Natural Resources Assessment Report

Stewart Street Reservoirs Replacement
Fortuna, California

Prepared for:

City of Fortuna

DRAFT

SHN Consulting Engineers & Geologists, Inc.
812 W. Wabash Ave.
Eureka, CA 95501-2138
707-441-8855

June 2009
009030.020

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Reference: 009030.020

June 15, 2009

Mr. Dennis Ryan, Public Works Director
City of Fortuna
PO Box 545
Fortuna, CA 95540

Subject: Natural Resources Assessment Report, Stewart Street Reservoirs Replacement, Fortuna, Humboldt County, California

Dear Mr. Ryan:

Attached is the Natural Resources Assessment for the proposed Stewart Street Reservoirs Replacement project at Stewart Street in Fortuna, California. The purpose of this report is to assess potential impacts to any special status species or their habitat within the vicinity of the proposed Stewart Street Reservoirs Replacement project site.

For species with the potential to be impacted by project activities, we discuss the possible types and sources of impacts and assess the likelihood of an impact. Finally, we make recommendations to avoid and/or minimize potential impacts, based on consultation with state and federal agencies.

Please contact me at 707-441-8855 if you have any questions or if we can help you in any way.

Sincerely,

SHN Consulting Engineers & Geologists, Inc.

Shannon S. Zimmerman
Biologist

SSZ:scw
Enclosure: Natural Resources Assessment Report

DRAFT

Reference: 009030.020

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Stewart Street Reservoirs Replacement
Fortuna, California

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City of Fortuna

Prepared by:

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812 W. Wabash Ave.
Eureka, CA 95501-2138
707-441-8855

June 2009

QA/QC: LKS___

Table of Contents

Page

List of Illustrations ii

Acronyms and Abbreviations iv

1.0 Executive Summary 1

2.0 Introduction 1
- 2.1 Project Location 1
- 2.2 Project Description 2
- 2.3 Site Description 2
- 2.4 Scope of Report 3

3.0 Methods 3
- 3.1 Literature Review 3
- 3.2 Field Observations and Studies 4
- 3.3 Trustee and Other Agency Consultation 4

4.0 Environmental Setting 5
- 4.1 Hydrology 5
- 4.2 Soils 6
- 4.3 Vegetation Communities 6
- 4.4 Wildlife Habitats 6
- 4.5 Wildlife Movement Corridors 7

5.0 Regulatory Setting 8
- 5.1 Federal Laws 8
  - 5.1.1 Clean Water Act Sections 404 and 401 8
  - 5.1.2 Rivers and Harbors Appropriation Act of 1899 9
  - 5.1.3 Fish and Wildlife Coordination Act 9
  - 5.1.4 Federal Endangered Species Act 10
  - 5.1.5 Migratory Bird Treaty Act 10
  - 5.1.6 Bald Eagle Protection Act 11
- 5.2 State Laws 11
  - 5.2.1 Porter-Cologne Water Quality Act 11
  - 5.2.2 California Endangered Species Act 12
  - 5.2.3 California Environmental Quality Act Guidelines Sections 15380 and 15370 12
  - 5.2.4 California Coastal Act 13
  - 5.2.5 California Fish and Game Code Section 1600 13
  - 5.2.6 California Fish and Game Code Sections 3503 and 3513 14
  - 5.2.7 Fully Protected Species and Species of Special Concern 14
  - 5.2.8 Native Plant Protection Act of 1973 15
  - 5.2.9 Natural Community Conservation Planning Act 15
  - 5.2.10 California Public Resources Code Section 21083.4 15
  - 5.2.11 Sensitive Vegetation Communities 16
- 5.3 Other Statutes, Codes, and Policies Affording Limited Species Protection 16
- 5.4 Local Regulations and Ordinances 16

DRAFT

Table of Contents, Continued

Page

5.4.1 Fortuna General Plan....16
5.4.2 Goals....16
5.4.3 Policies....17
5.4.4 City of Fortuna Zoning Code, Chapter 17.12 R-1 Residential Single-Family Districts....17

6.0 Special Status Biological Resources....17
6.1 Special Status Natural Communities....28
6.2 Special Status Plant Species....29
6.3 Special Status Animal Species....29

7.0 Environmental Impacts....30
7.1 Thresholds of Significance....30
7.2 Project Impacts and Mitigation Measures....31

8.0 Conclusions....34

9.0 References Cited....34

Appendices

A. Species List
B. Site Photographs
C. USFWS Technical Assistance Request Response Letter dated May 2009

List of Illustrations

Figures **Follows Page**

1. Site Location Map....1
2. Quarter Mile Radius....1
3. Preliminary Site Plan and Access Road Profile....2
4. CNDDB Special Status Species Observations within 2 miles of Site....3
5. National Wetland Inventory....5
6. Soils Map....5

Tables **Page**

1.
Potential Regionally Occurring Sensitive Botanical Species from the Fortuna Area....19
Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area....23
Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area....24

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Acronyms and Abbreviations

ACOE	Army Corps of Engineers
AFWO	U.S. Fish and Wildlife Service, Arcata Field Office
APN	Assessor's Parcel Number
Ar4	Arcata loam soil series
BIO-#	Mitigation Measure-number
BIOS	Biogeographical Information and Observation System
BMPs	Best Management Practices
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERES	California Environmental Resources Evaluation System
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CFGC	California Fish and Game Code
CH	Critical Habitat
City	City of Fortuna
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
DPS	Distinct Population Segment
FC	Federal Candidate
FD	Federally Delisted
FE	Federally Endangered
FESA	Federal Endangered Species Act
FT	Federally Threatened
HA	Hydrologic Area
HR	Hydrologic Region
HSA	Hydrologic Sub-Area
HU	Hydrologic Unit
MBTA	Migratory Bird Treaty Act
MSL	Mean Sea Level
N/A	Not Applicable
NCCP	Natural Community Conservation Planning Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPPA	Native Plant Protection Act
NR	No Reference
NRCS	Natural Resources Conservation Service
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement

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Acronyms and Abbreviations, Continued

SFP	State Fully Protected
SE	State Endangered
SHN	SHN Consulting Engineers & Geologists, Inc.
SONCC	Southern Oregon Northern California Coast
SPWS	Super Planning Watershed
SR	State listed Rare
SSC	Species of Special Concern
ST	State Threatened
State	State of California
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAR	Technical Assistance Request
U.S.	United States
U.S. EPA	U.S. Environmental Protection Agency
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Services
USGS	United States Geological Survey
WDR	Waste Discharge Requirements

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1.0 Executive Summary

The project site is altered and has been subjected to regular human disturbance, both recently and historically. The site is currently developed with existing City of Fortuna (City) water infrastructure. No special status[1] plants or animals were observed during the reconnaissance level biological surveys. With careful site planning, and mitigation measures, potential impacts from future development of the site associated with water infrastructure improvements can be reduced to a level that is less than significant.

The evaluation included in this report only includes the Stewart Street Reservoirs Replacement project area. The project will include connecting Pressure Zone #5 to the Pressure Zone #1 by a pipe somewhere along Home Drive between the site and 9th Street. As described in the project description below, secondary piping is required to compensate for inadequate water pressure in Pressure Zone #1 due to the lower tank bottom. The alignment of the secondary piping will be determined and negotiated with property owners. The piping may require some minor vegetation to be removed. Impacts to biological resources from the secondary piping will be evaluated once the final alignment is selected.

2.0 Introduction

SHN Consulting Engineers & Geologists, Inc. (SHN) has conducted site investigations, literature reviews, and an assessment to determine potential impacts to biological natural resources present at the proposed Stewart Street Reservoirs Replacement project site on Stewart Street, in Fortuna, California.

2.1 Project Location

The proposed reservoir site is located in the northwest quadrant of Section 35, Township 3 North, Range 1 West Humboldt Base and Meridian of the Fortuna 7.5-minute quadrangle (Figure 1). The site is located at the existing Stewart Street reservoir site within Fortuna's city limits, near the northern city boundary on Assessor's Parcel Number (APN) 040-053-001. The northern and western boundaries of the project area are bound by Stewart Street, a two-lane paved city roadway (Figure 2). An unimproved, steep gradient access road (Barney Street) parallels the eastern edge of the site (Appendix B, Photo 4). The latitude and longitude of the project site is approximately 40.602109° N and 124.155782° W, respectively. The project will include connecting Pressure Zone #5 to the Pressure Zone #1 by a pipe somewhere along Home Drive between the site and 9th Street. Upon selection of the final alignment for the secondary piping, the figures will be revised to illustrate the proposed alignment.

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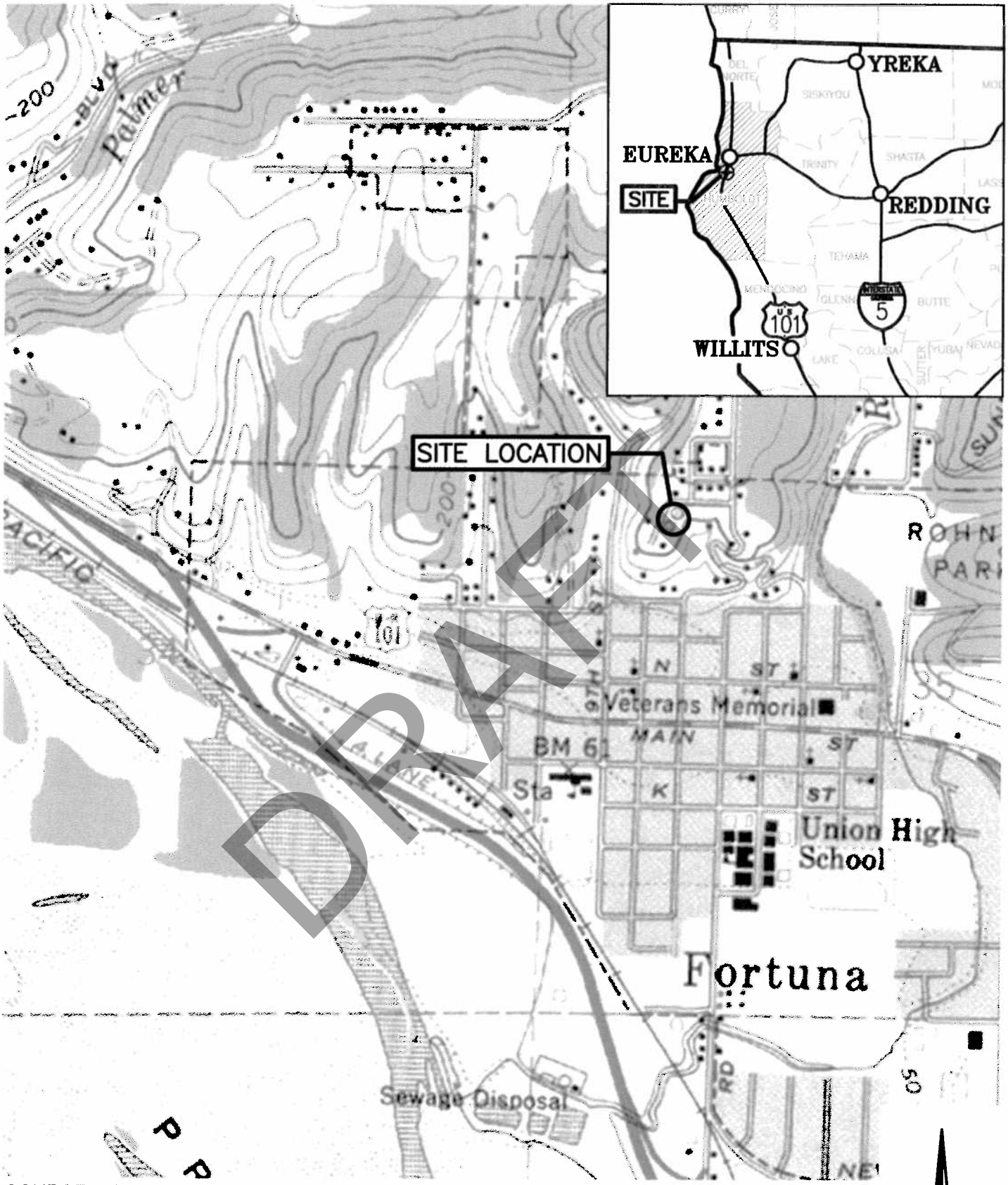
[1] The term "Special Status Species" is used collectively to refer to species that are state or federally listed, federal species of concern, species that are state candidates for listing, and all species listed by the California Natural Diversity Database. This term is consistent with the biological resources that need to be assessed pursuant to the California Environmental Quality Act.



SOURCE: FORTUNA
USGS 7.5 MINUTE QUADRANGLES

1"=1000'±

SHN Consulting Engineers & Geologists, Inc.	Stewart Street Reservoirs Replacement City of Fortuna Fortuna, California	Site Location Map SHN 009030.020
	June 2009	009030-020-SITE-LCTN	Figure 1

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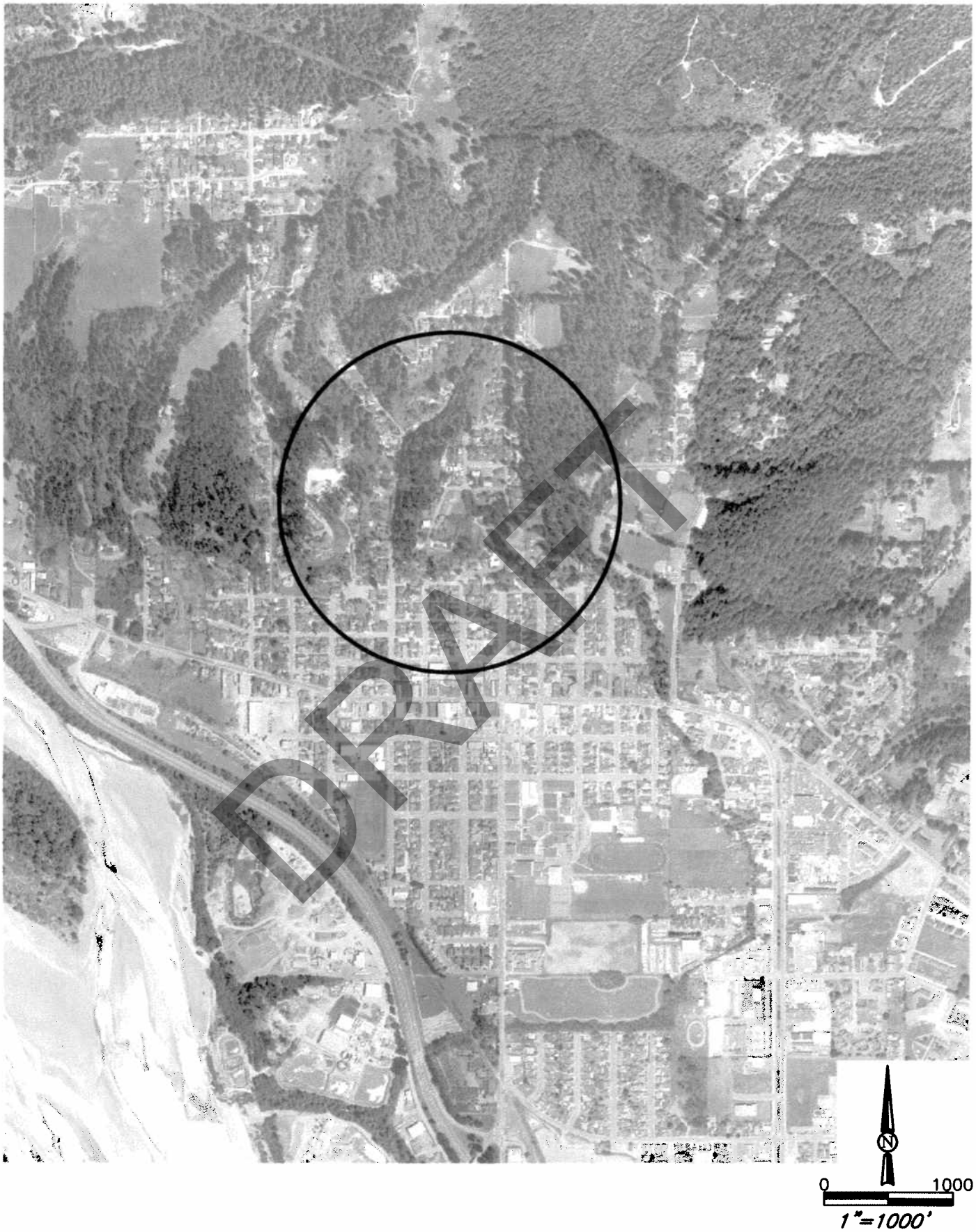

SHN Consulting Engineers & Geologists, Inc.	Stewart Street Reservoirs Replacement City of Fortuna Fortuna, California		Quarter Mile Radius SHN 009030.020
	June 2009	009030-020-RADIUS	Figure 2

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2.2 Project Description

The proposed project involves making improvements to the City's existing water storage and distribution system. This project will enable the City to provide adequate water storage for domestic and fire demands in Pressure Zone #1. The City currently stores water in two, 500,000-gallon reservoirs at the Stewart Street reservoir site within the City boundary. One of the concrete reservoirs is approximately 100 years old. The second tank is approximately 75 years old and has started to leak. The proposed project consists of removing/demolishing existing water tanks, constructing a new 2.0-million gallon concrete storage reservoir, relocating the booster pump station, rerouting on-site piping to connect the new storage tank to the existing distribution system, and connecting a new pipe to the system from Pressure Zone #5 near 9th Street (a directional drill will be used for pipe installation).

The proposed reservoir project site is the existing Stewart Street reservoir site. The two 500,000-gallon reservoirs and booster pump station are located in an area that has an herbaceous vegetation cover that is regularly mowed (Appendix B, Photo 2). The project will require relocating the booster pump station, demolishing the existing tanks, and excavating the site for the new tank construction. On-site piping will be rerouted to accommodate the new storage. The new tank excavation will require lowering the base elevation of the reservoir approximately 15 feet, to construct the foundation on a competent soil layer.

The lower tank bottom will result in some services in Pressure Zone #1 receiving less than adequate water pressure. To compensate for this, the project will connect Pressure Zone #5 to Pressure Zone #1 by a pipe somewhere along Home Drive between the site and 9th Street. The alignment will be determined and negotiated with property owners. The piping will be an eight-inch line connecting the two zones. The piping may require some minor vegetation to be removed; this will be determined when the final alignment is selected. The alignment of the secondary piping will be determined and negotiated with property owners. Impacts to biological resources from the secondary piping will be evaluated once the final alignment is selected. Refer to Figure 3 for a Preliminary Site Plan.

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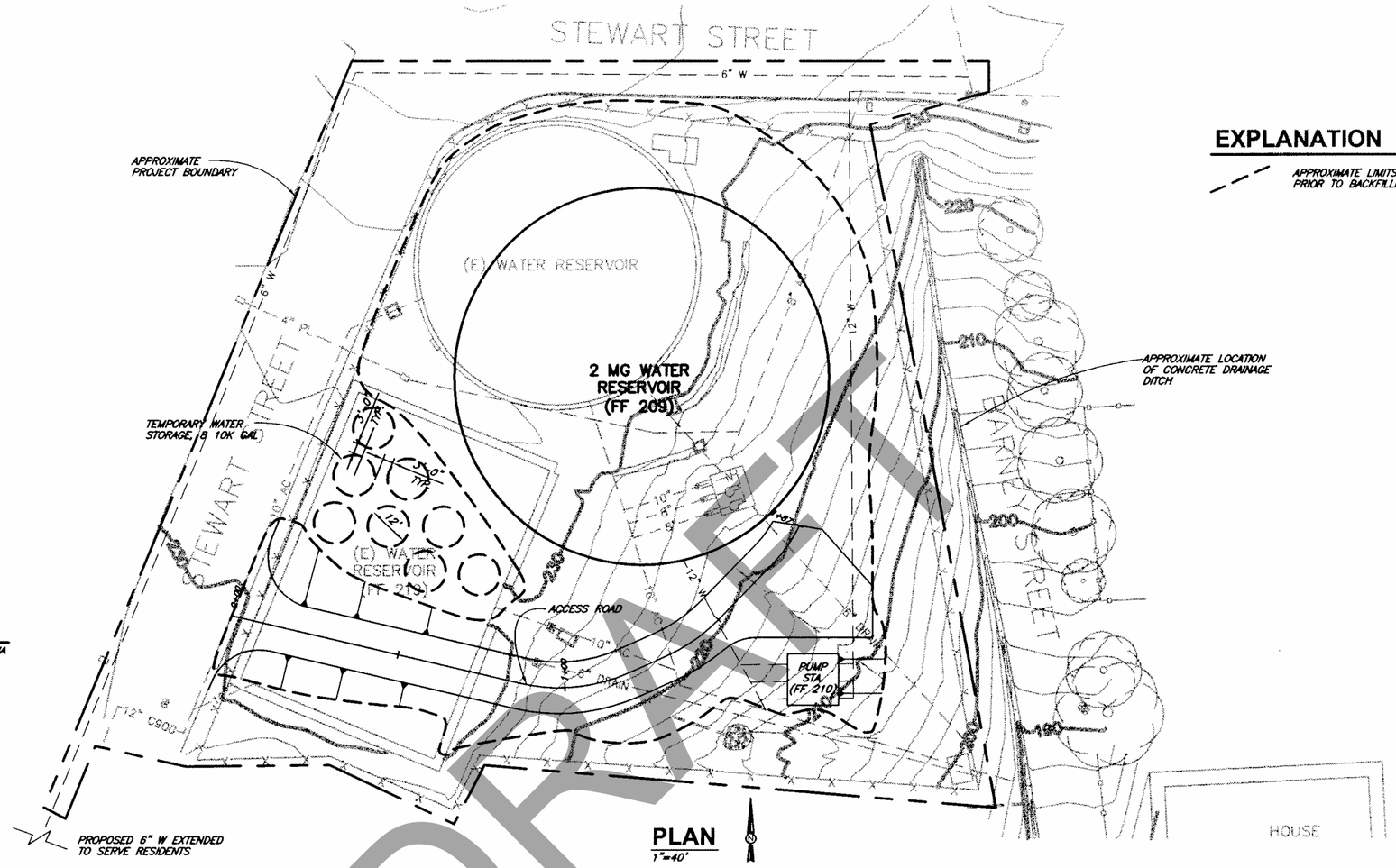
2.3 Site Description

The project site presently supports two, partially buried water supply reservoirs and a wood-frame pump house. The reservoirs consist of reinforced concrete water tanks, one circular and one rectangular, each having about 0.5 million gallons of storage (Appendix B, Photos 1 and 2). The site's elevation ranges from approximately 200 feet to 234 feet above Mean Sea Level (MSL). The project boundary encompasses approximately 0.75 acres. The site slopes 10% to 45% to the southeast. There is a concrete drainage ditch located along the eastern parcel boundary (Appendix B, Photo 4). It is located on the east side of a fence, which is outside of the City's property boundary. The surrounding land use includes urban development consisting of primarily single family residences. Site photos are included in Appendix B of this report.

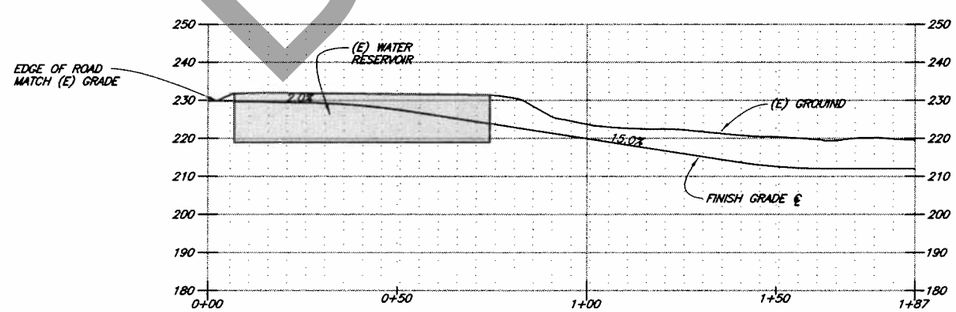


EXPLANATION

APPROXIMATE LIMITS OF GRADING PRIOR TO BACKFILLING

NOTES:

1. PIPE LOCATIONS ARE ADOPTED FROM CITY OF FORTUNA WATER SYSTEM MAP AND CITY STAFF VERIFICATION
2. ALL PIPE LOCATIONS ARE APPROXIMATE



ACCESS ROAD PROFILE

V: 1"=40'
H: 1"=40'

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SHN Consulting Engineers & Geologists, Inc.	Stewart Street Reservoirs Replacement City of Fortuna Fortuna, California	Preliminary Site Plan and Access Road Profile SHN 009030.020
	June 2009	009030-020-GRAD-PLAN	Figure 3

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The alignment for the secondary piping connecting Pressure Zone #5 to Pressure Zone #1 by a pipe somewhere along Home Drive between the site and 9th Street will be determined and negotiated with property owners. Impacts to biological resources from the secondary piping will be evaluated once the final alignment is selected.

2.4 Scope of Report

The purpose of this natural resources assessment is to determine if the proposed project will result in an impact to special status species, habitat that is jurisdictionally regulated such as wetlands, and/or other sensitive natural communities that may be subject to local policies or ordinances. The findings and recommendation measures included in this report shall be used to facilitate the California Environmental Quality Act (CEQA) review and biological permitting for the proposed project.

3.0 Methods

3.1 Literature Review

This natural resources assessment includes a review of pertinent literature on habitat characteristics of the site, and a review of information related to species of plants and animals that could potentially utilize the described habitats. A habitat analysis has been conducted in order to determine the potential presence of natural resources occurring within the survey area. This report documents the methods, results and conclusions for the natural assessment and analysis conducted for the site.

The findings for this report are a result of several sources, including a review of existing literature regarding sensitive resources that have the potential to occur within the site. Resources for this determination included:

1. California Natural Diversity Database (CNDDB) query for the Fortuna and the surrounding[2] U.S. Geological Survey (USGS) 7.5 minute topographic quadrangles (California Department of Fish and Game [CDFG}, 2009a; Figure 4).
2. Electronic Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society ([CNPS], 2009) was queried for a list of all plant species reported for the Fortuna and the surrounding USGS 7.5 minute topographic quadrangles.
3. U.S. Fish and Wildlife Service (USFWS) Listed/Proposed Threatened and Endangered Species for the Fortuna Quad (Candidates Included) (USFWS, 2009a).
4. Special Animals (CDFG, 2009b).
5. State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFG, 2009c).

[2] The surrounding USGS 7.5 minute topographic quadrangles include: (Scotia [636A], Taylor Peak [636B], Ferndale [655D], Cannibal Island [655A], Capetown [637A), Hydesville [654D], McWhinney Creek [654A], and Fields Landing [654B].

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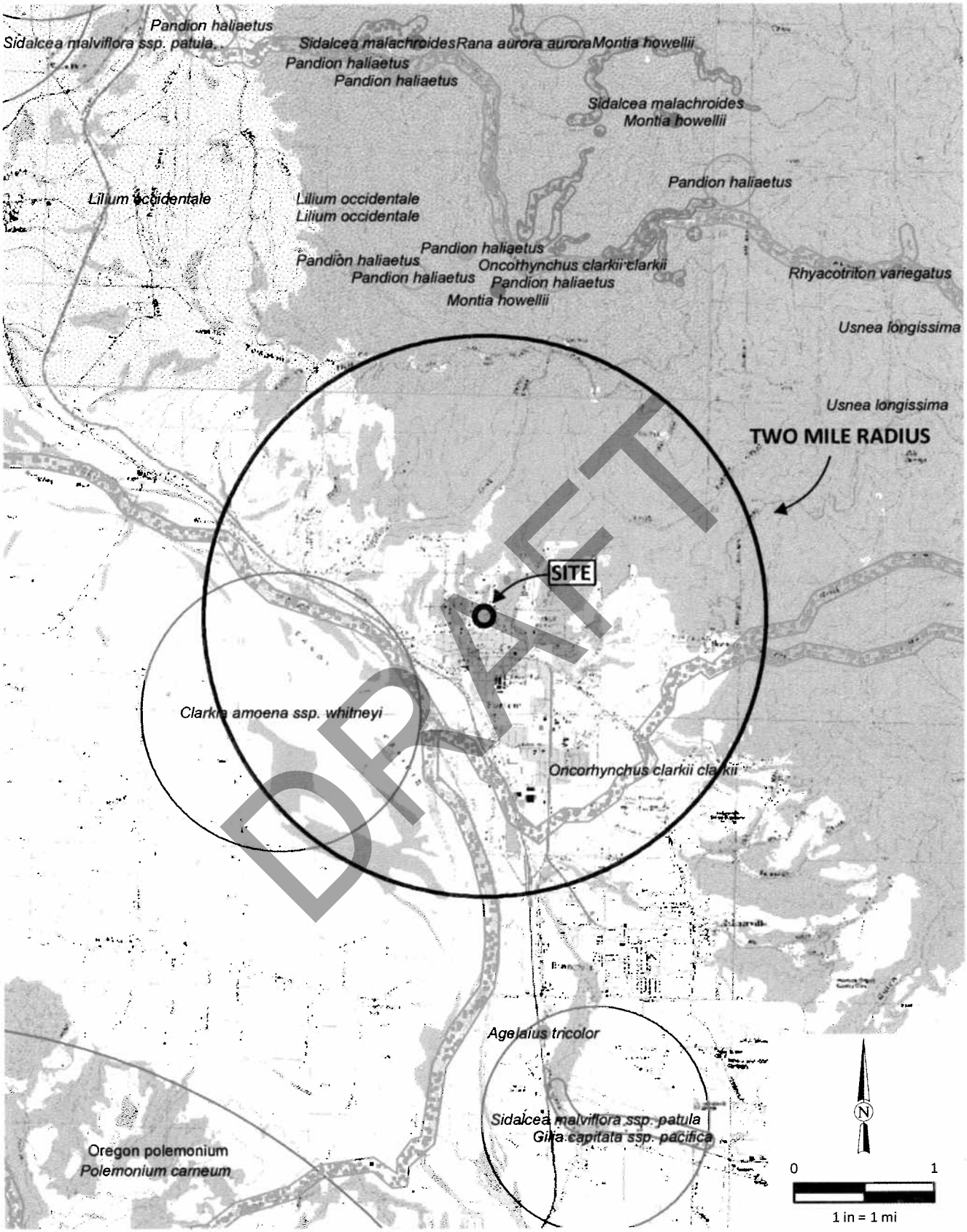

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SHN Consulting Engineers & Geologists, Inc.	Stewart Street Resevoirs Replacement City of Fortuna Fortuna, California	CNDDB Special Status Species Observations within 2 miles of Site SHN 009030.020
	June 2009 / 009030-020-CNNDB.mxd	Figure 4

6. State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFG, 2009d).
7. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication (CDFG, 2009e).
8. Biogeographical Information and Observation System (BIOS; CDFG, 2009f).

Nomenclature for special-status animals conforms to CDFG (2009a, 2009b, and 2009d), respectively. Plant community names conform to Holland (1986) and Sawyer and Keeler-Wolf (1995). Special-status plant community designations correspond to *List of Terrestrial Natural Communities Recognized by the CNDDB* (CDFG, 2003) and *Vegetation Classification and Mapping Program List of California Vegetation Alliances* (CDFG, 2007). Botanical nomenclature in this assessment follows the *Jepson Manual (*Hickman, 1993; UC, 2009). A list of species observed is included in Appendix A.

3.2 Field Observations and Studies

On February 24, 2009 and March 26, 2009, SHN's botanist/ecologist Aimee Weber, with the support of SHN's environmental planner Rosalind Litzky, conducted site visits at the subject site for the purpose of determining if the proposed project will result in impacts to special status plant species and/or habitat that is jurisdictionally regulated such as wetlands, and/or other sensitive natural communities that may be subject to local policies or ordinances.

Focused botanical survey(s), following the CDFG guidelines (CDFG, 1984 [revised 2000]) was not conducted, and is not considered necessary as impacts from site improvements are proposed within the existing developed area which is regularly mowed. No potential habitat for special status plant species was observed within the project area.

On June 11, 2009, SHN's biologist, Shannon Zimmerman, with the support of SHN's environmental planner Erica Kimnach, conducted a reconnaissance level field survey at the project site to evaluate the presence or absence of the habitat necessary for the special status wildlife species known to occur in the Fortuna area. The assessment at the project site included an on-site inspection, by foot. In addition, a preliminary review (windshield survey) of the alignment for the secondary piping proposed from Pressure Zone #5 near 9th street was conducted. The reconnaissance level field survey was adequate to provide a thorough inspection of the project site. In particular, the value of the site for its potential to attract and support the presence of special status bird species that could use the site for nesting and/or foraging. Focused wildlife and nesting bird survey(s) were not conducted, and is not considered necessary as impacts from site improvements are proposed within the existing developed area which is regularly maintained. Thus, the identity, description, and potential for occurrence of these special status bird species appear in Section 6.0. A list of animal species encountered during the assessment is presented in Appendix A.

3.3 Trustee and Other Agency Consultation

On March 26, 2009, Michael van Hattem and Scott Bauer, Environmental Scientists with the CDFG, Aimee Weber, SHN botanist/ecologist, and Liz Shorey, Dennis Ryan, Stephen Avis, and Kevin Carter with the City conducted a site visit to discuss the proposed project and potential biological impacts. Mr. van Hattem and Mr. Bauer concluded during this site visit that there were no major

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biological issues present at the project site and that a 1600 Streambed Alteration Agreement (SAA) was not required for the construction proposed, including construction adjacent to the concrete drainage ditch located in the vicinity (east of the project site).

On May 6, 2009, on behalf of the City, SHN submitted a formal Technical Assistance Request (TAR) for USFWS assistance in the assessment of potential impacts to federally listed species, specifically potential impacts to the marbled murrelet and northern spotted owl (SHN, 2009b). USFWS determined after review of information pertaining to the request, and a site visit conducted by Mr. Ken Hoffman of the USFWS staff, that the proposed project will not affect either the northern spotted owl or the marbled murrelet (USFWS, 2009b; Appendix C).

4.0 Environmental Setting

The environmental setting within the Fortuna area is predominately affected by the mild maritime climate, active tectonic processes that are manifested in the geomorphic landscape, and current and historical development. Influence from these factors is evident in the variety of habitat types found throughout the area, which include freshwater wetlands, coastal prairie, scrub-shrub, and North Coast coniferous forest. Appendix B contains site photographs which depict the existing conditions at the site. Based on the site conditions observed during multiple site visits and review of reference material (for example, soils map, National Wetland Inventory, and Geological Investigation Report), no further analysis regarding wetlands was warranted (i.e., no soil pits were excavated).

4.1 Hydrology

The site is located within the North Coast Hydrologic Region (HR), Eel River Hydrologic Unit (HU), Lower Eel River Hydrologic Area (HA), Ferndale Hydrologic Sub-Area (HSA), and Fortuna Super Planning Watershed (SPWS) (California Environmental Resources Evaluation System [CERES] GeoFinder, 2009). Fortuna is located along the eastern edge of the lower Eel River valley and is approximately 11 miles upstream of the mouth of the Eel River. There are no wetlands, flood hazard areas, or blue line streams within or adjacent to the project area (Figures 1 and 5).

A concrete drainage ditch is located along the eastern parcel boundary and is east of the property boundary fence, outside of the City's property. The concrete ditch is shallow and approximately 3-foot wide and drains south towards the intersection of Vista and Stewart Street. Surface water was observed (< 1-inch) in the concrete drainage ditch during the recent June 11, 2009 site visit. An attempt was made to locate any up gradient storm water drop inlets, but known were observed.

No surface water ponding was observed within or adjacent to the project area during the multiple site visits. A drain pipe with associated rip rap was observed near the southeast corner of the property. The source of the drain could not be determined. No OHWM or swale feature was observed extending from this drain pipe. The vegetation down gradient of the drain pipe was less maintained than the majority of the site.

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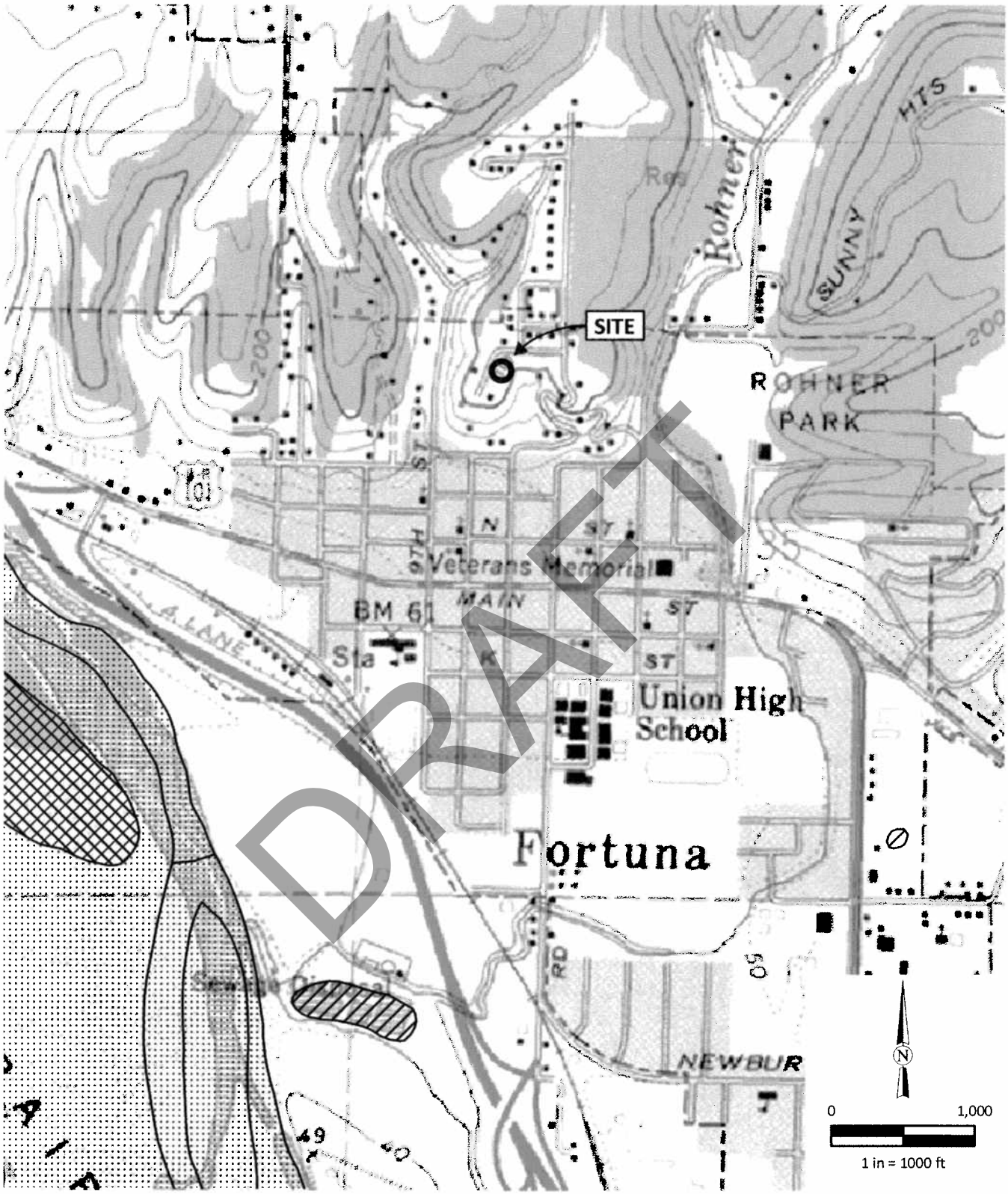


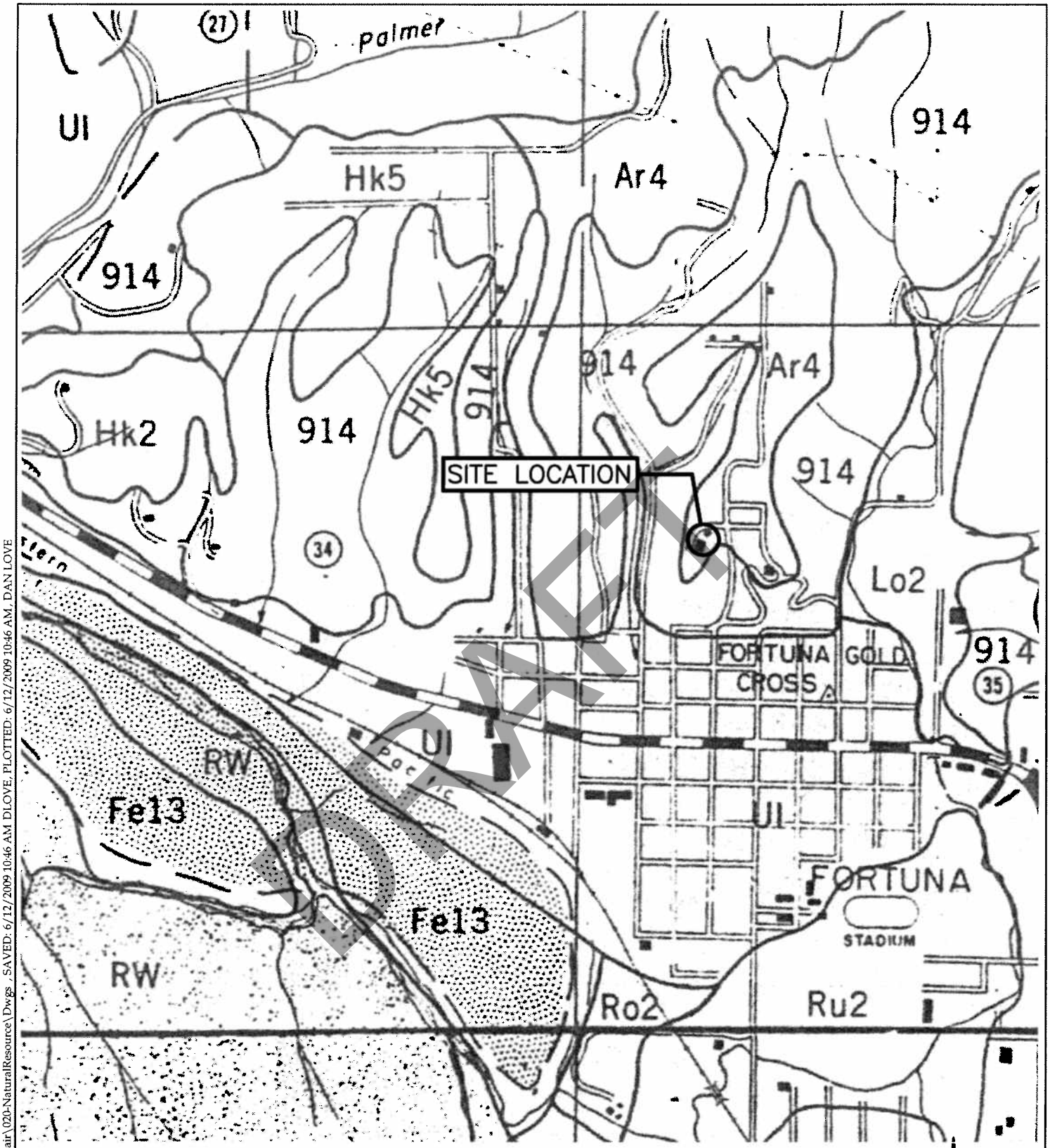
NATIONAL WETLANDS INVENTORY (JUNE 2009)

FRESHWATER EMERGENT WETLAND

FRESHWATER FORESTED/SHRUB WETLAND

RIVERINE

SHN Consulting Engineers & Geologists, Inc.	Stewart Street Resevoirs Replacement City of Fortuna Fortuna, California	National Wetland Inventory SHN 009030.020
	June 2009	009030-020-NWI.mxd	Figure 5



SOURCE: McLAUGHLIN, J. AND F. HARRADINE (1965). SOILS OF WESTERN HUMBOLDT COUNTY CALIFORNIA. DEPARTMENT OF SOILS AND PLANT NUTRITION, UNIVERSITY OF CALIFORNIA, DAVIS; WITH COOPERATION FROM COUNTY OF HUMBOLDT, CALIFORNIA.

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1"=1000'

SHN Consulting Engineers & Geologists, Inc.	Stewart Street Reservoirs Replacement City of Fortuna Fortuna, California	Soils Map SHN 009030.020
	June 2009	009030-020-SOILS	Figure 6

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4.2 Soils

Soils at the project site were mapped as part of the Soil Survey for Western Humboldt County (UC Davis, 1965; Figure 6). The Natural Resources Conservation Service (NRCS) Web Soil Survey 2.1 was also queried, but the mapping of the project area is not complete (NRCS, 2009a). The Site hosts one (1) soil map unit: Arcata loam (Ar4) (Figure 6). Arcata loam 0 to 3% (Ar4) is finer textured than the fine sandy loam, and contains a higher percentage of organic matter in the surface. The Arcata loam (Ar4) series is not designated as a hydric soil on the *National Hydric Soils List* (NRCS, 2009b).

Soils at the project site were defined in the Geotechnical Investigation Report completed for the proposed project (SHN, 2009a). Soils encountered in the 10 exploration borings at the site were generally uniform in occurrence and composition. The general soil profile encountered consisted of a layer of uncontrolled fill (generally 1 to 8 feet thick) commonly overlaying native topsoil, which in turn mantles weathered Hookton Formation sediments. The fill materials typically consisted of moist to wet, medium stiff to soft, locally derived silty, sandy clays and clayey fine sands.

4.3 Vegetation Communities

One (1) vegetation community currently exists on the site: urban/disturbed. Outside of the project area, to the north and west of the site, North Coast coniferous forest (82000; Holland, 1986)[3] is present.

Urban/disturbed habitat is widespread around the project site. This habitat consists of development that is surrounded by vegetation dominated by ruderal herbaceous species. The site is regularly mowed and native species composition is lacking. Non-native species are located throughout the project area and include cotoneaster (*Cotoneaster pannosa*), English ivy (*Helix helix*), heather (*Erica* sp.), and English holly (*Ilex aquifolium*) (Appendix B, Photos 1 and 2).

The moderately open overstory east of the project site consists of scattered grand fir (*Abies grandis*), red alder (*Alnus rubra*), Port-Orford-cedar (*Cupressus lawsoniana*), Douglas-fir (*Pseudotsuga menziesii*), willow (*Salix* sp.) and coastal redwood *(Sequoia sempervirens*).

4.4 Wildlife Habitats

Common wildlife species expected on the site are those typically associated with urban and North Coast coniferous forest (Holland, 1986). A list of the wildlife species and/or wildlife signs observed at the site is included in Appendix A.

Although urban landscape habitats are generally of low value to wildlife, many common opportunistic wildlife species adapted to high levels of human disturbance utilize this habitat. Mammalian species that typically use this community type include Virginia opossum (*Didelphis*

[3] Plant communities in the Unit are described primarily in accordance with the Sawyer and Keeler-Wolf (1995) terrestrial vegetation classification system. The Holland (1986) vegetation classification system is also referenced. The Holland system was used by the CNDDB until October 2000 when it was replaced by the Sawyer/Keeler-Wolf system, which is also integrated into the CNPS *Vegetation Rapid Assessment Protocol* (2001 rev. 2007).

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virginiane), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and gray fox (*Urocyon cinereoargenteus*). Urban landscapes also attract many species of birds, ranging from those feeding at bird feeders to those that are attracted to habitat provided by gardens, ornamental vegetation, and other urban activities. These species are common, and are typically adapted to the urban environment.

The common wildlife species typically found in North Coast coniferous forest habitat surrounded by, or adjacent to, urban development include California slender salamander (*Batrachoseps attenuatus*), Pacific giant salamander (*Dicamptodon tenebrosus*), northern rough-skinned newt (*Taricha granulose*), Pacific tree frog (*Hyla regilla*), chestnut-backed chickadee (*Parus rufescens*), Stellar's jay (*Cyanocitta stellari*), varied thrush (*Ixoreus naevius*), raccoon, striped skunk, gray fox, coyote (*Canis latrans*), and mule deer (*Odoicoileus hemionus*).

4.5 Wildlife Movement Corridors

Wildlife movement includes migration (i.e., usually one-way per season), inter-population movement (i.e., long-term genetic flow) and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also provide connection between outlying populations and the main corridor, permitting an increase in gene flow among populations.

These linkages among habitat types can extend for miles from primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement between populations located in discrete areas and populations located within larger habitat areas. The mosaic of habitats found within a large-scale landscape results in wildlife populations that consist of discrete sub-populations constituting a large single population, which is often referred to as a meta-population. Even where patches of pristine habitat are fragmented, such as occurs with coastal scrub, the movement between wildlife populations is facilitated through habitat linkages, migration corridors and movement corridors. Depending on the condition of the corridor, genetic flow between populations may be high in frequency, thus allowing high genetic diversity within the population, or may be low in frequency. Low-frequency genetic flow may potentially lead to complete isolation and, if pressures are strong, potential extinction (McCullough, 1996 and Whittaker, 1998).

In the vicinity of the site are residential uses. Stewart Street is located immediately north and west of the site (Figures 1 and 2). An unimproved, steep gradient access road (Barney Street) with a footpath parallels the eastern edge of the site (Appendix B; Photo 4). Residential property bounds the southern boundary of the site. No intact habitat exists on site or within the immediate vicinity of the site which would promote infusion of wildlife. The unimproved access road to the east provides opportunities for the dispersal of highly adaptable common mammals — raccoons, gray fox, Virginia opossum — and birds to enter the area. However, based on the development present on all the site's boundaries and in the immediate area, movement would typically be localized and limited.

DRAFT

5.0 Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of legislative acts. The following section summarizes the federal, state, and local regulations for special status species, jurisdiction waters of the United States (U.S.) and State of California (State), and other sensitive biological resources. Only select regulations will be applicable to this project.

5.1 Federal Laws

5.1.1 Clean Water Act Sections 404 and 401

Under Section 404 (33 U.S. Code (USC) 1344) of the Clean Water Act (CWA), as amended, the Army Corps of Engineers (ACOE) retains primary responsibility for permits to discharge dredged or fill material into waters of the U.S. All discharges of dredged or fill material into jurisdictional waters of the U.S. that result in permanent or temporary losses of waters of the U.S. are regulated by the ACOE, and a permit from the ACOE must be obtained before placing fill or grading in wetlands or other waters of the U.S., unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

The ACOE defines wetlands as "those areas that are inundated or saturated by surface or ground water 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 (Environmental Laboratory, 1987)." In other words, the ACOE defines wetlands by the presence of all three wetland indicators: hydrophytic vegetation, hydric soils, and wetlands hydrology.

Waters of the U.S. are defined at 33 Code of Federal Regulations (CFR) Part 328, and include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. Following recent court cases, the U.S. Environmental Protection Agency (U.S. EPA) and ACOE published a memorandum entitled Clean Water Act Jurisdiction (U.S. EPA/U.S. ACOE, 2008) to guide the determination of jurisdiction over waters of the U.S, especially for wetlands. The applicability of Section 404 permitting over discharges to wetlands is therefore a two-step process: (1) Determining the areas which are wetlands, and (2) where wetlands are present, assessing the wetlands' connection to traditional navigable waters and non-navigable tributaries to determine whether the wetlands are jurisdictional under the CWA. A wetland is considered jurisdictional if it meets certain specified criteria.

The ACOE is required to consult with the USFWS and/or National Marine Fisheries Service (NMFS) under Section 7 of the federal Endangered Species Act (FESA) if the action subject to CWA permitting could result in "Take" of federally listed species or an adverse affect to designated critical habitat.

Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at

DRAFT

the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine (9) Regional Water Quality Control Boards (RWQCB). The City is within the jurisdiction of the North Coast RWQCB.

There is a concrete drainage ditch located along the eastern parcel boundary (Appendix B; Photo 4). It is located on the east side of a fence, which is outside of the City's property boundary. No impacts to the aforementioned concrete drainage ditch are anticipated, and no wetlands were identified within the project area. No impacts to federally protected waters of the U.S. as defined by Section 404 of the CWA (including wetlands) are anticipated. Further discussion is included in Section 7.2, Question (c).

5.1.2 Rivers and Harbors Appropriation Act of 1899

The Rivers and Harbors Appropriation Act of 1899 addresses activities that involve the construction of dams, bridges, dikes, and other structures across any navigable water. Placing obstructions to navigation outside established federal lines and excavating from or depositing material in such waters require permits from the ACOE pursuant to Section 10 (33 USC 403) of the Rivers and Harbors Appropriation Act, which prohibits the unauthorized obstruction or alteration of any navigable water of the U.S. This section provides that the construction of any structure in or over any navigable water of the U.S., or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters, is unlawful unless the work has been recommended and authorized by the ACOE, Chief of Engineers.

No navigable waters as defined by Rivers and Harbors Appropriation exists within or adjacent to the site; thus, no permitting under the Rivers and Harbors Appropriation Act is required.

5.1.3 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with the USFWS and/or NMFS and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur (in this case the CDFG), with a view to conservation of birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

If direct permanent impacts occur to waters of the U.S. from a proposed project, then a permit from ACOE under the CWA Section 404 is required for the construction of the proposed project. ACOE is required to consult with USFWS and/or NMFS as appropriate regarding potential impacts to federally listed species under FESA. Such action may prompt consultation with CDFG which would review the project pursuant to California Endangered Species Act (CESA) and issue a consistency letter with USFWS and/or NMFS, if required.

DRAFT

There is a concrete drainage ditch located along the eastern parcel boundary (Appendix B, Photo 4). No impacts to the aforementioned concrete drainage ditch are anticipated. No impact on federally protected waters of the U.S. (including wetlands) is anticipated; thus, no coordination under the Fish and Wildlife Coordination Act is anticipated.

5.1.4 Federal Endangered Species Act

The United States Congress passed the FESA in 1973 to protect species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend and within which they live. The USFWS and the NMFS are the designated federal agencies responsible for administering the FESA.

The FESA prohibits the "Take" of endangered or threatened wildlife species. A "Take" is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). An activity can be defined as a "Take" even if it is unintentional or accidental. Taking can result in civil or criminal penalties. Activities that could result in "Take" of a federally listed species require an incidental "Take" authorization resulting from FESA Section 7 consultation or FESA Section 10 consultation. Plants are legally protected under the FESA only if "Take" occurs on federal land or from federal actions, such as issuing a wetland fill permit.

A federal endangered species is one that is considered in danger of becoming extinct throughout all, or a significant portion, of its range. A federal threatened species is one that is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species proposed for listing as threatened or endangered. Proposed species are those for which a proposed rule to list as endangered or threatened has been published in the Federal Register. In addition to endangered, threatened, and proposed species, the USFWS maintains a list of candidate species. Candidate (formerly category 1 candidate) species are those for which the USFWS has on file sufficient information to support issuance of a proposed listing rule.

Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such a species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA or result in the destruction or adverse modification of critical habitat designated or proposed to be designated for such species (16 USC 1536[3], [4]). Project-related impacts to species on the FESA endangered or threatened list would be considered significant and would require mitigation.

The proposed project is not anticipated to impact federally listed plant or wildlife species. Further discussion is included in Sections 6.0 and 7.2, Question (a).

5.1.5 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Part 10, including feather or other parts, nests,

DRAFT

eggs, or products, except as allowed by implementing regulations (50 CFR 21). The MBTA also prohibits disturbance and harassment of nesting migratory birds at any time during their breeding season. The USFWS is responsible for enforcing the MBTA (16 USC 703).

Most of the native bird species that occur in Humboldt County are covered by this act. Further discussion is included in 7.2, Question (a).

5.1.6 Bald Eagle Protection Act

The Bald Eagle Protection Act (16 USC 668) was passed in 1940 to protect bald eagles and was later amended to include golden eagles. Under the act, it is unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing eagles.

Bald eagle and golden eagle have a "low" potential to occur on the project site (see Table 1 in Section 6 [Special Status Biological Resources]). No active bald eagle or golden eagle nests were observed during the field surveys. No coordination or permitting under the Bald Eagle Protection Act is anticipated for the project.

5.2 State Laws

5.2.1 Porter-Cologne Water Quality Act

The state and RWQCB also maintain independent regulatory authority over the placement of waste, including fill, into waters of the State under Porter-Cologne Act. Waters of the State are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These water bodies might not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require an ACOE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCBs have the option to regulate such activities under its state authority in the form of Waste Discharge Requirements (WDRs) or Certification of WDRs. Water Quality Order No. 2004-0004-DWQ specifies general WDRs for dredged or fill discharges to waters deemed by the ACOE to be outside of federal jurisdiction under Section 404 of the CWA.

There is a concrete drainage ditch located along the eastern parcel boundary (Appendix B, Photo 4). It is located on the east side of a fence, which is outside of the City's property boundary. No impacts to the aforementioned concrete drainage ditch are anticipated, and no wetlands were identified within the project area. No impacts to State protected waters of the State as defined by Porter-Cologne Act (including wetlands) are anticipated. Further discussion is included in Section 7.2, Question (b).

DRAFT

5.2.2 California Endangered Species Act

The State of California enacted the CESA in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. Under the CESA, the CDFG has the responsibility for maintaining a list of threatened and endangered species designated under state law (California Fish and Game Code [CFGC] 2070). Section 2080 of the CFGC prohibits "Take" of any species that the commission determines to be an endangered or threatened species. "Take" is defined in Section 86 of the CFGC as "to hunt, purse, catch, capture, or kill, or attempt to hunt, purse, catch, capture, or kill."

The State and federal lists of threatened and endangered species are generally similar; however, a species present on one list may be absent from the other. CESA regulations are also somewhat different from the FESA in that the State regulations included threatened, endangered, and candidate plants on non-federal lands within the definition of "Take." CESA allows for "Take" incidental to otherwise lawful development projects.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. Project-related impacts to species on the CESA endangered or threatened list (or, in addition, designated by the CDFG as a "Species of Special Concern," which is a level below threatened or endangered status) would be considered significant and would require mitigation.

As a trustee agency under CEQA, CDFG reviews potential project impacts to biological resources, including wetlands. In accordance with the CEQA thresholds of significance for biological resources, areas that meet the state criteria of wetlands and could be impacted by a project must be analyzed. Pursuant to CFGC Section 2785, CDFG defines wet areas as "lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools." Wet areas are determined by CDFG by the presence of one of the three-wetland indicators (hydrophytic vegetation, hydric soils, or wetland hydrology).

The proposed project is not anticipated to impact State listed plant or wildlife species. Further discussion is included in Sections 6.0 and 7.2, Question (a).

5.2.3 California Environmental Quality Act Guidelines Sections 15380 and 15370

CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Thus, CEQA provides the ability to protect a species from potential project impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected, and requires a finding of significance if there will be substantial losses. Natural communities listed by CNDDB

DRAFT

as sensitive are considered by CDFG to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general plans often identify these resources as well.

Proposed projects that may result in an impact pursuant to Section 15380(b) must meet the requirements of CEQA Section 15370. Section 15370 specifies that a project must avoid, minimize, or mitigate the impact to a less than significant level as determined by the lead agency, resource agency(s), and trustee agency(s).

The proposed project is subject to CEQA. The City is the lead agency for the proposed project under CEQA. Further discussion is included in Sections 6.0 and 7.2, Question (a).

5.2.4 California Coastal Act

The California Coastal Commission (CCC) regulates the alteration of wetlands within the Coastal Zone under jurisdiction of the California Coastal Act (CCA). The project site is located outside of the Coastal Zone; thus, not under the requirements of the CCA.

5.2.5 California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFG under Sections 1600-1616 of the CFGC. Any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a SAA. The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG, 1994a). Riparian is defined as "on, or pertaining to, the banks of a stream"; therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG, 1994a). Removal of riparian vegetation also requires an SAA from the CDFG.

No impacts to the concrete drainage ditch located along the eastern parcel boundary and outside of the City's property boundary are anticipated (Appendix B, Photo 4). Additionally, no impact is anticipated to the existing vegetation located along the eastern property boundary and immediately adjacent to the concrete drainage ditch. No permitting under CFGC Section 1600 is anticipated due to CDFG determination during the March 26, 2009 site visit. Further discussion is included in Section 7.2, Question (b).

DRAFT

5.2.6 California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the CFGC it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrows (*Passer domesticus*) and European starlings [*Sturnus vulgaris*]). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the "Take" or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "Take" by the CDFG.

Given raptors and other bird (for example, passerines [perching birds]) species may potentially nest within the trees and shrubs that occur in and adjacent to the site, there is a potential for construction-related impacts to nesting birds. Further discussion is included in Section 7.2, Question (a).

5.2.7 Fully Protected Species and Species of Special Concern

The classification of "fully protected" was the CDFG's initial effort to identify and provide additional protection to those animals that were rare or faced with possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The CFGC sections (fish at Sec. 5515, amphibian and reptiles at Sec. 5050, birds at Sec. 3511, and mammals at Sec. 4700) dealing with "fully protected" species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," (CDFG, 1998) although "Take" may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "Take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFG to authorize "Take" resulting from recovery activities for state-listed species.

Species of Special Concern (SSC) are broadly defined as animals not listed under the CESA, but which are nonetheless of concern to the CDFG because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFG, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

Table 2 (Section 6 [Special Status Biological Resources]) includes potentially occurring Fully Protected (SFP) and SSC animals from the Fortuna area. Further discussion is included in Sections 6.0 and 7.2, Question (a).

DRAFT

5.2.8 Native Plant Protection Act of 1973

The Native Plant Protection Act (NPPA) of 1973 (Sec.1900-1913 of the CFGC) includes provisions that prohibit the taking of endangered or rare native plants from the wild and a salvage requirement for landowners. The CDFG administers the NPPA and generally regards as "rare" many plant species included on Lists 1B, 2, 3, and 4 of the CNPS Inventory of Rare and Endangered Vascular Plants of California (Tibor, 2001; CNPS, 2008).

Table 1 (Section 6 [Special Status Biological Resources]) includes potentially occurring endangered or rare native plants from the Fortuna area (including CNPS Lists 1B through 4). Further discussion is included in Sections 6.0 and 7.2, Question (a).

5.2.9 Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act (NCCP) of 1991 is an effort by the State of California, and numerous private and public partners that is broader in its orientation and objectives than the CESA and FESA (refer to discussions above). The primary objective of the NCCP Act is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

None of the three (3) potential regionally occurring natural communities from the Fortuna area according to the CNDDB query (for example, Coastal Terrace Prairie, Northern Coastal Salt Marsh, and Sitka Spruce Forest exist on-site. Further discussion is included in Sections 6.1 and 7.2, Question (b).

5.2.10 California Public Resources Code Section 21083.4

Under State Public Resources Code Section Sec. 21083.4, a County shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment.

If a significant effect is determined, the following mitigation alternatives are given:

1. Conserving oak woodlands through the use of conservation easements.
2. Plant an appropriate number of trees, including maintaining the plantings and replacing dead or diseased trees; required maintenance of trees terminates seven years after the trees are planted; this type of mitigation should not fulfill more than half of the mitigation requirement for the project; this type of mitigation may also be used to restore former oak woodlands.
3. Contribute funds to the Oak Woodlands Conservation Fund.
4. Other mitigation measures developed by the County.

The project site does not contain oak woodlands; thus, the project is not under the requirements of California Public Resources Code Section 21083.4.

DRAFT

5.2.11 Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFG (i.e., CNDDB) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G).

The project site is not considered a sensitive vegetation community. Further discussion is included in Sections 5.4, 6.4, and 7.2 Question (e).

5.3 Other Statutes, Codes, and Policies Affording Limited Species Protection

California Native Plant Society. CNPS maintains a list of plant species native to California whose members exist in significantly reduced populations from historical levels, occur in limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (Tibor, 2001; CNPS, 2008). CDFG recognizes that Lists 1A, 1B, 2, 3, and 4 of the CNPS Inventory consist of plants that may qualify for listing, and the CDFG recommends they be addressed in projects pursuant to CEQA.

Table 1 (see Section 6 [Special Status Biological Resources]) includes CNPS Lists 1B through 4 from the Fortuna area. Further discussion is included in Sections 6.0 and 7.2, Question (a).

5.4 Local Regulations and Ordinances

5.4.1 Fortuna General Plan

The Fortuna General Plan (Section 6800) sets forth goals and policies to concerning the development, utilization, and conservation of natural resources including water, forests, soils, rivers, fisheries, and wildlife (City of Fortuna, 1993). The following goals and policies pertain to the project area.

5.4.2 Goals

6811 - Maintain and enhance the quality of the streams in Fortuna and the Eel River.

6812 - Maintain riparian vegetation to the extent practical by assuring that compatible land uses are located next to streams and by using good engineering practices when drainage improvements are constructed.

DRAFT

5.4.3 Policies

6822 - The foothill-valley character of the City and its surrounding should be protected. The foothill area should be zoned from 1 to 4 homes/acre.

6823 - The open space stream buffers indentified on the Open Space Map are to be maintained as open space. The City shall obtain drainage easements that are 50 feet wide (25 feet from the center line of the stream) along the streams within the city unless a larger easement is specified in the Storm Drainage Master Plan.

6824 - Streams and adjacent marshes and other wetland areas should remain in a natural condition to the extent possible.

6825 - Development within stream channels is limited to (1) fishery and wildlife enhancement projects, (2) road crossings, (3) flood control projects including drainage channels, stream channels, levees, and dikes, and (4) public works projects.

6826 - The dedication of land for open space may be required of sub dividers to protect riparian vegetation and the foothill-valley character of the City.

6828 - Regulate development that would pollute watersheds.

6829 - Support the development of fisheries enhancement projects on streams within the City limits.

5.4.4 City of Fortuna Zoning Code, Chapter 17.12 R-1 Residential Single-Family Districts

There are no zoning restrictions that relate to biological resources on parcel APN 040-053-001.

DRAFT

6.0 Special Status Biological Resources

As a component of this assessment, an evaluation was conducted for the potential presence or absence of habitat for special status plant and animal species. Tables 1 and 2 (see Section 6 [Special Status Biological Resources]) were compiled of all potentially occurring special status plants and animals from the Fortuna area based on a search of current available database records (for example, CNDDB, USFWS list, and CNPS Electronic Inventory). The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field surveys. Each species was evaluated for its potential to occur on the project site according to the following criteria:

(1) **None**. Species listed as having "none" potential to occur on the project site are those species for which:

- There is no suitable habitat present on the Site (i.e., habitats on the project site are unsuitable for the species requirements [for example, elevation, hydrology, plant community, disturbance regime, etc.]).

(2) **Low**. Species listed as having a "low" potential to occur on the project site are those species for which:

- There are no known records of occurrence in the vicinity of the site; and
- There is marginal or very limited suitable habitat present on the site.

(3) **Moderate**. Species listed as having a "moderate" potential to occur on the project site are those species for which:

- There are known records of occurrence in the vicinity of the site; and
- There is suitable habitat present on the site.

(4) **High**. Species listed as having a "high" potential to occur on the project site are those species for which:

- There are known records of occurrence in the vicinity of the site (there are many records and/or records in close proximity); and
- There is highly suitable habitat present on the site.

(5) **Present**. Species listed as "present" on the project site are those species for which:

- The species was observed on the site.

CNDDB (CDFG, 2009a) Rare Find, Biogeographical Information and Observation System (BIOS; CDFG, 2009f), and CNPS (2009) searches were completed for the 7.5-minute USGS Fortuna quadrangle and all adjacent quadrangles. In addition, a U.S. Fish and Wildlife Service, Arcata Field Office (AFWO) database query was conducted for all federally listed species known in the Fortuna quadrangle (USFWS, 2009a). The databases were queried for historical and existing occurrences of state and federally listed Threatened, Endangered, and Candidate species; species proposed for listing; special status species; and species listed by the CNPS (2009; Tibor, 2001).

DRAFT

Table 1
Potential Regionally Occurring Sensitive Botanical Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/ State/CNPS)[1]	Life Form/General Habitat Requirements[2]	Blooming Period	Potential for Occurrence
Abronia umbellata ssp. *breviflora*	pink sand-verbena	-/-/1B	Perennial herb. Coastal dunes below 50 feet above Mean Sea Level (MSL).	June-October	None
Anomobryum julaceum	slender sliver moss	-/-/2	Moss. Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest, damp rock and soil on outcrops, usually on road cuts, between approximately 330 and 3,280 feet above MSL.	N/A	None
Astragalus pycnostachyus var. *pycnostachyus*	coastal marsh milk-vetch	-/-/1B	Perennial herb. Mesic coastal dunes, coastal salt marshes and swamps below 100 feet above MSL.	April-October	None
Carex leptalea	bristle-stalked sedge	-/-/2	Perennial rhizomatous herb. Bogs and fens, meadows and seeps, marshes and swamps from sea level to 2,300 feet above MSL.	March-July	None
Carex lyngbyei	Lyngbye's sedge	-/-/2	Perennial rhizomatous herb. Brackish or freshwater marshes and swamps below 35 feet above MSL.	May-August	None
Castilleja affinis ssp. *litoralis*	Oregon coast paintbrush	-/-/2	Perennial herb. Coastal bluff scrub, sandy coastal scrub, and dunes from 50-330 feet above MSL.	June	None
Castilleja ambigua ssp. *humboltiensis*	Humboldt Bay owl's-clover	-/-/1B	Annual herb. Coastal salt marsh and swamps up to 10 feet above MSL.	April-August	None
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	-/-/1B	Annual herb. Coastal bluff scrub, coastal scrub between 32 and 330 feet above MSL.	June-August	None
Cordylanthus maritimus ssp. *palustris*	Point Reyes bird's-beak	-/-/1B	Annual herb hemiparasitic. Coastal salt marsh and swamps up to 30 feet above MSL.	June-October	None
Erysimum menziesii ssp. *eurekense*	Humboldt Bay wallflower	FE/SE/1B	Perennial herb. Coastal dunes up to 30 feet above MSL.	March-April	None
Erythronium oregonum	giant fawn lily	-/-/2	Perennial herb. Cismontane woodland, meadows and seeps, sometimes serpentinite, rocky openings between 330 and 1,640 feet above MSL.	March-May	None
Erythronium revolutum	coast fawn lily	-/-/2	Perennial bulbiferous herb. Bogs and fens, mesic areas in broadleaved forests and North Coast coniferous forest, and streambanks up to 3,500 feet above MSL.	March-June	None

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Table 1
Potential Regionally Occurring Sensitive Botanical Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/ State/CNPS)[1]	Life Form/General Habitat Requirements[2]	Blooming Period	Potential for Occurrence
Gilia capitata ssp. *pacifica*	Pacific gilia	-/-/1B	Annual herb. Various, including coastal bluff scrub and coastal prairie generally below 1,000 feet above MSL.	April-August	None
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	-/-/1B	Annual herb. Coastal bluff scrub and coastal dunes up to 700 feet above MSL.	March-June	None
Hesperolinon adenophyllum	glandular western flax	-/-/1B	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland, usually serpentinite between 490 and 4,315 feet above MSL.	May-August	None
Lathyrus palustris	marsh pea	-/-/2	Perennial herb. Bogs and fens, coastal prairie, coastal scrub, lower montane coniferous forest, marshes and swamps, North Coast coniferous forest/mesic up to 330 feet above MSL.	March-August	None
Layia carnosa	beach layia	FE/SE/1B	Annual herb. Coastal dunes and coastal scrub up to 200 feet above MSL.	March-July	None
Lilium occidentale	western lily	FE/SE/1B	Perennial bulbiferous herb. Coastal bluff scrub, coastal prairies, openings in North Coast coniferous forests including edges of freshwater marshes and swamps up to 600 feet above MSL.	June-July	None
Montia howellii	Howell's montia	-/-/2	Annual herb. Vernally wet, open sites in North Coast coniferous forests including meadows and seeps/often in disturbed areas (e.g., roadsides).	March-May	Low
Oenothera wolfii	Wolf's evening-primrose	-/-/1B	Perennial herb. Coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest; sandy substrates; usually mesic sites from 10-2,600 feet above MSL.	May-October	None
Packera bolanderi var. *bolanderi*	seacoast ragwort	-/-/2	Perennial rhizomatous herb. Coastal scrub, North Coast coniferous forest, sometimes roadside, between 95 and 2,135 feet above MSL.	May- July	None
Piperia candida	white-flowered rein orchid	-/-/1B	Perennial herb. Broadleaf upland forest, lower montane coniferous forest, North Coast coniferous forest, sometime serpentinite between approximately 100 and 5,000 feet above MSL.	May-September	None

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Table 1
Potential Regionally Occurring Sensitive Botanical Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/ State/CNPS)[1]	Life Form/General Habitat Requirements[2]	Blooming Period	Potential for Occurrence
Polemonium carneum	Oregon polemonium	-/-/2	Perennial herb. Coastal prairie, coastal scrub, lower montane coniferous forest from sea level to approximately 6,000 feet above MSL.	April-September	None
Puccinellia pumila	dwarf alkali grass	-/-/2	Perennial herb. Coastal salt marshes and swamps up to 30 feet above MSL.	July	None
Sidalcea malachroides	maple-leaved checkerbloom	-/-/4	Perennial herb. Broadleaved upland forest, coastal prairie, coastal scrub, North Coast coniferous forest/ often in disturbed areas (e.g., roadsides) up to 2,300 feet above MSL.	April-August	None
Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	-/-/1B	Perennial rhizomatous herb. Openings in North Coast coniferous forest and coastal prairie from 50-2,300 feet above MSL.	May-August	None
Sidalcea oregana ssp. *eximia*	coast checkerbloom	-/-/1B	Perennial herb. Openings in lower montane and North Coast coniferous forests, meadows and seeps, and coastal prairie from 15-4,400 feet above MSL.	June-August	None
Sisyrinchium hitchcockii	Hitchcock's blue-eyed grass	-/-/1B	Perennial rhizomatous herb. Cismontane woodland openings, valley and foothill grassland at approximately 1,000 feet above MSL.	June	None
Spergularia canadensis var. *occidentalis*	western sand spurrey	-/-/2	Annual herb. Coastal salt marshes and swamps up to 10 feet above MSL.	June-August	None

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Table 1
Potential Regionally Occurring Sensitive Botanical Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/ State/CNPS)[1]	Life Form/General Habitat Requirements[2]	Blooming Period	Potential for Occurrence

1. CNPS List 1B includes plants that are rare, threatened, or endangered in CA and elsewhere.
   CNPS List 2 includes plants that are rare, threatened, or endangered in California but more common elsewhere.
   SR: State listed Rare, pursuant to CESA. SR designation refers to species that although not presently threatened with extinction, occur in such small numbers throughout their range that they may become endangered if their present environment worsens.
   CNPS List 4 includes plants of limited distribution and should be documented as they are watch list species
   FE: Federally listed Endangered, pursuant to the Federal Endangered Species Act (FESA), as amended. This designation includes taxa that are in danger of extinction throughout all or a significant portion of their range.
   FT: Federally listed Threatened, pursuant to the FESA, as amended. This designation refers to species that are not presently threatened with extinction but are likely to become endangered throughout all or a significant portion of their range in the foreseeable future if special protection and management efforts are not undertaken.
   SE: State listed Endangered, pursuant to California Endangered Species Act (CESA). SE designation includes taxa that are in danger of extinction throughout all or a significant portion of their range.
   ST: State listed Threatened, pursuant to CESA. ST designation includes taxa that are likely to become endangered throughout a significant portion of their range.
   N/A: Not Applicable
2. Plant habitat descriptions are from CNDDB (September 2009a), Tibor (2001), and Hickman (1993).

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Table 2
Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/State) [1]	General Habitat Requirements[2]	Potential for Occurrence
Fish				
Acipenser medirostris	green sturgeon – southern DPS[3]	FT/SSC	Most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento. Spawns at temps between 8-14 °C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	None
Eucyclogobius newberryi	tidewater goby	FE (CH)/SSC	Brackish water habitats along the California coast from San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, where water is fairly still but not stagnant water with high oxygen levels.	None
Oncorhynchus clarii clarkii	coast cutthroat trout	-/SSC	Spawns in small coastal tributary streams, and utilizes slow flowing backwater areas, low velocity pools, and side channels for rearing of young. Prefers good forest canopy cover, in-stream woody debris, from the Eel River north to the Oregon border.	None
Oncorhynchus kisutch	southern Oregon/ northern California (SONCC) coho salmon ESU[1]	FT (CH)/ST	Freshwater, nearshore and offshore environments throughout their lifecycles. Coho prefer low stream velocity, shallow water, and small gravel. Spawning and rearing habitat mainly in low gradient tributaries and side channels of river systems. Require beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water, and sufficient dissolved oxygen.	None
Oncorhynchus mykiss irideus	northern California steelhead ESU[1]	FT (CH)/SSC	Coastal basins from Redwood Creek south to the Gualala River. Spawning and rearing habitat mainly in low-medium gradient tributaries, side channels, and mainstem of river systems.	None
Oncorhynchus tshawytscha	California coastal Chinook salmon ESU[1]	FT (CH)/-	Coastal basins from Redwood Creek south to the Gualala River. Spawning and rearing habitat mainly in low-medium gradient tributaries, side channels, and mainstem of river systems.	None
Thaliechthys pacificus	southern eulachon DPS[1]	PT/SSC	An anadromous species, adults enter fresh water and spawn from February to mid-May. This species' range is Northern California to eastern Bering Sea and Pribilof Islands.	None

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Table 2
Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/State) [1]	Life Form/General Habitat Requirements[2]	Potential for Occurrence
Amphibians				
Actinemys marmorata marmorata	Northwestern pond turtle	-/SSC	Permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams. Require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks	None
Ascaphus truei	western tailed frog	-/SSC	Inhabits cold, clear, rocky fast flowing perennial streams in forested areas. From near sea level to 8,400 feet above MSL. Restricted to perennial montane streams. Tadpoles require water below 15 ºC.	None
Rana aurora aurora	northern red-legged frog	-/SSC	North Coast coniferous forest; breeds in ponds and slow moving backwater in creeks. Found in humid forests, woodlands, grasslands, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Sea level to 4,680 ft. above MSL.	None
Rana boylii	foothill yellow-legged frog	-/SSC	Found in or near rocky streams in a variety of habitats. Prefer shallow, shaded perennial streams with some open canopy; breeds in stream margins. Rarely encountered far from permanent water.	None
Rhyacotriton variegatus	southern torrent salamander	-/SSC	Habitat includes cold, clear well-shaded streams, waterfalls and seepages, particularly those running through talus and under rocks all year. Found primarily on north-facing slopes in the southern part of their range where forests are warmer and drier. Sea level to 5,000 ft. above MSL.	None
Birds				
Accipiter cooperii	Cooper's hawk	-/SSC	Can be associated with dense forests, edge habitat, and urban interface. Nests sites characteristically in dense cover of tree canopy.	Moderate
Accipiter striatus	sharp-shinned hawk	-/SSC	Non-breeding habitat preference highly variable from closed forests to urban interface. Nesting locations tend to be dense mixed-forests but can also be urban.	Moderate

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Table 2
Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/State) [1]	Life Form/General Habitat Requirements[2]	Potential for Occurrence
Birds (cont.)				
Agelaius tricolor	tricolored blackbird	-/SSC	Nesting preference variable, but usually associated with emergent wetlands and vegetation over water; gregarious during non-breeding season.	None
Aquila chrysaetos	golden eagle	-/FP	Rolling foothills and mountain areas. Cliff-walled canyons provide nesting habitat throughout most of the species range, as well as large trees in open areas.	None
Ardea alba	great egret	-/-	Colonial nesting species; nests in trees near tideflats, marshes, irrigated pastures, and margins of lakes and rivers.	None
Ardea herodias	great blue heron	-/-	Colonial nesting species; nests in trees near tideflats, marshes, irrigated pastures, and margins of lakes and rivers.	None
Brachyramphus marmoratus	marbeled murrelet	FT (CH)/ SE	Spend the majority of their lives on the ocean, but come inland to nest in old-growth forests, characterized by large trees, multiple canopy layers, and moderate to high canopy closure.	None
Charadrius alexandrinus nivosus	western snowy plover	FT (CH)/SSC	Sparsely vegetated beaches, along coastal strip, also inland; ground nester and gregarious in non-breeding season.	None
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FC/SE	Nests in tall cottonwood and willow riparian woodland. Requires patches of at least 10 hectares (25 acres) of dense riparian forest with a canopy cover of at least 50 percent in both the understory and overstory; nests typically in mature willows.	None
Egretta thula	snowy egret	-/-	Colonial nesting species; nests in trees near tideflats, marshes, irrigated pastures, and margins of lakes and rivers.	None
Haliaeetus leucocephalus	bald eagle	FD/SE, SFP	This species is generally found along ocean shores, lake margins, and rivers. Nests in large, old growth, or live trees with open branches, especially ponderosa pine, within 1 mile of water source. Species roosts communally in winter.	None
Nycticorax nycticorax	black-crowned night heron	-/-	Colonial nesting species; nests in trees near tideflats, marshes, irrigated pastures, and margins of lakes and rivers.	None
Pandion haliaetus	osprey	-/-	Primarily along rivers, lakes, bay, and seacoasts. Nests in dead snags, living trees, utility poles, etc. usually near or above water.	None
Strix occidentalis caurina	northern spotted owl	FT (CH)/SSC	Coastal to mountainous mature coniferous forests. Nests in cavities or on natural platforms.	None

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Table 2 Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area Stewart Street Reservoirs Replacement, Fortuna, California				
Species Latin Name	**Common Name**	**Status (Federal/State) [1]**	**Life Form/General Habitat Requirements[2]**	**Potential for Occurrence**
Mammals				
Antrozous paliidus	pallid bat	-/SSC	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts.	None
Arborimus pomo	Sonoma tree vole	-/SSC	Coniferous forest, especially those dominated by Douglas-fir. Build nests within the living portion of the canopy. Arboreal species. Feeds almost exclusively on Douglas-fir needles, but will occasionally take needles of grand fir, hemlock or spruce. May spend entire life in a single tree.	Low
Corynorhinus townsendii	Townsend's big-eared bat	-/SSC	Undisturbed roosts, nursery, and hibernaculum.	None
Lasiurus cinereus	hoary bat	-/SSC	Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage.	None
Martes americana humboldtensis	Humboldt marten	-/SSC	Occurs only in the Coastal Redwood zone from the Oregon border south to Sonoma County. Coniferous forest with >40% canopy closure, large trees and snags with complex physical structure near the ground. Presumed extant.	None
Myotis umanensis	Yuma myotis	-/-	Open forests and woodlands with sources of water over which to feed and for drinking. Roosts and bears young in buildings, mines, caves, or crevices.	None

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Table 2
Potential Regionally Occurring Sensitive Wildlife Species from the Fortuna Area
Stewart Street Reservoirs Replacement, Fortuna, California

Species Latin Name	Common Name	Status (Federal/State) [1]	Life Form/General Habitat Requirements[2]	Potential for Occurrence

1. CH: Critical Habitat
   DPS: Distinct Population Segment
   ESU: Evolutionary Significant Unit
   FE: Federally listed Endangered, pursuant to the Federal Endangered Species Act (FESA), as amended. This designation includes taxa that are in danger of extinction throughout all or a significant portion of their range.
   FT: Federally listed Threatened, pursuant to the FESA, as amended. This designation refers to species that are not presently threatened with extinction but are likely to become endangered throughout all or a significant portion of their range in the foreseeable future if special protection and management efforts are not undertaken.
   FC: Federal Candidate. This designation includes taxa that require additional information to propose for listing pursuant to the Endangered Species Act of 1973, as amended.
   FD: Federally Delisted.
   PT: Federally Proposed Threatened
   SE: State listed Endangered, pursuant to California Endangered Species Act (CESA). SE designation includes taxa that are in danger of extinction throughout all or a significant portion of their range.
   SFP: State Fully Protected
   ST: State listed Threatened, pursuant to CESA. ST designation includes taxa that are likely to become endangered throughout a significant portion of their range.
   CDFG: California Department of Fish and Game
   N/A: Not Applicable; species is considered to be sensitive for other reasons such as colonial nesting or that the species is rare or uncommon. While no formal conservation status is afforded, the CNDDB still tracks the presence of these species and they must be considered.
2. Habitat descriptions are from CNDDB (2009), Tibor (2001), and Hickman (1993).
3. Includes all spawning populations south of the Eel River.

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6.1 Special Status Natural Communities

Natural communities are habitats that are generally defined by vegetation type and geographical location and are increasingly restricted in abundance and distribution. CNDDB natural communities are habitat for numerous special status plant and animal species. The natural communities that are included in the CNDDB are based on the state and global ranking status, which provides an estimate of the number of acres that remains of a particular community and threat level designation. Recognition of natural communities is an ecosystem-based approach to maintaining biodiversity in California. The potential regionally occurring natural communities from the Fortuna area, according to the CNDDB query include: Coastal Terrace Prairie, Northern Coastal Salt Marsh, and Sitka Spruce Forest.

Coastal Terrace Prairie (41100). Coastal terrace prairie is a native grassland community found on sandy, marine terraces within the zone of fog intrusion. This habitat is dominated by fairly tall (greater than 3 feet) sod and tussock-forming perennial grasses. Herbaceous annuals species are typically scattered amongst the grasses. Much of California's coastal prairie habitat has been destroyed by agricultural conversion and development. The remaining areas are also threatened by the invasion of exotic weeds such as annual fescues (*Vulpia* sp.), nonnative bromes (*Bromus* sp.), and oats (*Avena* sp.). The state rarity status for coastal terrace prairie is very threatened (S2.1) with 2,000-10,000 acres remaining in the state. This natural community is not located on or adjacent to the site.

Northern Coastal Salt Marsh (52110). Northern coastal salt marshes develop along the intertidal shores of bays, lagoons, and estuaries. The historic distribution of northern coastal salt marsh in Humboldt County and throughout California has been greatly reduced by agricultural conversion, diking, and coastal development. Native species commonly associated with northern coastal salt marsh include spearscale (*Atriplex patula*), tufted hairgrass (*Deschampsia caespitosa*), saltgrass (*Distichlis spicata)*, gumweed (*Grindelia stricta*), salt rush (*Juncus lesueurii*), pickleweed (*Salicornia virginica*), and silverweed (*Potentilla anserina*). A number of sensitive plant species are found within this habitat type (refer to Table 1). The state rarity status for northern coastal salt marsh is very threatened (state rank S2) with 2,000 to 10,000 acres remaining in the state. This natural community is not located on or adjacent to the site.

Sitka Spruce Forest (82100). Sitka spruce grows in mild wet coastal climates and occurs in a narrow band along the Pacific coast from Northern California to Alaska. Sitka spruce forest is usually found growing on steep seaward upland slopes or topographically flat areas, but can also occur in wetlands, such as stream and river backwaters, bottoms, and floodplains. Species commonly associated with upland Sitka spruce forests include redwood (*Sequoia sempervirens*), western hemlock (*Tsuga heterophylla*), hazelnut (*Corylus cornuta*), cascara (*Rhamnus purshiana*), salmonberry (*Rubus spectabilis*), Douglas's iris (*Iris douglasiana*), false lily-of-the-valley (*Maianthemum dilatatum*), and sword fern (*Polystichum munitum*). The state rarity status for Sitka spruce forest is very threatened (state rank S1.1) with less than 2,000 acres remaining in the state.

Palustrine forested wetlands that are dominated with Sitka spruce have a different assemblage of species. The overstory typically consists of Sitka spruce, Oregon crabapple (*Malus fusca*), red alder, with a subcanopy of cascara (*Rhamnus purshiana*), willows, twinberry, and wax myrtle (*Myrica californica*). Dominant shrubs include salmonberry, thimbleberry, and elderberry. Common

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herbaceous species are sword fern, false lily-of-the-valley, milk maids (*Cardamine californica*), Douglas iris, and grass species including Pacific reed grass (*Calamagrostis nutkaensis*). This natural community is not located on or adjacent to the site.

6.2 Special Status Plant Species

Special status plant species are either listed as endangered, threatened, or rare (CESA only) under the FESA or CESA; and/or considered to be rare under the NPPA; and/or considered to be rare (but not formally listed) by resource agencies, professional organizations (for example, CNPS), and the scientific community. CDFG recognizes that Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and the CDFG recommends they be addressed in CEQA projects. CNPS List 4 is also included in our analysis of potentially occurring special-status plant species. "Listed species" are those taxa that are formally listed as endangered or threatened by the federal government (for example, USFWS) pursuant to the FESA or as endangered, threatened, or rare (for plants only) by the State of California (i.e., CDFG) pursuant to the CESA.

Based on a review for special-status plant species (CDFG, 2009a; CNPS 2009; USFWS, 2009), a total of 29 special-status plant species have been reported from the region consisting of the site's quadrangle (Fortuna) and the aforementioned surrounding quadrangles. Based on the 29 plant species reported, the range of habitats present at the project site, and the geographical range of the various special status plant species, one (1) plant species listed in Table 1 is considered to have a low potential to occur within the site. This species includes Howell's montia. As stated above, a protocol level focused botanical survey was not conducted at the project site.

Howell's montia is an annual herb that is tolerant of disturbance and occurs in a variety of habitats that have minimal vegetation cover. Off-site to the east within the unimproved Barney Street right-of-way, potentially suitable habitat exist for Howell's montia. The proposed project is not expected to impact this CNPS List 2 species.

None of the 29 special status plant species reported in Table 1 were observed during the 2009 site visits.

6.3 Special Status Animal Species

Special-status animal species include those listed as endangered, threatened, rare, or as candidates for listing by the USFWS (2009) and/or CDFG (2009a). Other species regarded as having special-status include special animals, as listed by the CDFG (2009b). Additional animal species receive protection under the Bald Eagle Protection Act and the MBTA (16 USC 703-711). The CFGC provides protection for "fully protected birds" (Section 3511), "fully protected mammals" (Section 4700), "fully protected reptiles and amphibians" (Section 5050) and "fully protected fish" (Section 5515). The California Code of Regulations (Title 14) prohibits the take of protected amphibians (Chapter 5 Section 41), protected reptiles (Chapter 5 Section 42) and protected furbearers (Chapter 5 Section 460). Additional definitions are given in the CEQA Section 15380(d).

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Based on a review for special status animal species (CDFG, 2009a; USFWS, 2009), a total of 32 special status animal species have been recorded or have potential to occur from the project region consisting of the site's quadrangle (Fortuna) and the aforementioned surrounding topographic quadrangles. Based on the 32 animal species potentially occurring in the region, the habitat present at the project site, and the geographical range of the various special status animal species, two (2) animal species included in Table 2 are considered to have a moderate potential to occur within the site. Those species include: Cooper's hawk and sharp-shinned hawk. Information presented in this section was gathered during the site visits, from published habitat requirements of each species, and through professional knowledge and experience with several of the species and their habitat requirements, disturbance issues, and distribution in northwestern California.

Sharp-shinned hawks (*A. striatus*) and **Cooper's hawk** (*Accipiter cooperii*) are in the Family Accipitridae and are primarily associated with dense forests but can be found in several habitat types including ecotones and urban environments. Accipiters are also relatively common in neighborhoods where bird feeders attract prey species. Like other raptors and birds in general, sharp-shinned hawk are protected under CFGC Section 3503.5 and the federal MBTA. No hawks or hawk nests were observed during the reconnaissance level biological surveys. Construction activities are not anticipated to impact sharp-shinned hawks.

Many other common birds that might occasionally forage and/or nest on or adjacent to the site are protected under the MBTA and CFGC 3503.

7.0 Environmental Impacts

7.1 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a project could have a significant environmental impact on natural resources if it would:

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFG or USFWS;

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS;

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

(d) Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of a native wildlife nursery site;

(e) Conflict with local polices or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

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(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

7.2 Project Impacts and Mitigation Measures[4]

Question (a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?

No special-status plant or animal species were observed on the site. Of the 29 special status plant species potentially occurring in the Fortuna area, one (1) plant species is considered to have a low potential to occur within the site (CDFG, 2009a; CNPS, 2009). Vegetation at this site has been altered and modified by past land use (for example, currently developed with existing City water infrastructure). These activities have altered the environmental conditions at the site so that common, non-native plant species dominate the site. The ongoing disturbed nature of the site and regular impacts from human intrusion are factors that likely contribute to the absence of rare plants or their ability to colonize the site over time, with the exception of species that can tolerate a high disturbance regime.

On March 26, 2009, Mr. van Hattem and Mr. Bauer, Environmental Scientists with the CDFG, Aimee Weber, SHN botanist, and Liz Shorey, Dennis Ryan, Stephen Avis, and Kevin Carter with the City conducted a site visit to discuss the proposed project and potential biological impacts. Mr. van Hattem and Mr. Bauer concluded during this site visit that there were no major biological issues present at the project site.

Given the above information and the fact that no special status plant species were detected during SHN's site visits, the proposed project is not anticipated to directly or indirectly impact any listed or special status plant species; thus, anticipated impacts are less than significant.

On May 6, 2009, on behalf of the City, SHN submitted a formal TAR for USFWS assistance in the assessment of potential impacts to special status species, specifically potential impacts to the marbled murrelet and northern spotted owl (SHN, 2009b). The USFWS determined after review of information pertaining to the request, and a site visit conducted by Mr. Hoffman of the USFWS staff, that the proposed project will not affect either the northern spotted owl or the marbled murrelet (USFWS, 2009b; Appendix C).

A total of two (2) animal species are considered to have moderate potential for occurrence within or adjacent to the site: Cooper's hawk and sharp-shinned hawk (Table 2). Neither of these species were observed on the site (Appendix A). Although these two species were not observed on the site, they are considered to have moderate potential for future occurrence because the site contains suitable habitat and is within either the breeding or migration ranges of these species. The proposed project is not anticipated to directly or indirectly impact listed or special status animal species; thus, it is less than significant.

[4] Note: the mitigation measures listed below may not follow the number sequence included in the Mitigated Negative Declaration but the content shall be the same.

DRAFT

Given raptors and other bird (for example, passerines [perching birds]) species may potentially nest within the trees and shrubs that occur in and adjacent to the site, there is a potential for construction-related impacts to nesting birds. The proposed construction for the tanks replacement does not propose removal of trees. However, trees and shrubs exist along the fence line of the eastern and southern property boundaries (Appendix B, Photo 3). Grading and construction activities within the site could cause nest abandonment and/or loss of eggs or young. Nests of native birds are protected under the CFGC (Section 3503) and destruction of an active nest or eggs would represent a significant impact. Disturbance that results in the abandonment of an active nest is also considered a significant impact. However, implementation of Mitigation Measure BIO-1 would reduce these potential impacts to a less than significant level.

Given the site location, existing site conditions, and by implementing BIO-1 (preconstruction nesting bird surveys), impacts to special status or common wildlife species are less than significant.

Mitigation Measure BIO-1

To avoid impacts to nesting raptors and/or other bird (for example, passerines [perching birds]), one of the following shall be implemented:

- Conduct vegetation removal activities associated with construction during September through January, when birds are not nesting; or
- Conduct a brief pre-construction survey for nesting birds two weeks prior to construction if vegetation removal is to take place during the nesting season (February 1 to August 31 for most birds). Preconstruction surveys for nesting pairs, nests, and eggs would occur in areas proposed for vegetation removal, and active nesting areas flagged. If active nests are encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the CDFG and implemented to prevent abandonment of the active nest.

Question (b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS?

There will be no temporary or permanent direct impacts to waters of the State (for example, isolated wetlands, drainages above Ordinary High Water Mark (OHWM), or riparian vegetation) regulated under the Porter Cologne Act and/or CFGC Section 1600.

On March 26, 2009 a site visit was held with Mr. van Hattem and Mr. Bauer, environmental scientists with CDFG. Mr. Van Hattem and Mr. Bauer concluded that a 1600 SAA was not required for the proposed work adjacent to the existing concrete drainage ditch located in the vicinity of the project area.

The State's Construction Storm Water General Permit requires a Storm Water Pollution Prevention Plan (SWPPP) for ground disturbances of greater than one (1) acre. Ground disturbances associated with the demolition of existing structures and construction of replacement reservoirs is anticipated to be less than one (1) acre. However, the project's construction footprint is anticipated to exceed 1 acre

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with the proposed secondary piping connecting Pressure Zone #5 to Pressure Zone #1. Impacts to stormwater runoff from construction would be considered *temporary* indirect impacts. However, adherence with the project Construction SWPPP (BIO-2) and implementation of appropriate Best Management Practices (BMPs) would reduce the potential for adverse erosion and/or pollutant transport to less than significant.

There will be no impacts to stormwater runoff from the proposed development following construction. There are no sensitive natural communities within the project site that will be adversely affected by the proposed project. The site does not propose removal of trees.

Mitigation Measure BIO-2

Prior to construction, a Notice of Intent (NOI) shall be prepared and submitted to the SWRCB for coverage under the Construction Stormwater General Permit. A Construction SWPPP shall be developed outlining the BMPs necessary to reduce potential pollution of stormwater runoff during construction. Site-specific BMPs for the proposed construction shall be addressed in the project SWPPP.

Question (c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

No impacts on federally protected waters of the U.S. as defined by Section 404 of the CWA (including wetlands) are anticipated. There is an existing concrete drainage ditch located along the eastern parcel boundary (Appendix B; Photo 4). It is located on the east side of the fence, and outside of the City's property boundary. No impacts to the aforementioned concrete drainage ditch are anticipated, and no wetlands were identified within the project area.

Question (d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No designation of major migratory routes has been identified for the site. The site is located within a developed residential area, within the city limits and is surrounded by urban development. Development exists on-site and off-site along the site's perimeter (for example, Stewart Street and single family homes). During the March 26, 2009 site visit, an evaluation of the off-site concrete drainage was conducted. The drainage does not support fish and therefore; the project will not interfere with any movement of native resident or migratory fish.

The site may facilitate home range and dispersal movement of resident wildlife species, but does not serve as a wildlife movement corridor. Development of the site would not restrict regional wildlife movement or wildlife migration patterns, and would have no related significant impacts. Mitigation Measure BIO-1 (preconstruction nesting bird surveys) would reduce potential impacts to migratory birds to less than significant.

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Question (e) Would the project conflict with local polices or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The City does not currently have any local regulations and/or ordinances for the protection of biological resources; therefore the project will not conflict with local polices or ordinances protecting these resources.

Question (f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

No Habitat Conservation Plans, Natural Community Conservation Plans or other local or regional plans have been adopted within the area that encompasses the site; therefore, no impacts are anticipated and no mitigation is considered necessary.

8.0 Conclusions

The site is altered and has been subjected to regular human disturbance, both recently and historically. Jurisdictional waters of the U.S. and/or State (as wetlands and other waters of the U.S.) were not identified on site. Although no special-status plants are anticipated to be impacted by any proposed site improvements, other biological resources such as birds could be subject to state and/or federal regulations. With careful site planning, and mitigation measures (for example, BIO-1 and BIO-2), potential impacts from the project can be reduced to a level that is less than significant. It is important to note that the regulatory environment changes, and that these conclusions are based on current laws and policies (see Section 5.0).

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Appendix A

Species List

Species List
Stewart Street Reservoirs Replacement
Fortuna, California

Plants

Latin Name	Common Name	Presence (1=tree, 2=shrub, 3=herb)
Abies grandis	grand fir	1
Alnus rubra	red alder	1
Cupressus lawsoniana	Port-Orford-cedar	1
Ilex aquifolium	English holly	1
Pseudotsuga menziesii	Douglas-fir	1
Salix sp.	willow	1
Sequoia sempervirens	coast redwood	1
Cotoneaster pannosa	cotoneaster	2
Rosa sp.	Rose	2
Rubus discolor	Himalayan blackberry	2
Allium sp.	onion	3
Athyrium filix-femina	lady fern	3
Bellis perennis	English daisy	3
Bromus sp.	brome grass	3
Dactylis glomerata	orchard grass	3
Daucus carota	wild carrot	3
Erica sp.	Heather	3
Festuca sp.	fescue	3
Fragaria vesca	wood strawberry	3
Geranium sp.	geranium	3
Hedera helix	English Ivy	3
Hypochaeris radicata	hairy cat's-ear	3
Juncus effusus	common rush	3
Juncus patens	spreading rush	3
Lonicera sp.	honeysuckle	3
Lotus corniculatus	birdfoot trefoil	3
Plantago lanceolata	English plantain	3
Polystichum munitum	sword fern	3
Prunella vulgaris	self-heal	3
Ranunculus repens	creeping buttercup	3
Rubus ursinus	Pacific bramble or California blackberry	3
Scirpus microcarpus	small-flowered bulrush	3
Sonchus sp.	sow thistle	3
Stachys ajugoides	hedge nettle	3

Avian

Latin Name	Common Name
Carpodacus mexicanus	Housefinch
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
Psaltriparus minimus	Bushtit
Turdus migratorius	American Robin

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Appendix B

Site Photographs

Photo 1: Existing tanks; orientation is north. Photo taken on February 24, 2009.

Photo 2: Existing pump station; orientation is south. Photo taken on February 24, 2009.

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Photo 3: View of slope facing southeast. Photo taken on February 24, 2009.

Photo 4: View of concrete drainage ditch; orientation is south. Proposed project is west. The unimproved, steep gradient access road (Barney Street), which parallels the eastern edge of the site is shown in the background. Photo taken on February 24, 2009.

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Appendix C

USFWS Technical Assistance Response Letter dated May 2009