

# **CHAPTER FOUR**

## **ENVIRONMENTAL SETTING, ENVIRONMENTAL IMPACTS, CUMULATIVE IMPACTS, AND MITIGATION MEASURES**

### **4.1 APPROACH TO THE ENVIRONMENTAL ANALYSIS**

#### **4.1.1 AIRPORT SETTING AND LOCATION**

Gness Field Airport (DVO or Airport) is located in the unincorporated area of Marin County, California approximately three miles northeast of the city of Novato on a 120-acre site situated between U.S. Highway 101 and the Petaluma River (see **Exhibit 4.1-1, Airport Regional Location**). DVO is the only general aviation airport in Marin County, California, and one of several reliever airports in the San Francisco Bay area for San Francisco International Airport (SFO).

DVO is owned and operated by Marin County, California. The County Department of Public Works is responsible for the daily management of the Airport. The Airport has one runway oriented southeast/northwest (designated Runway 13/31) that measures 3,300 feet-long by 75 feet-wide. Runways are assigned two numbers that represent the compass heading the runway is pointing towards. For DVO, Runway 13 points to approximately 130 degrees on the compass, which is a southeasterly direction. Aircraft taking off to the south or landing from the north pointed to the south are using the 13 end of the runway. Likewise, Runway 31 points to approximately 310 degrees on the compass, which is a northwesterly direction. Aircraft taking off to the north or landing from the south pointed to the north are using the 31 end of the runway.

A system of manmade ditches and levees with pumps surround the runway to protect it from flooding. The characteristics of adjacent land uses and zoning, location of nearby communities, and general characteristics of the Airport vicinity are discussed below.

For all analyses conducted for this Environmental Impact Report (EIR) baseline, existing, conditions per CEQA Guidelines are the conditions that existed on the date the Notice of Preparation was published, July 11 2008.

#### **4.1.2 STUDY AREAS**

For the purposes of this EIR, two study areas have been defined. The General Study Area (GSA) depicts the communities surrounding the Airport. A further refined Detailed Study Area (DSA) depicts the potential land area that may be physically disturbed by the development of the Proposed Project. Exhibits depicting these two study areas show the existing political jurisdictional boundaries;

noise-sensitive land uses; compatible land uses; major and minor streets and roadways; and major physical, geographic, and natural features, along with selected place names, road names, and names of major geographic features.

The GSA, shown on **Exhibit 4.1-2, General Study Area**, covers approximately 12,655 acres and is defined as the area where potential indirect impacts may result from the Proposed Project. The majority of the GSA for this EIR is located within Marin County including portions of the City of Novato, and approximately 1,788 acres of the northeastern portion of the GSA located within neighboring Sonoma County, California. The DSA, shown on **Exhibit 4.1-3, Detailed Study Area**, covers approximately 102 acres and is defined as the area where potential direct impacts may result from the Proposed Project or its alternatives.

### **4.1.3 STUDY AREA CLIMATE AND TOPOGRAPHY**

The climate in the study area is generally mild with average high temperatures throughout the year ranging from 56 degrees in January to 81 degrees Fahrenheit in July. Average low temperatures throughout the year range from 41 to 55 degrees Fahrenheit. Average rainfall is typically highest in January at seven inches and lowest in July at less than one inch.<sup>1</sup> DVO is situated on reclaimed marshlands that lie on the eastern flank of low-lying coastal foothills. The area is nearly flat with elevations close to sea level (See Section 4.8 for a discussion of sea level rise due to global warming). Several meandering sloughs and excavated drainage channels are located adjacent to the Airport, connecting with the Petaluma River to the east.<sup>2</sup> Topography to the west and northwest is dominated by Olompali Ridge, which reaches its highest point on Mount Burdell at a summit of approximately 1,556 feet above ground level (1,558-foot mean sea level), located approximately 1½ miles west of the existing runway. The location of Mount Burdell, coupled with prevailing afternoon offshore wind direction during the spring and summer months leads to strong crosswinds at the airport during those seasons.<sup>3</sup> Pinheiro Ridge trends northeast/southwest and lies one mile south of DVO with its highest point at approximately 278 feet above ground level (280 feet mean sea level). Bahia Ridge trends northwest and terminates approximately one mile southeast of DVO at the northeast end of Pinheiro Ridge.<sup>4</sup> **Exhibit 4.1-4, Topography**, depicts the topography within the vicinity of DVO.

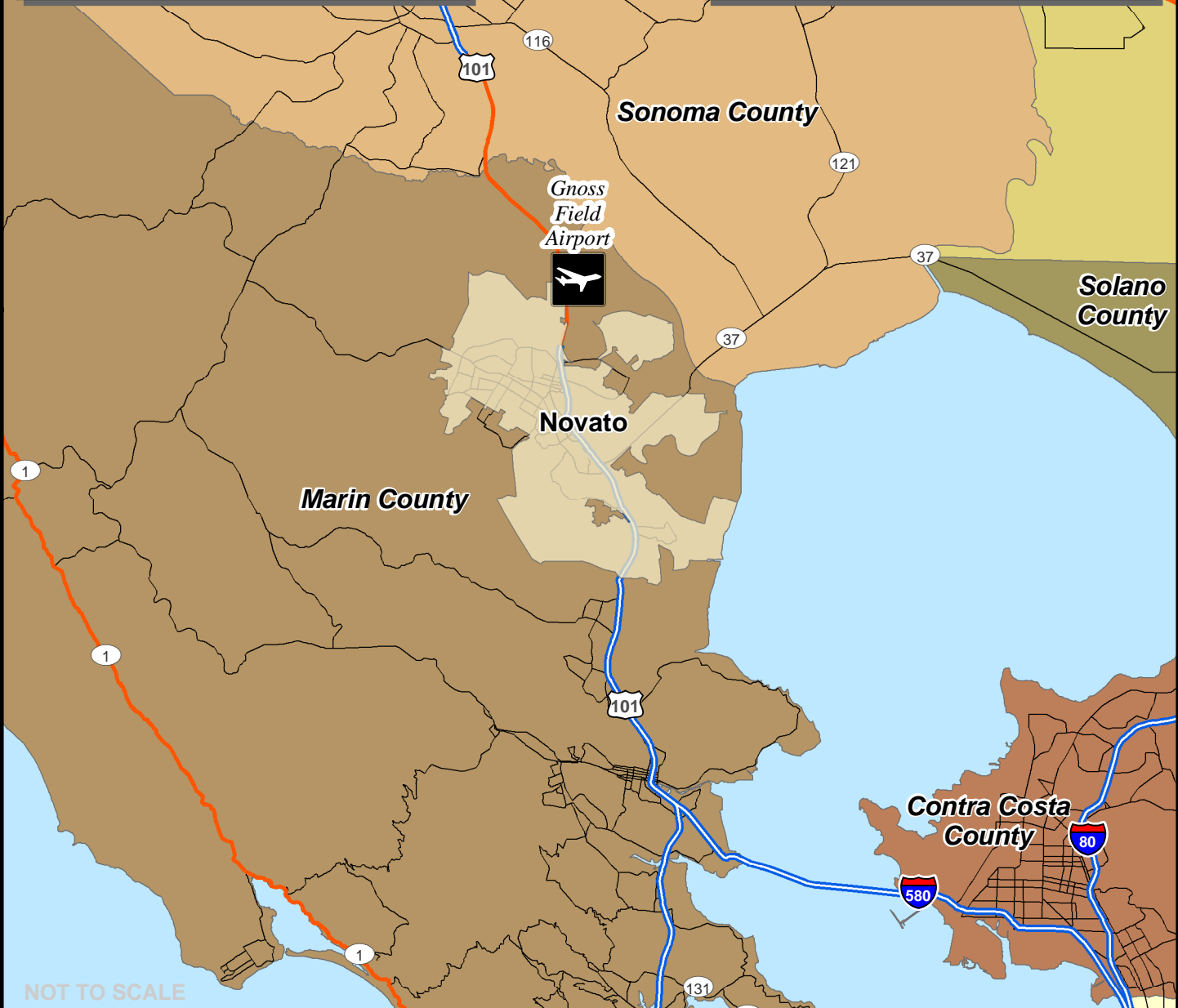
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<sup>1</sup> Average Weather for Novato, California. On-line at [www.weather.com/](http://www.weather.com/). Retrieved June 27, 2009.

<sup>2</sup> *Preliminary Design Report, Runway Extension, Gness Field*, Prepared by Cortright & Seibold, 2002.

<sup>3</sup> [USGS GNIS: Burdell Mountain](#)

<sup>4</sup> *Environmental Impact Report/Environmental Assessment, Marin County (Gness Field) Airport*, Working Paper 6, Prepared by Cortright & Seibold, June 24, 1988.



NOT TO SCALE

Environmental Impact Report  
GROSS Field Airport  
L&B

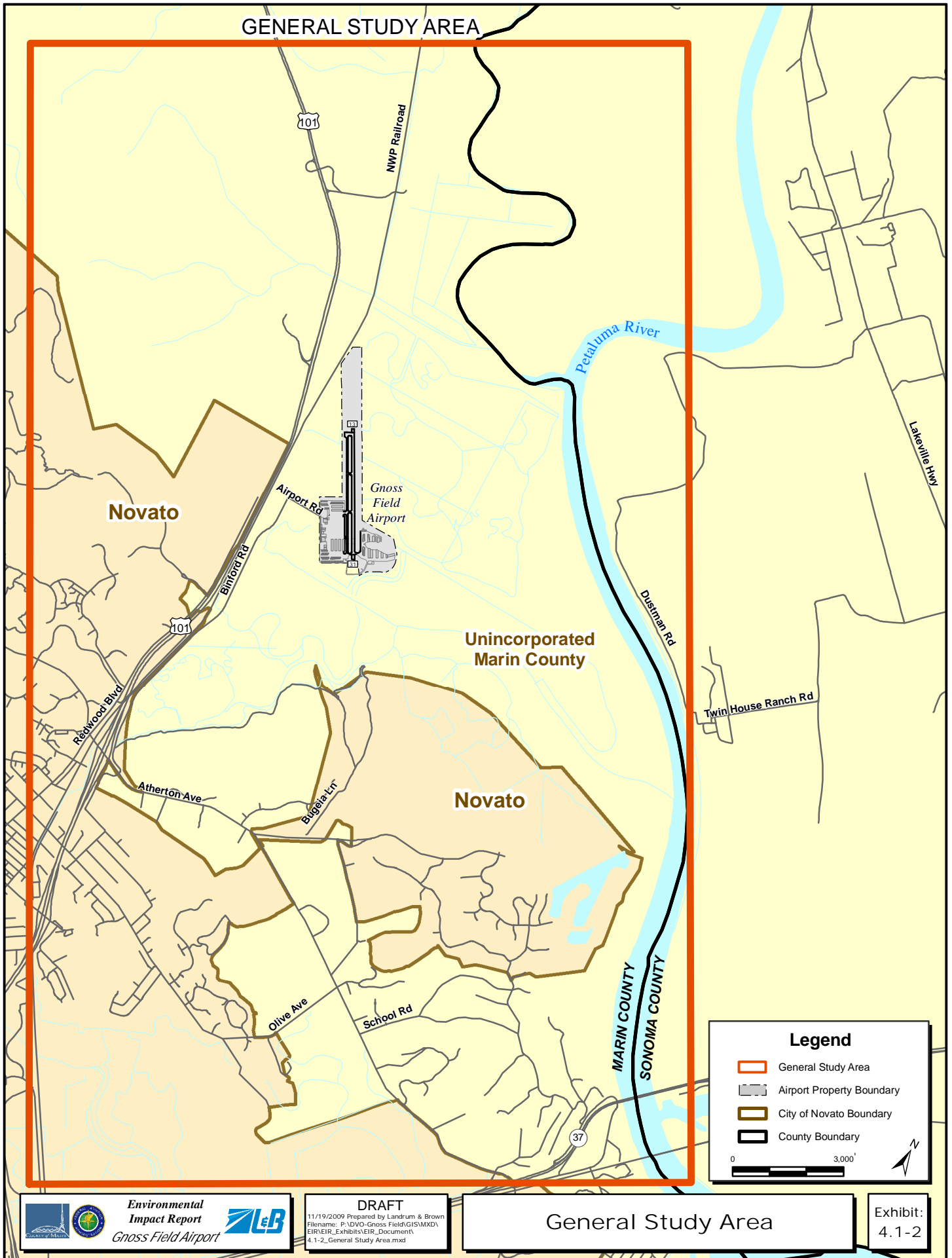
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11/19/2009 Prepared by Landrum & Brown  
Filename: P:\DVO-Gross Field\GIS\MXD\ EIR\EIR\_ Exhibits\EIR\_Document 4.1-1\_Airport Regional Location.mxd

Airport Regional Location

Exhibit:  
4.1-1



GENERAL STUDY AREA

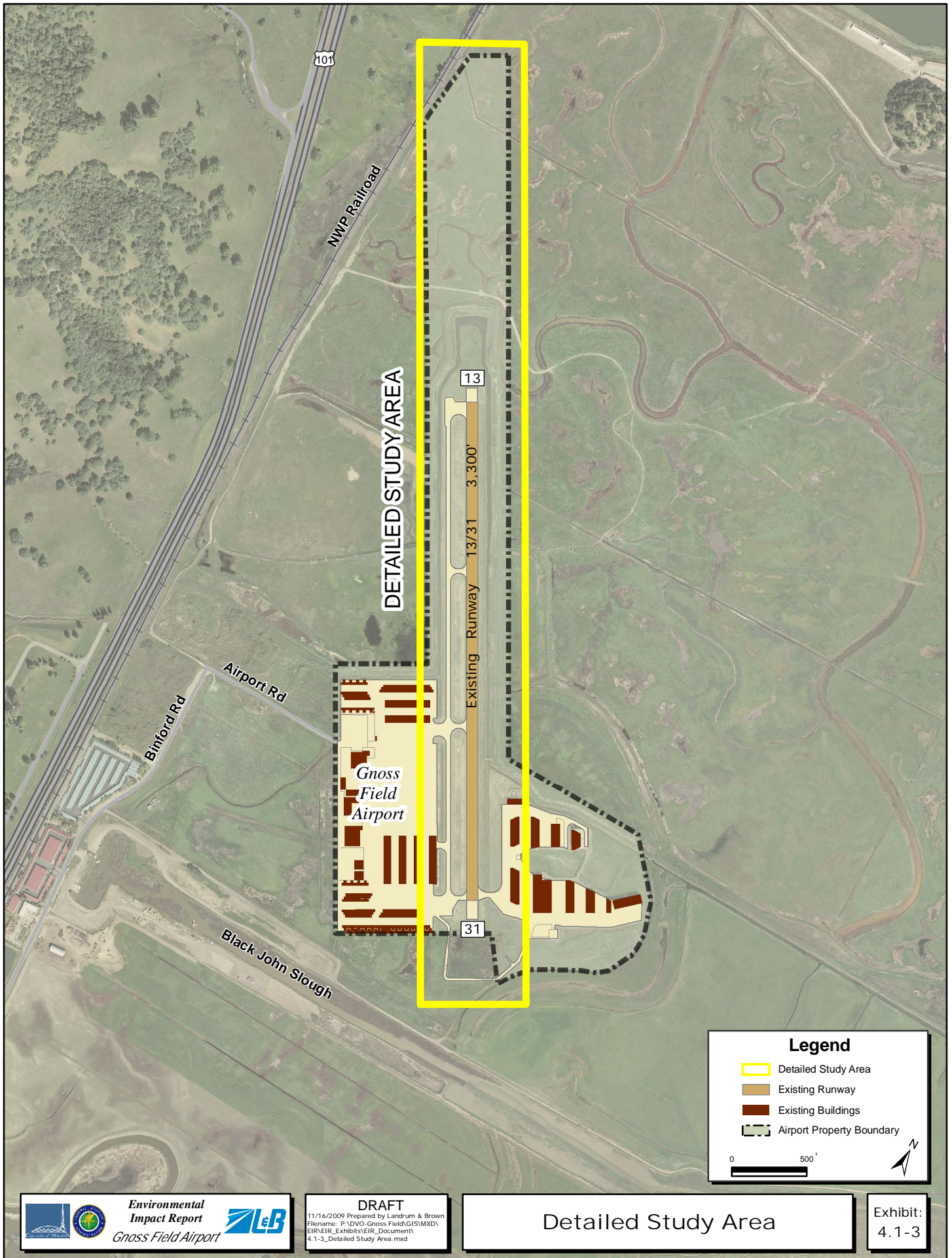


**Legend**

- General Study Area
- Airport Property Boundary
- City of Novato Boundary
- County Boundary

0 3,000'





DETAILED STUDY AREA

13

Existing Runway 13/31 3,300'

31

Gross Field Airport

**Legend**

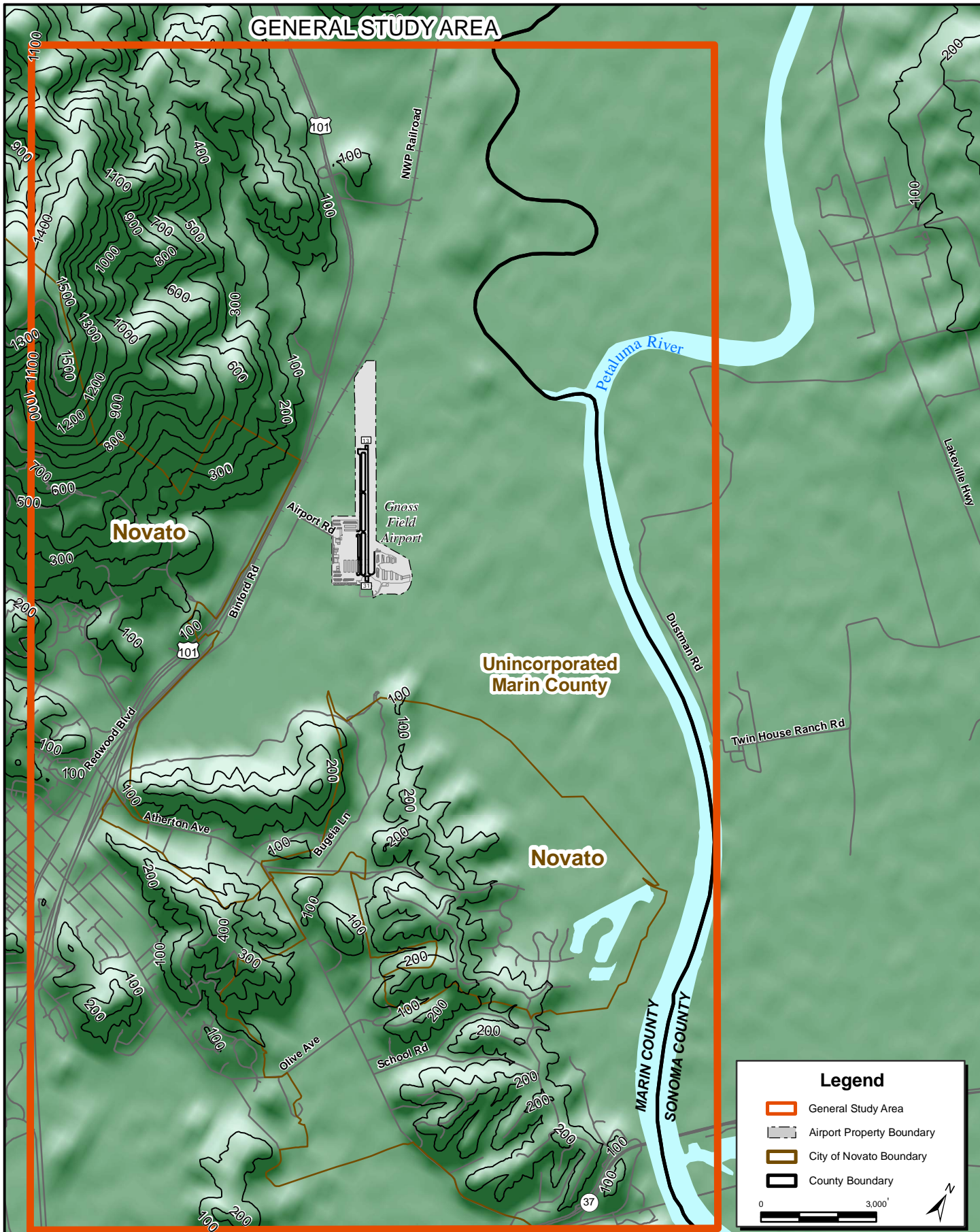
- Detailed Study Area
- Existing Runway
- Existing Buildings
- Airport Property Boundary

0 500'





**GENERAL STUDY AREA**



**Legend**

- General Study Area
- Airport Property Boundary
- City of Novato Boundary
- County Boundary

0 3,000'



#### **4.1.4 STRUCTURE OF CHAPTER FOUR**

The remaining sections within this chapter provide descriptions of the approach, regulatory framework, significance criteria, existing conditions, potential impacts, potential construction impacts, potential cumulative impacts, and if necessary potential mitigation measures associated with each environmental impact category to be considered by the California Environmental Quality Act. These impact categories are listed below.

- Section 4.2, Land Use and Planning
- Section 4.3, Geology, Soils, and Seismicity
- Section 4.4, Hydrology and Water Quality
- Section 4.5, Vegetation and Wildlife
- Section 4.6, Transportation and Circulation
- Section 4.7, Noise
- Section 4.8, Climate and Air Quality
- Section 4.9, Historic, Architectural, Archaeological, and Cultural Resources
- Section 4.10, Visual and Aesthetic Quality
- Section 4.11, Wild and Scenic Rivers
- Section 4.12, Public Parks and Recreation Facilities
- Section 4.13, Public Services and Utilities
- Section 4.14, Energy and Natural Resources
- Section 4.15, Socioeconomic
- Section 4.16, Hazards and Hazardous Materials
- Section 4.17, Mineral Resources
- Section 4.18, Agricultural Resources
- Section 4.19, Wetlands
- Section 4.20, Floodplains
- Section 4.21, Coastal Resources

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