



**Amphibian Inventory  
of the Jarbidge and  
Snake River Resource  
Areas**

*by  
Mike McDonald*

**AMPHIBIAN INVENTORY OF THE JARBIDGE AND SNAKE  
RIVER RESOURCE AREAS**

**FINAL REPORT**

**August 19, 1996**

**Cooperative Challenge Cost Share Project**

**Bureau of Land Management  
Lower Snake River District  
Jarbidge Resource Area  
2620 Kimberly Road  
Twin Falls, ID 83301**

**Bureau of Land Management  
Upper Snake River District  
Snake River Resource Area  
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## INTRODUCTION

Amphibians are important members of natural ecosystems. They are prey for birds, mammals, and fish and constitute a significant amount of biomass in many ecosystems (Burton and Likens 1975, Pough 1980). In long-term environmental monitoring programs, amphibians are useful bioindicators to evaluate environmental health (Wake and Morowitz 1990). Recently, scientists have expressed concern over the apparent world-wide decline of many amphibian populations (Wake and Morowitz 1990, Wyman 1990). A variety of factors including acid rain, heavy metal and pesticide contamination, habitat degradation, changes in land-use practices, and the introduction of exotic species are factors that may contribute to declines (Phillips 1990, Livermore 1992).

Despite their ecological importance, little is known about the status of amphibian populations in Idaho. Although the spotted frog (*Rana pretiosa*) is presently listed as a Category 1 Candidate Species (Conservation Data Center 1995) in the southern portion of its range, little is known about its distribution and abundance in Idaho south of the Snake River. To date, spotted frog populations have been documented in only 6-10 sites in Idaho south of the Snake River (Jim Munger, pers. comm.).

More detailed information on amphibians is needed to develop management guidelines to protect and maintain populations. Data provided by this project will help preserve an important group of wildlife and help land management professionals make better informed land-use decisions.

The objectives of this project were: (1) to survey potential spotted frog and other amphibian habitats within the Jarbidge (JRA) and Snake River (SRRA) Resource Areas, and (2)

if amphibian populations exist, determine their status and distribution.

## **METHODS**

Survey sites were selected based on a need to confirm recent amphibian observations within both resource areas and to determine the presence/absence of amphibians within project area boundaries. National Wetland Inventory Maps also were used to identify potential amphibian breeding sites. Breeding call surveys were used to locate adults while visual searches were used to locate egg masses, larvae, and adults (Campbell and Christman 1982, Karns 1986). Species presence, approximate numbers, and location were recorded for each observation. Habitat information including plant species present, configuration of the water source (size, depth, and bottom composition), and water chemistry (temperature, conductivity, and pH) were also collected at each amphibian observation. Ground, air, and water temperature, water pH and conductivity (a measure of total dissolved solids expressed in ppm), and weather information were recorded per survey site visit. In addition, incidental reptile observations were recorded by species, date, and location (Appendix A).

Each survey site was classified according to the Wetlands and Deepwater Habitat Classification System (Cowardin et al. 1979). Fish presence/absence was determined by visual observation, rod and reel sampling, or records from the Idaho Department of Fish and Game (IDFG) records (Jerome, Idaho). Historical data on the presence of amphibians in Twin Falls county were obtained from the Northern Intermountain Herpetological Data Base (Idaho Museum of Natural History, Pocatello, Idaho).

## **STUDY SITES**

Three sites in the JRA and five in the SRRA were surveyed from 17 April to 29 June,

1995 (Table 1, Figure 1). In this report, Salmon Falls Creek is included in the JRA sites even though it serves as the boundary between the resource areas. The three JRA sites were also surveyed from 4 May to 8 July, 1994 (McDonald and Marsh 1995) (Table 1, Figure 1). All sites were visited at least three times with the exception of Salmon Falls Creek which was visited twice. Each survey site is described below. Distances to nearest population centers or landmarks are estimates. Additional physical and water chemistry data are provided (Table 1).

**1. Tuanna Gulch** - The site is in the Jarbidge Resource area and is located 6.2 km southwest of Bliss, Idaho. The survey site encompassed a 2 km stretch of perennial stream that was dissected by numerous beaver dams and small ponds (Figure 2). A road, running parallel to the site, allowed access. The site is located on Bureau of Land Management (BLM) Surface Management Status Map Twin Falls Quadrangle: Township 6 South, Range 12 East, Sections 14 and 23.

**2. Yahoo Creek** - The site is in the Jarbidge Resource Area and is located 9.8 km southwest of Hagerman, Idaho. The survey site included a 1.5 km stretch of stream and a palustrine wetland approximately 1 ha in size (Figure 3). The wetland was fenced to exclude livestock. Access was limited to a road intersecting the creek at the northern end of the survey site. The site is located on BLM Surface Management Status Map Twin Falls Quadrangle: Township 8 South, Range 13 East, Sections 9 and 16.

**3. Salmon Falls Creek south of Salmon Falls Creek Reservoir** - The survey site is in the Jarbidge Resource Area and consisted of a 18 km stretch of creek starting south of Jackpot, Nevada where U.S. Highway 93 intersects the creek, to 1 km from the southern end of Salmon Falls Creek Reservoir (Figure 4). The creek is inhabited by trout (*Oncorhynchus spp*) and

grazed by livestock. Because of limited access, wetlands along this stretch were accessed via canoe. The survey area is located on BLM Surface Management Status Maps Rogerson and Jackpot Quadrangles.

**4. Winter Spring** - The site is located approximately 6.4 km east and 12.9 km south of Rogerson, Idaho. The survey area included nearly 200 meters of the spring, starting at its origin (Figure 5). In 1983, the surveyed portion of the spring was fenced to exclude livestock and rock/wire dams and wire/rock gully plugs were installed to trap sediment and stabilize the watershed (P. Makela, pers. comm.). Access to the site was gained via the Magic Hot Springs road which paralleled the survey site. The site is located on BLM Surface Management Status Map Rogerson Quadrangle: Township 15 South, Range 17 East, Section 30.

**5. Shoshone Creek 1** - The site is located approximately 12.9 km east and 16.1 km south of Rogerson, Idaho. The survey area was a 400 m stretch of creek starting at the Shoshone Basin Cutoff road bridge and proceeding downstream (Figure 6). The entire survey area was fenced in 1983 as an ungrazed riparian control area for comparison purposes (P. Makela, pers. comm.). Access was gained via the Shoshone Basin Cutoff road. The creek is inhabited by trout (*Oncorhynchus spp*). The site is located on BLM Surface Management Status Map Rogerson Quadrangle: Township 15 South, Range 17 East, Section 34.

**6. Shoshone Creek 2** - The site is located approximately 12.9 km east and 19.3 km south of Rogerson, Idaho. The survey area was a 400 m stretch of the creek north and south of the Shoshone Creek-Big Creek confluence (Figure 7). Because of high water levels, the west side of the creek was surveyed only once. The creek supports a trout (*Oncorhynchus spp*) population. The site is located on BLM Surface Management Status Map Rogerson Quadrangle:

Township 16 South, Range 17 East, Sections 10 and 15.

**7. Shoshone Creek 3** - The site is located approximately 12.9 km east and 22.5 km south of Rogerson, Idaho. The survey area was a 400 m stretch of the creek immediately north of the Shoshone Creek-Hot Creek confluence (Figure 8). Because of high water levels, the west side of the creek was surveyed only once. The creek supports a trout (*Oncorhynchus spp*) population. The site is located on BLM Surface Management Status Map Sheep Creek Quadrangle: Township 16 South, Range 17 East, Section 22.

**8. Horse Creek Reservoir** - The site is located approximately 14.5 km east and 20.9 km south of Rogerson, Idaho. The reservoir encompasses approximately 0.5 hectares and was constructed in 1947 for livestock watering (P. Makela, pers. comm.). The site is grazed by livestock. The survey area included the perimeter of the reservoir and approximately 50 m of Horse Creek from the reservoir upstream (Figure 9). The site is located on BLM Surface Management Status Map Rogerson Quadrangle: Township 16 South, Range 17 East, Section 24.

## **RESULTS AND DISCUSSION**

### **Species Summaries**

Two amphibian species were found during the 1995 survey (Table 1). Three were found in 1994 (McDonald and Marsh 1995) (Table 1). Below is a brief species description including historical observations, locations, and survey techniques used. In addition, information is provided on species potentially found in the JRA and SRRA based on historical observations, known ranges, and suitable habitat (Table 2).

#### **Pacific Chorus Frog (*Pseudacris regilla*)**

Pacific chorus frogs were found at six of the eight survey sites in 1995 (Table 1).

Calling adults were identified in Winter Spring, Shoshone Creek 1,2, and 3, and in Horse Creek Reservoir (Table 2, Figures 5, 6, 7, 8, and 9). Adults, tadpoles and eggs were found in flooded wetlands adjacent to Salmon Falls Creek (Table 2, Figure 4) and at Winter Spring (Table 2, Figure 5). Pacific chorus frogs were not found in Yahoo Creek marsh in 1995 despite encountering calling adults in 1994 (McDonald and Marsh 1995) (Table 1, Figure 3). Chorus frog presence was confirmed using breeding call surveys and visual searches (Table 1). Table 3 shows historical observations of pacific chorus frogs in Twin Falls County.

#### **Western Toad (*Bufo boreas*)**

Western toads were not encountered during the 1995 surveys despite being found at two sites in 1994 (McDonald and Marsh 1995) (Table 1). In 1994, visual searches revealed adults in Tuanna Gulch and the Yahoo Creek marsh (Table 2, Figures 2 and 3). No evidence of successful reproduction was detected in 1994 or 1995. Table 3 shows historical observations of western toads in Twin Falls County.

#### **Great Basin Spadefoot (*Spea intermontanus*)**

Spadefoots were found in Tuanna Gulch using breeding call surveys and visual searches at dusk in 1994 (McDonald and Marsh 1995) and 1995 (Table 1, Figure 2). No evidence of successful reproduction was detected in 1994 or 1995. Table 3 shows historical observations of spadefoots in Twin Falls County.

#### **Leopard Frog (*Rana pipiens*)**

Leopard frogs were not located during the 1994 (McDonald and Marsh 1995) or 1995 surveys (Table 2) despite historical observations in Twin Falls County (Table 3). A review of historical observations indicate leopard frogs were the most commonly observed species in the

Twin Falls County database (Table 3).

**Spotted Frog (*Rana pretiosa*)**

Spotted frogs were not found during the 1994 (McDonald and Marsh 1995) or 1995 surveys (Table 2) despite recent sightings in northeast Nevada. In 1994, surveys revealed two adult spotted frogs in Salmon Falls Creek approximately 19 km southwest of Jackpot, Nevada (M. Ports, pers. comm.). A review of historical observations from Twin Falls County shows no record of spotted frogs (Table 3). The nearest observations of spotted frog in Idaho south of the Snake River are from southwestern Owyhee County (Nussbaum et al. 1983).

**Woodhouse's Toad (*Bufo woodhousei*), Striped Chorus Frog (*Pseudacris triseriata*), and Bull Frog (*Rana catesbeiana*)**

All three species are possible inhabitants in the JRA and SRRA but none were located during the 1994 (McDonald and Marsh 1995) and 1995 surveys (Table 2). Tables 3 shows none of the species have been historically observed in Twin Falls County.

**Wetland Associations**

Five of the eight 1995 survey sites were classified as intermittent or perennial riverine systems while three were classified as palustrine (Table 1). Amphibians were found in 2 of 3 palustrine sites, the exception being Yahoo Creek marsh, and in all 5 of the riverine sites (Table 1). In all cases where amphibians were encountered in riverine sites, a portion of the site had been impounded (beavers dams) or flooded by spring runoff and was classified as palustrine. Similar wetland associations were noted in 1994 when amphibians were only found in palustrine sites (including Yahoo Creek marsh) or palustrine sites within intermittent riverine systems (McDonald and Marsh 1995).

## **Physical and Chemical Site Characteristics**

Water temperature ranged from 10.3°C at Winter Spring to 22.0 C at Tuanna Gulch (Table 1). Conductivity ranged from 102 ppm at Winter Spring to 1055 ppm at Yahoo Creek (Table 1). The pH did not vary widely between sites (pH 7.5-9.3) (Table 1). Amphibians were found across the range of water temperature, conductivity, and pH values (Table 1).

Elevations ranged from 950 m at Tuanna Gulch to 1,800 m at Winter Spring (Table 1). Pacific chorus frogs were found from 1,000-1,800 m while spadefoots and western toads were encountered at lower elevation (950-1,000 m) sites (Table 1).

## **Fish**

Although it was beyond the scope of this survey to assess fish/amphibian interactions, the results of the 1994 and 1995 surveys warrant some discussion. Hayes and Jennings (1986) suggested fish, especially introduced species, may limit amphibian distribution. In 1994, fish were absent in sites inhabited by amphibians (McDonald and Marsh 1995). Conversely, fish were present in all sites where amphibians were absent (McDonald and Marsh 1995). In 1995, fish were present in four of the seven sites containing amphibians (Table 1). However, in these four sites, amphibians were found in seasonally flooded wetlands (palustrine type) which appeared inaccessible to fish.

Preliminary results of amphibian survey work in the Big Horn Crags of central Idaho have shown that amphibians are absent from sites inhabited by introduced trout unless some portion of the site is inaccessible to fish (C. Peterson, pers. comm.). The relationship between amphibian distribution and introduced fishes needs further study.

## **SUMMARY**

1. No spotted frogs were observed in 1994 and 1995. There have been recent observations of adult spotted frogs in Salmon Falls Creek in northeast Nevada (M. Ports, pers. comm.).
2. No leopard frogs were encountered in 1994 and 1995 despite historical observations in Twin Falls County.
3. Amphibians were found inhabiting palustrine wetlands and palustrine wetlands associated with riverine systems with and without beaver dams.
4. Amphibians were not observed in perennial riverine systems.
5. Amphibians were not found in riverine systems that contained fish although they were found in associated wetland refugia (seasonally flooded wetlands inaccessible to fish). Fish were absent in sites where amphibians were observed.
6. In 1994 and 1995, no evidence of successful reproduction by western toads and spadefoots was detected in Tuanna Gulch or Yahoo Creek, although adult individuals were observed at both sites.

## **RECOMMENDATIONS**

1. Because of recent concern over leopard frog and western toad populations in southern Idaho, historical observation sites within the JRA and SRRA should be revisited and additional surveys should be initiated in potential habitat.
2. The recent discovery of spotted frogs in Salmon Falls Creek in northeast Nevada warrants further survey work in that drainage and others in southern Idaho.
3. The lack of evidence of successful reproduction by western toads and spadefoots in Tuanna Gulch and Yahoo Creek in 1994 and 1995 suggests a need for further survey work in those drainages.
4. Future survey work should include evaluations of the potential influence of introduced fishes on amphibian distribution and abundance.

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Table 1. Survey sites, wetland classification, presence of amphibians or fish, physical and chemical characteristics, and survey techniques, Jarbidge and Snake River Resource Areas, 4 May to 8 July, 1994 and 17 April to 29 June, 1995.

SITE NAME	WETLAND TYPE <sup>a</sup>	FISH PRESENT	x pH	x WATER TEMP (°C)	ELEVATION (m)	AMPHIBIANS PRESENT		SURVEY TECHNIQUE <sup>c</sup>
			x COND. <sup>b</sup>			1994	1995	
Tuanna Gulch <sup>d</sup>	Riverine, Intermittent	No	8.9	22.0	950	Western Toad, Great Basin Spadefoot	Great Basin Spadefoot	visual search; breeding call surveys
			615					
Yahoo Creek	Palustrine, Emergent	No	8.1	17.6	1,000	Pacific Chorus Frog, Western Toad	none found	visual search; breeding call surveys
			1055					
Salmon Falls Creek <sup>d</sup>	Riverine, Upper Perennial	Yes	9.3	20.9	1,500	none found	Pacific Chorus Frog	visual search
			247					
Winter Spring <sup>d</sup>	Palustrine, Unconsolidated Bottom	No	8.3	10.3	1,800	not surveyed	Pacific Chorus Frog	visual search; breeding call surveys
			102					
Shoshone Creek #1 <sup>d</sup>	Riverine, Upper Perennial	Yes	7.7	13.9	1,700	not surveyed	Pacific Chorus Frog	breeding call surveys; visual search
			230					
Shoshone Creek #2 <sup>d</sup>	Riverine, Upper Perennial	Yes	7.5	20.5	1,700	not surveyed	Pacific Chorus Frog	breeding call surveys; visual search
			497					
Shoshone Creek #3 <sup>d</sup>	Riverine, Upper Perennial	Yes	7.5	20.5	1,700	not surveyed	Pacific Chorus Frog	breeding call surveys; visual search
			497					
Horse Creek Reservoir <sup>d</sup>	Palustrine, Emergent	No	8.2	14.0	1,750	not surveyed	Pacific Chorus Frog	breeding call surveys; visual search
			265					

<sup>a</sup> Cowardin et al. (1979)

<sup>b</sup> Conductivity is a measure of total dissolved solids (ppm) in water at each site.

<sup>c</sup> Survey techniques are listed in order of effectiveness based on results.

<sup>d</sup> Contained multiple wetland types.

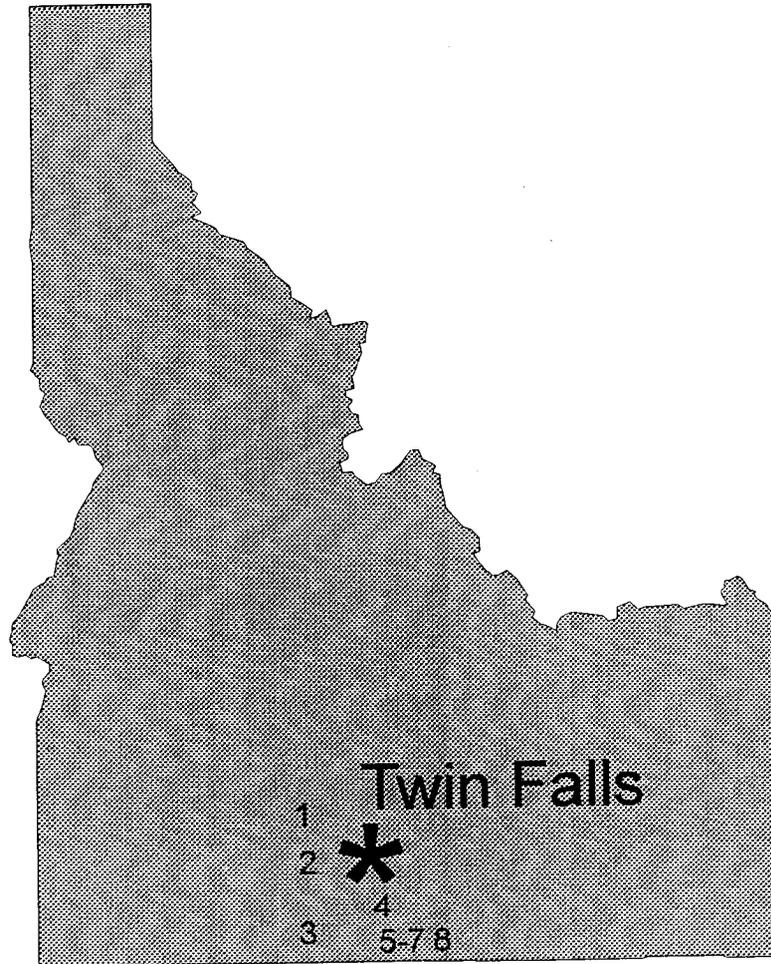


Figure 1. Site locations for amphibian survey in Jarbidge and Snake River Resource Areas, 7 April to 29 June, 1995. 1 = Tuanna Gulch, 2 = Yahoo Creek, 3 = Salmon Falls Creek, 4 = Winter Spring, 5 = Shoshone Creek #1, 6 = Shoshone Creek #2, 7 = Shoshone Creek #3, 8 = Horse Creek Reservoir.

# Tuanna Gulch, Bliss Quadrangle, Idaho

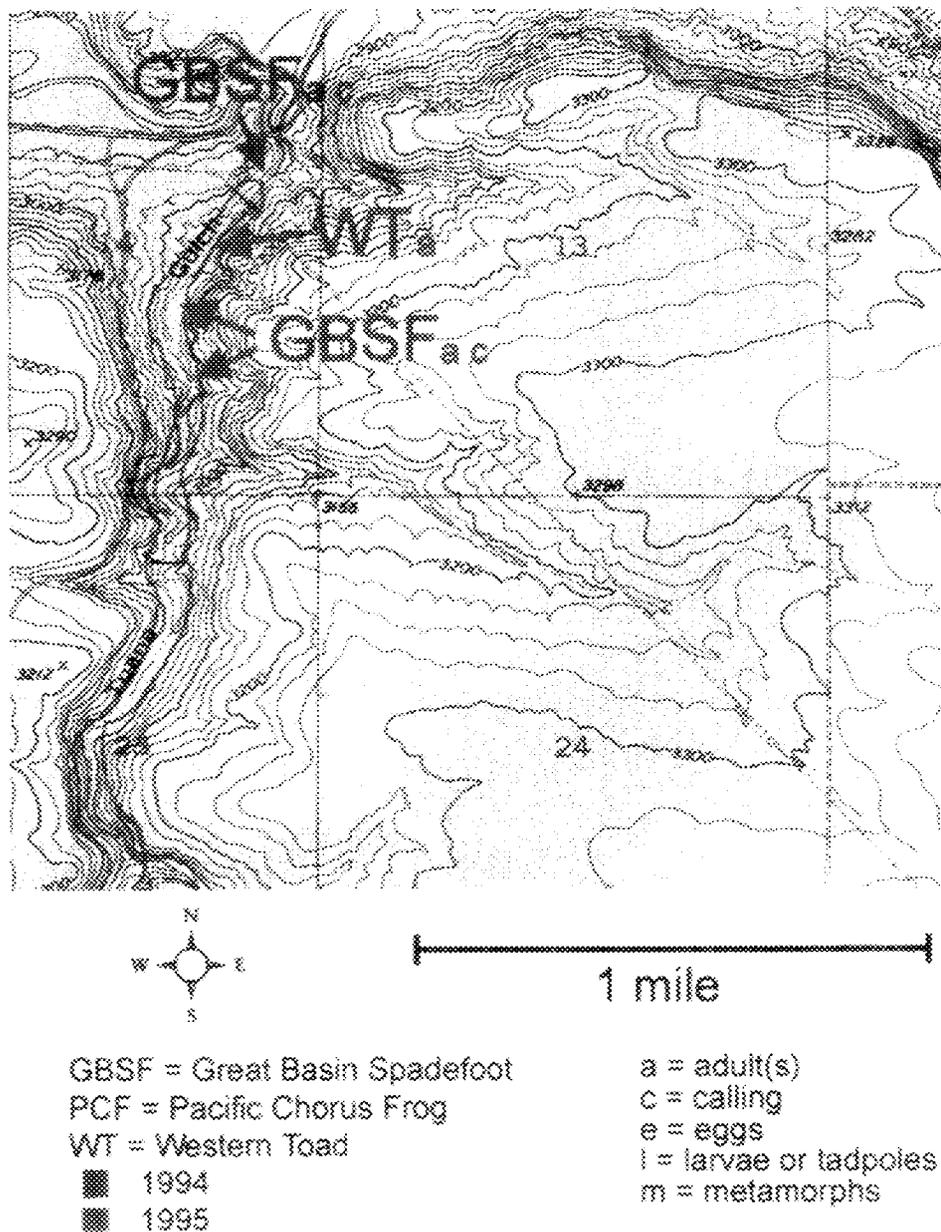
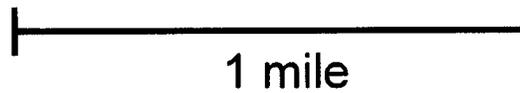
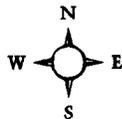
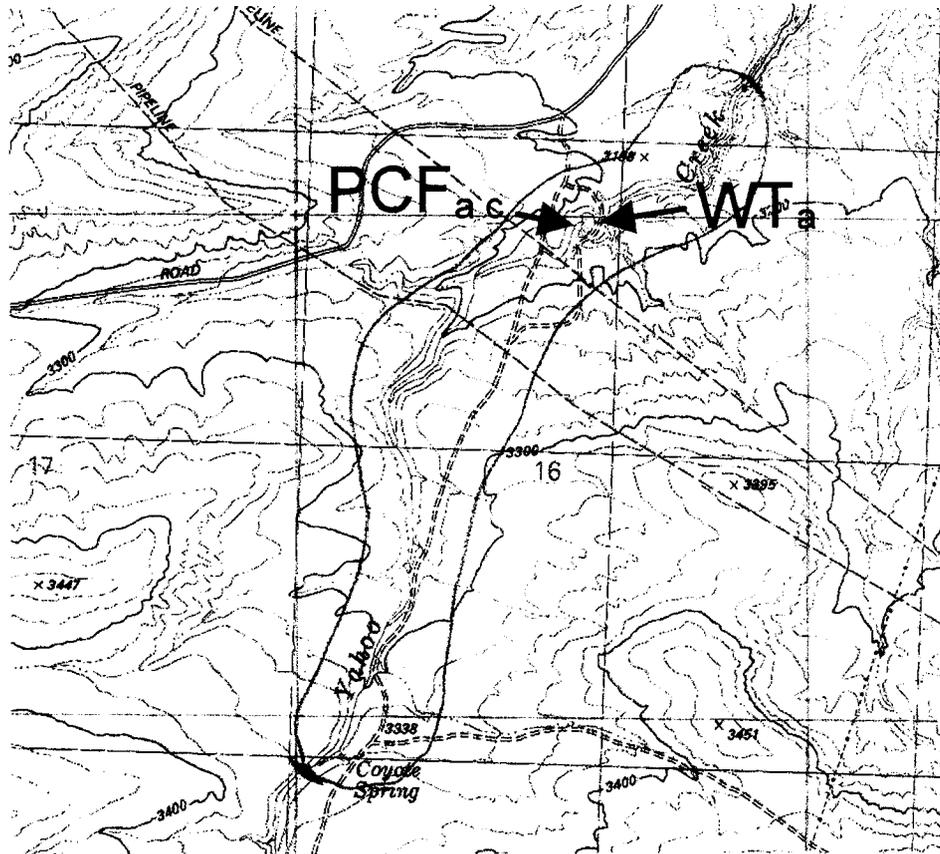


Figure 2. Tuanna Gulch survey site with observed amphibian locations, Jarbidge, Resource Area, 4 May to 8 July, 1994 and 17 April to 29 June, 1995. The map was scanned from the Bliss Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Yahoo Creek, Yahoo Creek Quadrangle, Id.



GBSF = Great Basin Spadefoot

PCF = Pacific Chorus Frog

WT = Western Toad

■ 1994

■ 1995

a = adult(s)

c = calling

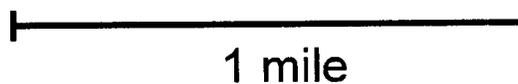
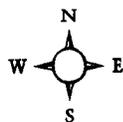
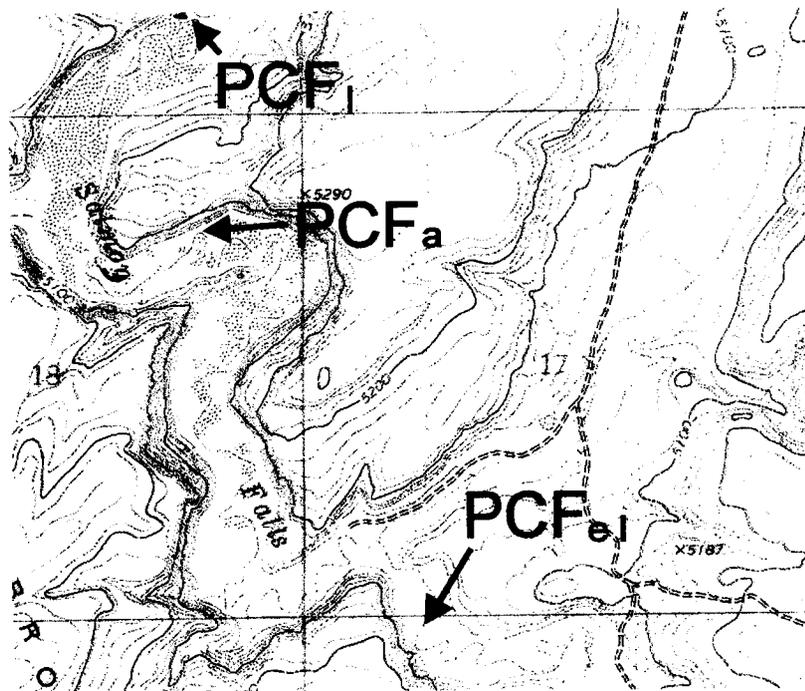
e = eggs

l = larvae or tadpoles

m = metamorphs

Figure 3. Yahoo Creek survey site with observed amphibian locations, Jarbidge, Resource Area, 4 May to 8 July, 1994 and 17 April to 29 June, 1995. The map was scanned from the Yahoo Creek Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Salmon Falls Creek, Meteor Quadrangle, Id.

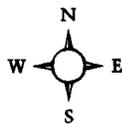
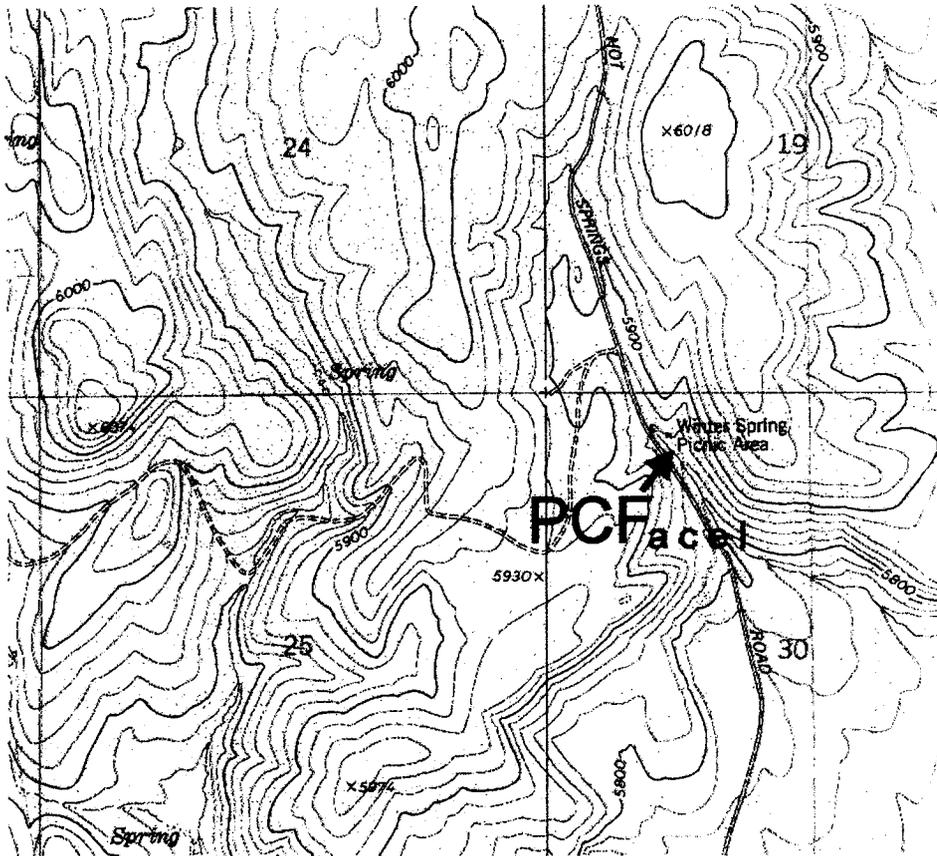


GBSF = Great Basin Spadefoot  
 PCF = Pacific Chorus Frog  
 WT = Western Toad

a = adult(s)  
 c = calling  
 e = eggs  
 l = larvae or tadpoles  
 m = metamorphs

Figure 4. Salmon Falls Creek survey site with observed amphibian locations, Jarbidge Resource Area, 17 April to 29 June, 1995. The map was scanned from the Meteor Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Winter Spring, Magic Hot Spring Quadrangle, Id.



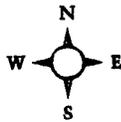
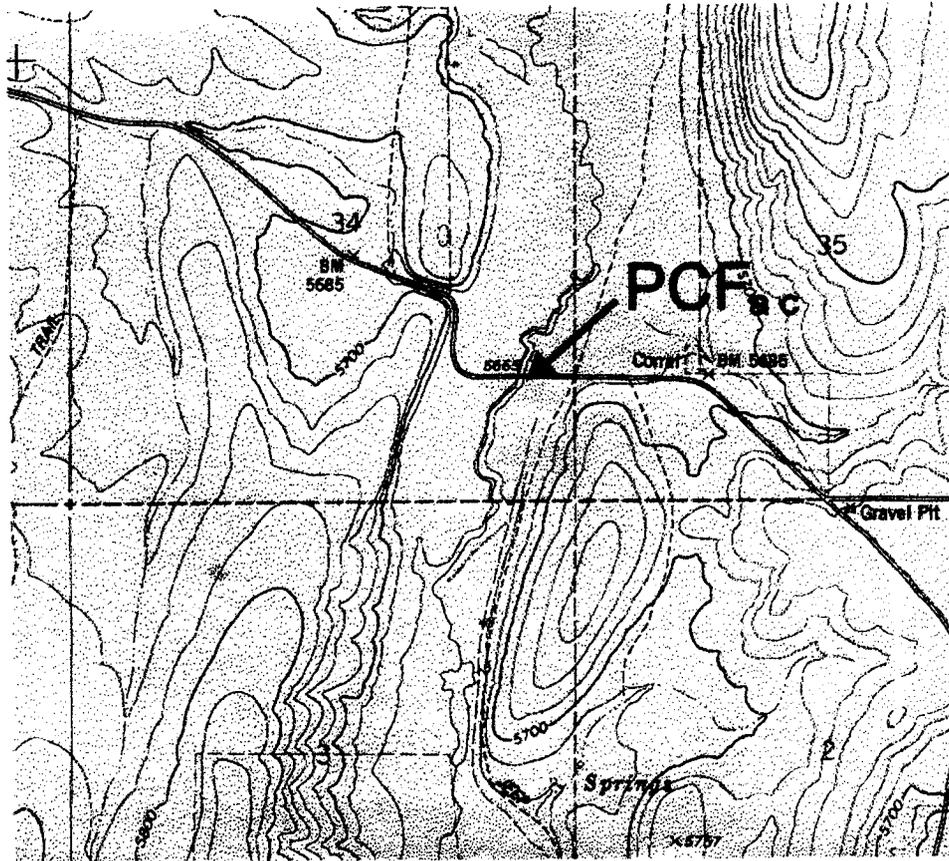
1 mile

GBSF = Great Basin Spadefoot  
 PCF = Pacific Chorus Frog  
 WT = Western Toad

a = adult(s)  
 c = calling  
 e = eggs  
 l = larvae or tadpoles  
 m = metamorphs

Figure 5. Winter Spring survey site with observed amphibian locations, Snake River Resource Area, 17 April to 29 June, 1995. The map was scanned from the Magic Hot Springs Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Shoshone Creek #1 Big Creek Ranch Quadrangle, Id.



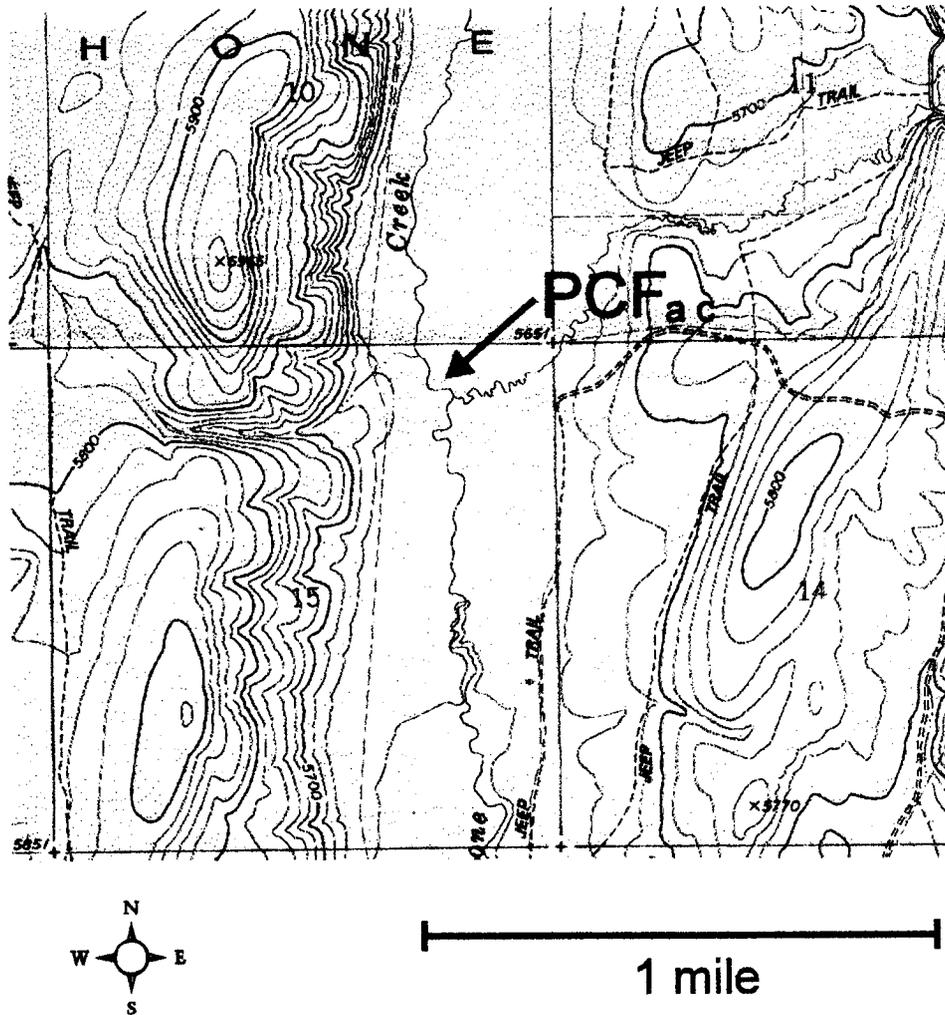
1 mile

GBSF = Great Basin Spadefoot  
PCF = Pacific Chorus Frog  
WT = Western Toad

a = adult(s)  
c = calling  
e = eggs  
l = larvae or tadpoles  
m = metamorphs

Figure 6. Shoshone Creek #1 survey site with observed amphibian locations, Jarbidge Resource Area, 17 April to 29 June, 1995. The map was scanned from the Big Creek Ranch Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Shoshone Creek #2 Big Creek Ranch Quadrangle, Id.

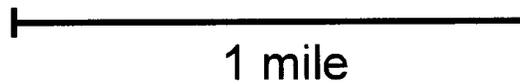
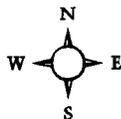
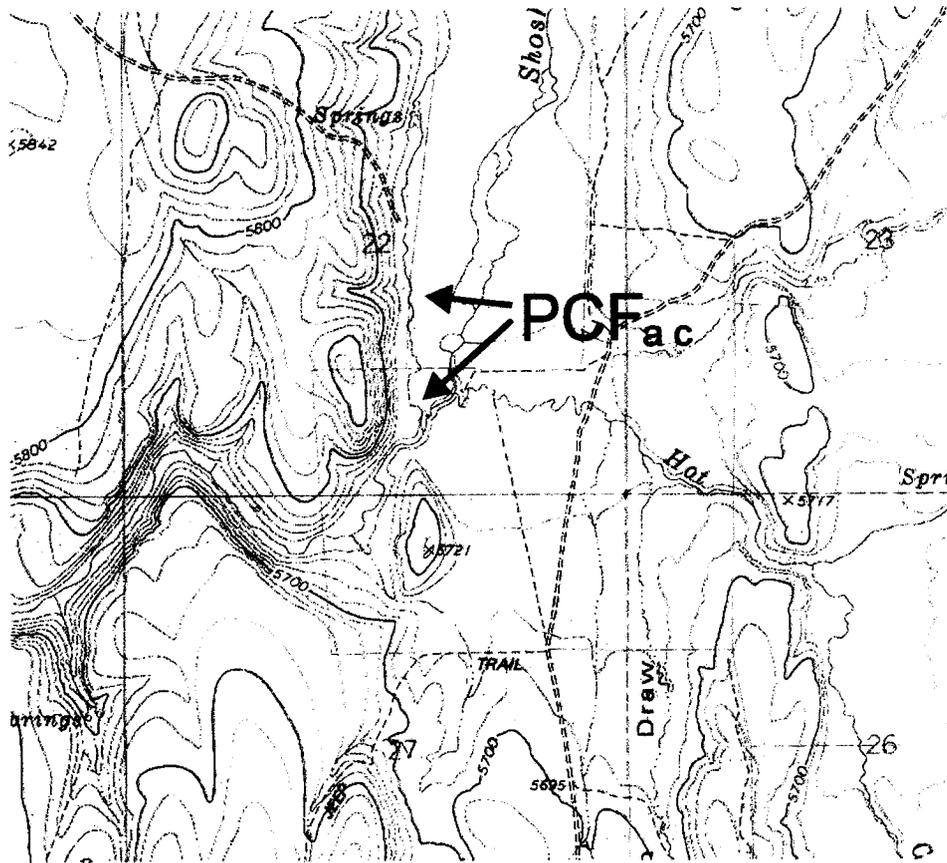


GBSF = Great Basin Spadefoot  
 PCF = Pacific Chorus Frog  
 WT = Western Toad

a = adult(s)  
 c = calling  
 e = eggs  
 l = larvae or tadpoles  
 m = metamorphs

Figure 7. Shoshone Creek #2 survey site with observed amphibian locations, Jarbidge Resource Area, 17 April to 29 June, 1995. The map was scanned from the Big Creek Ranch Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Shoshone Creek #3 Big Creek Ranch Quadrangle, Id.

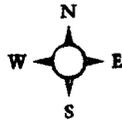
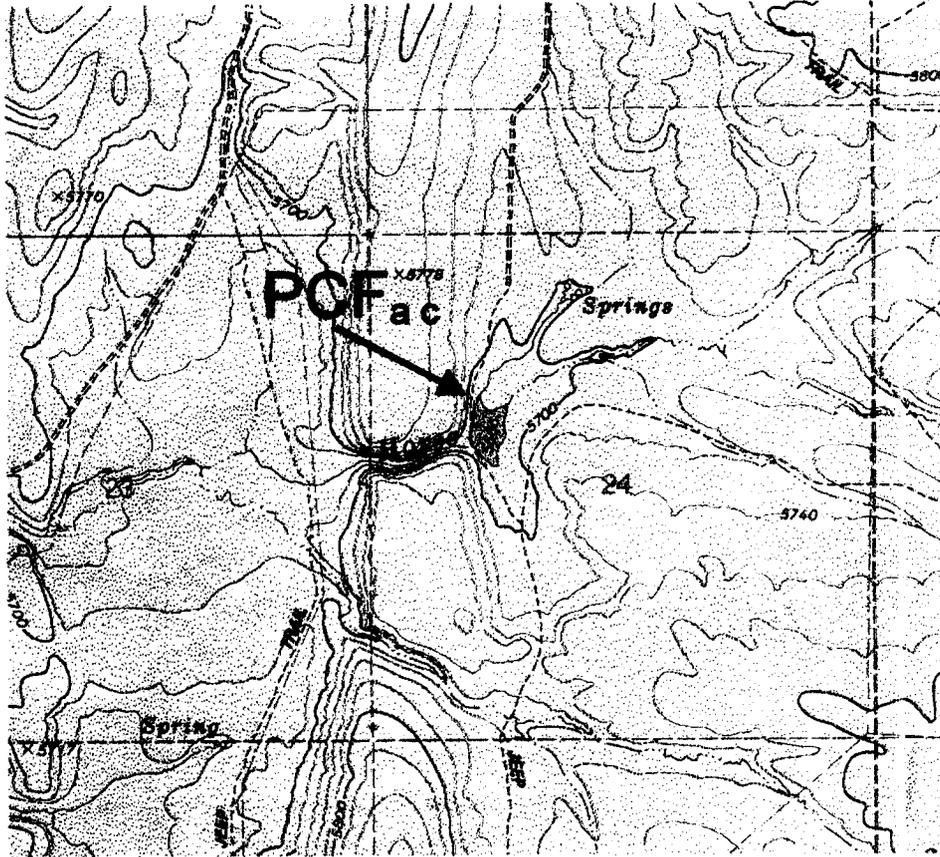


GBSF = Great Basin Spadefoot  
 PCF = Pacific Chorus Frog  
 WT = Western Toad

a = adult(s)  
 c = calling  
 e = eggs  
 l = larvae or tadpoles  
 m = metamorphs

Figure 8. Shoshone Creek #3 survey site with observed amphibian locations, Jarbidge Resource Area, 17 April to 29 June, 1995. The map was scanned from the Big Creek Ranch Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

# Horse Creek Reservoir Big Creek Ranch Quadrangle, Id.



1 mile

GBSF = Great Basin Spadefoot  
PCF = Pacific Chorus Frog  
WT = Western Toad

a = adult(s)  
c = calling  
e = eggs  
l = larvae or tadpoles  
m = metamorphs

Figure 9. Horse Creek Reservoir survey site with observed amphibian locations, Jarbidge Resource Area, 17 April to 29 June, 1995. The map was scanned from the Big Creek Ranch Quadrangle, 7.5 minute series (Topographic). Capital letters indicate species. Small case letters indicate life stage. See legend above.

Table 2. Amphibian survey results in the Jarbidge and Snake River Resource Areas, 4 May to 8 July, 1994 and 17 April to 29 June, 1995.

COMMON NAME	SCIENTIFIC NAME	STATUS <sup>b</sup>	DISTRIBUTION <sup>c</sup>	ESTIMATED ABUNDANCE <sup>c</sup>	VOUCHER <sup>d</sup>	SAMPLING TECHNIQUE	COMMENTS	
							1994	1995
*****	*****	*****	*****	*****	*****	*****	*****	
<b>CONFIRMED<sup>a</sup></b>	*****	*****	*****	*****	*****	*****	*****	
Western Toad	<i>Bufo boreas</i>	SSC, BLM-S	intermediate	uncommon	photograph	visual search	adults found in Tuanna Gulch and Yahoo Creek	none found
Great Basin Spadefoot	<i>Spea intermontanus</i>	PNG	intermediate	common	recorded call; photograph	breeding call surveys; visual search	adults observed and heard in Tuanna Gulch	adults heard in Tuanna Gulch
Pacific Chorus Frog	<i>Pseudacris regilla</i>	PNG	widespread	common	recorded call; photograph	breeding call surveys; visual search	adults heard in Yahoo Creek	adults heard in all SRRA sites; tadpoles and eggs at Salmon Falls Creek and Winter Spring
*****	*****	*****	*****	*****	*****	*****	*****	
<b>PROBABLE<sup>a</sup></b>	*****	*****	*****	*****	*****	*****	*****	
Leopard Frog	<i>Rana pipiens</i>	SSC, BLM-S					seven historical observations in Twin Falls County	
*****	*****	*****	*****	*****	*****	*****	*****	
<b>POSSIBLE<sup>a</sup></b>	*****	*****	*****	*****	*****	*****	*****	
Spotted Frog	<i>Rana pretiosa</i>	SSC, C1, BLM-S, FSR4-S					historical observations in Owyhee County	
Western Chorus Frog	<i>Pseudacris triseriata</i>	PNG					historical observations in Cassia County	
Woodhouse's Toad	<i>Bufo woodhousei</i>	PNG					historical observations in Owyhee County	
Bullfrog	<i>Rana catesbeiana</i>	Game Species					historical observations in Owyhee and Gooding Counties	

<sup>a</sup> Confirmed - voucher or reliable observation, Probable - within range, suitable habitat, Possible - range nearby, suitable habitat

<sup>b</sup> Based on Idaho Conservation Data Center (1994)

SSC = Species of Special Concern (IDFG); PNG = Protected Nongame (IDFG)

C1 = Category 1 Candidate Species (USFWS)

BLM-S = Sensitive Species

FSR4 -S = Sensitive Species Region 4 (USFS)

<sup>c</sup> Based on 1994-95 surveys

<sup>d</sup> Museum specimen, photograph, tape recording

Table 3. Historic observations of amphibians in Twin Falls County, Idaho. Data are from the Northern Intermountain Herpetological Data Base, Idaho Museum of Natural History, Pocatello, Idaho.

MUSEUM	COMMON NAME	SCIENTIFIC NAME	LOCALITY	DATE	COLLECTOR	REMARKS
BSU 21	Pacific Chorus Frog	<i>Pseudacris regilla</i>	8 ½ miles S.S.E. Twin Falls	3 October, 1969	Hoesinsky	
BSU 25	Leopard Frog	<i>Rana pipiens</i>	8 ½ miles S.SE. Twin Falls	5 October, 1969	Holesinsky	
IMNH 128	Pacific Chorus Frog	<i>Pseudacris regilla</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 129	Pacific Chorus Frog	<i>Pseudacris regilla</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 132	Western Toad	<i>Bufo boreas</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 133	Western Toad	<i>Bufo boreas</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 134	Western Toad	<i>Bufo boreas</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 394	Leopard Frog	<i>Rana pipiens</i>	Salmon Falls Cr above Balanced Rock St. Park	14 June, 1975		
UIM 153	Leopard Frog	<i>Rana pipiens</i>	12 miles WNW of Buhl, US 30, Salmon Falls	6 May, 1964	P. Dumas	subadult
UIM 221	Leopard Frog	<i>Rana pipiens</i>	0.5 mi. E of Twin Falls	13 June, 1958	Wilcox	adult
UIM 222	Leopard Frog	<i>Rana pipiens</i>	Twin Falls city limits	20 June, 1958	Gillenwater	adult
UIM 268	Leopard Frog	<i>Rana pipiens</i>	12 miles WNW of Buhl, Salmon Falls	13 April, 1957	P. Dumas	adult 3 subadults
UIM 385	Leopard Frog	<i>Rana pipiens</i>	Twin Falls	10 August, 1976	S. File	adult

Appendix A. Date and location of reptile observations during the Jarbidge and Snake River Resource Areas Amphibian Surveys, 4 May to 8 July, 1994 and 17 April to 29 June, 1995.

COMMON NAME	SCIENTIFIC NAME	DATE	LOCATION
Western Rattlesnake	<i>Crotalus viridis</i>	May 10, 1994	Tuanna Gulch
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Gopher Snake	<i>Pituophis catenifer</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Gopher Snake	<i>Pituophis catenifer</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Side-blotched Lizard	<i>Uta stansburiana</i>	June 15, 1994	W. slope of Tuanna Gulch .8 km S. of Shoestring Road
Whip-tailed Lizard	<i>Cnemidophorus tigris</i>	June 15, 1994	W. slope of Tuanna Gulch .8 km S. of Shoestring Road
Whip-tailed Lizard	<i>Cnemidophorus tigris</i>	June 15, 1994	W. slope of Tuanna Gulch .4 km S. of Shoestring Road
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	June 15, 1994	Balanced Rock Park S. of crossing
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	June 15, 1994	Balanced Rock Park S. of crossing
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	oxbow of Salmon Falls Cr above reservoir (T16S, R14E, S18)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	on shore adjacent to Salmon Falls Creek above reservoir (T16S, R14E, S18)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Salmon Falls Creek (T16S, R14E, S18)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	April 30, 1995	Horse Creek (T16S, R17E, SW1/4 NW1/4 NW1/4 Sec.24)
Racer	<i>Coluber constrictor</i>	May 16, 1995	Tuanna Gulch (T6S, R12E, NW1/4 NW1/4 SE1/4 Sec.14)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	June 23, 1995	Salmon Falls Cr. (T16S, R15E, NE1/4 NW1/4 NW1/4 Sec.20)
Gopher Snake	<i>Pituophis catenifer</i>	June 23, 1995	Salmon Falls Cr. (T16S, R15E, SE1/4 SW1/4 SW1/4 Sec.17)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	June 23, 1995	Salmon Falls Creek (T16S, R12E, NW1/4 SE1/4 SE1/4 Sec.7)



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