Austin Transit Partnership

Austin Transit Partnership

Austin Light Rail Project

Aquatic Resources Delineation Report and Proposed Jurisdictional Analysis

Austin, TX

May 12, 2025

Contents

Tables

Attachments

Acronyms and Abbreviations

Acronym/Term	Definition
ATP	Austin Transit Partnership
CWA	Clean Water Act
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
LOC	limit of construction
OBL	obligate wetland
OHWM	ordinary high water mark
OMF	operations and maintenance facility
Project	Austin Light Rail Phase 1 Project
RPW	relatively permanent water
SH 71	State Highway 71
TNW	traditionally navigable water
UPL	upland
US 183	U.S. Highway 183
USACE	U.S. Army Corps of Engineers
WOTUS	waters of the United States
Zara	Zara Environmental LLC

1 Introduction

The Federal Transit Administration and Austin Transit Partnership (ATP) are completing an environmental review of the Austin Light Rail Phase 1 Project (the Project) in Austin, Texas. Pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act, Zara Environmental LLC (Zara) conducted a delineation of wetlands, waterbodies, and other special aquatic sites within the Study Area for the Project.

The Study Area encompasses the proposed light rail route and limits of construction (LOC), beginning at the intersection of Guadalupe Street and 38th Street and continuing south past the University of Texas and Texas State Capitol. From Guadalupe Street, the route turns east on 3rd Street and then south on Trinty Street crossing Lady Bird Lake on a new dedicated light rail bridge. On the south shore of the lake, the alignment splits into two branches: one travels southwest along South Congress Avenue and ends at Oltorf Street, and the other continues southeast along East Riverside Drive and ends at the Yellow Jacket Station near State Highway 71 (SH 71). An operations and maintenance facility (OMF) is proposed just west of the U.S. Highway 183 (US 183) / SH 71 interchange near Airport Commerce Drive and accessed via a dedicated lead track from Yellow Jacket Station. The Study Area includes all project elements: guideway, stations, OMF, park-and-rides, roadway reconstruction areas, bicycle and pedestrian improvements, stormwater infrastructure, and contractor access and staging zones.

A field investigation was conducted to assess surface waters, stormwater features, and floodplain conditions within the Study Area. The survey, led by a qualified wetland scientist, identified the extent of wetlands and other potential waters of the United States (WOTUS) to support a permitting evaluation and regulatory consultation with the U.S. Army Corps of Engineers (USACE) (**Attachment A**).

This report summarizes the results of fieldwork conducted on March 19 and 20, 2025, including a delineation and jurisdictional analysis of potential WOTUS within the Study Area.

2 Background

This report supplements and builds on two key documents developed previously to inform aquatic resources planning and permitting for the Project:

1. ***Lady Bird Lake Bridge Project: Aquatic Resources Delineation Report and Proposed Jurisdictional Analysis*** **(Kimley-Horn 2025)**
   This document includes a detailed delineation and jurisdictional analysis for Lady Bird Lake Bridge and an elevated guideway extension. It describes the aquatic resources present within that portion of the alignment and provides guidance regarding potential permitting requirements under the USACE Fort Worth District. Relevant mapping is provided in.
2. **Austin Light Rail Phase 1 Project, Water Resources Technical Report (ATP 2024)**
   This report presents a comprehensive desktop review and analysis of water resources

across the broader Phase 1 project limits. It includes existing conditions analyses for surface and groundwater, water quality, stormwater systems, floodplains, and drinking water sources, providing foundational data for understanding hydrologic and regulatory constraints throughout the alignment.

The March 2025 delineation confirms the presence and extent of wetlands, special aquatic sites, and other potential WOTUS based on direct field observation. Details from the Kimley-Horn (2025) and Zara (2024) reports are not repeated here; readers are referred to those documents for additional information on delineations near Lady Bird Lake and supporting desktop analyses.

As context for proposed jurisdictional determinations, the U.S. Supreme Court's decision in *Sackett v. Environmental Protection Agency* (EPA)[1] narrowed the definition of WOTUS under the CWA. The ruling eliminated the "significant nexus" standard and restricted federal jurisdiction to waters that maintain a continuous surface connection to relatively permanent waters, such as rivers, streams, lakes, or traditionally navigable waters (TNW). In accordance with joint USACE and EPA guidance published on March 12, 2025, jurisdiction under the current regulatory framework is asserted for:

- TNWs;
- wetlands with a continuous surface connection to TNWs;
- relatively permanent waters (RPW), including tributaries with continuous seasonal or year-round flow to TNWs; and
- wetlands directly abutting tributaries that are WOTUS in their own right (i.e., RPWs), with a continuous surface connection.

Wetlands or features that are physically separated from jurisdictional waters by uplands, berms, roads, or similar barriers—and that lack a direct, continuous surface connection to a TNW or RPW—are not considered jurisdictional. Likewise, ephemeral drainages, isolated wetlands, and upland-constructed ditches generally fall outside federal jurisdiction. This delineation was conducted in accordance with the Sackett decision and implementing guidance (USACE and EPA 2025).

3 Methodology

3.1 Field Survey Approach

A field survey was conducted by Zara on March 19 and 20, 2025, to delineate wetlands, special aquatic sites, and other potential WOTUS within the Study Area. The delineation followed the routine methodology outlined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), as refined by the *Regional Supplement to the Corps of*

[1] Sackett v. EPA, 598 U.S. 651 (2023).

Engineers Wetland Delineation Manual: Great Plains Region (Version 2) (USACE 2010), consistent with current guidance for the USACE Fort Worth District.

The survey focused on identifying aquatic features subject to federal jurisdiction under 33 Code of Federal Regulations 328.3 and was conducted entirely in the field. Field survey areas were determined by potential WOTUS features that were previously identified in the Zara (2024) desktop analysis.

3.2 Data Collection

Potential wetlands were identified based on the following three required indicators:

- Hydrophytic vegetation, characterized by dominance of plant species adapted to saturated conditions;
- Hydric soils, which form under sustained saturation leading to anaerobic conditions; and
- Wetland hydrology, evidenced by surface saturation or inundation during the growing season.

Streams and other linear features were evaluated for flow characteristics (perennial, intermittent, or ephemeral) and the presence of an ordinary high water mark (OHWM), indicated by features such as shelving, soil changes, scouring, or debris lines.

Soil, vegetation, and hydrologic conditions were documented at representative sampling points using standard USACE wetland determination data forms. Photographs were taken to support visual documentation (**Attachment B**), and all sampling points, delineated wetland and stream boundaries, and identified stormwater features are shown in the map series (**Attachment A**).

3.3 Mapping and Equipment

An Arrow 100 GNSS Global Positioning System (GPS) unit with sub-meter accuracy was used to collect spatial data for delineated features in accordance with USACE Fort Worth District protocols (USACE 2016). Collected data were used to generate delineation maps showing aquatic resources within the Study Area.

3.4 Documentation

This report summarizes the field methods, findings, and mapped delineations prepared for submission to the USACE Fort Worth District. It includes delineation maps, site photographs, and completed data forms (**Attachment C**) that document survey procedures and field observations. The report supports the identification and potential jurisdictional status of aquatic features.

4 Study Area Description

The Study Area spans a densely developed urban corridor extending from North Austin through Downtown Austin and into the city's southern and southeastern regions. It includes roadways, light rail infrastructure, and adjacent properties where aquatic resource surveys were conducted. The area is characterized by widespread impervious surfaces, extensive

infrastructure, and a long history of landscape alteration. Throughout the corridor, stormwater is actively managed through inlets, underground box culverts, dry-bottom detention and retention basins, water impoundments, and reconfigured open channels—many of which exhibit signs of regular maintenance or stabilization. These engineered systems often disconnect surface flow from natural drainage patterns, limiting hydrologic connectivity and reducing infiltration potential.

Streams within the Study Area are predominantly ephemeral or intermittent and exhibit signs of urban stress, including channelization, incision, altered flow regimes, or partial armoring with riprap or concrete. Many show evidence of erosion, limited vegetative buffers, and proximity to adjacent infrastructure such as roadways, sidewalks, buildings, and fencing. In some areas, channels are confined between developed lots or road embankments, with culverts serving as the primary flow conveyance. While a few features retain semi-natural morphology, most are clearly modified or constructed, such as linear ditches with uniform banks and minimal riparian structure.

Overall, aquatic features across the Study Area reflect a highly managed urban system, where hydrologic function is dictated more by engineered infrastructure than by natural geomorphic or ecological processes.

4.1 Vegetation

Vegetation across the Study Area reflects long-term disturbance and routine maintenance, including mowing, clearing, and grading associated with adjacent infrastructure and urban land use. Plant communities are generally dominated by ruderal herbaceous species, early successional woody plants, and non-native vegetation. Where wetland vegetation is present, it is generally limited in extent and dominated by upland (UPL), facultative-upland (FACU), or facultative (FAC) species adapted to upland, temporary, or managed hydrologic conditions. The dominant species observed include the following:

- Cedar elm (*Ulmus crassifolia; FAC*);
- Sugar hackberry (*Celtis laevigata; FAC*);
- Gum bumelia (*Sideroxylon lanuginosum ssp. lanuginosum; FACU*);
- Chinese privet (*Ligustrum sinense; UPL*);
- Saw greenbrier (*Smilax bona-nox; FACU*);
- Poison ivy (*Toxicodendron radicans; FAC*);
- Dewberry (*Rubus trivialis; FAC*);
- Bermudagrass (*Cynodon dactylon; FACU*);
- Western ragweed (*Ambrosia psilostachya; FACU*);
- Annual bedstraw (*Galium aparine; FACU*);and
- Bastard cabbage (*Rapistrum rugosum; UPL*).

Wetland vegetation indicators were observed at select locations within the Study Area. Species such as slender spike-rush (*Eleocharis montividensis*; facultative wetland [FACW]), broadleaf

cattail (*Typha latifolia*; obligate wetland [OBL]), and bordered buttercup (*Ranunculus marginatus*; FACW) were present in localized areas where hydrologic conditions supported facultative or obligate wetland vegetation. However, these species were not widespread and often occurred in small patches intermixed with upland or non-native species.

4.2 Soils

Soils throughout the Study Area are mapped primarily as Houston Black clay and Altoga silty clay, with 0 to 6 percent slopes. Field observations indicate widespread disturbance, with most profiles exhibiting evidence of grading, compaction, or fill placement. Across all sampling points, soil textures were predominantly clay or clay loam, with moist color values ranging from 10YR 2/1 to 10YR 4/6. Soil profiles generally lacked distinct horizon development and frequently contained imported material, rock fragments, or gravel. Some profiles displayed clear indicators of anthropogenic disturbance, including compacted layers that confined root growth or impeded water movement.

No restrictive layers were observed in natural strata; however, observations of compaction and imported fill at depths ranging from 8 to 12 inches suggest created impervious conditions. These traits were consistent across multiple sampling locations and align with the long-term development history of the Study Area.

Hydric soil indicators were observed at select sampling points within the Study Area and included features such as a Redox Dark Surface, consistent with USACE criteria for hydric soils. While not widespread, these soils were present in isolated areas. Representative soil profiles corresponding to the sampling points documented in wetland delineation data forms in **Attachment C** are shown in **Attachment B**.

4.3 Hydrology

Receiving waters around and/or intersected by the Study Area include Shoal Creek, Country Club Creek, the Colorado River, and the Lady Bird Lake portion of the Colorado River. Surface flow is managed through a network of stormwater infrastructure, including stormwater inlets, underground box culverts, concrete-lined channels, and dry-bottom detention and retention basins.

Antecedent precipitation data indicate normal precipitation conditions at the time fieldwork was conducted (EPA 2024). Although wetland hydrology was not widespread, algal mats were observed at one location, serving as a primary indicator of wetland hydrology under USACE criteria.

5 Results

The potential WOTUS delineation data are presented in the aquatic features map (**Attachment**), the photo location map and photographs (**Attachment B**), and the wetland determination data forms (**Attachment C**). The delineated features are summarized below.

5.1 Delineated Aquatic Features

One emergent wetland, four ephemeral drainages, eight intermittent streams, one perennial stream, and one open water impoundment were observed during the routine onsite delineation visit. Further discussion of these aquatic features is provided below. **Attachment B** contains representative site photographs, and Table 1 contains the photo numbers associated with each aquatic feature.

5.1.1 Streams

A total of 13 aquatic features were documented within the Study Area during the March 2025 onsite delineation. These included 4 ephemeral drainages, 8 intermittent streams, and 1 perennial stream, as described below.

5.1.1.1 Ephemeral Drainages

S-04 (Unnamed) is an ephemeral drainage feature within the Colorado River watershed that has been modified to function as stormwater infrastructure. The upstream segment, fed by a stormwater detention pond between Willow Creek Road and East Riverside Drive, appeared artificially intermittent in the field due to pooled water and signs of scouring and gravel deposition near the culvert inlet. However, downstream of the Study Area, the feature flattens, contains modified OHWM indicators due to channelization, and exhibits no natural stream morphology. Aerial imagery and field observations suggest the feature alternates between underground via culverts and natural channels terminating at a detention pond near the Colorado River (**Attachment B, Photographs 16–18**). These characteristics support a determination that S-04 functions as a constructed stormwater conveyance rather than a naturally occurring waterway, making it ephemeral in nature. While the downstream retention pond likely has an overflow outfall to the river, it is physically separated by a human-made impoundment and lacks a continuous surface connection with the Colorado River, a TNW. Based on the ephemeral flow regime and the lack of a continuous surface connection with an RPW or TNW, S-04 is not considered a WOTUS.

S-10 (Carson Creek Montopolis Tributary) and **S-13 (Unnamed)** were dry vegetated channels at the time of the survey and appear to function solely as stormwater conveyance channels. Both features are straight, human-made channels constructed to manage runoff from surrounding areas with substantial impervious cover, including busy multi-lane roads and residential development. Each includes large storm drain infrastructure and was likely engineered to convey high volumes of stormwater during precipitation events.

The channels lack natural stream characteristics such as defined sinuosity, bed and bank development, or a readily observable OHWM due to modification. The channels were delineated using multiple indicators suggesting flow patterns during storm events, such as stone riprap placement, a change in slope, or significant vegetation growth due to lack of mowing within the channel (**Attachment B, Photographs 4, 25, and 26**). Additionally, no observable hydrologic connectivity to aquatic resources was observed. A review of historical imagery indicates that S-10 corresponds with a stream shown on the 1955 U.S. Geological Survey topographic map; however, the current alignment appears to have been substantially relocated and channelized.

The present-day features were constructed entirely in uplands and do not drain any identified wetlands. The channels were dry during a period of normal precipitation, are considered ephemeral, and are therefore not considered WOTUS.

S-14 (Unnamed) was identified as an ephemeral stream located near the center of the Study Area. It originates at an upgradient municipal separate storm sewer system (MS4) outfall that conveys water only during precipitation events and flows downslope through a deeply incised, narrow erosional channel. The stream was completely dry during the survey, lacked indicators of sustained or base flow, and contained large woody debris deposits within the banks, suggesting it primarily conveys high-energy runoff during storms. The channel exhibits a low width-to-depth ratio, characteristic of downcutting, where increased runoff causes vertical erosion of the streambed, leading to entrenchment and steep, unstable banks. An OHWM was observed within the erosional channel, indicated by a narrow, discontinuous line of sediment deposition, including small rocks, scour marks, and slight bank undercutting (**Attachment B, Photographs 30 and 31**). These characteristics suggest periodic high-flow events, reinforcing the ephemeral classification of the channel. Because the channel was dry during a period of normal precipitation, it is considered ephemeral and is therefore not considered a WOTUS.

5.1.1.2 Intermittent Streams

S-02 (**East Bouldin Creek**) has been modified to function as a stormwater conveyance channel in a highly developed portion of the Study Area. Portions of the channel are armored with concrete due to the proximity of the surrounding infrastructure. The creek exhibits incised beds and altered morphology characteristic of urban stream systems. Upstream of the roadway crossing, the channel retains a more natural appearance, with one side of the creek remaining open, unlined, and supporting riparian vegetation (**Attachment B, Photographs 27–29**). This segment is adjacent to undeveloped land and receives additional flow from S-14. Bouldin Creek serves as a potential RPW tributary with a continuous surface connection to the Colorado River and is likely jurisdictional.

S-05 (**Country Club Creek West**) flows through the eastern portion of the Study Area and exhibited surface water and well-defined channel morphology at the time of the survey and in publicly accessible historical aerial photography. In this reach, the feature appeared to reflect characteristics of intermittent flow, including evidence of a defined bed and bank and the presence of hydrologic indicators consistent with sustained seasonal flow (**Attachment B, Photographs 13–15**). While a downstream segment of Country Club Creek has been channelized and is reported to function ephemerally, the reach observed within the Study Area demonstrates surface flow and connectivity to larger regional drainage systems. Aerial imagery further supports this interpretation, showing a continuous channel connecting to the Colorado River downstream of Lady Bird Lake. A previous Nationwide Permit 43 (Stormwater Management Project) authorization identified an approximately 1,500-foot segment of this channel downstream of the Study Area as ephemeral due to the 1976 Bypass Channel of Country Club Creek project, which rerouted Country Club Creek West over a floodplain area with sandy, highly erodible substrate (SWF-2016-00352). Ongoing construction of the stabilization project is expected to beneficially affect hydrology and minimize soil loss by creating three large in-channel structures with a series of intermittent stream and pool habitats.

At this time, it is unclear if future EPA and USACE definitions and guidance for defining RPWs will exclude upstream segments based on downstream segments with constructed stormwater management infrastructure for stream bank stabilization. It is also not possible to evaluate the seasonal extent of stream flow in the downstream section due to the construction. Based on current field observations and aerial review within the Study Area, the observed reach of S-05 is best characterized as intermittent with a surface connection to an RPW and appears likely jurisdictional.

S-06 (**Country Club Creek West-1**), **S-07** (**Country Club Creek East-3**), **S-08** (**Country Club Creek East**), and **S-09** (**Country Club Creek East-4**) are mapped tributaries to Country Club Creek, an RPW. Apart from S-09, these features were dry at the time of the survey. However, all features displayed indicators of intermittent flow, including incised channels, defined beds and banks, and OHWMs demarcated by consistent vegetation breaks and erosional features. All streams are located in a highly urbanized area with significant impervious cover and include large storm drain infrastructure. Each crosses beneath roadways via box culverts. Channel substrates contained debris, primarily composed of trash and urban runoff deposits, indicative of episodic, high-energy stormwater flows (**Attachment B, Photographs 5–12 and 32–33**). Based on their geomorphic characteristics, flow indicators, and surface connectivity to an RPW, these features appear likely jurisdictional.

S-11 (**Carson Creek**) is a highly modified stream adjacent to a large business park. Although not directly connected to visible infrastructure, it likely receives indirect inputs from nearby impervious surfaces and stormwater features, including nearby detention basins, culverts, and outfalls (**Attachment B, Photographs 1–3**). The channel is partially lined with concrete and riprap in segments but retains natural morphology in others and appears to follow the original alignment of a natural creekbed. Aerial imagery supports this, showing a natural drainage course that functions as a primary corridor for stormwater conveyance and that maintains a surface connection downstream to the Colorado River.

An OHWM was observed, marked by distinct sediment deposits, scour marks, slight bank undercutting, and shifts in vegetation, indicative of regular flow during storm events. Water was observed pooled within the channel at depths of approximately 1 to 4 inches. Based on field observations, aerial interpretation, and its role in conveying flow through a natural drainage feature with episodic standing water, S-11 is best characterized as intermittent with seasonal pools and appears likely jurisdictional under current guidance.

S-15 (Hemphill Creek) is a concrete-lined portion of the upstream end of Hemphill Creek near the northern boundary of the Study Area. Within the Study Area, the feature lacks natural stream morphology and was observed to be fully armored with concrete along its entire length. Although the feature functions exclusively as part of the stormwater drainage system at this location, it corresponds with Hemphill Creek, which exhibits more natural characteristics downstream (southeast) of the Study Area.

At the point where it intersects the Study Area, the creek is routed through stormwater infrastructure that conveys flow beneath roadways and continues underground for approximately 0.3 mile before resurfacing (**Attachment B, Photographs 37 and 38**).

Based on current field observations and desktop review, this upstream segment does not maintain a continuous surface connection to an RPW, and its flow is conveyed entirely through engineered infrastructure. As such, S-15 does not meet the criteria for a jurisdictional WOTUS and is considered likely non-jurisdictional under current guidance.

5.1.1.3 Perennial Streams

S-01 (**Colorado River / Lady Bird Lake**), an impoundment to a major perennial river, traverses the southern portion of the Study Area. The feature exhibited continuous surface water during the site visit and is a named river with year-round flow, regional connectivity, and the capacity to support a variety of aquatic uses. Lady Bird Lake is directly connected to navigable waters because the upstream limits of the Section 10 navigable waters segment is Longhorn Dam at Pleasant Valley Road downstream of the proposed crossing, and it functions as a key hydrologic and ecological resource in the region (**Attachment B, Photographs 34–36**).

5.1.2 Wetlands

5.1.2.1 Palustrine Emergent (PEM) Wetlands

HNTB-B6 is in a low-lying area and meets USACE wetland criteria based on the presence of hydrophytic vegetation, hydric soils, and observed algal mats. The wetland appeared isolated during the survey, with no visible surface connection to nearby streams or drainage infrastructure (**Attachment B, Photographs 19–21**). It was likely formed due to stormwater features not functioning as intended, causing water to collect and persist at the lowest point of the landscape rather than flowing to the nearby drainage ditch. The wetland was isolated with no observable surface connection to a nearby RPW and is not likely considered a WOTUS.

5.1.3 Open Water Features

OW-01 is a human-made impoundment at the upstream extent of an unnamed tributary to the Colorado River. Although the feature has been modified, it appears to represent an impounded segment of a historically natural stream channel. Historical aerial imagery (particularly from 1958) indicates the original stream extended upstream beyond the current impoundment location but was truncated around 1964 because of the construction of a commercial building. The open water feature itself was excavated circa 2012 during adjacent commercial site development.

OW-01 exhibits characteristics consistent with an open water body, including persistent surface water, a defined basin, and active hydrologic function. It serves as a collection point for runoff from surrounding impervious surfaces and contributes intermittent flow to a downstream tributary via culvert. While culverted, this downstream tributary contains observable surface water and is a well-defined channel with a clear surface connection to the Colorado River, as supported by light detection and ranging (LiDAR) data and site photographs. This suggests the downstream tributary meets the criteria for an RPW under current regulatory guidance.

Although OW-01 lies just outside the Study Area boundary (within approximately 50 feet), it was delineated because of its proximity to, and potential for indirect influence on, the Project. No

direct impacts on the feature are proposed; if future improvements to the stormwater system occur, they would affect infrastructure (e.g., under-road culverts) rather than aquatic features.

Given the persistent hydrologic characteristics of OW-01, its origin as a modified natural stream segment, and its downstream connection to a likely RPW tributary of the Colorado River, the feature should be conservatively considered likely jurisdictional under current guidance (**Attachment B, Photographs 22–24**).

Table 1: Summary of the Aquatic Features Observed within the Study Area

Feature	Extent of Aquatic Features			Proposed Jurisdictional Assessment	Photo Number(s)*
	Linear Feet	Average Stream Width (ft)	Acres		
Ephemeral Drainages					
S-04	233.11	12.2	0.06	Non-RPW, likely non-jurisdictional	16–18
S-10	258.22	14.3	0.10	Non-RPW, likely non-jurisdictional	4
S-13	201.82	10.1	0.03	Non-RPW, likely non-jurisdictional	25, 26
S-14	154.64	8.9	0.02	Non-RPW, likely non-jurisdictional	30, 31
Intermittent Streams					
S-02	652.73	18.1	0.24	Potential RPW, likely jurisdictional	27–29
S-05	329.84	19.7	0.13	Potential RPW, likely jurisdictional	13–15
S-06	284.27	14.6	0.10	Potential RPW, likely jurisdictional	11, 12
S-07	301.78	9.6	0.05	Potential RPW, likely jurisdictional	8–10
S-08	329.89	22.0	0.13	Potential RPW, likely jurisdictional	5–7
S-09	435.16	12.8	0.09	Potential RPW, likely jurisdictional	32, 33
S-11	1,728.74	33.4	1.11	Potential RPW, likely jurisdictional	1–3
S-15	114.80	8.4	0.05	Non-RPW, likely non-jurisdictional	37, 38

Feature	Extent of Aquatic Features			Proposed Jurisdictional Assessment	Photo Number(s)*
	Linear Feet	Average Stream Width (ft)	Acres		
Perennial Stream					
S-01	466.67	477.4	5.22	TNW, jurisdictional	34–36
Emergent Wetland					
HNTB-B6	74.4	8.8	0.02	Isolated, likely non-jurisdictional	19–21
Open Water					
OW-01	253.05	40.8	0.48	Likely jurisdictional	22–24

* See **Attachment B** for the locations of the site visit photos.

6 Key Findings and Recommendations

Aquatic resource surveys conducted within the Study Area—an urban corridor extending from North Austin through Downtown Austin to the southeastern city limits—identified 13 streams, 1 wetland, and 1 open water impoundment. The area is defined by extensive impervious cover, engineered drainage infrastructure, and long-standing landscape modification, all of which have significantly altered natural hydrologic patterns.

Most streams are ephemeral or intermittent and visibly influenced by urban pressures, including channelization, incision, armoring, and culvert confinement. Many features lack riparian buffers, show signs of erosion, and are bordered by dense development. While a few exhibit elements of natural morphology, most function as engineered stormwater conveyance systems disconnected from broader hydrologic networks.

Vegetation is dominated by ruderal and non-native species, and shaped by routine mowing and grading. Wetland species were present only in localized areas, typically where surface water was retained by stormwater infrastructure. Soils across the Study Area are highly disturbed, with evidence of compaction and fill common. Hydric soil indicators and wetland hydrology were observed at select points but were limited in extent.

Recommendations are as follows:

1. Submit delineation data to USACE to confirm the status of stream and wetland features under the Clean Water Act.
2. Where feasible, avoid or minimize impacts on aquatic features and incorporate best management practices to support water quality and channel stability.

As discussed in Section 2, for additional context and planning guidance, refer to the Water Resources Technical Report for the Project (ATP 2024). This companion report provides a comprehensive overview of surface and groundwater conditions, stormwater infrastructure, regulatory constraints, and mitigation measures throughout the broader Phase 1 alignment.

Additional WOTUS delineations relevant to this area can be found in the *Lady Bird Lake Bridge Project: Aquatic Resources Delineation Report and Proposed Jurisdictional Analysis* (Kimley-Horn 2025).

7 References

ATP. 2024. Austin Light Rail Phase 1 Project, Water Resources Technical Report.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1. U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS. January. Accessed March 2025. https://www.sac.usace.army.mil/Portals/43/docs/regulatory/1987_wetland_delineation_manual_reg.pdf.

EPA. 2024. The Antecedent Precipitation Tool (APT). *Waters of the United States.* October 24. Accessed May 12, 2025. https://www.epa.gov/wotus/antecedent-precipitation-tool-apt#https://erdc-library.erdc.dren.mil/jspui/handle/11681/47189.

Kimley-Horn. 2025. *Lady Bird Lake Bridge Project: Aquatic Resources Delineation Report and Proposed Jurisdictional Analysis*. Prepared for Austin Transit Partnership.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)*. ERDC/EL TR-10-1. March. U.S. Army Engineer Research and Development Center, Vicksburg, MS. https://usace.contentdm.oclc.org/utils/getfile/collection/p266001coll1/id/7613.

USACE. 2016. SWG-Standard Operating Procedures; Recording and submitting Jurisdictional Delineations Using Global Positioning Systems (GPS) and Geographic Information Systems (GIS) Tools and Technologies. Accessed May 2025. https://www.swg.usace.army.mil/Portals/26/docs/regulatory/Wetlands/2016%20GPS%20SOP.pdf

USACE and EPA. 2025. Memorandum to the Field Between the U.S. Department of the Army, U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency Concerning the Proper Implementation of “Continuous Surface Connection” Under the Definition of “Waters of the United States” Under the Clean Water Act. March 12. Accessed March 2025. https://www.epa.gov/system/files/documents/2025-03/2025cscguidance.pdf.

Attachment A. Study Area Figures

Attachment B. Photo Location Map and Site Visit Photographs

Attachment C. Wetland Determination Data Documentation