM section) stream pool
11-Aug-02	1020	MT	4.0	35	#2	too little	441095	4816924	(BLM section) stream pool
11-Aug-02	1021	MT	3.9	36	#2	too little	441095	4816924	(BLM section) stream pool
11-Aug-02	1022	MT	4.0	34	#2	too little	441095	4816924	(BLM section) stream pool
11-Aug-02	1023	MT				uncaptured	441095	4816924	(BLM section) stream pool
11-Aug-02	1033	F	28.7	66	no	433F524022	441106	4816943	(BLM section) big oxbow pool
11-Aug-02	1044	MT				uncaptured	441032	4816969	(BLM section) big slough upper reach
11-Aug-02	1045	MT	4.0	34	#2	too little	441032	4816969	(BLM section) big slough upper reach
11-Aug-02	1047	F				uncaptured	441032	4816969	(BLM section) big slough upper reach
									(BLM section) big slough upper reach; appears
11-Aug-02	1048	F	44.0	80	20	1357/5/011	441032	4816060	gravid; bone sticking out of #1 (previous toe
11-Aug-02	1040	F	22.5	63	no	43574E6E7D	441032	4816969	(BI M section) big slough upper reach
11-Aug-02	1100	MT	22.0	00	no	uncaptured	441032	4816969	(BLM section) big slough upper reach
TT Aug 02	1100	IVII				START STATE	441002	4010000	YOY Thamnophis elegans & 11 chukar at
11-Aug-02	1125					SECTION			water's edge
11-Aug-02	1127	MT	4.0	34	#2	too little	442104	4816973	stream
11-Aug-02	1230	MT	6.5	40	no	43596E6C5C	442590	4817550	in second pinch; UTMs hand-calculated.
									just below second pinch; UTMs hand-
11-Aug-02	1240	MT				uncaptured	442610	4817580	calculated.
11-Aug-02	1250	MT	4.0	36	#2	too little	442699	4817617	below campsite; UTMs hand-calculated.
11-Aug-02	1310	MT				escaped	442754	4817594	
11-Aug-02	1317	MT	4.0	36	#2	too little	442803	4817598	5 chukar
11-Aug-02	1321	MT	4.0	36	#2	too little	442803	4817598	
11-Aug-02	1325	MT	5.0	38	#2	too little	442843	4817602	stream
11-Aug-02	1326	MT	4.5	36	#2	too little	442842	4817613	side pool of stream

11-Aug-02	1327	MT	3.0	32	#2	too little	442842	4817613	side pool of stream
11-Aug-02	1328	MT	4.5	35	#2	too little	442842	4817613	side pool of stream
11-Aug-02	1335	MT	3.0	29	#2	too little	442842	4817613	side pool of stream
11-Aug-02	1336	MT	2.7	32	#2	too little	442842	4817613	side pool of stream
11-Aug-02	1337	MT	5.0	36	#2	too little	442842	4817613	side pool of stream
11-Aug-02	1341	MT	3.5	33	#2	too little	442853	4817607	side channel
11-Aug-02	1344	MT	7.5	40	no	43523D785F	442853	4817607	side channel
11-Aug-02	1349	MT	4.5	34	#2	too little	442853	4817607	side channel
11-Aug-02	1353	MT	4.0	35	#2	too little	442875	4817606	stream
11-Aug-02	1359	MT				uncaptured	442875	4817606	
11-Aug-02	1402	MT	3.5	34	#2	too little	442920	4817600	third pinch; UTMs hand-calculated.
11-Aug-02	1412	MT	4.1	35	#2	too little	442920	4817600	third pinch; UTMs hand-calculated.
11-Aug-02	1413	MT				uncaptured	442920	4817600	third pinch; UTMs hand-calculated.
11-Aug-02	1414	MT				uncaptured	442920	4817600	third pinch; UTMs hand-calculated.
11-Aug-02	1425	MT	5.0	42	no	435A311B63	443079	4817466	wide slough (scour pool)
11-Aug-02	1430	MT	5.0	37	#2	too little	443079	4817466	wide slough (scour pool)
11-Aug-02	1431	MT				uncaptured	443079	4817466	wide slough (scour pool)
11-Aug-02	1432	MT				uncaptured	443116	4817456	head of scour pool
11-Aug-02	1444	MT				uncaptured	443116	4817456	head of scour pool
11-Aug-02	1447	MT	2.5	28	#2	too little	443130	4817465	small stream connecting scour pools
11-Aug-02	1449	MT	2.5	30	#2	too little	443130	4817465	small stream connecting scour pools
11-Aug-02	1452	MT	4.0	34	#2	too little	443130	4817465	small stream connecting scour pools
11-Aug-02	1453	MT	2.5	29	#2	too little	443130	4817465	small stream connecting scour pools
11-Aug-02	1457	MT	3.1	34	#2	too little	443138	4817462	small stream connecting scour pools
11-Aug-02	1500	MT	4.0	34	#2	too little	443157	4817471	
11-Aug-02	1507	F	38.8	73	no	434E2B7F25	443169	4817464	probably gravid
11-Aug-02	1512	MT				uncaptured	443169	4817464	
11-Aug-02	1513	MT				uncaptured	443169	4817464	
11-Aug-02	1525	MT				uncaptured	443363	4817405	approximately 25 chukar
11-Aug-02	1526	MT				uncaptured	443363	4817405	
11-Aug-02	1530	MT	2.5	28	#2	too little	443398	4817410	
11-Aug-02	1535	MT	4.0	35	#2	too little	443398	4817410	
11-Aug-02	1537	MT	2.8	30	#2	too little	443398	4817410	
11-Aug-02	1544	MT	2.7	32	#2	too little	443491	4817460	
11-Aug-02	1545	MT	3.0	33	#2	too little	443491	4817460	
11-Aug-02	1550	MT	3.0	36	#2	too little	443491	4817460	
11-Aug-02	1552	MT	3.5	33	#2	too little	443491	4817460	

11-Aug-02	1555	MT	3.0	32	#2	too little	443491	4817460	
11-Aug-02	1556	MT	3.5	33	#2	too little	443491	4817460	
11-Aug-02	1600	MT	5.0	39	#2	too little	443504	4817465	
11-Aug-02	1603	MT	5.0	37	#2	too little	443504	4817465	
11-Aug-02	1604	MT	4.0	34	#2	too little	443504	4817465	
11-Aug-02	1607	MT	4.5	39	#2	too little	443552	4817531	
11-Aug-02	1608	MT	5.0	38	#2	too little	443552	4817531	
11-Aug-02	1609	MT	3.4	33	#2	too little	443552	4817531	
11-Aug-02	1610	MT	3.5	33	#2	too little	443552	4817531	
11-Aug-02	1611	MT				too little	443570	4817530	did not capture; UTMs hand-calculated
11-Aug-02	1612	MT				too little	443570	4817530	did not capture; UTMs hand-calculated
11-Aug-02	1613	MT				too little	443570	4817530	did not capture; UTMs hand-calculated
11-Aug-02	1614	MT				too little	443570	4817530	did not capture; UTMs hand-calculated
11-Aug-02	1618	F	25.1	68	no	434D623F6D	443599	4817530	over 50 chukar
11-Aug-02	1625					uncaptured	443669	4817557	
11-Aug-02	1645					end survey			
6-Jun-03	915					start			
6-Jun-03	950					Pituophis catenifer	442360	4817286	no frogs between start point and 1st pinch
6 Jun 02	1002	<u></u>	11.0	10	no	133D0C3005	112363	/817276	along bank in natural evelopure
0-JUN-03	1002	5a	11.0	49	110	4330003903	442303	4017270	along bank in natural exclosure
6-Jun-03	1002	50	11.0	49	TIO	Pituophis catenifer	442303	4817334	just below natural exclosure
6-Jun-03 6-Jun-03	1002 1020 1032	F	34.5	75	no	Pituophis catenifer 4334374261	442303 442391 442503	4817334 4817423	just below natural exclosure oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033	F F	34.5 16.0	75 57	no	Pituophis catenifer 4334374261 435A112676	442303 442391 442503 442503	4817334 4817423 4817423	just below natural exclosure oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110	F F Sa	34.5 16.0 7.0	75 57 43	no no no	Pituophis catenifer 4334374261 435A112676 434E080F45	442303 442391 442503 442503 442675	4817334 4817423 4817423 4817596	just below natural exclosure oxbow pool oxbow pool stream below campsite
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115	F F Sa	34.5 16.0 7.0	75 57 43	no no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer	442503 442503 442503 442675 442680	4817334 4817423 4817423 4817596 4817602	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116	F F sa M	34.5 16.0 7.0 14.5	75 57 43 55	no no no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251	442303 442391 442503 442503 442675 442680 442681	4817334 4817423 4817423 4817596 4817602 4817602	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118	F F sa M sa	34.5 16.0 7.0 14.5 9.5	49 75 57 43 55 42	no no no no no	433D003903 Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F	442303 442391 442503 442503 442675 442680 442681 442681	4817270 4817334 4817423 4817423 4817596 4817602 4817602 4817602	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126	F F Sa M Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0	49 75 57 43 55 42 43	no no no no no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 435B585523	442503 442503 442503 442675 442680 442681 442681 442685	4817334 4817423 4817423 4817596 4817602 4817602 4817605	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205	F F Sa M Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5	49 75 57 43 55 42 43 48	no no no no no no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 435B585523 43583B5B5D	442503 442503 442503 442675 442680 442681 442681 442685 442821	4817334 4817334 4817423 4817596 4817602 4817602 4817602 4817605 4817594	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211	F F Sa M Sa Sa Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 8.5	49 75 57 43 55 42 43 48 44	no no no no no no no no	433D0003903 Pituophis catenifer 4334374261 435A112676 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 43583B5523 43583B55D 43577D7F0B	442303 442391 442503 442675 442681 442681 442685 442821 442839	4817334 4817334 4817423 4817596 4817602 4817602 4817602 4817602 4817603 4817604 4817605 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212	F F Sa M Sa Sa Sa Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 7.0 9.5 8.5 10.5	49 75 57 43 55 42 43 48 44 42	no no no no no no no no no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 435B585523 43577D7F0B 43577A5D43	442303 442391 442503 442675 442681 442681 442685 442839 442839	4817334 4817334 4817423 4817596 4817602 4817602 4817602 4817605 4817594 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212 1213	F F Sa M Sa Sa Sa Sa Sa F	34.5 16.0 7.0 14.5 9.5 7.0 9.5 7.0 9.5 7.0 9.5 8.5 10.5 32.0	49 75 57 43 55 42 43 48 44 42 72	no no no no no no no no no no no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 435B585523 43583B5B5D 43577A5D43 434E367F06	442303 442391 442503 442503 442675 442681 442681 442685 442839 442839 442839	4817270 4817334 4817423 4817423 4817596 4817602 4817602 4817602 4817605 4817608 4817608 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212 1213 1214	F F Sa M Sa Sa Sa Sa Sa Sa F Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 8.5 10.5 32.0 6.5	49 75 57 43 55 42 43 48 44 42 72 42	no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 4358385523 43577D7F0B 43577A5D43 435A00426E	442303 442391 442503 442675 442675 442681 442681 442685 442839 442839 442839 442839 442839	4817334 4817334 4817423 4817423 4817602 4817602 4817602 4817602 4817603 4817608 4817608 4817608 4817608 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212 1213 1214 1215	F F Sa M Sa Sa Sa Sa Sa F Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 8.5 10.5 32.0 6.5 11.0	49 75 57 43 55 42 43 48 44 42 72 44 42 42	no no no no no no no no no no no no no n	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 435B585523 43577D7F0B 43577A5D43 435A00426E 435A336346	442303 442391 442503 442675 442675 442681 442681 442685 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839	4817276 4817334 4817423 4817423 4817596 4817602 4817602 4817602 4817603 4817608 4817608 4817608 4817608 4817608 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212 1213 1214 1215 1216	F F Sa M Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 8.5 10.5 32.0 6.5 11.0 9.0	49 75 57 43 55 42 43 48 44 42 72 42 42 42 43	no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 435B585523 43583B5B5D 43577D7F0B 43577A5D43 435A00426E 43506C2D0F	442303 442391 442503 442675 442681 442681 442681 442685 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839	4817276 4817334 4817423 4817423 4817596 4817602 4817602 4817602 4817605 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212 1213 1214 1215 1216 1217	F F Sa M Sa Sa Sa Sa Sa F Sa Sa Sa Sa Sa Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 8.5 10.5 32.0 6.5 11.0 9.0 12.0	49 75 57 43 55 42 43 48 44 42 72 42 43 49	no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 4358585523 43583B5B5D 43577A5D43 435A36346 43506C2D0F 435A36346 43500C00F	442303 442391 442503 442603 442675 442681 442681 442685 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839	4817270 4817334 4817423 4817423 4817602 4817602 4817602 4817602 4817603 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool
6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03 6-Jun-03	1002 1020 1032 1033 1110 1115 1116 1118 1126 1205 1211 1212 1213 1214 1215 1216 1217 1240	F F Sa M Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa Sa	34.5 16.0 7.0 14.5 9.5 7.0 9.5 8.5 10.5 32.0 6.5 11.0 9.0 12.0 9.5	49 75 57 43 55 42 43 48 44 42 72 44 43 49 42	no no	Pituophis catenifer 4334374261 435A112676 434E080F45 Pituophis catenifer 4357461251 4352582D0F 4358585523 435838585D 43577D7F0B 435A00426E 435A36346 43506C2D0F 4357442D00	442303 442391 442503 442675 442681 442681 442681 442685 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442839 442846	4817270 4817334 4817423 4817423 4817596 4817602 4817602 4817602 4817602 4817603 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608 4817608	just below natural exclosure oxbow pool oxbow pool stream below campsite between the stream & the oxbow oxbow pool oxbow pool oxbow pool stream down from fenceline oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool oxbow pool

6-Jun-03	1251	sa	11.5	51	no	434F5C3850	442846	4817611	oxbow pool before 3rd pinch
6-Jun-03	1252	sa	9.5	47	no	435926650F	442846	4817611	oxbow pool before 3rd pinch
6-Jun-03	1256	sa	9.5	49	no	4357474242	442846	4817611	oxbow pool before 3rd pinch
6-Jun-03	1301	sa	8.0	42	no	435035032A	442857	4817608	stream backwater towards oxbow
6-Jun-03	1302	sa	10.0	49	no	433C5E0E7B	442857	4817608	stream backwater towards oxbow
6-Jun-03	1303	sa	12.0	50	no	434F5D5462	442857	4817608	stream backwater towards oxbow
6-Jun-03	1311					uncaptured	442857	4817608	stream backwater towards oxbow
6-Jun-03	1313	sa	12.0	49	no	4358044215	442857	4817608	stream backwater towards oxbow
6-Jun-03	1359	sa	11.0	50	no	433D197477	443180	4817455	stream just above 3rd pinch
6-Jun-03	1408	sa	9.0	44	no	435236220E	442881	4817598	isolated oxbow
6-Jun-03	1409	sa	8.0	45	no	435975480D	442881	4817598	isolated oxbow
6-Jun-03	1410					uncaptured	442881	4817598	isolated oxbow
6-Jun-03	1436	sam	12.5	50	no	435A3B583D	443730	4817622	end point; worked back from here
6-Jun-03	1506	sa	10.5	51	no	433D0D0E61	443366	4817400	creeks subs out after 2nd scour pool
6-Jun-03	1517					tadpoles	443266	4817445	scour pool
6-Jun-03	1521	sa	10.0	46	no	435809763D	443255	4817455	
6-Jun-03	1525	sa				uncaptured	443256	4817455	
6-Jun-03	1532	sa	12.0	51	no	433C5D7064	443181	4817455	
0 1	4000					and			and a discription of Qual minute
6-JUN-03	1600					end			ended back at 3rd pinch
6-Jun-03	1600					ena			warming at the toe of the slope; photo; went to
6-Jun-03 7-Jun-03	902					Crotalus viridis	443693	4817588	warming at the toe of the slope; photo; went to drink
6-Jun-03 7-Jun-03 7-Jun-03	902 907	sa	12.5	51	R	Crotalus viridis 435A3B583D	443693 443721	4817588 4817609	warming at the toe of the slope; photo; went to drink oxbow pool at endpoint
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935	sa sa	12.5 14.0	51 51	R	Crotalus viridis 435A3B583D 4350710E38	443693 443721 443583	4817588 4817609 4817529	warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936	sa sa	12.5 14.0	51 51	R no	Crotalus viridis 435A3B583D 4350710E38 uncaptured	443693 443721 443583 443583	4817588 4817609 4817529 4817529	warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937	sa sa	12.5 14.0	51 51	R no	Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles	443693 443721 443583 443583 443583	4817588 4817609 4817529 4817529 4817529	warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000	sa sa sa	12.5 14.0 9.5	51 51 45	R no no	Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 434E372C02	443693 443721 443583 443583 443583 443583 443489	4817588 4817609 4817529 4817529 4817529 4817431	warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001	sa sa sa F	12.5 14.0 9.5 34.0	51 51 45 72	R no no no	Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 434E372C02 435B372040	443693 443721 443583 443583 443583 443489 443489	4817588 4817609 4817529 4817529 4817529 4817431 4817431	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002	sa sa sa F sa	12.5 14.0 9.5 34.0 14.0	51 51 45 72 52	R no no no	End Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 435B372040 43573B5E21	443693 443721 443583 443583 443583 443583 443489 443489 443489	4817588 4817609 4817529 4817529 4817529 4817431 4817431 4817431	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003	sa sa sa F sa sa	12.5 14.0 9.5 34.0 14.0 9.5	51 51 45 72 52 48	R no no no no	End Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 435B372040 43573B5E21 43504D4627	443693 443721 443583 443583 443583 443583 443489 443489 443489 443489	4817588 4817609 4817529 4817529 4817529 4817431 4817431 4817431 4817431 4817431	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1005	sa sa sa F sa sa	12.5 14.0 9.5 34.0 14.0 9.5	51 51 45 72 52 48	R no no no no	End Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 435B372040 43573B5E21 43504D4627 PTF tadpoles	443693 443721 443583 443583 443583 443489 443489 443489 443489 443489	4817588 4817609 4817529 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow isolated oxbow
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1046	sa sa F sa sa sa sa	12.5 14.0 9.5 34.0 14.0 9.5 10.5	51 51 45 72 52 48 46	R no no no no no	Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 435B372040 43573B5E21 43504D4627 PTF tadpoles 435B340B61	443693 443721 443583 443583 443583 443489 443489 443489 443489 443489 443489	4817588 4817609 4817529 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817433	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow stream below scour pool
6-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1046 1052	sa sa sa F sa sa sa sa sa	12.5 14.0 9.5 34.0 14.0 9.5 10.5 10.0	51 51 45 72 52 48 46 47	R no no no no no no	End Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 434E372C02 435B372040 43504D4627 PTF tadpoles 435B340B61 433F46666F	443693 443721 443583 443583 443583 443583 443489 443489 443489 443489 443489 443471 443482	4817588 4817609 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817433 4817433 4817433 4817435	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow stream below scour pool
6-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1046 1056	sa sa F sa sa sa sa F	12.5 14.0 9.5 34.0 14.0 9.5 10.5 10.0 27.5	51 51 45 72 52 48 46 47 67	R no no no no no no no no no	Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 435B372040 43573B5E21 43504D4627 PTF tadpoles 435B340B61 435F7742A76	443693 443721 443583 443583 443583 443489 443489 443489 443489 443489 443489 443489 443482 443462	4817588 4817509 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817433 4817434	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow isolated oxbow stream below scour pool
6-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1005 1046 1052 1056 1102	sa sa F sa sa sa Sa F F F	12.5 14.0 9.5 34.0 14.0 9.5 10.5 10.0 27.5 29.5	51 51 45 72 52 48 46 47 67 68	R no no no no no no no no no no no	Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 435B372040 43573B5E21 43504D4627 PTF tadpoles 435B340B61 4357742A76 435A093D62	443693 443721 443583 443583 443583 443489 443489 443489 443489 443489 443489 443489 443482 443462 443462 443459	4817588 4817529 4817529 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817433 4817433 4817435 4817424 4817432	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow stream below scour pool temperature: 20.7C
6-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1046 1052 1056 1102 1112	sa sa F sa sa sa Sa F F F Sa	12.5 14.0 9.5 34.0 14.0 9.5 10.5 10.0 27.5 29.5	51 51 45 72 52 48 46 47 67 68	R no no no no no no no no no no	End Crotalus viridis 435A3B583D 435O710E38 uncaptured tadpoles 434E372C02 435B372040 43573B5E21 43504D4627 PTF tadpoles 435F346666F 4357742A76 435A093D62 uncaptured	443693 443721 443583 443583 443583 443489 443489 443489 443489 443489 443489 443489 443482 443462 443459 443369	4817588 4817609 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817433 4817434 4817435 4817432 4817432	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow stream below scour pool temperature: 20.7C
6-Jun-03 7-Jun-03 7-Jun-03	902 907 935 936 937 1000 1001 1002 1003 1005 1046 1052 1056 1112 1118	sa sa F sa sa sa F F F sa sa sa	12.5 14.0 9.5 34.0 14.0 9.5 10.5 10.0 27.5 29.5 11.5	51 51 45 72 52 48 46 47 67 68 50	R no no no no no no no no R	End Crotalus viridis 435A3B583D 4350710E38 uncaptured tadpoles 434E372C02 435B372040 43573B5E21 43504D4627 PTF tadpoles 435F340B61 435F7742A76 435A093D62 uncaptured	443693 443721 443583 443583 443583 443583 443489 443489 443489 443489 443489 443489 443489 443489 443489 443489 443489 443489 443489 443489 443489 443482 443462 443369 443369	4817588 4817609 4817529 4817529 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817431 4817432 4817433 4817435 4817432 4817404 4817401	ended back at 3rd pinch warming at the toe of the slope; photo; went to drink oxbow pool at endpoint stream stream isolated oxbow isolated oxbow isolated oxbow isolated oxbow stream below scour pool temperature: 20.7C

7-Jun-03	1129					uncaptured	443253	4817461	
7-Jun-03	1142	sa	11.5	52	R	433C5D7064	443174	4817464	
7-Jun-03	1147	F	36.0	74	R	434E2B7F25	443165	4817469	
7-Jun-03	1153	F	25.0	67	no	4357473D0D	443096	4817474	
7-Jun-03	1159	sa	12.0	50	no	435A4A1B5D	443089	4817485	
7-Jun-03	1203	F	26.0	71	no	435B5C5301	443056	4817491	
7-Jun-03	1216	sa	11.5	49	R	433D197477	442899	4817604	
7-Jun-03	1221	sa	8.0	43	R	435236220E	442890	4817596	
7-Jun-03	1224	sa	8.5	45	R	435975480D	442890	4817596	
7-Jun-03	1229	sa	9.5	44	R	435035032A	442856	4817615	
7-Jun-03	1230	sa	14.0	50	R	434F5D5462	442856	4817615	
7-Jun-03	1231	sa	11.0	48	R	433C5E0E7B	442856	4817615	
7-Jun-03	1235	sa	11.5	50	R	434F5C3850	442850	4817611	oxbow pool
7-Jun-03	1236	sa	11.0	50	R	4357474242	442850	4817611	oxbow pool
7-Jun-03	1240	sa	9.0	41	R	435926650F	442839	4817608	oxbow pool
7-Jun-03	1241	sa			R	4357442D00	442839	4817608	oxbow pool
7-Jun-03	1242	sa			R	43506C2D0F	442839	4817608	oxbow pool
7-Jun-03	1249	sa			R	435A336346	442839	4817608	oxbow pool
7-Jun-03	1250	sa			R	434E100116	442839	4817608	oxbow pool
7-Jun-03	1251	sa			R	43577D7F0B	442839	4817608	oxbow pool
7-Jun-03	1252	sa			R	435A00426E	442839	4817608	oxbow pool
7-Jun-03	1300					Coluber constrictor	442730	4817631	big rock next to fenceline below camp; no GPS
7-Jun-03	1458	sa	9.5	48	no	2003 toe clip	440976	4816988	isolated oxbow
7-Jun-03	1513					PTF tadpoles	440976	4816988	isolated oxbow
7-Jun-03	1514	F	27.5	69	R	4358056A44	440804	4817010	temperature: 25.8C
7-Jun-03	1518	sa	9.5	46	no	2003 toe clip	440803	4817004	
7-Jun-03	1523	sa	12.0	52	no	2003 toe clip	440843	4816999	
-									small, but could be breeding size; prominent
7-Jun-03	1524	М	15.0	56	no	2003 toe clip	440843	4816999	thumb pads
7-Jun-03	1530	sa	8.5	44	no	2003 toe clip	440847	4817002	
7-Jun-03	1537					Coluber constrictor	440970	4816964	
7-Jun-03	1538	sa	12.0	50	no	2003 toe clip	440975	4816969	
7-Jun-03	1539	sa	11.5	50	no	2003 toe clip	440975	4816969	
7-Jun-03	1546	sa	7.0	44	no	2003 toe clip	441031	4816966	
7-Jun-03	1554	F	30.5	75	R	4350506E41	441097	4816938	oxbow pool
7-Jun-03	1559	М	18.5	58	R	435B2A2063	441097	4816938	oxbow pool
7-Jun-03	1623					Pituophis catenifer	441319	4816774	dry creek bed

7-Jun-03	1630					end			confluence of Dry Creek and Butte Creek
7-Jun-03	1640					start point			
7-Jun-03	1659					Natural Exclosure			no frogs in this section; stopped for the day
8-Jun-03	1030					start			worked upstream from fenceline below campsite to N.E.
8-Jun-03	1034	sa	10.5	49	no	435B2B0157	442695	4817595	oxbow pool
8-Jun-03	1035	М	15.5	56	R	4357461251	442695	4817595	oxbow pool
8-Jun-03	1036	sa	12.0	51	no	435777396C	442695	4817595	oxbow pool
8-Jun-03	1045	sa	10.0	47	R	4352582D0F	442695	4817595	oxbow pool
8-Jun-03	1050	sa	10.0	47	no	433D0A5071	442660	4817609	
8-Jun-03	1205	sa	19.5	58	R	435A112676	442501	4817428	
8-Jun-03	1206					uncaptured	442497	4817418	
8-Jun-03	1530	sa	11.5	51	no	4350163107	440824	4817009	windy
8-Jun-03	1544	sa	10.0	48	no	435A447A38	441030	4816966	
8-Jun-03	1550	sa	12.0	53	no	435A3B5B2A	441130	4816923	no GPS; across canyon from oxbow pool
8-Jun-03	1553	sa	11.5	50	no	43512B2A78	441132	4816924	no GPS; across canyon from oxbow pool
8-Jun-03	1618	sa	7.5	43	R	435B4C0467	441029	4816976	toe clip yesterday; PIT tag today
									oxbow pool; became extrememely windy; no
8-Jun-03	1630	sa				uncaptured	440804	4817010	frogs up
8-Jun-03	1700					end			fenceline in canyon
9-Aug-03	945	М	21	60	no	43501D783F	441101	4816936	oxbow pool
9-Aug-03	946					uncaptured	441101	4816936	oxbow pool
9-Aug-03	947					uncaptured	441101	4816936	oxbow pool
9-Aug-03	948					uncaptured	441101	4816936	oxbow pool
9-Aug-03	1001	MT	4	36	no		441111	4816920	stream
9-Aug-03	1002	MT					441111	4816920	stream
9-Aug-03	1003	MT					441115	4816918	stream
9-Aug-03	1004	MT					441111	4816920	stream
9-Aug-03	1007	F	29	67	no	435852595C	441143	4816909	scour pool
9-Aug-03	1012	MT					441148	4816905	scour pool
9-Aug-03	1013	MT					441151	4816907	scour pool
9-Aug-03	1014					uncaptured	441151	4816907	scour pool
9-Aug-03	1015					uncaptured	441151	4816907	scour pool
9-Aug-03	1019	Μ	16.5	58	no	433D004E57	441149	4816901	scour pool
					toe-				
9-Aug-03	1027	М	16	56	clipped (2002)	433F522442	441177	4816891	scour pool

9-Aug-03	1028	MT			441177	4816891	scour pool
9-Aug-03	1037	MT			441239	4816847	scour pool
9-Aug-03	1040	MT			441243	4816841	scour pool
9-Aug-03	1047	MT			441371	4816729	scour pool
9-Aug-03	1048	MT			441388	4816716	scour pool
9-Aug-03	1058	MT			441423	4816683	scour pool
9-Aug-03	1101	MT			441445	4816682	scour pool
9-Aug-03	1103	MT			441487	4816704	oxbow pool
9-Aug-03	1104			uncaptured	441487	4816704	oxbow pool
9-Aug-03	1106	MT			441487	4816704	oxbow pool
9-Aug-03	1135	MT			442079	4816967	stream - start point
9-Aug-03	1137	MT	34		442093	4816972	stream
9-Aug-03	1140	MT			442101	4816973	stream
9-Aug-03	1141	MT			442105	4816970	oxbow pool
9-Aug-03	1142	MT			442105	4816970	oxbow pool
9-Aug-03	1143	MT			442105	4816970	oxbow pool
9-Aug-03	1144	MT			442107	4816976	stream
9-Aug-03	1146	MT			442111	4816969	stream
9-Aug-03	1147	MT			442111	4816969	stream
9-Aug-03	1149	MT			442123	4816977	stream
9-Aug-03	1150	MT			442123	4816977	stream
9-Aug-03	1151	MT			442127	4816978	stream
9-Aug-03	1152	MT			442127	4816978	stream
9-Aug-03	1153	MT			442127	4816978	stream
9-Aug-03	1154	MT			442127	4816978	stream
9-Aug-03	1155	MT			442159	4817006	stream
9-Aug-03	1156	MT			442177	4817020	stream
9-Aug-03	1200	MT			442208	4817052	scour pool
9-Aug-03	1205	MT			442233	4817102	stream
9-Aug-03	1207	MT			442252	4817143	oxbow pool
9-Aug-03	1210	MT			442255	4817158	oxbow pool
9-Aug-03	1212	MT			442258	4817174	stream
9-Aug-03	1214	MT			442279	4817211	stream
9-Aug-03	1215	MT			442279	4817211	stream
9-Aug-03	1257	MT			442373	4817286	natural exclosure
9-Aug-03	1303	MT			442387	4817304	just downstream of NE
9-Aug-03	1304	MT			442387	4817304	just downstream of NE

9-Aug-03	1305	MT					442387	4817304	just downstream of NE
9-Aug-03	1312	MT					442407	4817312	hole in rock
9-Aua-03	1313				Hyla tadpoles		442407	4817312	hole in rock
9-Aug-03	1330	MT			10.000		442592	4817499	iust above 2nd pinch
9-Aug-03	1351	MT					442682	4817589	loog wodxo
9-Aug-03	1410	MT					442671	4817613	stream
9-Aug-03	1414	MT					442843	4817590	stream
9-Aug-03	1415	MT					442839	4817597	oxbow pool
9-Aug-03	1416	MT					442840	4817604	oxbow pool
9-Aug-03	1417	MT					442840	4817604	oxbow pool
9-Aug-03	1417	MT					442841	4817606	oxbow pool
9-Aug-03	1419	MT					442843	4817604	oxbow pool
9-Aug-03	1420	MT					442843	4817604	oxbow pool
9-Aug-03	1421	MT					442846	4817608	oxbow pool
9-Aug-03	1422	MT					442853	4817607	oxbow pool
9-Aug-03	1423	М	14.5	56	yes	433D197477	442853	4817609	oxbow pool
9-Aug-03	1424	MT					442853	4817609	oxbow pool
9-Aug-03	1427	MT					442861	4817604	oxbow pool
9-Aug-03	1431	MT					442863	4817607	oxbow pool
9-Aug-03	1435	F				uncaptured	442846	4817607	oxbow pool (near source pool)
9-Aug-03	1440	F	14.5	56	no	435236220E	442878	4817597	oxbow pool
9-Aug-03	1441					uncaptured	442878	4817597	oxbow pool
9-Aug-03	1442	MT					442859	4817591	Pool at side rock before 3rd pinch
9-Aug-03	1443	MT					442859	4817591	Pool at side rock before 3rd pinch
9-Aug-03	1444	MT					442859	4817591	Pool at side rock before 3rd pinch
9-Aug-03	1447	MT					442907	4817617	stream
9-Aug-03	1450	MT					442909	4817612	stream
9-Aug-03	1457	MT					442959	4817525	just after 3rd pinch - stream
9-Aug-03	1505	MT					443111	4817462	oxbow pool
9-Aug-03	1506	MT					443111	4817462	oxbow pool
9-Aug-03	1507	MT					443113	4817457	oxbow pool
9-Aug-03	1508	MT					443128	4817466	stream
9-Aug-03	1513	MT					443133	4817465	stream
9-Aug-03	1514	MT					443133	4817465	stream
9-Aug-03	1515	MT					443245	4817464	stream
9-Aug-03	1516	MT					443257	4817458	stream

9-Aug-03	1517	MT					443259	4817453	stream
9-Aug-03	1518	MT					443262	4817453	stream
9-Aug-03	1519	MT					443262	4817453	stream
9-Aug-03	1520	MT					443262	4817453	stream
9-Aug-03	1521	MT					443262	4817453	stream
9-Aug-03	1522	MT					443262	4817453	stream
9-Aug-03	1523	MT					443262	4817453	stream
9-Aug-03	1524	MT					443262	4817453	stream
9-Aug-03	1525	MT					443267	4817450	stream
9-Aug-03	1527	MT					443445	4817430	scour pool
9-Aug-03	1528	MT					443451	4817418	scour pool
9-Aug-03	1529	MT					443451	4817418	scour pool
9-Aug-03	1530	MT					443483	4817437	stream
9-Aug-03	1531	MT					443504	4817461	stream
9-Aug-03	1532	MT					443504	4817461	stream
9-Aug-03	1533	MT					443508	4817471	stream
9-Aug-03	1537	MT					443559	4817517	stream
9-Aug-03	1539	MT					443566	4817519	stream
9-Aug-03	1540	MT					443571	4817523	stream
9-Aug-03	1541	MT					443578	4817531	stream
9-Aug-03	1542	MT					443587	4817534	stream
9-Aug-03	1543	MT					443589	4817535	stream
9-Aug-03	1544	MT					443605	4817544	stream
9-Aug-03	1545	MT					443668	4817570	scour pool
9-Aug-03	1546	MT					443696	4817582	stream
9-Aug-03	1550	F	20	60	no	435A2E0F43	443726	4817616	oxbow pool
5-Jun-04	1410					START BLM TRANSECT			
5-Jun-04	1415	SA	9.5	48	no	435A4C176A	440842	4817004	stream
5-Jun-04	1427	SAF	13	53	no	4358487820	440975	4816984	previously toe clipped? oxbow pool
5-Jun-04	1428	SA				uncaptured	440975	4816984	oxbow pool
5-Jun-04	1447	SAF	13.5	53	no	4350605B7E	441162	4816901	stream - canyon, very windy
5-Jun-04	1453	F	24	68	YES	435852595C	441163	4816902	stream, canyon
5-Jun-04	1512					FINISH BLM TRANSECT			
6-Jun-04	950		45- 55mm			tadpoles - breeding site	443806	4817950	1 scoop, 6 tadpoles

6-Jun-04	1000					START STATE TRANSECT-East			
									stream - check point on map - last number
6-Jun-04	1005	SA	7	42	no	43584B4A1A	443805	4817837	missing on UTME.
6-Jun-04	1020	Adult				uncaptured	443719	4817615	sidebow channel
6-Jun-04	1036	SA	11.5	50	no	433F506668	443535	4817493	stream, skin tear at PIT incision
6-Jun-04	1042	SA				uncaptured	443517	4817466	small oxbow, very skittish
6-Jun-04	1048	SAF	10.5	50	no	435B2A4C45	443499	4817468	oxbow pool
6-Jun-04	1049	SA	6.5	41	no	435805161C	443499	4817468	oxbow pool
		_							oxbow pool, breeding site - but no tads this
6-Jun-04	1102	F	27.5	67	YES	43504D4627	443486	4817438	time, water 62 degrees F
6-Jun-04	1103	F	10.5	48	no	434D7E1408	443486	4817438	oxbow pool
6-Jun-04	1104	F	28	66	YES	43573B5E21	443486	4817438	oxbow pool
6-Jun-04	1106	F	15	56	no	435A2F2A6D	443486	4817438	oxbow pool
6-Jun-04	1132	F	36	74	no	4350004104	443486	4817438	oxbow pool; toe clipped RR 03
6-Jun-04	1135	SA	6.5	42	no	43583F562E	443487	4817438	oxbow pool
6-Jun-04	1138	SAM	12	50	no	43594F5E16	443489	4817429	oxbow pool
6-Jun-04	1142	F				uncaptured	443491	4817429	oxbow pool
6-Jun-04	1145	М	15.5	56	no	4350583657	443491	4817429	oxbow pool
6-Jun-04	1146	SAM	9	45	no	43525C583E	443489	4817429	oxbow pool
6-Jun-04	1151	М	26.5	57	no	433F443021	443489	4817429	oxbow pool
6-Jun-04	1152	SA				uncaptured	443489	4817429	oxbow pool
6-Jun-04	1205	SAM	13	51	no	43524B7551	443467	4817459	stream
6-Jun-04	1212	SA	11	49	no	43594B5151	443467	4817456	stream
6-Jun-04	1213	SA				uncaptured	443467	4817459	stream
6-Jun-04	1220	SAF	9	47	no	435035787F	443454	4817415	stream - injury on right eye
6-Jun-04	1232	SA	7	43	no	43583B0706	443362	4817403	braid channel
6-Jun-04	1235	SAF	13	52	no	435243287E	443356	4817414	braid channel
6-Jun-04	1240	SA	8.5	45	no	43595D7C2E	443345	4817422	sidebow channel - PIT could be 43595D7C2A
6-Jun-04	1243	SAF	23	53	no	43574C7516	443345	4817422	sidebow channel
									breeding site - scour pool - algal mat, emergent
6-Jun-04	1300			60mm		tadpole	443295	4817421	veg
6-Jun-04	1301	F	16	57	no	433F39023D	443295	4817422	breeding site - scour pool
6-Jun-04	1302	F	12.5	53	no	435A3A290E	443296	4817422	breeding site - scour pool
6-Jun-04	1303	F	35	73	no	435A3B015F	443295	4817423	breeding site - scour pool
6-Jun-04	1304	F	48	78	YES	434E2B7F25	443293	4817422	breeding site - scour pool
6-Jun-04	1316	SA	7.5	45	no	433F1F312B	443276	4817451	stream - no right eye (photos)
6-Jun-04	1322	SA	9	47	no	434D480652	443273	4817454	stream

6-Jun-04	1331	SAF	10.5	52	no	434E2A2A0F	443253	4817439	sidebow channel
6-Jun-04	1405	М	15.5	55	no	433C734E5A	442837	4817612	oxbow pool
6-Jun-04	1410	F	30.5	69	YES	435A336346	442843	4817613	oxbow pool, toe clip left front -2002?
6-Jun-04	1416	SA	10	48	no	435A4C6906	442733	4817601	stream
6-Jun-04	1422	SAF	10	48	no	435A330B7A	442680	4817605	oxbow pool below camp
6-Jun-04	1423	F	17	55	no	43580F6E6E	442681	4817606	stream
6-Jun-04	1427	SA	8.5	46	no	435056787A	442681	4817605	oxbow pool below camp
6-Jun-04	1432	SA	9	47	no	435B363A58	442678	4817614	oxbow pool below camp
6-Jun-04	1433	F	15.5	55	no	43511A7F29	442678	4817613	oxbow pool below camp
6-Jun-04	1443	F	28.5	69	no	435A011F02	442681	4817607	stream
6-Jun-04	1526	М	11.5	51	no	4358410944	442681	4817615	oxbow pool below camp
6-Jun-04	1531	F	29.5	68	no	4358482376	442681	4817613	oxbow pool below camp
6-Jun-04	1537	SA				uncaptured	442681	4817613	oxbow pool below camp
6-Jun-04	1542	SA	9	46	no	43597F5C59	442623	4817599	stream - shedding skin
6-Jun-04	1620	SAM	10.5	49	no	43597C431F	442378	4817297	in cattails (N) in natural exclosure
6-Jun-04	1621	SA				uncaptured	442377	4817296	in cattails (N) in natural exclosure
6-Jun-04	1634	SAF	14.5	53	no	435246634E	442371	4817274	in cattails (S), natural exclosure
						FINISHED STATE			
6-Jun-04	1700								
7- lun-04	900								
	000					odinp			oxbow below camp - recapture from previous
7-Jun-04	910	F	29	66	YES	435777396C	442681	4817613	year, not first pass
7-Jun-04	912	М	23	62	no	43505D364F	442681	4817615	oxbow pool below camp
7-Jun-04	915	SAM	10	49	no	433C6F5C27	442681	4817613	oxbow pool below camp
7-Jun-04	920	F	29	69	YES	4358482376	442681	4817613	oxbow pool below camp
7-Jun-04	922	SAM	12	49	no	4334476D33	442681	4817613	oxbow pool below camp
									oxbow below camp - frog emptied stomach
7-Jun-04	926	Μ	18	51	no	43593D5237	442682	4817614	contents - photo
7-Jun-04	930	SA	11	48	no	435803326E	442681	4817615	oxbow pool below camp
7-Jun-04	935	SA	9	46	YES	435056787A	442681	4817613	oxbow pool below camp
7-Jun-04	937	SA	11	48	YES	435A330B7A	442681	4817613	oxbow pool below camp
7-Jun-04	940	SA				uncaptured	442681	4817615	oxbow pool below camp
_						START STATE		10/5-5-5	
7-Jun-04	1030					TRANSECT -East	443805	4817879	moved upstream from 2001 point
7-Jun-04	1037	•				uncaptured	443805	4817879	sidebow pool - skittish
7-Jun-04	1041	SA	8	43	no	4352346333	443803	4817874	sidebow pool

7-Jun-04	1042					tadpole	443803	4817874	sidebow pool
7-Jun-04	1045	Adult				uncaptured	443803	4817872	sidebow pool
7-Jun-04	1050	SA	10	48	no	***	443807	4817872	***ran out of PIT tags - no marks
									dark color, cold - stream (photo); recapture from
7-Jun-04	1110	M	19	57	YES	435A3B583D	443662	4817552	previous year
7-Jun-04	1118	SAF	10.5	49	no	***	443539	4817537	stream
7-Jun-04	1119	F	14.5	53	no	***	443539	4817537	stream
7-Jun-04	1123	SAF	9	49	YES	433F506668	443538	4817493	stream
7-Jun-04	1130	F	28	67	YES	43504D4627	443489	4817431	oxbow breeding site (east end)
7-Jun-04	1131	SAM	13	50	no	***	443489	4817431	oxbow pool
7-Jun-04	1132	М	17	57	no	***	443489	4817431	oxbow pool
7-Jun-04	1135	М	16	58	YES	4350583657	443489	4817431	oxbow pool
7-Jun-04	1144	SAF	15	51	no	***	443489	4817431	oxbow pool; regurgitated damselfly larvae
7-Jun-04	1147	М	16	54	YES	433F443021	443489	4817431	oxbow pool
7-Jun-04	1150	М	13.5	51	no	***	443484	4817426	oxbow pool (west end)
7-Jun-04	1200	SA	11.5	48	YES	434D7E1408	443484	4817426	oxbow pool (west end)
7-Jun-04	1204	SAM	11	48	no	***	443484	4817426	oxbow pool (west end)
7-Jun-04	1207	F	17	55	no	***	443484	4817426	oxbow pool (west end)
7-Jun-04	1208					uncaptured	443484	4817426	oxbow pool (west end)
7-Jun-04	1223	SAM	13	50	no	***	443469	4817435	stream
7-Jun-04	1226	SAF	12	48	no	***	443469	4817435	stream
7-Jun-04	1228	SA	10	49	YES	43594B5151	443467	4817438	stream
7-Jun-04	1229	SAM	10.5	48	no	***	443465	4817430	stream
7-Jun-04	1235	SAF	15	53	no	***	443459	4817431	stream
7-Jun-04	1236	SA				uncaptured	443450	4817416	stream
7-Jun-04	1242	SAF	14	52	no	***	443365	4817402	stream
7-Jun-04	1252	SAF	11	49	no	***	443365	4817402	stream
7-Jun-04	1256	SAF	13.5	52	YES	43574C7516	443348	4817419	stream
7-Jun-04	1300	SAF	8.5	45	YES	43595D7C2A	443331	4817420	PIT could be 43595D7C2E
7-Jun-04	1301			79		tadpole	443331	4817420	stream
7-Jun-04	1305	SAF	14	52	no	***	443316	4817422	stream
7-Jun-04	1306	SAF	13	52	no	***	443316	4817422	stream
7-Jun-04	1312	F	34	74	YES	435A3B015F	443306	4817425	stream - scour pool
7-Jun-04	1313	SA	8.5	45	no	***	443306	4817425	stream - scour pool
7-Jun-04	1316	F	48	78	YES	434E2B7F25	443306	4817425	stream - scour pool
7-Jun-04	1320	SA	12	50	YES	435A3A290E	443306	4817425	stream - scour pool
7-Jun-04	1326	SAF	7.5	45	no	***	443267	4817439	stream

7-Jun-04	1328	F	36	75	no	***	443263	4817438	stream
7-Jun-04	1329	SA				uncaptured	443265	4817436	stream
7-Jun-04	1330	Adult				uncaptured	443265	4817436	stream
7-Jun-04	1335	SAF	12	49	no	***	443247	4817442	stream
7-Jun-04	1337	SAF	10	45	no	***	443252	4817435	side channel
7-Jun-04	1338					uncaptured	443252	4817435	side channel
7-Jun-04	1345	SAF	12	48	no	***	443265	4817454	stream
7-Jun-04	1348	SA				uncaptured	443240	4817459	stream
7-Jun-04	1353	F	32.5	68	YES	433C5D7064	443201	4817460	recapture from 2003 - stream
7-Jun-04	1356	SA	10	46	no	***	443177	4817471	stream
7-Jun-04	1402	F	14	52	no	***	443103	4817479	stream
7-Jun-04	1403	SAF	12.5	51	no	***	443104	4817470	stream
7-Jun-04	1413	SAM	12.5	50	no	***	443093	4817478	side channel
7-Jun-04	1414	SAF	11.5	50	no	***	443079	4817489	stream
7-Jun-04	1416	SAM	9	48	no	***	443071	4817482	stream
7-Jun-04	1417	SA				uncaptured	443071	4817482	stream
7-Jun-04	1423	F	32.5	70	no	***	443071	4817483	stream
7-Jun-04	1428	SAF	12	51	no	***	443067	4817484	stream
7-Jun-04	1429			58		tadpole	443066	4817485	probable breeding area - scour pool side
7-Jun-04	1430	F	32.5	68	no	***	443056	4817487	stream
7-Jun-04	1433	F	33	68	no	***	443054	4817490	stream
7-Jun-04	1446					uncaptured	442899	4817613	stream - new cattails in this area
7-Jun-04	1450	SA	6.5	41	no	***	442879	4817597	oxbow pool
7-Jun-04	1451	SAM	10	46	no	***	442879	4817597	oxbow pool
7-Jun-04	1452	SAM	10	47	no	***	442879	4817597	oxbow pool
7-Jun-04	1508	SAM	11	50	no	***	442682	4817594	stream, rugose skin
7-Jun-04	1510	F	29	70	YES	435A011F02	442682	4817594	stream
7-Jun-04	1547	SA	10	47	no	***	442667	4817602	stream
									side pool - thumb & index on rt hand okay, all
7-Jun-04	1551	SA	10	46	no	***	442662	4817606	other fingers gone (photo)
7-Jun-04	1554	SA	11.5	46	no	***	442662	4817606	side pool
7-Jun-04	1620	F	18	57	no	***	442497	4817433	oxbow pool
7-Jun-04	1621	Μ	12.5	54	no	***	442503	4817430	oxbow pool - no spots
7-Jun-04	1634	SAM	11	49	YES	43597C431F	442378	4817297	natural exclosure - cattails
7-Jun-04	1639	F	15.5	55	YES	435246634E	442373	4817286	natural exclosure - cattails
7-Jun-04	1640					uncaptured	442373	4817286	natural exclosure - cattails
7-Jun-04	1700					SPECIES?	442250	4817155	backwater channel SPECIES QUESTION -

									young bullfrog?
						END STATE			
7-Jun-04	1715					TRANSECT			
7 Jun 04	1720					START BLM			
7-Jun-04	1750		24	69	VES	1RANSEUT	441162	4916002	atroom conven
7-Jun 04	1200	Г	24	00	TES	433032393C	441103	4010902	Siledili, callyoli
7-Jun-04	1000					FINISH BLM	441097	4010930	oxbow pool - very windy, nog skillsn
7-Jun-04	1815					TRANSECT			
20-Aug-04	827	М	13	54	no	4357430966	441095	4816942	oxbow pool; dead fish present
20-Aug-04	835	F	25	65	YES	43512B2A78	441103	4816942	oxbow pool
20-Aug-04	840	М	15.5	51	no	4357371A19	441103	4816942	oxbow pool
20-Aug-04	841	F	40	75	no	4358513A42	441099	4816942	GRAVID female; oxbow pool
20-Aug-04	846	М	14	54	no	43505C5415	441103	4816939	oxbow pool
20-Aug-04	856					uncaptured	441103	4816939	oxbow pool
20-Aug-04	859	MT	7	41	no	43573B5B18	441096	4816937	stream
20-Aug-04	900	MT	4	34	no	too little	441099	4816921	stream
20-Aug-04	903	MT				uncaptured	441103	4816921	stream
20-Aug-04	904	MT				uncaptured	441103	4816932	stream
20-Aug-04	908	MT	5.5	36	no	too little	441111	4816921	stream
20-Aug-04	909	MT	5	38	no	too little	441111	4816921	stream
20-Aug-04	914	MT	4	38	no	too little	441159	4816910	stream
20-Aug-04	916	MT				uncaptured	441159	4816910	stream
20-Aug-04	925	MT				uncaptured	441250	4816842	recharge pool
20-Aug-04	927	MT	2.5	30	no	too little	441247	4816838	recharge pool
20-Aug-04	932	MT	6	39	no	too little	441340	4816761	stream
20-Aug-04	933	MT				uncaptured	441340	4816762	stream
20-Aug-04	935	MT	6.5	39	no	too little	441344	4816761	stream
20-Aug-04	938	MT	6.5	38	no	too little	441366	4816742	stream
20-Aug-04	939	MT				uncaptured	441366	4816744	stream
20-Aug-04	940	MT				uncaptured	441366	4816744	stream
20-Aug-04	943	MT	6	38	no	too little	441372	4816733	stream
20-Aug-04	944	MT	5.5	38	no	too little	441372	4816733	stream
20-Aug-04	945	MT	4.5	37	no	too little	441377	4816728	stream
20-Aug-04	946	MT	4.5	38	no	too little	441377	4816728	stream
20-Aug-04	950	MT				DEAD MT - collected	441381	4816725	stream
20-Aug-04	955	MT	6	39	no	too little	441393	4816715	stream

20-Aug-04	956	MT	5.5	38	no	too little	441392	4816711	stream
20-Aug-04	958	MT	5	37	no	too little	441393	4816715	stream
20-Aug-04	1001	MT	4.5	36	no	too little	441397	4816708	stream
20-Aug-04	1002	MT	8	42	no	43526A4A64	441397	4816708	stream
20-Aug-04	1006	MT	6.5	39	no	too little	441401	4816704	stream
20-Aug-04	1007	MT				uncaptured	441401	4816704	stream
20-Aug-04	1008	MT	5.5	38	no	too little	441401	4816704	stream
20-Aug-04	1009	MT	4	37	no	too little	441396	4816696	stream
20-Aug-04	1012	MT	4.5	36	no	too little	441404	4816696	stream
20-Aug-04	1026	MT	3.5	34	no	too little	442088	4816976	stream
20-Aug-04	1029	MT				uncaptured	442103	4816981	stream
20-Aug-04	1030	MT	4	35	no	too little	442105	4816970	sidebow channel
20-Aug-04	1031	MT	4.5	36	no	too little	442105	4816970	sidebow channel
20-Aug-04	1032	MT				uncaptured	442105	4816970	sidebow channel
20-Aug-04	1033	MT	5	38	no	too little	442105	4816970	sidebow channel
20-Aug-04	1036	MT				uncaptured	442121	4816972	stream
20-Aug-04	1038	MT	4	31	no	too little	442124	4816979	stream
20-Aug-04	1040	MT				uncaptured	442125	4816982	stream
20-Aug-04	1041	MT				uncaptured	442135	4816992	stream
20-Aug-04	1044	MT				uncaptured	442155	4817000	stream
20-Aug-04	1045	MT				uncaptured	442155	4817000	stream
20-Aug-04	1046	MT				uncaptured	442167	4817013	stream
20-Aug-04	1047	MT	5	36	no	too little	442167	4817013	stream
20-Aug-04	1048	MT	3.5	35	no	too little	442172	4817014	stream
20-Aug-04	1049	MT				uncaptured	442174	4817017	stream
20-Aug-04	1050	MT	4	35	no	too little	442174	4817017	stream
20-Aug-04	1055	MT	3.5	33	no	too little	442191	4817030	stream
20-Aug-04	1057	MT	3.5	34	no	too little	442198	4817047	stream
20-Aug-04	1100	MT	3.5	33	no	too little	442202	4817053	stream
20-Aug-04	1103	MT	4	34	no	too little	442202	4817062	stream
20-Aug-04	1104	MT				uncaptured	442202	4817064	stream
20-Aug-04	1105	MT				uncaptured	442202	4817064	stream
20-Aug-04	1107	MT	4	37	no	too little	442203	4817069	scour pool
20-Aug-04	1108	MT	2	24	no	too little	442210	4817076	scour pool
20-Aug-04	1111	MT	4	34	no	too little	442212	4817077	scour pool
20-Aug-04	1113	MT	3	34	no	too little	442221	4817086	scour pool
20-Aug-04	1115	MT				uncaptured	442227	4817094	scour pool

20-Aug-04	1120	MT	3.5	33	no	too little	442236	4817091	scour pool
20-Aug-04	1121	MT	3.5	34	no	too little	442237	4817101	stream
20-Aug-04	1126	MT	3.5	35	no	too little	442237	4817113	stream
20-Aug-04	1127	MT	4.5	35	no	too little	442239	4817110	stream
20-Aug-04	1130	MT	2	27	no	too little	442239	4817111	stream
20-Aug-04	1131	MT				uncaptured	442241	4817113	stream
20-Aug-04	1133	MT	4	35	no	too little	442248	4817127	stream
20-Aug-04	1136	MT				uncaptured	442247	4817137	stream
20-Aug-04	1137	MT	5	38	no	too little	442242	4817141	stream
20-Aug-04	1140	MT				uncaptured	442262	4817143	sidebow pool
20-Aug-04	1141	MT	4	36	no	too little	442250	4817150	stream
20-Aug-04	1143	MT				uncaptured	442270	4817156	sidebow pool
20-Aug-04	1146	MT	3.5	33	no	too little	442271	4817177	stream
20-Aug-04	1147	MT				uncaptured	442260	4817174	stream
20-Aug-04	1150	MT	4.5	36	no	too little	442267	4817200	stream
20-Aug-04	1151	MT	4.5	38	no	too little	442275	4817195	stream
20-Aug-04	1154	MT	4	36	no	too little	442276	4817202	stream
20-Aug-04	1155	MT	5	39	no	too little	442276	4817203	stream
20_{-} Λ_{11} α_{-} 0.4	1156	МЛТ	55	38	no	too little	442285	4817208	stream
20-Aug-04	1150		5.5	5	110		772200	4017200	otroann
20-Aug-04	1244	MT	4	35	no	too little	442377	4817291	natural exclosure - cattails
20-Aug-04 20-Aug-04 20-Aug-04	1244 1247	MT F	4 28	35 68	no	too little 435B55694D	442377 442394	4817291 4817301	natural exclosure - cattails natural exclosure - cattails
20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252	MT F MT	4 28	35 68	no no	too little 435B55694D uncaptured	442377 442394 442369	4817291 4817301 4817289	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253	MT F MT MT	4 28	35 68	no no	too little 435B55694D uncaptured uncaptured	442377 442394 442369 442369	4817291 4817301 4817289 4817289	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256	MT F MT MT MT	4 28 4.5	35 68 37	no no	too little 435B55694D uncaptured uncaptured too little	442377 442394 442369 442369 442335	4817291 4817301 4817289 4817289 4817289 4817287	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259	MT F MT MT MT MT	4 28 4.5	35 68 37	no no	too little 435B55694D uncaptured uncaptured too little uncaptured	442377 442394 442369 442369 442335 442335	4817291 4817301 4817289 4817289 4817257 4817262	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300	MT F MT MT MT MT MT	4 28 4.5 3	35 68 37 34	no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little	442377 442394 442369 442369 442335 442335 442335	4817291 4817301 4817289 4817289 4817257 4817262 4817262	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure natural exclosure natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301	MT F MT MT MT MT MT MT	4 28 4.5 3 3	35 68 37 37 34 33	no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little	442377 442394 442369 442369 442335 442335 442338 442338	4817291 4817301 4817289 4817289 4817287 4817262 4817262 4817262 4817262	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305	MT F MT MT MT MT MT MT MT	4 28 4.5 3 3 5.5	35 68 37 34 33 37	no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little too little	442377 442394 442369 442369 442335 442335 442335 442338 442338 442337	4817291 4817291 4817289 4817289 4817257 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308	MT F MT MT MT MT MT MT MT F	4 28 4.5 3 3 5.5 28.5	35 68 37 37 34 33 37 67	no no no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little 433D052673	442377 442394 442369 442369 442335 442335 442335 442338 442337 442337 442344	4817291 4817291 4817289 4817289 4817257 4817262 4817262 4817262 4817277 4817277 4817277	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320	MT F MT MT MT MT MT MT MT F MT	4 28 4.5 3 3 5.5 28.5	35 68 37 37 34 33 37 67	no no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little too little 433D052673 uncaptured	442377 442394 442369 442335 442335 442338 442337 442338 442337 442344 442386	4817291 4817291 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817263 4817264 4817265 4817265 4817266	natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure - cattails natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320 1321	MT F MT MT MT MT MT MT MT F MT MT	4 28 4.5 3 3 5.5 28.5	35 68 37 37 34 33 37 67	no no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little too little 433D052673 uncaptured uncaptured	442377 442394 442369 442369 442335 442335 442338 442337 442337 442386 442386	4817291 4817291 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817263 4817263 4817263 4817263 4817306 4817308	natural exclosure - cattails natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320 1321 1322	MT F MT MT MT MT MT MT MT MT MT MT	4 28 4.5 3 3 5.5 28.5 4.5	35 68 37 37 34 33 37 67 38	no no no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little 433D052673 uncaptured uncaptured too little	442377 442394 442369 442369 442335 442335 442335 442338 442337 442337 442336 442338 442338 442337 442386 442386 442390	4817291 4817291 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817263 4817262 4817263 4817263 4817263 4817263 4817263 4817263 4817263 4817263 4817306 4817308 4817304	natural exclosure - cattails natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320 1321 1322 1323	MT F MT MT MT MT MT MT F MT MT MT MT MT	4 28 4.5 3 3 5.5 28.5 4.5	35 68 37 37 34 33 37 67 38	no no no no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little too little 433D052673 uncaptured uncaptured too little too little	442377 442394 442369 442369 442335 442335 442338 442337 442344 442386 442390 442390	4817291 4817291 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817263 4817264 4817270 4817306 4817304 4817304	natural exclosure - cattails natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320 1321 1322 1323 1324	MT F MT MT MT MT MT MT F MT MT MT MT MT	4 28 4.5 3 3 5.5 28.5 4.5	35 68 37 37 34 33 37 67 38	no no no no no no no no	too little 435B55694D uncaptured uncaptured too little uncaptured too little too little too little 433D052673 uncaptured uncaptured too little too little	442300 442377 442394 442369 442369 442335 442335 442338 442338 442337 442344 442386 442390 442390 442390	4817291 4817291 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817262 4817200 4817306 4817308 4817304 4817308	natural exclosure - cattails natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320 1321 1322 1323 1324 1325	MT F MT MT MT MT MT MT MT MT MT MT MT MT MT	4 28 4.5 3 3 5.5 28.5 4.5	35 68 37 37 34 33 37 67 38		too little 435B55694D uncaptured uncaptured too little uncaptured too little too little too little 433D052673 uncaptured uncaptured too little too little too little too little	442377 442394 442369 442369 442335 442335 442338 442338 442337 442386 442386 442390 442390 442395	4817291 4817291 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817263 4817264 4817265 4817262 4817263 4817306 4817308 4817308 4817308 4817308 4817308	natural exclosure - cattails natural exclosure
20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04 20-Aug-04	1244 1247 1252 1253 1256 1259 1300 1301 1305 1308 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1321 1322 1323 1324 1325 1326	MT F MT MT MT MT MT MT MT MT MT MT	4.5 4.5 3 3 5.5 28.5 4.5	35 68 37 37 34 33 37 67 38		too little 435B55694D uncaptured uncaptured too little uncaptured too little too little 433D052673 uncaptured uncaptured too little too little too little too little too little	442377 442394 442369 442369 442335 442335 442335 442338 442338 442344 442386 442390 442390 442395 442395	4817291 4817291 4817301 4817289 4817289 4817262 4817262 4817262 4817262 4817262 4817262 4817306 4817308 4817308 4817308 4817308 4817308 4817308 4817308 4817308	natural exclosure - cattails natural exclosure natural exclosure

20-Aug-04	1334	MT			too little	442402	4817315	natural exclosure
20-Aug-04	1335	MT			too little	442402	4817315	natural exclosure
20-Aug-04	1336	MT			too little	442402	4817315	natural exclosure
20-Aug-04	1337	MT			too little	442405	4817315	rock pool below exclosure
20-Aug-04	1338	MT			too little	442405	4817315	rock pool below exclosure
20-Aug-04	1339	MT			too little	442405	4817315	rock pool below exclosure
20-Aug-04	1340	MT			too little	442402	4817331	scour pool below exclosure
20-Aug-04	1342	MT			too little	442442	4817358	isoloated oxbow
20-Aug-04	1349				uncaptured	442496	4817425	oxbow pool
20-Aug-04	1352	MT			too little	442517	4817414	stream
20-Aug-04	1356	MT			too little	442569	4817476	stream
20-Aug-04	1357	MT			too little	442571	4817475	stream
20-Aug-04	1358	MT			too little	442567	4817483	stream
20-Aug-04	1359	MT			too little	442579	4817500	stream
20-Aug-04	1400	MT			too little	442579	4817500	stream
20-Aug-04	1401	MT			too little	442576	4817508	stream
20-Aug-04	1402	MT	40)	too little	442576	4817506	stream
								2nd pinch - couldn't get reading - extrapolated in
20-Aug-04	1405	MI			too little	442602	4817532	ArcGIS
20-Aug-04	1411	MI			too little	442591	4817572	stream
20-Aug-04	1415	MI			too little	442596	4817583	stream
20-Aug-04	1416	MI			too little	442613	4817587	stream
20-Aug-04	1417	MI			too little	442608	4817587	stream
20-Aug-04	1418	MI			too little	442623	4817593	stream
20-Aug-04	1419	MI			too little	442623	4817593	stream
20-Aug-04	1420	MI			too little	442625	4817594	stream
20-Aug-04	1421	MI			too little	442625	4817594	stream
20-Aug-04	1422	MI			too little	442632	4817598	stream
20-Aug-04	1423	MI			too little	442638	4817604	stream
20-Aug-04	1424	MI			too little	442637	4817606	oxbow pool
20-Aug-04	1425	MI			too little	442637	4817606	oxbow pool
20-Aug-04	1426	MI			too little	442656	481/604	stream
20-Aug-04	1427	MI			too little	442675	481/612	oxbow pool
20-Aug-04	1428	MI			too little	442675	481/612	oxbow pool
20-Aug-04	1437	MI			too little	442675	481/612	oxbow pool
20-Aug-04	1438	MT			too little	442675	4817612	oxbow pool
20-Aug-04	1439	MT			too little	442699	4817596	stream

20-Aup-041450MTMTIso initia4427114817599stream20-Aup-041500MTMTIso initia4427304817596stream20-Aup-041501MTIso initia4427504817596stream20-Aup-041503MTIso initia4427504817597stream20-Aup-041505MTIso initia4427504817692stream20-Aup-041505MTIso initia4427504817692stream20-Aup-041505MTIso initia4428054817690stream20-Aup-041506MTIso initia4428054817598stream20-Aup-041508MTIso initia4428054817598stream20-Aup-041509MTIso initia4428044817598stream20-Aup-041509MTIso initia4428244817598stream20-Aup-041510MTIso initia4428244817598stream20-Aup-041512MTIso initia4428444817607rcebarge pol20-Aup-041514MTIso initia4428444817607rcebarge pol20-Aup-041514MTIso initia4428444817607rcebarge stream20-Aup-041514MTIso initia4428454817607rcebarge stream20-Aup-041517MTIso initia4428454817611recbarge stream<	20-Aug-04	1441	MT		too little	442703	4817596	stream
20-Aug-041459MTImage <thimage< th="">ImageImageImageI</thimage<>	20-Aug-04	1450	MT		too little	442711	4817599	stream
20-Aug-041500MTImage	20-Aug-04	1459	MT		too little	442739	4817591	stream
20-Auq-041501MTMTMMMNNN<	20-Aug-04	1500	MT		too little	442750	4817596	stream
20-Auq.04 1503 MT MT </td <td>20-Aug-04</td> <td>1501</td> <td>MT</td> <td></td> <td>too little</td> <td>442751</td> <td>4817595</td> <td>stream</td>	20-Aug-04	1501	MT		too little	442751	4817595	stream
20-Aug-041506MTImageImageImageImageMatrixMatrixMatrixMatrixMatrixMatrix20-Aug-041507MTImageImageImageMTImageImageMatrix	20-Aug-04	1503	MT		too little	442759	4817597	stream
20-Aug-041506MTMTII<	20-Aug-04	1505	MT		too little	442790	4817602	stream
20-Aug-041507MTIm<	20-Aug-04	1506	MT		too little	442805	4817600	stream
20-Aug-041508MTImage	20-Aug-04	1507	MT		too little	442805	4817599	stream
20-Aug-041509MTIMT	20-Aug-04	1508	MT		too little	442809	4817597	stream
20-Aug-041510MTImageMTImageImageMT <th< td=""><td>20-Aug-04</td><td>1509</td><td>MT</td><td></td><td>too little</td><td>442815</td><td>4817599</td><td>stream</td></th<>	20-Aug-04	1509	MT		too little	442815	4817599	stream
20-Aug-041511MT<	20-Aug-04	1510	MT		too little	442823	4817598	stream
20-Aug-041512MTMTMM<	20-Aug-04	1511	MT		too little	442824	4817590	stream
20-Aug-041513MTImage	20-Aug-04	1512	MT		too little	442823	4817598	stream
20-Aug-041514MTImage	20-Aug-04	1513	MT		too little	442830	4817596	stream
20-Aug-041515MTImage	20-Aug-04	1514	MT		too little	442844	4817607	recharge pool
20-Aug-041516MTImage	20-Aug-04	1515	MT		too little	442844	4817607	recharge pool
20-Aug-041517MTMTMMMInto initial4428444817614rrecharge stream20-Aug-041518MTMM <td< td=""><td>20-Aug-04</td><td>1516</td><td>MT</td><td></td><td>too little</td><td>442842</td><td>4817611</td><td>recharge stream</td></td<>	20-Aug-04	1516	MT		too little	442842	4817611	recharge stream
20-Aug-041518MTImage	20-Aug-04	1517	MT		too little	442844	4817614	recharge stream
20-Aug-041519MTMTImageIma	20-Aug-04	1518	MT		too little	442845	4817610	recharge stream
20-Aug-041520MTImage	20-Aug-04	1519	MT		too little	442859	4817605	stream
20-Aug-041521MT<	20-Aug-04	1520	MT		too little	442853	4817598	stream
20-Aug-041522MTImage	20-Aug-04	1521	MT		too little	442851	4817603	stream
20-Aug-041523MTImage: MTM	20-Aug-04	1522	MT		too little	442848	4817600	stream
20-Aug-041524MTImage	20-Aug-04	1523	MT		too little	442845	4817599	stream
20-Aug-041525MTImage: MTImage: M	20-Aug-04	1524	MT		too little	442880	4817600	sidebow pool
20-Aug-041526MTImage	20-Aug-04	1525	MT		too little	442892	4817601	stream
20-Aug-041527MTImage: MTImage: M	20-Aug-04	1526	MT		too little	442905	4817615	stream
20-Aug-041528MTImage: MTImage: M	20-Aug-04	1527	MT		too little	442907	4817614	stream
20-Aug-041529MTImage: MTImage: M	20-Aug-04	1528	MT		too little	442920	4817607	stream
20-Aug-041534MTImage: MTImage: M	20-Aug-04	1529	MT		too little	442917	4817609	stream
20-Aug-041536MT<	20-Aug-04	1534	MT		too little	443033	4817473	stream
20-Aug-041539MT<	20-Aug-04	1536	MT		too little	443053	4817473	stream
20-Aug-04 1540 MT MT too little 443098 4817461 scour pool 20-Aug-04 1541 MT MT Image: Marcial Scour Pool 443102 4817459 stream 20-Aug-04 1542 MT Image: Marcial Scour Pool 443100 4817459 stream	20-Aug-04	1539	MT		too little	443098	4817461	scour pool
20-Aug-04 1541 MT MT too little 443102 4817459 stream 20-Aug-04 1542 MT MT <td>20-Aug-04</td> <td>1540</td> <td>MT</td> <td></td> <td>too little</td> <td>443098</td> <td>4817461</td> <td>scour pool</td>	20-Aug-04	1540	MT		too little	443098	4817461	scour pool
20-Aug-04 1542 MT 1542 MT 1542 too little 1543	20-Aug-04	1541	MT		too little	443102	4817459	stream
	20-Aug-04	1542	MT		too little	443110	4817455	stream

1544	MT		too little	443113	4817475	stream
1545	MT		too little	443113	4817475	stream
1546	MT		too little	443121	4817469	stream
1547	MT		too little	443133	4817463	stream
1548	MT		too little	443138	4817462	stream
1549	MT		too little	443153	4817465	scour pool
1550	MT		too little	443167	4817460	scour pool
1551	MT		too little	443191	4817457	scour pool
1552	MT		too little	443193	4817456	scour pool
1553	MT		too little	443207	4817455	scour pool
1554	MT		too little	443211	4817455	scour pool
1555	MT		too little	443232	4817456	scour pool
1556	MT		too little	443201	4817467	scour pool
1557	MT		too little	443201	4817467	scour pool
1558	MT		too little	443216	4817459	scour pool
1559	MT		too little	443241	4817462	scour pool
1602	MT		too little	443266	4817453	stream
1605	MT		too little	443302	4817423	scour pool
1608	MT		too little	443368	4817409	recharge pool
1608 1609	MT MT		too little too little	443368 443368	4817409 4817409	recharge pool recharge pool
1608 1609 1610	MT MT MT		too little too little too little	443368 443368 443368	4817409 4817409 4817409	recharge pool recharge pool recharge pool
1608 1609 1610 1611	MT MT MT		too little too little too little uncaptured	443368 443368 443368 443375	4817409 4817409 4817409 4817401	recharge pool recharge pool recharge pool recharge pool
1608 1609 1610 1611 1613	MT Constraints of the second s		too little too little too little uncaptured too little	443368 443368 443368 443375 443378	4817409 4817409 4817409 4817401 4817409	recharge pool recharge pool recharge pool recharge pool recharge pool
1608 1609 1610 1611 1613 1614	MT M		too little too little too little uncaptured too little too little	443368 443368 443368 443375 443378 443378	4817409 4817409 4817409 4817401 4817409 4817409	recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool
1608160916101611161316141615	MT Constraints of the second s		too little too little uncaptured too little too little too little	443368 443368 443368 443375 443378 443378 443378 443381	4817409 4817409 4817409 4817401 4817409 4817409 4817402	recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool
16081609161016111613161416151616	MT MT MT MT MT MT MT MT MT MT MT		too little too little uncaptured too little too little too little too little	443368 443368 443368 443375 443378 443378 443381 443390	4817409 4817409 4817409 4817401 4817409 4817409 4817402 4817407	recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool
160816091610161116131614161516161617	MT Image: MT		too little too little uncaptured too little too little too little too little too little	443368 443368 443368 443375 443378 443378 443378 443390 443398	4817409 4817409 4817409 4817409 4817409 4817409 4817402 4817407 4817410	recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool recharge pool
1608160916101611161316141615161616171619	MT Image: MT		too little too little uncaptured too little too little too little too little too little too little	443368 443368 443368 443375 443378 443378 443378 443381 443390 443398 443414	4817409 4817409 4817401 4817409 4817409 4817409 4817409 4817401 4817402 4817407 4817410	recharge pool recharge pool
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20-Aug-04	1629	MT				too little	443487	4817438	scour pool
20-Aug-04	1630	MT				too little	443462	4817437	scour pool
20-Aug-04	1631	MT				too little	443500	4817439	breeding oxbow
20-Aug-04	1632	MT				too little	443500	4817439	breeding oxbow
20-Aug-04	1633	MT				too little	443500	4817439	breeding oxbow
20-Aug-04	1634	MT				too little	443500	4817439	breeding oxbow
20-Aug-04	1635	MT				too little	443490	4817440	breeding oxbow
20-Aug-04	1636	MT				too little	443487	4817432	breeding oxbow
20-Aug-04	1637	MT				too little	443487	4817432	breeding oxbow
20-Aug-04	1638	MT				too little	443496	4817434	stream
20-Aug-04	1639	MT				too little	443497	4817443	stream
20-Aug-04	1640	MT				too little	443500	4817439	breeding oxbow
20-Aug-04	1641	MT				too little	443510	4817467	stream
20-Aug-04	1642	MT				too little	443514	4817474	stream
20-Aug-04	1643	MT				too little	443516	4817475	stream
20-Aug-04	1644	MT				too little	443526	4817486	stream
20-Aug-04	1645	MT				too little	443533	4817493	stream
20-Aug-04	1646	MT				too little	443529	4817487	stream
20-Aug-04	1647	MT				too little	443529	4817487	stream
20-Aug-04	1648					END TRANSECT	443537	4817494	END POINT (TIME LIMITED) fence line
20-Aug-04	1649	MT				too little	443503	4817481	oxbow
20-Aug-04	1650	MT				too little	443503	4817481	oxbow
20-Aug-04	1709	F	34.5	71	yes	435777396C	442676	4817611	oxbow below campsite; gravid

APPENDIX IV. FIGURE 17 METADATA

File Name: B2004082501.TIF

Title: Dry Creek Spotted Frog Survey 2004 Date: 20040902

Author: Bob Kibler; USFWS-SRFWO; 1387 South Vinnell Way, Room 368; Boise, Idaho 83709 **Purpose:** Developed as a graphic to be used in an annual Bureau of Land Management (BLM) survey report of spotted frog populations in Dry Creek, Oregon. The survey data is collected and provided to the BLM by Janice Engle of the USFWS-SRFWO; Boise, Idaho.

OALS Number: Not Applicable – This is a BLM task. No OALS number is assigned.

Administrative File Number: 6352.1052

FWS Retention Schedule: 62.A. – Permanent – Separate files into 1-year sets. Offer to NARA when it is 2-years old.

Process Information:

-The map callouts for egg masses, natural exclosure, pinch points, and transect end points were produced as hand drawn annotations based upon verbal and written information provided by Janice Engle.

-The metamorph, subadult, male, and female frog points were produced from shapefiles generated from a set of Microsoft Excel spreadsheets provided by Janice Engle.

-The background features, including topographic contours, public land survey sections,

waterbodies, and roads were produced by clipping and merging two 1:24,000 scale USGS topographic digital raster graphics.

-background features were trimmed (clipped) in ArcGIS 8.3 using a simple polygon shapefile built using heads up digitizing by Bob Kibler.

Limitations of Use: The user agrees to cite the USFWS as the source of this graphic. If the user modifies this graphic in any manner, the user must document the changes that have been made, and ensure that the resulting graphic is stored as a new file using a file name, title, and authorship differing from that provided in this document. This graphic is provided "as is" for the purpose stated above. The USFWS make no guarantees regarding the accuracy or completeness of the information represented by this graphic.

Limitations of Distribution: The graphic should always be distributed and stored with this README and the accompanying metadata files. In order to protect the integrity of the original graphic, the user should refrain from redistributing copies of this graphic. Persons seeking copies should be directed to provide a written request to the GIS Coordinator at the Authors address listed above. Please provide the requestors name and mailing address, and a brief message identifying the name of the graphic being requested. **References:**

Clip Box:

USFWS, 2004. *Clip_Box_Dry_Creek*. [ESRI Shapefile] Obtained from Bob Kibler – GIS Coordinator, USFWS, Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA. *USGS Digital Raster Graphic Topographic Maps:*

U.S. Geological Survey. *Rufino Butte Quadrangle, Oregon* [digitized georectified map]. 1:24,000. 7.5 Minute Digital Raster Graphic series. Denver, Colorado; USGS, 1972.

U.S. Geological Survey. *Copeland Reservoirs Quadrangle, Oregon* [digitized georectified map]. 1:24,000. 7.5 Minute Digital Raster Graphic series. Denver, Colorado; USGS, 1972.

Spotted Frogs:

USFWS. 2004. 2004_Females. USFWS, 2004. . [ESRI Shapefile] Obtained from Bob Kibler – GIS Coordinator, USFWS, Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA.

USFWS, 2004. 2004_Males. [ESRI Shapefile] Obtained from Bob Kibler - GIS Coordinator, USFWS,

Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA.

USFWS, 2004. 2004_Metamorphs. [ESRI Shapefile] Obtained from Bob Kibler – GIS Coordinator, USFWS, Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA.

USFWS, 2004. 2004_SubAdults. [ESRI Shapefile] Obtained from Bob Kibler – GIS Coordinator, USFWS.

Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA. *Software:*

ArcGIS ArcInfo 8.3, Environmental Systems Research Institute (ESRI) Inc., Redlands, California 92373, USA www.esri.com

FIGURE 18 METADATA

File Name: B2004091302.TIF

Title: Dry Creek Spotted Frog Metamorphs 2001 - 2004 Date: 20040917

Author: Bob Kibler/Janice Engle; USFWS-SRFWO; 1387 South Vinnell Way, Room 368; Boise, Idaho 83709 **Purpose:** Developed as a graphic to be used in an annual Bureau of Land Management (BLM) survey report of spotted frog populations in Dry Creek, Oregon. The survey data is collected and provided by Janice Engle of the USFWS-SRFWO; Boise, Idaho.

OALS Number: Not Applicable – This is a BLM task. No OALS number is assigned.

Administrative File Number: 6352.1052

FWS Retention Schedule: 62.A. – Permanent – Separate files into 1-year sets. Offer to NARA when it is 2-years old.

Process Information:

-The map callouts for egg masses, natural exclosure, pinch points, and transect end points were produced as hand drawn annotations based upon verbal and written information provided by Janice Engle.

-The metamorph frog points were produced by a query to a shapefile generated from a

Microsoft Excel spreadsheet provided by Janice Engle. A sample query would appear as ...

["DATE_" >= date '1/1/2004' AND "DATE_" <= date '12/31/2004' AND "GENDER" = 'MT'] -The background features, including topographic contours, public land survey sections,

waterbodies, and roads were produced by clipping and merging two 1:24,000 scale USGS topographic digital raster graphics.

-background features were trimmed (clipped) in ArcGIS 8.3 using a simple polygon shapefile built using heads up digitizing by Bob Kibler.

Limitations of Use: The user agrees to cite the USFWS as the source of this graphic. If the user modifies this graphic in any manner, the user must document the changes that have been made, and ensure that the resulting graphic is stored as a new file using a file name, title, and authorship differing from that provided in this document. This graphic is provided "as is" for the purpose stated above. The USFWS make no guarantees regarding the accuracy or completeness of the information represented by this graphic.

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Clip Box:

USFWS, 2004. *Clip_Box_Dry_Creek*. [ESRI Shapefile] Obtained from Bob Kibler – GIS Coordinator, USFWS, Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA. *USGS Digital Raster Graphic Topographic Maps:*

U.S. Geological Survey. *Rufino Butte Quadrangle, Oregon* [digitized georectified map]. 1:24,000. 7.5 Minute Digital Raster Graphic series. Denver, Colorado; USGS, 1972.

U.S. Geological Survey. *Copeland Reservoirs Quadrangle, Oregon* [digitized georectified map]. 1:24,000. 7.5 Minute Digital Raster Graphic series. Denver, Colorado; USGS, 1972.

Spotted Frogs:

USFWS. 2004. *DryCreek_20040920*. USFWS, 2004. . [ESRI Shapefile] Obtained from Bob Kibler, GIS Coordinator, USFWS, Snake River Fish and Wildlife Service, 1387 South Vinnell Way, Room 368, Boise, Idaho, 83709 USA.

Software:

ArcGIS ArcInfo 8.3, Environmental Systems Research Institute (ESRI) Inc., Redlands, California 92373, USA www.esri.com

APPENDIX V. ADDITIONAL PHOTOS

June 2004



































AUGUST 2004





