



GALLAWAY
CONSULTING
A DIVISION OF NORTHSTAR ENGINEERING

Wetlands Assessment

November 09, 2009

Suisun City Redevelopment Agency
Attn: Jason Garben
701 Civic Center Boulevard
Suisun City, CA 94585

**Re: Wetlands Assessment for the Suisun City Mixed Use Project, Suisun City,
Solano County, CA (GC# 2009-227)**

Dear Mr. Garben:

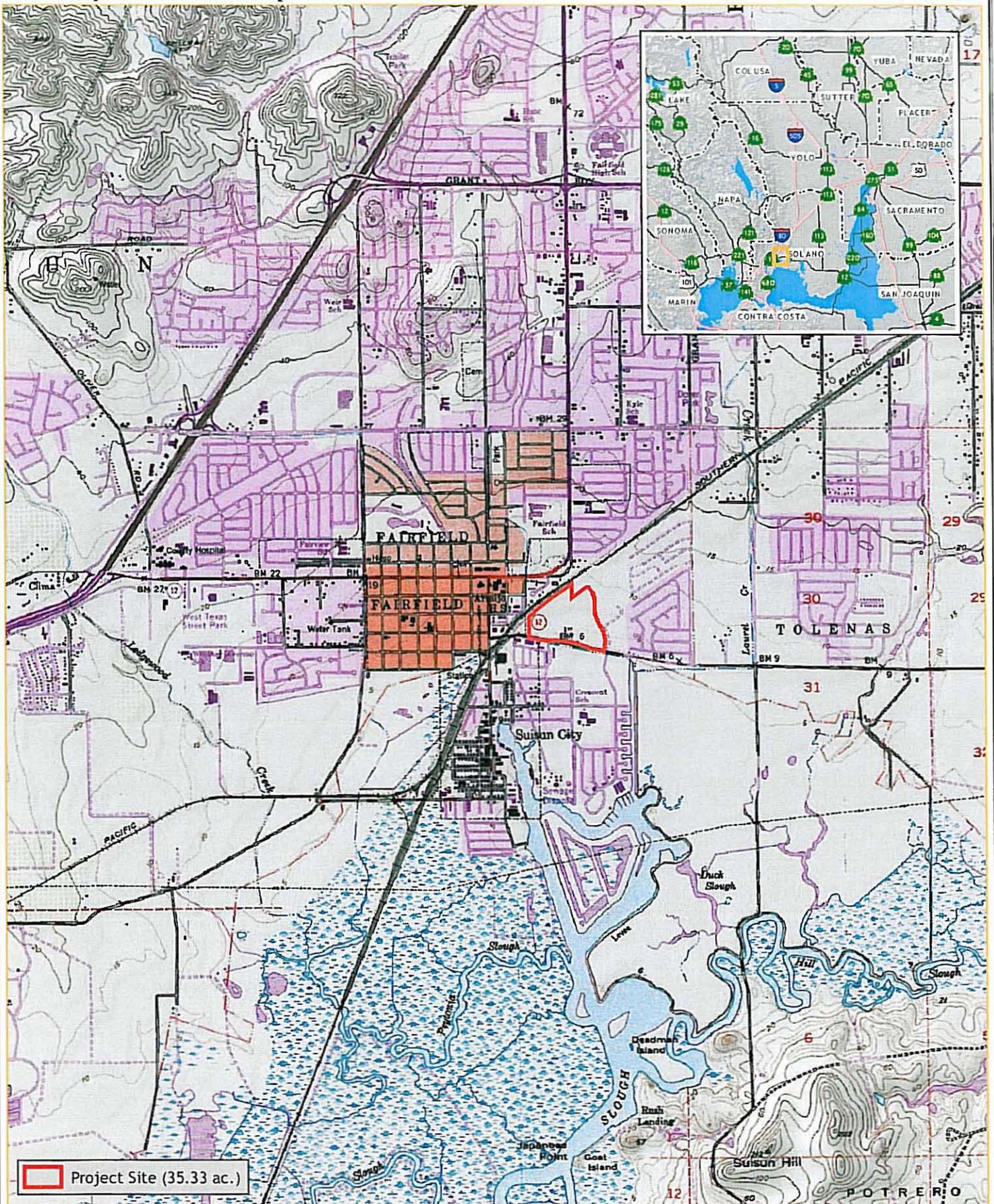
As requested, Gallaway Consulting (GC) conducted a Wetlands Assessment to update the 2006 Delineation of Waters of the U.S. for the Suisun City Mixed Use Project (Assessment Area) located in Suisun City, Solano County, CA (**Figure 1**). The purpose of the following analysis is to identify any changes to the wetlands on the site and re-assess the wetlands pursuant to the most recent U.S. Army Corps of Engineers (USACE) delineation guidelines.

EXISTING CONDITIONS

The approximately 30-acre Assessment Area is located within Section 25, T5N, R2W (M) of the Fairfield South 7.5-minute quadrangle (**Figure 1**). The Assessment Area is characterized as disturbed annual grassland with vegetation consisting mainly of non-native grasses and forbs. The site showed evidence of recent tilling and mowing as well as past grading and fill activities. Construction of a paved pedestrian path along the north side of the irrigation ditch located along the southern boundary of the site was in progress, and a small portion of the Property was being used as a staging area for equipment. Commercial and residential developments surround the BSA in all cardinal directions. Dirt access roads occur in multiple areas throughout the site and a dilapidated concrete building pad and water storage tank occur within southern portion of the Assessment Area. The primary soil series found within the Assessment Area are the Capay Clay, Capay Silty Loam, Clear Lake Clay, and Made Land. These soil series, with the exception of the Made Land fill soil, typically occur on alluvial fan terraces. Within the Assessment Area, soils displayed alkaline characteristics. A series of man-made ditches within the Assessment Area drain water from the site and transport it to offsite stormwater infrastructure. Multiple seasonal wetlands also occur within the Assessment Area.

Suisin City Mixed Use Development

Location



Project Site (35.33 ac.)



Within Suisin Land Grant,
in proximity of T5N, R2W Solano County, CA,
on Fairfield North USGS 7.5' Quad
Map shows Fairfield North & Fairfield South USGS 7.5' Quads
Map Date: November 9, 2009



Figure 1

METHODOLOGY

The purpose of the survey was to compare the 2006 wetland delineation map prepared by Gallaway Consulting, Inc. (**Attachment A**), to the features presently located on the site. The site visit was conducted on October 28, 2009 and involved an examination of botanical resources, soils, and hydrological features and a determination of wetland characteristics based on the *United States Army Corps of Engineers Wetlands Delineation Manual* (1987); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008); and the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (2007).

Terminology

Waters of the United States, Including Wetlands are water bodies under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) per the Clean Water Act (CWA) and the Rivers and Harbors Act. The term “waters of the U.S” is an encompassing term that includes “wetlands” and “other waters.” Wetlands have been defined for regulatory purposes as follows: “Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” Other waters of the U.S. are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

RESULTS

Hydrology

A Draft Delineation of Waters of the U.S. was prepared in January 2006 by Gallaway Consulting, Inc. to determine the extent of potentially pre-jurisdictional features within the Property (**Attachment A**). The delineation involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the USACE Wetlands Delineation Manual (1987). The delineation was not submitted to USACE for verification. Based on the recent site visit on October 28, 2009 and new USACE guidance for determining jurisdiction (*Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision Rapanos v. United States and Carabell v. United States*), the original wetland delineation map from 2006 would require designation changes and a slight increase in wetland acreage (**Figure 2**). The seasonal wetland labeled as NF 01 would increase in length, and according to current USACE guidance would be considered jurisdictional. WF 02 and OW 03 would be likely considered non-jurisdictional since the hydrologic connectivity of these features to OW 02 was removed (Culvert 03) during the construction of the bike path. Wetland feature 01 and OW 02

would remain as they are currently depicted on the map, but OW 02 will need to be re-classified as a relatively permanent water (RPW). One additional potentially non-jurisdictional feature would need to be added to the map in the southeast portion of the Assessment Area (**Figure 2**).

REGULATORY FRAMEWORK

The following laws and regulations were identified as possible constraints to Project activities within the Assessment Area based on occurring and potentially occurring sensitive natural resources.

Clean Water Act, Section 404

The USACE and the EPA regulate the placement of dredged or fill material into “waters of the U.S.” under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. The USACE may issue either a nationwide permit (NWP) or individual permit (IP) depending upon the proposed amount of impacts to jurisdictional features. Nationwide permits are general permits issued to cover particular fill activities. All NWPs have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each NWP. NWP 43 covers discharges of dredged or fill material into waters of the U.S. for construction and maintenance of stormwater management facilities. Stormwater management facilities are covered under NWP 43 provided that less than ½ acre of waters of the U.S. and less than 300 linear feet of open water are impacted. Individual permits are required when the impact thresholds of nationwide permits are exceeded. An Individual permit requires compliance with section 404(b)(1) guidelines. Under the guidelines, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Therefore, when applying for an IP the applicant will be required to provide an alternatives analysis that demonstrates that the proposed project represents the least environmentally damaging practicable alternative. The alternatives analysis will include both on and off site alternatives that were considered in the analysis. As a basic reference or guideline, the IP process generally takes a minimum of 1 year while the NWP process is estimated to take approximately 6 months.

Clean Water Act, Section 401 and 402

Section 401 of the CWA requires water quality certification and authorization of placement of dredged or fill material in wetlands and other waters of the U.S. through the appropriate Regional Water Quality Control Board (RWQCB). In accordance with Section 401 of the CWA, criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting CWA Section 402 permits or waivers under the National Pollutant Discharge Elimination System (NPDES), which are

obtained through the RWQCB. Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

California Fish and Game Code, Sections 1600-1616

Under the California Fish and Game Code, Sections 1600-1616, CDFG regulates projects that divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. Proponents of such projects must notify CDFG and enter into a streambed alteration agreement with them.

Section 1602 of the California Fish and Game Code requires a state or local governmental agency or public utility to notify CDFG before it begins a construction project that will: (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Once the notification is filed and determined to be complete, CDFG issues a streambed alteration agreement that contains conditions for construction and operations of the proposed project.

PERMITTING

Should impacts to jurisdictional wetlands be proposed, a 404 Permit, and 401 Certification, and 402 NPDES Permit will be required. If impacts to any of the jurisdictional other waters are proposed, a 404, 401, and 1600 permit will be required.

Table 1. Timelines for permits identified as potential requirements for impacts to waters of the U.S.

Agency	Permit/Approval Required	Timeline	Design Alternative Affected
U.S. Army Corps of Engineers	Section 404; Nationwide or Individual permit	9-12 months	All
Regional Water Quality Control Board	Section 401; Water Quality Certification	60 days	All
California Department of Fish and Game	Section 1600; Streambed Alteration Agreement	60 days	All
U.S. Fish and Wildlife Service	Section 7 Consultation, Endangered Species Act (ESA)	145 days	All
National Historic Preservation Act: State Office of Historic Properties	Section 106 compliance	30 days	All

MITIGATION

Where complete avoidance of jurisdictional waters is not possible, impacts should be minimized to the greatest extent practicable. Impacts to waters of the U.S. will need to be

mitigated per EPA, USACE, and RWQCB requirements. The USACE policy of “no net loss” applies to all jurisdictional wetlands and other waters. When a proposed project will impact waters of the U.S., consultation with USACE and RWQCB is required to determine the type and extent of mitigation that will be required, as well as approval of the mitigation location. In addition, if required by project design, a Section 1600 Streambed Alteration Agreement with CDFG will outline appropriate mitigation measures. These permits are described above and are all, except for the 404 Permit, contingent upon successful completion of the CEQA process.

CONCLUSION

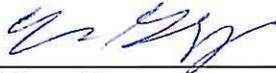
Due to recent changes in the USACE guidance for determining jurisdiction of waters of the U.S., a revised formal Delineation of Waters of the U.S. would need to be prepared for the site. The previously delineated non-jurisdictional seasonal wetland, NF 01, would need to be increased in size and mapped as jurisdictional. Additionally, the previously delineated jurisdictional seasonal wetland and other water, WF 02 and OW 03, should now be mapped as non-jurisdictional. Finally, one isolated wet area in the southeastern corner of the site may need to be depicted on the map as non-jurisdictional.

Impacts to waters of the U.S. must be authorized and mitigated for as required by the regulatory agencies prior to any construction activities on the site.

Due to the potential for one federally listed plant species, the Contra Costa goldfields, to occur within the Assessment Area, ESA Section 7 Consultation may be required if impacts to this species will occur due to the proposed project.

Please contact me with questions at (530) 343-8327 or elena@gallowayconsulting.net

Sincerely,

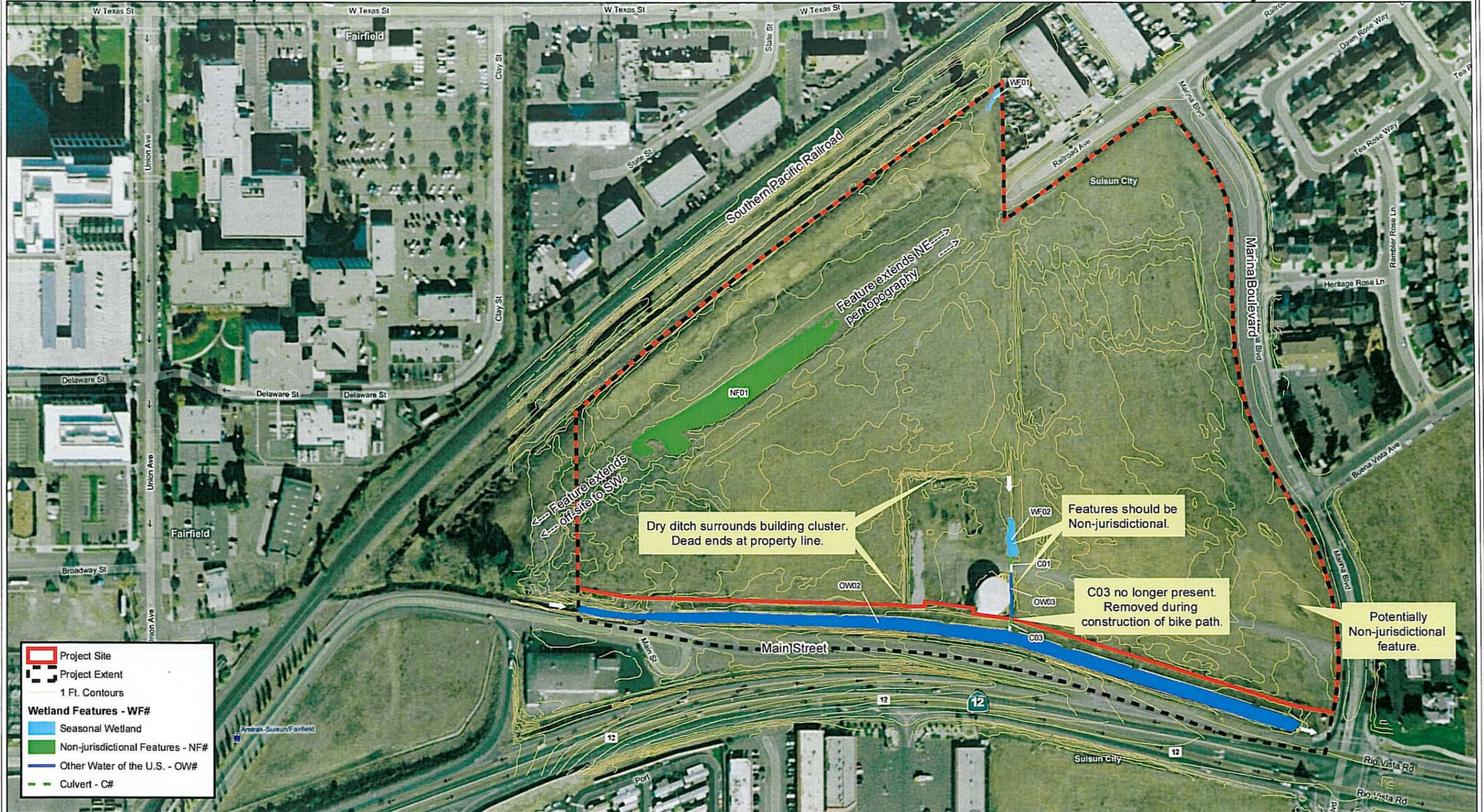


Elena Gregg,
Botanist/Arborist

Encl: Appendix A

Literature Cited

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- Wetland Training Institute. 1995. Field guide for wetland delineation: 1987 Corps of Engineers Manual (WTI 95-3). Poolsville, MD.



Legend

- Project Site
- Project Extent
- 1 Ft. Contours
- Wetland Features - WF#**
- Seasonal Wetland
- Non-jurisdictional Features - NF#
- Other Water of the U.S. - OW#
- Culvert - C#

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 The information in the figure shall be considered preliminary until written verification by the USACE
 Project Site derived from Ruggeri-Jensen-Azar & Associates
 Aerial provided by Microsoft
 Map Date: Nov. 9, 2009

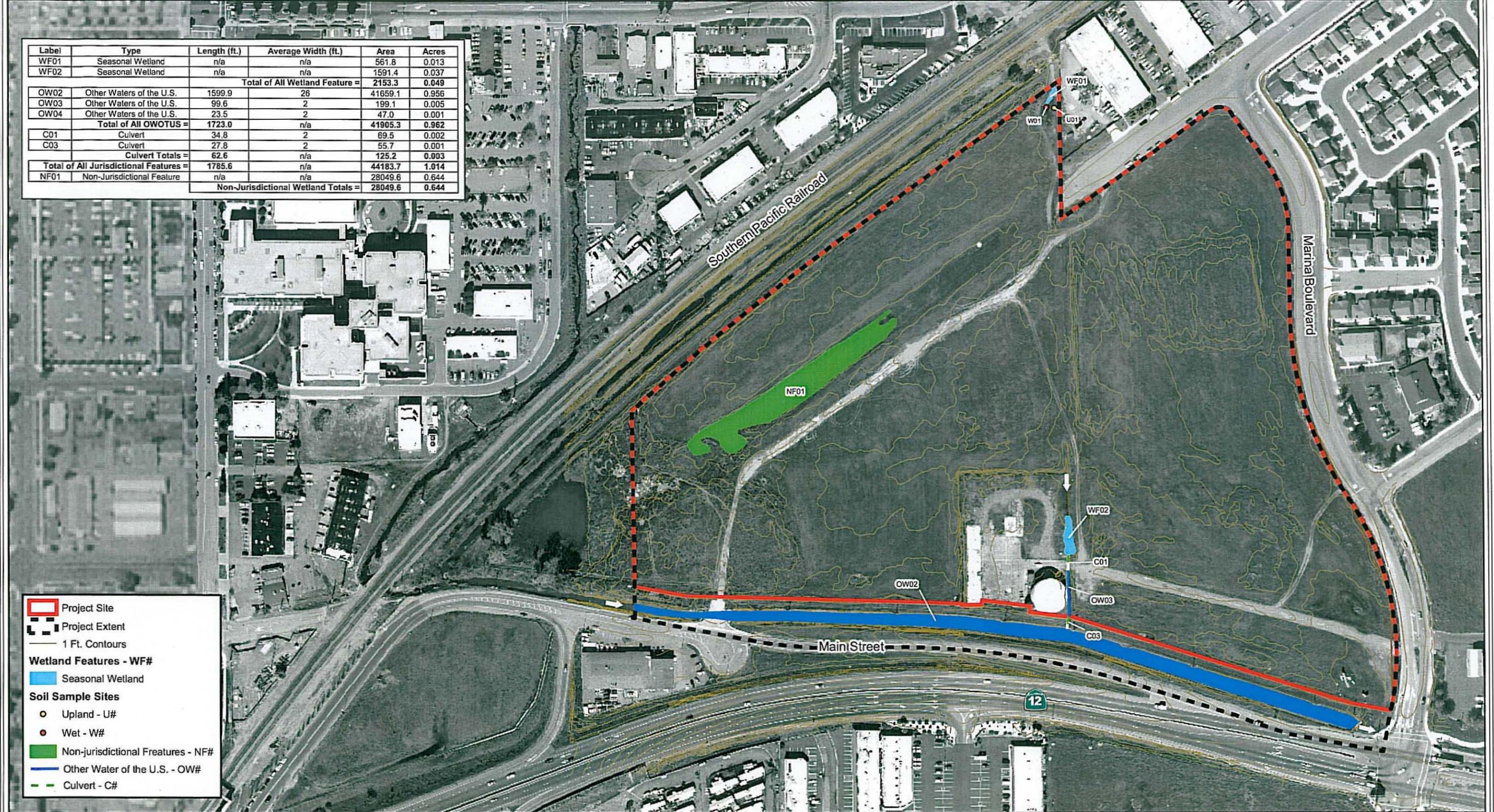


Figure 2

APPENDIX A

2006 Delineation of Waters of the U.S. Map Prepared by Gallaway Consulting, Inc.

Label	Type	Length (ft.)	Average Width (ft.)	Area	Acres
WF01	Seasonal Wetland	n/a	n/a	561.8	0.013
WF02	Seasonal Wetland	n/a	n/a	1591.4	0.037
Total of All Wetland Feature =				2153.3	0.049
OW02	Other Waters of the U.S.	1599.9	26	41659.1	0.956
OW03	Other Waters of the U.S.	99.6	2	199.1	0.005
OW04	Other Waters of the U.S.	23.5	2	47.0	0.001
Total of All OWOTUS =		1723.0	n/a	41905.3	0.962
C01	Culvert	34.8	2	69.5	0.002
C03	Culvert	27.8	2	55.7	0.001
Culvert Totals =		62.6	n/a	125.2	0.003
Total of All Jurisdictional Features =		1785.6	n/a	44183.7	1.014
NF01	Non-Jurisdictional Feature	n/a	n/a	28049.6	0.644
Non-Jurisdictional Wetland Totals =				28049.6	0.644



Project Site
 [Red outline] Project Site
Project Extent
 [Dashed black outline] Project Extent
 [Thin grey line] 1 Ft. Contours

Wetland Features - WF#
 [Blue area] Seasonal Wetland

Soil Sample Sites
 [White circle] Upland - U#
 [Red circle] Wet - W#

Non-jurisdictional Features - NF#
 [Green area] Non-jurisdictional Features - NF#

Other Water of the U.S. - OW#
 [Red area] Other Water of the U.S. - OW#

Culvert - C#
 [Green line] Culvert - C#

↑
 The information in the figure shall be considered preliminary until written verification by the USACE
 Project Site derived from Ruggeri-Jensen-Azar & Associates
 Aerial provided by Ruggeri-Jensen-Azar & Associates
 Map Date: Nov. 30, 2005



Figure 3.