WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Rocky Flats Site City/County: Jefferson Sampling Date: 8/20/13

Applicant/Owner: DOE State: CO Sampling Point: WAMPOC (96)

Investigator(s): Jody Nelson Section, Township, Range: T2S, R70W, Sec. 13 A

Landform (hillslope, terrace, etc.): Stream channel Local relief (concave, convex, none): Concave Slope (%): 1-2

Subregion (LRR): G Lat: 747309.3682 Long: 2089432.2233 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 _____

Hydric Soil Present? Yes X No _____

Wetland Hydrology Present? Yes X No _____

Is the Sampled Area within a Wetland? Yes X No _____

Remarks: Mitigation area - flume installation in 2011. Streambed recontoured after project completion. New normal circumstances.

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)			
226 1. AmFRI	2		FACW
2.			
3.			
4.			
5.			
	2 = Total Cover		
Herb Stratum (Plot size: wetland)			
227 1. SoARI	3		UPL
228 2. TYAN1	20	Y	OBL
229 3. ELMAI	3		OBL
230 4. VEBLI	<1		UPL
231 5. RUMAI	<1		FACW
232 6. BUDAI	<1		FACU
233 7. PACAI	2		FAC
234 8. MEARI	2		FACW
235 9. RUCRI	<1		FAC
236 10. AGSTI	3		FACW
	~~37.50~~ (check) = Total Cover		
	+3.75 8/20/13		
	37.75		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 _____	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: TRM mat on grd across most of area.

<1 = 0.25%

SOIL

Sampling Point: WOMPDC-A (96)

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) **(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)
- ___ 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: Mitigation area. Both hydrophytic veg & wetland hydrology present. Therefore assume that hydric soils are developing. Area wet > 14 consecutive days in 2013 growing season.

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)
- X Sediment Deposits (B2) 8/22/13
- ___ 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)

- X Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (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 X No ___

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

See water level data

Remarks: Stream was flowing in spring/early summer.

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

Date 8/20/13
Sampling Point WOMPOC (96)
A

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
237	11	HOJUI	2		FACW
238	12	AGCAI	<1		FACU
239	13	SCPAI	<1		OBL
240	14	CIARI	<1		FACU
241	15	AMARI	<1		FACU
242	16	POCOI	<1		FACU
243	17	ALTRI	<1		OBL
244	18	VETHI	<1		FACU
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				
	32				
	33				
	34				
	35				

Over > ?

8/20/13 ~~33.50~~ = Total Cover
3.75

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 8/20/13
Observer(s) Jody Nels-
Location ID WOMPOL-A (96)

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.

Area is slowly filling in. May want to seed additional wetland species.

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

Yes - For most part - typical of stream at this location on site - dry in late summer.

Woody Plant Counts

		Height			Width		
Species	**Stem Count**	**1**	**2**	**3**	**1**	**2**	**3**
AmFR1	~13	3'	3'	3'	1'	1'	1.5'

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

Suggestions for management:

Control weeds as needed. Maybe reseed some wetland species.

Other comments:

Area slowly filling in.

Completed by: Jody Nelson Date 8/20/13