



EDAW INC

August 4, 2003

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SAN DIEGO CALIFORNIA

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Subject: Biological Survey Letter Report for San Diego State University Sorority Row Housing Project, L.D.R. 6036

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Dear Mr. Hyatt:

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Per the scope of work for the subject project, EDAW, Inc. (EDAW) submits the following Biological Survey Letter Report. This report presents the biological findings and impacts associated with the San Diego State University (SDSU) Sorority Row Housing Project. The proposed housing will be completed on a 0.63-hectare (1.56-acre) lot located in the developed area of the 4800 block of College Avenue adjacent to SDSU (Figure 1). The proposed area is not a part of or adjacent to the City of San Diego's Multi-Habitat Planning Area (MHPA), as defined under the Multiple Species Conservation Program (MSCP). However, there are two sensitive communities that occur on-site (Figure 2).

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Project Description

The proposed housing facility includes five chapter houses and a live-out residential wing totaling 70 units, six courtyards, a pool, and underground residential parking (Figure 3). Each chapter house has a combination of different units including 4-bedroom/2bath, 3-bedroom/1bath, 2-bedroom/1bath, and 1-bedroom/1-bath. In total, the proposed layout will consist of 178 bedrooms and 173 parking stalls. There is a 5-foot landscape buffer proposed around the complex along with a 20-foot utility easement on the north and south side of the property. Also for security purposes, there is a fire access lane proposed in case of emergencies.

Methodology

EDAW biologist Danielle Tannourji performed a field survey of the project area on December 12, 2002. The goals of the survey were to map existing vegetation communities and cover types and to conduct a biological survey of the project area to determine the potential biological impacts associated with implementation of the project. Biological surveys were conducted by walking throughout the project area and recording all plant and animal species observed or detected. Vegetation community mapping was conducted by recording biological resource information onto a 1 inch = 200 feet scale aerial photograph of the site. These biological resources are presented in Figure 2.

UNITED STATES

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Results

The project footprint encompasses areas that have been previously developed and disturbed. Primarily, the site contains nonnative, invasive vegetation with a 0.04-hectare (0.10-acre) patch of disturbed coastal sage scrub. The acreage of each vegetation community is presented in Table 1. Nonnative grasses, trees, and ornamental shrubs are the common associates that occur on-site and are described below.

Table 1. Vegetation Acreages

| Vegetation Type | Area Cover |
|-------------------------------------|--------------------------|
| Disturbed Diegan Coastal Sage Scrub | 0.04 hectare (0.10 acre) |
| Nonnative Grassland | 0.50 hectare (1.24 acre) |
| Nonnative Woodland | 0.08 hectare (0.20 acre) |
| Ruderal | 0.01 hectare (0.02 acre) |
| Total | 0.63 hectare (1.56 acre) |

Disturbed Diegan Coastal Sage Scrub

Coastal sage scrub is comprised of low, soft-woody subshrubs to about 1 meter (3 feet) high and is one of the major shrub-dominated (scrub) communities within California. This community occurs on xeric sites, which are defined as well-drained, shallow soils, such as steep, south-facing slopes, or clay-rich soils that are slow to release stored water. Sage scrub species are typically drought deciduous plants with shallow root systems. Both of these adaptations allow for the occurrence of sage scrub species on these xeric sites. California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), laurel sumac (*Malosma laurina*), and lemonadeberry (*Rhus integrifolia*) occur along the southwestern slope of the project site, but this habitat is highly disturbed due to the presence of nonnative grasses and trees within the habitat. Approximately 0.04-hectare (0.10-acre) of disturbed coastal sage scrub occurs on-site.

Nonnative Grassland

Most of the grasslands in the coastal and foothill areas San Diego County are dominated by nonnative annual grasses of Mediterranean origin. The Mediterranean region has a maritime climate similar to that of much of cismontane California (i.e., southern California). The Mediterranean region has a long history of agriculture and overgrazing activities and many of these introduced species are associated with

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disturbance. Many of these species are thus preadapted to areas with similar climates and disturbance regimes. Intensive grazing and agriculture, accidental and intentional species introductions, along with periods of severe droughts during the early Spanish era, allowed for the successful invasions of these nonnative species and the subsequent displacement and exclusion of native grasses. It was initially believed that overgrazing was the principal factor in the displacement of native grasses, but there is considerable current debate over this.

Nonnative grassland generally occurs on fine-textured loam or clay soils, which are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. It is characterized by a dense to sparse cover of annual grasses, often with native and nonnative annual forbs (Holland 1986).

The majority of the 0.63-hectare (1.56-acre) project site is dominated by two common nonnative grass species known as Bermuda grass (*Cynodon dactylon*) and fescue (*Festuca* sp.). This community occurs in the middle of the site and along the slopes of the northern and southern project boundaries. These two species, along with a number of weedy annuals, cover approximately 0.5 hectare (1.24 acre) within the project site.

Nonnative Woodland

Nonnative woodland communities consist of extensive stands of ornamental trees. This habitat is dominated by species of Peruvian pepper (*Schinus molle*) and Brazilian pepper (*Schinus terebinthifolius*) trees. These introduced species inhibit the establishment and growth of other species, especially natives, in the understory. Generally, these species were planted for aesthetic and horticultural purposes, but over time many species have become naturalized and have been quite successful in invading riparian and upland areas.

On-site, there is a large stand of tall Peruvian pepper trees along the southern edge of the property. There are also single stands of Brazilian pepper trees scattered throughout the site. Nonnative woodland habitat makes up approximately 0.08 hectare (0.20 acre) of the project site.

Ruderal

On the southwestern edge of the site, there is a small 0.01-hectare (0.02-acre) patch of ruderal habitat dominated by crystalline iceplant (*Mesembryanthemum crystallinum*). Ruderal communities are areas of high disturbance that are dominated by invasive nonnative forbs (herbaceous, nongrass species) that are adapted to a regime of frequent

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disturbances. Nonnative annual grasses will occur in low abundance and typically contribute less than 50 percent to the entire herbaceous cover in ruderal vegetation. Many of the broad-leaved weeds characteristic of ruderal areas are also common species of nonnative grasslands. Similar to the nonnative grass species in California, many of the nonnative weeds now present in this state are originally from the Mediterranean region. Some common ruderal species are Russian thistle (*Salsola tragus*), mustard (*Hirschfeldia incana*), and crystalline iceplant.

Sensitive Habitats

Sensitive habitats are those that are considered rare within the region, are considered sensitive by the City of San Diego (1997) and the California Department of Fish and Game (CDFG 2000a), are listed in the City of San Diego's *Land Development Code, Biology Guidelines* (2002a), are addressed in the City of San Diego's *Significance Determination Guidelines under the California Environmental Quality Act (CEQA)* (2002b), or support sensitive plants or animals.

One sensitive habitat, nonnative grassland, occurs in the proposed areas for development. Nonnative grassland is considered a Tier IIIB habitat by the City of San Diego (2002a). This community is considered sensitive because of its potential to support sensitive plant species and provide foraging habitat for raptors.

Diegan coastal sage scrub is also a sensitive habitat found on-site and is considered a Tier II habitat by the City of San Diego (2002a). Oberbauer and Vanderview (1991) estimate that only about 130,000 acres of sage scrub remains in San Diego County. This represents a 69 percent loss of this community in the County from the pre-European era. These estimates were based on 1988 vegetation coverage estimates and additional losses have accrued since. Loss of sage scrub habitat within California is due primarily by grazing and urbanization.

Sensitive Species

Sensitive plant species are those that are federally listed by the US Fish and Wildlife Services (USFWS 1999), are state listed or considered sensitive by the CDFG (2002b, 2002c), occur on the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California (2001), or are a "Covered Species" under the MSCP (City of San Diego 1997). No sensitive plant species were observed in the project area. No sensitive plant species are expected to occur on-site due to the disturbed condition of the site.

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Sensitive animal species are those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS (1999); are considered sensitive by CDFG (2002d), Tate (1986), Everett (1979), and the San Diego Herpetological Society (SDHS 1980); or are a "Covered Species" under the MSCP Subarea Plan (City of San Diego 1997). No sensitive animal species were observed in the project area. No sensitive animal species are expected to occur on-site due to the disturbed condition of the site and because the site is isolated from large tracts of open space by intense residential and urban development.

Impacts

Diegan coastal sage scrub and nonnative grassland habitats will be impacted by the proposed action. Approximately 0.04 hectare (0.10 acre) of Diegan coastal sage scrub and 0.5 hectare (1.24 acres) of nonnative grassland would be directly impacted (permanent and temporary) by the housing facility. Diegan coastal sage scrub and nonnative grassland are Tier II and Tier IIIB habitats, respectively, and the only habitats classified as Tiers I through III in the impact area. According to the City of San Diego's *Significance Determination Guidelines under the California Environmental Quality Act (CEQA)* (2002b), impacts to sensitive vegetation (Tiers I through III) totaling 0.1 acre or more are considered significant and require mitigation. For this project, mitigation for the impacts to Diegan coastal sage scrub and nonnative grassland habitat will be required (2002b).

The mitigation ratios derived by the City of San Diego (2002a) for impacts to Tiers I through III habitats are based on whether the proposed area and the mitigation take place inside the MHPA or outside the MHPA (2002a). Because the SDSU Sorority Row Housing Project is outside of the MHPA, the mitigation ratios are as follows. Tier II habitats outside the MHPA require a mitigation ratio of 1:1 within the MHPA and 1.5:1 outside the MHPA. Tier IIIB habitats outside the MHPA require a mitigation ratio of 0.5:1 within the MHPA and 1:1 outside the MHPA. The total impacts and mitigation acreages inside and outside the MHPA are presented below in Tables 2 and 3 respectively.

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Table 2. Mitigation inside the MHPA

| Vegetation Type | Permanent Impacts | Mitigation Ratios inside the MHPA | Total Mitigation Acreage Required inside the MHPA |
|---------------------------|----------------------------------|--|--|
| Diegan coastal sage scrub | 0.04 hectare (0.10 acre) | 1:1 | 0.04 hectare (0.10 acre) |
| Nonnative Grassland | 0.5 hectare (1.24 acres) | 0.5:1 | 0.25 hectare (0.62 acre) |
| Total | 0.54 hectare (1.33 acres) | | 0.29 hectare (0.72 acre) |

Table 3. Mitigation outside the MHPA

| Vegetation Type | Permanent Impacts | Mitigation Ratios outside the MHPA | Total Mitigation Acreage Required outside the MHPA |
|---------------------------|----------------------------------|---|---|
| Diegan coastal sage scrub | 0.04 hectare (0.10 acre) | 1.5:1 | 0.06 hectare (0.15 acre) |
| Nonnative Grassland | 0.5 hectare (1.24 acres) | 1:1 | 0.5 hectare (1.24 acres) |
| Total | 0.54 hectare (1.33 acres) | | 0.56 hectare (1.39 acres) |

Mitigation Measures

The City of San Diego (2002a) recommends a variety of measures to reduce impacts to sensitive biological resources. Mitigation methods such as off-site acquisition, on-site preservation, and habitat restoration help reduce impacts to below a level of significance and maintain the region’s biological resources.

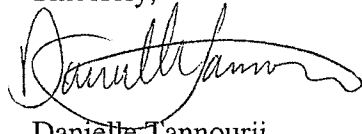
However, projects with small impacts, such as this one, may mitigate by payment into the City of San Diego’s Habitat Acquisition Fund (Fund #10571). This fund is used for mitigation of impacts to small isolated sites, which generally consist of less than 5 acres. The City of San Diego’s Habitat Acquisition Fund is used to acquire and maintain lands for preservation and conservation of sensitive biological resources to make up for the loss of resources due to urban development within the region. Because all impacts will be within the nonnative grassland habitat, this is the recommended measure for mitigation under the City of San Diego’s biology guidelines (2002a). To estimate costs of this mitigation, the City of San Diego’s Real Estate Assets Department uses an estimate of the average land costs of the focused acquisition area

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closest to the project site with an additional amount equal to 10 percent of the total for administrative costs (2002a).

If you have any questions or need further clarification, please call me at (619) 233-1454.

Sincerely,



Danielle Tannourji
Botanist

2KI26 SDSU Housing Ltr Rpt SDSU Edits

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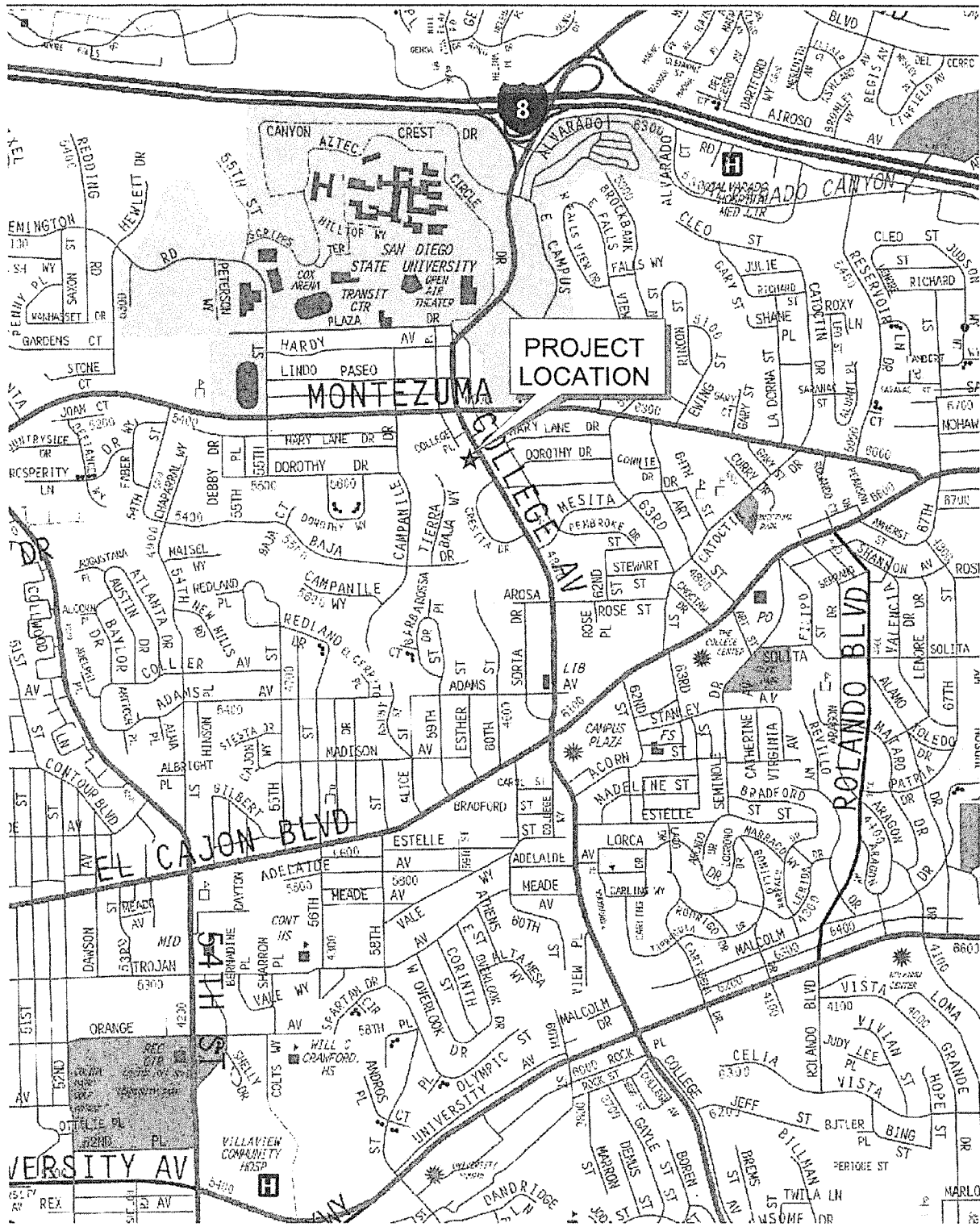
APPENDIX A
Floral Species Inventory for the SDSU Sorority Row Housing Project

| <u>Scientific Name</u> | <u>Common Name</u> |
|--|-----------------------|
| CONIFERS | |
| Pinaceae – Pine Family | |
| <i>Pinus</i> sp.* | Pine tree |
| DICOTS | |
| Aizoaceae – Fig Marigold Family | |
| <i>Mesembryanthemum crystallinum</i> * | Crystalline iceplant |
| Anacardiaceae – Sumac Family | |
| <i>Malosma laurina</i> | Laurel sumac |
| <i>Rhus integrifolia</i> | Lemonadeberry |
| <i>Schinus molle</i> * | Peruvian pepper tree |
| <i>Schinus terebinthifolius</i> * | Brazilian pepper tree |
| Apiaceae – Carrot Family | |
| <i>Foeniculum vulgare</i> * | Fennel |
| Asteraceae – Sunflower Family | |
| <i>Artemisia californica</i> | California sagebrush |
| Cactaceae – Cactus Family | |
| <i>Opuntia littoralis</i> | Coastal prickly-pear |
| Chenopodiaceae - Goosefoot Family | |
| <i>Salsola tragus</i> * | Russian thistle |
| Lamiaceae – Mint Family | |
| <i>Salvia apiana</i> | White sage |
| Polygonaceae – Buckwheat Family | |
| <i>Eriogonum fasciculatum</i> | California buckwheat |
| Rosaceae – Rose Family | |
| <i>Cotoneaster pannosa</i> * | Cotoneaster |
| Poaceae – Grass Family | |
| <i>Cynodon dactylon</i> * | Bermuda grass |
| <i>Festuca</i> sp.* | Fescue |
| <i>Lolium</i> sp.* | Ryegrass |

* - Indicates nonnative vegetation

APPENDIX B
Faunal Species Inventory for the SDSU Sorority Row Housing Project

| | <u>Scientific Name</u> | <u>Common Name</u> |
|---------------|---|--------------------------------------|
| Birds | | |
| <u>Family</u> | | |
| Corvidae | <i>Corvus corax</i> <i>Corvus brachyrhynchos</i> | Common raven American crow |
| Emberizidae | Sparrows, Towhees <i>Carpodacus mexicanus</i> <i>Zonotrichia leucophrys</i> | House finch White-crowned sparrow |
| Mimidae | <i>Mimus polyglottus</i> | Northern mockingbird |
| Trochilidae | Hummingbirds <i>Calypte costae</i> | Costa's hummingbird |



Source: Thomas Brothers Mapping Software.



Figure 1
Vicinity Map



Source: Eagle Aerial, 0.5 m resolution, April 2002; SANDAG, 40-Foot Contours, 1995



200 0 200 Feet

Scale: 1 : 2400; 1 inch = 200 feet

Figure 2
Vegetation Map



Source: Eagle Aerial, 0.5m resolution, April 2002; SANDAG, 40-Foot Contours, 1995

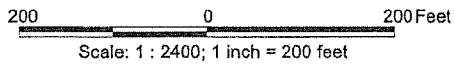


Figure 3
Area Map