

Aquatic Resources Inventory for White River Enhancement and Access, Rio Blanco County, Colorado

DECEMBER 2021

PREPARED FOR

**Town of Meeker and Eastern Rio Blanco
Metropolitan
Recreation and Park District**

PREPARED BY

SWCA Environmental Consultants

AQUATIC RESOURCES INVENTORY FOR WHITE RIVER ENHANCEMENT AND ACCESS, RIO BLANCO COUNTY, COLORADO

Prepared for

**Town of Meeker and
Eastern Rio Blanco Metropolitan
Recreation and Park District**

101 Ute Road
Meeker, Colorado 81641

Prepared by

SWCA Environmental Consultants
295 Interlocken Boulevard, Suite 300
Broomfield, Colorado 80021
(303) 487-1183
www.swca.com

December 2021

CONTENTS

1	Introduction	1
2	Methods	1
2.1	Existing Data Review	1
2.2	Field Survey	2
2.2.1	Mapping	2
2.2.2	Wetlands	2
2.2.3	Non-Wetland Waters	2
2.3	Jurisdictional Considerations	2
3	Results.....	3
3.1	Existing Data Review Results	3
3.2	Field Results	4
3.2.1	Wetlands	4
3.2.2	Non-Wetland Waters	5
4	Jurisdictional Considerations.....	5
5	Summary and Recommendations	6
6	Literature Cited.....	7

Appendices

- Appendix A. Aquatic Resources Inventory Maps
- Appendix B. Wetland Determination Data Forms
- Appendix C. Photographs

Tables

Table 1.	Approximate Center Point of Study Areas	1
Table 2.	Antecedent Precipitation Tool Results for the Study Areas.....	3
Table 3.	Delineated Wetlands in the Study Areas.....	4
Table 4.	Delineated Non-Wetland Waters in the Study Areas.....	5

This page intentionally left blank.

1 INTRODUCTION

On behalf of the Town of Meeker (Town) and Eastern Rio Blanco Metropolitan Recreation and Park District (District), SWCA Environmental Consultants (SWCA) completed an inventory of aquatic resources, commonly referred to as a jurisdictional delineation, for the White River Enhancement at Circle Park and access improvements at 3rd and 10th Streets (project) in Rio Blanco County, Colorado (Appendix A, Figure A-1). The aquatic resources inventory included delineation of three discrete areas (study areas) in the town of Meeker adjacent to the White River to support future Clean Water Act (CWA) Section 404 permitting associated with the project. The project will include:

- Development in the 3rd Street and 10th Street study areas to improve parking access, safety, bank stability, visual screening, and non-motorized water access.
- Bank stabilization activities, stream channel design, and in-stream enhancements to the White River in the Circle Park study area.

The approximate center points of the study areas are shown in Table 1 below. The goal of conducting an aquatic resources inventory is to identify the potential presence and extent of features that may be jurisdictional waters of the U.S. (WOTUS) under Section 404 of the CWA, as amended. The inventory of aquatic resources included the identification and recording of features that may be determined to be WOTUS by the U.S. Army Corps of Engineers (USACE).

Table 1. Approximate Center Point of Study Areas

Study Area	Latitude	Longitude
10th Street	40.033643°	-107.918462°
Circle Park	40.034192°	-107.911804°
3rd Street	40.035021°	-107.908630°

2 METHODS

The aquatic resources inventory included a desktop review of existing data and a field survey, as described below.

2.1 Existing Data Review

SWCA conducted a desktop review of existing spatial data prior to the field survey to identify areas with the greatest potential for aquatic resources. Sources used during the existing data review included U.S. Geological Survey (USGS) 7.5-minute quadrangles (Environmental Systems Research Institute [ESRI] 2021), the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps (USFWS 2021), the National Hydrography Dataset (NHD) (USGS 2010), Natural Resources Conservation Service (NRCS) soil survey maps (NRCS 2021), Federal Emergency Management Agency (FEMA) flood zone maps (FEMA 2018), and historic and current aerial photographs of the study areas (Google Earth 2014). SWCA used the USACE’s Antecedent Precipitation Tool (APT) (Version 1.0) to evaluate the conditions leading up to and during the site visit relative to normal conditions, seasonality, and typical year considerations (USACE 2021a).

2.2 Field Survey

The aquatic resources field survey was conducted on October 29, 2021, using the methods discussed in the following subsections.

2.2.1 Mapping

SWCA used a handheld global positioning system (GPS) receiver capable of submeter accuracy to record the spatial extent of potential WOTUS, geographically reference data points, and demarcate wetland and waterbody boundaries during the field survey. Geographic information system (GIS) software was used to analyze recorded features, calculate areas, and generate the study area maps.

2.2.2 Wetlands

SWCA determined the presence/absence of wetlands in the field using delineation methods provided in the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Western Mountains, Valleys, and Coasts Region* (Version 2.0) (Regional Supplement) (USACE 2010). Data at each potential wetland were recorded on a Regional Supplement wetland determination data form – Western Mountains, Valleys, and Coasts (datasheet). Determination of wetland habitat (type) is based on the classification system developed by Cowardin et al. (1979). In order for an aquatic resource to be considered a wetland, a site must include wetland hydrology, hydrophytic vegetation, and hydric soils. Wetland plant indicator statuses relied on the 2018 National Wetland Plant List (USACE 2020) for each species. Soil colors were identified using Munsell Soil Color Charts (Munsell Color 2010). Using desktop data and field observations, wetland sampling points were selected to determine the boundaries of each wetland area. To test or confirm the wetland boundary, a wetland sampling point was selected within the adjacent non-wetland area. These data were used to map the wetland boundaries.

2.2.3 Non-Wetland Waters

The presence and extent of non-wetland waters (e.g., creeks, rivers, arroyos, ponds, and constructed ditches) was determined in the field using the guidance and methods provided in USACE Regulatory Guidance Letter 05-05 (USACE 2005) and the USACE technical guidance *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (USACE 2016). An ordinary high-water mark (OHWM) is the line on a shore established by fluctuations of water and is typically identified by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas. The spatial extent of non-wetland waters is delineated using the identified OHWM for each feature.

2.3 Jurisdictional Considerations

On September 4, 2021, the USACE halted the implementation of the Navigable Waters Protection Rule (in effect since April 2020 and currently promulgated under 33 Code of Federal Regulations 328.3) and announced they would determine jurisdiction for WOTUS according to the pre-2015 regulatory definition and practice due to the U.S. District Court for the District of Arizona’s decision on August 30, 2021, in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency* (U.S. Environmental Protection Agency 2021). At the time of this report’s preparation, the USACE continues to interpret WOTUS using the pre-2015 definition and practice, which relies on the *Clean Water Act Jurisdiction Following the U.S.*

Supreme Court’s Decision in *Rapanos v. United States* and *Carabell v. United States* regulatory guidance letter (USACE 2007).

Under the pre-2015 WOTUS definition and as relevant to the project, WOTUS include traditional navigable waters, wetlands adjacent to traditional navigable waters, and tributaries and wetlands adjacent to navigable waters that have continuous flow at least seasonally. Non-navigable tributaries which have less than seasonal flow, wetlands adjacent to tributaries that have less than seasonal flow, and wetlands that are adjacent to but do not abut tributaries that have less than seasonal flow are evaluated for jurisdiction based on a fact-specific analysis.

The reviewed wetlands and non-wetland waters including the White River are expected to be jurisdictional under the recent regulatory approaches for approved jurisdictional determinations due to their proximity to the White River, which is identified by the NHD as a perennial stream with downstream connectivity to the Green River and the Colorado River.

3 RESULTS

3.1 Existing Data Review Results

The study areas range between approximately 6,210 to 6,230 feet above sea level and are entirely within the Upper White watershed Hydrologic Unit Code 14050005 (NRCS 2010). According to the existing data review, a combined total of four NHD-mapped waterbodies are present within the study areas and four NWI-mapped wetlands overlap the study areas (USFWS 2021; USGS 2021) (see Appendix A, Figure A-2). Additionally, the study areas are located entirely outside of any FEMA 1% annual chance flood hazard zones (FEMA 2018). The USACE’s APT was used to evaluate the conditions leading up to and during the site visit relative to normal conditions, seasonality, and typical year considerations (USACE 2021a). Based on the results of the APT, the study areas experienced normal wetness conditions (product of 12). Wetland hydrology indicators observed during SWCA’s October 2021 field survey reflect those that would be expected in a typical year for this area and support the “normal conditions” product generated by the APT (Table 2).

Table 2. Antecedent Precipitation Tool Results for the Study Areas

30 Days Ending	30th Percentile (inches)*	70th Percentile (inches)†	Observed (inches)‡	Wetness§	Condition Value¶	Month Weight#	Product**
October 29, 2021	0.98	2.46	2.26	Normal	2	3	6
September 29, 2021	1.10	2.09	1.72	Normal	2	2	4
August 30, 2021	0.93	1.57	1.06	Normal	2	1	2
Result							12

* 30th percentile represents the lower limit of the 30-year normal range for the month

† 70th percentile represents the upper limit of the 30-year normal range for the month

‡ Observed: total precipitation recorded during the month

§ Wetness: observed value above 30-year normal range (wet), observed value within 30-year normal range (normal)

¶ Condition Value: wet = 3, normal = 2

Month Weight: first 30-day period = 3, second 30-day period = 2, third 30-day period = 1

** Product: Antecedent Condition Calculation (condition value x month weight)

3.2 Field Results

3.2.1 Wetlands

SWCA observed and delineated three large wetland complexes within the study areas (Table 3; see Appendix A, Figures A-3–A-5). Wetlands had both emergent and scrub/shrub wetland components. Narrative summaries of the data recorded at the wetlands within the study areas are provided below. Additional data collected during the wetland delineation are included on determination data forms provided in Appendix B. Photographs are provided in Appendix C.

Table 3. Delineated Wetlands in the Study Areas

Feature ID	Feature Name/Type	Acres in Study Areas
WL01A	Unnamed/PEM/PSS	0.05
WL01B	Unnamed/PEM/PSS	0.02
WL01C	Unnamed/PEM/PSS	0.11
WL02A	Unnamed/PEM/PSS	0.17
WL02B	Unnamed/PEM/PSS	0.08
WL02C	Unnamed/PEM/PSS	0.01
WL02D	Unnamed/PEM/PSS	0.15
WL02E	Unnamed/PEM/PSS	0.01
WL02F	Unnamed/PEM/PSS	0.04
WL02G	Unnamed/PEM/PSS	0.02
WL02H	Unnamed/PEM/PSS	0.02
WL03A	Unnamed/PEM/PSS	0.02
WL03B	Unnamed/PEM/PSS	0.03
Total		0.73

Note: PEM = palustrine emergent; PSS = palustrine scrub/shrub

Vegetation: Dominant herbaceous species identified within the mapped wetland components include Baltic rush (*Juncus balticus*), reed canary grass (*Phalaris arundinacea*), prairie cordgrass (*Spartina pectinata*), broadleaf cattail (*Typha latifolia*), bluejoint (*Calamagrostis canadensis*), Kentucky blue grass (*Poa pratensis*). Shrub components include species such as peach-leaf and coyote willow (*Salix amygdaloides* and *S. exigua*), including mature and sapling individuals. Dominant species at the evaluated data points exhibit a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL), meeting the Regional Supplement criteria for hydrophytic vegetation communities (USACE 2010).

Soils: Wetland soils consisted of loamy, sandy, and clay textures and exhibited a hue of 10YR; a value of 2, 3, and 4; and chromas of 1 or 2. Redox concentrations of 5YR 4/4, 5YR 4/6, and 7.5YR 4/6 were observed in approximately 3% to 10% of sample matrices beginning at the soil surface and extending to 16 inches below the ground surface, which meets the Regional Supplement hydric soil criteria for S5: Sandy Redox and F6: Redox Dark Surface. The associated upland pits consisted of clay loam and clayey soils with a hue of 10YR; a value of 2, 3, or 4; and a chroma of 1 or 2. Redox concentrations of 5YR 4/4 and 7.5YR 4/6 were observed in approximately 2% to 5% of the matrices at varying depths; however dominant hydrophytic vegetation and/or primary wetland hydrology indicators were not observed at these locations.

Hydrology: Primary indicators of wetland hydrology at excavated wetland pits included saturation, drift deposits, and oxidized rhizospheres on living roots. Secondary indicators in sample plots included drainage patterns, saturation visible on aerial imagery, geomorphic position, and the FAC-neutral test.

3.2.2 Non-Wetland Waters

During SWCA’s October 2021 survey, biologists observed the White River, a perennial stream, in all three study areas (OHWM02, OHWM03, and OHWM05). SWCA observed two additional non-wetland waters, including a large, constructed pond with a direct surface hydrology connection to the White River (OHM04) and an ephemeral stormwater drain that is connected to the White River through a large concrete box culvert at 10th Street (OHWM01). The five non-wetland waters comprise a total of approximately 2.91 acres within the study areas. Table 4 provides information of each non-wetland water observed and delineated within the study areas.

Table 4. Delineated Non-Wetland Waters in the Study Areas

Feature ID	Feature Name/Type	Acres in Study Areas	Linear Feet in Study Areas
OHWM01	Unnamed/ephemeral	0.01	120.46
OHWM02	White River/perennial	0.17	130.47
OHWM03	White River/perennial	1.41	657.92
OHWM04	Circle Park Pond/pond	1.12	N/A
OHWM05	White River/perennial	0.20	267.83
Total		2.91	1,176.68

4 JURISDICTIONAL CONSIDERATIONS

Methods for the jurisdictional considerations included in this section are based on the information provided in Section 2.3. The following jurisdictional considerations regarding delineated wetlands are based on SWCA’s evaluation of the study area, delineated aquatic resources (and their hydrologic connection to downstream waters), and SWCA’s understanding of the USACE’s current policies regarding jurisdictional determinations.

Based on the results of the October 2021 survey and a subsequent review of current and historical aerial imagery, flows associated with White River generally travel east to west through the study areas. Delineated features either directly abut or have a readily apparent, direct surface hydrology connection to the White River (see Appendix A, Figure A-2). The proximity of the delineated features to the White River and direct surface hydrology connection between the study areas and receiving waters suggests these features satisfy the pre-2015 definition of “adjacent.” Further, the White River is a perennial stream with an unbroken surfacy hydrology to downstream receiving waters such as the Colorado River (portions of which are a Traditional Navigable Water), and would therefore be jurisdictional under the definition of WOTUS currently in effect (USACE 2021b).

5 SUMMARY AND RECOMMENDATIONS

SWCA delineated approximately 0.73 acre of wetlands and 2.91 acres of non-wetland waters within the study areas. Delineated aquatic resources appear to have a regular, unbroken surface hydrologic connection to downstream receiving waters that are WOTUS. SWCA recommends submitting this report to the USACE with a request for an aquatic resource delineation verification for the WL01, WL02, and WL03 complexes, as well as the non-wetland surface water features OHWM01–OHWM05.

6 LITERATURE CITED

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. Washington, D.C.: U.S. Fish and Wildlife Service.
- Environmental Systems Research Institute (ESRI). 2021. ESRI World Topographic Basemap. Available at: <http://www.arcgis.com/home/item.html?id=30e5fe3149c34df1ba922e6f5bbf808f>. Accessed November 2021.
- Federal Emergency Management Agency (FEMA). 2018. National Flood Hazard Layer. Available at: <https://www.fema.gov/national-flood-hazard-layer-nfhl>. Accessed November 2021.
- Google Earth. 2014. Source: Meeker, Colorado. Available at: <https://www.google.com/earth/>. Accessed November 2021.
- Munsell Color. 2010. Munsell Soil Color Charts: With Genuine Munsell Color Chips. Grand Rapids, Michigan: Munsell Color.
- Natural Resources Conservation Service (NRCS). 2010. Upper White Watershed Rapid Assessment. Available at: <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/technical/dma/rwa/?cid=nrcseprd1321466>. Accessed November 2021.
- . 2021. Natural Resources Conservation Service, National Lists of Hydric Soils (December 2015). Available at: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>. Accessed October 2021.
- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1*. Vicksburg, Mississippi: U.S. Army Engineers Waterways Experiment Station.
- . 2005. *Regulatory Guidance Letter No. 05-05, Subject: Ordinary High Water Mark Identification*. Signed by Major General Don T. Riley, Director of Civil Works.
- . 2007. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States*. Available at: https://www.epa.gov/sites/default/files/2016-02/documents/cwa_jurisdiction_following_rapanos120208.pdf. Accessed November 2021.
- . 2010. *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, edited by J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-12. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.
- . 2016. *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*. Available at: <https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/3691/>. Accessed October 2021.
- . 2020. National Wetland Plant List, Version 3.5. Available at: <http://wetland-plants.usace.army.mil/>. Accessed November 2021.
- . 2021a. Antecedent Precipitation Tool. Available at: <https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool/releases/tag/v1.0.19>. Accessed November 2021.
- . 2021b. Navigable Waters of the U.S. Available at: <https://www.spk.usace.army.mil/Missions/Regulatory/Jurisdiction/Navigable-Waters-of-the-US/>. Accessed November 2021.

U.S. Environmental Protection Agency. 2021. Current Implementation of Waters of the United States. Available at: <https://www.epa.gov/wotus/current-implementation-waters-united-states>. Accessed September 2021.

U.S. Fish and Wildlife Service (USFWS). 2021. National Wetlands Inventory. U.S. Fish and Wildlife Service Ecological Services. Available at: <http://www.fws.gov/wetlands/Data/State-Downloads.html>. Accessed October 2021.

U.S. Geological Survey (USGS). 2021. National Hydrography Dataset. Available at: <http://nhd.usgs.gov/index.html>. Accessed October 2021.

APPENDIX A

Aquatic Resources Inventory Maps

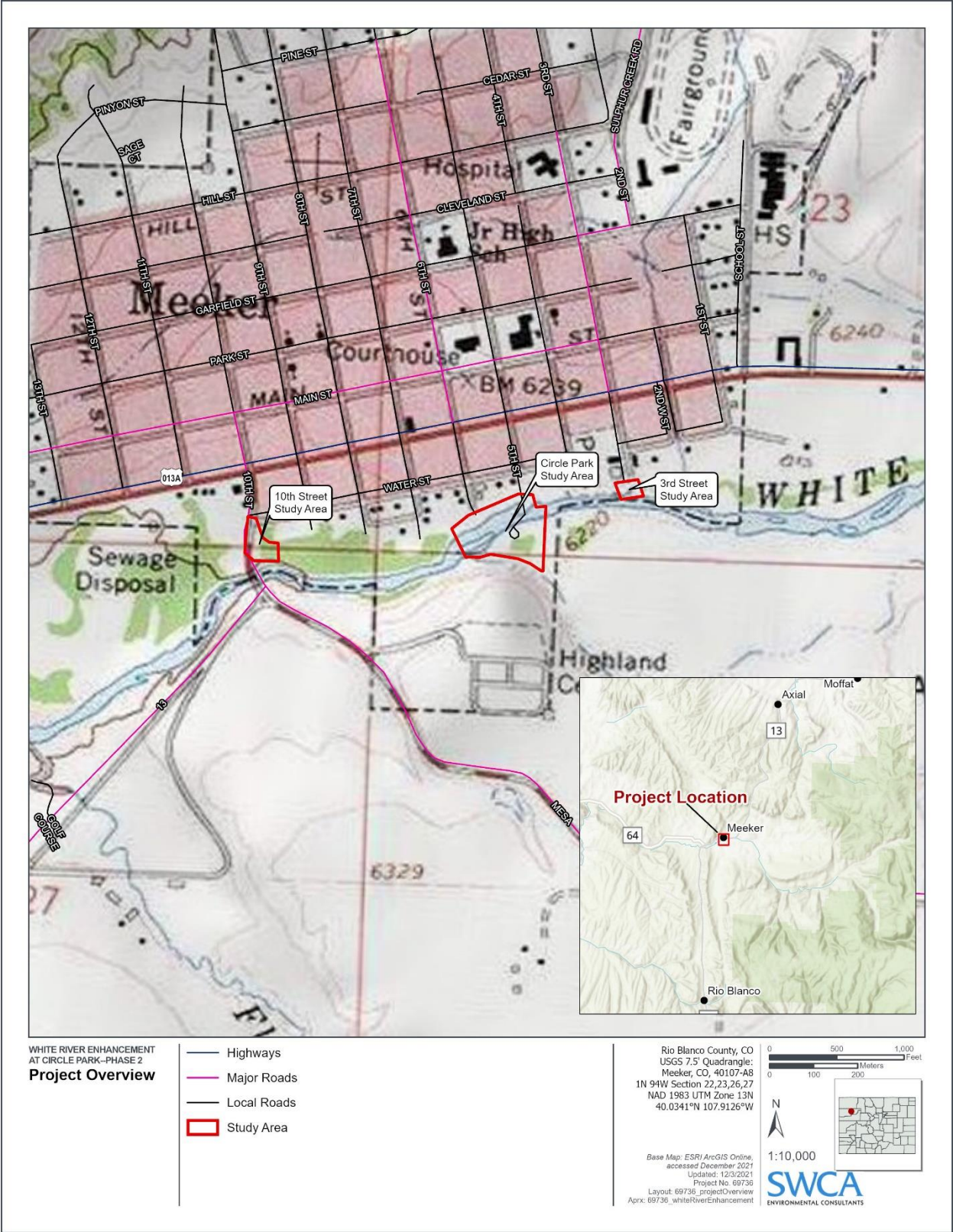


Figure A-1. Project location overview.

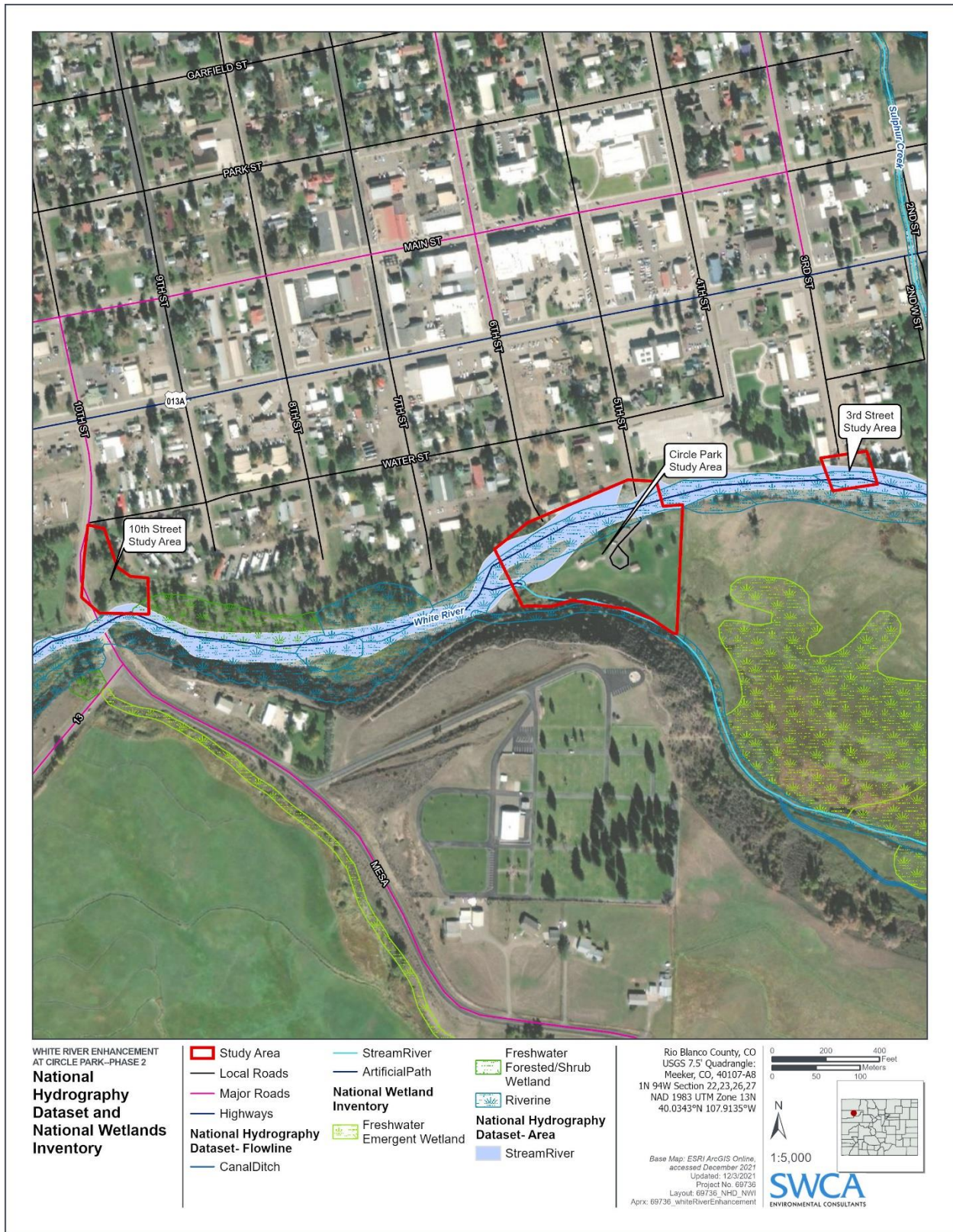


Figure A-2. National Hydrography Dataset and National Wetlands Inventory mapped aquatic resources within the study areas.

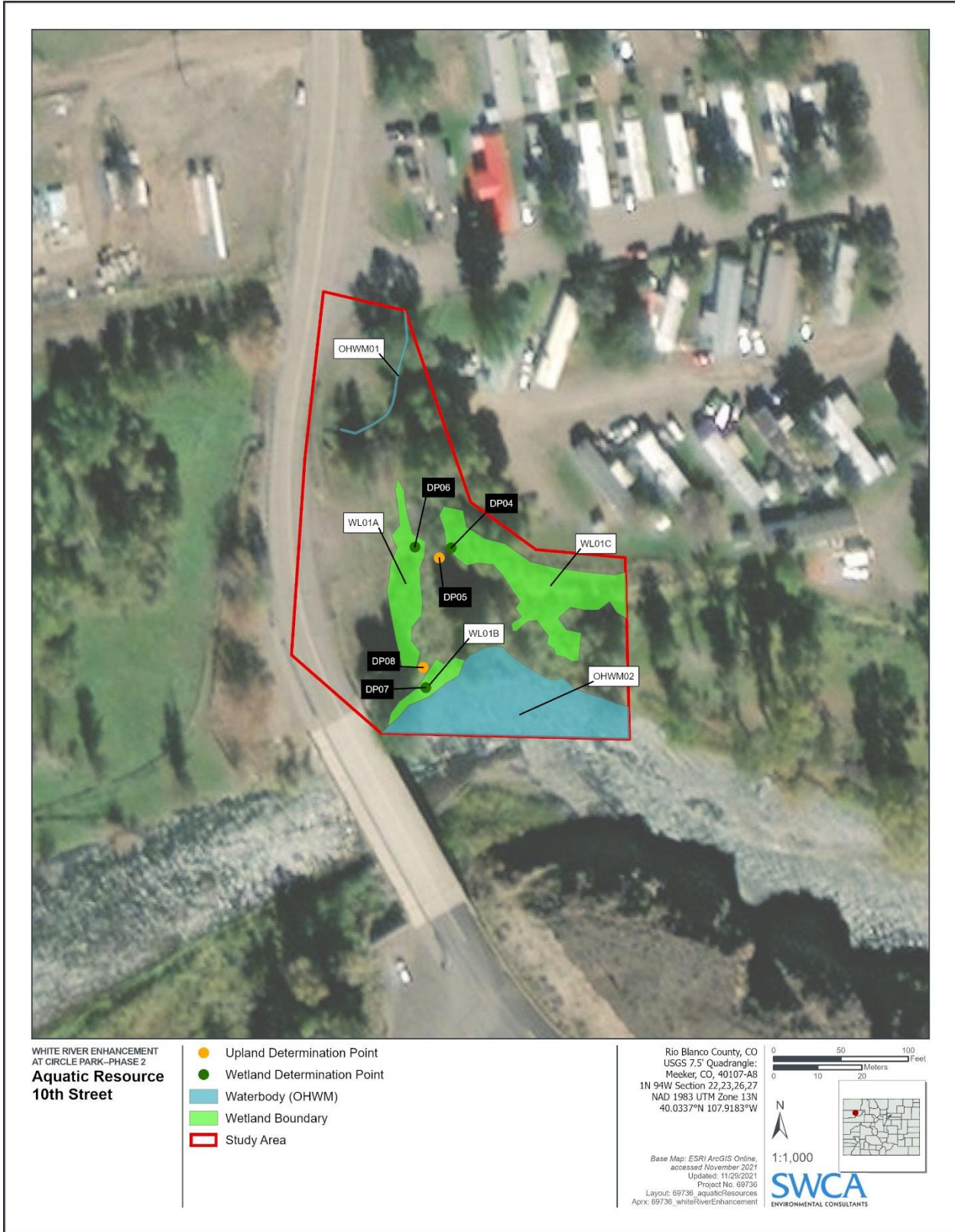


Figure A-3. Aquatic resources within the 10th Street study area.

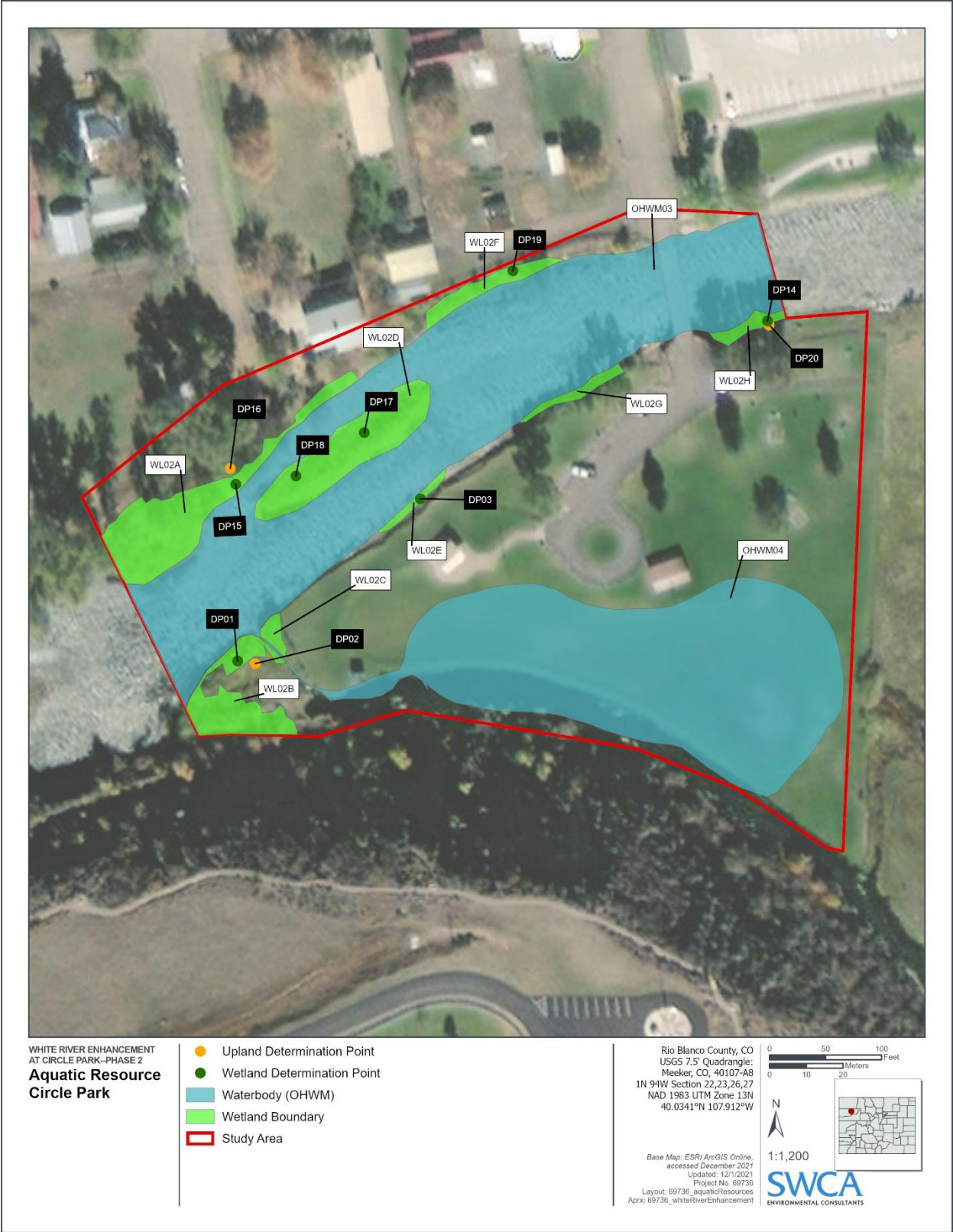


Figure A-4. Aquatic resources within the Circle Park study area.

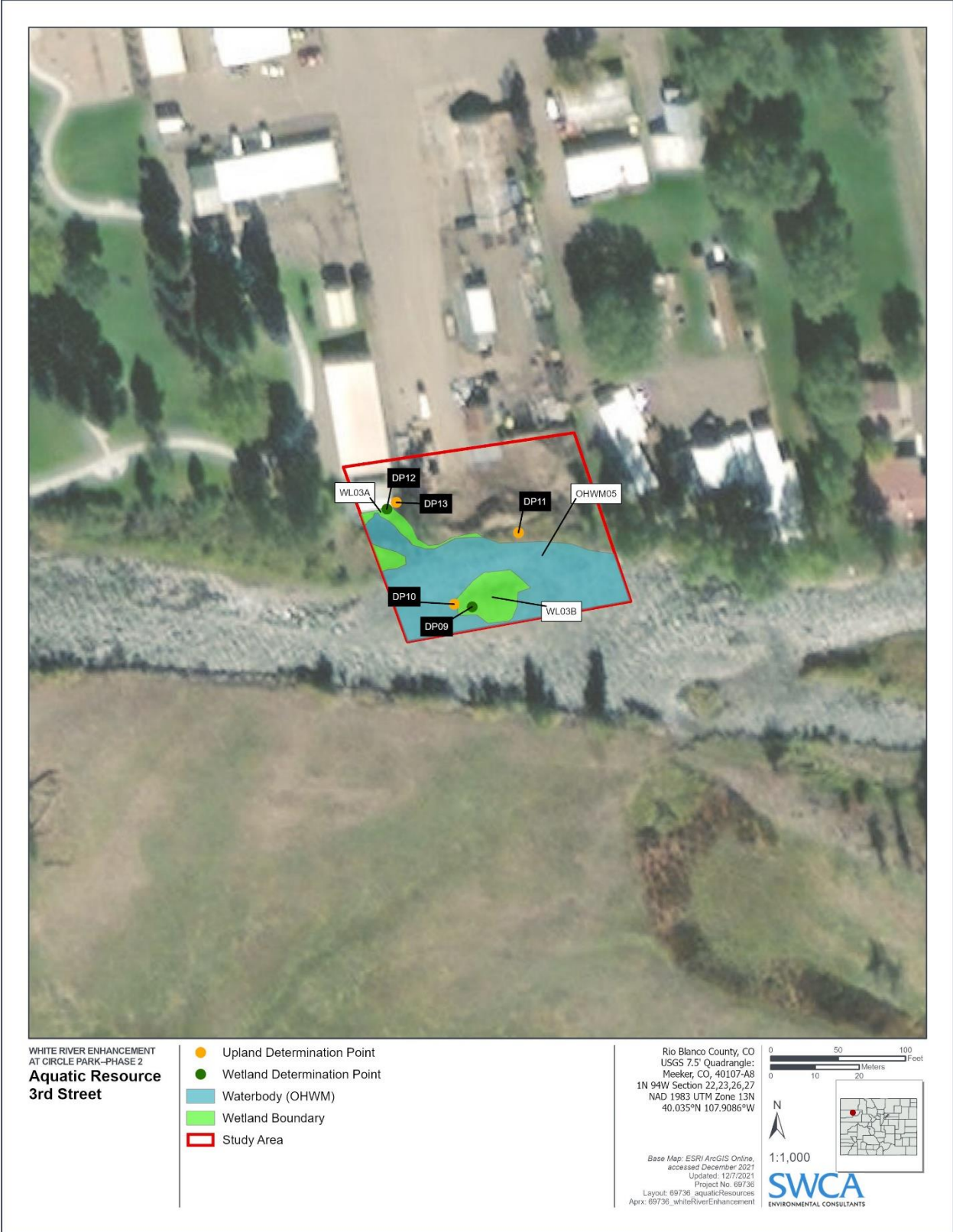


Figure A-5. Aquatic resources within the 3rd Street study area.

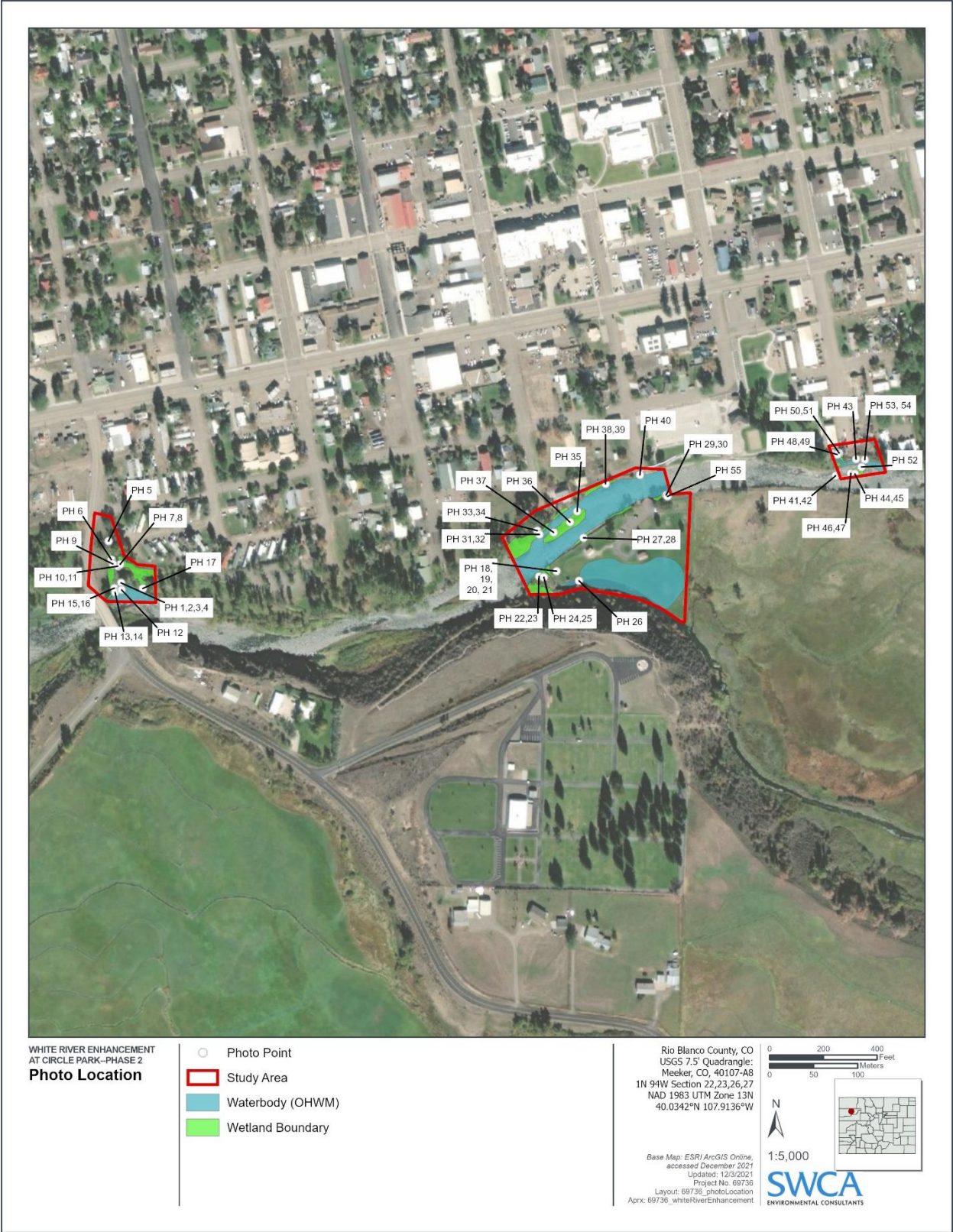


Figure A-6. Photo point locations within the study areas.

APPENDIX B

Wetland Determination Data Forms

APPENDIX C

Photographs



Photograph PH1. Overview of the 10th Street study area, view facing north.



Photograph PH2. Overview of the 10th Street study area, view facing east.



Photograph PH3. Overview of the 10th Street study area, view facing south.



Photograph PH4. Overview of the 10th Street study area, view facing west.



Photograph PH5. Overview of OHWM01 (unnamed ephemeral drainage), view facing north.



Photograph PH6. Overview of emergent/scrub shrub wetland (WL01A), view facing south.



Photograph PH7. Overview of emergent/scrub shrub wetland (WL01C), view facing east.



Photograph PH8. Overview of wetland soil pit DP04.



Photograph PH9. Overview of wetland soil pit DP06.



Photograph PH10. Overview of uplands and associated WL01A and WL01C, view facing south. This area is dominated by smooth brome (*Bromus inermis*) and bisects wetlands WL01A and WL01C.



Photograph PH11. Overview of upland soil pit DP05. This determination point is the paired upland point for both DP04 and DP06.



Photograph PH12. Overview of perennial OHWM02 (White River), view facing southeast.



Photograph PH13. Overview of emergent/scrub shrub wetland WL01B, view facing west.



Photograph PH14. Overview of wetland soil pit DP07.



Photograph PH15. Overview of upland area associated with wetland WL01B, view facing north.



Photograph PH16. Overview of upland soil pit DP08.



Photograph PH17. Overview of vegetation along northern bank of OHWM02, view facing west. Channel is severely incised; banks are dominated primarily by smooth brome and western wheatgrass (*Pascopyrum smithii*).



Photograph PH18. Overview of Circle Park study area, view facing north.



Photograph PH19. Overview of Circle Park study area, view facing east.



Photograph PH20. Overview of Circle Park study area, view facing south.



Photograph PH21. Overview of Circle Park study area, view facing west. Photograph also shows overview of wetland WL02C.



Photograph PH22. Overview of emergent/scrub shrub wetland WL02B, view facing east.



Photograph PH23. Overview of wetland soil pit DP01.



Photograph PH24. Overview of upland area associated with WL02B, view facing west. Hydrophytic vegetation is prevalent in the area; however, location does not contain hydric soil indicators or primary wetland hydrology indicators.



Photograph PH25. Overview of upland soil pit DP02.



Photograph PH26. Overview of OWHM04, view facing east. Flows travel west through the study area toward White River.



Photograph PH27. Overview of fragmented wetland fringe associated with WL02E, view facing west.



Photograph PH28. Overview of wetland soil pit DP03. Data point taken to confirm that wetland fringe along the White River (OHWM03) maintained hydric soil indicators. No paired upland point taken at this location.



Photograph PH29. Overview of fragmented wetland fringe associated with WL02H and corresponding uplands, view facing west. Upland soil pit depicted in PH55.



Photograph PH30. Overview of wetland soil pit DP14. Data point taken to confirm that wetland fringe along the White River (OHWM03) maintained hydric soil indicators.



Photograph PH31. Overview of emergent/scrub shrub wetland WL02A, view facing west. Fringe is located on the north side of the White River and contains identical vegetation community to wetlands delineated on the south banks of the White River.



Photograph PH32. Overview of wetland soil pit DP15.



Photograph PH33. Overview of upland area associated with WL02A, view facing southeast.



Photograph PH34. Overview of upland soil pit DP16.



Photograph PH35. Overview of emergent/scrub shrub wetland WL02D, view facing west. Wetland is located on a small island in the middle of the White River, abuts the OHWM, and is entirely dominated by hydrophytic vegetation, hydric soils, and wetland hydrology. No upland area was observed in this location; as such, no upland determination point was collected.



Photograph PH36. Overview of wetland soil pit DP17.



Photograph PH37. Overview of wetland soil pit DP18.



Photograph PH38. Overview of emergent/scrub shrub wetland WL02F, view facing west. Fringe is located on the north side of the White River and contains identical vegetation community to wetlands delineated on the south banks of the White River.



Photograph PH39. Overview of wetland soil pit DP19. Data point taken to confirm that wetland fringe along the White River (OHWM03) maintained hydric soil indicators. No paired upland point taken at this location, as vegetation community is unchanged.



Photograph PH40. Overview of OHWM03 (White River), view facing east. Vegetation in riprap lacks dominant hydrophytic vegetation species.



Photograph PH41. Overview of the 3rd Street study area, view facing north.



Photograph PH42. Overview of the 3rd Street study area, view facing east.



Photograph PH43. Overview of the 3rd Street study area, view facing west.



Photograph PH44. Overview of emergent/scrub shrub wetland WL03B, view facing east. Site is located on an island in the middle of the White River.



Photograph PH45. Overview of wetland soil pit DP09.



Photograph PH46. Overview of upland area associated with WL03B, view facing west.



Photograph PH47. Overview of upland soil pit DP10.



Photograph PH48. Overview of emergent/scrub shrub wetland WL03A, view facing southeast.



Photograph PH49. Overview of wetland soil pit DP12.



Photograph PH50. Overview of upland area associated with WL03A, view facing east.



Photograph PH51. Overview of upland soil pit DP13.



Photograph PH52. Overview of OHWM05 (White River), view facing west.



Photograph PH53. Overview of upland area on north banks of the White River, view facing west. Overstory dominated by *Salix exigua* with an understory comprised of smooth brome. No hydric soils or primary wetland hydrology were observed at this location.



Photograph PH54. Overview of upland soil pit DP11.



Photograph PH55. Overview of upland soil pit DP20. Photograph is associated with wetlands and corresponding uplands depicted in PH29.