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January 29, 2020

PROJECT NO: 0224-CS19-ADDENDUM

Client: Ms. Careena Barry

Reference: Wetlands Assessment of Small Ponded Area, Proposed residential development, Bentgrass Meadows St, Falcon, CO

Dear Ms. Barry,

At your request, we have completed the wetlands assessment for the referenced project. Results of our evaluation are summarized below.

PURPOSE and SCOPE

The study area is an isolated small pond, less than 2000 sq.ft. in size, roughly located in the northernmost portion of the proposed residential development as shown below (**Photo No. 26).** The site vicinity area consists of partially urban, partially developed, residential and commercial areas at an elevation of approximately 6,920-7,010 feet. The general habitat types within the study area include upland grassy/weedy habitat, riparian habitat, and minor adjacent landscaped areas. The area has an average annual precipitation of approximately 16-17 inches, an annual max temperature of 62 degrees, and an average minimum temperate of 36 degrees Fahrenheit.

The purpose of this wetland assessment was to survey and delineate the boundaries of any potentially jurisdictional wetlands that might exist at the small ponded area in the northern portion of the site (Photo No. 26) as shown below, as defined under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

738 Synthes Avenue
Monument, CO 80132
Ph: (719) 761 6072

www.americangeoservices.com
sma@americangeoservices.com
Ph: (888) 276 4027
Fx: (877) 471 0369

Mailing: 191 University Blvd, #375
Denver, CO 80206
Ph: (303) 325 3869

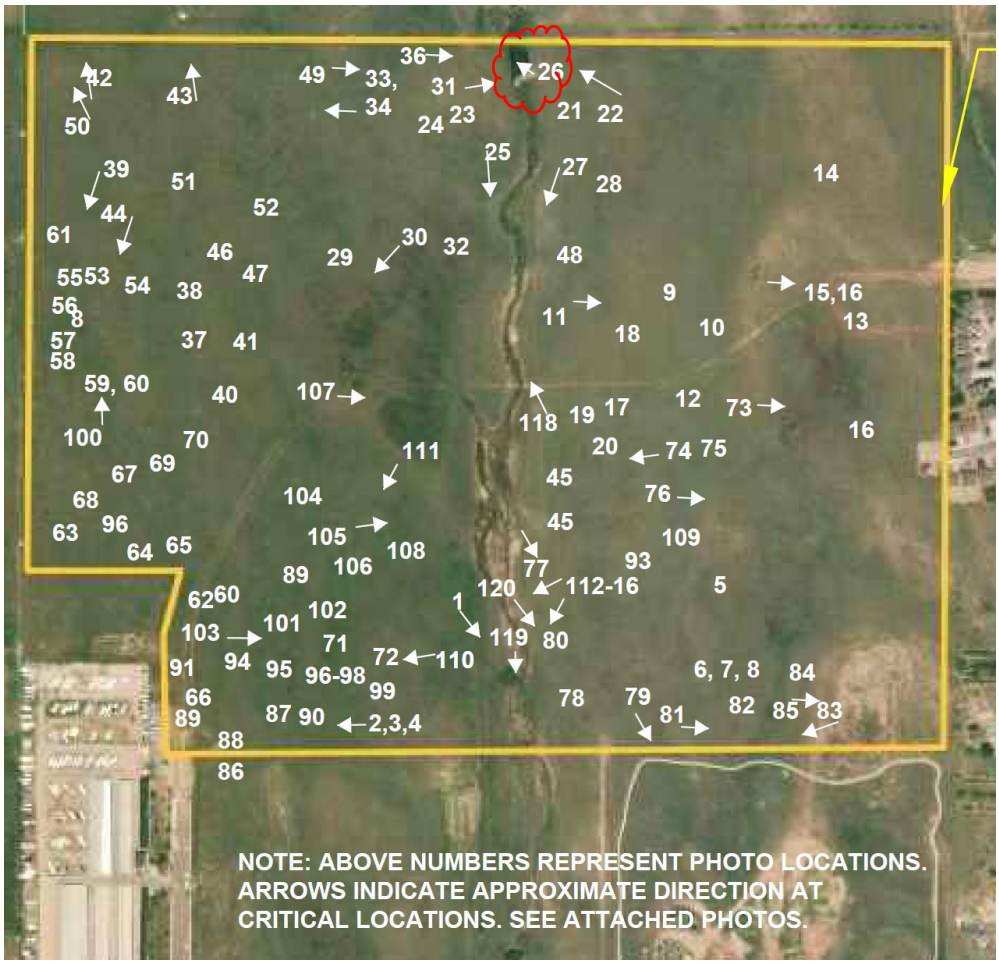
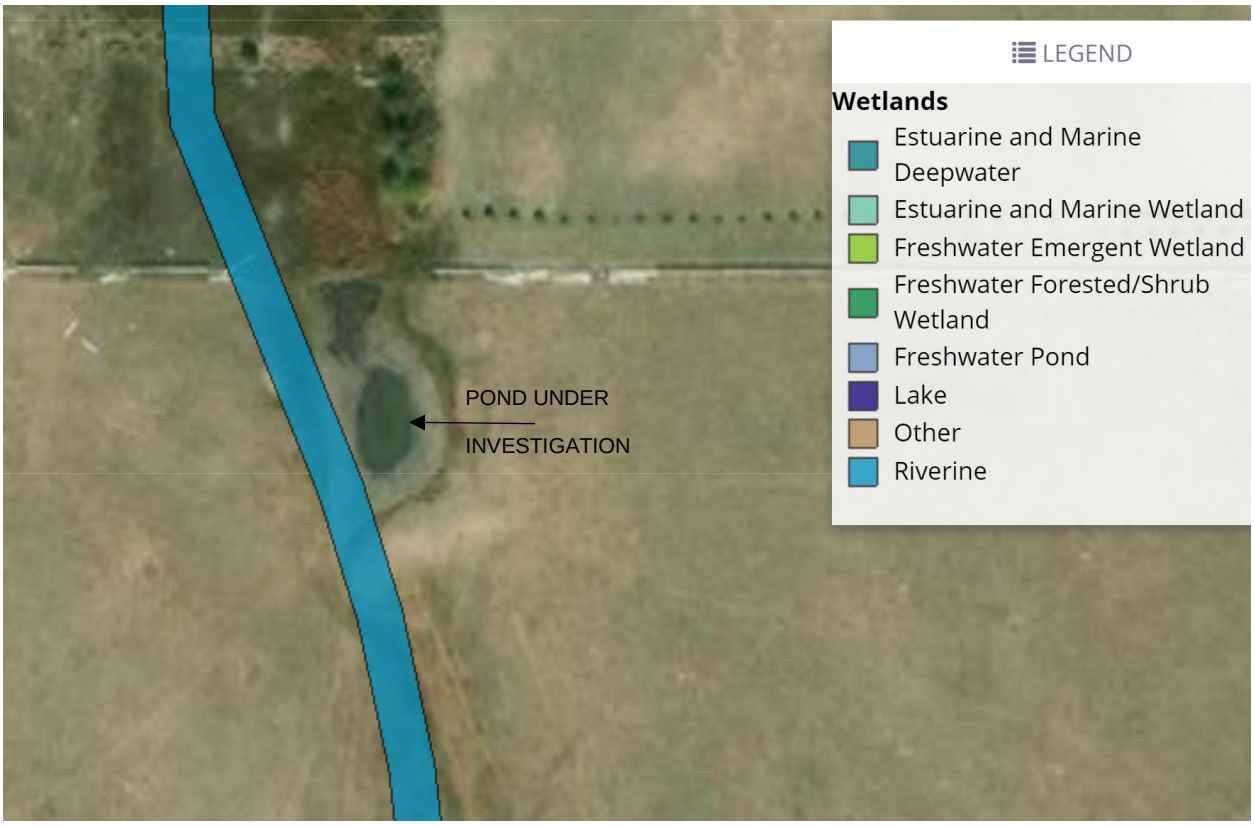

NOTE: ABOVE NUMBERS REPRESENT PHOTO LOCATIONS.
ARROWS INDICATE APPROXIMATE DIRECTION AT
CRITICAL LOCATIONS. SEE ATTACHED PHOTOS.

PHOTO- 26

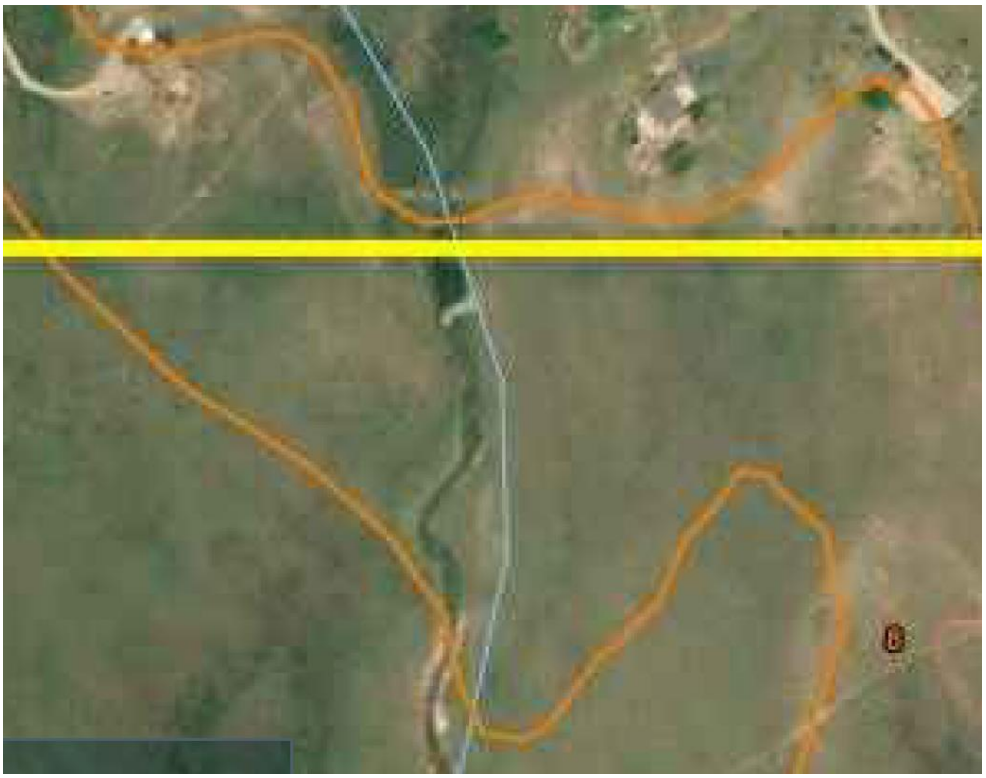
DESK STUDY

Prior to the field survey, a desktop analysis was performed to evaluate overall wetlands and water resource characteristics of the aforementioned ponded area and determine the presence of potentially jurisdictional wetlands. Aerial imagery, topographic maps, United States (US) Fish and Wildlife (USFWS) Wetlands Mapper (USFWS), NRCS Web Soil Survey, other state and federal agency websites, and other relevant data was reviewed. A review of NWI maps (USFWS) was conducted to determine the potential presence, location, size, and type of wetlands located within the pond boundaries. NWI data did not depict any wetlands within the pond boundaries.



A review of FEMA FIRM floodplain maps (FEMA) was conducted to determine the existence, location, and extent of floodplains located near the ponded areas. The ponded area is identified as Zone X flood zone, which consists of areas of minimal flood risk “outside the 1-percent and 0.2-percent-annual-chance floodplains” (FEMA 2005). The Project is located within FEMA FIRM panel 08041C0553G, El Paso County.

The El Paso County Soil Survey indicates the project area is underlain by Blackland loamy sand (1 to 9 percent slopes). These soils are not classified as a hydric soil in El Paso County by the Natural Resources Conservation Service (NRCS).



El Paso County Area, Colorado (CO625)

El Paso County Area, Colorado (CO625)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Blakeland loamy sand, 1 to 9 percent slopes	157.2	25.2%

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

FIELD INVESTIGATION

Sam Adettiwar, MS, PE performed field visits in April 2019 and January 2020. Field reconnaissance was conducted to determine the true extent and type of wetlands located within and adjacent to the pond area, and to verify the information gathered through NWI data review. The wetland assessment was performed in general accordance with the Rocky Mountains, Valleys, and Coasts Regional Supplement to the 1987 USACE Wetland Delineation Manual (USACE 1987).

Generally, the detailed examination of wetlands involves the collection of vegetation, soil, and hydrology data at paired data points. These paired points include one point within the suspected wetland and one point in the adjacent upland. However, if numerous wetlands are in close proximity and surrounded by the same or similar upland plant community, then upland data points of nearby sites are often utilized, rather than creating a new upland data point for each wetland area. Most surrounding uplands were not formally sampled and were generally examined while attempting to identify wetland areas.

The determination of a wetland depends on the presence or absence of three parameters:

- *Hydrophytic Vegetation:* To be considered hydrophytic vegetation, over 50% of the dominant species in an area must have an indicator status of facultative (FAC), facultative wetland (FACW), or obligate wetland (OBL), according to the National List of Plant Species.
- *Hydric Soils*: A hydric soil is "a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part". Anaerobic conditions are indicated in the field by soils with low chromas (2 or less), as determined by using the Munsell Soil Color Charts; iron oxide mottles; hydrogen sulfide odor and other indicators. Soil colors were identified using the most current edition of the Munsell Soil Color Charts.
- *Wetland hydrology during the wettest season*: Generally, wetland hydrology is defined by inundation or saturation to the surface for a consecutive period of 12.5% or greater of the growing season. Areas that contain indicators of wetland hydrology between 5%-12.5% of the growing season may or may not be wetlands depending upon other indicators. Field indicators included visual observation of soil inundation, saturation, oxidized rhizospheres, water marks on trees or other fixed objects, drift lines, etc. Under normal circumstances, indicators of all three parameters are generally present in wetland areas.

All plants considered dominant in wetlands, as well as other commonly observed species, were investigated for. During field examinations, dominant plants were compared to the National Wetland Plant List (NWPL) (Corps 2018) to determine the “wetland indicator status” of each species. Indicator ratings are as follows (Corps 2012): obligate (OBL) = almost always occur in

wetlands; facultative wet (FACW) = usually occur in wetlands but may occur in non-wetlands; facultative (FAC) = occur in wetlands and non-wetlands; facultative upland (FACU) = usually occur in non-wetlands but may occur in wetlands; and upland (UPL) = almost never occur in wetlands. If the species is not included in the NWPL, then the indicator rating is assumed to be UPL. Generally, if at least 50 percent of those species had an indicator rating of FAC or wetter, the potential wetland area would satisfy the Corps criterion for wetland vegetation. The botanical nomenclature presented in this report follows the NWPL. If a species is not listed in the NWPL, then the nomenclature follows PLANTS Database (USDA, NRCS 2018).

While recording plant species and identifying soil characteristics, potential wetlands within the study area were assessed for evidence and potential sources of wetland hydrology. This evidence included primary indicators such as the presence of surface water and saturation and secondary indicators such as geomorphic position and drainage patterns.

Soils were examined at various locations throughout the study area to identify the presence of hydric soil indicators. If indicators are found, multiple pits are dug along the gradient to identify the extent of hydric soils; however, this was not necessary due to the absence of hydric soil indicators.

JURISDICTIONAL STATUS

The jurisdictional status of wetlands and other water features is generally based on the US Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (Corps 2007) and other Corps documents (Corps 2008). In order for an aquatic feature to be considered a “water of the US” and jurisdictional under Section 404 of CWA, it must be at least one of the following:

- A traditional navigable water (TNW)
- A wetland adjacent to a TNW
- A relatively permanent water (RPW), including tributaries that typically flow year-round or have a continuous flow at least seasonally, typically three months
- A wetland that directly abuts an RPW
- A wetland adjacent to an RPW, but only if it can be shown that the feature has a “significant nexus” with a TNW
- A non-RPW or wetland adjacent to a non-RPW, if the feature has a “significant nexus” with a TNW

The significant nexus evaluation includes an assessment of the flow characteristics and functions of the feature to see if it has “more than an insubstantial or speculative effect on the chemical,

physical, or biological integrity of TNWs" (Corps 2007). If it does, then it is considered jurisdictional.

CONCLUSION

Soils, hydric indicators, and vegetation were examined on site to determine the presence or absence of wetlands. Based on our field investigation, potentially jurisdictional wetlands were not observed within the ponded area. Field indicators did not include any wetland vegetation within and abutting or adjacent to the ponded area. Soil saturation was evident, however the organic, spongy, or mucky soils which generally require time to develop and lead to the growth of wetland plants were not noted in the ponded area or adjacent to it. The pond did not appear as a marsh, swamp, bog, or fen by any means. Emergent plants or floating plants were not noted.

REFERENCES

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U.S. Geological Survey Maps

GENERAL CONDITIONS

This report has been prepared exclusively for the client, its' consultant, engineers and subcontractors for the purpose of design and construction of the proposed structures. No other engineer, consultant, or contractor shall be entitled to rely on information, conclusions or recommendations presented in this document without the prior written approval of AGS.

We appreciate the opportunity to be of service to you on this project. If we can provide additional assistance or observation and testing services during design and construction phases, please call us at 1 888 276 4027.

Sincerely,
Sam Adettiwar, MS, PE, GE, P.Eng, M.ASCE
Senior Engineer

Attachments

PHOTOGRAPHIC
DOCUMENTATION
(JANUARY 2020)

PHOTOGRAPHIC
DOCUMENTATION
(APRIL 2019)