WETLAND DELINEATION
FOR THE
±181-ACRE
DEWITT CENTER PROJECT

Placer County, California

Submitted To:

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INTRODUCTION

At the request of the Placer County Department of Facility Services, North Fork Associates conducted a wetland delineation on the 181-acre DeWitt Center Property located between Bell Road and Atwood Road west of Highway 49 and north of Auburn in Placer County, California. This location corresponds to Section 32, Township 16N, Range 8E of the "Auburn, California" 7.5 minute USGS topographic quadrangle. Coordinates to the approximate center of the project are: 38°56′29″ N and 21°6′30″ W (Figure 1).

Topography of the site is gently sloping, trending from northeast to southwest. Elevation ranges from approximately 1380 feet in the southwest corner to 1420 feet in the northern area. Annual rainfall at the site is approximately 35 inches.

METHODOLOGY

North Fork biologists Jeff Glazner and Barry Anderson conducted a wetland delineation on March 14, 19, and 20, 2002. An additional survey was completed on July 10 to refine wetlands on a portion of the site. Prior to the survey, we reviewed color aerial photographs of the site taken on February 28, 2002 (Figure 2). Other information used in the delineation included the USGS 7.5 minute Auburn quadrangle and the *Soil Survey of Placer County, California, Western Part* (1980). The delineation was conducted in accordance with the 1987 U.S. Army Corps of Engineers *Wetland Delineation Manual*.

All areas within the project site were evaluated for the presence or absence of waters of the United States. Wetland edges, sampling points, and other features were recorded on a color aerial photograph (scale 1″=100′). Sampling points were taken at representative locations, and information about vegetation, hydrology, and soils was recorded on wetland determination forms. Plant nomenclature follows *The Jepson Manual: Higher Plants of California*. Wetland indicator status was obtained from the 1988 *National List of Vascular Plant Species that Occur in Wetlands*, California Region 0. A Munsell soil color chart was used to determine soil matrix and mottle colors.

Although the Corps currently recommends the use of a Global Positioning System with an accuracy of three feet or less, broad, dense stands of Himalayan blackberry (*Rubus discolor*) around most of the wetlands precluded the use of this technology. Consequently, the amount of wetland acreage on the study site was determined from ground measurements and interpreting the aerial photo while standing near the wetland edge. We used a cutting tool to hack swaths into the blackberry to locate the true wetland edge. These swaths were

cut into areas where the edge could not be determined from higher ground. In addition, photographs of the wetland features were taken and are included in this report (Figure 3).

RESULTS

Vegetation

The site consists of gently rolling oak woodland and urban development. Blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizeni*) is the dominant tree, and foothill pine (*Pinus sabiniana*) occurs at scattered locations. The woodland understory varies. In a few areas, the understory consists of non-native annual grassland. Typical species include soft chess (*Bromus hordeaceus*), oats (*Avena* sp.), and Italian ryegrass (*Lolium multiflorum*). Although this grassland is dominated by non-native grasses, it also supports a number of native bulbs and other broad-leaved species that bloom in the spring.

Concrete, asphalt, and other waste material have been disposed of on portions of the site. In addition, some areas have been graded or otherwise disturbed. At these locations the flora is best described as ruderal, consisting of species adapted to high levels of disturbance. Typical ruderal species include Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), yellow starthistle (*Centaurea solstitialis*), and horehound (*Marrubium vulgare*).

Shrubs such as coyote brush (*Baccharis pilularis*), buckbrush (*Ceanothus* sp.), poison-oak (*Toxicodendron diversilobum*), and coffeeberry (*Rhamnus tomentella*) occur in open areas and occasionally as a woody understory in the woodland.

Several areas on the site support a riparian or wetland flora. Willows (*Salix* spp.) and Himalayan blackberry form thickets at the edges of ponds. Emergent vegetation, such as cattail (*Typha* sp.), occurs in areas that have standing water for most or all of the year. Various species of rush (*Juncus* spp.) occupy wetland locations that may be dry by mid to late summer. These areas occur near the pond dams and in the drier portions of creek channels.

Soils

Soils on much of the study area have been disturbed by grading and development or by the deposition of foreign materials such as concrete, asphalt, and other materials. Nevertheless, native soil occurs at several locations in the area. According to the *Soils Survey of Placer County, California, Western Part* (1980), two soil types occur in the study area: Auburn silt loam with 2 to 15 percent slopes and Auburn-Rock outcrop complex with 2 to 30 percent slope (Figure 4). In undisturbed areas, Auburn silt loam has a strong brown silt loam A horizon approximately one to eight inches thick. Between eight and about 20 inches, the B horizon is a yellowish red silt loam. Permeability is moderate, and may become saturated following heavy rains. Auburn-Rock outcrop complex has a strong brown silt loam about four inches thick. Between four and 20 inches is yellowish red silt loam. The bedrock is weathered basic schist. Permeability is moderate and the soils are well drained.

Hydrology

The DeWitt Center property discharges water to two watersheds. The northeastern portion of the site drains into the Rock Creek watershed, and the remainder of the site drains to the North Ravine watershed. Two drainages drain the site. The headwaters of North Ravine along the western part of the site drains into the abandoned sewer pond and then to the south. A smaller local drainage occurs in the center of the property and drains under the new jail facility, south under Atwood Road. Precipitation falling on the site either sheet flows to the two drainages or flows laterally underground along shallow bedrock to the drainages.

WATERS OF THE UNITED STATES

Waters of the United States takes four forms: open water, riparian wetland, wetland swale, and detention basin. The total amount of waters of the U. S. mapped on the project site is 4.95 acres. Water types and acreages are summarized below in Table 1.

Table 1. Waters of the U.S. Acreage Summary

Classification	Acreage
Wetlands	
• Riparian Wetland	1.89
• Wetland Swale	0.30
• Seasonal Wetland	0.03
• Detention Basin	0.16
Other Waters	
• Ephemeral Drainage	0.02
• Open Water	2.55
Total	**4.95**

Riparian Wetland

Riparian wetland forms in areas where wetland hydrology can support woody hydrophytic vegetation. Areas too wet are marsh and areas too dry are seasonal wetlands or non wetlands. Riparian wetland hydrology occurs in five locations on the DeWitt project area. Riparian species composition is characterized by several willow species (*Salix gooddingii, S. lasiolepis, S. laevigata, and S. exigua*), cottonwood (*Populus fremontii*), valley oak (*Quercus lobata*), and Himalayan blackberry. Upland species blend with the riparian species at the upland/wetland line. Common along these edges are interior live oak, foothill pine, buckbrush (*Ceanothus cuneatus*), and coyote bush (*Baccharis pilularis*). Many of the riparian wetland species are common on the upland side of the line, particularly Himalayan blackberry.

At the fringe of the riparian wetland in the open water areas, emergent marsh forms a narrow band in standing water that is shallow enough to allow the growth of vegetation, usually less than six feet deep. Areas supporting emergent marsh usually have some standing water during the entire year, but cattails and other marsh species can tolerate dry periods of a month or more. Emergent marsh has formed around the edge of the abandoned sewer pond and in a secondary pond downstream from the sewer pond. The dominant species is cattails, but other species may be present by mid-summer as water levels recede. The smaller pond supports a similar flora and apparently has no standing water by the end of the summer. Both ponds have a fringe of woody vegetation consisting of woody riparian species.

Wetland Swale

This wetland type forms where inundation or saturation occurs throughout the winter and at least portions of the spring. These areas may also have periodic flows from adjacent urban uses such as street runoff. Vegetation in this wetland type is herbaceous and tolerates extended dry periods. On the DeWitt property, wetland swale is located in the southern areas of the property where water is conveyed through ditches or swales. The swales are typically dominated by ryegrass (*Lolium multiflorum*), rushes (*Juncus* spp.) and nutsedges (*Cyperus* spp.).

Seasonal Wetland

A small seasonal wetland occurs in the western portion of the site. This area is associated with an ephemeral drainage that flows along the northern property boundary. Most of the seasonal wetland is beneath the canopy of willows and oaks, but it is dominated by a sedge (*Carex* sp.) that is common in seeps and along streambanks.

Detention Basin

A detention basin was constructed several years ago along Atwood Road in the southern portion of the property. The basin receives periodic water from adjacent developments to the north. It supports many wetland species including willow seedlings, broomsedge bluestem (*Andropogon virginicus*) and curly dock (*Rumex crispus*).

Open Water

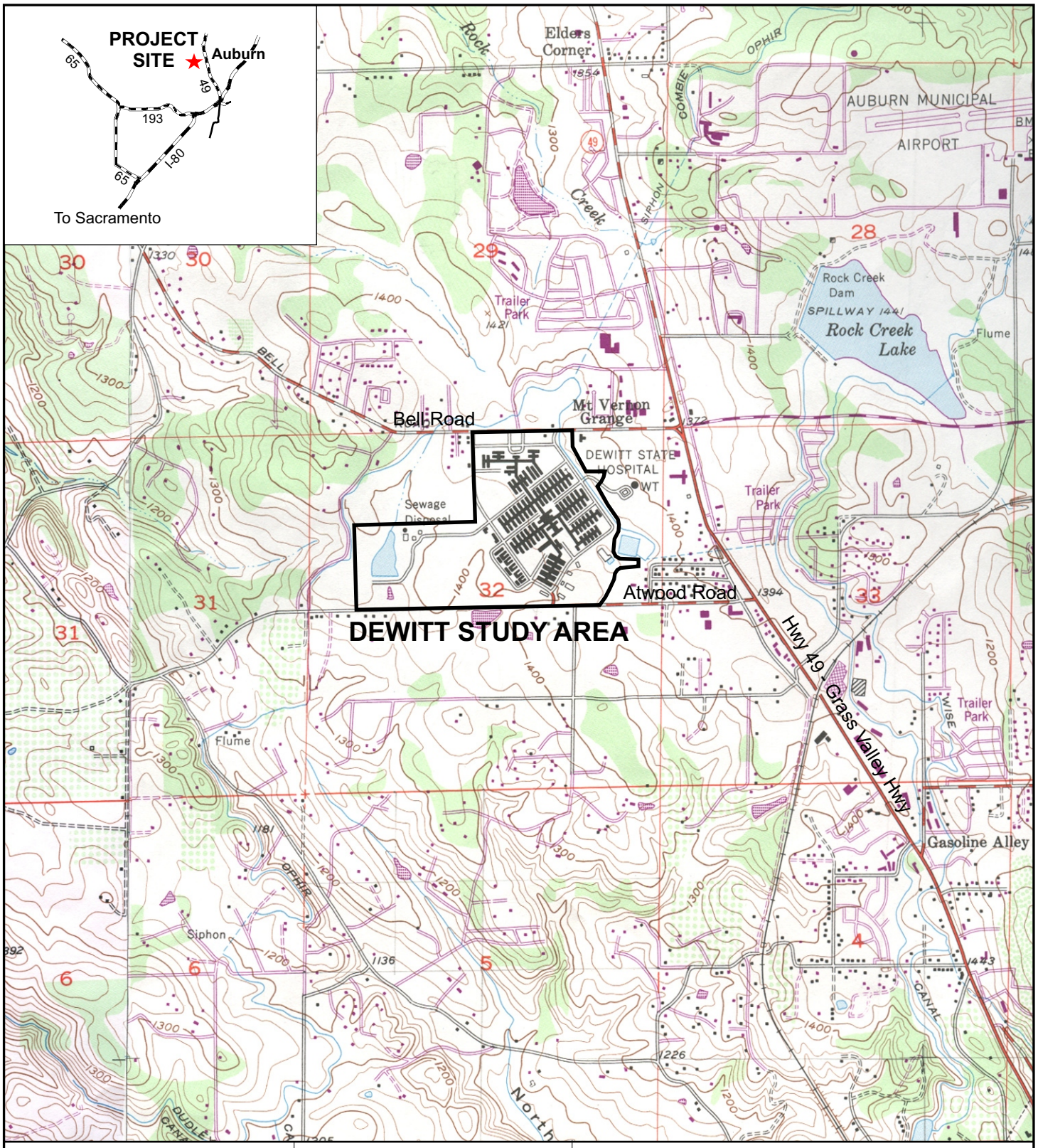
Open water occurs where water is too deep to allow the growth of emergent marsh. The large abandoned sewer pond and the smaller lower pond near Atwood Road in the southwest corner of the DeWitt Center property has 2.55 acres of open water. Although this amount varies with the season, Placer County personnel have stated that the larger pond has water throughout the year but the lower pond may seasonally dry up.

Ephemeral Drainage

A short ephemeral drainage occurs along the property boundary just east of the abandoned sewage pond. This channel has an ordinary high water mark about three feet wide and appears to carry water only during periods of rainfall. Much of the channel is covered with a dense growth of Himalayan blackberry, but scattered willows and cottonwoods are also present.

SUMMARY

A wetland delineation was conducted on the 181 acre DeWitt Center project area. About 80% of the property is developed. Wetlands are located in undeveloped areas on formerly disturbed landscape. The property is owned by Placer County and has been used for a variety of County services in the past. We have mapped six categories of the U.S. totaling 4.95 acres (refer to Figure 5).



north fork associates

0 1000 2000
Approximate scale in feet

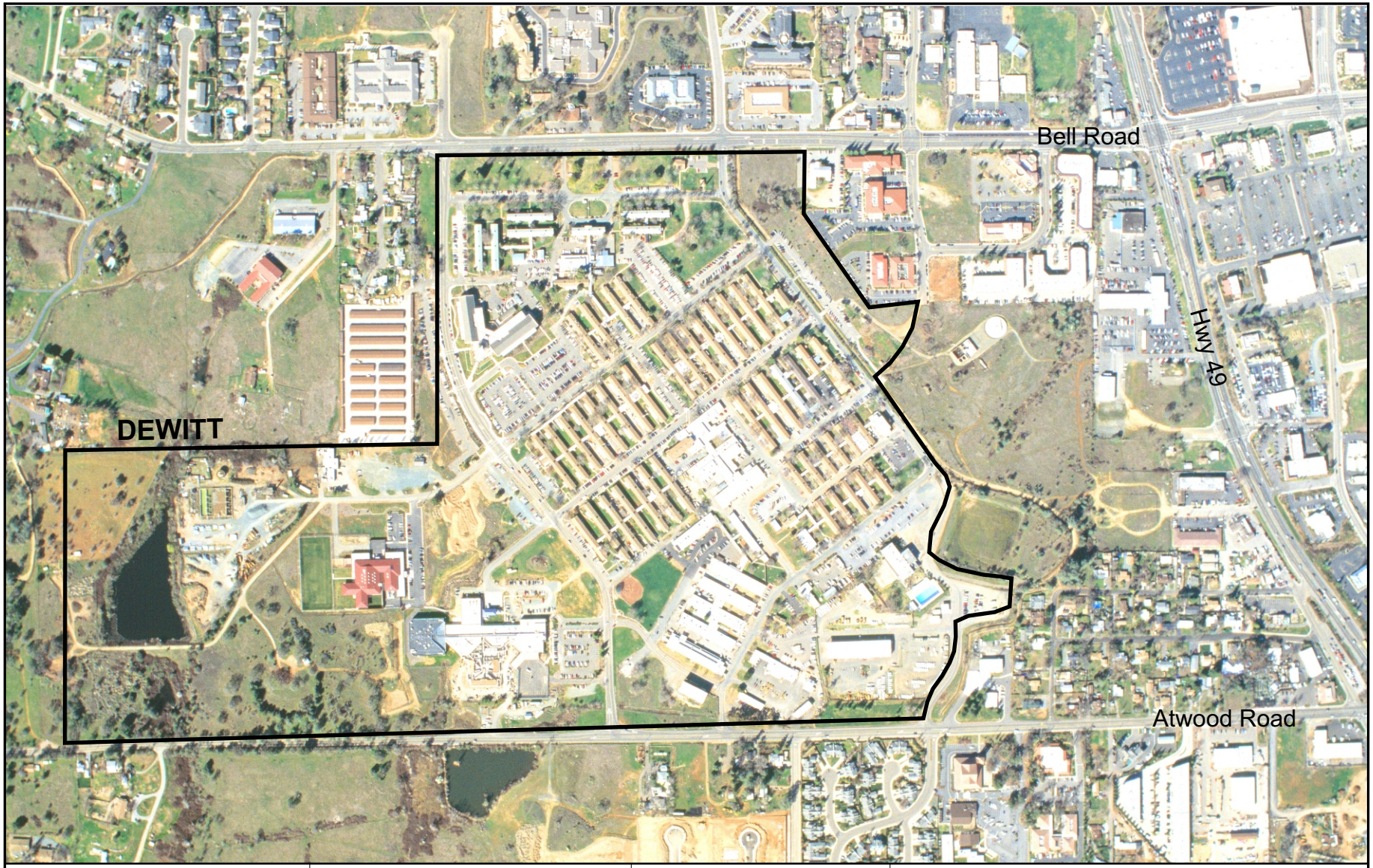
N W E S

Basemaps: Auburn and Gold Hill, CA
USGS 7.5 minute
topographic quadrangles

Figure 2-1

SITE AND VICINITY MAP

DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California



north fork associates

0 600
Approximate scale in feet

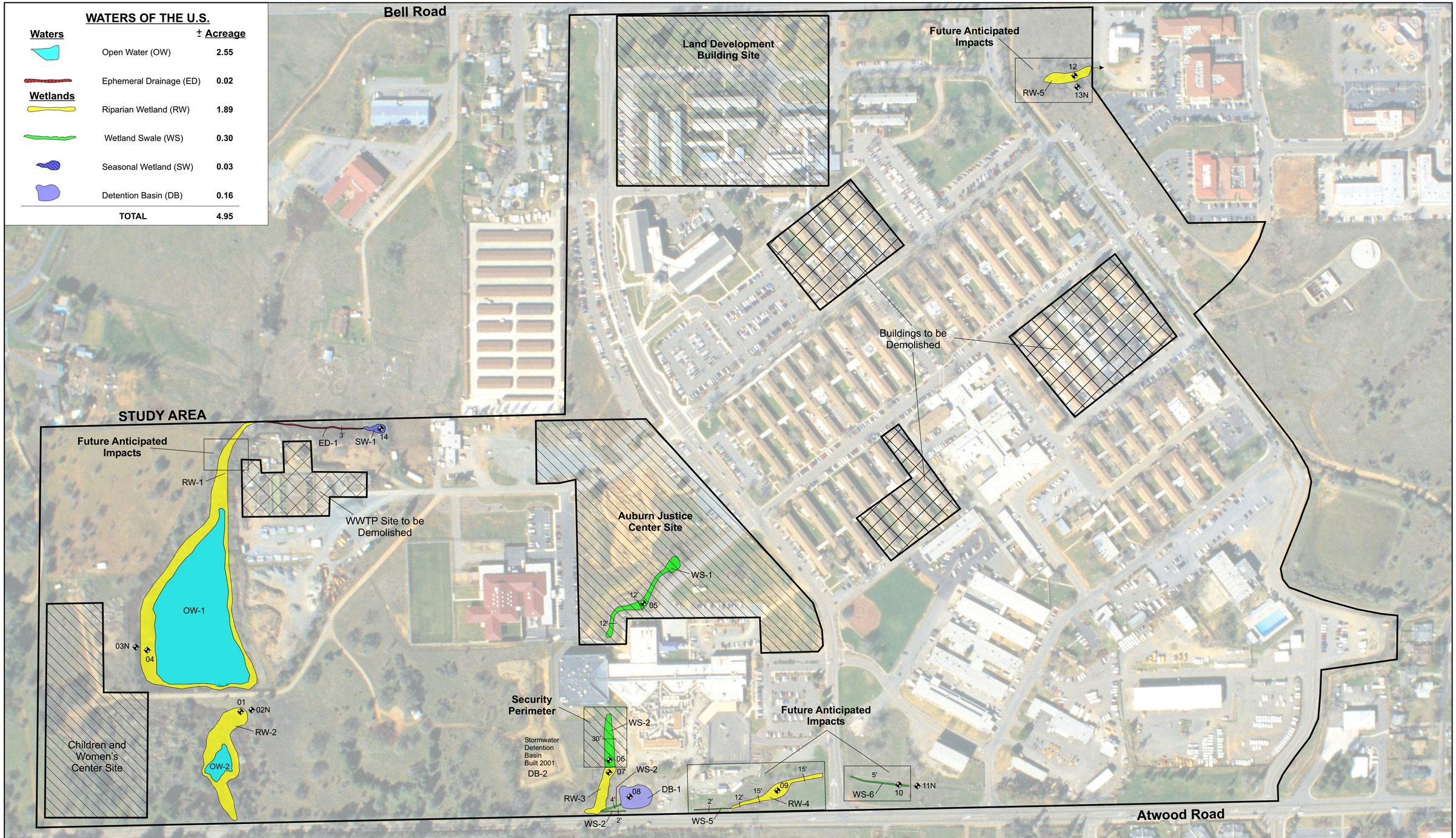
N
W E
S

Aerial Photo Provided by
Geoimagery
Photo Date: 2/28/02

Figure 2-2

AERIAL PHOTO

DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California



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Data Points

01 Three Parameter Data Point - Wetland

01N Three Parameter Data Point - Upland

Culvert

Project Notes

Gross Study Area: ±180 acres

Photo Date: February 28, 2002 by Geoimagery

Field Delineation conducted March and June 2002 by Jeff Glazner and Barry Anderson

Map Date: 8-31-02

N W E S

0 200
Approximate scale in feet

Figure 9-2

WETLAND DELINEATION MAP

DeWitt Government Center

Facility Plan (2003 - 2010)

Placer County, California

Riparian Wetland (RW-5) at northeast corner, looking east.

Pond (OW-1) at west end of study area.

Wetland Swale (WS-1)

Detention Basin (DB-1)

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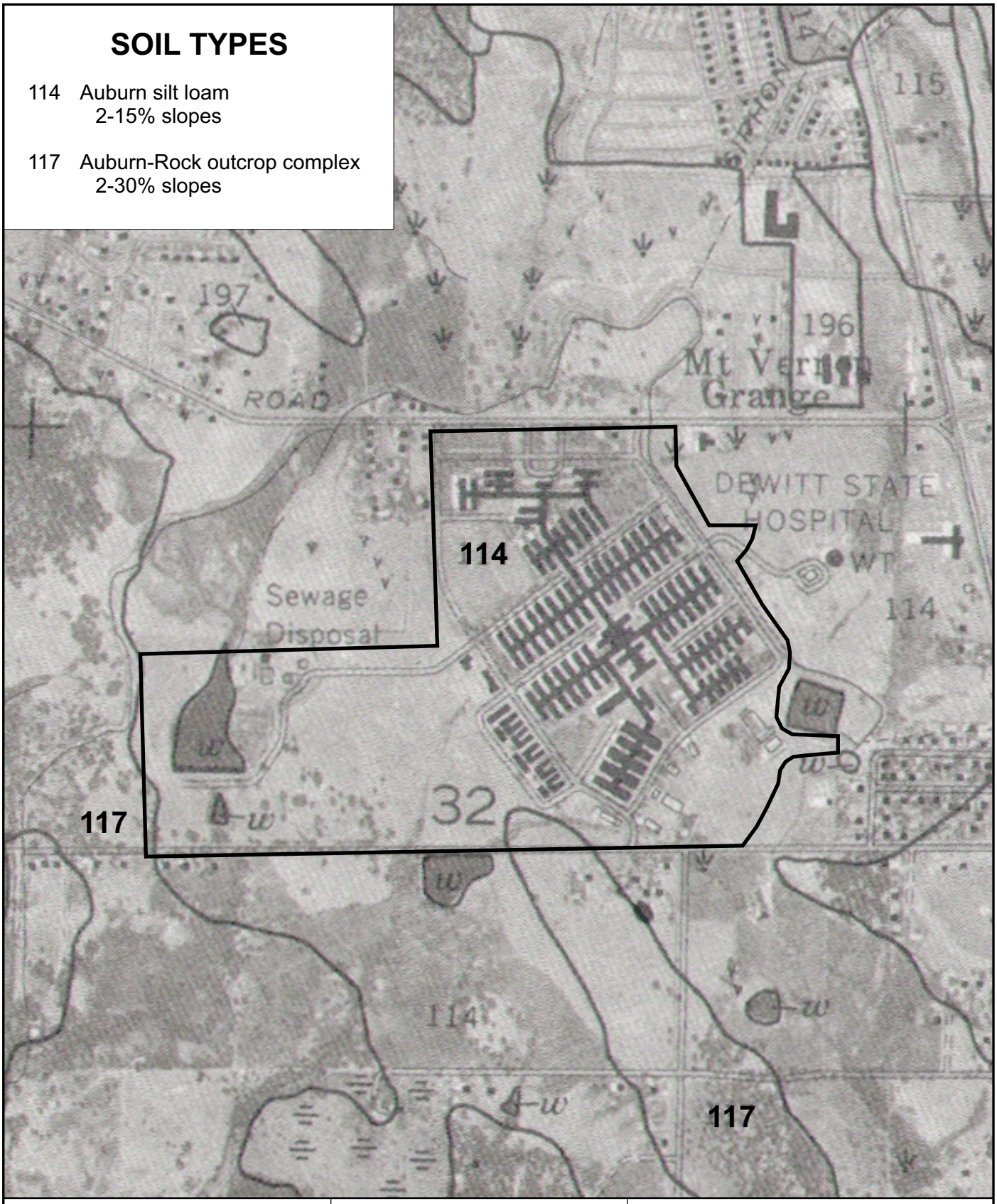
Photos taken 3/02

Figure 3

SITE PHOTOS

DeWitt Center Project

Placer County, California



0 400 800
Approximate scale in feet

N
W E
S

Basemap: Auburn, CA Soil Survey
Soil Conservation Service, USDA

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Figure 10-2

SOIL MAP

DeWitt Government Center
Facility Plan (2003 - 2010)
Placer County, California