



Phillip Porter
Senior Environmental Representative
PDC Energy
4000 Burlington Ave.
Evans, Colorado 80620

7/1/2020

Subject: Wetland Delineation Findings (Revision 2) for the Phelps Project Located in Weld County, Colorado

Dear Mr. Porter,

PDC Energy (PDC) has requested Two Dot Consulting, LLC (2DOT) conduct a wetland delineation and determination if prior construction activities impacted jurisdictional waters surrounding the Phelps pad and access road (Project Area) located in Weld County, Colorado. The site visit was conducted on 6/22/2020.

Project Location

The Project Area is located south of County Road 4, approximately 0.8 mile north of Brighton, Colorado in section 32, township 1 north, and range 66 west (**ATTACHMENT I: Vicinity Map**).

Site Conditions

The Project Area is an operational oil and gas well pad and production facility that is located on private property adjacent to an actively managed agricultural field to the east. The topography is relatively flat with a slight depression along the forested wetland area between the wellpad and production facility. The adjacent land use of the Project Area is composed of rangeland that supports an active prairie dog colony. A National Wetland Inventory (NWI) mapped freshwater forested/shrub wetland is located within the Project Area (**ATTACHMENT I: Wetland Delineation Map 1**).

Methods

2DOT conducted wetland delineations in accordance with the Great Plains Regional Supplement to the 1987 USACE Wetland Delineation Manual. Wetland data was mapped using a sub-meter accuracy handheld GPS. 2DOT examined soils, hydrology, and vegetation at the Project Area to determine the current wetland boundaries and potential impacts resulting from the pad construction activities.

Summary of Wetland and Waters of the U.S. Findings

A freshwater emergent wetland and freshwater forested/shrub wetland were observed and delineated within the Project Area (**ATTACHMENT I**). Approximately 0.24 acre of wetlands were delineated within the Project Area. The water source of the wetland appears to originate from an actively managed agricultural field located up gradient and directly east of the Project Area. The field was being flood-irrigated during the site visit on 6/22/2020 and the excess water was draining southwest through an earthen irrigation ditch to a culvert that goes under the oil and gas road and terminates into the area just up gradient of the eastern most delineated wetland (**ATTACHMENT II: Photographic Log**). The freshwater emergent wetland is dominated by reed canary grass (*Phalaris arundinacea*), common threesquare

(*Schoenoplectus pungens*), salt grass (*Distichlis spicata*), and patches of broadleaf cattail (*Typha latifolia*). The wetland continues down gradient where it transitions to a freshwater forested/shrub wetland that is dominated by Russian olive (*Elaeagnus angustifolia*) in its overstory (**ATTACHMENT III: Wetland Determination Data Forms**). The delineated forested/shrub wetland continues down gradient where a hydrological connection to Fulton Ditch was observed (**ATTACHMENT I**). Due to the downstream connections, the delineated wetlands are potentially jurisdictional. However, since the wetland source is likely agriculturally fed, there is a possibility that the wetlands in question are “artificially irrigated areas” and therefore are not subject to 404 permitting.

Based on Google Earth historical and current aerial imagery, as available on 6/23/2020, the construction activities associated with what appears to be a pipeline trench connecting the wellheads to the tank battery facility, bisected and impacted a 39 feet by 30 feet long area, approximately 0.027 acre, within the historical wetland that was likely present prior to the impacts (**ATTACHMENT I: Wetland Delineation Map 2**). Soil compaction with vegetation and hydrology disturbances were observed within the disturbance areas (**ATTACHMENT II**). Based on the historical imagery and the site visit on 6/22/2020, the Russian olive overstory and emergent wetland understory that were likely present prior to the disturbance were removed during construction, and the majority of the vegetation has not returned. Cheatgrass (*Bromus tectorum*) and lambsquarters (*Chenopodium album*) with signs of saltgrass and curly doc (*Rumex crispus*) occupy the sparsely vegetated disturbance area. Cheatgrass is a Colorado listed noxious weed – C list species. The vegetation observed directly adjacent to the disturbance area within the delineated wetland was broadleaf cattail, narrowleaf cattail (*Typha angustifolia*), common threesquare, reed canary grass, and softstem bulrush (*Schoenoplectus tabernaemontani*) which are common wetland species vegetation (**ATTACHMENT II**).

Surface disturbance and soil compaction from construction activities have manipulated wetland indicators near Soil Pit 7 (**ATTACHMENT I: Wetland Delineation Map 1**). Typical hydric wetland soils were observed at a depth that was not consistent with the delineated wetland hydric soils located approximately 10 feet south within the delineated wetland and therefore did not meet the 1987 USACE Wetland Delineation Manual (Manual) parameters to be considered hydric soils. Wetland indicator soils within Soil Pit 7 were observed at 9.5 inches from the surface. These wetland indicator soils, as referenced within the Manual, Hydric Soil Indicator *Redox Dark Surface (F6)* as, “A layer that is at least 10 cm (4 inches) thick starting a depth of ≤ 20 cm (8 inches) from the mineral soil surface” did not meet the depth criteria to be considered hydric. This was likely due to surface disturbance and soil content (road-base material), that was observed above the layer with the wetland indicator soils during the delineation. Due to surface disturbance and compaction, no hydrological features or wetland vegetation were present at Soil Pit 7. Based on existing site conditions, soil indicators, and historical imagery, it is likely that the wetland feature extended further north beyond its current delineated boundary prior to the construction activities from 10/2013 and 6/2014. However, the extent the historical wetland potentially continued could not be determined during the site visit on 6/24/2020.

Recommendations

It is recommended that PDC coordinate with USACE and COGCC for potential mitigation, restoration, and/or any post-construction permitting requirements. Given that the wetland that was impacted is

classified as a freshwater forested/shrub wetland, any impacts to this type of wetland automatically requires a pre-construction notification (PCN), under nationwide permit (NWP) 12 – *Utility Line Activities*, be submitted to USACE prior to construction activities (**ATTACHMENT IV: USACE NWP 12**). 2DOT recommends contacting USACE to initiate coordination and request a site visit for an approved jurisdictional determination (AJD) regarding the jurisdictional nature of the wetlands. An AJD will determine the permitting path forward, if any. USACE will likely be the lead agency during the coordination process and all information and post-construction requirements will be summarized and presented to COGCC once all applicable general and regional conditions are adequately addressed.

Nationwide Permit 12 – Utility Line Activities

Prior to construction of the Project Area, a PCN under NWP 12 would have most likely been required due to criteria (1) “*the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way*”. Since the construction activities occurred between 10/2013 and 6/2014, the 2012 *Nationwide Permit Information* would have been applicable for the Project Area (**ATTACHMENT IV**). Please see Table 1 below comparing the Project Area’s current condition, as observed during the site visit on 6/24/2020, to the 2012 General and Region Conditions (**ATTACHMENT IV; ATTACHMENT V: 2012 Regional Conditions in Colorado**).

Table 1. 2012 NWP General and Regional Conditions Post-Construction Observations

2012 General and Regional Conditions for NWP 12		
General/Regional Condition	Title	Observation
1	<i>Navigation</i>	NA – feature was not being utilized for navigation
2	<i>Aquatic Life Movements</i>	NA – aquatic species not likely present
3	<i>Spawning Areas</i>	NA – not present
4	<i>Migratory Bird Breeding Areas</i>	Unknown at this time if nests were present during construction activities
5	<i>Shellfish Beds</i>	NA – not present
6	<i>Suitable Material</i>	No signs of unsuitable material observed
7	<i>Water Supply Intakes</i>	No signs of public water use were observed nearby
8	<i>Adverse Effects from Impoundments</i>	No signs of impoundment were observed
9	<i>Management of Water Flows</i>	Unknown as to the functionality of the feature prior to construction activities
10	<i>Fills Within 100-Year Floodplains</i>	NA – not within a FEMA 100-Year Floodplain
11	<i>Equipment</i>	Unknown if equipment utilized measures to limit soil disturbance
12	<i>Soil Erosion and Sediment Controls</i>	Unknown if proper BMPs were utilized
13	<i>Removal of Temporary Fills</i>	Temporary fills not observed; however, unknown if returned to pre-existing conditions
14	<i>Proper Maintenance</i>	Unknown



15	<i>Single and Complete Project</i>	No NWP utilized for the work prior to commencing
16	<i>Wild and Scenic Rivers</i>	NA – not present
17	<i>Tribal Rights</i>	NA – not present
18	<i>Endangered Species</i>	T&E species are not likely present due to the amount of disturbance and habitat fragmentation observed in the area
19	<i>Migratory Birds and Bald and Golden Eagles</i>	Take permit was not required for the Project Area
20	<i>Historic Properties</i>	Unknown; however, unlikely historic properties exist on site
21	<i>Discovery of Previously Unknown Remains and Artifacts</i>	Unknown; however, unlikely previously unknown remains and artifacts existed on site
22	<i>Designated Critical Resource Waters</i>	NA – not present
23	<i>Mitigation</i>	To Be Determined
24	<i>Safety of Impoundment Structures</i>	NA – not present
25	<i>Water Quality</i>	Unknown; however, likely the activity did not result in more than minimal degradation of water quality
26	<i>Coastal Zone Management</i>	NA – not present
27	<i>Regional and Case-By-Case Conditions</i>	Feature is not a perennial water; therefore, regional conditions appeared to have been met

Please let me know if you have any questions.

Thank you,

Spencer Morrison



SPENCER **MORRISON**
project manager • wildlife biologist • wetland specialist
ARVADA, CO | LARAMIE, WY | SARATOGA, WY
Office: 303.953.2255 | Mobile: 303.726.3181
morrison@2dotconsulting.com
www.2dotconsulting.com



ATTACHMENT I: Maps

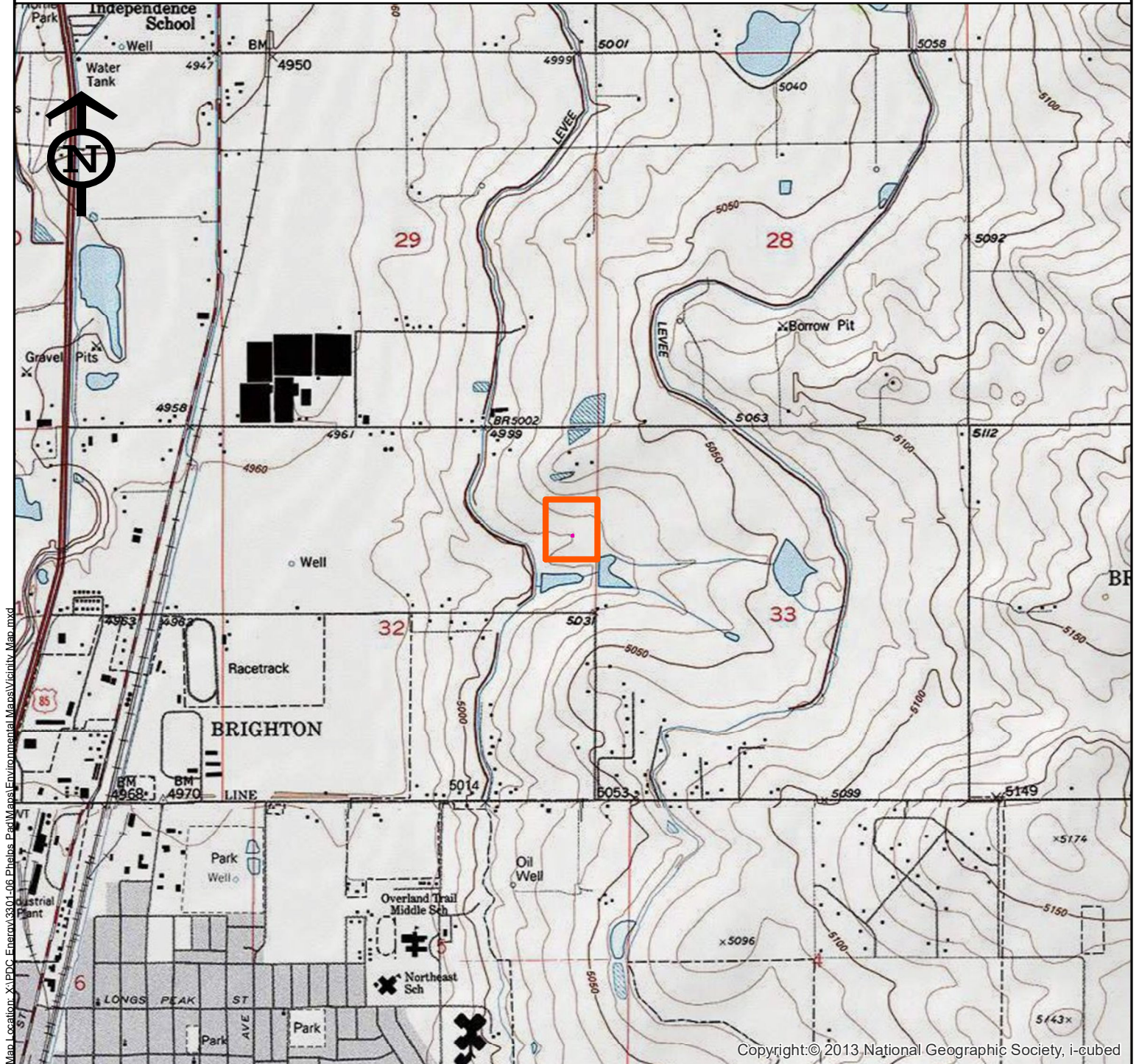
Vicinity Map

Wetland Delineation Map 1

Wetland Delineation Map 2

Phelps Pad

SECTION 32, TOWNSHIP 1N, RANGE 66W, 6TH P.M. WELD COUNTY, CO



Project Area

PREPARED BY:



7674 Grandview Ave., Ste. 210
Arvada, CO 80002

0 1,000 2,000
Feet

SOURCES:
Project Features, 2DOT 2020
and PDC 2020.

PREPARED FOR:

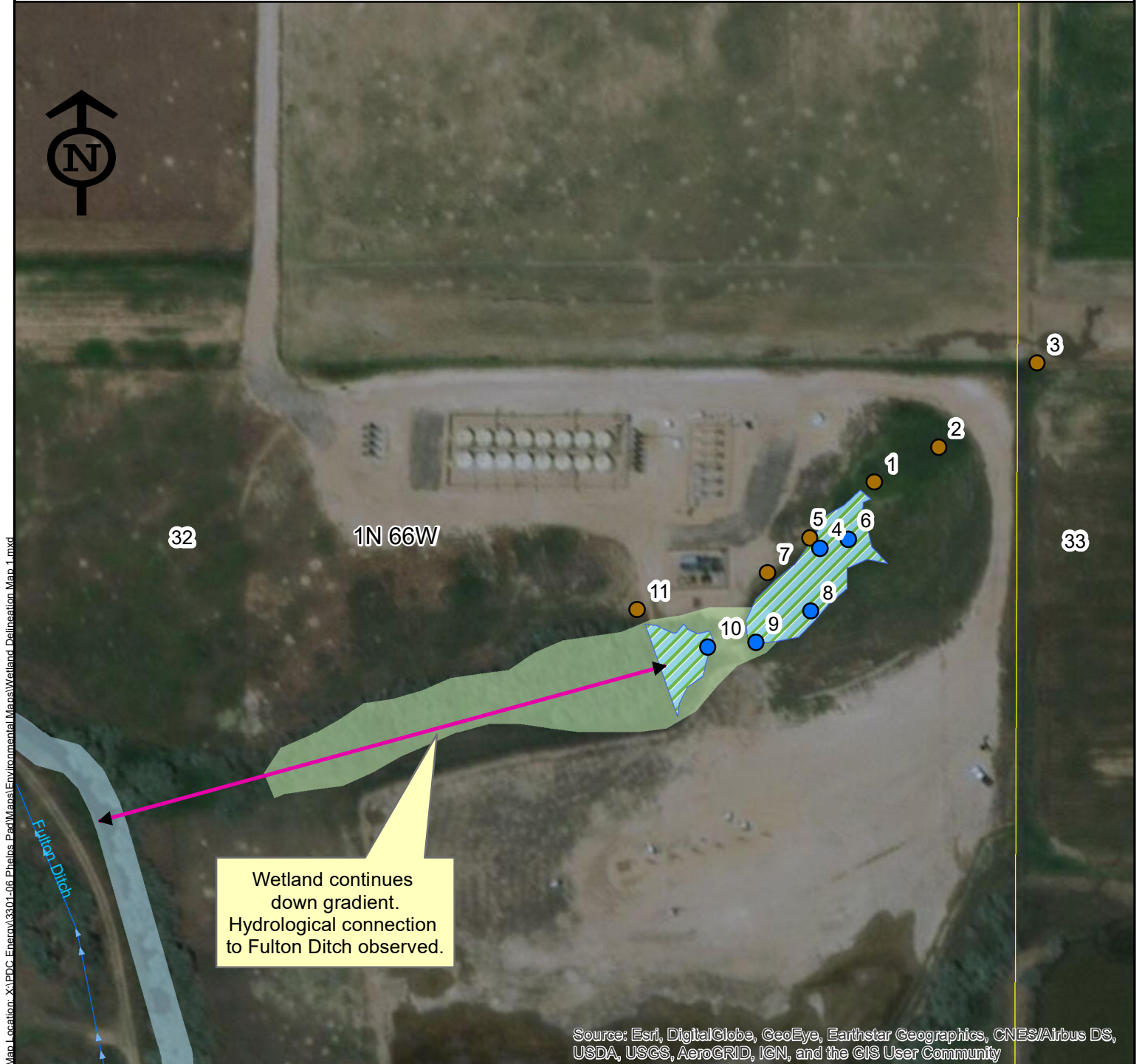


Projection: Nad83 UTM 13N Date: 6/23/2020
Drafted By: SM Reviewed By: SR

Vicinity
Map

Phelps Pad

SECTION 32, TOWNSHIP 1N, RANGE 66W, 6TH P.M. WELD COUNTY, CO



- | | | |
|---|--|---|
| ● Upland Soil Pit |  Delineated Wetlands |  Section |
| ● Wetland Soil Pit |  NWI-mapped Freshwater Forested/Shrub Wetland | |
|  NHD-mapped Ditch |  NWI-mapped Riverine | |

PREPARED BY:



7674 Grandview Ave., Ste. 210
Arvada, CO 80002

0 100 200
Feet

SOURCES:
Project Features, 2DOT 2020
and PDC 2020.

PREPARED FOR:



Projection: Nad83 UTM 13N Date: 6/23/2020
Drafted By: SM Reviewed By: SR

Wetland Delineation
Map 1

Phelps Pad

SECTION 32, TOWNSHIP 1N, RANGE 66W, 6TH P.M. WELD COUNTY, CO



The extent the delineated wetland continued north prior to construction activities is undetermined.

32

1N 66W

30 feet

39 feet

Impacts to wetland feature are approximately 0.027 acre.

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Delineated Wetlands

PREPARED BY:



7674 Grandview Ave., Ste. 210
Arvada, CO 80002

0 50 100
Feet

SOURCES:
Project Features, 2DOT 2020
and PDC 2020.

PREPARED FOR:



Projection: Nad83 UTM 13N Date: 6/23/2020
Drafted By: SM Reviewed By: SR

Wetland Delineation
Map 2



ATTACHMENT II: Photographic Log



Photograph 1. The delineated freshwater wetland that is located in the northeastern corner of the Project Area. View is looking southwest towards the delineated forested/shrub wetland.



Photograph 2. Directly adjacent flood-irrigated agricultural field that is the water source for the down gradient wetlands. View is looking east.



Photograph 3. Culvert terminus from the flood-irrigated agricultural field. The culvert terminates up gradient from the freshwater emergent wetland



Photograph 4. Disturbance area through the NWI-mapped and 2DOT delineated forested/shrub wetland. View is looking north.



Photograph 5. Disturbance area through the NWI-mapped and 2DOT delineated forested/shrub wetland. View is looking west.



Photograph 6. Disturbance area through the NWI-mapped and 2DOT delineated forested/shrub wetland. View is looking east.



Photograph 7. Upland area directly south of the disturbance area. View is looking south towards the wellpad.



Photograph 8. Historical Google Earth imagery of the Project Area, 10/2013, prior to construction activities.



Photograph 9. Historical Google Earth imagery of the Project Area, 6/2014, post wetland disturbance with pipeline trenching observed.



ATTACHMENT III: Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC - Phelps City/County: Weld Sampling Date: 6-22-2020
 Applicant/Owner: PDC State: CO Sampling Point: 1
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): Slight depression Local relief (concave, convex, none): none Slope (%): -
 Subregion (LRR): G Lat: 40.01100017 Long: -104.79198017 Datum: WGS 84
 Soil Map Unit Name: Olney fine sandy loam, 1-3% slopes NWI classification: W4A NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u> No <u>X</u>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
= Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u>X</u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> = Total Cover				
Herb Stratum (Plot size: <u>5'x5'</u>) 1. <u>Phalaris Arundinacea</u> <u>70</u> <u>Y</u> <u>FACW</u> 2. <u>Schoenoplectus pungens</u> <u>30</u> <u>Y</u> <u>FACW</u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> = Total Cover				
Woody Vine Stratum (Plot size: <u>X</u>) 1. <u> </u> 2. <u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>X</u> = Total Cover				
Remarks:				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>				

Sampling Point: 1

HYDROLOGY

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

- Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) **(LRR F)**

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

Remarks: Water in the area is fed from culvert up gradient. Culvert gets its water from adjacent ag field to the east.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC-Phelps City/County: Weld Sampling Date: 6-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 2
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): Slight depression Local relief (concave, convex, none): concave Slope (%): <1%
 Subregion (LRR): G Lat: 40.0110917 Long: -104.79176267 Datum: WGS 84
 Soil Map Unit Name: Olney Fine Sandy loam, 1-3% slopes NWI classification: Amis NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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 <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			
Remarks: <u>Area is not saturated long enough for the soils to become hydric</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u>X</u>)				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
<u> </u> = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'x5'</u>)				
1. <u>Phalaris Arundinacea</u>	<u>100</u>	<u>X</u>	<u>FACW</u>	
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
<u> </u> = Total Cover				
Woody Vine Stratum (Plot size: <u>X</u>)				
1. <u> </u>				
2. <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>X</u>				
<u> </u> = Total Cover				
Remarks:				

Sampling Point: 2

[illegible]²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No redox

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (LRR F)

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

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 inspections), if available:

Remarks: Surface water is from culvert that is fed from the adjacent agricultural field.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC - Phelps City/County: Weld Sampling Date: 6-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 3
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): Ditch feature Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): G Lat: 40.01130167 Long: 704.79142683 Datum: WGS 84
 Soil Map Unit Name: olney fine sandy loam, 1-3% slopes 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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 <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>f</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u> </u> (A) Total Number of Dominant Species Across All Strata: <u> </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> </u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u>90</u> x 2 = <u>180</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u> </u> x 4 = <u> </u> UPL species <u>15</u> x 5 = <u>75</u> Column Totals: <u>115</u> (A) <u>285</u> (B) Prevalence Index = B/A = <u>2.47</u>
<u> </u> = Total Cover				
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>5'x5'</u>)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% <u>X</u> 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.
1. <u>Phalaris Arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>rumex crispus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Bromus inermis</u>	<u>15</u>	<u>N</u>	<u>UPL</u>	
4. <u>Schonoplectus tabernaemontani</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
<u>115</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>X</u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>X</u>				
Remarks:				

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100					SL	roots present
2-15 ⁺	10YR 3/2	30					S	
	10YR 4/2	70					S	

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

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

Indicators for Problematic Hydric Soils³:

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No redox

HYDROLOGY

Wetland Hydrology Indicators:

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

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> (where tilled) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): 0"

Water Table Present? Yes _____ No ☒ Depth (inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks: Surface water is fed from Ag ditch to the east. Pit is within an earthen ditch..

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC- Phelps City/County: Well Sampling Date: 6-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 4
 Investigator(s): SM + SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): Slight depression Local relief (concave, convex, none): Concave Slope (%): 41%
 Subregion (LRR): G Lat: 40.01082850 Long: -104.79216517 Datum: WGS 84
 Soil Map Unit Name: olney fine sandy loam, 1-3% slopes 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u>X</u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>5' x 5'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Schoenoplectus pungens</u>	<u>80</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Schoenoplectus tabernaemontani</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
3. <u>Hordeum jubatum</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>102</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u> </u>				
Remarks:				

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3.5	10YR 3/1	100					S2	roots present
3.5-8.5	10YR 3/1	90	2.5R 3/6	2	mac	m		
	10YR 4/2	10						
8.5-14+	10YR 4/2	30						
	10YR 3/1	70	2.5R 3/6	7	c	m		

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

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

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

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ☐ 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)
- ☒ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

- | | | |
|------------------------|---|-----------------------|
| Surface Water Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): _____ |
| Water Table Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): _____ |
| Saturation Present? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches): _____ |

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: Area receives its water up gradient from a culvert from Ag field water run off, more clay/organic content on soils

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: Phelps City/County: Weld County Sampling Date: 6/22/20
 Applicant/Owner: PDC State: CO Sampling Point: 5
 Investigator(s): SR, SM Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 1%
 Subregion (LRR): G Lat: 40.01085633 Long: -104.79219750 Datum: WGS 84
 Soil Map Unit Name: Olney Fine Sandy loam, 1-3% slopes 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes Y No ☐
 Are Vegetation N, Soil N, or Hydrology N 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>1</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) Prevalence Index worksheet: Total % Cover of: <u>100</u> Multiply by: OBL species <u>1</u> x 1 = <u>1</u> FACW species <u>1</u> x 2 = <u>2</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>3</u> (A) <u>2</u> (B) Prevalence Index = B/A = <u>0.67</u> Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>1</u>) = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5'x5'</u>) = Total Cover				
1. <u>Hordeum jubatum</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Schoenoplectus purpureus</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Distichlis spicata</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>	
4. <u>Phalaris arundinacea</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>1</u>) = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>0</u> = Total Cover				
Remarks:				

Sampling Point: 5

[illegible]

Indicators for Problematic Hydric Soils³:

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Doesn't hit depth requirement

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

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

Secondary Indicators (minimum of two required)

- ___ 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)
- ✓/___ 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 1 No 1

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC Phelps City/County: Weld Sampling Date: 6/22/20
 Applicant/Owner: PDL State: CO Sampling Point: 6
 Investigator(s): SR, SM Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): Slight depression Local relief (concave, convex, none): concave Slope (%): 41%
 Subregion (LRR): G Lat: 40.01084900 Long: -104.79207050 Datum: WGS 84
 Soil Map Unit Name: Olney Fine sandy loam, 1-3% slopes NWI classification: NIA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>✓</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: <u>✓</u>)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'x5'</u>)	_____	_____	_____	
1. <u>Scleroplectus purgus</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Hordeum jubatum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FW</u>	
3. <u>Phalaris arundinacea</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum (Plot size: <u>✓</u>)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>✓</u> _____ = Total Cover				
Remarks:				

Sampling Point: 6

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	(where tilled)
<input type="checkbox"/> Drift Deposits (B3)	(where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
Field Observations:		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: When a slight depression where water can Congregate. dead veg is lying when the same pattern facing southwest/down gradient		

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC - Phelps City/County: Weld Sampling Date: 10-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 7
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): graded area Local relief (concave, convex, none): — Slope (%): —
 Subregion (LRR): G Lat: 40.01076333 Long: -104.79234133 Datum: WGS 84
 Soil Map Unit Name: Olney fine Sandy loam, 1-3% slopes NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes — No X (If no, explain in Remarks.)
 Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes — No X
 Are Vegetation N, Soil N, or Hydrology N 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 <u>—</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>—</u> No <u>X</u>
Hydric Soil Present? Yes <u>—</u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>—</u> No <u>X</u>	
Remarks: <u>Area has been graded and manipulated for the O & G pad. heavy disturbance observed</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>X</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>—</u> (A) Total Number of Dominant Species Across All Strata: <u>—</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>—</u> (A/B)
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
3. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
4. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
5. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
Sapling/Shrub Stratum (Plot size: <u>X</u>) = Total Cover				Hydrophytic Vegetation Indicators: <u>—</u> 1 - Rapid Test for Hydrophytic Vegetation <u>—</u> 2 - Dominance Test is >50% <u>—</u> 3 - Prevalence Index is ≤3.0 ¹ <u>—</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>—</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
3. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
4. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
Herb Stratum (Plot size: <u>5'x5'</u>) = Total Cover				Hydrophytic Vegetation Present? Yes <u>—</u> No <u>X</u>
1. <u>Typha latifolia</u>	<u>1</u>	<u>N</u>	<u>OBL</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	Remarks: <u>Area has been graded & compacted for O & G operation - Veg not presently here. unknown if was prior to disturbance</u>
3. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
4. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
5. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
6. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
7. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
8. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
9. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
10. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
Woody Vine Stratum (Plot size: <u>X</u>) = Total Cover				
1. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
2. <u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	
% Bare Ground in Herb Stratum <u>99%</u> = Total Cover				

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-9.5	10YR 3/2	100					SL
9.5-14	10YR 3/2	20					
	10YR 3/1	80	2.5YR 3/6	8	C	m	↓

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: redox layer is too far from surface. heavy soil compaction

HYDROLOGY

Wetland Hydrology Indicators:

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> (where tilled)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> (where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> 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 inspections), if available:

Remarks: Soil compaction likely altered the hydrology. No hydrology indicators observed

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC-Phelps City/County: Weld Sampling Date: 6-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 8
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 4.7%
 Subregion (LRR): 6 Lat: 40.01066933 Long: -104.79219500 Datum: WGS 84
 Soil Map Unit Name: Olney fine sandy loam, 1-3% slopes NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation N, Soil N, or Hydrology N 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20'x20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. <u>Elaeagnus angustifolia</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>100</u> x 2 = <u>200</u> FAC species _____ x 3 = _____ FACU species <u>40</u> x 4 = <u>160</u> UPL species _____ x 5 = _____ Column Totals: <u>140</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>2.57</u>
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: <u>X</u>)	_____	_____	_____	Hydrophytic Vegetation Indicators: ____ 1 - Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Remarks:
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover	_____	_____	_____	
Herb Stratum (Plot size: <u>5'x5'</u>)	_____	_____	_____	Remarks:
1. <u>Phalaris arundinacea</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Remarks:
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Remarks:
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover	_____	_____	_____	
Woody Vine Stratum (Plot size: <u>X</u>)	_____	_____	_____	Remarks:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover	_____	_____	_____	
% Bare Ground in Herb Stratum <u>X</u>	_____	_____	_____	Remarks:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover	_____	_____	_____	

Sampling Point:

HYDROLOGY

Wetland Hydrology Indicators:Great Plains – Version 2.0

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Phelps City/County: Weld County Sampling Date: 6/22/20
 Applicant/Owner: PDC State: CO Sampling Point: 9
 Investigator(s): SR, SM Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 0-1%
 Subregion (LRR): G Lat: 40.01058767 Long: -104.79238033 Datum: NAD83
 Soil Map Unit Name: Olney fine Sandy loam, 1-3% slopes NWI classification: forested
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20x20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Eleagnus angustifolia</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Sapling/Shrub Stratum (Plot size: _____) <u>30</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>100</u> x 2 = <u>200</u> FAC species _____ x 3 = _____ FACU species <u>30</u> x 4 = <u>120</u> UPL species _____ x 5 = _____ Column Totals: <u>130</u> (A) <u>320</u> (B) Prevalence Index = B/A = <u>2.4</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Herb Stratum (Plot size: <u>5'x5'</u>) _____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 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.
1. <u>Scheuchzeria palustris</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>FW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: _____) <u>100</u> = Total Cover				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____ = Total Cover				
Remarks:				

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-4.5	10YR 3/2	100				Sandy loam	
4.5-16	10YR 4/2	65	10YR 4/6	5	C	PL/M	↓
4.5-16	10YR 4/3	30				clay	

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3 in</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3 in</u>

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: _____

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: PDC - Phelps City/County: Weld Sampling Date: 6-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 10
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): <1%
 Subregion (LRR): G Lat: 40.01057517 Long: -104.79254033 Datum: NAD83
 Soil Map Unit Name: Olney fine sandy loam, 1-3% slopes NWI classification: forested

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation N, Soil N, or Hydrology N 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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	
Remarks: <u>Wetland just west of disturbance path w/ NWI feature</u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>20' x 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Elaeagnus angustifolia</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Sapling/Shrub Stratum (Plot size: <u>X</u>) = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>70</u> x 1 = <u>70</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u> </u> x 3 = <u> </u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u>150</u> (A) <u>330</u> (B) Prevalence Index = B/A = <u>2.2</u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Herb Stratum (Plot size: <u>5' x 5'</u>) = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u>typha latifolia</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Phalaris arundinacea</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. <u>typha angustifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Woody Vine Stratum (Plot size: <u> </u>) = Total Cover				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
% Bare Ground in Herb Stratum <u> </u> = Total Cover				
Remarks: <u> </u>				

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100					C	roots present
3-10	10YR 3/1	90	2.5YR 3/6	5	C	M		
	10YR 4/2	100 10						
10-14+	10YR 3/1	60	2.5YR 3/6	10	C	M		
	10YR 4/2	40						

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

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

Indicators for Problematic Hydric Soils³:

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> (where tilled)
<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☒ No ☐ Depth (inches): 12"

Saturation Present? Yes ☒ No ☐ Depth (inches): 11"

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: PDC-Phelps City/County: Weld Sampling Date: 6-22-20
 Applicant/Owner: PDC State: CO Sampling Point: 11
 Investigator(s): SM & SR Section, Township, Range: 32, 1N, 66W
 Landform (hillslope, terrace, etc.): geographically neutral Local relief (concave, convex, none): none Slope (%): —
 Subregion (LRR): G Lat: 40.01067167 Long: -104.72277933 Datum: WGS84
 Soil Map Unit Name: Olney fine Sandy loam, 1-3% slopes 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No —
 Are Vegetation N, Soil N, or Hydrology N 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 — No X
 Wetland Hydrology Present? Yes — No X

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: X) Absolute % Cover Dominant Species? Indicator Status

1. — — — —
 2. — — — —
 3. — — — —
 4. — — — —

Sapling/Shrub Stratum (Plot size: X) = Total Cover

1. — — — —
 2. — — — —
 3. — — — —
 4. — — — —
 5. — — — —

Herb Stratum (Plot size: 5'x5') = Total Cover

1. Hordeum jubatum 50 Y FACW
 2. Distichlis spicata 50 Y FACW
 3. Lactuca Serriola 2 N FAC
 4. basia Scoparia 20 N FACU
 5. — — — —
 6. — — — —
 7. — — — —
 8. — — — —
 9. — — — —
 10. — — — —

Woody Vine Stratum (Plot size: X) 122 = Total Cover

1. — — — —
 2. — — — —

% Bare Ground in Herb Stratum X = Total Cover

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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 — x 1 = —
 FACW species 100 x 2 = 200
 FAC species 2 x 3 = 6
 FACU species 20 x 4 = 80
 UPL species — x 5 = —
 Column Totals: 122 (A) 286 (B)

Prevalence Index = B/A = 2.34

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
— 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
— Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present?

Yes X No —

SOIL

Sampling Point: 11

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	80					silty lean	Sandy clay loam
0-3	10YR 3/2	20						
3-16	10YR 4/2	100						↓

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

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

Indicators for Problematic Hydric Soils³:

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No redox observed

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> (where tilled)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> (where not tilled)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> 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 _____ No ☒

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

Remarks:



ATTACHMENT IV: USACE NWP 12

12. Utility Line Activities. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term “utility line” does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322).

Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 31.) (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 4: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

13. Bank Stabilization. Bank stabilization activities necessary for erosion prevention, provided the activity meets all of the following criteria:

- (a) No material is placed in excess of the minimum needed for erosion protection;
- (b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

For each single and complete project, no more than 10 generation units (e.g., wind turbines or hydrokinetic devices) are authorized.

This NWP does not authorize activities in coral reefs. Structures in an anchorage area established by the U.S. Coast Guard must comply with the requirements in 33 CFR part 322.5(l)(2). Structures may not be placed in established danger zones or restricted areas as designated in 33 CFR part 334, Federal navigation channels, shipping safety fairways or traffic separation schemes established by the U.S. Coast Guard (see 33 CFR part 322.5(l)(1)), or EPA or Corps designated open water dredged material disposal areas.

Upon completion of the pilot project, the generation units, transmission lines, and other structures or fills associated with the pilot project must be removed to the maximum extent practicable unless they are authorized by a separate Department of the Army authorization, such as another NWP, an individual permit, or a regional general permit. Completion of the pilot project will be identified as the date of expiration of the Federal Energy Regulatory Commission (FERC) license, or the expiration date of the NWP authorization if no FERC license is issued.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 31.) (Sections 10 and 404)

Note 1: Utility lines constructed to transfer the energy from the land-based collection facility to a distribution system, regional grid, or other facility are generally considered to be linear projects and each separate and distant crossing of a waterbody is eligible for treatment as a separate single and complete linear project. Those utility lines may be authorized by NWP 12 or another Department of the Army authorization.

Note 2: An activity that is located on an existing locally or federally maintained U.S. Army Corps of Engineers project requires separate approval from the Chief of Engineers under 33 U.S.C. 408.

Note 3: If the pilot project, including any transmission lines, is placed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration, National Ocean Service, for charting the generation units and associated transmission line(s) to protect navigation.

Note 4: For any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission line, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

C. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the

provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have “no effect” on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any “take” permits required under the U.S. Fish and Wildlife Service’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such “take” permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA

section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of

the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWP.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the

vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) that the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific

conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.



ATTACHMENT V: 2012 Regional Conditions in Colorado



2012 Regional Conditions in Colorado

Updated on September 5, 2014

**U.S. Army Corps of Engineers
Albuquerque District**

REGIONAL CONDITIONS TO NATIONWIDE PERMITS IN THE STATE OF COLORADO

Regional Conditions Applicable to Specific Nationwide Permits within the State of Colorado

1. Nationwide Permit No. 12: Utility Line Activities. Notification to the District Engineer (DE) in accordance with General Condition (GC) No. 31, pre-construction notification (PCN) is required for utility line activities that either require open trenching in perennial waters or are for the purpose of water transmission. The purpose for requiring a PCN for water transmission projects is to determine whether the project will result in withdrawal of water from a stream/river, and if so, whether the effects of the withdrawal are minimal.

2. Nationwide Permit Nos. 12 and 14: Utility Line Activities and Linear Transportation Projects. PCN is required for utility lines and transportation activities crossing perennial waters and/or special aquatic resources, including wetlands, in the Colorado River Basin (all tributaries to the Colorado River within Colorado).

3. Nationwide Permit No. 13: Bank Stabilization. PCN is required for bank stabilization activities either exceeding 250 linear feet or that are necessary for erosion prevention in streams with an average width of less than 20 feet (measured between the ordinary high water marks (OHWM)). Bank stabilization activities in these small streams are limited to the placement of no more than ¼ cubic yard of fill material per linear foot below the plane of the OHWM unless the Corps determines on a case-by-case basis that the use of larger or greater quantities of material is appropriate.

4. Nationwide Permit No. 23: Approved Categorical Exclusions. PCN is required for all projects utilizing Categorical Exclusions.

5. Nationwide Permit No. 27: Aquatic Habitat Restoration, Establishment, and Enhancement Activities. This permit is revoked for activities that include a fishery enhancement component in perennial streams. These types of projects must be authorized by the Regional General Permit No. 12 for Aquatic Habitat Improvement for Stream Channels in Colorado.

a. Channel realignment is not authorized by this permit unless it is demonstrated that the realignment is consistent with the natural morphological evolution of the stream.

b. Structures authorized by this permit must allow for the upstream and downstream passage of aquatic organisms, including fish native to the reach, unless waived in writing by the DE.

c. Structures authorized by this permit must not impede waterborne navigation, including recreational watercrafts, unless waived in writing by the DE.

d. The use of concrete/grouting is not allowed in perennial streams unless waived in writing by the DE.

e. The construction of water parks (e.g. kayak courses) and flood control projects are not authorized by this permit.

6. Nationwide Permit Nos. 29 and 39: Residential Developments and Commercial and Institutional Developments. A copy of the Existing FEMA/locally-approved floodplain map must be submitted with the PCN.

Regional Conditions Applicable to All Nationwide Permits within the State of Colorado

7. Important Spawning Areas. GC No. 3 (Spawning Areas) is amended by adding the following: Activities are not authorized by any nationwide permit except after case-by-case review and consultation with Colorado Parks and Wildlife (CPW) if the activities would destroy important spawning areas or would be conducted in these waters during trout and Kokanee spawning seasons. Bio-engineering techniques, such as native riparian shrub plantings, are required for all bank protection activities that exceed 50 linear feet in important spawning areas. For activities located in these important spawning areas, PCN is required and consultation with CPW must be conducted in accordance with the timeframes established in GC 31 (Pre-Construction Notification). Important spawning areas are identified in the list of Gold Medal Waters in Colorado (Attachment 2).

NOTE: Pre-application consultation with the CPW, preferably on-site, is highly recommended. Providing documentation of pre-application consultation with CPW, stating that CPW has reviewed the proposed project and has no concerns, may result in quicker processing times. Please visit the following state website to determine the appropriate office for coordination: <http://cpw.state.co.us>.

8. Removal of Temporary Fills. GC No. 13 (Removal of Temporary Fills) is amended by adding the following: When temporary fills are placed in wetlands, a horizontal marker (i.e. fabric, certified weed-free straw, etc.) must be used to delineate the existing ground elevation of wetlands that will be temporarily filled during construction.

9. Fens. All nationwide permits, with the exception of 3, 5, 6, 20, 27, 32, 37, and 38, are revoked for activities located in fens and wetlands adjacent to fens. PCN is required for all other activities considered for authorization by Nationwide Permits. The permittee may not begin the activity until the Corps determines the adverse environmental effects are minimal.

A fen is defined as a groundwater-fed wetland with saturated fibric organic soil (greater than or equal to 16 inches in thickness) that is classified as a histosol in the Natural Resources Conservation Service (NRCS) Field Indicators of Hydric Soils in the United State (Version 7.0, 2010). A copy of the document can be obtained from the NRCS at ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/FieldIndicators_v7.pdf.

Note: A fen may be part of a larger aquatic system (fen complex) where wetlands and other waters adjacent to the fen may provide a critical source of hydrology necessary for sustaining the fen.

10. Springs. PCN is required for all Nationwide Permits if the activities occur within 100 feet of the discharge point of a spring. The Corps will determine if the proposed project will have more than a minimal effect to the site specific spring and may require an Individual Permit or project modification to reduce/eliminate the spring impacts. For the purposes of this regional condition, springs do not include seeps or other discharges that do not have a defined channel.

11. Suitable Fill. PCN is required for the use of broken concrete as fill material within the State of Colorado. Permittees must demonstrate that soft engineering methods utilizing native or non-manmade materials are not

practicable (with respect to cost, existing technology, and logistics), before broken concrete is allowed as suitable fill. Use of broken concrete with exposed rebar is prohibited.

Note: GC No. 6 prohibits the use of unsuitable material, which includes but is not limited to organic debris, building waste, asphalt, car bodies, and junk materials.

ADDITIONAL INFORMATION

The following additional information relates to minimization of impacts to jurisdictional waters of the United States and compliance with the General Conditions:

1. **Permittees are reminded** that appropriate erosion and sediment controls are required in accordance with GC No. 12 in order to properly stabilize the site and prevent erosion and siltation into wetlands and other waters downstream. Streambed material or other small aggregate material placed alone for bank stabilization will not meet GC No. 12.

2. **Permittees are reminded** that all compensatory mitigation is required prior to or concurrent with project construction to ensure compliance with the Final Compensatory Mitigation Rule. A complete copy of the Final Compensatory Mitigation Rule may be obtained at the following website: http://www.usace.army.mil/cecw/pages/final_cmr.aspx.

3. **Permittees are encouraged** to clean heavy equipment prior to and after construction if equipment was previously used in another stream, river, lake, pond or wetland within 10 days of initiating work in order to prevent the spread of New Zealand Mud Snails and other aquatic hitchhikers:

a. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and keep the equipment dry for 10 days; or

b. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with either a 1:1 solution of Formula 409 Household Cleaner and water, or other approved chemical solutions. Treated equipment must be kept moist for at least 10 minutes; or

c. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 120 degrees F for at least 10 minutes.

4. Designated Critical Resource Waters. Within the State of Colorado, the waters listed in **Attachment 1** are designated as Critical Resource Waters. In accordance with GC 22, the discharge of dredged or fill material is not authorized by the following nationwide permits in these waters or their adjacent wetlands: NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, A and B. In addition, in accordance with GC 31, notification to the DE is required for the use of the following nationwide permits in these waters and their adjacent wetlands: NWP 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37 and 38.

5. Gold Medal Waters. Within the State of Colorado, the waters listed in **Attachment 2** are designated as Gold Medal Waters. Requirements for projects located in these waters and their adjacent wetlands are set forth in RC 7 above.

ATTACHMENT 1: DESIGNATED CRITICAL RESOURCE WATERS

The Colorado Water Quality Control Division designates Critical Resource Waters within the State of Colorado. Please note that the following list is subject to change. For the most current list, or for more information on specific designations within these watersheds and their tributaries, please refer to the Colorado Water Quality Control Commission's website: <http://www.colorado.gov/cs/Satellite/CDPHE-Main/CBON/1251595703337>.

Animas and Florida River Basins. All tributaries to the Animas River and Florida River, including all wetlands, which are within the Weminuche Wilderness Area.

Hermosa Creek, including all tributaries, from the source to immediately below the confluence with Long Hollow, except for the East Fork of Hermosa Creek.

All lakes and reservoirs tributary to the Animas River and Florida River which are within the Weminuche Wilderness Area. This segment includes Lillie Lake, Castilleja Lake, City Reservoir, Emerald Lake, Ruby Lake, Balsam Lake, Garfield Lake, Vestal Lake, Eldorado Lake, Highland Mary Lakes, Verde Lakes, Lost Lake, and Crater Lake.

Bear Creek Basin. The mainstem of Bear Creek and all tributaries, lakes, and reservoirs, including wetlands, within the Mt. Evans Wilderness Area.

Big Thompson River Basin. The mainstem of the Big Thompson River, including all tributaries, lakes, reservoirs, and wetlands, located within Rocky Mountain National Park (RMNP).

Blue River Basin. North Fork of the Swan River, including all tributaries and wetlands, from the source to the confluence with the Swan River.

All tributaries to the Blue River, including wetlands within the Eagle Nest and Ptarmigan Peak Wilderness Areas.

All lakes and reservoirs within the Eagle Nest and Ptarmigan Peak Wilderness Areas.

Boulder Creek Basin. All tributaries to Boulder Creek, including lakes, reservoirs, and wetlands, located within the Indian Peaks Wilderness Area.

Cache la Poudre River Basin. All tributaries to the Cache La Poudre River, including lakes, reservoirs, and wetlands, located within RMNP and Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas.

Clear Creek Basin. All tributaries to Clear Creek, including lakes, reservoirs, and wetlands, located within Mt. Evans Wilderness Area.

San Luis Valley (Closed Basin). All tributaries in the Closed Basin, including wetlands, lakes, and reservoirs, located within the La Garita Wilderness Area.

The mainstem of Sand Creek, including all tributaries and wetlands, from the source to the mouth.

The mainstem of Medano Creek, including all tributaries and wetlands, from the source to the mouth

Colorado River Basin. The mainstem of the Colorado River, including all tributaries and wetlands, located within or flowing into RMNP.

All tributaries to the Colorado River and Frasier River within RMNP and within the Never Summer, Indian Peaks, Byers, Vasquez, Eagles Nest, and Flat Top Wilderness Areas.

Mainstem of Northwater Creek and Trapper Creek, including all tributaries and wetlands, from their source to the confluence with the East Fork of Parachute Creek. East Middle Fork of Parachute Creek, including all tributaries and wetlands from the source to the confluence with Middle Fork of Parachute Creek.

Battlement Creek, including all tributaries and wetlands, from its source to a point immediately downstream boundary of BLM lands.

Mainstem of Rapid Creek, including all tributaries and wetlands, from the source to a point immediately below the confluence with Cottonwood Creek including Kruzen Springs.

Dolores River Basin. All tributaries to the Dolores River and West Dolores River, including all wetlands, tributaries, which are within the Lizard Head Wilderness area.

Mainstem of Rio Lado from the source to the confluence with the Dolores River. Mainstem of Spring Creek from the source to the confluence with Stoner Creek. Mainstem of Little Taylor Creek from the source to the confluence with Taylor Creek.

All lakes, and reservoirs tributary to the Dolores River and West Dolores River, which are within the Lizard Head Wilderness area. This segment includes Navajo Lake.

Eagle River Basin. All tributaries to the Eagle River system, including lakes, reservoirs, and wetlands, located within the Eagle Nest and Holy Cross Wilderness Areas of the Gore Range.

Abrams Creek, including all tributaries and wetlands, from the source to the eastern boundary of the BLM lands.

Fountain Creek Basin. Severy Creek, including all tributaries, from the source to a point just upstream of where the Forest Service Road 330 crosses the stream.

Bear Creek, including all tributaries, from the source to a point upstream of GPS coordinated N3847682, W10454917 (this location is at elevation 8,200 feet above sea level at a 250 degree angle and 3,000 feet from the trailhead of the Mount Buckhorn Trail off High Drive).

Upper Gunnison River Basin. All tributaries to the Gunnison River, including and wetlands, within the La Garita, Powderhorn, West Elk, Collegiate Peaks, Maroon Bells, Fossil Ridge, or Uncompahgre Wilderness Areas.

All tributaries and wetlands from North Beaver Creek to Meyers Gulch, from the West Elk Wilderness boundary to their confluences with Blue Mesa Reservoir, Morrow Point Reservoir, or the Gunnison River, excluding Steuben Creek, North Willow Creek, and Soap Creek.

All lakes and reservoirs that are tributary to the Gunnison River and within the La Garita, Powderhorn, West Elk, Collegiate Peaks, Maroon Bells, Raggeds, Fossil Ridge, or Uncompahgre Wilderness Areas.

Lower Gunnison River Basin. All tributaries to the Smith Fork, including all wetlands, which are within the West Elk Wilderness Area.

All lakes and reservoirs tributary to the Smith Fork, and are within the West Elk Wilderness Area.

North Fork of the Gunnison River Basin. All tributaries to North Fork of the Gunnison River, including all wetlands, within the West Elk or Raggeds Wilderness Areas.

All lakes and reservoirs that are tributary to the North Fork of the Gunnison River and within the West Elk or Raggeds Wilderness areas.

Laramie River Basin. All tributaries to the Laramie River system, including lakes, reservoirs, and wetlands, located within the Rawah Wilderness Area.

Los Pinos River Basin. All tributaries to the Los Pinos River, including all wetlands, which are within the Weminuche Wilderness Area.

All lakes and reservoirs tributary to the Los Pinos River which are within the Weminuche Wilderness Area. This includes Granite Lake, Divide Lakes, Elk Lake, Flint Lakes, Moon Lake, Rock Lake, Betty Lake, Lost Lake, Hidden Lake, Vallecito Lake, Eldorado Lake, Trinity Lake, Leviathan Lake, Sunlight Lake, Hazel Lake, Columbine Lake, and Emerald Lake.

Mancos River Basin. All tributaries of the Mancos River located within Mesa Verde National Park.

North Fork of the Gunnison River Basin. All tributaries to North Fork of the Gunnison River, including lakes, reservoirs, and wetlands, located within the West Elk and Raggeds Wilderness Areas.

North Platte River Basin. All tributaries to the North Platte River and Encampment Rivers, including lakes and reservoirs.

All wetlands located within the Mount Zirkle, Never Summer, and Platte River Wilderness Areas.

Piedra River Basin. All tributaries to the Piedra River, including all wetlands, which are within the Weminuche Wilderness Area.

All lakes and reservoirs tributary to the Piedra River which are within the Weminuche Wilderness Area. This segment includes Window Lake, Monument Lake, Hossick Lake, and Williams Lakes.

Rio Grande Basin. All tributaries to the Rio Grande, including lakes, reservoirs, and wetlands, located within the Weminuche Wilderness Area.

Roaring Fork River. All tributaries of the Roaring Fork River system, including lakes and reservoirs, located within the Maroon Bells/Snowmass, Holy Cross, Raggeds, Collegiate Peaks, and Hunter/Fryingpan Wilderness Areas.

San Juan River Basin. All tributaries to the San Juan River, Rio Blanco, and Navajo River including all wetlands which are within the Weminuche Wilderness area and South San Juan Wilderness Area.

All lakes and reservoirs which are tributary to the San Juan River, Rio Blanco, and Navajo River and located within the Weminuche Wilderness Area and South San Juan Wilderness Area.

This segment includes Archuleta Lake, Spruce Lakes, Turkey Creek Lake, Fourmile Lake, Upper Fourmile Lake, Crater Lake, Quartz Lake, Fish Lake, and Opal Lake.

San Miguel River Basin. All tributaries, including wetlands, to the San Miguel River, and within the boundaries of the Lizard Head, or Mount Sneffels Wilderness Areas.

All lakes and reservoirs tributary to the San Miguel River and within the boundaries of the Lizard Head, or Mount Sneffels Wilderness Areas.

South Platter River Basin. All tributaries to the South Platte River, including lakes, reservoirs, and wetlands, located within the Lost Creek and Mt. Evans Wilderness Areas.

St. Vrain Creek Basin. All tributaries to St. Vrain Creek, including lakes, reservoirs, and wetlands, located within the Indian Peaks Wilderness Areas and RMNP.

Uncompahgre River Basin. All tributaries to the Uncompahgre River, including all wetlands, which are within the Mt. Sneffels or Uncompahgre Wilderness Areas.

All lakes and reservoirs tributary to the Uncompahgre River and within the Mt. Sneffels or Uncompahgre Wilderness Areas.

White River Basin. All tributaries to the White River, including lakes, reservoirs, and wetlands, located within the Flat Tops Wilderness Area, including Trapper's Lake.

Yampa River Basin. All tributaries to the Yampa River, including lakes, reservoirs, and wetlands, located within Zirkle, Flat Tops, and Sarvis Creek Wilderness Areas.

ATTCHMENT 2: GOLD MEDAL WATERS

The following list of important spawning areas has been defined as Gold Medal Waters by the State of Colorado. As a reminder, according to RC 7 above, PCN is required for all proposed nationwide permit activities in these waters; consultation with CPW must be conducted in accordance with the timeframes established in GC 31.

NOTE: This list of Gold Medal Waters is subject to change. For the most current list, please refer to the Colorado Parks and Wildlife (CPW) Colorado Fishing Brochure available on the CPW website (<http://cpw.state.co.us>) or contact any CPW or Corps office in Colorado.

GOLD MEDAL LAKES:

North Delaney Butte Lake in Jackson County.

Spinney Mountain Reservoir in Park County.

Steamboat Lake in Routt County.

GOLD MEDAL STREAMS:

Animas River from Lightner Creek to Rivera Crossing Bridge.

Arkansas River from the confluence with the Lake Fork of the Arkansas, near Leadville, downstream to Parkdale at the Hwy. 50 bridge crossing above the Royal Gorge.

Blue River from Dillon Reservoir Dam to Green Mountain Reservoir inlet; and

From Green Mountain Reservoir dam to Colorado River confluence.

Colorado River from Fraser River to Troublesome Creek confluence.

Ervingpan River from Ruedi Reservoir dam to Roaring Fork River confluence.

Gore Creek from Red Sandstone Creek to Eagle River confluence.

Gunnison River from 200 yards downstream of Crystal Reservoir dam to the North Fork of the Gunnison River.

North Platte River from the south boundary of Routt National Forest to the Wyoming border.

Rio Grande from State Highway 149 Bridge at South Fork downstream to the Rio Grande canal diversion structure.

Roaring Fork River from the Fryingpan River downstream to the Colorado River confluence.

South Platte River: The middle fork of the South Platte River from State Highway 9 Bridge to the south fork confluence;

From the confluence of the middle and south forks to Spinney Mountain Reservoir inlet;

From the Spinney Mountain Reservoir outlet downstream to Eleven Mile Reservoir inlet;

From Cheesman Reservoir dam to the south boundary of the Wigwam Club property; and

From the north boundary of the Wigwag Club property to Scraggy View picnic ground.