

## TABLES AND FIGURES

**Table 1:** Summary description of toad monitoring searches. A detailed description of search types is provided in Appendix 1.

Search Type	Purpose	Location	Level of Effort	Timing
Low Intensity Search	To determine where toads are dispersing and select sites for high intensity searches.	All search blocks on BFP (Figure 2).	Each wetland and upland block searched at the rate of about 8 and 14 minutes per acre, respectively.	Session 1: May 30 - June 1. Session 2: June 19 – 21. Session 3: August 14 – 15. (i.e., pre-release, breeding, and post-breeding)
High Intensity Search	To determine relative abundance of all toads and obtain population estimates of adult toads.	The 10 highest priority search blocks identified from Low Intensity Searches (see Appendix 1 for details).	Each of 10 wetland and upland blocks searched at the rate of about 24 and 42 minutes per acre, respectively.	Session 1: June 1 – 2. Session 2: June 20 – 23. Session 3: August 16 – 17. (i.e., immediately following Low Intensity Searches; see above)
Detectability Search (juveniles)	Determine approximate detection rate of toadlets in wetlands of the BFP.	All search blocks adjacent to the release site.	Low Intensity and High Intensity search in each block (see below).	June 19. (i.e., day after metamorph release)
Detectability Search (adults)	Determine approximate detection rate of adult toads on the BFP.	2 wetland and 2 upland search blocks chosen randomly.	Low Intensity and High Intensity search in each block (see below).	June 19 and August 13. (i.e., associated with standard Low and High intensity searches; see below)
Shoreline Search	To document wild breeding, should it occur.	All moist, vegetated shorelines on the BFP.	About 1 day per shoreline search, or 3 days total effort.	June 1, June 12, and July 7. (i.e., early, mid, and late breeding season)

**Table 2:** Intervals used in estimating percentage of plant canopy cover and ground cover.

Range	Midpoint (value recorded)
0-1%	1
1 - 20%	10
21% - 40%	30
41% - 60%	50
61% - 80%	70
81% - 100%	90

**Table 3:** Results of low and high-intensity search efforts for Wyoming toads on the Buford Foundation Property. An “x” indicates the noted search was not conducted, while blank cells indicate that a search was conducted and nothing was found.

Search Block	Age Class	Session 1 May 30 – June 2		Session 2 June 19 - 23		Session 3 August 14 - 17	
		L	H	L	H	L	H
90	Tadpoles		x	8	3		x
	Metamorphs		x	8	11		x
	Adults		x				x
92	Tadpoles			7	x		x
	Metamorphs				x		x
	Adults				x		x
95	Tadpoles		x	48	9		x
	Metamorphs		x	19	29		x
	Adults		x				x
108	Tadpoles	2	113	38	x		x
	Metamorphs			*a	x	13	27
	Adults			1	x		1
109	Tadpoles		x				
	Metamorphs		x	1	3	18	4
	Adults		x				
110	Tadpoles		x	*b			
	Metamorphs		x		4	11	14
	Adults		x	1	1		2
111	Tadpoles		x				x
	Metamorphs		x		3	8	x
	Adults		x	3	1	3	x
114	Tadpoles		6				x
	Metamorphs			4	1	1	x
	Adults						x
200	Tadpoles	x	x	x	x		
	Metamorphs	x	x	x	x		
	Adults	x	x	x	x		2
Total	Tadpoles	2	119	94	12	0	0
	Metamorphs	0	0	32	51	51	45
	Adults	0	0	5	2	3	5

\* The indicated life stage was observed in this block during shoreline searches, but was not documented during low- or high-intensity searches and thus not included in the total numbers.

\*a: 1 metamorph in block 108

\*b: 5 tadpoles in block 110

**Table 4:** Data from detectability trials.

Table 4a: Data from adult detectability trials showing the fraction of artificial toads detected during searches. The mean fraction is followed in parenthesis by the range of non-zero values.

<b>Habitat</b>	<b>Size of Artificial Toads</b>		
	<b><i>Small</i></b>	<b><i>Medium</i></b>	<b><i>Large</i></b>
Wetland (Shoreline)	0.24 (0.20 - 0.40)	0.49 (0.20 - 0.75)	0.43 (0.38 - 0.50)
Upland	0.24 (0.1 - 0.44)	0.17 (0.10 - 0.33)	0.17 (0.10 - 0.30)

Table 4b: Data from the metamorph detectability trial showing fraction of 202 toadlets detected during low and high-intensity searches following their release.

<b>Habitat</b>	<b>Low Intensity</b>	<b>High Intensity</b>
Shoreline	0.158	0.238

**Table 5:** Information for adult Wyoming toads found on the Buford Foundation wetland reserve in summer 2006. Entries for individual toads that were observed more than once are grouped together and similarly shaded.

Adult ID	Date	Search Type <sup>(a)</sup>	Search Block	Sex	Age <sup>(b)</sup>	Weight (g)	SVL (mm)	Notes
F01	7-Jun-06	I	91	F	O	3.2	30	
F02	20-Jun-06	L	110	F	M	23.5	52	Avid PIT#: 092-867-119
F02	22-Jun-06	I	110	F	-	-	-	
F03	20-Jun-06	H	110	F	O	7.3	4	
F03	22-Jun-06	I	110	F	-	-	-	
F04	21-Jun-06	L	200	F	O	6.3	34	
F05	21-Jun-06	L	200	F	O	4.8	34	
F05	23-Jun-06	H	200	F	-	-	-	
F05	7-Jul-06	S	110	F	-	-	-	
F06	21-Jun-06	L	200	F	O	6.8	36	
F07	21-Jun-06	L	108	F	O	6.5	36	
F08	22-Jun-06	I	112	F	O	4.4	30	
F09	15-Aug-06	L	111	F	Y	4.1	35	
F09	17-Aug-06	H	110	F	-	-	-	
F10	15-Aug-06	L	200	F	Y	6	38	
F11/M4	16-Aug-06	I	111	F	Y	5.1	34	
F11/M4	17-Aug-06	H	200	M	-	-	-	
F12	16-Aug-06	I	200	F	Y	3.2	31	
F12	17-Aug-06	H	110	F	-	-	-	
F13	17-Aug-06	H	108	F	Y	3.2	32	
F14	17-Aug-06	H	200	F	Y	4.5	36	
F15	17-Aug-06	I	114	F	Y	3.9	32	
M00	13-Jun-06	N	110	M	U	-	-	Heard calling, but not captured
M01	13-Jun-06	N	110	M	O	15.2	52	
M01	22-Jun-06	I	109	M	-	-	-	
M02	13-Jun-06	N	110	M	O	14.7	58	
M03	15-Aug-06	L	200	M	O	15.6	46	
M05	17-Aug-06	I	114	M	M	18.1	57	

(a) Type of search activity being conducted when toad was found: L = low-intensity survey, H = high-intensity survey, S = shoreline search for egg masses, I = incidental observation, N = nocturnal call survey.

(b) Age classification of toad estimated at time of observation:

Y = Young of year. These are small toads likely captured in the same year they hatched. They are usually observed late in summer and weigh 3-5 grams.

O = Over-wintered. These are smallish toads likely captured the summer after their first hibernation. They can be captured any time during summer. They usually weigh 5-15 grams when captured early in the season and are slightly larger later in the season.

M = Mature. These are larger toads that have likely survived two or more breeding seasons. They can be captured any time during the summer and are usually greater than 15 grams (often greater than 20 grams). These toads are most likely to be in breeding condition.

U = Unknown. These are toads that were not aged, likely because they were males heard calling during nocturnal surveys but were not visually identified.

**Table 6:** Minimum movement of individual Wyoming toads from sequential observations. Average numbers are provided for information, but are based on too few data points to afford meaningful statistical conclusions. Exact capture dates for these toads can be found in Table 7.

<b>Adult ID</b>	<b>Time between Obs. (days)</b>	<b>Distance Moved (m)</b>	<b>Average Daily Movement (m/day)</b>	<b>Season</b>	<b>Direction</b>
F02	2	2	1.0	Breeding	NE
F03	2	4	2.0	Breeding	SE
F05	2	3	1.5	Breeding	NE
F05	14	38	2.7	Mid Summer	NW
F09	2	24	12.0	Late Summer	NW
F11/M4	1	89	89.0	Late Summer	SE
F12	1	152	152.0	Late Summer	NW
M01	9	63	7.0	Breeding	NW

Average Breeding Season Movement: 2.9 meters per day

Average Post-Breeding Movement: 63.9 meters per day

**Table 7:** Vegetation types growing around Porter Lake. Names of plant species are from USDA, NRCS (2006), with other widely-used names shown for some species. See Table 18 for scientific names.

Name	Description	Distribution
<i>WETLAND</i>		
Timothy - Baltic rush Meadow	Dense vegetation (cover typically 80%), dominated by graminoids, growing in irrigated areas. Dominant species include Timothy, Creeping bentgrass (redtop), Baltic rush, Smooth brome, and Kentucky bluegrass. Other graminoids that may contribute substantial cover are Slender wheatgrass, Nebraska sedge, Big bluegrass, and Analogue sedge. Forbs contribute less cover than do graminoids but a number of species usually are present; common forbs are Silverweed cinquefoil, Dandelion sp., Redwood plantain, White clover, Pale agoseris, and Seaside arrowgrass. Canada thistle may form dense patches. Litter covers much of the ground surface.	Drier parts of the irrigated meadows north and west of Porter Lake. Merges with the Analogue sedge - Baltic rush Meadow. Merges, too, with the Common spikerush Wet Meadow on wetter soils.
Analogue sedge - Baltic rush Meadow	Dense vegetation (cover usually 70%- 100%) dominated by graminoids, growing in irrigated areas. Most common species in most places are Analogue sedge, Creeping bentgrass (redtop), and Baltic rush; in other areas, Common spikerush may also be a common species. Secondary species include Tufted hairgrass, Big bluegrass, Plains bluegrass, Slender wheatgrass, and Scratchgrass. Forbs contribute less cover than do graminoids; common species include Seaside arrowgrass, plantain (especially Redwood plantain), Sea milkwort, and Plantain goldenweed. Moss, plant litter, and bare ground are common.	Drier parts of the irrigated meadows west and south of Porter Lake; may also grow on non-irrigated, gentle slopes south of the lake. These sites may receive water from above. Merges with the Timothy - Baltic rush Meadow, and with the Common spikerush Wet Meadow on wetter soils. On the south side of Porter Lake, may merge into the Inland saltgrass Meadow.
Common spikerush Wet Meadow	Dense vegetation (cover typically > 70%) dominated by graminoids, growing in very wet soils of irrigated areas. Common species are Common spikerush, Nebraska sedge, rushes (Baltic rush, Knotted rush, Longstyle rush), Creeping bentgrass (redtop), and Northwest Territory sedge. Secondary species include Timothy and Tufted hairgrass. Common threesquare bulrush often is present and may contribute substantial cover. Forbs contribute less cover than do graminoids but a number of species often are present, especially Silverweed cinquefoil, Seaside arrowgrass, Shore buttercup, and Dandelion sp.	Wet parts of the irrigated meadows north, west, and southwest of Porter Lake. These wetter sites are generally the lower slopes. Merges with the Timothy - Baltic rush Meadow and the Analogue sedge - Baltic rush Meadow on drier soils. Also merges into, and may form a mosaic with, the Nuttall's alkaligrass - Foxtail barley Wet Bunchgrass Vegetation on saturated soils. South of Porter Lake, may merge into the Inland saltgrass Meadow.
Common threesquare bulrush Wetland	This vegetation grows in small patches and interrupted bands in wet soil (often with standing water) on the margins of Porter Lake and Crescent Lake. Common threesquare bulrush forms a tall layer (to 50 cm) above a shorter graminoid layer that usually is dominated by Common spikerush and Knotted rush, but may consist of Foxtail barley and Nuttall's alkaligrass. Forbs contribute little cover but Silverweed cinquefoil and Seaside arrowgrass often are present. This vegetation may be better considered simply as patches of Common threesquare bulrush growing in Common spikerush vegetation or Nuttall's alkaligrass - Foxtail barley vegetation.	Small patches around Crescent Lake and on the western and southern margins of Porter Lake.
Nuttall's alkali grass - Foxtail barley Wet Bunchgrass Vegetation	Sparse to moderately dense vegetation (20% to > 50% canopy cover) dominated by bunch grasses, in wet soil around the margins of Porter Lake and berm ponds. The ground surface is largely bare; cobbles may be present, but litter is rare. Graminoids contribute virtually all of the canopy cover; the two common species are Nuttall's alkaligrass and Foxtail barley. Inland saltgrass may also co-dominate. Forbs contribute little cover but Nuttall's povertyweed and Shore buttercup usually are present, and they may be joined by Silverweed cinquefoil, asters, and Canada thistle.	Forms patches and interrupted bands on saturated soil around the margins of Porter Lake. Also found on the berms on the western and southern sides of the lake. Merges into the Inland saltgrass Meadow on drier soils.

Table 7 (continued).

Name	Description	Distribution
<i>INTERMEDIATE MOISTURE</i>		
Inland saltgrass Meadow	Sparse (< 20% cover) to moderately dense (> 50% cover), graminoid-dominated vegetation, generally growing a meter or more above the level of Porter Lake and usually at some distance from the lake. Soils are moist. Inland saltgrass co-dominates the vegetation, usually with Thickspike wheatgrass (or Western wheatgrass); Plains bluegrass, Baltic rush, Alkali sacaton, Analogue sedge, and Foxtail barley may also co-dominate. Forbs contribute less cover but Canada thistle, Alkali marsh aster, Nuttall's povertyweed, and Redwood plantain often are present. Shrubs usually are present, especially Rubber rabbitbrush and Black greasewood, but shrub canopy cover is ≤ 10% in most places. Denser shrub patches may be present, though.	Widespread to the east of Porter Lake, and also found on the northern and southern sides. Merges with other types on wetter soils, especially the Nuttall's alkaligrass - Foxtail barley Wet Bunchgrass Vegetation closer to Porter Lake. Also merges with the Thickspike wheatgrass - Blue grama - Threadleaf sedge Steppe on uplands. Contains patches of Black greasewood / Inland saltgrass Shrub Vegetation on dunes east of Porter Lake.
Alkali sacaton Grass Vegetation	South of Porter Lake, the upland grass vegetation is dominated by patches of Alkali sacaton. In one area (waypoint 51), Thickspike wheatgrass and Baltic rush co-dominate, and Inland saltgrass and Plains bluegrass are common. In the other area (waypoint 54), the vegetation is similar to the widespread Thickspike wheatgrass - Blue grama - Threadleaf sedge grassland; Thickspike wheatgrass, Blue grama, and Needleleaf sedge are common, and Fringed sagewort, Broom snakeweed, and other forbs are present. Black greasewood and Rubber rabbitbrush are present in both places but contribute < 10% cover. These patches of vegetation may be better considered simply variants of the Inland saltgrass type or the Thickspike wheatgrass - Blue grama - Threadleaf sedge type, respectively.	Patches in the Inland saltgrass Meadow and the Thickspike wheatgrass - Blue grama - Threadleaf sedge Steppe south of Porter Lake.
Black greasewood / Inland saltgrass Shrub Vegetation	Patchy vegetation with a definite shrub overstory grows on dunes on the eastern (downwind) side of Porter Lake. Black greasewood forms a shrub layer with 25 - 25% canopy cover. The herbaceous undergrowth (≤ 15% canopy cover) is strongly dominated by graminoids, principally Plains bluegrass with Inland saltgrass and Thickspike wheatgrass. Forbs are rare.	On dunes east of Porter Lake, apparently surrounded by the Inland saltgrass Meadow.
<i>UPLAND</i>		
Black sagebrush Shrub-steppe	This short shrub vegetation grows in a swale (waypoint 43). Total canopy cover is 25 - 35%. The shrub layer, 20 - 30 cm tall and with ca. 20% canopy cover, is formed of Black sagebrush with Yellow rabbitbrush, Rubber rabbitbrush, and Skunkbush sumac. The herbaceous layer is composed primarily of graminoids, of which the main species are Prairie junegrass, Blue grama, Threadleaf sedge, Needleleaf sedge, and Thickspike wheatgrass. Forbs contribute only a trace of cover; common species are Spreading buckwheat, Common toadflax (bastard toadflax), Fringed sagewort, Broom snakeweed, and others.	Patches in swales within the Thickspike wheatgrass - Blue grama - Threadleaf sedge Steppe matrix, on the uplands.
Thickspike wheatgrass - Blue grama - Threadleaf sedge Steppe	This is the upland vegetation around much of Porter Lake. The vegetation is sparse to moderately dense (15 - 50% canopy cover) and composed mainly of graminoids; Thickspike wheatgrass (or Western wheatgrass) and Blue grama co-dominate in most areas, often with Needleleaf sedge or Threadleaf sedge. Prairie junegrass and Sandberg bluegrass usually are present and may contribute substantial cover; Alkali sacaton dominates patches in the area south of Porter Lake. Forbs contribute relatively little cover but a number of species usually are present, especially Fringed sagewort, Hooker's sandwort, and Broom snakeweed. Shrub cover generally is < 10% but several species usually are present, especially Rubber rabbitbrush and Yellow rabbitbrush. Black sagebrush also may be present and forms moderately dense patches in swales.	Matrix vegetation around Porter Lake and associated wetlands. Contains patches of the Black sagebrush Shrub-steppe in swales.

**Table 8:** Numbers of toad points and unoccupied points and their associated neighborhoods at which habitat data were collected.

a. Number of points and neighborhoods by habitat type.

Habitat Type	Toad	Unoccupied
On land, $\geq 5$ m from shore (type 0)	2	10
On land, $< 5$ m from shore (type 1)	7	6
In water (type 2)	10	3
Total	19	19

b. Number of points and neighborhoods by soil wetness category.

Soil Wetness Category	Toad	Unoccupied
Dry (category 0)	0	2
Moist (category 1)	2	8
Saturated (category 2)	7	6
Flooded (category 3)	10	3
Total	19	19

**Table 9:** Categories for the variable, soil wetness.

Category	Value	Recorded in Field?
Dry: soil appeared to contain no moisture	0	Yes
Moist: soil contained moisture but water could not be expressed from the soil surface by thumb pressure	1	Yes
Saturated: water could be expressed from the soil surface with thumb pressure	2	Yes
Flooded: water was standing on or flowing slowly over the soil surface	3	No. This category was assigned to a point when data in the ground cover variable showed that water covered $\geq 50\%$ of the soil surface.

**Table 10:** Summary of results from tests for habitat variables between toad points and unoccupied points.

Habitat Variable	Type of test	Significant?	Note
Habitat type	GLM analysis of variance	No	--
	Logistic regression	No	
Maximum plant height	GLM analysis of variance	No	
	Logistic regression	No	
Amount of plant canopy cover	GLM analysis of variance	No	
	Logistic regression	No	
Horizontal vegetation density	GLM analysis of variance	No	
	Logistic regression	No	
Three major plant groups	Not tested		
Ground cover: % plant litter	GLM analysis of variance	No	Insufficient variability
	Logistic regression	No	
Ground cover: % live plants	Not tested	--	Insufficient variability
Ground cover: % animal droppings	Not tested	--	Insufficient variability
Ground cover: % bare ground	GLM analysis of variance	No	
	Logistic regression	No	
<b>Ground cover: % water</b>	<b>GLM analysis of variance</b>	<b>Yes</b>	<b>Interaction with soil wetness</b>
	<b>Logistic regression</b>	<b>Yes</b>	
<b>Soil wetness</b>	<b>GLM analysis of variance</b>	<b>Yes</b>	<b>Interaction with % water and water depth</b>
	<b>Logistic regression</b>	<b>No</b>	
Distance to shore	GLM analysis of variance	No	
	Logistic regression	No	
<b>Depth of water</b>	<b>GLM analysis of variance</b>	<b>Yes</b>	<b>Interaction with soil wetness</b>
	<b>Logistic regression</b>	<b>No</b>	

**Table 11:** Results of logistic regression of presence of toads at points against percent of ground covered by water.

Predictor	Coefficient	Standard Deviation	Z-Statistic	Probability	Odds Ratio	Limits of 95% Confidence Interval	
						Lower	Upper
Constant	-0.7394	0.4680	-1.58	0.114			
Point % water	0.02995	0.01371	2.18	0.029	1.03	1.00	1.06

Test that all slopes are zero:  $G = 5.810$ , Degree of freedom = 1, Probability value = 0.016

Goodness-of-fit tests

Method	Chi-Square	Degrees of Freedom	Probability
Pearson	19.363	5	0.0002
Deviance	20.365	5	0.0001
Hosmer-Lemeshow	17.620	4	0.0001

Measures of Association between Response Variable (occupied vs. unoccupied) and Predicted Probabilities

Pairs	Number	Percent
Concordant	262	72.6%
Discordant	72	19.9%
Ties	27	7.5%
Total	361	100.0%

Percent Water at Toad Points vs. Unoccupied Points

Point Type	N	Mean
Toad points	19	36.9
Unoccupied points	19	15.0

**Table 12:** Summary of results from tests for habitat variables between occupied and unoccupied neighborhoods.

Habitat Variable	Type of test	Significant?	Note
Habitat type	GLM analysis of variance	No	
	--	--	
Maximum plant height	Logistic regression	No	
	GLM analysis of variance	No	
Maximum horiz. vegetation density, terrestrial	Logistic regression	No	
	GLM analysis of variance	No	
Minimum horiz. vegetation density, terrestrial	Logistic regression	No	
	GLM analysis of variance	No	
Maximum horiz. vegetation density, emergent aquatic	Logistic regression	No	
	GLM analysis of variance	No	
Minimum horiz. vegetation density, emergent aquatic	Logistic regression	No	
	GLM analysis of variance	No	
Amount of plant canopy cover	Logistic regression	No	
	GLM analysis of variance	??	Possible effect interacting with soil wetness but small sample size is a problem
Horizontal vegetation density	Logistic regression	No	
	GLM analysis of variance	No	
Three major plant groups	Not tested	--	Data inappropriate for categorical tests
	--	--	
Ground cover: % plant litter	Logistic regression	No	
	GLM analysis of variance	No	
Ground cover: % live plants	Not tested	--	Insufficient variability
	--	--	
Ground cover: % animal droppings	Not tested	--	Insufficient variability
	--	--	
Ground cover: % bare ground	Logistic regression	No	
	GLM analysis of variance	No	
Ground cover: % water	Logistic regression	No	
	GLM analysis of variance	No	
Soil wetness	Data not collected	--	
	--	--	
Distance to shore	Logistic regression	No	
	GLM analysis of variance	No	
Depth of water	Data not collected	--	
	--	--	

**Table 13:** Correlation coefficients among pairs of habitat variables. Statistically significant coefficients ( $\alpha = 0.05$ ) are shown in bold typeface. Significant coefficients ( $r \geq \pm 0.7$ ) are indicated by solid lines around cells. The bottom row shows the number of significant correlations involving each variable.

Variables:		Wetness								
Pt %Water	Pearson Corr.	0.768								
	Sig. (2- tailed)	0.000								
	N	38								
Pt Distance from Shore	Pearson Corr.	-0.564	-0.533							
	Sig. (2- tailed)	0.000	0.001							
	N	38	38							
Pt:Water Depth	Pearson Corr.	--	0.417	-0.29						
	Sig. (2- tailed)	--	0.156	0.337						
	N	--	13	13						
Pt Ht Tallest Plant	Pearson Corr.	-0.183	-0.208	0.200	-0.63					
	Sig. (2- tailed)	0.270	0.210	0.229	0.839					
	N	38	38	38	13					
Pt % Canopy Cover	Pearson Corr.	-0.511	-0.619	0.596	-0.208	0.506				
	Sig. (2- tailed)	0.001	0.000	0.000	0.516	0.001				
	N	38	38	38	12	38				
Pt %Litter	Pearson Corr.	-0.550	-0.485	0.429	0.628	0.293	0.596			
	Sig. (2- tailed)	0.000	0.002	0.007	0.022	0.074	0.000			
	N	38	38	38	13	38	38			
Pt: %Bare Ground	Pearson Corr.	-0.088	-0.144	-0.158	-0.223	-0.409	-0.557	-0.305		
	Sig. (2- tailed)	0.603	0.394	0.350	0.485	0.012	0.000	0.066		
	N	37	37	37	12	37	37	37		
Neigh. %Water	Pearson Corr.	0.709	0.771	-0.726	0.649	-0.218	-0.646	-0.610	-0.150	
	Sig. (2- tailed)	0.000	0.000	0.000	0.022	0.247	0.000	0.000	0.437	
	N	30	30	30	12	30	30	30	29	
Neigh Max Hor. Veg Dens. Aquatic	Pearson Corr.	0.419	0.275	-0.485	-0.549	0.297	-0.027	-0.156	-0.356	0.243
	Sig. (2- tailed)	0.026	0.156	0.009	0.052	0.125	0.893	0.428	0.068	0.213
	N	28	28	28	13	28	28	28	27	28

Pt Indicates a measurement taken at a point

Neigh indicates measurement taken in the neighborhood

Pearson Corr = Pearson product-moment correlation coefficient, r

Sig (2-tailed) = Probability for the two-tailed test for the hypothesis,  $r = 0$  (that is, the probability

of obtaining r as large as that observed when there is no correlation).

N = number of points or neighborhoods used in calculation of r.

Table 13 (continued).

Neigh Min Hor Veg Dens, Aquatic	Pearson Corr.	-0.058	-0.160	0.186	--	0.215	0.327	0.367	-0.186	-0.215	0.126	Neigh Min Hor Veg Dens, Aquatic							
	Sig. (2- tailed)	0.769	0.417	0.343	--	0.273	0.089	0.055	0.352	0.272	0.523								
	N	28	28	28	--	28	28	28	27	28	28								
Neigh Ht Tallest Plant, Aquatic	Pearson Corr.	0.453	0.307	-0.612	-0.069	0.324	-0.110	-0.130	-0.354	0.371	0.840	0.028	Neigh Ht Tallest Plant, Aquatic						
	Sig. (2- tailed)	0.016	0.112	0.001	0.823	0.093	0.577	0.509	0.070	0.052	0.000	0.888							
	N	28	28	28	13	28	28	28	28	27	28	28							
Neigh Ht Tallest Plant, Terrestrial	Pearson Corr.	-0.195	-0.316	0.335	-0.022	0.690	0.592	0.255	-0.448	-0.328	0.393	0.189	0.430	Neigh Ht Tallest Plant, Terrest.					
	Sig. (2- tailed)	0.242	0.053	0.040	0.943	0.000	0.000	0.122	0.005	0.076	0.039	0.336	0.022						
	N	38	38	38	13	38	38	38	38	37	30	28	28						
Neigh Max Hor Veg Dens, Terrestrial	Pearson Corr.	-0.021	-0.137	0.165	-0.069	0.602	0.342	0.087	-0.341	-0.190	0.498	0.242	0.557	0.812	Neigh Max Hor Veg Dens, Terrest				
	Sig. (2- tailed)	0.898	0.413	0.321	0.821	0.000	0.036	0.605	0.039	0.315	0.007	0.214	0.002	0.000					
	N	38	38	38	13	38	38	38	38	37	30	28	28	28					
Neigh % Canopy Cover, Aquatic	Pearson Corr.	0.140	0.142	-0.433	0.136	0.197	0.007	-0.104	-0.276	0.237	0.614	0.077	0.554	0.215	0.287	Neigh % Canopy Cover, Aquatic			
	Sig. (2- tailed)	0.477	0.472	0.021	0.659	0.316	0.974	0.598	0.164	0.225	0.001	0.698	0.002	0.271	0.139				
	N	28	28	28	13	28	28	28	27	28	28	28	28	28	28				
Neigh % Canopy Cover, Terrestrial	Pearson Corr.	-0.239	-0.308	0.362	-0.54	0.410	0.623	0.336	-0.462	-0.458	0.168	0.150	0.164	0.665	0.629	-0.019	Neigh % Can Cover, Terrest		
	Sig. (2- tailed)	0.155	0.064	0.028	0.071	0.012	0.000	0.042	0.005	0.013	0.404	0.456	0.412	0.000	0.000	0.923			
	N	37	37	37	12	37	37	37	37	36	29	27	27	27	37	37			
Neigh Min Hor Veg Dens, Terrestrial	Pearson Corr.	0.182	0.061	-0.153	0.295	0.486	0.209	0.159	-0.389	0.046	0.296	0.436	0.435	0.510	0.572	0.202	0.421	Neigh Min Hor Veg Dens, Terrest	
	Sig. (2- tailed)	0.274	0.716	0.358	0.328	0.002	0.208	0.341	0.017	0.808	0.126	0.020	0.021	0.001	0.000	0.303	0.009		
	N	38	38	38	13	38	38	38	38	37	30	28	28	28	38	38	28		
Neigh % Litter, Terrestrial	Pearson Corr.	-0.321	-0.355	0.316	0.357	0.475	0.496	0.569	-0.327	-0.380	-0.018	0.324	0.098	0.535	0.579	-0.013	0.597	0.319	TN:% Litter
	Sig. (2- tailed)	0.049	0.029	0.053	0.071	0.003	0.002	0.000	0.048	0.038	0.928	0.093	0.619	0.001	0.000	0.948	0.000	0.051	
	N	38	38	38	13	38	38	38	38	37	30	28	28	38	38	28	37	38	
Neigh % BareGround, Terrestrial 9	Pearson Corr.	0.129	0.146	-0.326	0.076	-0.400	-0.470	-0.235	0.330	0.250	0.012	-0.214	0.020	-0.463	-0.479	-0.023	-0.824	-0.367	-0.548
	Sig. (2- tailed)	0.440	0.383	0.046	0.805	0.013	0.003	0.155	0.046	0.183	0.953	0.274	0.918	0.003	0.002	0.907	0.000	0.023	0.000
	N	38	38	38	13	38	38	38	38	37	30	28	28	28	38	38	28	37	38
Variables:		Wetness 8	Pt:% Water 5	Pt Dist. from Shore 9	Pt: Water Depth 2	Pt Ht Tallest Plant 8	Pt % Can Cover 12	Pt:% Litter 8	Pt:% Bare Grnd 8	Neigh % Water 8	Neigh MaxHor. Veg Dens, Aquatic 6	Neigh MinHor Veg Dens, Aquatic 1	Neigh Ht Tallest Plant, Aquatic 7	Neigh Ht Tallest Plant, Terrest 10	Neigh Max Hor Veg Dens, Terrest 9	Neigh % Can Cover, Aquatic 3	Neigh % Can Cover, Terrest 11	Neigh Min Hor Veg Dens, Terrest 8	Neigh % Litter Terrest 10

**Table 14:** Specimens collected for PCR analysis to determine presence of chytrid fungus (*Batrachochytrium dendrobatidis*).

Specimen Number	GPSE	GPSN	Collection Date	Species <sup>(a)</sup>	Sex <sup>(b)</sup>	Toad ID <sup>(c)</sup>
PL001	0416558	4571764	31-May-06	BOCO	nr	
PL002	0416690	4571582	31-May-06	BOCO	nr	
PL003	0416690	4571582	31-May-06	BOCO	M	
PL004	0416690	4571582	31-May-06	BOCO	M	
PL005	0416569	4571756	1-Jun-06	BOCO	F	
PL006	0416544	4571717	1-Jun-06	BOCO	F	
PL007	0416545	4571722	7-Jun-06	BOCO	nr	
PL008	0416532	4571729	7-Jun-06	WYTO	F	F1
PL009	0416621	4571710	7-Jun-06	BOCO	M	
PL010	0416621	4571710	7-Jun-06	BOCO	F	
PL011	0416621	4571710	7-Jun-06	BOCO	F	
PL012	0416621	4571710	7-Jun-06	BOCO	F	
PL013	0416526	4571743	8-Jun-06	BOCO	M	
PL014	0416667	4571559	12-Jun-06	BOCO	M	
PL015	0416636	4571507	12-Jun-06	BOCO	F	
HL001	0416705	4570754	12-Jun-06	BOCO	F	
HL002	0416682	4570515	12-Jun-06	BOCO	M	
PL016	0416689	4571596	13-Jun-06	WYTO	M	M1
PL017	0416690	4571597	13-Jun-06	WYTO	M	M2
HL003	0416712	4570781	16-Jun-06	BOCO	M	
HL004	0416711	4570757	18-Jun-06	BOCO	M	
HL005	0416711	4570767	18-Jun-06	BOCO	M	
HL006	0416722	4570795	18-Jun-06	BOCO	M	
PL018	0416546	4571793	18-Jun-06	BOCO	M	
PL023	0416637	4571551	20-Jun-06	BOCO	M	
PL024	0416672	4571558	20-Jun-06	BOCO	M	
PL019	0416532	4571728	20-Jun-06	BOCO	M	
PL020	0416707	4571572	20-Jun-06	BOCO	F	
PL021	0416704	4571577	20-Jun-06	WYTO	F	F2
PL022	0416698	4571581	20-Jun-06	WYTO	F	F3
PL025	0416561	4571752	21-Jun-06	BOCO	F	
PL026	0416565	4571743	21-Jun-06	BOCO	F	
PL027	0416869	4571524	21-Jun-06	WYTO	F	F4
PL028	0416859	4571520	21-Jun-06	WYTO	F	F5
PL029	0416859	4571520	21-Jun-06	WYTO	F	F6
PL030	0416851	4571524	21-Jun-06	BOCO	M	
PL031	0416591	4571739	21-Jun-06	WYTO	F	F7
PL032	0416694	4571574	22-Jun-06	WYTO	F	F8
PL033	0416557	4571739	22-Jun-06	BOCO	F	
PL034	0416850	4571527	23-Jun-06	BOCO	M	
PL035	0416858	4571518	23-Jun-06	BOCO	M	
PL040	0416806	4571559	15-Aug-06	WYTO	F	F9
PL041	0416871	4571521	15-Aug-06	WYTO	F	F10
PL042	0416876	4571528	15-Aug-06	WYTO	M	M3
PL043	0416801	4571562	16-Aug-06	WYTO	F	F11/M4
PL044	0416873	4571522	16-Aug-06	WYTO	F	F12
PL045	0416873	4571528	16-Aug-06	BOCO	F	
PL046	0416873	4571528	16-Aug-06	BOCO	F	
PL047	0416876	4571524	16-Aug-06	BOCO	M	

Table 14 continued

Specimen Number	GPSE	GPSN	Collection Date	Species <sup>(a)</sup>	Sex <sup>(b)</sup>	Toad ID <sup>(c)</sup>
PL048	0416864	4571523	16-Aug-06	BOCO	M	
PL049	0416611	4571763	17-Aug-06	BOCO	M	
PL050	0416611	4571763	17-Aug-06	BOCO	M	
PL051	0416598	4571770	17-Aug-06	BOCO	M	
PL052	0416608	4571726	17-Aug-06	BOCO	F	
PL053	0416616	4571722	17-Aug-06	WYTO	F	F13
PL054	0416605	4571717	17-Aug-06	BOCO	M	
PL055	0416754	4571566	17-Aug-06	BOCO	M	
PL056	0416794	4571582	17-Aug-06	BOCO	M	
PL057	0416857	4571527	17-Aug-06	WYTO	F	F14
PL058	0416684	4571578	17-Aug-06	WYTO	M	M5
PL059	0416685	4571580	17-Aug-06	WYTO	F	F15

(a) All swabs were collected from two species: Boreal chorus frog (BOCO; *Pseudacris maculata*) and Wyoming toad (WYTO; *Bufo baxteri*).

(b) Sex was recorded based on external morphology: M = male, F = female and nr = not recorded.

(c) For those swabs collected from Wyoming toads, the identification number of the relevant individual is provided and can be cross-referenced with Table 6.

**Table 15:** Notes on potential predators seen during surveys for Wyoming toads on the Buford Foundation wetland reserve.

Species	Date	Place Observed	Number	Notes
American Avocet	1-Jun-06	South side of Porter Lake, in block 111	1	
American White Pelican	30-May-06	South shore Porter Lake	3	
American White Pelican	21-Jun-06	North shore of Porter Lake	2	
American White Pelican	21-Jun-06	In Porter Lake	1	
American White Pelican	23-Jun-06	South shore of Porter Lake	1	
Canada Goose	30-May-06	West shore Porter Lake	7	1 was in middle swimming
Canada Goose	30-May-06	Southwest of Hardigan Lake	3	
Canada Goose	31-May-06	West side of Porter Lake, in upland	8	3 adults and 5 fledglings
Canada Goose	1-Jun-06	In Porter Lake	3	
Canada Goose	12-Jun-06	West shore of Porter Lake	20	
Canada Goose	19-Jun-06	In Porter Lake	31	19 adults, 12 fledglings
Canada Goose	20-Jun-06	In Porter Lake and Crescent Lakes	26	14 adults, 12 fledglings
Canada Goose	23-Jun-06	East shore of Porter Lake	19	
Canada Goose	7-Jul-06	In Porter Lake	25	
Coyote	30-May-06	South end of block 202, channel between lakes	1	tracks
Crayfish	30-May-06	Middle of block 202, channel between lakes	3	~ 3 inches long
Crayfish	30-May-06	North end of block 203, channel between lakes	1	> 3 inches long
Crayfish	1-Jun-06	Block 114, channel between lakes	2	~ 3 inches long
Crayfish	12-Jun-06	Block 114, channel between lakes	15	most < 3 inches
Crayfish	21-Jun-06	Channel between Hardigan and Porter Lakes	16	also 10 dead crayfish
Crayfish	7-Jul-06	Channel between Hardigan and Porter Lakes	3	
Crayfish	14-Aug-06	Block 208, pond on north end of Hardigan Lake	3	
Fish	12-Jun-06	Channel between Hardigan and Porter Lakes	1	12 inches and fat
Suckers	21-Jun-06	Channel between Hardigan and Porter Lakes	2	fish were about 12 inches long
Garter Snake	8-Jun-06	Crescent Lake	1	
Garter Snake	8-Jun-06	Rocky ditch south of Hardigan Lake	1	
Garter Snake	21-Jun-06	Meadow north of Crescent Lake	1	
Garter Snake	21-Jun-06	West shore Porter Lake	1	
Garter Snake	23-Jun-06	Between Porter Lake and Crescent Lake	1	
Garter Snake	7-Jul-06	Channel between Hardigan and Porter Lakes	2	
Garter Snake	15-Aug-06	Along irrigation ditch by gate to property	1	
Great Horned Owl	30-May-06	Middle of block 202, channel between lakes	1	
Great Horned Owl	21-Jun-06	In cottonwoods by old homestead	1	
Magpie	30-May-06	Roosting in trees by homestead	2	
Raccoon	30-May-06	South end of block 202, channel between lakes	1	tracks
Red-tailed Hawk	17-Aug-06	Soring above Porter Lake	2	
Sandhill Crane	30-May-06	Meadow north of Hardigan Lake by ponds	2	
Seagull	30-May-06	Flying over Hardigan Lake	1	
Seagull	31-May-06	Flying over Porter Lake	7	
Seagull	1-Jun-06	In Porter Lake	3	
Seagull	19-Jun-06	Flying over northeast shore of Hardigan Lake	1	
Seagull	19-Jun-06	In Porter Lake	2	
Seagull	21-Jun-06	In Porter Lake	1	
Seagull	7-Jul-06	South shore Porter Lake	1	
Swainson's Hawk	30-May-06	Flying over old homestead	1	
Swainson's Hawk	31-May-06	Flying over west side of Porter Lake	1	
Tiger Salamander	1-Jun-06	Crescent Lake	1	~ 5 inches long
Tiger Salamander tadpoles	8-Jun-06	Block 208, pond on north end of Hardigan Lake	100	estimated number 50-100
Tiger Salamander tadpoles	12-Jun-06	Crescent Lake	10	
Tiger Salamander tadpoles	20-Jun-06	Crescent Lake	5	very large tadpoles
Water Beetles	30-May-06	South shore Porter Lake in block 110	2	

**Table 16:** Probability of predation on 3 size classes of artificial toads placed at BFP and surveyed after approximately 24 hours.

<b>Toad Size</b>	<b><u>Shoreline Habitat</u></b>		<b><u>Upland Habitat</u></b>	
	<b>Count <sup>(a)</sup></b>	<b>Percent Flipped</b>	<b>Count <sup>(a)</sup></b>	<b>Percent Flipped</b>
<b>Small</b>	0/34	0	0/39 <sup>(b)</sup>	0
<b>Medium</b>	2/33	6.1	0/41	0
<b>Large</b>	5/29	17.2	4/36	11.1
<b>Pooled</b>	7/96	7.3	4/116	3.4

- (a) Counts are presented as number of artificial toads found flipped followed by the total number of artificial toads placed.
- (b) One small artificial toad was stepped on by cows, but was not flipped and therefore was not counted as a “predation” event for this analysis.

**Table 17:** Invertebrate samples collected from wetlands on the Buford Foundation wetland reserve during summer 2006. Specimens were still being identified by entomologists when this report was completed.

<b>Specimen Number</b>	<b>Location</b>	<b>Collection Date</b>	<b>Field Categorization</b>
PL100	W. Porter Lake and Crescent Lake	7-Jun-06	Water Mites
PL101	W. Porter Lake and Crescent Lake	7-Jun-06	Zooplankton (Water Fleas)
PL102	W. Porter Lake and Crescent Lake	7-Jun-06	Damselfly Larvae
PL103	W. Porter Lake and Crescent Lake	7-Jun-06	Water Striders
PL104	W. Porter Lake and Crescent Lake	7-Jun-06	Diving Beetles
PL105	W. Porter Lake and Crescent Lake	7-Jun-06	Caddisfly Larvae
PL106	W. Porter Lake and Crescent Lake	7-Jun-06	Water Beetles
PL107	W. Porter Lake and Crescent Lake	7-Jun-06	Snails
PL108	W. Porter Lake and Crescent Lake	7-Jun-06	June Bugs
PL109	W. Porter Lake and Crescent Lake	7-Jun-06	Midges
PL110	W. Porter Lake and Crescent Lake	7-Jun-06	Water Boatman
PL111	W. Porter Lake and Crescent Lake	7-Jun-06	Leeches
PL112	W. Porter Lake and Crescent Lake	7-Jun-06	Diving Beetles
PL113	W. Porter Lake and Crescent Lake	7-Jun-06	Damselfly Larvae
PL114	W. Porter Lake and Crescent Lake	7-Jun-06	Mayfly Larvae
PL115	W. Porter Lake and Crescent Lake	7-Jun-06	Diving Beetles
PL116	W. Porter Lake and Crescent Lake	7-Jun-06	Water Mites
PL117	W. Porter Lake and Crescent Lake	7-Jun-06	Diving Beetle Larvae
PL118	W. Porter Lake and Crescent Lake	7-Jun-06	Snails
PL119	W. Porter Lake and Crescent Lake	7-Jun-06	Unknown Aquatic Beetles
PL120	W. Porter Lake and Crescent Lake	7-Jun-06	Fresh Water Worms
PL121	W. Porter Lake and Crescent Lake	7-Jun-06	Mayfly Adults
PL122	W. Porter Lake and Crescent Lake	7-Jun-06	Damselfly Adults
PL123	W. Porter Lake and Crescent Lake	7-Jun-06	Damselfly Larvae
PL124	W. Porter Lake and Crescent Lake	7-Jun-06	Spiders
HL001	North Hardigan Lake	7-Jun-06	Damselfly Larvae
HL002	North Hardigan Lake	7-Jun-06	Water Boatman
HL003	North Hardigan Lake	7-Jun-06	Scuds
HL004	North Hardigan Lake	7-Jun-06	Caddisfly Larvae
HL005	North Hardigan Lake	7-Jun-06	Water Mites
HL006	North Hardigan Lake	7-Jun-06	Leeches
HL007	North Hardigan Lake	7-Jun-06	Bloodworms
HL008	North Hardigan Lake	7-Jun-06	Unknown Beetles
HL009	North Hardigan Lake	7-Jun-06	Dragonfly Larvae
HL011	North Hardigan Lake	7-Jun-06	Mayfly Larvae
HL012	North Hardigan Lake	7-Jun-06	Snails
HL013	North Hardigan Lake	7-Jun-06	Crayfish
HL014	North Hardigan Lake	7-Jun-06	Damselfly Larvae
HL015	North Hardigan Lake	7-Jun-06	Zooplankton (Water Fleas)
PL100	W. Porter Lake and Crescent Lake	7-Jul-06	Water Boatman
PL101	W. Porter Lake and Crescent Lake	7-Jul-06	Diving Beetle Larvae
PL102	W. Porter Lake and Crescent Lake	7-Jul-06	Diving Beetles
PL103	W. Porter Lake and Crescent Lake	7-Jul-06	Snails
PL104	W. Porter Lake and Crescent Lake	7-Jul-06	Mayfly Larvae
PL105	W. Porter Lake and Crescent Lake	7-Jul-06	Damselfly Larvae
HL100	North Hardigan Lake	7-Jul-06	Water Mites
HL101	North Hardigan Lake	7-Jul-06	Caddisfly Larvae
HL102	North Hardigan Lake	7-Jul-06	Water Boatman
HL103	North Hardigan Lake	7-Jul-06	Scuds
HL104	North Hardigan Lake	7-Jul-06	Mayfly Larvae
HL105	North Hardigan Lake	7-Jul-06	Damselfly Larvae
HL106	North Hardigan Lake	7-Jul-06	Snails
HL107	North Hardigan Lake	7-Jul-06	Unknown Invertebrate
HL108	North Hardigan Lake	7-Jul-06	Unknown Beetles

**Table 18:** Common names and scientific names of vascular plants documented during habitat survey at Porter Lake. Common names are from USDA, NRCS (2006), with additional widely-used common names given for some species. Scientific names are from USDA, NRCS (2006); synonyms from Dorn (2001) are given for a few species where the scientific names differ.

Common Name	Growth-form	NRCS Scientific Name	Dorn Scientific Name
Alkali marsh aster	Forb	<i>Almutaster pauciflorus</i>	
Alkali sacaton	Graminoid	<i>Sporobolus airoides</i>	
American sloughgrass	Graminoid	<i>Beckmannia syzigachne</i>	
Analogue sedge	Graminoid	<i>Carex simulata</i>	
Autumn dwarf gentian	Forb	<i>Gentianella amarella</i>	<i>Gentianella amarella</i> var. <i>amarella</i>
Baltic rush	Graminoid	<i>Jnucus balticus</i>	
Big bluegrass	Graminoid	<i>Poa secunda</i>	<i>Poa juncifolia</i> var. <i>ampla</i>
Black greasewood	Shrub	<i>Sarcobatus vermiculatus</i>	
Black sagebrush	Shrub	<i>Artemisia nova</i>	
Blue grama	Graminoid	<i>Bouteloua gracilis</i>	
Bluebunch wheatgrass	Graminoid	<i>Pseudoroegneria spicata</i> ssp. <i>spicata</i>	<i>Elymus spicatus</i>
Broom snakeweed	Forb	<i>Gutierrezia sarothrae</i>	
Buckwheat	Forb	<i>Eriogonum</i> sp.	
Canada thistle	Forb	<i>Cirsium arvense</i>	
Common spikerush	Graminoid	<i>Eleocharis palustris</i>	
Common threesquare bulrush	Graminoid	<i>Schoenoplectus pungens</i>	<i>Schoenoplectus pungens</i> var. <i>polycephalus</i>
Common toadflax, bastard toadflax	Forb	<i>Comandra umbellata</i> ssp. <i>pallida</i>	<i>Comandra umbellata</i> var. <i>pallida</i>
Coyote willow	Shrub	<i>Salix exigua</i>	
Creeping bentgrass (redtop)	Graminoid	<i>Agrostis stolonifera</i>	
Cryptantha, miner's candle	Forb	<i>Cryptantha</i> sp.	
Cursed buttercup	Forb	<i>Ranunculus sceleratus</i> var. <i>multifidus</i>	
Dandelion	Forb	<i>Taraxacum</i> sp.	

Table 18 (continued).

Common Name	Growth-form	NRCS Scientific Name	Dorn Scientific Name
Desert goosefoot	Forb	<i>Chenopodium pratericola</i>	
Douglas knotweed	Forb	<i>Polygonum douglasii</i>	
Fendler's threeawn	Graminoid	<i>Aristida purpurea</i> var. <i>fendleriana</i>	
Fleabane	Forb	<i>Erigeron</i> sp.	
Foxtail barley	Graminoid	<i>Hordeum jubatum</i>	
Fringed sagewort	Forb	<i>Artemisia frigida</i>	
Gardner's saltbush	Shrub	<i>Atriplex gardneri</i>	
Golden banner	Forb	<i>Thermopsis</i> sp.	
Granite prickly phlox	Forb	<i>Linanthus pungens</i>	
Hairy goldaster	Graminoid	<i>Heterotheca villosa</i>	
Hemlock waterparsnip	Forb	<i>Sium suave</i>	
Hooker's sandwort	Forb	<i>Arenaria hookeri</i>	<i>Eremogone hookeri</i>
Inland saltgrass	Graminoid	<i>Distichlis spicata</i>	<i>Distichlis stricta</i>
Kentucky bluegrass	Graminoid	<i>Poa pratensis</i>	
Knotted rush	Graminoid	<i>Juncus nodosus</i>	
Larchleaf penstemon	Forb	<i>Penstemon laricifolius</i>	
Littleleaf pussytoes	Forb	<i>Antennaria microphylla</i>	
Longstyle rush	Graminoid	<i>Juncus longistylis</i>	
Lupine	Forb	<i>Lupinus</i> sp.	
Mat muhly	Graminoid	<i>Muhlenbergia richardsonis</i>	
Meadow barley	Graminoid	<i>Hordeum brachyantherum</i>	
Meadow foxtail	Graminoid	<i>Alopecurus pratensis</i>	
Milkvetch	Forb	<i>Astragalus</i> sp.	
Nailwort	Forb	<i>Paronychia</i> sp.	
Nebraska sedge	Graminoid	<i>Carex nebrascensis</i>	
Needle-and-thread	Graminoid	<i>Hesperostipa comata</i>	

Table 18 (continued).

Common Name	Growth-form	NRCS Scientific Name	Dorn Scientific Name
Needleleaf sedge	Graminoid	<i>Carex duriuscula</i>	<i>Carex stenophylla</i>
Northern bog aster	Forb	<i>Symphotrichum boreale</i>	
Northwest Territory sedge	Graminoid	<i>Carex utriculata</i>	
Nuttall tarweed	Forb	<i>Machaeranthera grindelioides</i>	
Nuttall's alkaligrass	Graminoid	<i>Puccinellia nuttalliana</i>	
Nuttall's povertyweed	Forb	<i>Monolepis nuttalliana</i>	
Pale agoseris	Forb	<i>Agoseris glauca</i> var. <i>glauca</i>	
Pale blue-eyed grass	Forb	<i>Sisyrinchium pallidum</i>	
Pink pincushion cactus	Forb	<i>Escobaria vivipara</i> var. <i>vivipara</i>	<i>Coryphantha vivipara</i>
Plains bluegrass	Graminoid	<i>Poa arida</i>	<i>Poa glaucifolia</i>
Plains pricklypear	Forb	<i>Opuntia polyacantha</i>	
Plains reedgrass	Graminoid	<i>Calamagrostis montanensis</i>	
Plantain goldenweed	Forb	<i>Pyrocoma uniflora</i>	
Prairie junegrass	Graminoid	<i>Koeleria macrantha</i>	
Rayless alkali aster	Forb	<i>Symphotrichum ciliatum</i>	
Redwool plantain	Forb	<i>Plantago eriopoda</i>	
Rubber rabbitbrush	Shrub	<i>Ericameria nauseosa</i>	
Sagewort (herbaceous)	Forb	<i>Artemisia</i> sp.	
Sandberg bluegrass	Graminoid	<i>Poa secunda</i>	<i>Poa secunda</i> (var. <i>secunda</i> ?)
Scarlet globemallow	Forb	<i>Sphaeralcea coccinea</i>	
Scratchgrass	Graminoid	<i>Muhlenbergia asperifolia</i>	
Sea milkwort	Forb	<i>Glaux maritima</i>	
Seaside arrowgrass	Forb	<i>Triglochin maritima</i>	<i>Triglochin maritima</i> var. <i>elata</i>
Sharpleaf buttercup	Forb	<i>Ranunculus acriformis</i> var. <i>acriformis</i>	
Shore buttercup	Forb	<i>Ranunculus cymbalaria</i>	
Silverweed cinquefoil	Forb	<i>Argentina anserina</i>	<i>Potentilla anserina</i>

Table 18 (continued).

Common Name	Growth-form	NRCS Scientific Name	Dorn Scientific Name
Skunkbush sumac	Shrub	<i>Rhus trilobata</i> var. <i>trilobata</i>	<i>Rhus aromatica</i> var. <i>trilobata</i>
Slender wheatgrass	Graminoid	<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	<i>Elymus trachycaulus</i> var. <i>andinus</i>
Slender wheatgrass	Graminoid	<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	<i>Elymus trachycaulus</i> var. <i>trachycaulus</i>
Smooth brome	Graminoid	<i>Bromus inermis</i> var. <i>inermis</i>	
Softstem bulrush	Graminoid	<i>Schoenoplectus tabernaemontani</i>	
Spreading buckwheat	Forb	<i>Eriogonum effusum</i> var. <i>effusum</i>	<i>Eriogonum microthecum</i> var. <i>effusum</i>
Thickspike wheatgrass	Graminoid	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	<i>Elymus lanceolatus</i> var. <i>lanceolatus</i>
Threadleaf sedge	Graminoid	<i>Carex filifolia</i>	
Timothy	Graminoid	<i>Phleum pratense</i>	
Tufted hairgrass	Graminoid	<i>Deschampsia caespitosa</i>	
Western aster	Forb	<i>Symphyotrichum ascendens</i>	
Western wheatgrass	Graminoid	<i>Pascopyrum smithii</i>	<i>Elymus smithii</i>
White clover	Forb	<i>Trifolium repens</i>	
Wild mint	Forb	<i>Mentha arvensis</i>	<i>Mentha arvensis</i> var. <i>canadensis</i>
Winterfat	Shrub	<i>Krascheninnikovia lanata</i>	
Yellow rabbitbrush	Shrub	<i>Chrysothamnus viscidiflorus</i>	