WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetlands / Rocky Flats Site City/County: Jefferson Sampling Date: 8/19/14

Applicant/Owner: DOE State: CO Sampling Point: A3-A (98)

Investigator(s): Jody Nelson Section, Township, Range: T2S, R70W, Sec. 11

Landform (hillslope, terrace, etc.): Former pond bottom that was filled. Now in stream channel. Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR): G Lat: 75274.2370 Long: 2088275.9574 Datum: NAD27

Soil Map Unit Name: NA - mitigation area 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 X, 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 ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: mitigation area. New normal circumstances. Former pond bottom was backfilled during dam breach activities in 2012 to create new wetland area.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: wetland)			
246 1. SAEXI	25	Y	FACW
2.			
3.			
4.			
5.			
	25.0 = Total Cover		
Herb Stratum (Plot size: wetland)			
247 1. POMOI	8		FACW
248 2. PAVII	2		FAC
249 3. AGSMI	<1		FACU
250 4. AGCAI	<1		FACU
251 5. XASTI	2		FAC
252 6. HOJUI	20	Y	FACW
253 7. AMARI	<1		FACU
254 8. POPEZ	<1		FACW
255 9. SCACI	1		OBL
256 10. PLMAI	<1		FAC
	34.25 = Total Cover		
Woody Vine Stratum (Plot size: ____)	50.25 page 2		
	84.50		
1.			
2.			
	____ = Total Cover		
% Bare Ground in Herb Stratum 15-20%			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks: <1 = 0.25% → another 30-35% is TRM (it was placed across entire wetland bottom.

SOIL

Sampling Point: A3 - A (98)

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	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) (**LRR 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 of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X 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 Soil Present? Yes X No ___

Remarks: Interim monitoring. No soil pits dug. Area wet >14 continuous days during growing season. Also hydrophytic veg + wetland hydrology are present so hydric soils are assumed to be developing. Mitigation area w/ disturbed soils.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (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 Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- X 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): 0-10"

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

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

See wetland water level data from earlier in summer.

Remarks:

Wetland Determination Data Form - Great Plains Region
Extra Page for Vegetation Species

Date 8/19/14
Sampling Point A3-A (98)

Tree Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
5				
6				
7				
8				
9				
10				

_____ = Total Cover

Sapling/Shrub Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
6				
7				
8				
9				
10				

_____ = Total Cover

Herb Stratum

		Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
257	11	ECCR1	4		FAC
258	12	ELMA1	5		OBL
259	13	CIAR1	1		FACU
260	14	SCPA1	<1		OBL
261	15	RUCR1	<1		FAC
262	16	ASFA1	<1		FACU
263	17	LASE1	<1		FAC
264	18	VEBL1	<1		UPL
265	19	TYAN1	20	Y	OBL
266	20	COCA1	<1		FACU
267	21	SCMA1	18	Y	OBL
268	22	AMPS1	<1		FACU
269	23	CHGL1	<1		FAC
270	24	MEOF1	<1		FACU
	25				
	26				
	27				
	28				
	29				
	30				
	31				
	32				
	33				
	34				
	35				

50.25 = Total Cover

Over > ?	N

Wetland Determination Data Form - Great Plains Region
Extra Page for Vegetation Species

Date _____

Sampling Point _____

Tree Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
11				
12				
13				
14				
15				

_____ = Total Cover

Sapling/Shrub Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
11				
12				
13				
14				
15				

_____ = Total Cover

Herb Stratum

	Scientific Name	Absolute % Cover	Dominant Species?	Indicator Status
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				

_____ = Total Cover

Wetland Qualitative Revegetation Evaluation Form Form #_____

Date 8/19/14
Observer(s) Jody Nelson
Location ID A3-A (98)

Photographs taken today? Y (N) taken earlier

Are desired wetland plant species present? (Y) N

Are there any issues regarding the establishment of the desired wetland species? Explain, if so.

no

Are the hydrologic conditions appropriate for successful establishment and sustainability of the wetland. If not, describe the problem/issue.

yes

Woody Plant Counts

Species	Stem Count	Height 1	Height 2	Height 3	Width 1	Width 2	Width 3
SAEXI	Too numerous	5'	5'	6'	7'	6'	7'

Noxious weed evaluation. See separate noxious weed evaluations conducted throughout the summer months (June – August).

Suggestions for management:

Control weeds as needed.

Install plugs to increase veg cover - open water area?

Other comments:

Perimeter of area has established well, however, the open water area has not (even though it was only 6" deep originally).

Completed by: Jody K Nels — J K Nels Date 8/19/14