

OKI PARK

OPEN SPACE

DESIGNING A PARK FOR THE 21ST CENTURY

KEVIN EVINGER
SPRING 2008



Dedications

This project is dedicated to Zoe and Zachary, for being so good to their mother while their father was at school.

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Introduction

For many years, parks have been considered a place for people to escape their busy city lives and relax with nature. Parks have been a counterbalance for the urban city life, a life filled with many social problems; some may even say that many of these problems are due to how out of touch the urban life is with all aspects of nature. In the last decade ecological problems have reached a point where they can no longer be ignored and are now a concern in nearly all actions of our every day life.

The goal of this project is to create a sustainable, functioning, low maintenance park for the City of Sacramento. This site will be designed for the community, the planning for which will include two public meetings: one to discuss what kind of amenities there will be and a follow up meeting to decide which design will be the official master plan. In this project I will use sustainable elements that will not only be aesthetically pleasing but also environmentally appropriate.



Front view of site

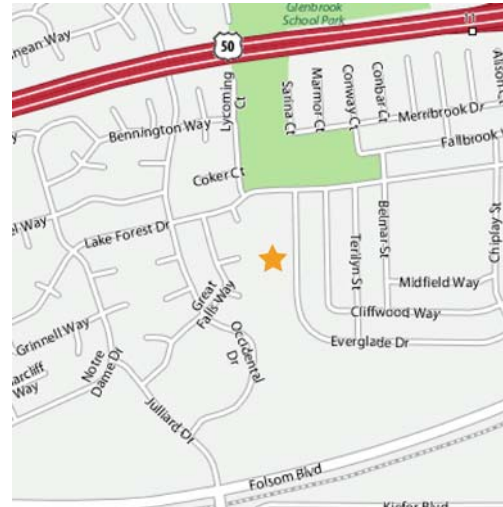
What is a Sustainable Park?

A sustainable park is a park that is landscaped and designed to be a self sufficient piece of land. The sustainable park requires little maintenance, but at the same time has the ability to bring the native wildlife and plants back into the environment. Two social goals for the sustainable parks are human and ecological health and rehabilitation. A sustainable park will bring with it activities such as biking, strolling, jogging, passive recreation, bird watching and nature based education. Based on research done by Galen Cox and Michael Boland Sustainable Parks must have three general principles: first they must be sustainable in reference to the materials that go into the land, second they can help solve urban social issues and finally, with these new ideas and designs bring about new aesthetics thus affecting the way we look at the modern urban park. (Cranz, Boland)

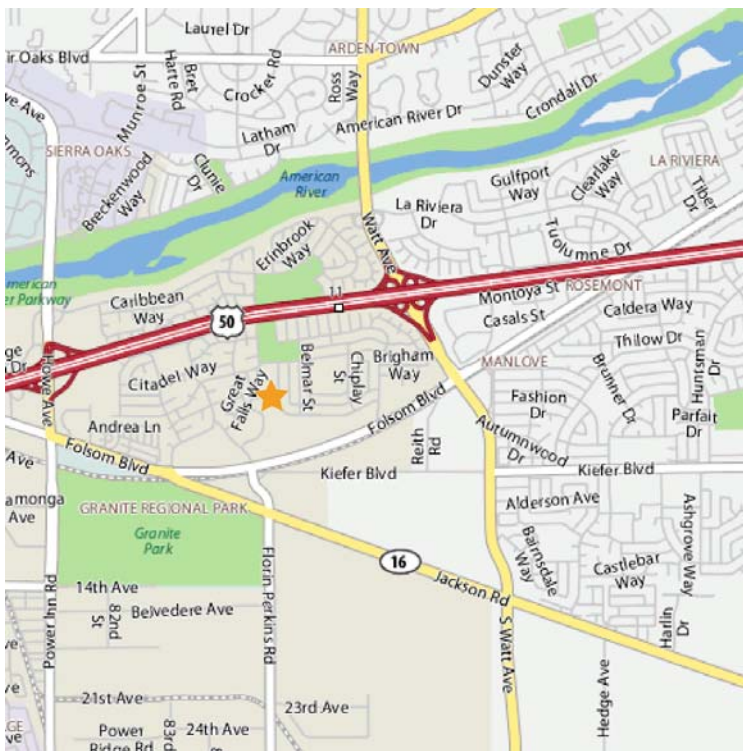
The Site

The site is a 6.3 acre piece of land located in East Sacramento between the already existing Oki Park and the Folsom Boulevard Flea Market. On the park site there is a Sacramento Municipal Utility District (SMUD) Substation that is at the entrance along with four electrical towers installed at the front and mid-section of the area. The future park site is predominantly flat with only three large trees in the center of the site. Along the side of the site there are numerous small trees under twelve feet in height and shrubs along parts of the fence-line of the neighboring properties.

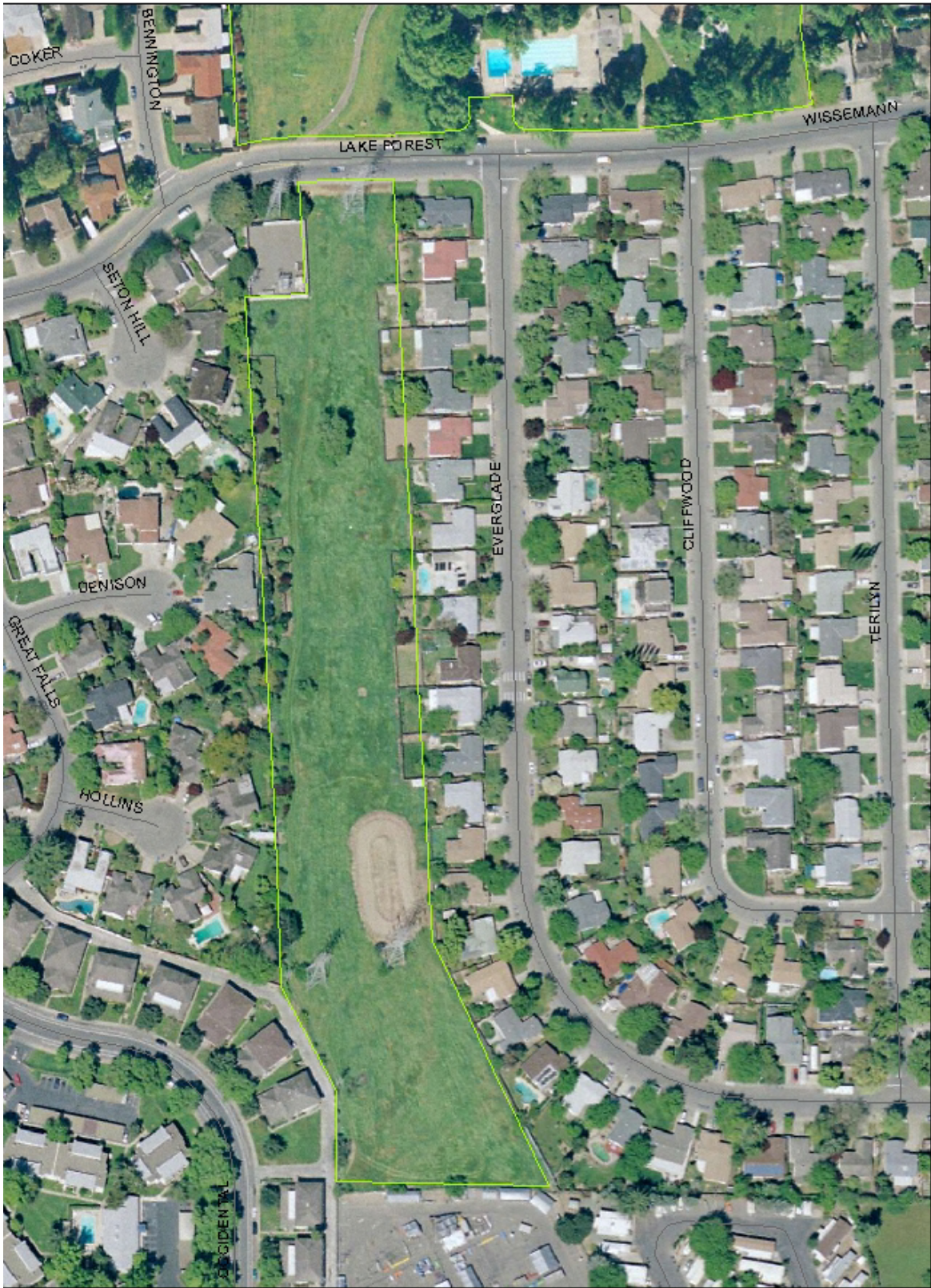
Street maps of site area



Neighborhood Map



Street Map



Aerial photo with park boundaries

Issues and Concerns



Aerial photo with tower boundaries

The large electrical transmission lines that run through the site are a challenge, as there are many guidelines that have to be followed when planning the design. The Western Area Power Administration (WAPA) owns a 200-foot easement along the length of the transmission lines and has the authority over building and planning in the area. Fences must be grounded in accordance with current safety codes and lighting cannot exceed a maximum of 15 feet and must not be placed under the conductors.

The vegetation that will be planted also falls into the design process and must not exceed 12 feet in height at maturity. This poses a great design issue since the variety of vegetation that there is to choose from is very limited. Yet another challenge is that no structures may be built on the site without prior approval from WAPA. Because there must be 30 feet of unobstructed access around the towers and since the area of the park is so narrow having the 30 foot radius around an already large object does not leave a lot of room for a pathway through the park.

Design Process

Public Meetings

One of the most important parts of the project was to hold a series of public meetings for the people that reside in the surrounding area. It is very important for a community to have a say regarding what is being built and how the land in their neighborhood is being used. This also helps a community by bringing them together, being in an environment where they have a voice and are able to vote in a process for a park that they will consider their own.

Meeting #1

At the first meeting 20 community members attended. This meeting was solely to solicit the residents input in the master plan of the park. After talking to the group about how the design process works and showing them examples of possible parks and amenities, the group decided on what they wanted the site to consist of.

The following are proposed ideas from the meeting:

- Dog Park (Separate Large and Small Dog Parks)
- Native Tree with Plant Identification labels
- Bocce Ball Courts
- Small Neighborhood Skate Park
- Butterfly Garden
- Security Lighting (Low level path lighting)
- Bikeway/Walkway
- Larger Soccer Field
- Disc Golf Course
- Community Garden

After this list was made there was a group vote in which residents voted on the proposed amenities.

Votes were as follows:

- Dog Park (10 yes votes)
- Native Tree with Plant Identification labels (4 yes votes)
- Bocce Ball Courts (7 yes votes)
- Small Neighborhood Skate Park (6 yes votes)
- Butterfly Garden (4 yes votes)
- Security Lighting/Low level path lighting (6 yes votes)

Opposing votes:

- Bikeway/Walkway Pass Through (3 no votes)
- Larger Soccer Field (5 no votes)
- Frisbee Golf (3-no votes)
- Community Garden (5 no votes)

Community Issues and Concerns



Vagrant camp

Vagrancy - It was noted that once the improvements are completed more residents would be using the site for legitimate purposes and this will hopefully discourage the homeless and vagrants. Once the site is improved there will be a paved pathway through the site that Park Maintenance, Park Patrol or Police would use to access the site and monitor activities as necessary.



Future connection on the south end

Path Connection – Discussion took place regarding the paved pathway through the open space and how it did not initially extend to create a pass through to the other end of the property near the auction or apartment complexes.

A possible extension could be made at some point in the future.



Gate connecting to the Folsom Flea Market

Buffering Zone – Many residents voiced their preference for better fencing and proper buffer zone for the gate, something that could drown out the site and sound of the flea market.

Site Design

For the Master Plan design, I decided to create two completely different site plans using the elements that the community voted on. From these two designs the community may choose one of the plans, but there will be room to use elements from both plans if needed.



Design A

The first design is a more free form style and has a continuing theme of a dry creek with cobble and rock flowing throughout the site. The swale is an area where children could play and would be able to climb around on the boulders during the summer months. The swale would also serve as a bioretention swale during the wet season. There would be a 10 foot walking path in the form of a loop with the dog area be in the center. The dog park inside the fenced off area

would contain decomposed granite for when the weather is wet so the soil does not turn to mud, there will also be earth mounds placed throughout for the dogs to run on and a change of elevation would simply be aesthetically pleasing. The meandering walkway will have two different side paths of decomposed granite: the initial path will lead to the passive recreational areas, one to the Horseshoe Pit and one to the Bocce Ball Court with a Picnic Area for those to congregate in the summer.



- LEGEND**
- A. EXISTING UTILITY TOWER
 - B. SKATE PARK
 - C. BOCCIE BALL COURTS
 - D. PICNIC AREA (INCLUDES PICNIC TABLES, TRASH & RECYCLE RECEPTACLES, DRINKING FOUNTAIN)
 - E. HORSE SHOE COURTS
 - F. BUTTERFLY GARDEN
 - G. EXISTING FENCELINE
 - H. 10' PATH
 - I. DOG PARK (INCLUDES BENCHES, TABLES, TRASH & RECYCLE RECEPTACLES, 14' MAINTENANCE GATE, DG AREA AND EARTH MOUNDS)
 - J. DESTINATION AREA (INCLUDES BENCHES, TRASH & RECYCLE RECEPTACLES, SEATED WALLS)
 - K. FUTURE CONNECTION
 - SHADE TREES
 - ACCENT TREES
 - EXISTING TREES

MASTER PLAN FOR:
OKI PARK OPEN SPACE (6.3 ac)
 CITY OF SACRAMENTO, CALIFORNIA

LANDSCAPE ARCHITECT:
 D. DAY
 DRAWN BY:
 KEVIN EVINGER
 DATE:
 FEBRUARY 2006

SCALE 1"=50'-0"

NORTH

Design B

For this design I decided to take a more formal approach. Rather than having a looping trail I created this plan with a destination area. Removing the path around the dog park I was able to have the park run against the property line,

which in turn made for a much larger dog park. Along the walkway I enclosed an area which contained the Bocce Ball Court, Horseshoe Pit and the Picnic Area all in the same location. In the final destination area I created a very shaded space that included a seated bench garden perfect for relaxing on a nice hot summer day.



Meeting #2

At the second meeting there were approximately 45 community members in attendance to discuss their likes and dislikes of the two designs.

The following are various ideas and suggestions from the second meeting:

- Add shelter over picnic area.
- Add more butterfly gardens in secluded area.
- Add Decomposed Granite path along entire walkway path.
- Add arm rest to benches to prevent skating.
- Screen Folsom Flea Market with large shrubs.
- Move skate park further away from the fence-line.
- Use lower ramps in skate park.

- Smaller scale skate park.
- More trees in the park.
- Larger dog park.

Votes for the Two Site Plans

- Design A – Free Form Plan – 44 votes – WINNER
- Design B – Formal Style Plan – 1 vote

The free form design was chosen by an overwhelming majority over that of the formal design. This was in part due to the community favoring the loop around the dog park. Community members also appreciated the natural aspects of the swales and the use the boulders as a natural play area.





Rendering of trail and swale

Final Low-Impact Design

For the final design the skate park was removed from the plan. The removal of the skate park was due to the amount of neighbors that complained about the possible noise pollution from the skateboarding. The skateboarding did not fit into the passive recreation ideals that the parks design was striving for. In place of the skate park there would be a larger bioswale that would help manage the stormwater run-off from the site and filter it prior to flowing out to the street.



PROGRAM FOR A SUSTAINABLE SITE

Sustainable Design Goals

- Increase pervious site area and landscape
- Have little or no energy needs
- Require minimum amount of maintenance
- Treat pollution from runoff before leaving the site

Native Plants

One important aspect of a sustainable park is in the choice of planting materials.

The use of native and non-invasive vegetation is a critical step, as the plants chosen must work for the site in the overall ecological process. When native plants are used, the resources necessary for excessive watering, pesticides and

fertilizers are not needed. The use of these native plants will not only reduce the maintenance required, but also bring about a naturalistic aesthetic, bringing people closer to their immediate natural surroundings. These self-regenerating landscapes will only require maintenance the first one to two years, with little weeding and irrigation until they have become established.

The use of no-mow fescue such as Red Fescue, will replace the standard turf. This will play a vital role in the use of irrigation, since the no-mow fescue is a low-maintenance native grass it is



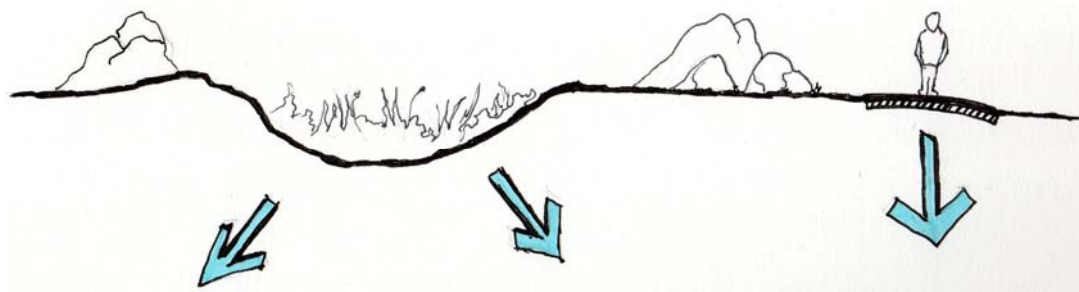
generally only mowed once a year and has very limited irrigation needs



Example of swale

Bioretention Swales

Bioretention swales are low-impact vegetated channels that are an important part of a sustainable park that “control both the quality of water and the quantity of water within a landscape”. (Dunnett, Clayden) The approach of using bioretention is to reuse the amount of runoff and naturally store the stormwater for use at the site. The purpose of these vegetated channels is not to necessarily hold water permanently, but to hold water enough during storms so it can percolate back into the soil and provide water for the immediate area. Using these swales also takes out the hazardous waste of our run-off in the natural filtration process.



Direction of filtration from swale and path



Examples of entrances from Davis Greenbelt

Connecting the Park

One important change I would make to the park would be to allow more accessibility for the neighborhood.

Placing connecting pathways to the open space from the surrounding streets brings people to the park. This



makes it easier for the elderly to frequent the site and gives the neighbors a sense of communal ownership.

Two of the four entrances would have a path that would lead to one of the two dog park entrances; a functional aspect to the park as many of the visitors' sole purpose for frequenting the park will be for its dog run. Having these connections, along with a new sense of pride and ownership in the area will be a

main ingredient in removing the vagrancy issue. Since there will be more than one entrance and exit, people will feel safer being in an atmosphere that has multiple exits. With more residents visiting the area we can speculate that any prior criminal activities would decrease and there would be no vagrants setting up camp, as there have been in the past.



New circulation from neighborhood to the park

Circulation

The new circulation pattern has many benefits for the site. These “pass through” areas will allow pedestrians to cut through the site and bypass a lot of surface streets to the shopping areas which are located close to the south entrance next to the flea market. Not only will the “pass through” allow for neighbors to have a quicker walk to the park, but it also connects neighbors to each other which in turn assists in the building of a community.



Examples of outdoor solar lighting

Solar Lighting

Solar lighting can be tremendously energy efficient. It can save 50-80% more energy than the conventional sodium and mercury lamps. These lamps are not only an attractive amenity to the site but the use of solar lighting also brings to the attention of the visitors that the use of solar energy is available in a wide variety of uses.





Example of porous walking trail

Porous Asphalt Walking Trail

Porous asphalt will be used instead of the standard impervious concrete or asphalt that is commonly used in parks. This asphalt will reduce the impervious area of the site, recharge the ground water and will improve the water quality. For the standard mix of porous asphalt laid down at 3/8", 95% of water can pass through, which makes this asphalt extremely useful for groundwater recharge. (Adams) One issue to consider when putting in the trail is the underlying soil conditions that may hinder the water from percolating. Site investigation which includes boring and penetrating radar should be used to see what conditions there are to work with.





Rendering of main butterfly garden

Butterfly Gardens



The butterfly gardens would be located throughout the site, with the largest garden in the heart of the park. Using native plants that would not only allow visitors to view and enjoy the surroundings, but would also bring the natural

habitat back into the area that has been missing.

Since the butterfly gardens seem to be one of the more popular ideas among the neighbors at both of the meetings I decided there should be more of an emphasis on these gardens. So, in my final design, the two major gardens are

in between the main rest / picnic area and the passive sports area.



Conclusion

The goals of this project were to develop a neighborhood park in which a community would have a part in planning and be able to enjoy. No matter what amenities or designs are put in place, a park is only worth making if people are going to enjoy and visit. Additionally, my goal for this project was to implement low impact sustainable features that will not only help bring native wildlife and plants back to the area, but also help clean the storm water drainage. I hope to help educate the community and motivate them to start the healing process not only for their communities but on a larger global scale as well.

Definitions

Sustainable - Capable of being continued with minimal long-term effect on the environment. (Dictionary.com, 2007).

Open Space Park-Natural areas set aside to preserve the City's natural landscape.

Bibliography

Punnett, Nigel and Clayden, Andy. Rain Garden-Managing Water Sustainability in the Garden. (207) Timber Press. Portland, OR

Cranz, Galen and Boland, Michael. Defining the Sustainable Park: A Fifth Model for Urban Parks. (2004) Landscape Journal 23(2):102-120

Adams, Michael C. Porous Asphalt Pavement with Recharge Beds: 20 Years and Still Working. (2003) May/June Stormwater Magazine

Plant Index

BIOSWALE PLANTINGS (NATIVE SHRUBS)

<i>Arctostaphylos densiflora</i>	<i>Sonoma Manzanita</i>
<i>Artemisia californica</i>	<i>California Sagebrush</i>
<i>Atriplex californica</i>	<i>California Saltbush</i>
<i>Baccharis pilularis</i> spp. <i>pilularis</i>	<i>Dwarf Coyote Bush</i>
<i>Ceanothus gloriosus</i>	<i>Point Reyes Lilac</i>
<i>Cistus salvifolius</i>	<i>Sageleaf Rockrose</i>
<i>Juncus patens</i>	<i>Wire grass</i>
<i>Limonium californicum</i>	<i>Sea-Lavender, Marsh-Rosemary</i>
<i>Lupinus formosus</i>	<i>Summer Lupine</i>
<i>Salvia leucophylla</i>	<i>Purple Sage</i>
<i>Solidago californica</i>	<i>California Goldenrod</i>
<i>Westringia fruticosa</i>	<i>Coast Rosemary</i>
<i>Zauschneria californica</i>	<i>California Fuschia</i>

BIOSWALE CANOPY TREES

BIOSWALE UNDERSTORY TREES

<i>Acer macrophyllum</i>	Bigleaf Maple
<i>Aesculus californica</i>	Buckeye
<i>Arbutus menziessii</i>	Pacific Madrone
<i>Arbutus unedo</i>	Strawberry Tree Eucalyptus
<i>Geijera parviflora</i>	Australian Willow
<i>Heteromeles arbutifolia</i>	Toyon
<i>Melaleuca quinquenervia</i>	Cajeput Tree
<i>Pinus torreyana</i>	Torrey Pine

SPECIMEN TREE

<i>Aesculus californica</i>	Buckeye
<i>Olea europea</i>	European Olive
<i>Quercus agrifolia</i>	Coast live Oak

MEADOW GRASSES

<i>Danthonia californica</i>	California Oatgrass
<i>Deschampsia cespitosa</i> ssp. <i>holciformis</i>	Pacific Hairgrass
<i>Deschampsia elongata</i>	Slender Hairgrass
<i>Dichelostemma capitatum</i>	Blue Dicks
<i>Elymus glaucus</i>	Blue Wild Rye
<i>Eschscholzia californica</i>	California Poppy
<i>Festuca californica</i>	California Fescue
<i>Festuca idahoensis</i>	Fescue Bunchgrass
<i>Limonium californicum</i>	Sea-Lavender, Marsh-Rosemary
<i>Muhlenbergia rigens</i>	Deer Grass
<i>Nasella pulchra</i>	Purple Needle Grass