ADDENDUM 3.5-A
VEGETATION COVER SUMMARIES

Table 3.5A-1: Breaks Grassland Cover Summary

Project Name:	2011 AUC- Reno Creek	**Sampling Method:**	Point Line Intercept
Polygon Name:	BG	**Sample Size:**	1
Community Type:	Breaks Grassland	**Number of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Introduced Annual Grasses							
Bromus commutatus	0.1	0.17	0.44	5	0.56	0.73	24
Bromus tectorum	4.7	8.17	9.38	35	3.95	12.12	6
Sub-Total	**4.8**	**8.34**	**9.42**	**40**	**4.51**	**12.85**	
Native Cool Season Perennial Grasses							
Achnatherum hymenoides	0.5	0.87	1.82	10	1.13	2	19
Elymus lanceolatus	1.3	2.26	2.54	30	3.39	5.65	13
Elymus smithii	11.1	19.3	15.1	70	7.91	27.21	1
Elymus spicatus	0.2	0.35	0.9	5	0.56	0.91	23
Hesperostipa comata	0.1	0.17	0.44	5	0.56	0.73	24
Koeleria macrantha	1.1	1.91	1.66	35	3.95	5.86	11
Nassella viridula	6.7	11.65	7.26	65	7.34	18.99	3
Poa secunda	3.4	5.91	3.44	70	7.91	13.82	5
Sub-Total	**24.4**	**42.42**	**15.08**	**290**	**32.75**	**75.17**	
Native Warm Season Perennial Grasses							
Bouteloua gracilis	3.1	5.39	4.32	50	5.65	11.04	9
Sub-Total	**3.1**	**5.39**	**4.32**	**50**	**5.65**	**11.04**	
Introduced Perennial Grasses							
Agropyron cristatum	1	1.74	3.14	10	1.13	2.87	16
Poa pratensis	0.7	1.22	1.98	15	1.69	2.91	15
Sub-Total	**1.7**	**2.96**	**3.52**	**25**	**2.82**	**5.78**	
Native Grasslike Species							
Carex filifolia	7.5	13.04	7.22	70	7.91	20.95	2
Sub-Total	**7.5**	**13.04**	**7.22**	**70**	**7.91**	**20.95**	

Table 3.5A-1: Breaks Grassland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Introduced Annual Forbs							
Alyssum desertorum	0.7	1.22	1.34	25	2.82	4.04	14
Thlaspi arvense	0.4	0.7	1.78	5	0.56	1.26	22
Sub-Total	**1.1**	**1.92**	**2.46**	**30**	**3.38**	**5.3**	
Introduced Biennial Forbs							
Melilotus officinalis	0.1	0.17	0.44	5	0.56	0.73	24
Tragopogon dubius	0.1	0.17	0.44	5	0.56	0.73	24
Sub-Total	**0.2**	**0.34**	**0.62**	**10**	**1.12**	**1.46**	
Native Perennial Forbs							
Astragalus spatulatus	1.7	2.96	3.2	25	2.82	5.78	12
Delphinium bicolor	0.1	0.17	0.44	5	0.56	0.73	24
Eremogone hookeri	0.2	0.35	0.62	10	1.13	1.48	21
Erigeron pumilus	0.1	0.17	0.44	5	0.56	0.73	24
Lomatium foeniculaceum	0.4	0.7	1.04	15	1.69	2.39	18
Phlox hoodii	1.6	2.78	2.3	40	4.52	7.3	10
Sphaeralcea coccinea	0.4	0.7	1.24	10	1.13	1.83	20
Vicia americana	2.7	4.7	3.2	60	6.78	11.48	7
Zigadenus venenosus	0.1	0.17	0.44	5	0.56	0.73	24
Sub-Total	**7.3**	**12.7**	**5.32**	**175**	**19.75**	**32.45**	
Introduced Perennial Forbs							
Taraxacum officinale	0.4	0.7	1.78	5	0.56	1.26	22
Sub-Total	**0.4**	**0.7**	**1.78**	**5**	**0.56**	**1.26**	
Native Full Shrubs							
Artemisia cana	0.1	0.17	0.44	5	0.56	0.73	24
Artemisia tridentata	6.1	10.61	7.32	55	6.21	16.82	4
Ericameria nauseosa	0.1	0.17	0.44	5	0.56	0.73	24
Sub-Total	**6.3**	**10.95**	**7.18**	**65**	**7.33**	**18.28**	
Native Half &Sub-Shrubs							
Artemisia frigida	0.1	0.17	0.44	5	0.56	0.73	24
Artemisia pedatifida	0.5	0.87	1.44	15	1.69	2.56	17
Krascheninnikovia lanata	0.1	0.17	0.44	5	0.56	0.73	24
Sub-Total	**0.7**	**1.21**	**1.5**	**25**	**2.81**	**4.02**	

Table 3.5A-1: Breaks Grassland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Cryptograms							
Moss	0	0	0	0	0	0	25
Lichen	2.2	0	2.89	100	11.3	11.3	8
Algae	0	0	0	0	0	0	25
Fungi	0	0	0	0	0	0	25
Sub-Total	**2.2**	**0**	**2.89**	**100**	**11.3**	**11.3**	

Totals		Std. Dev.
Total Vegetation	57.5	11.22
Total Vegetation w/Cryptograms	59.7	10.2
Litter	19	7
Rock	1.2	2.86
Total Ground Cover	79.9	13.32
Bare Soil	20.1	13.32
Total Cover	**100**	

* I.V. Stands for Importance Value

Table 3.5A-2: Big Sagebrush Shrubland Cover Summary

Project Name:	2011 AUC- Reno Creek	**Sampling Method:**	Point Line Intercept
Polygon Name:	BSS	**Sample Size:**	1
Community Type:	Big Sagebrush Shrubland	**Number of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Introduced Annual Grasses							
Bromus japonicus	0.9	1.44	2.1	20	1.9	3.34	14
Bromus tectorum	1.3	2.08	3.74	15	1.43	3.51	13
Sub-Total	**2.2**	**3.52**	**4.04**	**35**	**3.33**	**6.85**	
Native Cool Season Perennial Grasses							
Elymus lanceolatus	0.1	0.16	0.44	5	0.48	0.64	24
Elymus smithii	5.6	8.97	5.34	75	7.14	16.11	3
Koeleria macrantha	2.8	4.49	2.46	75	7.14	11.63	8
Nassella viridula	5.3	8.49	6.16	70	6.67	15.16	4
Poa arida	0.4	0.64	1.04	15	1.43	2.07	18
Poa secunda	2.5	4.01	3.3	50	4.76	8.77	9
Sub-Total	**16.7**	**26.76**	**8.56**	**290**	**27.62**	**54.38**	
Native Warm Season Perennial Grasses							
Bouteloua gracilis	5.8	9.29	5.22	75	7.14	16.43	2
Sub-Total	**5.8**	**9.29**	**5.22**	**75**	**7.14**	**16.43**	
Introduced Perennial Grasses							
Agropyron cristatum	2.4	3.85	7.06	15	1.43	5.28	12
Poa pratensis	0.3	0.48	0.98	10	0.95	1.43	21
Sub-Total	**2.7**	**4.33**	**7.02**	**25**	**2.38**	**6.71**	
Native Grasslike Species							
Carex filifolia	4.4	7.05	5.68	65	6.19	13.24	6
Carex stenophylla	0.9	1.44	2.94	10	0.95	2.39	17
Sub-Total	**5.3**	**8.49**	**5.7**	**75**	**7.14**	**15.63**	
Native Annual Forbs							
Lappula redowskii	0.1	0.16	0.44	5	0.48	0.64	24
Sub-Total	**0.1**	**0.16**	**0.44**	**5**	**0.48**	**0.64**	

Table 3.5A-2: Big Sagebrush Shrubland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Introduced Annual Forbs							
Alyssum desertorum	1	1.6	1.02	50	4.76	6.36	10
Camelina microcarpa	0.4	0.64	0.82	20	1.9	2.54	16
Sub-Total	**1.4**	**2.24**	**1.32**	**70**	**6.66**	**8.9**	
Introduced Biennial Forbs							
Melilotus officinalis	0.2	0.32	0.9	5	0.48	0.8	23
Sub-Total	**0.2**	**0.32**	**0.9**	**5**	**0.48**	**0.8**	
Native Perennial Forbs							
Allium textile	0.2	0.32	0.62	10	0.95	1.27	22
Arnica fulgens	0.3	0.48	0.98	10	0.95	1.43	21
Astragalus miser	0.1	0.16	0.44	5	0.48	0.64	24
Astragalus spatulatus	0.3	0.48	0.98	10	0.95	1.43	21
Comandra umbellata	0.1	0.16	0.44	5	0.48	0.64	24
Lomatium foeniculaceum	0.1	0.16	0.44	5	0.48	0.64	24
Lupinus argenteus	0.2	0.32	0.62	10	0.95	1.27	22
Oxytropis lambertii	0.1	0.16	0.44	5	0.48	0.64	24
Phlox hoodii	1.4	2.24	1.84	40	3.81	6.05	11
Sphaeralcea coccinea	0.1	0.16	0.44	5	0.48	0.64	24
Vicia americana	4	6.41	4.06	75	7.14	13.55	5
Sub-Total	**6.9**	**11.05**	**4.66**	**180**	**17.15**	**28.2**	
Introduced Perennial Forbs							
Astragalus cicer	0.1	0.16	0.44	5	0.48	0.64	24
Cerastium arvense	0.2	0.32	0.9	5	0.48	0.8	23
Taraxacum officinale	0.3	0.48	0.74	15	1.43	1.91	19
Sub-Total	**0.6**	**0.96**	**1.14**	**25**	**2.39**	**3.35**	
Native Full Shrubs							
Artemisia tridentata	19.3	30.93	7.08	100	9.52	40.45	1
Chrysothamnus viscidiflorus	0.2	0.32	0.9	5	0.48	0.8	23
Sub-Total	**19.5**	**31.25**	**7.28**	**105**	**10**	**41.25**	
Native Half &Sub-Shrubs							
Artemisia frigida	0.6	0.96	1.32	20	1.9	2.86	15
Artemisia pedatifida	0.4	0.64	1.4	10	0.95	1.59	20
Sub-Total	**1**	**1.6**	**1.78**	**30**	**2.85**	**4.45**	

Table 3.5A-2: Big Sagebrush Shrubland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Cryptograms							
Moss	0	0	0	0	0	0	25
Lichen	3	0	2.64	130	12.38	12.38	7
Algae	0	0	0	0	0	0	25
Fungi	0	0	0	0	0	0	25
Sub-Total	**3**	**0**	**2.64**	**130**	**12.38**	**12.38**	

Totals		Std. Dev.
Total Vegetation	62.4	8.8
Total Vegetation w/Cryptograms	65.4	8.24
Litter	22.2	6.55
Rock	0	0
Total Ground Cover	87.6	8.32
Bare Soil	12.4	8.32
Total Cover	**100**	

* I.V. Stands for Importance Value

Table 3.5A-3: Meadow Grassland Cover Summary

Project Name:	2011 AUC- Reno Creek	**Sampling Method:**	Point Line Intercept
Polygon Name:	MG	**Sample Size:**	1
Community Type:	Meadow Grassland	**Number of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Introduced Annual Grasses							
Bromus japonicus	0.1	0.15	0.44	5	0.73	0.88	22
Bromus tectorum	10.7	15.74	12.52	70	10.22	25.96	2
Sub-Total	**10.8**	**15.89**	**12.44**	**75**	**10.95**	**26.84**	
Native Cool Season Perennial Grasses							
Elymus smithii	30.2	44.41	14.34	95	13.87	58.28	1
Nassella viridula	1.6	2.35	4.14	25	3.65	6	8
Poa juncifolia	1.7	2.5	5.32	10	1.46	3.96	12
Poa secunda	1.3	1.91	2.46	35	5.11	7.02	7
Sub-Total	**34.8**	**51.17**	**14.78**	**165**	**24.09**	**75.26**	
Native Warm Season Perennial Grasses							
Bouteloua gracilis	0.3	0.44	0.98	10	1.46	1.9	17
Calamovilfa longifolia	0.7	1.03	2.7	10	1.46	2.49	14
Sub-Total	**1**	**1.47**	**2.8**	**20**	**2.92**	**4.39**	
Introduced Perennial Grasses							
Agropyron cristatum	5	7.35	15.6	30	4.38	11.73	3
Bromus inermis	0.2	0.29	0.62	10	1.46	1.75	19
Poa pratensis	0.9	1.32	2	20	2.92	4.24	11
Sub-Total	**6.1**	**8.96**	**15.36**	**60**	**8.76**	**17.72**	
Native Grasslike Species							
Carex praegracilis	0.1	0.15	0.44	5	0.73	0.88	22
Carex stenophylla	0.1	0.15	0.44	5	0.73	0.88	22
Eleocharis palustris	0.7	1.03	3.14	5	0.73	1.76	18
Sub-Total	**0.9**	**1.33**	**3.14**	**15**	**2.19**	**3.52**	
Native Annual Forbs							
Descurainia pinnata	0.1	0.15	0.44	5	0.73	0.88	22
Lappula redowskii	0.4	0.59	1.4	10	1.46	2.05	16
Monolepis nuttalliana	0.3	0.44	0.98	10	1.46	1.9	17
Sub-Total	**0.8**	**1.18**	**1.98**	**25**	**3.65**	**4.83**	

Table 3.5A-3: Meadow Grassland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Introduced Annual Forbs							
Alyssum desertorum	2	2.94	4.44	45	6.57	9.51	5
Camelina microcarpa	1	1.47	4.48	5	0.73	2.2	15
Chenopodium album	0.4	0.59	1.78	5	0.73	1.32	20
Chorispora tenella	0.3	0.44	0.98	10	1.46	1.9	17
Thlaspi arvense	0.2	0.29	0.9	5	0.73	1.02	21
Sub-Total	**3.9**	**5.73**	**6.14**	**70**	**10.22**	**15.95**	
Native Perennial Forbs							
Achillea millefolium	1	1.47	1.9	25	3.65	5.12	9
Arnica fulgens	0.9	1.32	2.1	20	2.92	4.24	11
Erigeron ochroleucus	0.1	0.15	0.44	5	0.73	0.88	22
Lomatium foeniculaceum	0.2	0.29	0.9	5	0.73	1.02	21
Lupinus argenteus	0.2	0.29	0.62	10	1.46	1.75	19
Phlox hoodii	0.1	0.15	0.44	5	0.73	0.88	22
Sphaeralcea coccinea	0.1	0.15	0.44	5	0.73	0.88	22
Vicia americana	2.5	3.68	3.84	50	7.3	10.98	4
Sub-Total	**5.1**	**7.5**	**4.88**	**125**	**18.25**	**25.75**	
Introduced Perennial Forbs							
Cerastium arvense	0.9	1.32	1.66	25	3.65	4.97	10
Taraxacum officinale	2	2.94	4.16	35	5.11	8.05	6
Sub-Total	**2.9**	**4.26**	**4.62**	**60**	**8.76**	**13.02**	
Unknown Forb Species							
Rumex spp.	0.1	0.15	0.44	5	0.73	0.88	22
Sub-Total	**0.1**	**0.15**	**0.44**	**5**	**0.73**	**0.88**	
Native Full Shrubs							
Artemisia cana	0.5	0.74	1.58	10	1.46	2.2	15
Artemisia tridentata	0.9	1.32	1.78	25	3.65	4.97	10
Sub-Total	**1.4**	**2.06**	**2.16**	**35**	**5.11**	**7.17**	
Native Half &Sub-Shrubs							
Artemisia ludoviciana	0.1	0.15	0.44	5	0.73	0.88	22
Krascheninnikovia lanata	0.1	0.15	0.44	5	0.73	0.88	22
Sub-Total	**0.2**	**0.3**	**0.62**	**10**	**1.46**	**1.76**	

Table 3.5A-3: Meadow Grassland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Cryptograms							
Moss	0	0	0	0	0	0	23
Lichen	0.6	0	1.96	20	2.92	2.92	13
Algae	0	0	0	0	0	0	23
Fungi	0	0	0	0	0	0	23
Sub-Total	**0.6**	**0**	**1.96**	**20**	**2.92**	**2.92**	

Totals		Std. Dev.
Total Vegetation	68	14.1
Total Vegetation w/Cryptograms	68.6	13.66
Litter	27.1	12.99
Rock	0	0
Total Ground Cover	95.7	4.36
Bare Soil	4.3	4.37
Total Cover	**100**	

* I.V. Stands for Importance Value

Table 3.5A-4: Upland Grassland Cover Summary

Project Name:	2011 AUC- Reno Creek	**Sampling Method:**	Point Line Intercept
Polygon Name:	UG	**Sample Size:**	1
Community Type:	Upland Grassland	**Number of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Native Annual Grasses							
Vulpia octoflora	0.3	0.53	1.34	5	0.74	1.27	21
Sub-Total	**0.3**	**0.53**	**1.34**	**5**	**0.74**	**1.27**	
Introduced Annual Grasses							
Bromus japonicus	2.8	4.9	6.34	20	2.96	7.86	10
Bromus tectorum	3	5.25	9.84	30	4.44	9.69	6
Sub-Total	**5.8**	**10.15**	**11.52**	**50**	**7.4**	**17.55**	
Native Cool Season Perennial Grasses							
Elymus smithii	6.9	12.08	9.98	75	11.11	23.19	2
Koeleria macrantha	1	1.75	1.66	30	4.44	6.19	12
Nassella viridula	2.1	3.68	4.38	30	4.44	8.12	9
Poa arida	0.6	1.05	2.68	5	0.74	1.79	19
Poa secunda	1.8	3.15	4	20	2.96	6.11	13
Sub-Total	**12.4**	**21.71**	**14**	**160**	**23.69**	**45.4**	
Native Warm Season Perennial Grasses							
Bouteloua gracilis	4.1	7.18	5.9	45	6.67	13.85	3
Calamovilfa longifolia	0.1	0.18	0.44	5	0.74	0.92	23
Sub-Total	**4.2**	**7.36**	**5.84**	**50**	**7.41**	**14.77**	
Introduced Perennial Grasses							
Agropyron cristatum	20	35.03	21.4	55	8.15	43.18	1
Poa pratensis	1.9	3.33	3.98	25	3.7	7.03	11
Sub-Total	**21.9**	**38.36**	**20.04**	**80**	**11.85**	**50.21**	
Native Grasslike Species							
Carex filifolia	3.9	6.83	7.56	30	4.44	11.27	4
Carex stenophylla	0.9	1.58	2.78	10	1.48	3.06	15
Sub-Total	**4.8**	**8.41**	**7.68**	**40**	**5.92**	**14.33**	

Table 3.5A-4: Upland Grassland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Native Annual Forbs							
Lappula redowskii	0.2	0.35	0.62	10	1.48	1.83	18
Sub-Total	**0.2**	**0.35**	**0.62**	**10**	**1.48**	**1.83**	
Introduced Annual Forbs							
Alyssum desertorum	1	1.75	1.78	30	4.44	6.19	12
Camelina microcarpa	0.2	0.35	0.62	10	1.48	1.83	18
Thlaspi arvense	0.1	0.18	0.44	5	0.74	0.92	23
Sub-Total	**1.3**	**2.28**	**1.76**	**45**	**6.66**	**8.94**	
Introduced Biennial Forbs							
Tragopogon dubius	0.1	0.18	0.44	5	0.74	0.92	23
Sub-Total	**0.1**	**0.18**	**0.44**	**5**	**0.74**	**0.92**	
Native Perennial Forbs							
Arnica fulgens	0.4	0.7	1.78	5	0.74	1.44	20
Astragalus spatulatus	0.5	0.88	1.58	10	1.48	2.36	17
Lomatium foeniculaceum	0.1	0.18	0.44	5	0.74	0.92	23
Musineon divaricatum	0.4	0.7	1.04	15	2.22	2.92	16
Phlox hoodii	0.5	0.88	1.1	20	2.96	3.84	14
Vicia americana	1.4	2.45	2.26	40	5.93	8.38	8
Viola nuttallii	0.1	0.18	0.44	5	0.74	0.92	23
Sub-Total	**3.4**	**5.97**	**3.84**	**100**	**14.81**	**20.78**	
Introduced Perennial Forbs							
Cirsium arvense	0.4	0.7	1.78	5	0.74	1.44	20
Medicago sativa	0.1	0.18	0.44	5	0.74	0.92	23
Taraxacum officinale	0.2	0.35	0.9	5	0.74	1.09	22
Sub-Total	**0.7**	**1.23**	**2.7**	**15**	**2.22**	**3.45**	
Native Full Shrubs							
Artemisia tridentata	1.8	3.15	2.5	45	6.67	9.82	5
Sub-Total	**1.8**	**3.15**	**2.5**	**45**	**6.67**	**9.82**	
Native Half &Sub-Shrubs							
Artemisia frigida	0.1	0.18	0.44	5	0.74	0.92	23
Artemisia pedatifida	0.1	0.18	0.44	5	0.74	0.92	23
Sub-Total	**0.2**	**0.36**	**0.62**	**10**	**1.48**	**1.84**	

Table 3.5A-4: Upland Grassland Cover Summary (continued)

Species	Cover			Frequency			
	Mean Absolute	Relative (%)	Std. Dev. (n-1)	Absolute	Relative (%)	I.V*	Rank
Cryptograms							
Moss	0	0	0	0	0	0	24
Lichen	1.9	0	3.52	60	8.89	8.89	7
Algae	0	0	0	0	0	0	24
Fungi	0	0	0	0	0	0	24
Sub-Total	**1.9**	**0**	**3.52**	**60**	**8.89**	**8.89**	

Totals		Std. Dev.
Total Vegetation	57.1	11.42
Total Vegetation w/Cryptograms	59	12.2
Litter	31.1	8.79
Rock	0.4	1.79
Total Ground Cover	90.5	7.92
Bare Soil	9.5	7.92
Total Cover	**100**	

* I.V. Stands for Importance Value

ADDENDUM 3.5-B
VEGETATION SPECIES SUMMARY

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
Native Annual Grasses						
ALOCAR	*Alopecurus carolinianus*	Carolina foxtail				
VULOCT	*Vulpia octoflora*	Sixweeks fescue		X		
Introduced Annual Grasses						
BROCOM	*Bromus commutatus*	Bald brome				X
BROJAP	*Bromus japonicus*	Japanese brome	X	X	X	
BROTEC	*Bromus tectorum*	Cheatgrass	X	X	X	X
Native Cool Season Perennial Grasses						
ACHHYM	*Achnatherum hymenoides*	Indian ricegrass				X
ELYLAN	*Elymus lanceolatus*	Thickspike wheatgrass	X			X
ELYSMI	*Elymus smithii*	Western wheatgrass	X	X	X	X
ELYSPI	*Elymus spicatus*	Bluebunch wheatgrass				X
ELYTRA	*Elymus trachycaulus*	Slender wheatgrass				

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
HESCOM	*Hesperostipa comata*	Needleandthread				X
KOEMAC	*Koeleria macrantha*	Prairie junegrass	X	X		X
NASVIR	*Nassella viridula*	Green needlegrass	X	X	X	X
POAARI	*Poa arida*	Plains bluegrass	X	X		
POAJUN	*Poa juncifolia*	Alkali bluegrass			X	
POASEC	*Poa secunda*	Sandberg bluegrass	X	X	X	X
Native Warm Season Perennial Grasses						
BOUGRA	*Bouteloua gracilis*	Blue grama	X	X	X	X
CALLON	*Calamovilfa longifolia*	Praire sandreed		X	X	
Introduced Perennial Grasses						
AGRCRI	*Agropyron cristatum*	Crested wheatgrass	X	X	X	X
BROINE	*Bromus inermis*	Smooth brome			X	
POABUL	*Poa bulbosa*	Bulbous bluegrass				

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
POAPRA	*Poa pratensis*	Kentucky bluegrass	X	X	X	X
Native Grasslike Species						
CARFIL	*Carex filifolia*	Threadleaf sedge	X	X		X
CARPRA	*Carex praegracilis*	Silver sedge			X	
CARSTE	*Carex stenophylla*	Needleleaf sedge	X	X	X	
ELEPAL	*Eleocharis palustris*	Common spikerush			X	
Native Annual Forbs						
DESPIN	*Descurainia pinnata*	Western tansymustard			X	
LAPRED	*Lappula redowskii*	Bluebur stickseed	X	X	X	
MONNUT	*Monolepis nuttalliana*	Nuttall's povertyweed			X	
PHALIN	*Phacelia linearis*	Threadleaf phacelia				
Introduced Annual Forbs						
ALYALY	*Alyssum alyssoides*	Pale alyssum				

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
ALYDES	*Alyssum desertorum*	Desert alyssum	X	X	X	X
CAMMIC	*Camelina microcarpa*	Littleseed falseflax	X	X	X	
CHEALB	*Chenopodium album*	Common lambsquarter			X	
CHOTEN	*Chorispora tenella*	Common blue mustard			X	
POLAVI	*Polygonum aviculare*	Prostrate knotweed				
SISALT	*Sisymbrium altissimum*	Tumble mustard				
THLARV	*Thlaspi arvense*	Field pennycress		X	X	X
Introduced Biennial Forbs						
CIRVUL	*Cirsium vulgare*	Bull thistle				
MELOFF	*Melilotus officinalis*	Yellow sweetclover	X			X
TRADUB	*Tragopogon dubius*	Goat's beard		X		X
Native Perennial Forbs						
ACHMIL	*Achillea millefolium*	Western yarrow			X	

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
AGOGLA	*Agoseris glauca*	Pale agoseris				
ALLTEX	*Allium textile*	Textile onion	X			
ARNFUL	*Arnica fulgens*	Foothill arnica	X	X	X	
ASTBIS	*Astragalus bisulcatus*	Twogrooved milkvetch				
ASTMIS	*Astragalus miser*	Weedy milkvetch	X			
ASTMI1	*Astragalus missouriensis*	Missouri milkvetch				
ASTPUR	*Astragalus purshii*	Woolly milkvetch				
ASTSPA	*Astragalus spatulatus*	Spoonleaf milkvetch	X	X		X
CALGUN	*Calochortus gunnisonii*	Gunnison mariposalily				
CIRFLO	*Cirsium flodmanii*	Flodman thistle				
CIRUND	*Cirsium undulatum*	Wavyleaf thistle				
COMUMB	*Comandra umbellata*	Common bastard toadflax	X			
CRYCIN	*Cryptantha cinerea*	James' cryptantha				

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
DELBIC	*Delphinium bicolor*	Little larkspur				X
EREHOO	*Eremogone hookeri*	Hooker sandwort				X
ERIOCH	*Erigeron ochroleucus*	Buff fleabane			X	
ERIPUM	*Erigeron pumilus*	Low fleabane				X
GAUCOC	*Gaura coccinea*	Scarlet gaura				
Native Perennial Forbs						
LEWRED	*Lewisia rediviva*	Bitter root				
LOMFOE	*Lomatium foeniculaceum*	Biscuitroot	X	X	X	X
LUPARG	*Lupinus argenteus*	Silvery lupine	X		X	
MUSDIV	*Musineon divaricatum*	Leafy wildparsley		X		
OXYLAM	*Oxytropis lambertii*	Lambert crazyweed	X			
PEDARG	*Pediomelum argophyllum*	Silverleaf Indian breadroot				
PENALB	*Penstemon albidus*	White beardtongue				

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
PENERI	*Penstemon eriantherus*	Fuzzytongue penstemon				
PHLHOO	*Phlox hoodii*	Hoods phlox	X	X	X	X
SENINT	*Senecio integerrimus*	Lambstongue groundsel				
SPHCOC	*Sphaeralcea coccinea*	Scarlet globemallow	X		X	X
THERHO	*Thermopsis rhombifolia*	Golden banner				
VICAME	*Vicia americana*	American vetch	X	X	X	X
VIONUT	*Viola nuttallii*	Nuttall's violet		X		
ZIGVEN	*Zigadenus venenosus*	Death camas				X
Introduced Perennial Forbs						
ASTCIC	*Astragalus cicer*	Cicer milkvetch	X			
CERARV	*Cerastium arvense*	Field chickweed	X		X	
CIRARV	*Cirsium arvense*	Canada thistle		X		
MEDSAT	*Medicago sativa*	Alfalfa medic		X		

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
TAROFF	*Taraxacum officinale*	Common dandelion	X	X	X	X
Unknown Forb Species						
CIRSPP	*Cirsium spp.*	Thistle				
RUMSPP	*Rumex spp.*	Dock			X	
Native Full Shrubs						
ARTCAN	*Artemisia cana*	Silver sagebrush			X	X
ARTTRI	*Artemisia tridentata*	Big sagebrush	X	X	X	X
CHRVIS	*Chrysothamnus viscidiflorus*	Sticky-leaved rabbitbrush	X			
ERINAU	*Ericameria nauseosa*	Rubber rabbitbrush	X			X
Native Half &Sub-Shrubs						
ARTFRI	*Artemisia frigida*	Fringed sagewort	X	X		X
ARTLUD	*Artemisia ludoviciana*	Louisiana sagewort		X	X	X
ARTPED	*Artemisia pedatifida*	Birdfoot sagebrush	X	X		X

Acronym	Current Nomenclature	Common Name	Plant Community			
			BSS	UG	MG	BS
ATRGAR	*Atriplex gardneri*	Gardner saltbush	X	X		X
KRALAN	*Krascheninnikovia lanata*	Winterfat			X	X
LINPUN	*Linanthus pungens*	Granite pricklygila				
Native Succulents						
OPUPOL	*Opuntia polyacantha*	Plains pricklypear				
	Species observed but not sampled					

ADDENDUM 3.5-C
SUMMARY OF SHRUB DENSITY DATA

Table 3.5C-1: Breaks Grassland Density Summary

Project Name:	2011 AUC- Reno Creek	**Plot Size:**	100 m^2
Polygon Name:	BG	**Sample Size:**	1
Community Type:	Breaks Grassland	**No. of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Mean (#/Plot)	Relative Density	Std. Dev. n-1 (#/Plot)	Mean (#/sq.m.)	Mean (#/Acre)
Artemisia cana	1.95	4.17	4.75	0.02	78.92
Artemisia tridentata	40.35	86.22	32.3	0.4	1,632.96
Ericameria nauseosa	0.55	1.18	2.24	0.01	22.26
Total Native Full Shrubs	**42.85**	**91.56**	**32.23**	**0.43**	**1,734.14**
Artemisia frigida	2.5	5.34	5.61	0.03	101.18
Artemisia ludoviciana	0.1	0.21	0.45	0	4.05
Atriplex gardneri	0.35	0.75	1.18	0	14.16
Krascheninnikovia lanata	1	2.14	4.47	0.01	40.47
Total Native Half &Sub-Shrubs	**3.95**	**8.44**	**8.71**	**0.04**	**159.86**
Total	**46.8**	**100**	**33.15**	**0.47**	**1,894.00**

Table 3.5C-2: Big Sagebrush Shrubland Density Summary

Project Name:	2011 AUC- Reno Creek	**Plot Size:**	100 m^2
Polygon Name:	BSS	**Sample Size:**	1
Community Type:	Big Sagebrush Shrubland	**No. of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Mean (#/Plot)	Relative Density	Std. Dev. n-1 (#/Plot)	Mean (#/m^2)	Mean (#/Acre)
Artemisia tridentata	115.4	79.18	63.33	1.15	4,670.24
Chrysothamnus viscidiflorus	0.25	0.17	0.91	0	10.12
Ericameria nauseosa	0.1	0.07	0.45	0	4.05
Total Native Full Shrubs	**115.75**	**79.42**	**63.08**	**1.16**	**4,684.40**
Artemisia frigida	1.9	1.3	4.05	0.02	76.89
Artemisia pedatifida	26.9	18.46	73.13	0.27	1,088.64
Atriplex gardneri	1.2	0.82	4.92	0.01	48.56
Total Native Half &Sub-Shrubs	**30**	**20.58**	**74.51**	**0.3**	**1,214.10**
Total	**145.75**	**100**	**110.33**	**1.46**	**5,898.50**

Table 3.5C-3: Meadow Grassland Density Summary

Project Name:	2011 AUC- Reno Creek	**Plot Size:**	100 m^2
Polygon Name:	MG	**Sample Size:**	1
Community Type:	Meadow Grassland	**No. of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Mean (#/Plot)	Relative Density	Std. Dev. n-1 (#/Plot)	Mean (#/sq.m.)	Mean (#/Acre)
Artemisia cana	1.7	9.02	6.16	0.02	68.8
Artemisia tridentata	14.8	78.51	27.1	0.15	598.96
Total Native Full Shrubs	**16.5**	**87.53**	**26.82**	**0.17**	**667.76**
Artemisia ludoviciana	0.85	4.51	3.8	0.01	34.4
Krascheninnikovia lanata	1.5	7.96	5.46	0.02	60.71
Total Native Half &Sub-Shrubs	**2.35**	**12.47**	**6.45**	**0.02**	**95.1**
Total	**18.85**	**100**	**26.09**	**0.19**	**762.86**

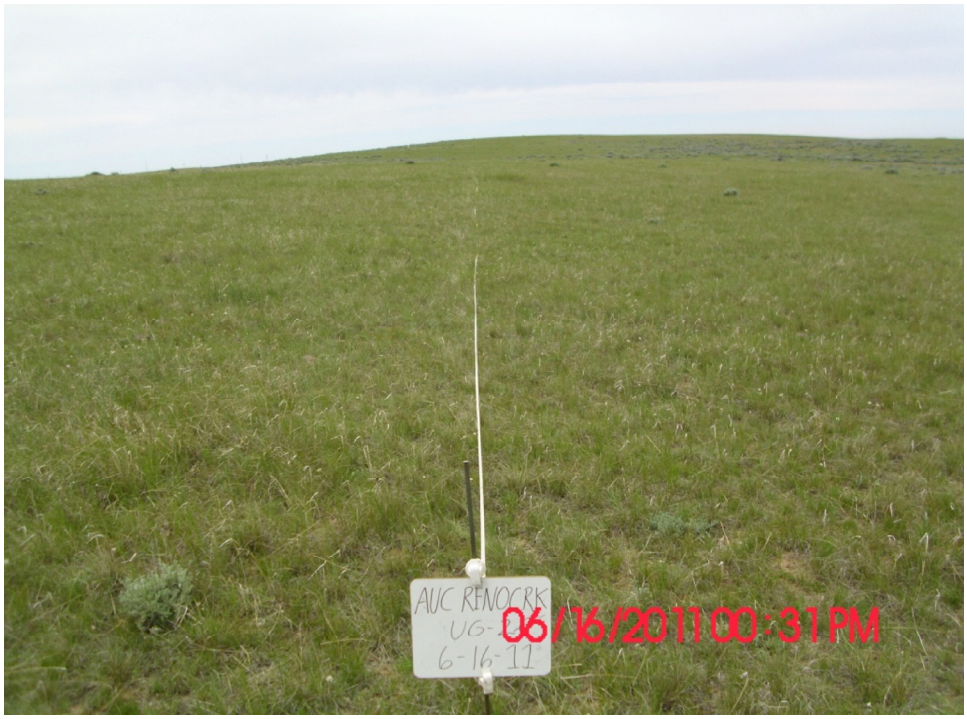
Table 3.5C-4: Upland Grassland Density Summary

Project Name:	2011 AUC- Reno Creek	**Plot Size:**	100 m^2
Polygon Name:	UG	**Sample Size:**	1
Community Type:	Upland Grassland	**No. of Samples:**	20
Date:	10/31/2011	**Report Date:**	9/1/2011

Species	Mean (#/Plot)	Relative Density	Std. Dev. n-1 (#/Plot)	Mean (#/sq.m.)	Mean (#/Acre)
Artemisia tridentata	23.65	58.9	50.42	0.24	957.12
Total Native Full Shrubs	**23.65**	**58.9**	**50.42**	**0.24**	**957.12**
Artemisia frigida	0.75	1.87	2.24	0.01	30.35
Artemisia ludoviciana	0.25	0.62	1.12	0	10.12
Artemisia pedatifida	15.35	38.23	68.65	0.15	621.21
Atriplex gardneri	0.15	0.37	0.49	0	6.07
Total Native Half &Sub-Shrubs	**16.5**	**41.1**	**68.89**	**0.17**	**667.76**
Total	**40.15**	**100**	**80.9**	**0.4**	**1,624.88**

ADDENDUM 3.5-D
VEGETATION PHOTOGRAPHS

Picture 1: Big Sagebrush Shrubland Plant Community

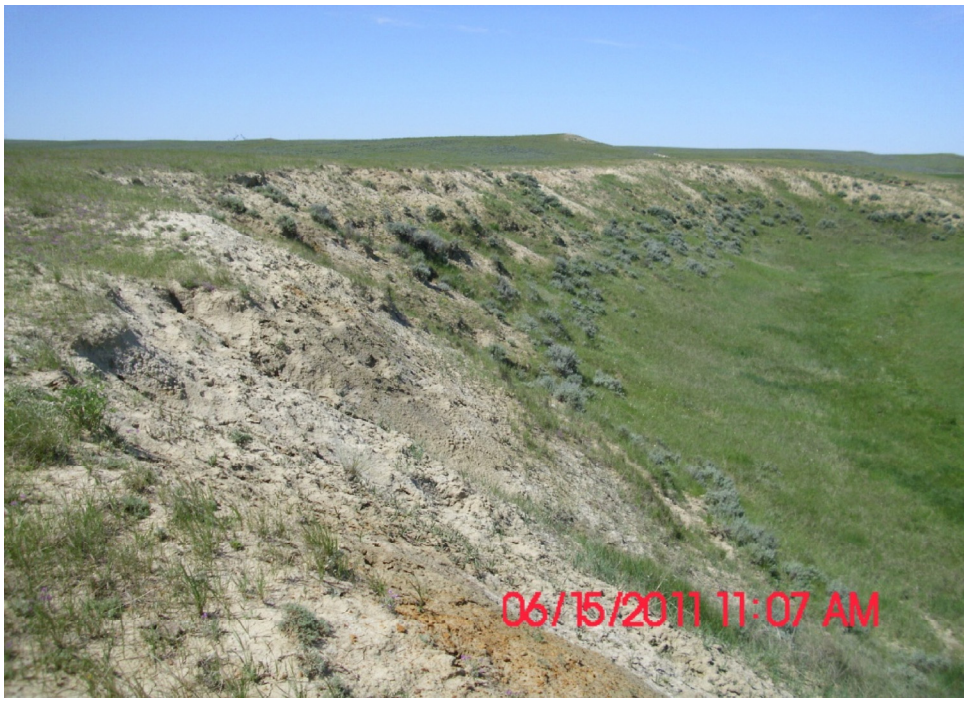


Picture 2: Upland Grassland Plant Community

Picture 3: Meadow Grassland Plant Community

Picture 4: Breaks Grassland Plant Community

Picture 5: Type of Habitat Evaluated as Potential Blowout Penstemon (*Penstemon haydenii*) Habitat within the Proposed Project Area

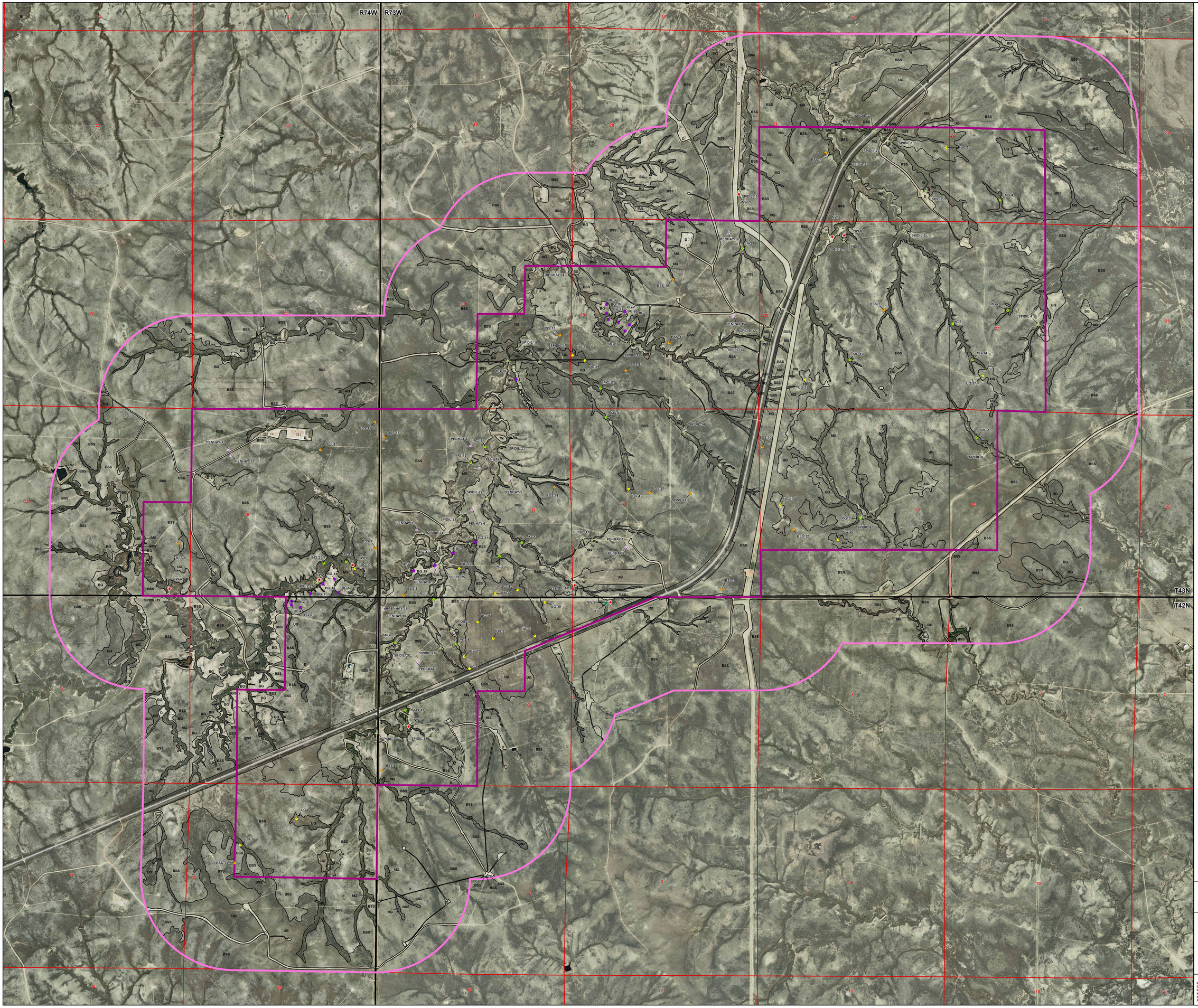


Picture 6: Type of Habitat Evaluated as Potential Blowout Penstemon (*Penstemon haydenii*) Habitat within the Proposed Project Area

Picture 7: Type of Habitat Evaluated as Potential Ute ladies'-tresses (*Spiranthes diluvialis*) Habitat within the Proposed Project Area

Picture 8: Type of Habitat Evaluated as Potential Ute ladies'-tresses (*Spiranthes diluvialis*) Habitat within the Proposed Project Area

ADDENDUM 3.5-E
PROPOSED RENO CREEK PROJECT VEGETATION MAP



Legend

- BG - Breaks Grassland Sample Location
- BSS - Big Sage Shrubland Sample Location
- MG - Meadow Grassland Sample Location
- UG - Upland Grassland Sample Location
- PENHAY - Penstemon haydenii Habitat Survey
- SPIDIL - Spiranthes divuvialis Habitat Survey
- TS - Tree Stand Location
- NW - Noxious Weed Location
- Vegetation Communities
- Proposed Reno Creek Project Boundary
- Proposed Half Mile Project Boundary Buffer
- Sections
- TWN/RNG

Vegetation Communities

Map Symbol	Vegetation Community
BG	Breaks Grassland
BSS	Big Sage Shrubland
D	Disturbed
MG	Meadow Grassland
UG	Upland Grassland
W	Water

N

0 0.15 0.3 0.6

Miles

1 inch = 875 feet

AUC, LLC

RENO CREEK
BASELINE VEGETATION ASSESSMENT
CAMPBELL COUNTY, WY

Map Created by: BKS
Date Modified: Sept. 27, 2011
Map Projection: NAD 83, UTM Z13
K:\Projects\AUC_Bayswater\641_AUC_Bayswater_Nuclear_Reno_Creek\Maps\Reno_Creek_Veg_v4.mxd

BKS Environmental Associates, Inc.

ADDENDUM 3.5-F
AQUATIC RESOURCES INVENTORY

AQUATIC RESOURCES INVENTORY

AUC, LLC
RENO CREEK PROJECT
IN-SITU URANIUM RECOVERY

Prepared for:

AUC LLC
The Reno Creek ISR
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Prepared by:

BKS Environmental Associates, Inc.

P.O. Box 3467
Gillette, Wyoming 82717

September 19, 2012

TABLE OF CONTENTS

INTRODUCTION

The aquatic resources inventory was conducted as part of the baseline assessment for the proposed in-situ uranium Reno Creek Project. The aquatic resources inventory will be utilized for reclamation planning and mining infrastructure locations, as well as, documenting the aquatic resources within the project area and the findings will be used for reports to be submitted to the Nuclear Regulatory Commission (NRC). Figure 1 identifies the general area, as well as sampling locations, on a National Agricultural Imagery Program true color ortho aerial imagery.

METHODOLOGY

Wetland surveys were conducted in accordance with the United States Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0). All waters of the United States (WoUS) and other waters of the United States (OWUS) were also assessed in conjunction with the wetland surveys. The routine wetland delineation approach with onsite inspection was utilized, and the survey was conducted by pedestrian reconnaissance and review of orthophotography maps.

The Belle Fourche River, tributaries to the Belle Fourche River, Spring Creek, Porcupine Creek, and K Bar Draw were evaluated using pedestrian reconnaissance. The remaining small drainages, draws, and stock ponds were evaluated based on combination of pedestrian reconnaissance and review of orthophotography mapping.

Identification of potential wetlands was based on visual assessment of vegetation and hydrology indicators, as well as, intrusive soil sampling to determine the presence of wetland criteria indicators.

USACE Wetland Determination Data Forms-Great Plains Region (Version 2.0), were utilized for each observation point. Hydrology and soils were evaluated whenever a plant community met hydrophytic vegetation parameters based on the Dominance Test and Prevalence Index (as defined by the USACE Great Plains Regional Supplement), or whenever indicators suggested the potential presence of a seasonal wetland under normal circumstances.

Natural Resources Conservation Service (NRCS) soil mapping for Campbell County, Wyoming, and BKS Environmental Associates, Inc. (BKS) baseline soil mapping for the project area were reviewed for general soils information.

Potential wetlands (WoUS) and OWUS were initially identified via review of area maps to include the following:

1) United States Fish and Wildlife Service (USFWS) digital National Wetland Inventory (NWI) mapping.

No flow data, stream gauge information or historical information of flow was reviewed or gathered for the purposes of wetland determination.

Wetland indicator categories were identified for each dominant plant species noted through use of the National List of Vascular Plant Species that Occur in Wetlands, 1988 National Summary. Region 4 (North Plains) indicator categories were utilized for the project area. Wetland species identified at the proposed project site are listed in Addendum 2.

Field sample locations and resulting wetland boundaries were recorded with a hand-held Garmin GPSmap 60Cx Global Positioning System (GPS) unit or a Garmin III Plus GPS unit in NAD 1927 Wyoming State Plane east FIPS 4901 feet.

RESULTS

The project area is generally characterized as a Big Sagebrush Shrubland with pockets of Upland Grassland and Breaks Grassland, with inclusions of several drainages. The drainage basins are dominated by the Meadow Grassland plant community and occupied approximately 484 acres of the project area. The dominate plant species within this community are *Elymus smithii* (Western wheatgrass), *Bromus inermis* (smooth brome), *Bromus tectorum* (cheatgrass brome), and *Poa pratensis* (Kentucky bluegrass). The wetland indicator statuses of these plants are UPL (upland), FACU (facultative upland), UPL, and NI, respectively.

Relatively abrupt upland/wetland transition areas occurred, and were a result of changes in topography occurring along drainage channels. Coal bed methane (CBM) outfalls, windmills, and livestock watering tanks, were found within the project area, and were generally located along or within a drainage channel.

Soils information for the project area was obtained from Natural Resource Conservation Service (NRCS) Web Soil Survey for southern Campbell County, Wyoming, (2006) and from BKS baseline soil mapping (BKS 2011). The soil map units found within the main drainages and tributaries located in the project area were Ulm Clay Loam and Forkwood Loam.

Both soil map units are found on the Wyoming Hydric Soils List for southern Campbell County (NRCS 2011). The map units are typically found in depressional areas or playas. These soils are described as soils that are frequently ponded for long duration or very long duration during the growing season (NRCS 2011).

The majority of the wetlands were found along and within existing drainage bottoms; however, the wetlands generally were not continuous along the entire length of the drainages. Classifications of the wetlands along the drainages were primarily Palustrine Emergent (PEM) OWUS. The sum acres identified within the project area totals approximately 42.31 acres. These acres are comprised of PEM stream channel, Palustrine Aquatic Bed (PAB) stream channel and isolated ponds, PEM isolated ponds, and Palustrine Unconsolidated Bottom (PUB) isolated ponds. See Table 1 and Table 2 for a summary of wetland acres within the proposed project area.

DISCUSSION

Windmills, livestock watering tanks and CBM outfalls were observed within the project area. Some outfalls and watering tanks had no water present while others were presently releasing water into the drainages where they were located. The release of water from the outfalls and watering tanks has influenced the presence or absence of wetland parameters within these drainages. In drainages where water is still being released the wetland characteristics are actively present. In areas where water has ceased being released, the wetland parameters are receding, particularly wetland hydrology and hydrophytic vegetation causing upland vegetation encroachment.

The headwaters of the Belle Fourche River are located within the Reno Creek project area. No flow data was obtained because it was not available. Historic NWI mapping states that the Belle Fourche River and the majority of its tributaries are classified as PEM wetlands that are continuous within their channels. While PEM wetlands are present within the Belle Fourche and its tributaries, they are not continuous and are usually isolated by upland swales or by manmade berms created within the channel. The Belle Fourche River can be characterized as an ephemeral channel with isolated pockets of natural wetlands due to precipitation events and intermittent and declining discharge from CBM outfalls.

The wetland information herein presented is subject to verification and approval by the USACE.

Table 1: Summary of Wetlands within the Project Area

Drainage	Sample Point (SP) ID/Map ID*	Legal Description	Photo #	2010/2011 Delineation Designation	Cowardin Classification	Acreage of Cowardin Classification
Tributary to the Belle Fourche River	1	Section 6 T42N, R73W	Photo 1&2	Wetland	OWUS	1.24
Tributary to the Belle Fourche River	2	Section 6 T42N, R73W	Photo 3&4	Wetland		
Tributary to the Belle Fourche River	3	Section 6 T42N, R73W	Photo 5&6	Wetland	PEMAh	0.23
Tributary to the Belle Fourche River	4	Section 6 T42N, R73W	Photo 10&11	Wetland	PUB	0.08
Tributary to the Belle Fourche River	5	Section 6 T42N, R73W	Photo 12, 13&14	Wetland	PEMAh	0.29
Belle Fourche River	6	Section 1 T42N, R74W	Photo 15&16	Wetland	PEMA	---
Belle Fourche River	7	Section 36 T43N, R74W	Photo 17&18	Wetland	PEMA	0.43
Belle Fourche River	8	Section 36 T43N, R74W	Photo 19&20	Wetland	PABFh	2.92
Belle Fourche River	9	Section 36 T43N, R74W	Photo 21, 22 & 23	---	---	---
Belle Fourche River	Waypoint 2	Section 36 T43N, R74W	Photo 24 & 25	---	---	---
Belle Fourche River	10	Section 36 T43N, R74W	Photo 28&29	Wetland	PEMA	7.47
Belle Fourche River	Upstream of SP 11	Section 31 T43N, R73W	Photo 30 & 31	---	---	
Belle Fourche River	11	Section 31 T43N, R73W	Photo 32&33	---	---	
Belle Fourche River	12	Section 31 T43N, R73W	Photo 34&35	---	---	
Belle Fourche River	13	Section 31 T43N, R73W	Photo 36&37	---	---	
Belle Fourche River	14	Section 31 T43N, R73W	No photos taken	---	---	
Belle Fourche River	15	Section 31 T43N, R73W	Photo 38&39	---	---	
Tributary to the Belle Fourche River	Waypoint 4	Section 31 T43N, R73W	Photo 40 &41	---	---	---
Tributary to the Belle Fourche River	Waypoint 5	Section 31 T43N, R73W	Photo 42 & 43	---	---	---
Tributary to the Belle Fourche River	Waypoint 6	Section 31 T43N, R73W	Photo 44	---	---	---
Belle Fourche River	16	Section 31 T43N, R73W	Photo 45&46	Wetland	PEMA	0.21
Tributary to the Belle Fourche River	17	Section 31 T43N, R73W	Photo 47&48	Wetland	PUB	0.08
Tributary to the Belle Fourche River	18	Section 31 T43N, R73W	Photo 49 Photographs 50&51 are on the north side of berm at SP 18	Wetland	PABFh	0.65

Drainage	Sample Point (SP) ID/Map ID*	Legal Description	Photo #	2010/2011 Delineation Designation	Cowardin Classification	Acreage of Cowardin Classification
Belle Fourche River	19	Section 30 T43N, R73W	Photo 52&53	---	---	---
Belle Fourche River	Waypoint 7	Section 30 T43N, R73W	Photo 54 & 55	---	---	---
Tributary to the Belle Fourche River	20	Section 28 T43N, R73W	Photo 56	Wetland	PUBFx	0.04
Tributary to the Belle Fourche River	21	Section 28 T43N, R73W	Photo 57	Wetland	PEMC	---
Tributary to the Belle Fourche River	22	Section 28 T43N, R73W	Photo 58&59	Wetland	PEMC	1.74
Tributary to the Belle Fourche River	23	Section 28 T43N, R73W	Photo 60, 61 & 62	Wetland	PEMC	
Tributary to the Belle Fourche River	24	Section 28 T43N, R73W	Photo 63&64	Wetland	PEMC	
Tributary to the Belle Fourche River	25	Section 28 T43N, R73W	Photo 65&66	Wetland	PEMAh	0.56
					PABFh	0.79
Tributary to the Belle Fourche River	26	Section 28 T43N, R73W	Photo 67&68	Wetland	PABFh	0.71
Tributary to the Belle Fourche River	27	Section 28 T43N, R73W	Photo 69&70	Wetland	PABFh	
Tributary to the Belle Fourche River	28	Section 21 T43N, R73W	Photo 71	Wetland	PABFh	0.21
Tributary to the Belle Fourche River	29	Section 21 T43N, R73W	Photo 72&73	Wetland	PEMC	0.70
					PEMA	0.11
Tributary to the Belle Fourche River	30	Section 21 T43N, R73W	Photo 74	Wetland	PABFh	0.62
Tributary to the Belle Fourche River	W1	Section 12 T42N, R74W	Photo 1&2	Wetland	PABFh	0.20
Tributary to the Belle Fourche River	W2	Section 12 T42N, R74W	Photo 3&4	Wetland	PEMA	2.25
Tributary to the Belle Fourche River	W3	Section 12 T42N, R74W	Photo 5, 6, 7, 8 & 9	Wetland		
Tributary to the Belle Fourche River	Near W3	Section 12 T42N, R74W	Photo 10 & 11	---	---	---
Tributary to the Belle Fourche River	W5	Section 12 T42N, R74W	Photo 12&13	Wetland	PEMA	0.15
Tributary to the Belle Fourche River	W6	Section 12 T42N, R74W	Photo 14&15	Wetland	PEMA	0.42
Tributary to the Belle Fourche River	Upstream of W6	Section 12 T42N, R74W	Photo 16, 17, 18 & 19	---		
Tributary to the Belle Fourche River	W7	Section 12 T42N, R74W	Photo 20&21	Wetland		
Tributary to the Belle Fourche River	Downstream of W7	Section 12 T42N, R74W	Photo 22, 23&24	---	---	---
Tributary to the Belle Fourche River	W8	Section 12 T42N, R74W	Photo 25&26	Wetland	PEMA	0.78
Tributary to the Belle Fourche River	Waypoint 1	Section 12 T42N, R74W	Photo 27, 28&29	Wetland		

Drainage	Sample Point (SP) ID/Map ID*	Legal Description	Photo #	2010/2011 Delineation Designation	Cowardin Classification	Acreage of Cowardin Classification
Tributary to the Belle Fourche River	Waypoint 2	Section 12 T42N, R74W	Photo 30, 31&32	---	---	---
Tributary to the Belle Fourche River	W9	Section 1 T42N, R74W	Photo 33&34	Wetland	PEMA	0.85
Tributary to the Belle Fourche River	W10	Section 1 T42N, R74W	Photo 35&36	Wetland		
Tributary to the Belle Fourche River	W11	Section 1 T42N, R74W	Photo 37&38	Wetland	---	---
Tributary to the Belle Fourche River	Waypoint 4	Section 1 T42N, R74W	Photo 39&40	---	---	---
Tributary to the Belle Fourche River	Waypoint 3	Section 1 T42N, R74W	Photo 41&42	---	---	---
Tributary to the Belle Fourche River	W12	Section 6 T42N, R73W	Photo 43,44,&45	Wetland	PEMA	1.85
Tributary to the Belle Fourche River	W13	Section 6 T42N, R73W	Photo 46&47	Wetland		
Tributary to the Belle Fourche River	Waypoint 6	Section 6 T42N, R73W	Photo 48&49	---	---	---
Tributary to the Belle Fourche River	W14	Section 32 T43N, R73W	Photo 50&51	Wetland	PABFh	0.21
Tributary to the Belle Fourche River	Waypoint 8	Section 32 T43N, R73W	Photo 52, 53,&54	---	---	---
Tributary to the Belle Fourche River	W15	Section 31 T43N, R73W	Photo 55&56	Wetland	PEMC	1.61
Tributary to the Belle Fourche River	Waypoint 9	Section 31 T43N, R73W	Photo 57, 58, 59, 60&61	---	---	---
Belle Fourche River	W16	Section 35 T43N, R74W	Photo 62&63; 64&65	Wetland	PEMAh	0.24
Belle Fourche River	W17	Section 35 T43N, R74W	Photo 66&67	---	---	---
Belle Fourche River	W18	Section 35 T43N, R74W	Photo 68, 69,&70	Wetland	PEMA	1.30
Tributary to the Belle Fourche River	W19	Section 36 T43N, R74W	Photo 71&72	---	---	---
Belle Fourche River	W20	Section 30 T43N, R73W	Photo 73&74	---	---	---
Tributary to the Belle Fourche River	W21	Section 29 T43N, R73W	Photo 75,76&77	---	---	---
Tributary to the Belle Fourche River	W22	Section 29 T43N, R73W	Photo 78&79	---	---	---
Belle Fourche River	W23	Section 30 T43N, R73W	Photo 80&81	Wetland	PEMA	4.70
Belle Fourche River	Waypoint 10	Section 30 T43N, R73W	Photo 82, 83,&84	---	---	---
Belle Fourche River	Waypoint 7	Section 36 T43N, R74W	Photo 85&86	---	---	---
Spring Creek	W24	Section 33 T43N, R73W	Photo 87, 88,&89	Wetland	PEMA	---
---	W25	Section 34 T43N, R73W	Photo 90&91	---	PEMA	0.58
---	W26	Section 34 T43N, R73W	Photo 92, 93, 94,&95	---	---	---

Drainage	Sample Point (SP) ID/Map ID*	Legal Description	Photo #	2010/2011 Delineation Designation	Cowardin Classification	Acreage of Cowardin Classification
Tributary to the Belle Fourche River	2010 Sample Point 30	Section 21 T43N, R73W	Photo 96&97	---	---	---
Tributary to the Belle Fourche River	W27	Section 21 T43N, R73W	Photo 98, 99&100	Wetland	PEMA	1.66
Tributary to the Belle Fourche River	Waypoint 11	Section 29 T43N, R73W	Photo 101&102	---	---	---
Porcupine Creek	W28	Section 27 T43N, R73W	Photo 103&104	Wetland	PEMC	0.37

*Sample points with "W" indicate 2011 sample date. Sample Points without indicate 2010 sample date.

Table 2. Total Wetland Acreages within Reno Creek

PABFh	PEMA	PEMAh	PEMC	PEMCh	PUBFx	PUB	OWUS
7.78	17.02	10.26	5.42	0.11	0.04	0.36	1.24

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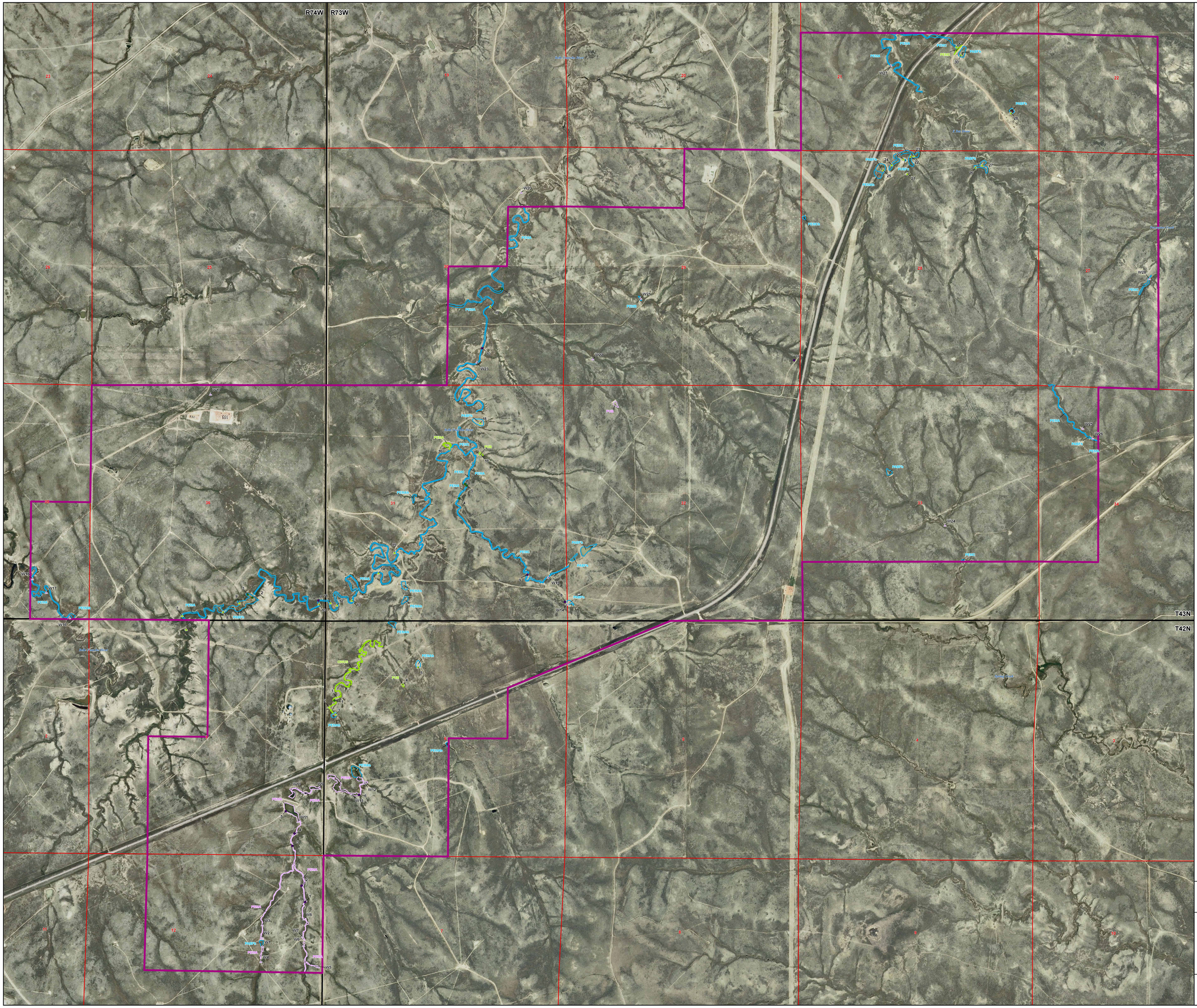
ADDENDUM 1

- Project Area Aquatic Resources Inventory Map – Figure 1



Wetland Acreages

Map Symbol	Source	Acres
PEMA	2011	6.31
PUB	2011	0.20
OWUS	2010	1.24
PEMA	2010	0.21
PEMC	2010	0.11
PUB	2010	0.16
Total 2010/2011 Acres		8.23
PABFh	NWI	7.78
PEMA	NWI	17.02
PEMAh	NWI	3.74
PEMB	NWI	0.08
PEMC	NWI	5.31
PEMCh	NWI	0.11
PUBFx	NWI	0.04
Total NWI Acres		34.08
Total Wetland Acres		42.31

AUC, LLC

RENO CREEK
BASELINE WETLAND
ASSESSMENT
CAMPBELL COUNTY, WY

Map Created by: BKS - Tracy Spetts
Date Modified: Sept. 27, 2011
Map Projection: NAD 83, WTM Z13
K:\Projects\AUC_Baseline\1841_AUC_Baseline\arc\Arcmap_Reno_Creek\Maps\Reno_Creek_Wet_V2.mxd

BKS Environmental Associates, Inc.

ADDENDUM 2

VEGETATION SPECIES LIST

Scientific Name	Common Name	Indicator Status	Observed	
			Fall 2010	Spring 2011
Achillea millefolium	Common yarrow	FACU	X	X
Agropyron cristatum	Crested wheatgrass	--	X	X
Alyssum desertorum	Desert alyssum	--		X
Arnica fulgens	Foothill arnica	--		X
Artemisia biennis	Biennial wormwood	FAC		X
Artemisia cana	Silver sagebrush	FACU		X
Bassia sieveriana	Fireweed summercypress	FAC		X
Bromus inermis	Smooth brome	--		X
Bromus japonicus	Japanese brome	FACU	X	
Bromus tectorum	Cheatgrass	--	X	X
Camelina microcarpa	Littleseed falseflax	--		X
Carex nebrascensis	Nebraska sedge	OBL	X	X
Carex praegracilis	Silver sedge	FACW		X
Carex simulata	Analogue sedge	OBL		X
Cirsium arvense	Canada thistle	FACU	X	X
Cirsium canescens	Prairie thistle	--		X
Collomia linearis	Linearleaf collomia	FACU		X
Descurainia pinnata	Western tansymustard	--	X	
Distichlis stricta	Inland saltgrass	NI	X	
Eleocharis acicularis	Needle spikerush	OBL		X
Eleocharis palustris	Creeping spikerush	OBL	X	X
Eleocharis sp.	Spikerush	---	X	
Elymus lanceolatus	Thickspike wheatgrass	FAC	X	
Elymus smithii	Western wheatgrass	FACU	X	X
Elymus spicatus	Bluebunch wheatgrass	FACU-	X	
Elymus trachycaulus	Slender wheatgrass	FACU	X	
Equisetum laevigatum	Smooth horsetail	FAC	X	X
Hordeum jubatum	Foxtail barley	FACW	X	X
Juncus balticus	Baltic rush	OBL	X	X
Koeleria macrantha	Prairie junegrass	--	X	
Lepidium campestre	Field pepperweed	--		X
Melilotus officinalis	Yellow sweetclover	FACU-		X
Muhlenbergia asperifolia	Scratchgrass	FACW	X	
Nassella viridula	Green needlegrass	--	X	X
Plantago major	Common plantain	FAC	X	
Plantago sp.	Plantain	--		X
Poa pratensis	Kentucky bluegrass	FACU	X	X
Poa secunda	Sandberg bluegrass	--		X
Poa sp.	Bluegrass	--		X
Polygonum aviculare	Prostrate shoestring	FACU	X	
Polygonum persicaria	Spotted ladysthumb	FACW		X
Ranunculus aquatilis	Watercrowfoot buttercup	OBL		X
Rorippa sinuata	Spreading yellowcress	FACW		X

Scientific Name	Common Name	Indicator Status	Observed	
			Fall 2010	Spring 2011
Rumex sp.	Dock	--	X	X
Sagittaria cuneata	Arumleaf arrowhead	OBL		X
Schoenoplectus pungens	Leafy bulrush	OBL	X	
Spartina pectinata	Prairie cordgrass	FACW	X	
Taraxacum officinale	Common dandelion	FACU		X
Thlaspi arvense	Field pennycress	NI	X	X
Trifolium sp.	Clover	--		X
Unknown forb	---	---	X	
Veronica peregrina	Purslane speedwell	FACW		X
Vicia americana	American vetch	NI		X
Xanthium strumarium	Rough cocklebur	FAC	X	

ADDENDUM 3

PHOTOGRAPHS

(Not Included in This Submission - Available Upon Request)

ADDENDUM 3

WETLAND DETERMINATION DATA FORMS
GREAT PLAINS REGION (VERSION 2.0)

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 1

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 0-5

Subregion (LRP): Western Great Plains | Lat: N 43.643939 | Long: W105.684159 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: OWUS

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 1 upstream
Photo 2 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Hordeum jubatum*	20	X	FACW
2. *Eleocharis palustris*	55	X	OBL
3. *Poa pratensis*	5		FACU
4. *Elymus smithii*	8		FACU
5. *Achillea millefolium*	1		FACU
6.			
7.			
8.			
9.			
10.			
Total Cover:	89		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 2%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	55	x1=	55	
FACW species	20	x2=	40	
FAC species	-	x3=	-	
FACU species	14	x4=	56	
UPL species	-	x5=	-	
Column Totals:	89	(A)	151	(B)

Prevalence Index = B/A = 1.70

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/4	90	7.5YR 4/6	10	C	PL	Clay Loam	Can not dig deeper than 10"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 2

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) Drainage | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.643342 | Long: W105.684815 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: OWUS

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 3 upstream
Photo 4 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Carex nebrascensis*	5		OBL
2. *Eleocharis palustris*	15	X	OBL
3. *Hordeum jubatum*	5		FACW
4. *Poa pratensis*	2		FACU
5. *Elymus smithii*	5		FACU
6. *Rumex Spp*	2		--
7.			
8.			
9.			
10.			
Total Cover:	34		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	20	x1=	20	
FACW species	5	x2=	10	
FAC species	0	x3=	0	
FACU species	7	x4=	28	
UPL species	0	x5=	0	
Column Totals:	32	(A)	58	(B)
Prevalence Index = B/A =			1.81	

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
X 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/3	100					CL	
2-3	2.5Y 6/4	100					SiCL	Run down off hillside
3-10	2.5Y 3/3	95	7.5YR 3/4	5	C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Area is more bare than previous point; snail shells are numerous in 3+ layer

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 3

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.642886 | Long: W105.684240 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMAh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 5 upstream
Photo 6 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	60	X	FACW
2. *Agropyron cristatum*	15		UPL
3. *Poa pratensis*	15		FACU
4. *Elymus smithii*	5		FACU
5. *Rumex Spp.*	1		--
6.			
7.			
8.			
9.			
10.			
Total Cover:	96		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species	60	x2=	120
FAC species		x3=	
FACU species	20	x4=	80
UPL species	15	x5=	75
Column Totals:	95 (A)		275 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 3.2	95	7.5YR 3/4	5	C	PL	CL	
6-12	2.5Y 2.5/1	30	7.5YR 5/8	70	C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 4

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) Drainage/ reservoir | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.644776 | Long: W105.678464 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PUB

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No ____
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 10 upstream
Photo 11 downstream
No water source anymore; soil is dry; no mottles in soils

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	40	X	FACW
2. *Eleocharis palustris*	5		OBL
3. *Polygonum aviculare*	2		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	47		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 30%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x1=	5
FACW species	40	x2=	80
FAC species		x3=	
FACU species	2	x4=	8
UPL species		x5=	
Column Totals:	47 (A)		93 (B)

Prevalence Index = B/A = 1.98

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2	100					CL	
6-14	2.5Y 3/3	100					CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___
Depth (inches): ___

Hydric Soils Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

No water present- appears to have ponded in the past

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 5

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) Reservoir | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRP): Western Great Plains | Lat: N43.645853 | Long: W105.677212 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMAh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 12 north
Photo 13 south
Photo 14 east

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *No veg*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 100%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:	
OBL species	x1=	
FACW species	x2=	
FAC species	x3=	
FACU species	x4=	
UPL species	x5=	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
No vegetation present because water ponds

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SOIL Sampling Point 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	5Y 5/2	100					SiCL	
5-10	5Y 5/2	70	10YR 3/3	5	C	PL	SiCL	
			Gley 1 3/10Y	25	D	M	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	X Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	X Sparsely Vegetated Concave Surfaces (B8)
X Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No	___	Depth (inches):	4”
Water Table Present?	Yes	___	No	X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (inches):	5”

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Surface water 12’ from point at base of outfall path

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 6

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 1 T42N, R74W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.648074 | Long: W105.697061 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 15 upstream
Photo 16 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Cirsium arvense*	2		FACU
2. *Hordeum jubatum*	85	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	87		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 13%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	85	x2=	170	
FAC species	-	x3=	-	
FACU species	2	x4=	8	
UPL species	-	x5=	-	
Column Totals:	87	(A)	178	(B)
Prevalence Index = B/A =			2.05	

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5Y 4/2	100					SiCL	
4-16	5Y 3/1	55	7.5YR 4/6	45	C	M/PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___
Depth (inches): ___

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Downstream from pocket; windmill on water not flowing into stream channel, yet 2" of surface water

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 7

Investigator(s): K. Wilson/ T. Spelts | Section, Township, Range: Sec 36 T43N, R74W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 0-2

Subregion (LRP): Western Great Plains | Lat: N43.648932 | Long: W105.697448 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 17 upstream
Photo 18 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	45	X	FACW
2. *Elymus smithii*	40	X	FACU
3. *Poa pratensis*	15		FACU
4. *Cirsium arvense*	8		FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	108		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	45	x2=	90	
FAC species	-	x3=	-	
FACU species	63	x4=	252	
UPL species	-	x5=	-	
Column Totals:	108	(A)	342	(B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1							OM/peat moss	
1-14	2.5Y 3/3	40	7.5YR 5/8	60	C	M/PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (**LRR I, J**)
Histic Epipedon (A2)	Sandy Redox (S5)	Coast Prairie Redox (A16) (**LRR F, G, H**)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) (**LRR G**)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	High Plains Depressions (F16)
Stratified Layers (A5) (**LRR F**)	Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
1 cm Muck (A9) (**LRR F, G, H**)	Depleted Matrix (F3)	Reduced Vertic (F18)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Red Parent Material (TF2)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	Other (Explain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)	Salt Crusts (B11)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surfaces (B8)
Saturation (A3)	Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
Water Marks (B1)	Dry-Season Water Table (C2)	Oxidized Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
Drift Deposits (B3)	(**where not tilled**)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	X Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remark)	FAC-Neutral Test (D5)
Water Stained Leaves (B9)		Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes No X Depth (inches):
Water Table Present? Yes No X Depth (inches):
Saturation Present? Yes No X Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

No OHWM, no bare areas/flow, 2nd drainage feeds into stream 50' upstream

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 8

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 36 T43N, R74W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRP): Western Great Plains | Lat: N43.649179 | Long: W105.693927 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 19 upstream
Photo 20 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	1		FACW
2. *Xanthium strumarium*	70	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	71		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 20%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	1	x2=	2	
FAC species	70	x3=	210	
FACU species	-	x4=	-	
UPL species	-	x5=	-	
Column Totals:	71	(A)	212	(B)
Prevalence Index = B/A =			2.99	

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5Y 4/2	100					CL	
4-12	2.5Y 3/2	40	7.5YR 3/4	55	C	M/PL	CL	
			2.5YR 3/6	5	C	PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F)**	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	

Indicators for Problematic Hydric Soils[3]:

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

Snail shell in 4-12" profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Ponded area- old

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 9

Investigator(s): K. Wilson/ T. Spelts | Section, Township, Range: Sec 36 T43N, R74W

Landform (hillslope, terrace, etc.) Terrace-lowland | Local relief (concave, convex, none): none | Slope (%): 0-1

Subregion (LRP): Western Great Plains | Lat: N43.649744 | Long: W105.692553 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes ____ No X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 21 north
Photo 22 upstream
Photo 23 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	95	X	FACW
2. *Poa pratensis*	3		FACU
3. *Thlaspi arvense*	1		NI
4. *Cirsium arvense*	1		FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x1=	-
FACW species	95	x2=	190
FAC species	-	x3=	-
FACU species	4	x4=	16
UPL species	-	x5=	-
Column Totals:	99 (A)		206 (B)

Prevalence Index = B/A = 2.08

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100					Org/peat	
1-5	2.5Y 4/2	100					CL	
5-12	2.5Y 4/2	35	7.5YR 4/6	65	C	M/PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Flood plain lowland area outfall 50' to east

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-3-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 10

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 36 T43N, R74W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRP): Western Great Plains | Lat: N43.649722 | Long: W105.685732 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 28 upstream
Photo 29 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Elymus smithii*	2		FACU
2. *Hordeum jubatum*	10	X	FACW
3. *Distichlis stricta*	5	X	NI
4. Unknown forb	7	X	--
5. *Poa pratensis*	1		FACU
6.			
7.			
8.			
9.			
10.			
Total Cover:	25		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 75%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	10	x2=	20	
FAC species	0	x3=	0	
FACU species	3	x4=	12	
UPL species	0	x5=	0	
Column Totals:	13	(A)	32	(B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:
Litter on ground- grazing

SOIL Sampling Point 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 4/3	100					CL	
5-12	2.5Y 4/4	75	7.5YR 4/6	25	C	M/PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

This WPT has a slight depression where water pools

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 11

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.649802 | Long: W105.684753 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 32 upstream
Photo 33 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Poa pratensis*	10		FACU
2. *Hordeum jubatum*	75	X	FACW
3. *Elymus smithii*	10		FACU
4. *Elymus spicatus*	5		FACU-
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x1=	-
FACW species	75	x2=	150
FAC species	-	x3=	-
FACU species	25	x4=	100
UPL species	-	x5=	-
Column Totals:	100 (A)		250 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2							Org material	
2-12	10YR 3/2	100					CL	
12+	10YR 3/2	100					CL	Rock fragments majority comp.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soils Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

On east side of Clarkelen Road

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 12

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3

Subregion (LRP): Western Great Plains | Lat: N43.649658 | Long: W105.684217 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 34 upstream
Photo 35 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Elymus smithii*	60	X	FACU
2. *Nassella viridula*	15		UPL
3. *Poa secunda*	25		UPL
4. *Koeleria macrantha*	2		UPL
5. *Achillea millefolium*	2		FACU
6. *Bromus japonicus*	1		UPL
7.			
8.			
9.			
10.			
Total Cover:	105		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	-	x2=	-	
FAC species	-	x3=	-	
FACU species	62	x4=	248	
UPL species	43	x5=	215	
Column Totals:	105	(A)	463	(B)

Prevalence Index = B/A = 4.41

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/2	100					CL	
4-10	2.5Y 4/2	98	7.5YR 5/8	2	C	L	CL	
10-12	2.5Y 4/2	90		10			CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (**LRR I, J**)
Histic Epipedon (A2)	Sandy Redox (S5)	Coast Prairie Redox (A16) (**LRR F, G, H**)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) (**LRR G**)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	High Plains Depressions (F16)
Stratified Layers (A5) (**LRR F**)	Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
1 cm Muck (A9) (**LRR F, G, H**)	X Depleted Matrix (F3)	Reduced Vertic (F18)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Red Parent Material (TF2)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Other (Explain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)	Salt Crusts (B11)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surfaces (B8)
Saturation (A3)	Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
Water Marks (B1)	Dry-Season Water Table (C2)	Oxidized Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
Drift Deposits (B3)	(**where not tilled**)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	X Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remark)	FAC-Neutral Test (D5)
Water Stained Leaves (B9)		Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes No X Depth (inches):
Water Table Present? Yes No X Depth (inches):
Saturation Present? Yes No X Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

No OHWM/flow/H20 present is culvert

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 13

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%):

Subregion (LRP): Western Great Plains | Lat: N43.649964 | Long: W105.682941 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 36 upstream
Photo 37 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	80	X	FACW
2. *Elymus smithii*	5		FACU
3. *Poa pratensis*	2		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	87		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x1=	-
FACW species	80	x2=	160
FAC species	-	x3=	-
FACU species	7	x4=	28
UPL species	-	x5=	-
Column Totals:	87 (A)		188 (B)
Prevalence Index = B/A =			2.16

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:
Deeper pocket- surrounded by steep slopes on all sides

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SOIL Sampling Point 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 4/2	100					CL	8-10" shale fragments
								10-15" component

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR F)**
- ____ 1 cm Muck (A9) (**LRR F, G, H**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ____ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ____ 1 cm Muck (A9) (**LRR I, J**)
- ____ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ____ Dark Surface (S7) (**LRR G**)
- ____ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ____ Reduced Vertic (F18)
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water Stained Leaves (B9)
- ____ Salt Crusts (B11)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Oder (C1)
- ____ Dry-Season Water Table (C2)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ____ Presence of Reduced Iron (C4)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ____ FAC-Neutral Test (D5)
- ____ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

No OHWM, flow

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 14

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage pool | Local relief (concave, convex, none): concave | Slope (%): 1-3

Subregion (LRP): Western Great Plains | Lat: N43.652958 | Long: 105.679315 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
No photos

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	55	X	FACW
2. *Eleocharis palustris*	8		OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	63		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 40%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	8	x1=	8
FACW species	55	x2=	110
FAC species	-	x3=	-
FACU species	-	x4=	-
UPL species	-	x5=	-
Column Totals:	63 (A)		118 (B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2	100					CL	
6-8	2.5Y 4/2	97	7.5Y 5/8	3	C	PL	CL	
8-10	2.5Y 4/2	70		30			CL	Shale fragments- makes soil appear darker

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

Very hard, crumbly soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Deep surface cracks in lowest portion of area.

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 15

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage pool | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRP): Western Great Plains | Lat: N43.652956 | Long: W105.679312 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 38 upstream
Photo 39 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	20	X	FACW
2. *Elymus smithii*	2		FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	22		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 75%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	20	x2=	40	
FAC species	-	x3=	-	
FACU species	2	x4=	8	
UPL species	-	x5=	-	
Column Totals:	22	(A)	48	(B)
Prevalence Index = B/A =			2.18	

Hydrophytic Vegetation Indicators

- 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 4/2	100					CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

Soil is slightly damp- 6+" (not saturated)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

There a road/culvert downstream approximately 15'. Elevation prevents flow through culvert

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 16

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage pool | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRP): Western Great Plains | Lat: N43.659519 | Long: W105.674754 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 45 upstream
Photo 46 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Eleocharis palustris*	75	X	OBL
2. *Poa pratensis*	5		FACU
3. *Elymus smithii*	5		FACU
4. *Hordeum jubatum*	10		FACW
5. *Elymus spicatus*	1		FACU-
6.			
7.			
8.			
9.			
10.			
Total Cover:	96		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x1=	75
FACW species	10	x2=	20
FAC species		x3=	
FACU species	11	x4=	44
UPL species		x5=	
Column Totals:	96 (A)		139 (B)
Prevalence Index = B/A =			1.45

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 3/3	75	7.5YR 5/8	25	C	PL	CL	Numerous roots
4-8	2.5Y 3/3	95	7.5YR 5/8	5	C	PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)		1 cm Muck (A9) (**LRR I, J**)
	Histic Epipedon (A2)		Sandy Redox (S5)		Coast Prairie Redox (A16) (**LRR F, G, H**)
	Black Histic (A3)		Stripped Matrix (S6)		Dark Surface (S7) (**LRR G**)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)		High Plains Depressions (F16)
	Stratified Layers (A5) (**LRR F**)		Loamy Gleyed Matrix (F2)		(**LRR H outside MLRA 72 & 73**)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)		Reduced Vertic (F18)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)		Red Parent Material (TF2)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)		Other (Explain in Remarks)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)		[3]Indicators of hydrophytic vegetation
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)		and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:
In small bare area, no mottles- only where vegetation is present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 17

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage pool/berm | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.659119 | Long: W105.672048 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PUB

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 47 upstream
Photo 48 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	80	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	85		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	80	x2=	160	
FAC species	-	x3=	-	
FACU species	-	x4=	-	
UPL species	-	x5=	-	
Column Totals:	80	(A)	160	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:
Litter from HORJUB seeds 5%
No OHWM- gradual bank from ponding- no outlet pipe on bermed reservoir

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SOIL Sampling Point 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/3	80	7.5YR 4/6	20	C	PL	Fine sandy/CL	
2-12	10YR 3/3	98	7.5YR 4/6	2	C	PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soils Present? Yes X No ___

Remarks:

Dug soil hole in bare area as well @lowest point in drainage pool- not too many redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	X Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Took sample @ edge of vegetation

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 18

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage reservoir | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRP): Western Great Plains | Lat: N43.661047 | Long: W105.672071 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 49: General view of reservior

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	30	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	30		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 70%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	30	x2=	60	
FAC species	-	x3=	-	
FACU species	-	x4=	-	
UPL species	-	x5=	-	
Column Totals:	30	(A)	60	(B)
Prevalence Index = B/A =			2	

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5Y 4/3	20	5YR 3/4	70	C	M	Sandy L	Fe deposits
4-8	5Y 4/3	20	7.5Y 5/8	10	C	PL	Sandy L	Real redox features
8-12	5Y 4/3	20	5YR 3/4	80	C	PL	Sandy L	
			Gley 1 2.5/10GY	70	D	M	CL	Fe
								7.5Y 5/8 10% in Gley matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

Fe deposits- problematic from past CBM discharge pt/water? Cracks in soil are deep 1-2' wide Soil is moist- not saturated at 12"-14"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-4-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 19

Investigator(s): K. Wilson/T. Spelts | Section, Township, Range: Sec 30 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage pocket | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.668289 | Long: W105.671272 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 52: Upstream
Photo 53: Downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Equisetum laevigatum*	20	X	FAC
2. Unknown Poaceae	15		
3. *Poa pratensis*	30	X	FACU
4. *Bromus japonicus*	1		UPL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	66		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species		x2=	
FAC species	20	x3=	60
FACU species	30	x4=	120
UPL species	1	x5=	5
Column Totals:	51 (A)		185 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
EQULAE has majority litter cover-appears to be 2 seasons old

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SOIL Sampling Point 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100					Decomposing OM	
2-4	2.5Y 3/3	100					SCL	
4-14	2.5Y 3/2	30	7.5YR 3/4	70	C	PL/M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___
Depth inches): ___

Hydric Soils Present? Yes ___ No X

Remarks:

Snail shell in 4" layer

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 20

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) terrace | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.677637 | Long: W105.636045 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PUBFx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 56- Windmill source of water

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	10	X	FACW
2. *Elymus lanceolatus*	3		FAC
3. *Distichlis stricta*	5		NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	18		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 90%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x1=	-
FACW species	10	x2=	20
FAC species	3	x3=	9
FACU species	-	x4=	-
UPL species	-	x5=	-
Column Totals:	13 (A)		29 (B)

Prevalence Index = B/A = 2.23

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:
Minimal vegetation

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SOIL Sampling Point 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___
Depth (inches): ___

Hydric Soils Present? Yes X No ___

Remarks:
No hole dug; soils assumed hydric due to presence of hydrophytic vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- X Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No	___	Depth (inches): 8”
Water Table Present?	Yes	___	No	___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes	___	No	___	Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Water going into pond from windmill day of visit.

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 21

Investigator(s): K. Wilson/ D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 8-10

Subregion (LRP): Western Great Plains | Lat: N43.676718 | Long: W105.635698 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland**	Yes X No
Hydric Soil Present?	Yes	X	No			
Wetland Hydrology Present	Yes	X	No			

Remarks:
Photo 57 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Juncus balticus*	7		OBL
2. *Eleocharis palustris*	10		OBL
3. *Hordeum jubatum*	30	X	FACW
4. *Schoenoplectus pungens*	7		OBL
5. *Poa pratensis*	20	X	FACU
6. *Elymus lanceolatus*	15		FAC
7. *Cirsium arvense*	1		FACU
8. *Distichlis stricta*	5		NI
9.			
10.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	24	x1=	24	
FACW species	30	x2=	60	
FAC species	15	x3=	45	
FACU species	21	x4=	84	
UPL species	-	x5=	-	
Column Totals:	90	(A)	213	(B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
X 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1							SCL	Organic layer
1-6	5Y 4/3	95	7.5YR 4/6	5	C	PL	SCL	
6-10	5Y 4/3	80	7.5YR 4/6	20	C	PL&M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Wetland sits in depression at end of drainage. Soil cracks

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 22

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.677806 | Long: W105.635420 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 58 upstream
Photo 59 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Cirsium arvense*	15		FACU
2. *Elymus trachycaulus*	30	X	FACU
3. *Poa pratensis*	40	X	FACU
4. *Carex nebrascensis*	25		OBL
5. *Hordeum jubatum*	27		FACW
6.			
7.			
8.			
9.			
10.			
Total Cover:	137		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 1%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	25	x1=	25	
FACW species	27	x2=	54	
FAC species	-	x3=	-	
FACU species	85	x4=	340	
UPL species	-	x5=	-	
Column Totals:	137	(A)	419	(B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
In channel

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SOIL Sampling Point 22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	90	7.5YR 4/6	10	C	PL/M	SL	High OM (fine sand)
5-12	10YR 3/2	80	7.5YR 3/4	20	C	PL/M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	X Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:
5-12 white deposits- either CaCO2 or Na 2+

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
In drainage- OHWM only indicated by change in vegetation- short upland, tall- lowland

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 23

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 5-7

Subregion (LRP): Western Great Plains | Lat: N43.677848 | Long: W105.635162 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 60 upstream
Photo 61 downstream
Photo 62

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	60	X	FACW
2. Spartina pectinata	5		FACW
3. *Poa pratensis*	20	X	FACU
4. *Elymus trachycaulus*	5		FACU
5. *Eleocharis palustris*	1		OBL
6. *Plantago major*	1		FAC
7. *Muhlenbergia asperifolia*	2		FACW
8. *Carex nebrascensis*	5		OBL
9.			
10.			
Total Cover:	99		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 1%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	6	x1=	6	
FACW species	67	x2=	134	
FAC species	1	x3=	3	
FACU species	25	x4=	100	
UPL species	0	x5=	0	
Column Totals:	99	(A)	243	(B)

Prevalence Index = B/A = 2.45

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
X 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:

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SOIL Sampling Point 23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 4/3	98	10YR 4/6	2	C	PL	SCL	fine
5-12	10YR 2/2	98	7.5YR 4/6	2	C	PL	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)	X	Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)
	High Water Table (A2)		Aquatic Invertebrates (B13)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)
	Water Marks (B1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
	Drift Deposits (B3)		
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)
	Water Stained Leaves (B9)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surfaces (B8)
X	Drainage Patterns (B10)
	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
X	Geomorphic Position (D2)
	FAC-Neutral Test (D5)
	Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes		No	X	Depth (inches):
Water Table Present?	Yes		No	X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes		No	X	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
In drainage OHWM indicated by change in vegetation

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 24

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) terrace | Local relief (concave, convex, none): none | Slope (%): 1-3

Subregion (LRP): Western Great Plains | Lat: N43.677272 | Long: W105.637036 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 63 (towards berm)- area has micro-topography with convex and concave surfaces
Photo 64 downstream-berm

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Poa pratensis*	55	X	FACU
2. *Spartina pectinata*	20	X	FACW
3. *Elymus trachycaulus*	25		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	100		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 3%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x1=	-
FACW species	20	x2=	40
FAC species	-	x3=	-
FACU species	80	x4=	320
UPL species	-	x5=	-
Column Totals:	100 (A)		360 (B)
Prevalence Index = B/A =			3.6

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point 24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2							SL	OM layer (fine S)
2-14	10YR 3/1	80	7.5YR 4/6	20	C	PL	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)	X	Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)
	High Water Table (A2)		Aquatic Invertebrates (B13)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)
	Water Marks (B1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Thin Muck Surface (C7)
	Iron Deposits (B5)		Other (Explain in Remark)
	Inundation Visible on Aerial Imagery (B7)		
	Water Stained Leaves (B9)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surfaces (B8)
X	Drainage Patterns (B10)
	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
X	Geomorphic Position (D2)
	FAC-Neutral Test (D5)
	Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches):
Saturation Present? Yes No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Below dam/berm

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 25

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) dam | Local relief (concave, convex, none): concave | Slope (%): 1-2

Subregion (LRP): Western Great Plains | Lat: N43.676960 | Long: W105.637760 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMAh/PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 65 upstream
Photo 66 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	20	X	FACW
2. *Eleocharis palustris*	30	X	OBL
3. *Elymus lanceolatus*	10		FAC
4. *Poa pratensis*	10		FACU
5. *Bromus japonicus*	1		FACU
6. *Descurainia pinnata*	1		--
7.			
8.			
9.			
10.			
Total Cover:	72		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	30	x1=	30	
FACW species	20	x2=	40	
FAC species	10	x3=	30	
FACU species	11	x4=	44	
UPL species	0	x5=	0	
Column Totals:	71	(A)	144	(B)

Prevalence Index = B/A = 2.03

Hydrophytic Vegetation Indicators

- 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/2	85	7.5YR 5/8	15	C	PL	CL	
4-11	2.5Y 3/2	95	7.5YR 5/8	5	C	PL	CL	
11-12								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

Multiple snail shells

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Upland grass encroaching

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 26

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.677152 | Long: W105.629881 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 67 upstream
Photo 68 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Bromus japonicus*	15		FACU
2. *Poa pratensis*	20	X	FACU
3. *Hordeum jubatum*	45	X	FACW
4. *Nassella viridula*	5		--
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	85		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	-	x1=	-	
FACW species	45	x2=	90	
FAC species	-	x3=	-	
FACU species	35	x4=	140	
UPL species		x5=		
Column Totals:	80	(A)	230	(B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:
Upland encroaching

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SOIL Sampling Point 26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1							SCL	OM layer
1-3	2.5Y 3/3	100					SCL	
3-12	2.5Y 3/3	75	7.5YR 5/8	25	C	PL/M	SCL	Fine sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

OHWM indicated by change in vegetation only upstream more upland vegetation present

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 27

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 28 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 5-7

Subregion (LRP): Western Great Plains | Lat: N43.677297 | Long: W105.629290 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 69 upstream
Photo 70 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	65	X	FACW
2. *Elymus smithii*	5		FACU
3. *Bromus japonicus*	5		FACU
4. *Poa pratensis*	10		FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	85		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 20%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	-	x1=	-
FACW species	65	x2=	130
FAC species	-	x3=	-
FACU species	20	x4=	80
UPL species	-	x5=	-
Column Totals:	85 (A)		210 (B)
Prevalence Index = B/A =			2.47

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:
Drainage dominated by HORJUB, similar in shape and size to map

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SOIL Sampling Point 27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 3/2	95	2.5Y 5/6	5	C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	

Indicators for Problematic Hydric Soils[3]:

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? Yes ___ No ___ Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 28

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 21 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 15-20

Subregion (LRP): Western Great Plains | Lat: N43.680551 | Long: W105.626862 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: OWUS-open water

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 71

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *No Veg*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1=	
FACW species		x2=	
FAC species		x3=	
FACU species		x4=	
UPL species		x5=	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
No vegetation within wetland boundary

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SOIL Sampling Point 28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

Soils very salty; crust ½" thick; no hole dug

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- X Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___
Water Table Present? Yes ___ No ___ Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

CBM outfall- water bed smells like iodine

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 29

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 21 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.684642 | Long: W105.631569 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC/PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Berm present to South of point
Photo 72(south) & Photo 73(north)

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Poa pratensis*	25		FACU
2. *Elymus trachycaulus*	10		FACU
3. *Carex nebrascensis*	55	X	OBL
4. *Juncus balticus*	20	X	OBL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	110		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 39%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x1=	75
FACW species	-	x2=	-
FAC species	-	x3=	-
FACU species	35	x4=	140
UPL species	-	x5=	-
Column Totals:	110 (A)		215 (B)

Prevalence Index = B/A = 1.95

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No ____

Remarks:
Dense vegetation

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SOIL Sampling Point 29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	40	7.5YR 3/4	60	C	PL/M	SCL	OM layer- fine sandy
4-14	2.5Y 3/3	85	10YR 5/8	15	C	PL	SCL	(fine sand)

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:

Redox concentrations in 0-4" layer- some areas more OM present
snail shell found

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	X Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Below OHWM indicated by bare soil- salt crusts, hydro vegetation

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 11-8-2010

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: 30

Investigator(s): K. Wilson/D. Gardner | Section, Township, Range: Sec 21 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.684129 | Long: W105.631178 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 74

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size 5 ft)			
1. *Hordeum jubatum*	55	X	FACW
2. *Poa pratensis*	5		FACU
3. *Eleocharis palustris*	5		OBL
4. *Eleocharis* sp.	5		--
5. *Polygonum aviculare*	2		FACU
6. *Bromus japonicus*	1		FACU
7. *Rumex sp.*	3		--
8.			
9.			
10.			
Total Cover:	76		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x1=	5
FACW species	55	x2=	110
FAC species	-	x3=	-
FACU species	8	x4=	32
UPL species	-	x5=	-
Column Totals:	68 (A)		147 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point 30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5Y 4/2	95	10YR 5/6	5	C	M	SCL	
8-10	5Y 4/2	80	10YR 5/6	20	C	M	SCL	
0-6	5Y 7/3						SCL	
6-8	10YR 5/8						SCL	
8-10	2.5Y 6/8						SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (**LRR I, J**)
Histic Epipedon (A2)	Sandy Redox (S5)	Coast Prairie Redox (A16) (**LRR F, G, H**)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) (**LRR G**)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
Stratified Layers (A5) (**LRR F**)	Loamy Gleyed Matrix (F2)	
1 cm Muck (A9) (**LRR F, G, H**)	Depleted Matrix (F3)	Reduced Vertic (F18)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Red Parent Material (TF2)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	Other (Explain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
5 cm Mucky Peat or Peat (S3) (**LRR F**)		

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:
Some portions of profile highly varied in color
Colors stratified- some more intermixed
Soil friable and dry
snail shell present
dug 2 holes

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)	Salt Crusts (B11)	X Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surfaces (B8)
Saturation (A3)	Hydrogen Sulfide Oder (C1)	X Drainage Patterns (B10)
Water Marks (B1)	Dry-Season Water Table (C2)	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)	
Drift Deposits (B3)		Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	X Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remark)	FAC-Neutral Test (D5)
Water Stained Leaves (B9)		Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes No X Depth (inches):
Water Table Present? Yes No X Depth (inches):
Saturation Present? (includes capillary fringe) Yes No X Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-11

Applicant/Owner: AUC , LLC | State: Wyoming | Sampling Point: W1

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 21 T42N, R74W

Landform (hillslope, terrace, etc.) Ponded Area | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.628447 | Long: 105.690325 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 1 upstream, Photo 2 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size: 5 ft)			
1. *Hordeum jubatum*	60	X	FACW
2. *Trifolium sp.*	2		--
3. *Bromus inermis*	10		--
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	72		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10%
Lit 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	60	x2=	120	
FAC species	0	x3=	0	
FACU species	0	x4=	0	
UPL species	0	x5=	0	
Column Totals:	60	(A)	12	(B)
Prevalence Index = B/A =			2.0	

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 4/2	100					FiSL	
8-16	7.5YR 4/6	80	Gley 1 5/10Y	20	D	PL/M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**	X	Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks: Very predominant matrix color for the matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)		Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Iron Deposits (B5)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Inundation Visible on Aerial Imagery (B7)				Frost-Heave Hummocks (D7) (**LRR F**)
	Water Stained Leaves (B9)				

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):
Water Table Present?	Yes		No	X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes		No	X	Depth (inches):

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Original high water mark observed 15 ft from point, sample point 4 ft from water with frog present.

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W2

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 12 T42N, R74W

Landform (hillslope, terrace, etc.) Channel | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.629018 | Long: W105.690412 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 3 upstream , photo 4 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size 5 ft)			
1. *Poa pratensis*	70	X	FACU
2. *Eleocharis palustris*	10		OBL
3. *Carex simulata*	10		OBL
4. *Elymus smithii*	8		FACU
5. *Taraxacum officinale*	5		FACU
6. *Rumex Spp*	2		--
7.			
8.			
9.			
10.			
Total Cover:	105		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	20	x1=	20	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	83	x4=	332	
UPL species	0	x5=	0	
Column Totals:	103	(A)	352	(B)

Prevalence Index = B/A = 3.42

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/2	100					C	
3-10	10YR 4/2	30	7.5YR 3/4	70	C	PL/M	C	
3-10	7.5 YR 4/1	50	7.5YR 3/4	50	C	PL/M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:
Soil was moist

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
X	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	4”
Water Table Present?	Yes		No	X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):	12”

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W3

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 12 T42N, R74W

Landform (hillslope, terrace, etc.) depression | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.6347 | Long: 105.6878 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes ____ No X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 5 upstream, Photo 6 downstream, Photo 7 pond, Photo 8 upstream, Photo 9 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size: 5 ft)			
1. *Poa pratensis*	70	X	FACU
2. *Carex simulata*	10		OBL
3. *Taraxacum officinale*	10		FACU
4. *Eleocharis palustris*	10		OBL
5. *Rumex Spp.*	5		--
6. *Elymus smithii*	5		FACU
7.			
8.			
9.			
10.			
Total Cover:	110		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	10	x1=	10	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	85	x4=	340	
UPL species	0	x5=	0	
Column Totals:	95	(A)	350	(B)

Prevalence Index = B/A = 3.68

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
Waypoint 4 upland vegetation and no water. No Original high water mark, there are pockets of water and depressions.

SOIL Sampling Point W3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/3	100					CL	
2-10	2.5 Y 3/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

Redox features below 10 inches, very faint and <5%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W5

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 12 T42N, R74W

Landform (hillslope, terrace, etc.) channel | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.627521 | Long: W105.690453 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 12 upstream and photo 13 downstream. Area is above windmill and not wet.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size 5ft)			
1. *Poa pratensis*	40	X	FACU
2. *Achillea millefolium*	25		FACU
3. *Thlaspi arvense*	20		NI
4. *Elymus smithii*	15		FACU
5. *Taraxacum officinale*	10		FACU
6. *Bromus tectorum*	10		--
7. *Agropyron cristatum*	5		--
8.			
9.			
10.			
Total Cover:	125		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	90	x4=	360	
UPL species	0	x5=	0	
Column Totals:	90	(A)	360	(B)
Prevalence Index = B/A =			4.0	

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/2	100					OM	
3-12	2.5Y 4/4	100					C	
12-16	10YR 3/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR F)**
- ____ 1 cm Muck (A9) (**LRR F, G, H**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ____ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ____ 1 cm Muck (A9) (**LRR I, J**)
- ____ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ____ Dark Surface (S7) (**LRR G**)
- ____ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ____ Reduced Vertic (F18)
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ____ No X

Remarks:
12-16" a few distinct redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water Stained Leaves (B9)
- ____ Salt Crusts (B11)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Oder (C1)
- ____ Dry-Season Water Table (C2)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ____ Presence of Reduced Iron (C4)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surfaces (B8)
- ____ Drainage Patterns (B10)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ FAC-Neutral Test (D5)
- ____ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Point at edge of project area, up gradient from this point upland vegetation is observed.

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W6

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 12 T42N, R74W

Landform (hillslope, terrace, etc.) | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.6379 | Long: 105.6822 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 14 upstream towards culvert, photo 15 downstream.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size : 5 ft)			
1. *Bromus inermis*	50	X	--
2. *Vicia americana*	10		NI
3. *Trifolium sp.*	2		--
4. *Bassia sieveriana*	2		FAC
5. *Taraaxacum officinale*	5		FACU
6. *Poa pratensis*	5		FACU
7. *Elymus smithii*	5		FACU
8.			
9.			
10.			
Total Cover:	79		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10-15 With litter

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	2	x3=	6	
FACU species	15	x4=	60	
UPL species	0	x5=	0	
Column Totals:	17	(A)	66	(B)

Prevalence Index = B/A = 3.88

Hydrophytic Vegetation Indicators

- 1-Rapid Test for Hydrophytic Vegetation
- 2-Dominance Test is > 50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes No X

Remarks:
Area has been grazed and some *Cirsium vulgare* (bull thistle) was observed

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SOIL Sampling Point W6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 5/3	100					CL	
7-12	7.5YR 4/2	100					CL	
12-16	7.5YR 4/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soils Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W7

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 12 T42N, R74W

Landform (hillslope, terrace, etc.) Ponded area | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: 43.628531 | Long: W105.686828 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 20 Upstream, Photo 21 Downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum				
1.	*Poa pratensis*	25	X	FACU
2.	*Hordeum jubatum*	5		FACW
3.	*Nassella viridula*	5		--
4.	*Achillea millefolium*	15		FACU
5.	*Taraxacum officinale*	10		FACU
6.	*Thlaspi arvense*	10		NI
7.	*Elymus smithii*	15		FACU
8.	*Rorippa sinuata*	5		FACW
9.				
10.				
Total Cover:		90		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 20

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	10	x2=	20	
FAC species	0	x3=	0	
FACU species	65	x4=	260	
UPL species	0	x5=	0	
Column Totals:	75	(A)	280	(B)

Prevalence Index = B/A = 3.73

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5Y 4/3	100					C	
4-16	10YR 4/4	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 12”
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W8

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range:

Landform (hillslope, terrace, etc.) | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.629087 | Long: W105.6866916 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 25 upstream Photo 26 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: 5ft)				
1.	*Taraxacum officinale*	10		FACU
2.	*Elymus smithii*	20		FACU
3.	*Poa pratensis*	60	X	FACU
4.	*Carex simulata*	5		OBL
5.	*Rumex sp.*	5		--
6.				
7.				
8.				
9.				
10.				
Total Cover:		100		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	5	x1=	5	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	90	x4=	360	
UPL species	0	x5=	0	
Column Totals:	95	(A)	365	(B)

Prevalence Index = B/A = 3.84

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	100					C	
5-8	10YR 3/2	100					C	
8-16	10YR 4/1	70	7.5 YR 4/6	30	C	PL/M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	6"+
Water Table Present?	Yes	X	No		Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):	

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Area likely receives spring runoff, currently water is present but likely is gone by summer months, which is the reason the vegetation is so upland.

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: Waypoint 1

Investigator(s): K. Wilson/ J. Saykally | Section, Township, Range: Sec 12 T42N, R74W

Landform (hillslope, terrace, etc.) | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.630178 | Long: W105.686800 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 27 pond, 28 upstream and photo 29 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (plot size: 5ft)			
1. *Elymus smithii*	40	X	FACU
2. *Poa pratensis*	30		FACU
3. *Vicia americana*	5		NI
4. *Taraxacum officinale*	5		FACU
5. *Carex simulata*	2		OBL
6. *Achillea millefolium*	5		FACU
7.			
8.			
9.			
10.			
Total Cover:	87		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	2	x1=	2	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	80	x4=	320	
UPL species	0	x5=	0	
Column Totals:	82	(A)	322	(B)

Prevalence Index = B/A = 3.92

Hydrophytic Vegetation Indicators

- 1-Rapid Test for Hydrophytic Vegetation
- 2-Dominance Test is > 50%
- 3-Prevalence Index is ≤ 3.0[1]
- 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes No X

Remarks: *Eleocharis palustris* observed in the middle of the pond

SOIL Sampling Point Waypoint 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	50	10YR 5/6	50	C	PL/M	C	
7-16	10YR 4/2	50	7.5 YR 4/6	50	C	PL/M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)		1 cm Muck (A9) (**LRR I, J**)
	Histic Epipedon (A2)		Sandy Redox (S5)		Coast Prairie Redox (A16) (**LRR F, G, H**)
	Black Histic (A3)		Stripped Matrix (S6)		Dark Surface (S7) (**LRR G**)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)		High Plains Depressions (F16)
	Stratified Layers (A5) (**LRR F**)		Loamy Gleyed Matrix (F2)		(**LRR H outside MLRA 72 & 73**)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)		Reduced Vertic (F18)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)		Red Parent Material (TF2)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)		Other (Explain in Remarks)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)		[3]Indicators of hydrophytic vegetation
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)		and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)		Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	12"
Water Table Present?	Yes		No		Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes		No		Depth (inches):	

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

No water at the bottom of the hole dug for soil sample. Photo 30 is the pond, photo 31 is upstream and photo 32 is downstream. Eleocharis palustris is water surrounded by upland.

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W9

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 1 T42N, R74W

Landform (hillslope, terrace, etc.) Depression/ channel | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.638287 | Long: W105.685561 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 33 upstream and photo 34 downstream.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: 5ft)			
1. *Eleocharis palustris*	40	X	OBL
2. *Carex praegracilis*	35		FACW
3. *Juncus balticus*	25		OBL
4. *Poa pratensis*	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	105		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	65	x1=	65	
FACW species	35	x2=	70	
FAC species	0	x3=	0	
FACU species	5	x4=	20	
UPL species	0	x5=	0	
Column Totals:	105	(A)	155	(B)

Prevalence Index = B/A = 1.48

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	Gley 2 2.5/5BG	100					OM	
2-10	10YR 4/2	65	7.5YR 4/6	35	C	M/PL	C	
10-16	10YR 4/2	75	7.5YR 4/6	25	C	M/PL	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)		1 cm Muck (A9) (**LRR I, J**)
	Histic Epipedon (A2)		Sandy Redox (S5)		Coast Prairie Redox (A16) (**LRR F, G, H**)
	Black Histic (A3)		Stripped Matrix (S6)		Dark Surface (S7) (**LRR G**)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)		High Plains Depressions (F16)
	Stratified Layers (A5) (**LRR F)**	X	Loamy Gleyed Matrix (F2)		(**LRR H outside MLRA 72 & 73**)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)		Reduced Vertic (F18)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)		Red Parent Material (TF2)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)		Other (Explain in Remarks)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)		[3]Indicators of hydrophytic vegetation
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)		and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
X	Saturation (A3)		Hydrogen Sulfide Oder (C1)		Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 12”

Water Table Present? Yes X No _____ Depth (inches): 15”

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 6”

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W10

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 1 T42N, R74W

Landform (hillslope, terrace, etc.) Pond/ Channel | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.638040 | Long: W105.686986 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 35 upstream and photo 36 downstream.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size : 5ft)			
1. *Carex nebrascensis*	50	X	OBL
2. *Juncus balticus*	30		OBL
3. *Ranunculus aquatilis*	2		OBL
4. *Eleocharis palustris*	15		OBL
5. *Carex praegracilis*	10		FACW
6. *Sagittaria cuneata*	2		OBL
7.			
8.			
9.			
10.			
Total Cover:	109		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	99	x1=	99	
FACW species	10	x2=	20	
FAC species	0	x3=	0	
FACU species	0	x4=	0	
UPL species	0	x5=	0	
Column Totals:	109	(A)	119	(B)

Prevalence Index = B/A = 1.09

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	Gley 1 4/5GY	100					C	
9-16	2.5Y4/2	55	7.5YR 3/4	45	C	PL/M	CL	
								Rock fragments majority comp.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**	X	Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:
Soil was moist

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Inundation Visible on Aerial Imagery (B7)				Frost-Heave Hummocks (D7) (**LRR F**)
	Water Stained Leaves (B9)				

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	12" +
Water Table Present?	Yes	X	No		Depth (inches):	16
Saturation Present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Water flowing in channel into the pond, water channel 6 ft wide.
CBM outflow wasn't flowing at time of observations.

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W11

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 1 T42N, R74W

Landform (hillslope, terrace, etc.) Floodplain area | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.636217 | Long: W105.687377 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 37 upstream and photo 38 downstream. Photo 39 upstream and photo 40 downstream.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: 5ft)			
1. *Elymus smithii*	10		FACU
2. *Poa pratensis*	35		FACU
3. *Cirsium canescens*	5		--
4. *Carex praegracilis*	5		FACW
5. *Hordeum jubatum*	75	X	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover:	130		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	80	x2=	160	
FAC species	0	x3=	0	
FACU species	45	x4=	180	
UPL species	0	x5=	0	
Column Totals:	125	(A)	340	(B)

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks: Photo 41 upstream, and Photo 42 downstream.

SOIL Sampling Point W11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	10	7.5YR 4/6	90	C	PL	C	
4-16	10YR 4/2	30	7.5 YR 4/6	70	C	PL	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:
Soil is moist at the bottom not quite saturated.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)
	High Water Table (A2)		Aquatic Invertebrates (B13)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)
	Water Marks (B1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
	Drift Deposits (B3)		
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)
	Water Stained Leaves (B9)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surfaces (B8)
X	Drainage Patterns (B10)
	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
X	Geomorphic Position (D2)
	FAC-Neutral Test (D5)
	Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	_____	No	X	Depth (inches): _____
Water Table Present?	Yes	_____	No	X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes	_____	No	X	Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W12

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%):

Subregion (LRP): Western Great Plains | Lat: N43.649964 | Long: W105.682941 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 43 upstream toward CBM well, photo 44 upstream facing southwest and photo 45 downstream toward pond.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: 5ft)			
1. *Eleocharis palustris*	25		OBL
2. *Elymus smithii*	5		FACU
3. *Poa pratensis*	20		FACU
4. *Poa secunda*	10		--
5. *Juncus balticus*	15		OBL
6. *Carex praegracilis*	30	X	FACW
7.			
8.			
9.			
10.			
Total Cover:	105		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	40	x1=	40	
FACW species	30	x2=	60	
FAC species	0	x3=	0	
FACU species	25	x4=	100	
UPL species	0	x5=	0	
Column Totals:	95	(A)	200	(B)

Prevalence Index = B/A = 2.11

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/2	20	7.5 YR 4/6	80	C	PL	CL	
7-16	10YR 4/2	10	5YR 4/6	90	C	PL	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)		1 cm Muck (A9) (**LRR I, J**)
	Histic Epipedon (A2)		Sandy Redox (S5)		Coast Prairie Redox (A16) (**LRR F, G, H**)
	Black Histic (A3)		Stripped Matrix (S6)		Dark Surface (S7) (**LRR G**)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)		High Plains Depressions (F16)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)		(**LRR H outside MLRA 72 & 73**)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)		Reduced Vertic (F18)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)		Red Parent Material (TF2)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)		Other (Explain in Remarks)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)		[3]Indicators of hydrophytic vegetation
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)		and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	6'+
Water Table Present?	Yes	X	No		Depth (inches):	11"
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):	10"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W13

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 6 T42N, R73W

Landform (hillslope, terrace, etc.) | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.637975 | Long: W105682790 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 46: Upstream
Photo 47: Downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum (Plot size: 5ft)			
1. *Poa pratensis*	65	X	FACU
2. *Elymus smithii*	30		FACU
3. *Taraxacum officinale*	5		FACU
4. *Melilotus officinalis*	5		FACU-
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	105		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	105	x4=	420	
UPL species	0	x5=	0	
Column Totals:	105	(A)	420	(B)
Prevalence Index = B/A =			4.0	

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					C	
2-12	10YR 4/2	65	7.5 YR 3/4	35	C	PL	C	
12-16	5Y 4/2	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)		1 cm Muck (A9) (**LRR I, J**)
	Histic Epipedon (A2)		Sandy Redox (S5)		Coast Prairie Redox (A16) (**LRR F, G, H**)
	Black Histic (A3)		Stripped Matrix (S6)		Dark Surface (S7) (**LRR G**)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)		High Plains Depressions (F16)
	Stratified Layers (A5) (**LRR F**)		Loamy Gleyed Matrix (F2)		(**LRR H outside MLRA 72 & 73**)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)		Reduced Vertic (F18)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)		Red Parent Material (TF2)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)		Other (Explain in Remarks)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)		[3]Indicators of hydrophytic vegetation
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)		and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:
Redox features very prominent toward 12".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	
Water Table Present?	Yes	X	No		Depth (inches):	12"
Saturation Present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC | State: Wyoming | Sampling Point: W14

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 32 T43N, R73W

Landform (hillslope, terrace, etc.) Pond | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.649844 | Long: W105.664501 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PABFh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Some *Eleocharis palustris* in the water.
Photo 50 pond and photo 51 downstream.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum				
1.	*Rumex sp.*	2		--
2.	*Elymus smithii*	75	X	FACU
3.	*Veronica peregrina*	10		FACW
4.				
5.				
6.				
7.				
8.				
9.				
10.				
Total Cover:	87			

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	10	x2=	20	
FAC species	0	x3=	0	
FACU species	75	x4=	300	
UPL species	0	x5=	0	
Column Totals:	85	(A)	320	(B)
Prevalence Index = B/A =			3.76	

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/4	100					CL	
3-12	7.5YR 3/1	90	7.5YR 4/6	10	C	PL	CL	
12-16	7.5YR 4/2	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:
Depth (inches):

Hydric Soils Present? Yes X No

Remarks:

Soil is moist at the bottom of hole, but not saturated.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Invertebrates (B13)	X	Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Algal Mat or Crust (B4)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Iron Deposits (B5)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Inundation Visible on Aerial Imagery (B7)				Frost-Heave Hummocks (D7) (**LRR F**)
	Water Stained Leaves (B9)				

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	12"+
Water Table Present?	Yes		No	X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 06-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W15

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 31 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.651505 | Long: W105.666147 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks: Photo 55 upstream, and photo 56 upstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Agropyron cristatum*	15		--
2. *Thlaspi arvense*	10		NI
3. *Poa pratensis*	5		FACU
4. *Elymus smithii*	45	X	FACU
5. *Taraxacum officinale*	5		FACU
6. *Carex praegracilis*	5		FACW
7.			
8.			
9.			
10.			
Total Cover:	110		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	5	x2=	10	
FAC species	0	x3=	0	
FACU species	55	x4=	220	
UPL species	0	x5=	0	
Column Totals:	60	(A)	230	(B)

Prevalence Index = B/A = 3.83

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					C	
3-16	10YR 3/2	75	7.5YR 4/6	25	C	PL	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:
Some depletions at 14 in the matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)	X	Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surfaces (B8)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)	X	Drainage Patterns (B10)
	Water Marks (B1)		Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		(**where tilled**)
	Drift Deposits (B3)		(**where not tilled**)		Crayfish Burrows (C8)
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	Iron Deposits (B5)		Thin Muck Surface (C7)	X	Geomorphic Position (D2)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)		FAC-Neutral Test (D5)
	Water Stained Leaves (B9)				Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W16

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 35 T43N, R74W

Landform (hillslope, terrace, etc.) Pond | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains (LLRG) | Lat: N43.659119 | Long: W105.672048 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMAh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks: Photo 62 upstream and Photo 63 downstream. Also photos 64 and 65 downstream south side of berm

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Eleocharis palustris*	10		OBL
2. *Hordeum jubatum*	25	X	FACW
3. *Thlaspi arvense*	10		NI
4. *Artemisia biennis*	10		FAC
5. *Cirsium arvense*	2		FACU
6.			
7.			
8.			
9.			
10.			
Total Cover:	57		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 40%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	10	x1=	10	
FACW species	25	x2=	50	
FAC species	10	x3=	30	
FACU species	2	x4=	8	
UPL species	0	x5=	0	
Column Totals:	47	(A)	98	(B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	5YR 3/1	95	7.5YR 3/4	5	C	PL	C	
7-9	10YR 4/1		7.5YR 3/4	20			C	With coarse fragmentss, and decomposing material
9-12	10YR 4/2	98	7.5 YR 4/6	2			SC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)
X	High Water Table (A2)		Aquatic Invertebrates (B13)
X	Saturation (A3)		Hydrogen Sulfide Oder (C1)
	Water Marks (B1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
	Drift Deposits (B3)		
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)
	Water Stained Leaves (B9)		

Secondary Indicators (minimum of two required)

X	Surface Soil Cracks (B6)
X	Sparsely Vegetated Concave Surfaces (B8)
X	Drainage Patterns (B10)
	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
X	Geomorphic Position (D2)
	FAC-Neutral Test (D5)
	Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes X No _____ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W17

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 34 T43N, R74W

Landform (hillslope, terrace, etc.) Swale | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.661047 | Long: W105.672071 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 66 upstream and photo 67 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			

Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			

Herb Stratum				
1.	*Poa pratensis*	30	X	FACU
2.	*Cirsium arvense*	10		FACU
3.	*Taraxacum officinale*	15		FACU
4.	*Melilotus officinalis*	10		FACU-
5.	*Thlaspi arvense*	5		NI
6.	*Elymus smithii*	20		FACU
7.	*Achillea millefolium*	10		FACU
8.	*Equisetum laevigatum*	2		FAC
9.	*Collomia linearis*	5		FACU
10.	*Bromus tectorum*	5		--
Total Cover:		112		

Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	2	x3=	6	
FACU species	100	x4=	400	
UPL species	0	x5=	0	
Column Totals:	102	(A)	406	(B)

Prevalence Index = B/A = 3.98

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5Y 2.5/2	100					SiCl	OM present
3-7	10YR 3/2	85	7.YR 3/4	15	C	PL	C	
7-16	5Y 4/2	90	10YR 4/6	10	C	PL	C	Coarse fragmentss similar to W17 at approximately 12"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soils Present? Yes X No ___

Remarks:

Fe deposits- problematic from past CBM discharge pt/water Cracks in soil are deep 1-2' wide Soil is moist- not saturated at 12"-14"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W18

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 34 T43N, R74W

Landform (hillslope, terrace, etc.) Drainage pocket | Local relief (concave, convex, none): concave | Slope (%): 2-5

Subregion (LRP): Western Great Plains | Lat: N43.668289 | Long: W105.671272 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 68 upstream, Photo 69 downstream, and Photo 70 downstream at fence line at project boundary, no water upstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Poa secunda*	10		--
2. *Poa pratensis*	40	X	FACU
3. *Taraxacum officinale*	15		FACU
4. *Elymus smithii*	25		FACU
5. *Cirsium arvense*	10		FACU
6.			
7.			
8.	40		
9.			
10.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=		
FACU species	90	x4=	360	
UPL species	0	x5=	0	
Column Totals:	90	(A)	360	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
Some *Equisetum laevigatum* on hillside

US Army Corps of Engineers — Great Plains – Version 2.0

SOIL Sampling Point W18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5 YR 3/3	100					L	OM
3-7	10YR 4/2	95	7.5YR 4/6	5	R	PL	SiCL	
7-13	10YR 4/2	80	7.5YR 4/6	20	R	PL	SiCL	Some coarse fragments
13-16	7.5 YR 4/2	80	7.5YR 4/6	20	R	PL	FiSCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	

Indicators for Problematic Hydric Soils[3]:

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks: 13-16" some depletion at very bottom soil moist at bottom of horizon as well.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
X Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 27"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W19

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 36 T43N, R74W

Landform (hillslope, terrace, etc.) Drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.677637 | Long: W105.636045 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes ____ No X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 71: Upstream
Photo 72: Downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Arnica fulgens*	2		--
2. *Vicia americana*	5		NI
3. *Taraxacum officinale*	15		FACU
4. *Achillea millefolium*	5		FACU
5. *Plantago* sp.	10		--
6. *Poa pratensis*	40	X	FACU
7. *Elymus smithii*	25		FACU
8.			
9.			
10.			
Total Cover:	102		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	85	x4=	340	
UPL species	0	x5=	0	
Column Totals:	85	(A)	340	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
No redox features

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SOIL Sampling Point W19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100						
3-12	7.5YR 4/1	100						
12-16	10YR 4/3	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:
No redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Surface water 5 feet from point

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W20

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 30 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage | Local relief (concave, convex, none): concave | Slope (%): 8-10

Subregion (LRP): Western Great Plains | Lat: N43.676718 | Long: W105.635698 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes ____ No X
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 73: Upstream
Photo 74: Downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Vicia americana*	5		NI
2. *Nassella viridula*	25		--
3. *Poa pratensis*	30	X	FACU
4. *Elymus smithii*	40		FACU
5. *Bromus tectorum*	10	X	--
6. *Taraxacum officinale*	10		FACU
7. *Alyssum desertorum*	2		--
8.			
9.			
10.			
Total Cover:	122		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x1=	0
FACW species	0	x2=	0
FAC species	0	x3=	0
FACU species	80	x4=	320
UPL species	0	x5=	0
Column Totals:	80 (A)		320 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
Moss also present under grass (60%)

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SOIL Sampling Point W20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					C	Organic layer
3-13	10YR 4/3	80	7.5YR 4/6	20	C	PL	C	
3-16	2.5YR 4/2	100					SiC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks: Soil is fairly dry

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W21

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 29 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.677806 | Long: W105.635420 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes ____ No X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 75 taken upstream and photo 76 taken downstream. Also photo 77 taken upstream on south side of road.

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Artemisia cana*	5		FACU
2. *Poa pratensis*	30	X	FACU
3. *Nassella viridula*	25		--
4. *Elymus smithii*	20		FACU
5. *Thlaspi arvense*	5		NI
6. *Taraxacum officinale*	10		FACU
7. *Vicia americana*	2		NI
8. *Lepidium campestre*	5		--
9.			
10.			
Total Cover:	102		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	65	x4=	260	
UPL species	0	x5=	0	
Column Totals:	65	(A)	260	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					C	
3-17	10YR 4/2	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___
Depth (inches): ___

Hydric Soils Present? Yes ___ No X

Remarks:
5-12 white deposits- either CaCO2 or Na 2+

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Evidence of water flowing to area with bent dead grass moist soil and erosion

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W22

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 29 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 5-7

Subregion (LRP): Western Great Plains | Lat: N43.677848 | Long: W105.635162 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 78: Upstream
Photo 79: Downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Poa pratensis*	45	X	FACU
2. *Elymus smithii*	30		FACU
3. *Taraxacum officinale*	10		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	85		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	85	x4=	340	
UPL species	0	x5=	0	
Column Totals:	85	(A)	340	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
Lit 20%

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SOIL Sampling Point W22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	5YR 3/1	100					C	OM at surface
3-16	10YR 4/2	95	7.5YR 4/4	5	C	PL	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks:
Some depletion towards bottom of profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
In drainage OHWM indicated by change in vegetation

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W23

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 30 T43N, R73W

Landform (hillslope, terrace, etc.) terrace | Local relief (concave, convex, none): none | Slope (%): 1-3

Subregion (LRP): Western Great Plains | Lat: N43.677272 | Long: W105.637036 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 80 upstream and Photo 81 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Elymus smithii*	35	X	FACU
2. *Bromus tectorum*	5	X	--
3. *Polygonum persicaria*	10		FACW
4. *Bromus inermis*	10		--
5. *Eleocharis palustris*	15		OBL
6. *Thlaspi arvense*	10		NI
7.			
8.			
9.			
10.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	15	x1=	15	
FACW species	10	x2=	20	
FAC species	0	x3=	0	
FACU species	35	x4=	140	
UPL species	0	x5=	0	
Column Totals:	60	(A)	175	(B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					C	OM
3-16	10YR 3/3	85	7.5YR 4/6	15	C	M	SC	
6-16	Gley1 4/10Y	75	7.5 YR 4/6	35	C	M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**	X	Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Salt Crusts (B11)
	High Water Table (A2)		Aquatic Invertebrates (B13)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)
	Water Marks (B1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Thin Muck Surface (C7)
	Iron Deposits (B5)		Other (Explain in Remark)
	Inundation Visible on Aerial Imagery (B7)		
	Water Stained Leaves (B9)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surfaces (B8)
X	Drainage Patterns (B10)
	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
X	Geomorphic Position (D2)
	FAC-Neutral Test (D5)
	Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Water likely flows with some spring runoff but no water is evident or flows at this point.

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-10

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W24

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 33 T43N, R73W

Landform (hillslope, terrace, etc.) Ponded Area | Local relief (concave, convex, none): concave | Slope (%): 0

Subregion (LRP): Western Great Plains | Lat: N43.676960 | Long: W105.637760 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area Within a Wetland** Yes X No
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 87, Photo 88 upstream and Photo 89 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Eleocharis palustris*	40	X	OBL
2. *Veronica peregrina*	35		FACW
3. *Eleocharis acicularis*	20		OBL
4. *Polygonum persicaria*	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	105		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x1=	60
FACW species	45	x2=	90
FAC species	0	x3=	0
FACU species	0	x4=	0
UPL species	0	x5=	0
Column Totals:	105 (A)		150 (B)

Prevalence Index = B/A = 1.42

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

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SOIL Sampling Point W24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	100					C	
12-16	10YR 4/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F)**
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water Stained Leaves (B9)
- ___ Salt Crusts (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Oder (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surfaces (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 4"+
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

Upland grass encroaching

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-10

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W25

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 34 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 3-5

Subregion (LRP): Western Great Plains | Lat: N43.677152 | Long: W105.629881 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: OWUS

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes ____ No X
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 90 upstream and photo 91 downstream likely OWUS due to eroded drainage

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Elymus smithii*	40	X	FACU
2. *Taraxacum officinale*	10		FACU
3. *Vicia americana*	5		NI
4. *Bromus tectorum*	25	X	--
5. *Artemisia cana*	5		FACU
6. *Achillea millefolium*	5		FACU
7. *Poa pratensis*	15		FACU
8.			
9.			
10.			
Total Cover:	105		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 6%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	0	x2=	0	
FAC species	0	x3=	0	
FACU species	75	x4=	300	
UPL species	0	x5=	0	
Column Totals:	75	(A)	300	(B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:
Upland encroaching

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SOIL Sampling Point W25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100					L	
1-10	10YR 3/2	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5) (**LRR F)**
- ____ 1 cm Muck (A9) (**LRR F, G, H**)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)
- ____ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1)
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)
- ____ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ____ 1 cm Muck (A9) (**LRR I, J**)
- ____ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ____ Dark Surface (S7) (**LRR G**)
- ____ High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
- ____ Reduced Vertic (F18)
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes ____ No X

Remarks:
Very fail and 4% redox near bottom of profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water Stained Leaves (B9)
- ____ Salt Crusts (B11)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Oder (C1)
- ____ Dry-Season Water Table (C2)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ____ Presence of Reduced Iron (C4)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remark)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surfaces (B8)
- ____ Drainage Patterns (B10)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ FAC-Neutral Test (D5)
- ____ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-2011

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W26

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 34 T43N, R73W

Landform (hillslope, terrace, etc.) drainage | Local relief (concave, convex, none): concave | Slope (%): 5-7

Subregion (LRP): Western Great Plains | Lat: N43.677297 | Long: W105.629290 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: NA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area Within a Wetland** Yes		No	X
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present	Yes		No	X	

Remarks:
Photo 92 pond upstream, Photo 93 downstream, Photo 94 upstream, 95 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Elymus smithii*	20	X	FACU
2. *Taraxacum officinale*	15		FACU
3. *Bromus tectorum*	35		--
4. *Poa pratensis*	30		FACU
5. *Vicia americana*	5		NI
6. *Eleocharis palustris*	1		OBL
7. *Camelina microcarpa*	1		--
8.			
9.			
10.			
Total Cover:	107		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x1=	1
FACW species	0	x2=	0
FAC species	0	x3=	0
FACU species	65	x4=	260
UPL species	0	x5=	0
Column Totals:	66	(A)	261 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤ 3.0[1]
____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes ____ No X

Remarks:

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SOIL Sampling Point W26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					C	OM
2-13	10 YR 3/2	98	10 YR 4/4	2	C	PL	C	
13-16	10 YR 4/2	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crusts (B11)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 6-22-11

Applicant/Owner: AUC, LLC. | State: Wyoming | Sampling Point: W27

Investigator(s): K. Wilson/J. Saykally | Section, Township, Range: Sec 21 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage | Local relief (concave, convex, none): concave | Slope (%): 15-20

Subregion (LRP): Western Great Plains | Lat: N43.680551 | Long: W105.626862 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks:
Photo 98 upstream and photo 99 downstream. Also photo 100 upstream south side of road

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. *Poa pratensis*	30	X	FACU
2. *Eleocharis palustris*	25	X	OBL
3. *Taraxacum officinale*	5		FACU
4. *Veronica peregrina*	20	X	FACW
5. *Elymus smithii*	15		FACU
6. *Carex praegracilis*	20	X	FACW
7.			
8.			
9.			
10.			
Total Cover:	115		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x1=	25
FACW species	40	x2=	80
FAC species	0	x3=	0
FACU species	50	x4=	200
UPL species	0	x5=	0
Column Totals:	115 (A)		305 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

US Army Corps of Engineers — Great Plains – Version 2.0

SOIL Sampling Point W27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 3/1	100					L	
3-12	10 YR 3/2	70	7.5 YR 4/6	30	C	PL	C	
12-16	2.5 YR 3/3	85	Gley 1 4/10Y	15	D	PL	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Gleyed Matrix (S4)
	Histic Epipedon (A2)		Sandy Redox (S5)
	Black Histic (A3)		Stripped Matrix (S6)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1)
	Stratified Layers (A5) (**LRR F)**		Loamy Gleyed Matrix (F2)
	1 cm Muck (A9) (**LRR F, G, H**)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)
	2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)		High Plains Depressions (F16)
	5 cm Mucky Peat or Peat (S3) (**LRR F**)		(**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

	1 cm Muck (A9) (**LRR I, J**)
	Coast Prairie Redox (A16) (**LRR F, G, H**)
	Dark Surface (S7) (**LRR G**)
	High Plains Depressions (F16) (**LRR H outside MLRA 72 & 73**)
	Reduced Vertic (F18)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soils Present? Yes X No _____

Remarks:
Pl has depletion present at 12-16

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

X	Surface Water (A1)		Salt Crusts (B11)
	High Water Table (A2)		Aquatic Invertebrates (B13)
	Saturation (A3)		Hydrogen Sulfide Oder (C1)
	Water Marks (B1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
	Drift Deposits (B3)		
	Algal Mat or Crust (B4)		Presence of Reduced Iron (C4)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial Imagery (B7)		Other (Explain in Remark)
	Water Stained Leaves (B9)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Sparsely Vegetated Concave Surfaces (B8)
	Drainage Patterns (B10)
	Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Geomorphic Position (D2)
	FAC-Neutral Test (D5)
	Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches):	6"+
Water Table Present?	Yes		No		Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes		No		Depth (inches):	

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:
Water present at surface and 10 feet away

WETLAND DETERMINATION DATA FORM-Great Plains Region

Project/Site: Reno Creek | City/County: Campbell | Sampling Date: 8-8-11

Applicant/Owner: AUC , LLC | State: Wyoming | Sampling Point: W28

Investigator(s): D. Gardner/J. Saykally | Section, Township, Range: Sec 27 T43N, R73W

Landform (hillslope, terrace, etc.) Drainage | Local relief (concave, convex, none): concave | Slope (%): 0-7

Subregion (LRP): Western Great Plains | Lat: N43.670330 | Long: 105.614905 | Datum: NAD 83 UTM zone 13

Soil Map Unit Name: | NWI Classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes x No (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ Significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____ , Soil ____ , or Hydrology ____ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is the Sampled Area Within a Wetland**	Yes X No
Wetland Hydrology Present	Yes	X	No		

Remarks: Photo 103 upstream, Photo 104 downstream

VEGETATION

Tree Stratum (Use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (plot size: 5 ft)			
1. *Hordeum jubatum*	20	X	FACW
2. *Poa sp.*	2		--
3. *Elymus smithii*	10		--
4. *Bromus japonicus*	5		FACU
5. *Eleocharis palustris*	25		OBL
6. *Carex sp.*	10		
7.			
8.			
9.			
10.			
Total Cover:	85		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15%

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x1=	0	
FACW species	60	x2=	120	
FAC species	0	x3=	0	
FACU species	0	x4=	0	
UPL species	0	x5=	0	
Column Totals:	60	(A)	12	(B)
Prevalence Index = B/A =			2.0	

Hydrophytic Vegetation Indicators

- ____ 1-Rapid Test for Hydrophytic Vegetation
- ____ 2-Dominance Test is > 50%
- X 3-Prevalence Index is ≤ 3.0[1]
- ____ 4-Morphological Adaptations[1] (Providing supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation (Explain)

[1]Indicators of hydric soils and wetland hydrology must be present, unless disturbed or problematic

Vegetation Present? Yes X No

Remarks:

US Army Corps of Engineers — Great Plains – Version 2.0

SOIL Sampling Point W28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 5/3	100					OM	
1-5	7.5YR 3/4	80	7.5YR 4/6	20	C	PL/M	CL	
5-20	7.5YR 3/2	90	7.6YR 4/4	10	C	M	CL	Dry at bottom

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)	___ Sandy Gleyed Matrix (S4)	___ 1 cm Muck (A9) (**LRR I, J**)
___ Histic Epipedon (A2)	___ Sandy Redox (S5)	___ Coast Prairie Redox (A16) (**LRR F, G, H**)
___ Black Histic (A3)	___ Stripped Matrix (S6)	___ Dark Surface (S7) (**LRR G**)
___ Hydrogen Sulfide (A4)	___ Loamy Mucky Mineral (F1)	___ High Plains Depressions (F16)
___ Stratified Layers (A5) (**LRR F**)	___ Loamy Gleyed Matrix (F2)	(**LRR H outside MLRA 72 & 73**)
___ 1 cm Muck (A9) (**LRR F, G, H**)	___ Depleted Matrix (F3)	___ Reduced Vertic (F18)
___ Depleted Below Dark Surface (A11)	___ Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Thick Dark Surface (A12)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Sandy Mucky Mineral (S1)	X Redox Depressions (F8)	___ Other (Explain in Remarks)
___ 2.5 cm Mucky Peat or Peat (S2) (**LFF G, H**)	___ High Plains Depressions (F16)	[3]Indicators of hydrophytic vegetation
5 cm Mucky Peat or Peat (S3) (**LRR F**)	(**MLRA 72 & 73 of LRR H**)	and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present? Yes X No ___

Remarks: Very predominant matrix color for the matrix

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
___ Surface Water (A1)	___ Salt Crusts (B11)	X Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Invertebrates (B13)	___ Sparsely Vegetated Concave Surfaces (B8)
___ Saturation (A3)	___ Hydrogen Sulfide Oder (C1)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)	___ Oxidized Rhizospheres on Living Roots (C3)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres on Living Roots (C3)	(**where tilled**)
___ Drift Deposits (B3)	(**where not tilled**)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	X Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remark)	___ FAC-Neutral Test (D5)
___ Water Stained Leaves (B9)		___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection), if available:

Remarks:

US Army Corps of Engineers Great Plains – Version 2.0

ADDENDUM 3.5-G

U.S. ARMY CORPS OF ENGINEERS AQUATIC RESOURCE INVENTORY LETTER

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
WYOMING REGULATORY OFFICE
2232 DELL RANGE BOULEVARD, SUITE 210
CHEYENNE WY 82009-4942

REPLY TO
ATTENTION OF

April 11, 2012

Wyoming Regulatory Office

Mr. Jim Viellenave
AUC, LLC
1536 Cole Boulevard
Lakewood, Colorado 80401

Dear Mr. Viellenave:

This letter is in response to our meeting on April 3, 2012, in which we discussed survey protocol used to complete an initial aquatic resources inventory for the Reno Creek Project permit area. The permit area includes approximately 8 square miles in Townships 42 and 43 North, Ranges 74 and 75 West in Campbell County, Wyoming.

The U.S. Army Corps of Engineers regulates placement of dredged and fill material into waters of the United States in accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344). The term "waters of the United States" has been broadly defined by statute, regulation, and judicial interpretation to include all waters that were, are, or could be used in interstate commerce such as streams, canals, reservoirs, lakes and adjacent wetlands. The Corps regulations are published in the *Code of Federal Regulations* as 33 C.F.R. Parts 320 through 332. Information on regulatory program requirements in Wyoming can be obtained from our web site at http://www.nwo.usace.army.mil/html/od-rwy/Wyoming.htm

Proposed mining activities in the permit area would extract uranium using an in-situ recovery process. This process utilizes well fields and a pipeline network to circulate a recovery solution through the ore bearing formation. Production facilities above ground include buildings where the ore is removed from the solution and a road network. Therefore, most of the ground surface within the permit area is left undisturbed. There is also some flexibility in siting production facilities and road crossings to avoid or minimize adverse affects on surface waters and wetlands.

During the meeting we suggested a method of using off-site mapping techniques based on recent aerial photographs to identify all potential aquatic sites in the permit area followed by field work to refine the mapping is appropriate for such a large area where there is a noticeable distinction between upland environments and aquatic resources. Conducting a formal wetland delineation for the entire permit area based on the *Corps of Engineers Wetlands Delineation Manual* would not be necessary. That level of analysis is only necessary in areas where Department of the Army authorization is actually required. Deferring the delineation requirement until site plans are developed in sufficient detail to identify specific locations where aquatic resources would be affected is justified.

This method of conducting an aquatic resources inventory documented on a map of the mine permit area along with photographs and field data forms as we discussed is acceptable for planning purposes. Thank you for coordinating with our office and please contact me at (307) 772-2300 if you have any questions and reference file NWO-2012-00946 in all future correspondence.

Sincerely,

Kevin C. Little
Project Manager
Wyoming Regulatory Office

Copy Furnished:

Katie Wilson
BKS Environmental
P.O. Box 3467
Gillette, Wyoming 82717

ADDENDUM 3.5-H

WYOMING GAME AND FISH DEPARTMENT WILDLIFE BASELINE SURVEY LETTERS

WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4610

Web site: http://gf.state.wy.us

April 7, 2008

WER 11769
ICF Jones & Stokes
Strathmore Minerals
Reno Creek Uranium Project
Campbell County

Gwyn McKee
ICF Jones & Stokes
1901 Energy Court, Suite 115
Gillette, WY 82718

Dear Gwyn:

This is to address your questions regarding the baseline wildlife data necessary for the proposed Reno Creek Uranium Project.

The baseline wildlife information should include a Wyoming Game and Fish Department map of the big game ranges that are present on the proposed project area. There is no data collection necessary, just the map in order to describe those habitats and to help advise the eventual reclamation plan for the project, in the event the landowner wants to reclaim pre-development big game habitats.

Actual baseline data collection should include sage grouse lek searches/counts and raptor nest surveys on the proposed permit area and 1-mile buffer around it (realizing potential limitations regarding access to buffer lands), and delineation of prairie dog towns on the permit area. You are already very familiar with the protocols associated with gathering this data. The existing data available from the adjacent CBM development area can be included.

Given the expected land disturbance normally associated with in-situ uranium developments, these data would provide the needed information for the wildlife species that may be present and sensitive enough to the eventual development to be potentially affected by it.

Thank you for the opportunity to provide input early in the permitting process. If you have further questions, please do not hesitate to call (307-777-4587).

Sincerely,

VERN STELTER
HABITAT PROTECTION SUPERVISOR

WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4610

Web site: http://gf.state.wy.us

June 14, 2010

WER 11769
AUC, LLC
Baseline Surveys
Reno Creek Uranium Project
Campbell County

Jessica Maycock
AUC, LLC
1536 Cole Blvd., Suite 330
Lakewood, CO 80401

Dear Ms. Maycock:

The staff of the Wyoming Game and Fish Department has reviewed the Baseline Surveys for the Reno Creek Uranium Project in Campbell County. We offer the following comments for your consideration.

We recommend review of our 2008 letter as those recommendations still pertain to this project. Additionally, we recommend evaluating whether the project will occur within a sage grouse core area and, if it does, we recommend further coordination with our office.

Swift fox may occur in the project area thus we suggest surveys be conducted for them specifically. We recommend other potential SGCN (Species of Greatest Conservation Need) species be accounted for as well.

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Scott Gamo, Staff Terrestrial Biologist, at 307-777-4509.

Sincerely,

for John Emmerich
Deputy Director

JE:MF:sg

cc: USFWS
Lynn Jahnke- WGFD, Sheridan

ADDENDUM 3.5-I
OBSERVED WILDLIFE SPECIES LIST

Table 3.5I-1: USFWS Migratory Bird Species of Management Concern (Non-coal) and occurrence within the Proposed Reno Creek Project.

Common Name[1] *(scientific name)*	Primary Nesting Habitat(s)	Occurrence[2] in Project area	Occurrence in Survey Area[3]
Level I Species – Conservation Action Needed			
Mountain Plover *(Charadrius montanus)*	Short-grass prairie, shrub-steppe	---	---
Trumpeter Swan *(Cygnus buccinator)*	Wetlands	---	---
Greater Sage-grouse *(Centrocercus urophasianus)*	Shrub-steppe	---	Observed, presumed breeder
McCown's Longspur *(Calcarius mccownii)*	Short-grass prairie, shrub-steppe	---	Observed
Baird's Sparrow *(Ammodramus bairdii)*	Short-grass prairie	---	---
Ferruginous Hawk *(Buteo regalis)*	Shrub-steppe, grasslands	Observed	Observed
Brewer's Sparrow *(Spizella breweri)*	Shrub-steppe, montane shrublands	Observed, presumed breeder	Observed
Wilson's Phalarope *(Phalaropus tricolor)*	Wetlands	---	Observed
Franklin's Gull *(Larus pipixcan)*	Wetlands	---	---
Sage Sparrow *(Amphispiza belli)*	Shrub-steppe, montane shrublands	---	---
Swainson's Hawk *(Buteo swainsoni)*	Plains/Basin riparian, grasslands	Observed	Observed
Long-billed Curlew *(Numenius americanus)*	Short-grass prairie	---	---
Short-eared Owl *(Asio flammeus)*	Short-grass prairie, shrub-steppe	---	---
Northern Goshawk *(Accipiter gentiles)*	Conifer, aspen	---	---
Peregrine Falcon *(Falco peregrinus)*	Cliffs	---	---
Burrowing Owl *(Athene cunicularia)*	Grasslands, shrub-steppe	---	---
Forster's Tern *(Sterna forsteri)*	Wetlands	---	---

Common Name[1] *(scientific name)*	Primary Nesting Habitat(s)	Occurrence[2] in Project area	Occurrence in Survey Area[3]
Level I Species – Conservation Action Needed			
Bald Eagle *(Haliaeetus leucocephalus)*	Riparian	---	---
Upland Sandpiper *(Bartramia longicauda)*	Short-grass prairie, shrub-steppe	---	---
Black Tern *(Chlidonia niger)*	Wetlands	---	---
Whooping Crane *(Grus americana)*	Wetlands	---	---
Piping Plover *(Charadrius melodus)*	Wetlands, aquatic	---	---
Level II Species – Continued Monitoring Recommended			
Calliope Humming bird *(Stellula calliope)*	Mid-elevation conifers, montane riparian	---	---
Lewis Woodpecker *(Melanerpes lewis)*	Low elevation conifer, plains/basin riparian	---	---
Cassin's Kingbird *(Tyrannus vociferans)*	Juniper Woodland Plain/basin riparian	---	---
Lark Bunting *(Calamospiza melanocorys)*	Shortgrass prairie, shrub steppe	Observed, presumed breeder	Observed
American White Pelican *(Pelecanus erythrorhynchos)*	Aquatic-rivers, lakes, ponds	---	---
William's Sapsucker *(Sphyrapicus thyroideus)*	Mid-elevation conifer	---	---
Black-backed Woodpecker *(Picoides arcticus)*	Mid-elevation conifer, High elevation conifer	---	---
Gray Flycatcher *(Empidonax wrightii)*	Juniper woodland, mountain-foothills shrub	---	---
Juniper Titmouse *(Baeolophus ridgwayi)*	Juniper woodlands	---	---
Dickcissel *(Spiza americana)*	Shortgrass prairie	---	---
Chestnut-collared Longspur *(Calcarius ornatus)*	Shortgrass prairie	---	---

Common Name[1] *(scientific name)*	Primary Nesting Habitat(s)	Occurrence[2] in Reno Creek Project area	Occurrence in Reno Creek Survey Area[3]
Level II Species – Continued			
Harlequin Duck *(Histrionicus histrionicus)*	Montane riparian	---	---
Snowy Plover *(Charadrius alexandrinus)*	Wetlands	---	---
Black-chinned Hummingbird *(Archilochus alexandri)*	Plains/basin riparian, shrub-steppe	---	---
Rufous Hummingbird *(Selasphorus rufus)*	Mid-elevation conifer	---	---
Red-naped Sapsucker *(Sphyrapicus nuchalis)*	Aspen	---	---
American Three-toed Woodpecker *(Picoides dorsalis)*	Mid-elevation conifer, high elevation conifer	---	---
Willow Flycatcher *(Empidonax traillii)*	Montane riparian Plains/basin riparian	---	---
Hammond's Flycatcher *(Epidonax hammondii)*	Higher-elevation confer with aspen, montane riparian	---	---
Codilleran Flycatcher *(Empidonax occidentalis)*	Montane riparian, mid-elevation conifer	---	---
Pygmy Nuthatch *(Sitta pygmaea)*	Low-elevation conifer	---	---
Marsh Wren *(Cistothorus palustris)*	Wetlands	---	---
American Dipper *(Cinclus mexicanus)*	Montane riparian	---	---
Plumbeous Vireo *(Vireo plumbeus)*	Mid-elevation conifer, low-elevation conifer	---	---
Townsend's Warbler *(Dendroica townsendii)*	High-elevation conifer, mid-elevation conifer	---	---
Dusky Flycatcher *(Empidonax oberholseri)*	Low-elevation conifer, aspen, mountain-foothills shrub	---	---
Western Bluebird *(Sialia mexicana)*	Juniper woodlands, low-elevation conifer	---	---

Common Name[1] *(scientific name)*	Primary Nesting Habitat(s)	Occurrence[2] in Reno Creek Project area	Occurrence in Reno Creek Survey Area[3]
Level II Species – Continued			
Sage Thrasher *(Oreoscoptes montanus)*	Shrub-steppe	---	Observed
Grasshopper Sparrow *(Ammodramus savannarum)*	Short-grass prairie, shrub-steppe	---	Observed
Bobolink *(Dolichonyx oryzivorus)*	Short-grass prairie, shrub-steppe	---	---
Common Loon *(Gavia immer)*	Lakes, wetlands	---	---
Black-billed Cuckoo *(Coccyzus erythropthalmus)*	Plains/basin riparian	---	---
Red-headed Woodpecker *(Melanerpes erythrocephalus)*	Plains/basin riparian, low-elevation conifer	---	---
Yellow-billed Cuckoo *(Coccyzus americanus)*	Plains/basin riparian	---	---
Eastern Screech Owl *(Megascops asio)*	Plains/basin riparian	---	---
Western Screech Owl *(Megascops kennicottii)*	Plains/basin riparian	---	---
Great Gray Owl *(Strix nebulosa)*	Mid-elevation conifer, High-elevation conifer	---	---
Boreal Owl *(Aegolius funereus)*	High elevation conifer	---	---
Broad-tailed Hummingbird *(Selasphorus platycercus)*	Montane riparian, Plains/basin riparian mid-elevation conifer	---	---
Western Scrub-Jay *(Aphelocoma californica)*	Juniper woodlands	---	---
Loggerhead shrike *(Lanius ludovicianus)*	Shrub-steppe	---	Observed
Vesper Sparrow *(Pooecetes gramineus)*	Shrub-steppe	Observed, presumed breeder	Observed
Lark Sparrow *(Chondestes grammacus)*	Shrub-steppe	Observed	Observed

Common Name[1] *(scientific name)*	Primary Nesting Habitat(s)	Occurrence[2] in Reno Creek Project area	Occurrence in Reno Creek Survey Area[3]
Level II Species – Continued			
Golden-crowned Kinglet *(Regulus satrapa)*	High-elevation conifer	---	---
McGillivray's Warbler *(Oporornis tolmiei)*	Montane riparian, Plains/basin riparian	---	---
Ash-throated Flycatcher *(Myiarchus cinerascens)*	Juniper woodlands	---	---
Bushtit *(Psaltriparus minimus)*	Juniper woodlands	---	---
Brown Creeper *(Certhia americana)*	Mid-elevation conifer, high-elevation conifer	---	---
Merlin *(Falco columbarius)*	Low-elevation conifer	---	---
Sprague's Pipit *(Anthus spragueii)*	Grassland, Plains/Basin riparian, short-grass prairie	---	---
Barn Owl *(Tyto alba)*	Short-grass prairie, urban	---	---
White-faced Ibis *(Plegadis chihi)*	Wetland, aquatic	---	---
American Bittern *(Botaurus lentiginosus)*	Wetland, aquatic	---	---
Common Tern *(Sterna hirundo)*	Wetland, aquatic	---	---
Purple Martin *(Progne subis)*	Wetland, aquatic/Basin riparian, montane riparian	---	---

Table 3.5I-2: Proposed Reno Creek Project Wildlife Baseline - Potential and Observed Species Lists, with WGFD Species of Greatest Conservation Need (SGCN)

POTENTIAL[1] AND OBSERVED MAMMALIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project survey area[2]**
Insectivores		
Masked shrew	*Sorex cinereus*	---
Merriam's shrew	*Sorex merriami*	---
Vagrant shrew	***Sorex vagrans***	---
Bats		
Small-footed myotis	***Myotis ciliolabrum***	---
Long-eared myotis	***Myotis evotis***	---
Northern myotis	***Myotis septentrionalis***	---
Little brown myotis	***Myotis lucifugus***	---
Long-legged myotis	***Myotis volans***	---
Hoary bat	***Lasiurus cinereus***	---
Silver-haired bat	***Lasionycteris noctivagans***	---
Big brown bat	***Eptesicus fuscus***	---
Townsend's big-eared bat	***Plecotus townsendii***	---
Hares and Rabbits		
Desert cottontail	*Sylvilagus audubonii*	--
Mountain cottontail	*Sylvilagus nuttallii*	---
Cottontail species	*Sylvilagus* spp.	X
Black-tailed jackrabbit	*Lepus californicus*	---
White-tailed jackrabbit	*Lepus townsendii*	X
Rodents		
Least chipmunk	*Tamias minimus*	---
Thirteen-lined ground squirrel	*Spermophilus tridecemlineatus*	---
Black-tailed prairie dog	***Cynomys ludovicianus***	---
Northern pocket gopher	*Thomomys talpoides*	---
Plains pocket gopher	***Geomys bursarius***	---
Olive-backed pocket mouse	***Perognathus fasciatus***	---
Silky pocket mouse	*Perognathus flavus*	---
Hispid pocket mouse	***Perognathus hispidus***	---
Ord's kangaroo rat	*Dipodomys ordii*	---
Beaver	*Castor canadensis*	---
Western harvest mouse	*Reithrodontomys megalotis*	---
Plains harvest mouse	***Reithrodontomys montanus***	---
White-footed mouse	*Peromyscus leucopus*	---

POTENTIAL[1] AND OBSERVED MAMMALIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project survey area[2]**
Rodents (cont.)		
Deer mouse	*Peromyscus maniculatus*	---
Northern grasshopper mouse	*Onychomys leucogaster*	---
Bushy-tailed woodrat	*Neotoma cinerea*	---
Long-tailed vole	*Microtus longicaudus*	---
Prairie vole	***Microtus ochrogaster***	---
Meadow vole	*Microtus pennsylvanicus*	---
Sagebrush vole	*Lemmiscus curtatus*	---
Muskrat	*Ondatra zibethicus*	X
Norway rat	*Rattus norvegicus*	---
House mouse	*Mus musculus*	---
Meadow jumping mouse	***Zapus hudsonius***	---
Porcupine	*Erethizon dorsatum*	---
Carnivores		
Coyote	*Canis latrans*	---
Swift fox	*Vulpes velox*	---
Red fox	*Vulpes vulpes*	---
Gray fox	*Urocyon cinereoargenteus*	---
Raccoon	*Procyon lotor*	---
Ermine	*Mustela erminea*	---
Long-tailed weasel	*Mustela frenata*	---
Black-footed ferret	***Mustela nigripes***	---
Least weasel	***Mustela nivalis***	---
Weasel species	*Mustela spp.*	---
Mink	*Mustela vison*	---
Badger	*Taxidea taxus*	X
Eastern spotted skunk	*Spilogale putorius*	---
Striped skunk	*Mephitis mephitis*	---
Mountain lion	*Felis concolor*	---
Bobcat	*Felis rufus*	---
Ungulates		
Mule deer	*Odocoileus hemionus*	X
White-tailed deer	*Odocoileus virginianus*	---
Pronghorn	*Antilocapra americana*	X

*** Bold font indicates WGFD Species of Greatest Conservation Need (SGCN)**

1 POTENTIAL OCCURRENCE--list derived from range and habitat information in Jones et al. (1983), Clark and Stromberg (1987), Burt and Grossenheider (1990), and Cerovski et al. (2004).

2 OBSERVED IN THE RENO CREEK SURVEY AREA--species recorded during baseline surveys: 2008, 2010, and 2011.

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Loons		
Common loon	***Gavia immer***	---
Grebes		
Horned grebe	*Podiceps auritus*	---
Eared grebe	*Podiceps nigricollis*	X
Western grebe	***Aechmorphorus occidentalis***	---
Pied-billed grebe	*Podilymbus podiceps*	---
Pelicans		
American white pelican	***Pelecanus erythrorhynchos***	---
Cormorants		
Double-crested cormorant	*Phalacrocorax auritus*	---
Herons		
American bittern	***Botaurus lentiginosus***	---
Great blue heron	***Ardea herodias***	---
Black-crowned night heron	***Nycticorax nycticorax***	---
White-faced ibis	***Plegadis chihi***	---
Swan, Geese, and Ducks		
Tundra swan	*Cygnus columbianus*	---
Trumpeter swan	***Cygnus buccinator***	---
Canada goose	*Branta canadensis*	---
White-fronted goose	*Anser albifrons*	---
Snow goose	*Chen caerulescens*	---
Mallard	*Anas platyrhynchos*	X
Gadwall	*Anas strepera*	---
Northern pintail	***Anas acuta***	X
Green-winged teal	*Anas crecca*	X
Blue-winged teal	*Anas discors*	---
Cinnamon teal	*Anas cyanoptera*	---
American wigeon	*Anas americana*	X
Northern shoveler	*Anas clypeata*	X
Wood duck	*Aix sponsa*	---
Redhead	***Aythya americana***	---
Ring-necked duck	*Aythya collaris*	---
Canvasback	***Aythya valisineria***	---
Greater scaup	*Aythya marila*	---
Lesser scaup	***Aythya affinis***	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Swan, Geese, and Ducks (cont.)		
Common goldeneye	*Bucephala clangula*	---
Barrow's goldeneye	***Bucephala islandica***	---
Bufflehead	*Bucephala albeola*	---
Ruddy duck	*Oxyura jamaicensis*	---
Hooded merganser	*Lophodytes cucullatus*	---
Common merganser	*Mergus merganser*	---
Red-breasted merganser	*Mergus serrator*	---
Diurnal Raptors		
Turkey vulture	*Cathartes aura*	---
Osprey	*Pandion haliaetus*	---
Bald eagle	***Haliaeetus leucocephalus***	**---**
Northern harrier	*Circus cyaneus*	X
Sharp-shinned hawk	*Accipiter striatus*	---
Cooper's hawk	*Accipiter cooperii*	---
Northern goshawk	***Accipiter gentilis***	**---**
Red-tailed hawk	*Buteo jamaicensis*	X
Swainson's hawk	***Buteo swainsoni***	**X**
Ferruginous hawk	***Buteo regalis***	**X**
Rough-legged hawk	*Buteo lagopus*	---
Golden eagle	*Aquila chrysaetos*	X
American kestrel	*Falco sparverius*	---
Merlin	***Falco columbarius***	**---**
Peregrine falcon	***Falco peregrinus***	**---**
Gyrfalcon	*Falco rusticolus*	---
Prairie falcon	*Falco mexicanus*	---
Gallinaceous Birds		
Sharp-tailed grouse	***Tympanuchus phasianellus***	**---**
Greater sage-grouse	***Centrocercus urophasianus***	**X**
Ring-necked pheasant	*Phasianus colchicus*	---
Gray partridge	*Perdix perdix*	---
Wild turkey	*Meleagris gallopavo*	---
Cranes, Rails, and Coots		
Sandhill crane	*Grus canadensis*	---
Virginia rail	***Rallus limicola***	**---**
Sora	*Porzana carolina*	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Shorebirds, Gulls, and Terns (cont.)		
Yellow rail	*Coturnicops noveboracensis*	---
American coot	*Fulica americana*	---
American avocet	*Recurvirostra americana*	---
Semipalmated plover	*Charadrius semipalmatus*	---
Killdeer	*Charadrius vociferus*	X
Mountain plover	***Charadrius montanus***	**---**
Lesser golden plover	*Pluvialis dominica*	---
Black-bellied plover	*Pluvialis squatarola*	---
Hudsonian godwit	*Limosa haemastica*	---
Marbled godwit	*Limosa fedoa*	---
Whimbrel	*Numenius phaeopus*	---
Long-billed curlew	***Numenius americanus***	**---**
Upland sandpiper	***Bartramia longicauda***	**---**
Greater yellowlegs	*Tringa melanoleuca*	---
Lesser yellowlegs	*Tringa flavipes*	---
Solitary sandpiper	*Tringa solitaria*	---
Willet	*Catoptrophorus semipalmatus*	---
Spotted sandpiper	*Actitis macularia*	---
Wilson's phalarope	*Steganopus tricolor*	X
Northern phalarope	*Lobipes lobatus*	---
Common snipe	*Gallinago gallinago*	---
Short-billed dowitcher	*Limnodromus griseus*	---
Long-billed dowitcher	*Limnodromus scolopaceus*	---
Red knot	*Calidris canutus*	---
Sanderling	*Calidris alba*	---
Semipalmated sandpiper	*Calidris pusilla*	---
Western sandpiper	*Calidris mauri*	---
Least sandpiper	*Calidris minutilla*	---
White-rumped sandpiper	*Calidris fuscicollis*	---
Baird's sandpiper	*Calidris bairdii*	---
Pectoral sandpiper	*Calidris melanotos*	---
Stilt sandpiper	*Micropalama himantopus*	---
Buff-breasted sandpiper	*Tryngites subruficollis*	---
Herring gull	*Larus argentatus*	---
California gull	*Larus californicus*	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Shorebirds, Gulls, and Terns (cont.)		
Ring-billed gull	*Larus delawarensis*	---
Franklin's gull	***Larus pipixcan***	**---**
Bonaparte's gull	*Larus philadelphia*	---
Forster's tern	***Sterna forsteri***	**---**
Caspian tern	***Sterna caspia***	**---**
Black tern	***Childonias niger***	**---**
Pigeons and Doves		
Rock pigeon	*Columba livia*	---
Mourning dove	*Zenaida macroura*	X
Cuckoos		
Black-billed cuckoo	*Coccyzus erythropthalmus*	---
Yellow-billed cuckoo	***Coccyzus americanus***	**---**
Owls		
Barn owl	*Tyto alba*	---
Eastern screech owl	*Otus asio*	---
Long-eared owl	*Asio otus*	---
Short-eared owl	***Asio flammeus***	**---**
Great horned owl	*Bubo virginianus*	---
Snowy owl	*Nyctea scandiaca*	---
Burrowing owl	***Athene cunicularia***	**---**
Barred owl	*Strix varia*	---
Northern saw-whet owl	*Aegolius acadicus*	---
Goatsuckers		
Common nighthawk	*Chordeiles minor*	---
Common poorwill	*Phalaenoptilus nuttallii*	---
Swifts		
Chimney swift	*Chaetura pelagica*	---
White-throated swift	*Aeronautes saxatalis*	---
Hummingbirds		
Broad-tailed hummingbird	*Selasphorus platycercus*	---
Rufous hummingbird	*Selasphorus rufus*	---
Kingfishers		
Belted kingfisher	*Megaceryle alcyon*	---
Woodpeckers		
Lewis' woodpecker	***Melanerpes lewis***	**---**

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Woodpeckers (cont.)		
Red-headed woodpecker	*Melanerpes erythrocephalus*	---
Yellow-bellied sapsucker	*Sphyripicus varius*	---
Williamson's sapsucker	*Sphyripicus thyroideus*	---
Hairy woodpecker	*Picoides villosus*	---
Downy woodpecker	*Picoides pubescens*	---
Black-backed woodpecker	***Picoides arcticus***	**---**
Northern flicker	*Colaptes auratus*	---
American Three-toed woodpecker	*Picoides tridactylus*	---
Flycatchers		
Western wood pewee	*Contopus sordidulus*	---
Willow flycatcher	***Empidonax traillii***	**---**
Least flycatcher	*Empidonax minimus*	---
Dusky flycatcher	*Empidonax oberholseri*	---
Cordilleran flycatcher	*Empidonax occidentalis*	---
Eastern phoebe	*Sayornis phoebe*	---
Say's phoebe	*Sayornis saya*	---
Cassin's kingbird	*Tyrannus vociferans*	---
Western kingbird	*Tyrannus verticalis*	---
Eastern kingbird	*Tyrannus tyrannus*	X
Larks		
Horned lark	*Eremophila alpestris*	X
Swallows		
Tree swallow	*Tachycineta bicolor*	---
Violet-green swallow	*Tachycineta thalassina*	---
Bank swallow	*Riparia riparia*	X
Rough-winged swallow	*Stelgidopteryx ruficollis*	---
Cliff swallow	*Hirundo pyrrhonota*	---
Barn swallow	*Hirundo rustica*	---
Purple martin	*Progne subis*	---
Jays, Magpies, and Crows		
Gray jay	*Perisoreus canadensis*	---
Blue jay	*Cyanocitta cristata*	---
Pinyon jay	*Gymnorhinus cyanocephalus*	---
Clark's nutcracker	*Nucifraga columbiana*	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Jays, Magpies, and Crows (cont.)		
Black-billed magpie	*Pica hudsonia*	---
Common raven	*Corvus corax*	---
American crow	*Corvus brachyrhynchos*	---
Chickadee		
Black-capped chickadee	*Parus atricapillus*	---
Mountain chickadee	*Parus gambeli*	---
Nuthatches		
Red-breasted nuthatch	*Sitta canadensis*	---
White-breasted nuthatch	*Sitta carolinensis*	---
Pygmy nuthatch	***Sitta pygmaea***	**---**
Brown creeper	*Certhia americana*	---
Wrens		
Rock wren	*Salpinctes obsoletus*	---
House wren	*Troglodytes aedon*	---
Marsh Wren	*Cistothorus palustris*	---
Gnatchers and Kinglets		
Golden-crowned kinglet	*Regulus satrapa*	---
Ruby-crowned kinglet	*Regulus calendula*	---
Thrushes		
Eastern bluebird	*Sialia sialis*	---
Western bluebird	*Sialia mexicana*	---
Mountain bluebird	*Sialia currucoides*	---
Townsend's solitaire	*Myadestes townsendi*	---
Veery	*Catharus fuscescens*	---
Swainson's thrush	*Catharus ustulatus*	---
Hermit thrush	*Catharus guttatus*	---
American robin	*Turdus migratorius*	---
American dipper	*Cinclus mexicanus*	---
Mimic Thrushes		
Mockingbird	*Mimus polyglottos*	---
Gray catbird	*Dumetella carolinensis*	---
Brown thrasher	*Toxostoma rufum*	---
Sage thrasher	***Oreoscoptes montanus***	**X**
Pipits		
Sprague's pipit	*Anthus spragueii*	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Waxwings		
Bohemian waxwing	*Bombycilla garrulus*	---
Cedar waxwing	*Bombycilla cedrorum*	---
Shrikes		
Northern shrike	*Lanius excubitor*	---
Loggerhead shrike	*Lanius ludovicianus*	X
Starlings		
European starling	*Sturnus vulgaris*	---
Vireos		
Plumbeous vireo	*Vireo plumbeous*	---
Warbling vireo	*Vireo gilvus*	---
Red-eyed vireo	*Vireo olivaceus*	---
Warblers		
Tennessee warbler	*Oreothlypis peregrina*	---
Orange-crowned warbler	*Oreothlypis celata*	---
Nashville warbler	*Oreothlypis ruficapilla*	---
Yellow warbler	*Dendroica petechia*	---
Magnolia warbler	*Dendroica magnolia*	---
Black-throated blue warbler	*Dendroica caerulescens*	---
Yellow-rumped warbler	*Dendroica coronata*	---
Townsend's warbler	*Dendroica townsendi*	---
Chestnut-sided warbler	*Dendroica pensylvanica*	---
Black-and-white warbler	*Mniotilta varia*	---
American redstart	*Setophaga ruticilla*	---
Ovenbird	*Seiurus aurocapillus*	---
Northern waterthrush	*Parkesia noveboracensis*	---
MacGillivray's warbler	*Oporornis tolmiei*	---
Common yellowthroat	*Geothlypis trichas*	---
Hooded warbler	*Wilsonia citrina*	---
Wilson's warbler	*Wilsonia pusilla*	---
Yellow-breasted chat	*Icteria virens*	---
Grosbeaks and Buntings		
Western tanager	*Piranga ludoviciana*	---
Rose-breasted grosbeak	*Pheucticus ludovicianus*	---
Black-headed grosbeak	*Pheucticus melanocephalus*	---
Lazuli bunting	*Passerina amoena*	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Grosbeaks and Buntings (cont.)		
Indigo bunting	*Passerina cyanea*	---
Dickcissel	*Spiza americana*	---
Evening grosbeak	*Hesperiphona vespertina*	---
Towhees, Sparrows, Juncos, and Longspurs		
Green-tailed towhee	*Papilo chlorurus*	---
Spotted towhee	*Pipilo maculatus*	---
American tree sparrow	*Spizella arborea*	---
Chipping sparrow	*Spizella passerina*	---
Clay-colored sparrow	*Spizella pallida*	---
Brewer's sparrow	***Spizella breweri***	**X**
Field sparrow	*Spizella pusilla*	---
Vesper sparrow	*Pooecetes gramineus*	X
Lark sparrow	*Chondestes grammacus*	X
Sage sparrow	***Amphispiza belli***	**---**
Lark bunting	***Calamospiza melanocorys***	**X**
Savannah sparrow	*Passerculus sandwichensis*	---
Baird's sparrow	*Ammodramus bairdii*	---
Grasshopper sparrow	***Ammodramus savannarum***	**X**
Fox sparrow	*Passerela iliaca*	---
Song sparrow	*Melospiza melodia*	---
Lincoln's sparrow	*Melospiza lincolnii*	---
White-throated sparrow	*Zonotrichia albicollis*	---
White-crowned sparrow	*Zonotrichia leucophrys*	---
Harris' sparrow	*Zonotrichia querula*	---
Dark-eyed junco	*Junco hyemalis*	---
McCown's longspur	***Rhyncophanes mccownii***	**X**
Lapland longspur	*Calcarius lapponicus*	---
Chestnut-collared longspur	***Calcarius ornatus***	**---**
Snow bunting	*Plectrophenax nivalis*	---
Blackbirds, Meadowlarks, and Orioles		
Bobolink	***Dolichonyx oryzivorus***	**---**
Red-winged blackbird	*Agelaius phoeniceus*	X
Western meadowlark	*Sturnella neglecta*	X
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	---

POTENTIAL[1] AND OBSERVED AVIAN SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project Survey Area[2]**
Blackbirds, Meadowlarks, and Orioles (cont.)		
Rusty blackbird	*Euphagus carolinus*	---
Brewer's blackbird	*Euphagus cyanocephalus*	---
Common grackle	*Quiscalus quiscula*	---
Brown-headed cowbird	*Molothrus ater*	X
Bullock's oriole	*Icterus bullockii*	---
Finches		
Gray-crowned rosy-finch	*Leucosticte tephrocotis*	---
Pine grosbeak	*Pinicola enucleator*	---
Purple finch	*Carpodacus purpureus*	---
Cassin's finch	*Carpodacus cassinii*	---
House finch	*Carpodacus mexicanus*	---
Red crossbill	*Loxia curvirostra*	---
White-winged crossbill	*Loxia leucoptera*	---
Common redpoll	*Acanthis flammea*	---
Pine siskin	*Spinus pinus*	---
American goldfinch	*Spinus tristis*	---
Weaver Finches		
House sparrow	*Passer domesticus*	---

..... *** Bold font indicates WGFD Species of Greatest Conservation Need (SGCN)**

[1] POTENTIAL OCCURRENCE--list derived from range and habitat information in Petersen (1990), Stokes and Stokes (1996), and Cerovski et al. (2004). The species listed includes those that might pass through the project area or vicinity during migration.

[2] OBSERVED IN THE PROPOSED RENO CREEK SURVEY AREA--species recorded during baseline surveys: 2008, 2010, and 2011.

POTENTIAL[1] AND OBSERVED AMPHIBIAN AND REPTILE SPECIES LIST*		
Common Name	**Scientific Name**	**Observed in the proposed project survey area[2]**
Salamanders		
Tiger salamander	***Ambystoma tigrinum***	**---**
Frogs and Toads		
Northern leopard frog	***Rana pipiens***	**---**
Boreal chorus frog	***Pseudacris triseriata***	**X**
Plains spadefoot	***Scaphiopus bombifrons***	**---**
Woodhouse's toad	***Bufo woodhousei***	**---**
Great plains toad	***Bufo cognatus***	**---**
Turtles		
Common snapping turtle	*Chelydra serpentina*	---
Western painted turtle	***Chrysemys picta***	**---**
Western spiny softshell	***Trionyx spiniferus***	**---**
Lizards		
Northern sagebrush lizard	***Sceloporus graciosus***	**---**
Short-horned lizard	*Phrynsoma douglassi*	X
Snakes		
Plains hognose snake	***Heterodon nasicus***	**---**
Eastern yellowbellied racer	***Coluber constrictor***	**---**
Smooth greensnake	***Opheodrys vernalis***	**---**
Pale milksnake	***Lampropeltis triangulum***	**---**
Bullsnake	***Pituophis melanoleucas***	**---**
Wandering garter snake	***Thamnophis elegans***	**---**
Western plains garter snake	***Thamnophis radix***	**---**
Common garter snake	***Thamnophis sirtalis***	**---**
Prairie rattlesnake	***Crotalus viridis***	**---**

*** Bold font indicates WGFD Species of Greatest Conservation Need (SGCN)**

1 POTENTIAL OCCURRENCE--list derived from range and habitat information in and Stebbins (1966) and Baxter and Stone (1980).

2 OBSERVED IN THE PROPOSED RENO CREEK SURVEY AREA--species recorded during baseline surveys: 2008, 2010, and 2011.