ATTACHMENT 9

REVISED MARCH 29, 2010

The Arbors

3500 Lake Park Drive, Santa Rosa, CA (Sonoma County)
Assessor's Parcel No. 173-270-005

Initial Study/Mitigated Negative Declaration

Lead Agency:

City of Santa Rosa
Community Development Department
100 Santa Rosa Avenue, Rm. 3
Santa Rosa, CA 95404

Contact: Erin Morris, Senior Planner

Date: July 10, 2009
Revised March 29, 2010

DATE: July 10, 2009
TO: Public Agencies, Organizations and Interested Parties

FROM: Erin Morris, Senior Planner

SUBJECT: **NOTICE OF PUBLIC REVIEW AND INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

Pursuant to the State of California Public Resources Code and the "Guidelines for Implementation of the California Environmental Quality Act of 1970" as amended to date, this is to advise you that the City of Santa Rosa's Department of Community Development has prepared an Initial Study of the following project:

Project Name:

The Arbors

Location:

3500 Lake Park Drive, Santa Rosa, Sonoma County, California, APNs: 173-270-005

The Nielsen Ranch Planned Community was established in 1992. The subject site was subdivided as a "bulk parcel" as part of the Nielsen Ranch Final Map, which was recorded on December 30, 1996. This subdivision also created the public open space including Nielsen Ranch Park and the open space south of the project site. The subject 5.69 acre site is one of the last remaining vacant parcels within the 70 acre Nielsen Ranch Planned Community and is located on the south side of Lake Park Drive approximately 500 feet easterly of Bicentennial Way. The other sites within Nielsen Ranch have been developed or have received entitlements; the approved Bicentennial Estates 2 project site located immediately west of the project site is the only other undeveloped area within Nielsen Ranch.

Property Description:

The subject 5.69 gross acre site is located on the south side of Lake Park Drive approximately 500 feet easterly of Bicentennial Way. The site is sloped, with 36% of the site exceeding 25 percent slope and an average slope of 22 percent.

More than three quarters of the project area is comprised of oak woodland. The dense woodland canopy is dominated by coast live oak (Quercus agrifolia) with some madrone (Arbutus menziesii) and black oak (Quercus kelloggii) in the woodland composition. There are approximately ~~861~~ 892 trees on the site and the property is within a high fire severity zone. Russell Creek is located south of the project site on a City-owned parcel. The City-owned parcel includes a combination maintenance road and public creek trail along the creek which connects from Lake Park Drive to Bicentennial Way.

Project Description:

The project proposes to subdivide 5.69 acres into 37 lots and one common parcel to allow development of 37 single family attached homes. A new private loop street would provide vehicular access to the homes, which are clustered in the northern area of the site. Of the ~~861~~ 892 trees on the site, ~~approximately 47 percent~~ 670 trees would be removed to accommodate the proposed development. All new development is oriented toward Lake Park Drive and away from the steep southern area of the project site. No construction work associated with the residential subdivision improvements and home construction would occur within 80 feet of Russell Creek.

Off-site improvements include traffic calming measures along Lake Park Drive consisting of new roadway markings and some off-site creek trail repair work on the public parcel adjoining the site. Specifically, the project is conditioned to repair a portion of the trail adjacent to Russell Creek that has been damaged by landslide activity. This aspect of the project is also part of the conditions of approval for another project to the west, and was previously reviewed for CEQA purposes with that project (Bicentennial Estates II, Mitigated Negative Declaration adopted October 13, 2005). On April 8, 2009, the Department of Army issued a 404 Permit for this work. On July 1, 2009, a permit was granted by the North Coast Regional Water Quality Control Board to allow the slide repair work.

Environmental Issues:

The proposed project would result in potentially significant impacts in Aesthetics, Biological Resources, Cultural Resources, Hydrology/Water Quality, and Geology/Soils. The project impacts would be mitigated to a less-than-significant level through implementation of recommended mitigation measures or through compliance with existing Municipal Code requirements or City standards. Recommended measures are summarized in the attached Mitigation Monitoring and Reporting Plan (MMRP) and Initial Study/Mitigated Negative Declaration. The Initial Study/Mitigated Negative Declaration document has been prepared in consultation with local, and state responsible and trustee agencies and in accordance with Section 15063 of the California Environmental Quality Act (CEQA). Furthermore, the Initial Study/Mitigated Negative Declaration will serve as the environmental compliance document required under CEQA for any subsequent phases of the project and for permits/approvals required by a responsible agency.

A 30-day (thirty-day) public review period shall commence on **Friday, July 10, 2009**. Written comments must be sent to the City of Santa Rosa, Community Development Department, Planning Division, 100 Santa Rosa Avenue, Room 3, Santa Rosa CA 95404 **by Monday, August 10, 2009.** The City of Santa Rosa Planning Commission will hold a public hearing on the Initial Study/Mitigated Negative Declaration and project merits on **Thursday, August 13, 2009 in the Santa Rosa City Council Chambers at City Hall (address listed above).** Correspondence and comments can be delivered to Erin Morris, project planner, phone: (707) 543-3273, email: emorris@srcity.org

MITIGATION MONITORING AND REPORTING PROGRAM
The Arbors

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)
III. AIR QUALITY					
1. Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site; active areas adjacent to windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives.	Require as a condition of project approval	Planning Division Public Works Inspection	Incorporate as condition of approval	Halt construction of project	
2. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.					
3. Wash off the tires or tracks of all trucks and equipment leaving the site.					
4. Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas.					
5. Sweep daily (or more often if necessary) to prevent visible dust from leaving the site (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.					
6. Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.					

MITIGATION MONITORING AND REPORTING PROGRAM
The Arbors

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)
IV. BIOLOGICAL RESOURCES					
▪ Comply with all of the recommendations contained within the Wildlife Habitat Assessment for The Arbors dated January 21, 2009 (attached to this Initial Study document) and with any additional recommendations provided by the project biologist(s), to the satisfaction of the Community Development Director.	Require as a condition of project approval	Planning Division	Prior to approval of the Improvement Plan Prior to issuance of a Grading Permit	Withhold approval of Improvement Plan Withhold issuance of grading permit	
▪ Prior to issuance of a grading permit or approval of the Improvement Plan, the applicant shall provide a letter report to the City of Santa Rosa – Community Development identifying the name of the qualified biologist(s) that will monitor tree removal activities, and a general schedule indicating when the biologist(s) will be present on site. If grading work is to occur within the nesting season (between February 15 and August 15), the report shall also include the results of the pre-construction surveys including an exhibit indicating which trees have active nests. At minimum, the biologist(s) shall be present prior to commencement of on-site construction work to ensure that sensitive trees (trees with active nests and/or that are identified as habitat trees for bats) are clearly marked, and shall instruct construction personnel on the specific measures necessary to comply with the mitigation.					
▪ Qualified biologists shall be present on-site to monitor tree removal activities to ensure that raptors and bats are protected.					

MITIGATION MONITORING AND REPORTING PROGRAM
The Arbors

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)
▪ Grading or removal of nesting trees and habitat shall be conducted outside the nesting season, which occurs between approximately February 15 and August 15.					
▪ If grading between August 15 and February 15 is infeasible and groundbreaking must occur within the nesting season, a pre-construction nesting bird (both passerine and raptor) survey of the grasslands and adjacent trees shall be performed by a qualified biologist within 7 days of ground breaking. If no nesting birds are observed no further action is required and grading shall occur within one week of the survey to prevent "take" of individual birds that could begin nesting after the survey.					
▪ If active bird nests (either passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged, as determined by a qualified biologist.					
▪ The radius of the required buffer zone can vary depending on the species, (i.e., 75-100 feet for passerines and 200-300 feet for raptors), with the dimensions of any required buffer zones to be determined by a qualified biologist in consultation with CDFG.					
▪ To delineate the buffer zone around a nesting tree, orange construction fencing shall be placed at the specified radius from the base of the tree within which no machinery or workers shall intrude.					

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)
▪ After the fencing is in place there will be no restrictions on grading or construction activities outside the prescribed buffer zones. The buffer zone shall remain in place until after the young have fledged.					
▪ A qualified bat biologist shall be present during all tree removal activities to minimize risks to bats. Prior to commencement of project construction activities and after consultation with the bat biologist, all potential habitat trees as identified in Table 2 of the project's Wildlife Habitat Assessment and as further identified at the project site by the biologist shall be marked, so that it will be clear to construction personnel and City staff which trees require special handling as described in the following procedures:					
▪ Conduct tree removal only during seasonal periods of activity; starting about March 1 (or when night temperatures are above 45F and when rains have ceased) until April 15 (prior to when females begin to give birth to young), or from August 15 (when young bats are self-sufficiently volant) until about October 15 (before night temperatures fall below 45F and rains begin, causing torpor).					
▪ Trees *not* identified as providing potential habitat that occur within a 50-foot radius of potential habitat trees listed in Table 1 shall be removed one day prior to removing potential habitat trees. This will cause noise and vibration disturbance					

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)

around the roost trees that should help cause bats that may be roosting in habitat trees to either abandon immediately (though this rarely occurs in our experience), or avoid returning to the roost tree after nightly foraging activities.

- Removal of non-habitat trees may be accomplished using chainsaws or any other desired equipment. It should be noted that no removal of non-habitat trees may cause damage to habitat trees; so the applicant shall not allow falling trees, limbs or branches to fall onto habitat trees.

- One day after removal of non-habitat trees within a 50-foot radius of habitat trees, those trees may be removed using a two-stage process. The two stage process must be conducted over two consecutive days.
    - On Day 1 (e.g., Tuesday), under instruction and supervision of a qualified bat expert, selected branches and limbs not containing cavities are to be removed using only chainsaws (no excavators, etc.). The noise and vibration from this activity should be sufficient to cause bats roosting in those trees to abandon the roost immediately, or choose not to return to the tree after night emergence and foraging, as a result of the daytime disturbance and significant physical modification to the structure and appearance of the tree and surrounding area. Specifically, late in the afternoon

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)

on Day 1 only small branches (<4" dia.) not containing cavities or fissures are removed using chainsaws (no heavy equipment). Only branches with leaves should be removed, which can include the crown or perimeter leafy canopy of each tree.

- The following day (Day 2, e.g., Wednesday), the remainder of the tree is removed, either using chainsaws or other equipment. Supervision is required to provide identification of branches and limbs safe for removal and instruction to tree cutters in suitable procedures.

- Tree Replacement: Protected trees to be removed ~~must~~ shall be replaced in accordance with Title 17-24.050(C) of the Municipal Code. Prior to Planning Division approval of the Improvement Plan or issuance of a Grading Permit, the developer shall provide a Tree Mitigation Plan Exhibit to the Planning Division with the following information in the form of a site plan plus table: 1) Number, size, and type of trees to be removed; 2) Total mitigation required; 3) Number, size, type, and location of trees to be planted on site; 4) Number, size, and type of trees to be planted off-site or provided in the form of an in-lieu donation; 5) Location and type of trees to be preserved during construction; 6) Tree Protection zones called out around trees proposed for preservation.

- Tree Preservation: All trees called out as to be

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)
preserved on the Tentative Map shall be protected during construction in accordance with Title 17-24.050(D) (1 through 6) of the Municipal Code. Tree protection zones and measures shall be called out on every sheet of the Improvement Plan involving work in the vicinity of any preserved tree.					
▪ Tree Relocation and Planting Success Criteria: Prior to approval of the Improvement Plan or grading permit for the project, the project arborist/forester shall develop success criteria for replacement tree survival and the triggers for replanting, to the satisfaction of the Director of Community Development.					
V. CULTURAL RESOURCES					
1. If cultural resources are discovered during the Project construction (inadvertent discoveries), all work in the area of the find shall cease, and a qualified archaeologist and representatives of the culturally affiliated tribe shall be retained by the Project sponsor to investigate the find, and make recommendations as to treatment and mitigation of any impacts to those resources.	Require as a condition of project approval	Planning Division	All of these mitigations to be noted on the Improvement Plan, grading plan, and construction drawings		
2. If human remains are encountered, all activity shall stop and the County Coroner must be notified immediately. All activity must cease until the County Coroner has determined the origin and disposition of said remains. The Coroner shall determine if the remains are prehistoric, and shall notify the State Native American Heritage Commission if applicable. Further actions shall be determined by the desires of					

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record (Name/Date)
the Most Likely Descendent. 3. The Public Improvement Plans and Building Plans shall contain the following note: "In the event that any remains of prehistoric or historic human activities are encountered during project-related activities, work in the immediate vicinity of the finds shall halt and the contractor shall immediately notify the project superintendent and the City of Santa Rosa liaison. Work shall not resume until a qualified archaeologist or historic archaeologist, as appropriate, approved by the City of Santa Rosa, has evaluated the situation and made recommendations for treatment of the resource, which recommendations are carried out. If human burials are encountered, the contractor must also contact the County Coroner.					
XIII. PUBLIC SERVICES					
Vegetation Clearance. A note shall be placed on the Final Map requiring all residential development to ensure clearance (and subsequent maintenance) of fire-hazardous vegetation around structures. A minimum 30-foot clearance is required, with greater clearances required where lot conditions warrant.	Require note on Final Map as a condition of approval	Planning Division	Prior to approval of Final Map	Deny approval of Final Map	
Landscape plans for construction of each residence shall be reviewed and approved by the Fire Department as part of the Hillside Development permit process to ensure consistency with this standard, considering tree protection/viewshed protection with the need for fire safety.	Review landscape plans during design review process	Planning Division	Prior to approval of Hillside Development Permit/Final Design Review	Deny approval of Hillside Development Permit/Final Design Review	

ENVIRONMENTAL CHECKLIST

1. Project Title:	The Arbors
2. Lead Agency Name & Address:	City of Santa Rosa Community Development Department Planning Division 100 Santa Rosa Avenue Santa Rosa, California 95404
3. Contact Person & Phone Number:	Erin Morris, Senior Planner Phone number: (707) 543-3273 Email: emorris@srcity.org
4. Project Location:	The site is located in the City of Santa Rosa, Sonoma County, California at 3500 Lake Park Drive, Assessor's Parcel No. 173-270-005. (Refer to Exhibit A, "Vicinity Map").
5. Project Sponsor's Name & Address:	Project Sponsor: Jack Chamberlain Chamberlain Lake Park LLC 655 Skyway, Suite 230 San Carlos, CA 94070 Sponsor's Representative: Bruce Aspinall Bruce Aspinall and Associates 2200 Range Avenue #201 Santa Rosa, CA 95401
6. General Plan Designation:	Low Density Residential (2.0 to 8.0 units per acre)
7. Zoning:	Planned Community (Nielsen Ranch)

8. Description of Project:

The project proposes to subdivide 5.69 acres into 37 lots and one common parcel to allow development of 37 single family attached homes. A new private loop street would provide vehicular access to the homes, which are clustered in the northern area of the site. Of the ~~861~~ 892 trees on the site, ~~approximately 47 percent~~ 670 trees would be removed to accommodate the proposed development. All new development is oriented toward Lake Park Drive and away from the steep southern area of the project site. No construction work associated with the residential subdivision improvements and home construction would occur within 80 feet of Russell Creek.

Off-site improvements include traffic calming measures along Lake Park Drive consisting of new roadway markings and some off-site creek trail repair work on the public parcel adjoining the site. Specifically, the project is conditioned to repair a portion of the trail adjacent to Russell Creek that has been damaged by landslide activity. This aspect of the project is also part of the conditions of approval for another project to the west, and was previously reviewed for CEQA purposes with that project (Bicentennial Estates II, Mitigated Negative Declaration adopted October 13, 2005). On April 8, 2009, the Department of Army issued a 404 Permit for this work. On July 1, 2009, a permit was granted by the North Coast Regional Water Quality Control Board to allow the slide repair work.

Detailed Description

The project includes a Tentative Map, Conditional Use Permit, and Hillside Development Permit to subdivide 5.69 acres into 37 lots and one common parcel. The proposed density is 6.5 units per acre. Proposed lot sizes range from 1,648 square feet to 7,290 square feet with an average lot size of 2,638 square feet. Access to 35 of the new lots would be provided via a new private loop street, Arbor Circle, which would connect with Lake Park Drive in two locations. Two of the lots, Lots 36 and 37, would take direct access from Lake Park Drive east of Bella Vista Way.

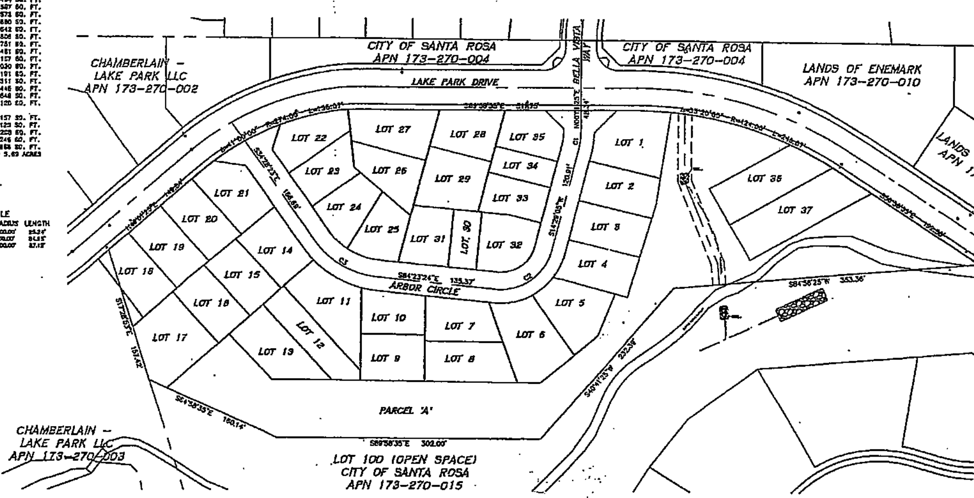
The new single family homes would be attached in pairs and threes and would range in size from about 1,560 square feet to 2,539 square feet. All of the homes would include fire sprinklers in compliance with the Fire Code and the project is conditioned to include clearance and maintenance of fire-hazardous vegetation within 30 feet of new structures. The common area of the subdivision, which contains most of the preserved trees and steepest slopes on the property, would be maintained by a homeowners association formed with this subdivision. Portions of the project construction located on slopes of 10% or more include the larger 15-foot side yards required by the Hillside Development standards of the Zoning Code.

New development would occur primarily in the northern area of the site, leaving the southern area in its natural wooded and steep condition. The project preserves a total of 222 trees, including 66 of the site's 128 heritage trees, between proposed improvements and a swath of mature trees and steep terrain in the southern area of the site. No construction work associated with the residential subdivision improvements and home construction would occur within 80 feet of Russell Creek. The project is conditioned to repair a portion of the trail adjacent to Russell Creek that has been damaged by landslide activity. This aspect of the project is also part of the conditions of approval for another project to the west, and was previously reviewed for CEQA purposes with that project (Bicentennial Estates II, Mitigated Negative Declaration adopted October 13, 2005) and a permit granted by the North Coast Regional Water Quality Control Board to allow the slide repair work.

9. Surrounding Land Uses and Setting:
North: Single family detached homes
West: Undeveloped (Approved Bicentennial Estates II project)
South: City-owned open space parcel/Russell Creek
East: Single family detached residential

10. Other Public Agencies Whose Approval Is Required:
California Regional Water Quality Control Board (Approval granted for Nielsen Ranch Slide Repair, Bicentennial Estates II project on July 1, 2009)
California Department of Fish and Game

Project Location: The Arbors



INDEX OF SHEETS
SHEET 1 - COVER SHEET
SHEET 2 - GRADING PLAN
SHEET 3 - GRADING PLAN
SHEET 4 - UTILITY PLAN
SHEET 5 - UTILITY PLAN

VICINITY MAP
NOT TO SCALE

OWNER/DEVELOPER:
PLANNING CONSULTANTS:
CIVIL ENGINEER:
ARCHITECT:
LANDSCAPE ARCHITECT:
GEOTECHNICAL ENGINEER:
ARBORIST:
ACOUSTICAL ENGINEER:

CURVE TABLE

PARKING TABULATION

ABBREVIATIONS

SYMBOLS & LEGEND

PRIVATE COMMON DRIVEWAY
NO SCALE

ARBOR CIRCLE
PRIVATE
NO SCALE

LAKE PARK DRIVE
PUBLIC
NO SCALE

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

MAY 15 2007

DEPARTMENT OF
COMMUNITY DEVELOPMENT

TENTATIVE MAP
FOR
THE ARBORS

3500 LAKE PARK DRIVE
SANTA ROSA, CALIFORNIA
APN 173-270-005

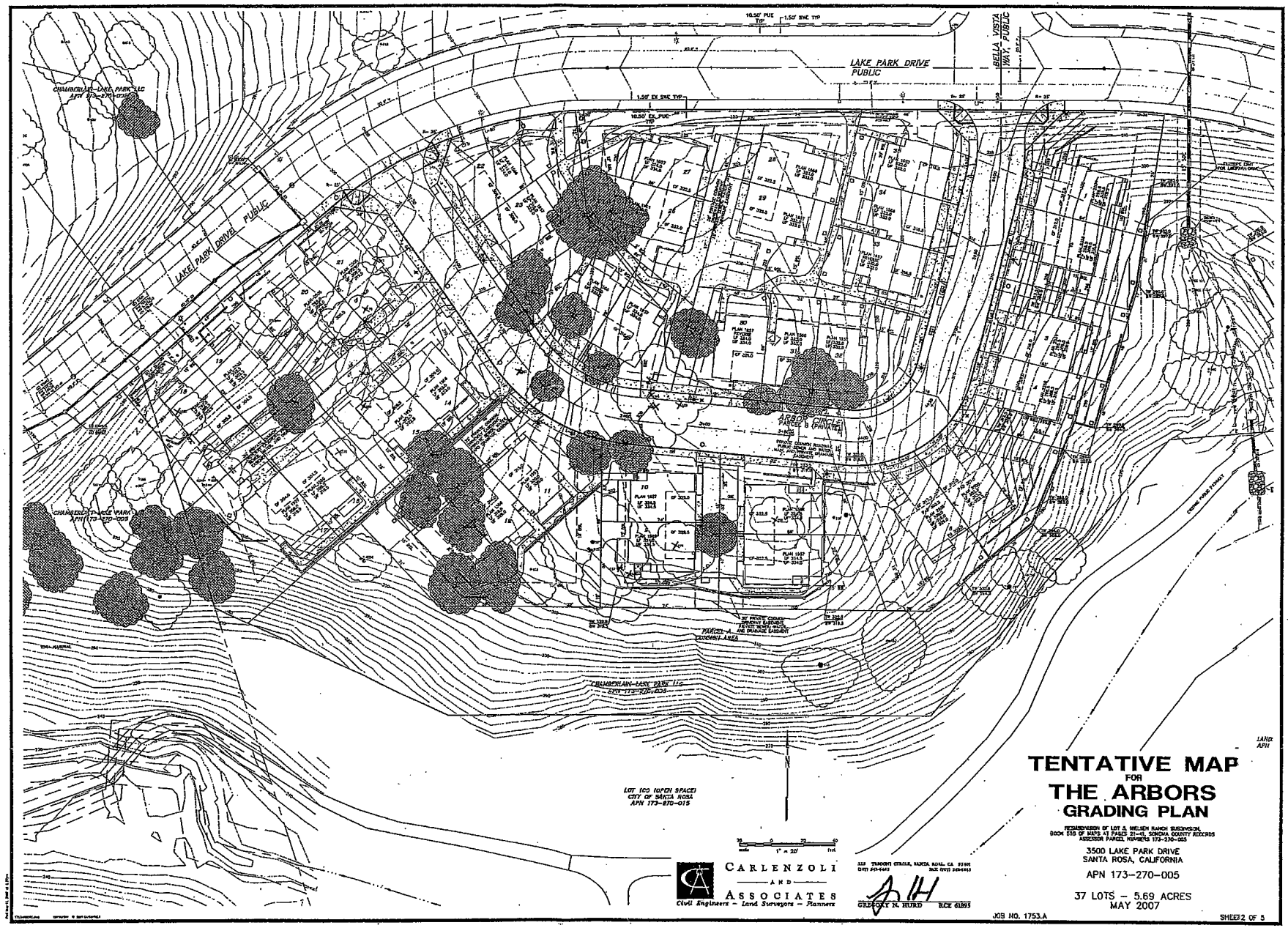
37 LOTS – 5.69 ACRES
MAY 2007

CARLENZOLI AND ASSOCIATES
Civil Engineers – Land Surveyors – Planners

GREGORY N. HURD RCE 61895

JOB NO. 1753.A

SHEET 1



TENTATIVE MAP
FOR
THE ARBORS
GRADING PLAN

RESUBDIVISION OF LOT A, NELSEN RANCH SUBDIVISION,
BOOK 255 OF MAPS, 43 PAGES 21-43, SONOMA COUNTY RECORDS
ASSESSOR PARCEL NUMBERS 173-270-003

3500 LAKE PARK DRIVE
SANTA ROSA, CALIFORNIA

APN 173-270-005

37 LOTS – 5.69 ACRES
MAY 2007

CARLENZOLI AND ASSOCIATES
Civil Engineers – Land Surveyors – Planners

GREGORY N. HURD RCE 61895

JOB NO. 1753.A

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology /Soils
☐ Hazards & Hazardous Materials	☒ Hydrology / Water Quality	☒ Land Use / Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☒ Public Services	☐ Recreation	☐ Transportation / Traffic
☐ Utilities / Service Systems	☐ Mandatory Finding of Significance	

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at lest one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an EARLIER EIR or NEGATIVE DECLARATION pursuant to applicable legal standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Erin J Morris

Signature

March 29, 2010

Date

Erin Morris, Senior Planner

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

I. AESTHETICS

Would the project:

a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion:

The site is undeveloped and heavily wooded, generally sloping downward from Lake Park Drive. The site is not located on or near a scenic road or vista per local or state standards so the project will have no impact on these scenic resources.

The applicant submitted visual simulations depicting the new development as viewed from Lake Park Drive. While the project will result in changes to the visual character of the site due to the removal of trees and construction of new single family homes, the impact is anticipated to be less-than-significant because the new residential development will be consistent with the character of surrounding residential neighborhood and with the General Plan and Nielsen Ranch Planned Community in terms of land use and residential density.

The City of Santa Rosa Zoning Code (Code) Section 20-30.080 requires that all outdoor lighting fixtures be limited to a maximum height of 14 feet, or the height of the nearest building, whichever is less. In addition, the Code also requires that lighting fixtures be shielded or recessed to reduce light bleed to adjoining properties, and that each light fixture be directed downward and away from adjoining properties and public rights-of-way, so that no on-site light fixture directly illuminates an area off the site. With these requirements in place, the proposed project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. A standard condition of approval regarding exterior lighting requirements will be placed on the project, therefore, reducing the potential impacts to less than significant.

Mitigation Measures: None required.

(Sources: General Plan, Zoning Code)

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

II. AGRICULTURE

Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Discussion:

The site is not farmland and is not located near farmland; therefore, the project will have no impact on agricultural resources.

Mitigation Measures: None required.

(Sources: General Plan, City GIS)

III. AIR QUALITY

Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c. Result in a cumulatively considerable net increase any criteria pollutant for which the project region is non – attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

The City of Santa Rosa participates with the Bay Area Air Quality Management District (BAAQMD) to address air quality issues. The Pacific Ocean dominates the climate of Sonoma County as the summer winds blow contaminants south toward San Francisco and in the winter periods of stagnant air can occur, especially between storms. Air Quality in Santa Rosa has generally improved as motor vehicles have become cleaner, agricultural and residential burning has been curtailed, and consumer products have been reformulated or replaced.

Sonoma County is in attainment of federal standards and in compliance with the State Implementation Plan (SIP). The United States Environmental Protection Agency requires that air basins record no more than three exceedances of ozone at a single station, over a three-year period (no more than one exceedance per year, on average). Stations that record four or more exceedances in three years cause the region to violate the standard. According to the BAAQMD, pollutant monitoring results for the years 1996 to 2001 at the Santa Rosa ambient air quality monitoring station indicate that air quality in the project area has generally been good.

Vehicle Trips

The project is located on Lake Park Drive, a local collector street. The project will result in additional vehicle traffic along local roadways. An estimated 370 new vehicle trips per day would result from the project. Based on the Bay Area Air Quality Management District's thresholds of significance, projects that generate fewer than 2,000 vehicle trips per day are not considered major air pollutant contributors and do not require a technical air quality study.

Global Climate Change

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of Greenhouse Gas (GHG) emissions in the atmosphere. Greenhouse gases trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated with global warming. State law defines GHG to include the following: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (Health and Safety Code, section 38505(g).) The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide.

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, recognizes that California is the source of substantial amounts of GHG emissions. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snow pack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems. In order to avert these consequences, AB 32 establishes a state goal of reducing GHG emissions to 1990 levels by the year 2020 (a reduction of approximately 25 percent from forecast emission levels) with further reductions to follow.

Per SB 97, enacted in 2007, lead agencies are required to make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities. The State of California is currently in the process of developing draft CEQA Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.

The proposed project would generate less than four (4) tons per day of carbon dioxide primarily in the form of vehicle exhaust. Several aspects of the proposed project, identified below, would result in less GHG emissions than if the project

were developed elsewhere. In the future, when it becomes reasonable based upon scientific and regulatory guidance to determine the significance of a land use project's GHG emissions, these aspects of the project likely would support a finding that the impacts of this project on climate change are not significant or cumulatively considerable. The following aspects of the project would lessen GHG emissions:

- The proposed new development is within the City's Urban Growth Boundary and is in compliance with the General Plan for the site;
- The project site is within an area long planned for residential development;
- The project site is close to employment centers along Fountaingrove Parkway and Mendocino Avenue;
- The project site is close to a shopping center with full service grocery store (within ½ mile) and other existing services along Mendocino Avenue;
- The proposed project will incorporate design elements and other measures to reduce GHG emissions, as required by the City's Green Building Ordinance; and
- The landscape plan will include drought-resistant landscaping as required by the City's Water Efficient Landscaping Policy.

Construction Impacts

The project would generate temporary air pollutant emissions during construction activities. The short-term air quality impacts during construction would be associated primarily with an increase in suspended particulates (dust). Construction activities, including site clearing and soil disturbance, could generate dust emissions and locally elevated levels of particulates (i.e., PM10) downwind of construction activities. This increase in dust could result in potentially significant short-term impacts on nearby residential uses. The BAAQMD provides feasible control measures for construction emissions of PM10. The potentially significant air quality impacts would be reduced to a less-than-significant level with the mitigation presented below.

This project would use typical construction equipment such as trucks and bulldozers. This type of equipment can generate temporary emissions of ozone precursors (i.e., nitrogen oxides and volatile organic compounds). These emissions are accommodated in the emission inventory of the state and federally required air plans and would not have a significant impact on the attainment and maintenance of ozone standards. In addition, toxic air contaminants (TACs), such as diesel exhaust, are emitted from various construction vehicles and equipment. The project would require limited construction activities and would not emit substantial TACs.

Mitigation Measures: Implement Bay Area Air Quality Management District construction management standards during all on- and off- site construction activities.

- Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site; active areas adjacent to windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Wash off the tires or tracks of all trucks and equipment leaving the site.
- Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas.
- Sweep daily (or more often if necessary) to prevent visible dust from leaving the site (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.
- Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.

(Sources: Bay Area Air Quality Management Standards; State Office of Planning Research Technical Advisory; URBEMIS GHG Emissions Calculator)

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
Would the project:				
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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. 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 California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
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 or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☐	☒	☐

Discussion:

For the purposes of this project, a biological resources impact is considered significant if the project will:

- 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;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations;
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors;
- conflict with local ordinances protecting biological resources, such as a tree preservation ordinance;
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Vegetation on the project site consists primarily of Coast Live Oak trees, with some Valley Oaks, Black Oaks, and madrone. A Tree Survey/report, a Wildlife Habitat Assessment, and a Special Status Plant Survey report were prepared to assess the project's potential impacts on biological resources including oak woodland, trees, plants, and animals. These reports are attached as part of the technical appendices to this document. The findings and conclusions of each study are presented in summary below.

Wildlife Habitat Assessment

This assessment titled Wildlife Habitat Assessment for The Arbors, dated January 21, 2009, was prepared by qualified biologists and conducted to determine the potential for occurrence of special-status animal species and the limitations for development of the project site. The biologist concluded that the site has a low potential to support the northwestern pond turtle and western red bat, moderate potential to support the cooper's hawk, sharp shinned hawk, and pallid bat, and high potential to support the acorn woodpecker. The report concluded that the project could potentially have a significant impact to raptors and bats and mitigation was recommended to reduce potential impacts to less-than-significant. Due to the low potential for northwestern pond turtles to occur on the site, it is concluded that the project will have a less than significant impact and no mitigation is necessary.

The report concluded that direct mortality of bats roosting in the trees on the site could result if construction occurs during the roosting season (April through August), or during winter torpor months (October through February). The greatest potential for mortality to bats exists with removal of trees containing cavities that could support colonies, particularly with non-volant young. To avoid or minimize risk of mortality to bats, tree removal must occur during specific seasonal periods when adult and young bats are actively flying in and out of their tree roost, and must follow certain procedures that cause bats to abandon the tree roost prior to tree removal. This method provides a level of disturbance that should be sufficient to cause any roosting bats to abandon the roost immediately, or choose not to return to the roost tree after night emergence and foraging activity due to alteration and disturbance of the tree.

Mitigation was recommended by the biologist to reduce potential impacts to less-than-significant:

Mitigation Measures:

- Comply with all of the recommendations contained within the Wildlife Habitat Assessment for The Arbors dated January 21, 2009 (attached to this Initial Study document) and with any additional recommendations provided by the project biologist(s), to the satisfaction of the Community Development Director.

- Prior to issuance of a grading permit or approval of the Improvement Plan, the applicant shall provide a letter report to the City of Santa Rosa – Community Development identifying the name of the qualified biologist(s) that will monitor tree removal activities, and a general schedule indicating when the biologist(s) will be present on site. If grading work is to occur within the nesting season (between February 15 and August 15), the report shall also include the results of the pre-construction surveys including an exhibit indicating which trees have active nests. At minimum, the biologist(s) shall be present prior to commencement of on-site construction work to ensure that sensitive trees (trees with active nests and/or that are identified as habitat trees for bats) are clearly marked, and shall instruct construction personnel on the specific measures necessary to comply with the mitigation.

- Qualified biologists shall be present on-site to monitor tree removal activities to ensure that raptors and bats are protected.

Detailed Raptor Mitigation

- Grading or removal of nesting trees and habitat shall be conducted outside the nesting season, which occurs between approximately February 15 and August 15.

- If grading between August 15 and February 15 is infeasible and groundbreaking must occur within the nesting season, a pre-construction nesting bird (both passerine and raptor) survey of the grasslands and adjacent trees shall

be performed by a qualified biologist within 7 days of ground breaking. If no nesting birds are observed no further action is required and grading shall occur within one week of the survey to prevent "take" of individual birds that could begin nesting after the survey.

- If active bird nests (either passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged, as determined by a qualified biologist.

- The radius of the required buffer zone can vary depending on the species, (i.e., 75-100 feet for passerines and 200-300 feet for raptors), with the dimensions of any required buffer zones to be determined by a qualified biologist in consultation with CDFG.

- To delineate the buffer zone around a nesting tree, orange construction fencing shall be placed at the specified radius from the base of the tree within which no machinery or workers shall intrude.

- After the fencing is in place there will be no restrictions on grading or construction activities outside the prescribed buffer zones. The buffer zone shall remain in place until after the young have fledged.

Detailed Bat Mitigation

- A qualified bat biologist shall be present during all tree removal activities to minimize risks to bats. Prior to commencement of project construction activities and after consultation with the bat biologist, all potential habitat trees as identified in Table 2 of the project's Wildlife Habitat Assessment and as further identified at the project site by the biologist shall be marked, so that it will be clear to construction personnel and City staff which trees require special handling as described in the following procedures:

- Conduct tree removal only during seasonal periods of activity; starting about March 1 (or when night temperatures are above 45F and when rains have ceased) until April 15 (prior to when females begin to give birth to young), or from August 15 (when young bats are self-sufficiently volant) until about October 15 (before night temperatures fall below 45F and rains begin, causing torpor).

- Trees *not* identified as providing potential habitat that occur within a 50-foot radius of potential habitat trees listed in Table 1 shall be removed one day prior to removing potential habitat trees. This will cause noise and vibration disturbance around the roost trees that should help cause bats that may be roosting in habitat trees to either abandon immediately (though this rarely occurs in our experience), or avoid returning to the roost tree after nightly foraging activities.

- Removal of non-habitat trees may be accomplished using chainsaws or any other desired equipment. It should be noted that no removal of non-habitat trees may cause damage to habitat trees; so the applicant shall not allow falling trees, limbs or branches to fall onto habitat trees.

- One day after removal of non-habitat trees within a 50-foot radius of habitat trees, those trees may be removed using a two-stage process. The two stage process must be conducted over two consecutive days.
    - On Day 1 (e.g., Tuesday), under instruction and supervision of a qualified bat expert, selected branches and limbs not containing cavities are to be removed using only chainsaws (no excavators, etc.). The noise and vibration from this activity should be sufficient to cause bats roosting in those trees to abandon the roost immediately, or choose not to return to the tree after night emergence and foraging, as a result of the daytime disturbance and significant physical modification to the structure and appearance of the tree and surrounding area. Specifically, late in the afternoon on Day 1 only small branches (<4" dia.) not containing cavities or fissures are removed using chainsaws (no heavy equipment). Only branches with leaves should be removed, which can include the crown or perimeter leafy canopy of each tree.
    - The following day (Day 2, e.g., Wednesday), the remainder of the tree is removed, either using chainsaws or other equipment. Supervision is required to provide identification of branches and limbs safe for removal and instruction to tree cutters in suitable procedures.

- No diesel or gas-powered equipment shall be stored or operated directly beneath trees with potential roosts, except for chainsaws used for removal of those trees.

Special Status Plants

A Plant Survey was prepared by a botanist, with results summarized in letters dated May 19, 2009 and July 8, 2009. Plant surveys were conducted in March 16, April 10, May 6, June 8 and June 25, 2009. The plant surveys were conducted in accordance with California Department of Fish and Game guidelines and are in compliance with these guidelines and with the standard protocol for conducting plant surveys. The survey dates cover the flowering period of all the special status plant species that could potentially occur on the site based on a 9-quadrangle search of the CNDDB and CNPS on-line electronic inventory and the presence of potential habitat. The surveys did not find any special status plants on the site and no special status plants are expected to occur on the project site. Therefore, the project is expected to have no impact on special status plants and mitigation is not recommended.

Trees and Oak Woodland

A separate arborist report was prepared that identifies each of the trees on the site and provides and inventory and analysis of the health and vigor of the tree species. Tree removals would occur in conjunction with road, utility, driveway and residence construction. An arborist's report (Ralph Osterling Consultants, Inc – September 18, 2007, updated November 2009) evaluated all trees of 4-inch diameter or greater on the project site. A total of ~~861~~ 892 trees were identified on the site, consisting mainly of oaks. Approximately ~~409~~ 670 trees would be removed, including ~~17~~ 62 of the site's 129 heritage Oaks. The project will result in preservation of oak woodland along the south area of the site but will result in the loss of oak woodland where the new homes and roadways would be constructed. The project arborist evaluated the existing forest and concluded that the site represents an "unnatural stand of oaks" because of tree overcrowding conditions that have led to tree competing for light, water, and nutrients. As a consequence of the intense competition, the tree developed foliar canopies limited to the upper one-fourth of the tree's architecture. Water and nutrients are also scarce due to competition and the site's physical characteristics resulting in reduced development of new growth.

Trees identified as "to be preserved" on the Tentative Map could be impacted by project construction if they are not properly protected. Therefore, it is concluded that implementation of the project would result in the loss of protected and heritage Oak trees and oak woodland, which is a significant impact. However, with the inclusion of the mitigation measures listed below, the impact is expected to be less-than-significant.

Mitigation Measures:

Trees/Woodland

- **Tree Replacement:** Protected trees to be removed must be replaced in accordance with Title 17-24.050(C) of the Municipal Code. Prior to Planning Division approval of the Improvement Plan or issuance of a Grading Permit, the developer shall provide a Tree Mitigation Plan Exhibit to the Planning Division with the following information in the form of a site plan plus table: 1) Number, size, and type of trees to be removed; 2) Total mitigation required; 3) Number, size, type, and location of trees to be planted on site; 4) Number, size, and type of trees to be planted off-site or provided in the form of an in-lieu donation; 5) Location and type of trees to be preserved during construction; 6) Tree Protection zones called out around trees proposed for preservation.

- **Tree Preservation:** All trees called out as to be preserved on the Tentative Map shall be protected during construction in accordance with Title 17-24.050(D) (1 through 6) of the Municipal Code. Tree protection zones and measures shall be called out on every sheet of the Improvement Plan involving work in the vicinity of any preserved tree.

- **Tree Relocation and Planting Success Criteria:** Prior to approval of the Improvement Plan or grading permit for the project, the project arborist/forester shall develop success criteria for replacement tree survival and the triggers for replanting, to the satisfaction of the Director of Community Development.

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

(Sources: City Code Title 17, Zoning Code, General Plan, Project Arborist's Reports, Project Wildlife Assessment, Project Plant Survey)

V. CULTURAL RESOURCES

Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion:

There are no unique geological or paleontological features on the project site and there are no known cultural or historical resources on the project site. A Cultural Resources Survey, dated August 17, 2007, was prepared by Tom Origer and Associates. This information was shared with the Lytton band and the project incorporates the recommendations of the report. While no significant impacts are anticipated to historical/cultural or archaeological resources, a standard condition of project approval will require that improvement plans and building plans contain a note requiring notification of the City in the event of discovery of prehistoric or historic human activities. A qualified archaeologist or historian may be required to conduct further investigations, depending upon the nature of the discovery, prior to further site disturbance activities. These requirements are listed below for informational purposes:

Mitigation Measures:

- If cultural resources are discovered during the Project construction (inadvertent discoveries), all work in the area of the find shall cease, and a qualified archaeologist and representatives of the culturally affiliated tribe shall be retained by the Project sponsor to investigate the find, and make recommendations as to treatment and mitigation of any impacts to those resources.

- If human remains are encountered, all activity shall stop and the County Coroner must be notified immediately. All activity must cease until the County Coroner has determined the origin and disposition of said remains. The Coroner shall determine if the remains are prehistoric, and shall notify the State Native American Heritage Commission if applicable. Further actions shall be determined by the desires of the Most Likely Descendent.

- The Public Improvement Plans and Building Plans shall contain the following note: "In the event that any remains of prehistoric or historic human activities are encountered during project-related activities, work in the immediate vicinity of the finds shall halt and the contractor shall immediately notify the project superintendent and the City of Santa Rosa liaison. Work shall not resume until a qualified archaeologist or historic archaeologist, as appropriate, approved by the City of Santa Rosa, has evaluated the situation and made recommendations for treatment of the resource, which recommendations are carried out. If human burials are encountered, the contractor must also contact the County Coroner."

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

(Sources: General Plan)

VI. GEOLOGY AND SOILS

Would the project:

e. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
f. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
g. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on, or off, site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
h. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
i. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion:

The City of Santa Rosa is subject to geological hazards related primarily to seismic events (earthshaking) due to presence of active faults. The applicant provided a slope analysis exhibit that identifies slope constraints across the project site. The steepest slopes on the property (those in excess of 25%) occupy over 36 percent of the property. The average slope of the site is 22 percent. Proposed building envelopes avoid significant intrusion into slope areas in excess of 25%.

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

In their report dated May 18, 2005, RGH Consultants noted evidence of soil creep along the southern flank of the Arbors site and a small landslide neat the western edge, but there was no evidence of any large scale landslide features. On March 29, 2010, RGH Consultants provided an update letter which indicates that there two areas of active soil creep on the project site. The report explains that soil creep is different from landslides and that the site is not within an old, inactive landslide.

The project site is not located within any Alquist Priolo Special Study Zone as depicted in the General Plan 2010 (Figure 12-2). The tentative map proposes only minimal grading activities on the project site's steeper slopes. Application of City and UBC construction standards will address any potential impacts related to possible area seismic activity. The project will include connection to City sewer systems for wastewater disposal, and therefore will not include use of a septic system.

Mitigation Measures: None required.

Sources: Project Geotechnical Report

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or	☐	☐	☒	☐

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
emergency evacuation plan?				
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

Discussion:

The proposed construction and use of 37 residential units is not expected to result in significant use or storage of hazardous materials. The project site is not listed on any sites maintained by the State of California (Regional Water Control Board, Department of Toxic Substances Control, and Integrated Waste Management Board). The project site is located over one mile from the closest school. The project site is not located within two miles of the Sonoma County Airport. Emergency access will be available through street connections to Lake Park Drive, which in turn connects to Fountaingrove Parkway to the west.

The project site is located in an area containing wildland vegetation, and is characterized as having very high fire hazards. See discussion and mitigation contained under Public Services – Fire, Section XIII, below.

Mitigation Measures: See Section XIII, Fire Hazards mitigation.

(Sources: City GIS Maps)

VIII. HYDROLOGY AND WATER QUALITY

Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off- site?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Discussion:

The project will be served by City water and wastewater services. Storm drainage improvement will be constructed to connect site drainage to City systems. The project site is not located in a 100-year floodplain. The project is near Russell Creek but is not expected to impact the creek, as development is oriented toward Lake Park Drive and away from the creek parcel.

Stormwater Management Description

Approximately half of the on-site storm water flows toward Lake Park Drive. A majority of these storm flows would be treated in lined bio-retention units. The remaining 50 percent of the site flows toward an on-site seasonal drainage swale located in a public drainage easement. This is an existing public drainage swale for the neighboring streets. Prior to entering this seasonal drainage swale, the flows would be treated in lined bio-retention units and vegetated filter strips. A portion of the on-site private roads is treated through media filter units where it cannot be treated by landscape means. After treatment and prior to discharge into the public storm drain system or the seasonal drainage swale, the storm flows will be detained to meet the City of Santa Rosa standards to limit the post-development two-year peak storm flows to the level of the two-year pre-development peak storm flows.

A majority of the treatment areas are located on the common area of the project owned by the Homeowners Association. A few on-lot systems will be covered by maintenance easements. Maintenance of the treatment systems and detention systems will be by the Project's Homeowners Association.

On January 14, 2010, City staff and the developer's engineer met with Regional Water Board staff to review the project's SUSMP Plan for compliance with the recently adopted Low Impact Development (LID) design criteria. At the meeting, the Board staff indicated that they were satisfied with the current design, which utilizes a combination of small, dispersed bioretention areas with subdrains and a couple of media filters, provided that the project engineer evaluated the possibility of eliminating the media filters at the Final SUSMP stage.

Conclusion

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

In addition to the above, the applicant will be required to implement Best Management Practices for controlling runoff and limiting on-site erosion from grading and construction activities. The project is not expected to result in a violation of water quality or waste discharge standards. The project site is not located within a 100-year floodplain and would not present a flooding danger to project residents. No water wells would be utilized as part of the project as the residential development would be required to connect to City water services.

Mitigation Measures: None required.

(Sources: Project SUSMP Description, Project Plans)

IX. LAND USE AND PLANNING

Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

Discussion:
The application proposes a 37-lot residential subdivision in an area planned for low density residential use. The proposed residential project is consistent with the General Plan, which designates the site Low Density Residential. The project site's existing PD (Planned Development) zone would remain unchanged. The zone would be consistent with the range of other residential subdivisions in the area as part of the greater Nielsen Ranch development. Applicable General Plan policies include:

> *Section 2.4, Low Density Land Use Designation: Development is intended for single-family residential dwellings, with a density range of 2-8 units/gross acre.*
>
> *LUL-E-2: As part of planning and development review activities, ensure that projects, subdivisions, and neighborhoods are designed to foster livability. (This includes use of different housing types and locations to accommodate a diverse range of needs, and use of quiet, interconnected neighborhood streets to accommodate pedestrians and bicyclists.)*
>
> *LUL-F-1: Do not allow development at less than the minimum density prescribed by each residential land use classification.*
>
> *LUL-F-3: Maintain a balance of various housing types in each neighborhood and ensure that new development does not result in undue concentration of a single housing type in any one neighborhood.*

The project would result in a density of 6.5 units per gross acre, within the prescribed range of the General Plan, and would be in keeping with the character of other residential projects in the immediate area. The project site is located along a public street (Lake Park Drive) that does not divide the established neighborhood. The project would not result in a conflict with any habitat conservation or natural community conservation plans.

Hillside Development Permit Requirements

Chapter 20-32 of the Zoning Code provides standards for hillside development with the stated purpose of preserving Santa Rosa's scenic character, conserving the City's open spaces and significant natural features, respecting natural features in the design and construction of hillside development, and designing hillside development to be sensitive to existing terrain, views, and significant natural forms and features. The Hillside Development Permit process will ensure that the development project meets the regulations of this Chapter.

Mitigation Measures: None required.

(Source: General Plan, Site Planned Development Policy Statement)

X. MINERAL RESOURCES

Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion:

The project site does not contain any locally- or regionally-significant mineral resources. The development of the project site with residential uses will not create an adverse impact upon locally- or regionally-significant resources since there are no such resources located on the project site.

Mitigation Measures: None required.

(Sources: General Plan)

XI. NOISE

Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above	☐	☐	☒	☐

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
levels existing without the project?				
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

The project would result in noise impacts related to construction of the proposed residential units. Residential uses do not typically generate substantial sources of noise. There are no major sources of noise generation near the project site aside from the nearby helipad; impacts of the helipad were discussed in a previous EIR.

The project will result in short-term noise impacts related to site grading and construction activities. Standard City conditions of project approval limit the hours of construction to 7 a.m. to 7 p.m. Monday through Friday and 8 a.m. to 6 p.m. Saturdays. No construction is permitted on Sundays and holidays.

Mitigation Measures: None required.

(Sources: General Plan)

XII. POPULATION AND HOUSING

Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Discussion:

The project would not induce substantial or unplanned levels of residential growth. The site was duly considered for the proposed levels of residential development (density) as part of the update to the City's General Plan. There are no residences currently located on the project site, and the project would therefore not result in displacement of housing units or residents.

Mitigation Measures: None required.

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact

XIII. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a. Fire protection?	☐	☒	☐	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☒	☐
d. Parks?	☐	☐	☒	☐
e. Other public facilities?	☐	☐	☒	☐

Discussion:

The project site is located within a Very High Fire Severity Zone due to its slopes and presence of wildland vegetation. The City of Santa Rosa would provide all necessary public services.

Fire protection services will be provided by the City of Santa Rosa. The Fire Department has reviewed the project plans and determined that the project complies with the Fire Code; all homes will be required to have fire sprinklers. Owners of each lot will be required to maintain minimum 30-foot firebreak clearances around residences, with clearances up to 100 feet possible where brush and other flammable materials occur (also noted below as a mitigation measure). The firebreak clearance requirement does not mean that sites must be cleared of existing healthy trees but does require a higher level of tree and brush maintenance to ensure that flammable materials such as deadwood are removed; the project has been conditioned to require that the developer provide informational brochures to all homeowners with specifications for maintaining the firebreak clearances.

Police protection services will be provided by the City Police Department, who will impose conditions regarding use of security night lighting and construction security. Evidence of school impact fees would be made to the applicable school district offices (Santa Rosa City Schools) prior to City issuance of any building permits. Parks impacts would be addressed through payment of City impact fees. Electrical and gas facilities would be constructed by the project developer, with service provided by Pacific Gas and Electric Company.

Mitigation Measures:

Vegetation Clearance. A note shall be placed on the Final Map requiring all residential development to ensure clearance (and subsequent maintenance) of fire-hazardous vegetation around structures. A minimum 30-foot clearance is required, with greater clearances required where lot conditions warrant to the satisfaction of the Fire Marshal. Landscape plans for construction of each residence shall be reviewed as part of the Hillside Development permit process to ensure consistency with this standard.

XIV. RECREATION

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Discussion:

No on-site park or recreational facilities are proposed with the project. A walking path adjoins the site to the south and follows Russell Creek; the project has been designed to orient development away from the creek and therefore would not impact the recreational use of the path. The site is near Francis Nielsen Ranch Park, which provides convenient recreation in close proximity. The project would be required to make impact fee payments to the City's Recreation and Parks system to address increased demand on park facilities resulting from the creation of 37 new residences. Fee payments are required at time of building permit issuance.

Mitigation Measures: None required.

XV. TRANSPORTATION/TRAFFIC

Would the project:				
a. Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e. Result in inadequate emergency access?	☐	☐	☒	☐
f. Result in inadequate parking capacity?	☐	☐	☒	☐
g. Conflict with adopted policies, plans, or programs	☐	☐	☐	☒

	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporation	Less-Than-Significant Impact	No Impact
supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				

Discussion:

The City Traffic Engineer has reviewed the proposed Tentative Map and has determined that it would not generate a significant amount of traffic or present adverse impacts to traffic along local streets. Lake Park Drive was designed to accommodate the future development of the project site. The project is conditioned to require traffic calming improvements on Lake Park Drive. The project is not located near a public or private airport, and would not impact air traffic patterns or safety. While the site is near Sutter hospital, a previous EIR addressed potential impacts of the helipad.

Mitigation Measures: None required.

(Sources: General Plan, Project Plans, Traffic Engineering staff)

XVI. UTILITIES AND SERVICE SYSTEMS

Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion:

The project will be served by City water and sewer services; adequate water supplies and wastewater treatment plant capacity are available for the project. New storm drainage facilities will be required to accommodate runoff from the proposed project; standard City conditions will require compliance with the Storm Water Mitigation Plan Guidelines and use of best management practices. Adequate landfill capacity exists at County facilities to support the project.

Mitigation Measures: None required.

(Sources: General Plan)

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Discussion:

As discussed in the Biological Resources section, the project could have a significant impact relative to Oak woodland, trees, birds, and bats. However, with implementation of mitigation, this impact would be reduced to less-than-significant.

Mitigation Measures: See Biological Resources mitigation above.

b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Discussion:

The project involves low density cluster residential on a site long planned for residential development, as part of a master planned community.

Mitigation Measures: None required.

c.	Does the project have environmental effects which will cause substantial adverse effects on	☐	☐	☒	☐

human beings, either directly or indirectly?

Discussion:

The residential project, as conditioned, would not have detrimental effects on human beings in that it involves standard construction and development practices on a site long planned for residential development.

Mitigation Measures: None required.

APPENDIX

SOURCE REFERENCES

The following is a list of references used in the preparation of this document. Unless attached herein, copies of all reference reports, memorandums and letters are on file with the City of Santa Rosa Department of Community Development. References to Publications prepared by Federal or State agencies may be found with the agency responsible for providing such information.

1) City of Santa Rosa 2020 General Plan, adopted June 18, 2002, and Final EIR, certified June 18, 2002 (SCH No. 2001012030).
2) Geotechnical investigation RGH, July 17, 2008, March 29, 2010
3) Project Arborist Report, Ralph Osterling and Associates, dated September 18, 2007, January 8, 2008, and November 2009
4) Preliminary Stormwater Plan, Carlenzoli and Associates, dated October 2008
5) Project Wildlife Habitat Assessment, Wildlife Research Associated, dated January 21, 2009
6) Project Special Status Plant Survey, Jane Valerius Environmental Consulting, May 19, 2009 and July 8, 2009
7) Cultural Resources Survey for The Arbors, Tom Origer and Associates, August 17, 2007

PROJECT SPONSOR'S INCORPORATION OF MITIGATION MEASURES

As the project sponsor or the authorized agent of the project sponsor, I, _____, undersigned, have reviewed the Initial Study for the _____ and have particularly reviewed all mitigation measures and monitoring programs identified herein. I accept the findings of the Initial Study and mitigation measures and hereby agree to modify the proposed project applications now on file with the City of Santa Rosa to include and incorporate all mitigation measures and monitoring programs set out in this Initial Study.

_____

Property Owner (authorized agent) Date

DETERMINATION FOR PROJECT

On the basis of this Initial Study and Environmental Checklist I find that the proposed project:

☒ could have a Potentially Significant Effect on the environment; however, the aforementioned mitigation measures to be performed by the property owner (authorized agent) will reduce the potential environmental impacts to a point where no significant effects on the environment will occur. A Mitigated Negative Declaration will be prepared.

Erin Morris March 29, 2010

Signature Date

Erin Morris, Senior Planner
City of Santa Rosa, Community Development Department

Appendix A:
Technical Report

Appendix B:
Correspondence

Appendix A
Technical Reports

(Additional technical reports will be provided upon request)

RGH
GEOTECHNICAL
Experience is the difference

1305 North Dutton Avenue
Santa Rosa, CA 95401
P: (707) 544-1072
F: (707) 544-1082

March 29, 2010

Chamberlain Lakepark Limited
c/o Chamberlain Group
655 Skyway, Suite 230
San Carlos, CA 94070

Geotechnical Consultation
Revised Exploration Plan and Creep Prone Areas

Project Number: 1775.03.06.1

The Arbors at Nielson Ranch
APN 173-270-005
3500 Lake Park Drive
Santa Rosa, California

The purpose of this letter is to address requests by the City of Santa Rosa (City) as they relate to The Arbors at Nielson Ranch project to be constructed at 3500 Lake Park Drive in Santa Rosa, California. The results of our geotechnical study for the project were presented in a report dated May 18, 2005. We also provided a letter, dated February 28, 2008, clarifying our recommendations regarding creep soils and soils on slopes 10:1 or steeper. We understand that since our report was issued the project layout has been revised, and as such, the City would like us to revise our exploration plan to show the new project layout. We also understand that the City would like further clarification on mapped areas of observed creep and their impact on the proposed improvements.

We obtained the latest project layout from BKF/Carlenzoli & Associates, the project civil engineer. We transferred the geology, the exploration points and cross section locations, and areas of soil creep onto the new site layout. This revised Plate 2 (Exploration Plan) is attached and supersedes the Exploration Plan presented in our geotechnical study.

As shown on the revised Exploration Plan two areas of active soil creep exist at the site. These areas are shown to be outside of proposed building envelopes in designated open space downslope of Lots 4, 5, 7, 8, 9, and 10. To be clear, creeping soils at the Arbors' site are not landslides where the movement will continue to propagate up the slope towards the structures such as could be expected for an active landslide. If creep was observed in soils within an old dormant landslide, then it could be a sign of activation of a smaller feature within the larger landslide. This is not the case at the Arbors site because the site is not within an old inactive landslide. As discussed in our report, on sloping terrain 10:1 or steeper, the weak, expansive surface materials (typically less than 4 feet thick at the site) undergo a gradual downhill movement known as creep. Soil creep is inherent to hillsides in the area and its force is directly proportional to slope inclination, the soils plasticity, water content and expansion potential. Essentially, this means where weaker in-places soils with a higher plasticity index are present on steeper slopes, there is a potential for soil creep. Where soils are susceptible to creep, grading is either performed to strengthen these soils or foundations are designed to resist creep forces. However, areas of soil creep that are outside of building areas are not typically

remediated with grading unless other improvements (pool, decking, concrete walkways, etc) are planned. At the Arbors' site the two areas of active creep are in open space areas where no improvements are planned.

In summary, because the creeping soils are not associated with a landslide feature and the actively creeping areas are in open space, we judge that evaluation of their stability and remedial grading are not required. Once the site has been staked and while the required clearing is being performed, our engineer and geologist will perform a site reconnaissance of the actively creeping areas to observe their limits relative to the proposed improvements to confirm what we have presented in our geotechnical study. At that time, we may provide additional recommendations for surface and/or subsurface drainage. If these areas are found to have a potentially adverse impact on the improvement areas, further evaluation will be performed and remediation measures implemented if necessary. Evaluations will be performed in accordance with the guidelines outlined in California Geologic Survey's Special Publication 117.

We trust this provides the information you require at this time. Please call if you have questions.

Very truly yours,
RGH Consultants, Inc.

Jared J. Pratt
Senior Geologist

Eric G. Chase
Senior Associate Engineer

REGISTERED PROFESSIONAL ENGINEER
ERIC G. CHASE
No. 2628
Exp. 6/30/11
GEOTECHNICAL
STATE OF CALIFORNIA

CERTIFIED ENGINEERING GEOLOGIST
JARED J. PRATT
No. 2453
STATE OF CALIFORNIA

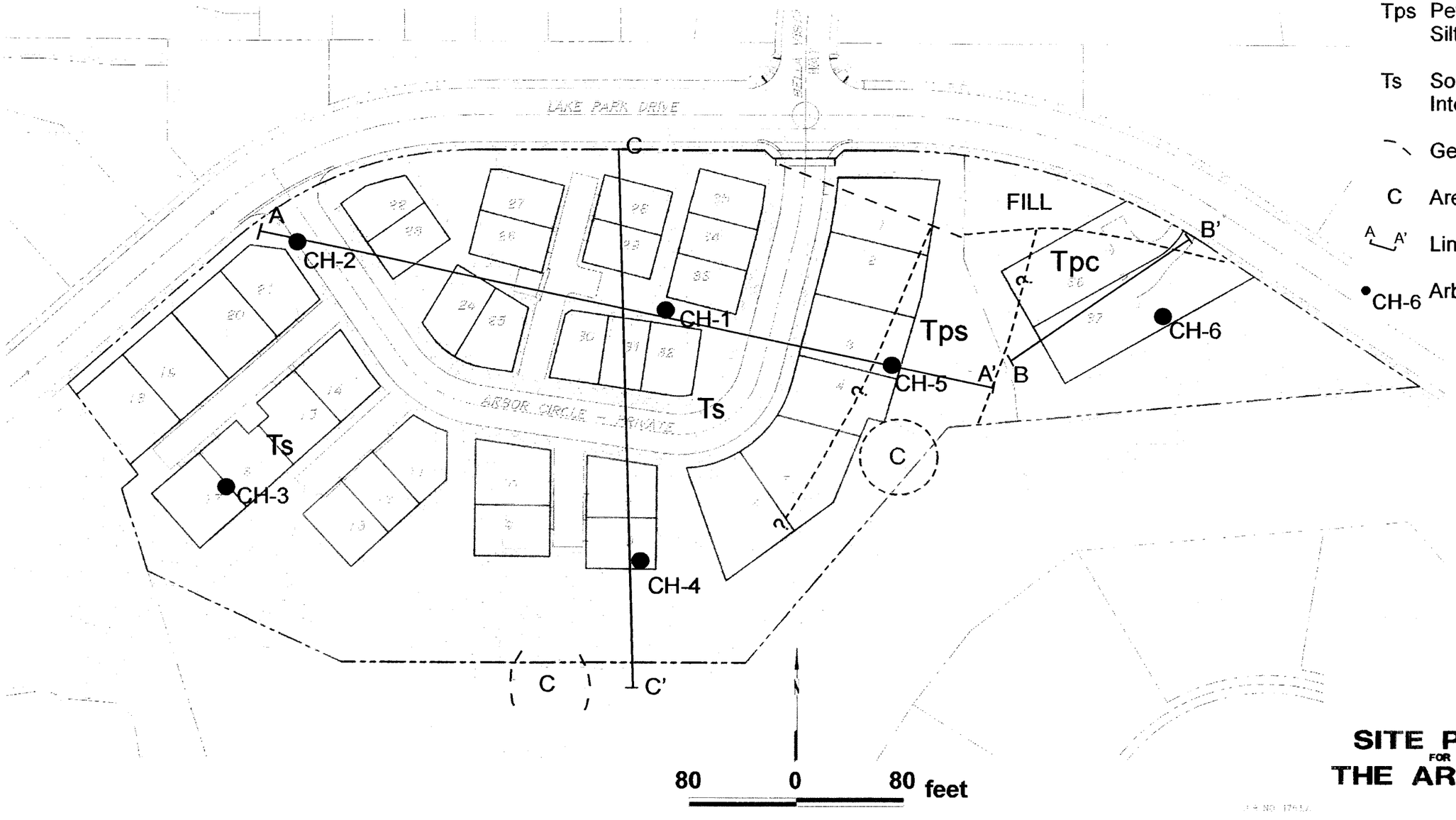
cc: City of Santa Rosa
Attn: Larry Lackie
LLackie@srcity.org

BKF-Carlenzoli& Associates
Attn: Bonnie Diefendorf
bdiefendorf@BKF.com

Attachment: Plate 2 – Exploration Plan

EGC:JJP:GWR:ec:lw
One copy submitted

s:\work in progress\1775.03.06.1 the arbors at nielson ranch\revised plate 2_creep areas letter.doc



EXPLANATION

Tp	Petaluma Claystone
Tps	Petaluma Sandstone Siltstone
Ts	Sonoma Volcanics Lithic Tuff, with Interbedded Sandstone and Siltstone
	Geologic Contact
C	Area of Soil Creep
A A'	Line of Geologic Cross Section
CH-6	Arbors Subdivision Core Hole

SITE PLAN FOR THE ARBORS

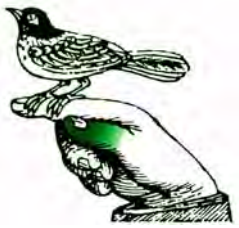
Reference: Site Plan by Carlenzoli and Associates, Undated.

Scale: 1"=80'

RGH CONSULTANTS	**EXPLORATION PLAN** The Arbors Subdivision Lake Park Drive Santa Rosa, California	PLATE **2**
Job No: 1775.03.04.1	Date: Mar 2010	

Ralph Osterling Consultants

Natural & Urban Resources Management



25 November 2009

Mr. Jack Chamberlain
655 Skyway
Suite 23
San Carlos, Ca 94070

Re: Tree Report for the Arbors

Dear Jack:

In order to provide an accurate tree inventory as required by the City of Santa Rosa, Ralph Osterling Consultants, Inc. (ROC) completed a tree survey in October 2009 to update the existing tree data base. During the period of time between the initial tree report in September 1999 and this current tree report a number of trees have grown and now meet the minimum diameter requirement of four inches and must therefore be included in the inventory. In addition, a number of trees have died or partially failed requiring a change in their recorded condition.

An updated Tree Exhibit using the preliminary site plan as the base map was prepared by BKF Carlenzoli and Associates in October 2009. Tree data from the October, 2009 ROC tree survey report was used to verify tree location and current tree status.

A total of 892 regulated trees (four inches in trunk diameter and larger) have been verified in the project area by ROC. Of these trees, 128 were determined to be Heritage Trees as per the City of Santa Rosa Tree Ordinance.

A total of 670 trees will be removed for reasons of tree condition and construction purposes. Removal of Heritage Trees will be limited to 62.

Using the City of Santa Rosa's mitigation formula of two mitigation trees for every six inches of authorized removed trees (total combined trunk diameters divided by 6 and multiplied by 2) we have the following:

Total combined trunk diameters of removed trees:	6129 inches
6129 inches divided by 6 inches and multiplied by 2:	2043 required mitigation trees

A total of 2043 15-gallon size trees are required to be planted on the site. If the site cannot accommodate all of the required trees, an in-lieu fee of $100 per tree may be submitted in place of the tree planting.

1650 Borel Place, Suite 204 ▪ San Mateo, CA 94402
(650) 573-8733 ▪ Fax (650) 345-7890 ▪ email: monitor@landwatch-inc.com

From a Forester's perspective, the site represents an unnatural stand of oaks. This overstocked site created an environment in which the trees competed heavily for available resources; light, water and nutrients. As a consequence of this intense competition, the trees developed foliar canopies limited to the upper one fourth of the tree's architecture. Water and nutrients are also scarce resulting in reduced development of new growth. These trees do not depict the image one would conjure up when discussing a "classic oak".

It is this image of the "classic oak" that the City's Tree Ordinance is attempting to protect as described in Chapter 17-24 Trees, Article I "Declaration of legislative intent and purpose". The existing trees located at this site clearly do not meet the intent of the City's tree ordinance.

Safety is a major concern when protecting individual trees that have grown in a dense stand. The trees have developed an architecture that competes for sunlight and depends on the buffering effect of surrounding trees to resist strong winds. An individual tree from a dense stand has not developed the defenses to grow independently and will be vulnerable to wind throw or limb failure.

In regards to mitigation trees, we strongly encourage the preservation of selected oaks with trunk diameters between 9 to 12 inches or smaller for use as relocated (transplanted) trees. Careful selection of appropriate candidate trees followed by possible cabling at the time of transplanting will help to assure stability. Special irrigation regimes and root treatments will encourage healthy root systems capable of supporting the trees into the future.

Approximately 80 existing oaks in the diameter range of 9 to 12 inches have been selected as transplant candidates. These trees typify the "classic oak" appearance that the tree ordinance desires to preserve. This 9 to 12 inch size range actually represents the next generation of oaks which in ten years will become the future Heritage Trees to be protected and appreciated rather than feared.

Attached is a Tree Protection Plan with tree protection and preservation measures for those trees to be retained in the project area. This plan is to be made a detail on the final construction drawings for use in the field.

Should you have questions or require additional information, kindly contact me at your earliest convenience.

Respectfully,

Ralph Osterling
President

The Arbors
Tree Protection Plan

The following tree protection and preservation measures have been prepared for those trees to be retained in the project area. All protected tree fencing areas are shown on the Site Plan. The tree protection zone is shown as a bold dashed line and corresponds to the location of the tree protection fencing. The following measures will be implemented to provide protection to the trees during project construction:

1. **Tree Protection Fencing** - Prior to the start of construction, tree protection fencing will be installed in the locations shown on the final grading plan. Tree protection fencing shall be four (4') foot high orange plastic protection fencing. The fencing will be mounted on steel AT@ drive posts driven into the ground to a depth of at least one foot with a spacing of no more than eight (8') feet.

   Tree fencing is to be erected and approved by the Project Forester before any demolition, grading, or construction begins and remain in place until final inspection of the project permit. A durable warning sign measuring 8.5" x 11.0" that reads, **Warning Tree Protection Zone,** will be prominently displayed on each fence. (Please refer to attached examples.)

2. **Tree Protection Zone or (TPZ)** - each tree to be retained to will have a designated TPZ identifying an area sufficiently large enough to protect the tree and roots from disturbance. The TPZ shall be shown on all site plans for the project. Improvement activities such as paving, utility and irrigation trenching and other ancillary activities shall occur outside of the TPZ, unless authorized by the Project Forester, or by project approval. The tree protection fencing will be used to delineate the extent of the TPZ.

   The following activities are prohibited within the TPZ:

   < Storage or parking vehicles, building materials, refuse excavated spoils or dumping of poisonous materials on or around trees and roots. Poisonous materials include, but are not limited to, paint, petroleum products, concrete or stucco mix, dirty water or any other material that may be deleterious to tree health.

   < The use of tree trunks as a winch support, anchorage, as a temporary power pole, sign posts or other similar function.

- Cutting tree roots by utility trenching, foundation digging, placement of curbs and trenches and other miscellaneous excavation without prior approval of the Project Forester.

- Soil disturbance or grade change

- Drainage changes

The following activities may be permitted in the TPZ:

- Mulching. During construction, wood chips may be spread within the TPZ to a 4-6-inch depth, leaving the trunk clear of mulch to help inadvertent compaction and moisture loss from occurring. The mulch may be removed if improvements or other landscaping is required.

- Root Buffer. When areas under the tree canopy cannot be fenced, a temporary buffer is required and shall cover the root zone and remain in place at the specified thickness until final grading stage.

- Irrigation, aeration, fertilizing or other beneficial practices that have been specifically approved for use within the TPZ.

3. **Tree Pruning, Surgery and Removal** - Prior to the start of construction, the contractor and Project Forester will conduct an onsite review of trees adjacent to the construction area to identify any pruning necessary for vehicle and equipment clearance. Where needed, limbs will be professionally pruned to provide the minimum necessary vehicle clearance. Pruning shall not be attempted by construction or contractor personnel, but shall be performed by a qualified tree care specialist or certified tree worker.

4. **Grade Limitations within the Tree Protection Zone**

- Grade changes outside of the TPZ shall not significantly alter drainage to the tree. Where drainage alteration is unavoidable, supplemental drip irrigation may be required for two growing seasons following the drainage alteration to mitigate for the loss of natural soil water.

< Grade changes within the TPZ are prohibited, except as previously noted for Aline@ trees that will be impacted, but preserved.

< Grade changes under specifically approved circumstances shall not allow more than six (6") inches of fill soil added or allow more than four (4") inches of existing soil to be removed from natural grade unless mitigated.

< Grade fills over six (6") inches or impervious overlay shall incorporate an approved permanent aeration system, permeable material or other approved mitigation.

5. **Trenching, Excavation and Equipment Use** - Trenching, excavation or boring activity within the TPZ is restricted to the following activities, conditions and requirements if approved by the Project Forester.

< Notification. Contractor shall notify the Project Forester a minimum of 24 hours in advance of any activity in the TPZ.

< Root Severance. Roots that are encountered shall be cut to sound wood and repaired. Roots two (2") inches and greater must remain injury free.

< Excavation. Any approved excavation, demolition or extraction of material shall be performed with equipment sitting outside the TPZ. Methods permitted are by hand digging, hydraulic or pneumatic air excavation technology. Excavation in the TPZ should be avoided during hot dry weather.

If excavation or trenching for drainage, utilities, irrigation lines, etc., the contractor shall tunnel under any roots two (2") inches in diameter and greater. Prior to excavation for foundations, footings, walls, grading or trenching within the TPZ, roots shall first be severed cleanly one (1') foot outside the TPZ and to the depth of the future excavation. The trench must then be hand dug and the roots pruned with a saw, Sawzall®, narrow trencher with sharp blades or other approved root pruning equipment.

- Heavy Equipment. Use of backhoes, steel tread tractors or any heavy vehicles within the TPZ is prohibited unless approved by the Project Forester. If allowed, a protective root buffer is required. The protective root buffer shall consist of a base course of tree chips spread over the root area to a minimum depth of six (6") inches, layered by 3/4-inch quarry gravel to stabilize 3/4-inch plywood on top. This buffer within the TPZ shall be maintained throughout the entire construction process.

- Structural Design. If injurious activity or interference with roots greater than two (2") inches in diameter will occur within the TPZ, plans shall specify a design of special foundation, footing, walls, concrete slab or pavement designs subject to Project Forester approval. Discontinuous foundations such as concrete pier and structural grade beam must maintain natural grade (not to exceed a four (4") inch cut), to minimize root loss and allow the tree to use the existing soil.

6. **Injury Mitigation** - The following mitigation measures will be used as need to address project induced drought stress, dust accumulation, or soil compaction to trees that are to be saved. To help reduce impact injury, one or more of the following mitigation measures will be implemented, as necessary and supervised by the Project Forester.

   - Irrigation Program. Irrigate to wet the soil within the TPZ to a depth of 24" to 30". Or, apply sub-surface irrigation at regular specified intervals by injecting on approximate three (3') foot centers, ten (10) gallons of water per inch of trunk diameter within the TPZ. Duration shall be until project completion or monthly until seasonal rainfall totals at least eight (8") inches of rain.

   - Dust Control Program. If grading occurs during the dry summer months, dust shall be controlled by wetting all disturbed areas as needed with a water truck.

   - Soil Compaction Damage. If a compaction event to the upper 12-inch soil horizon within the tree protection zone has or will occur by any means, then one or more of the following mitigation measures will be implemented.

Type 1 Mitigation. If an approved paving, hardscape or other compromising material encroaches within the TPZ, an aeration system shall be designed by the Project Forester and used within this area. **See Attached - Tree Protection Detail Drawings** for a typical aeration system design.

Type 2 Mitigation. If inadvertent compaction of the soil has occurred within the TPZ, the soil shall be loosened by one or more of the following methods to promote favorable root conditions: vertical mulching, soil fracturing, core-venting, radial trenching or other method approved by the Project Forester.

Damage to Trees requires reporting of any damage or injury to protected trees to the Project Forester and job superintendent within six (6) hours so that mitigation can take place immediately. All mechanical or chemical injury to branches, trunk or to roots over two (2") inches in diameter shall be reported in the weekly inspection report. In the event of injury, the following mitigation and damage control measures shall apply:

< Root Injury. When approved trenches within the TPZ are excavated and tree roots two (2") inches in diameter or larger are encountered, they must be cleanly cut back to a sound wood lateral root. The end of the root shall be covered with either a plastic bag and secured with tape or rubber band, or be coated with latex paint. All exposed root areas within the TPZ shall be backfilled or covered within one hour. Exposed roots may be kept from drying out by temporarily covering the roots and draping layered burlap or carpeting over the upper three (3') feet of trench walls. The materials must be kept wet until backfilled to reduce evaporation from the trench walls.

< Bark or Trunk Wounding. Current bark tracing and treatment methods shall be performed by a qualified tree care specialist within two days.

< Scaffold Branch or Leaf Canopy Injury. Within five days, remove broken or torn branches back to an appropriate branch capable of resuming terminal growth. If leaves are heat scorched from equipment exhaust pipes, consult the project arborist within six (6) hours.

Inspection Schedule

During grading activities, the Project Forester shall inspect the site twice each week to verify that protected trees have not been damaged. If any native tree greater than or equal to four (4") dbh is determined by the Project Forester to be damaged, the tree(s) will be replaced at a 2:1 ratio, and temporary fencing of the tree drip lines within the remaining construction area shall be required.

Inspection Reports will be submitted at the end of each week to the City of Santa Rosa summarizing the week's observations, problems or violations, and the corrective measures taken.

Due to the density of the preserved woodland areas, most mitigation planting will occur in areas devoid of trees or areas cleared for project construction. As a matter of procedure, any mitigation planting or landscape planting that may occur within the drip line of any native oak tree must be done in a manner that does not damage or weaken the preserved tree. Any irrigation within the drip line must be drip type irrigation. Area sprays are prohibited within the drip line of native oak trees. In addition, the area around the root collar (min. 6' radius) of the native oak trees must remain dry throughout the summer season.

Visual Impacts

Visual impacts will be limited to the interior portion of the project; primarily the view from Lake Park Drive. Offsite views from the south and west will be screened by the dense tree cover that will remain in these areas.

WARNING
Tree Protection Zone

This fence shall not be moved without approval.
Only authorized personnel may enter this area.

Each Protected Tree is required to have at least one warning card on its fencing.

CUIDADO
Zona De Arbol Pretejido

Esta cerca no sera removida sin aprobacion.
Solo personal autorizado entrara en esta area.

Cada arbol pretejido requiere tener por lo menos una tarjeta de advertencia en su cerca.

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
126	valley oak		X	good	14					
345	coast live oak		X	good	26	18	13	11		
346	coast live oak		X	fair	11	10				
347	coast live oak			good	15					
348	coast live oak			poor	7	5				
349	coast live oak			good	16					
352	coast live oak			good	15					
353	coast live oak		X	good	42	11				5" adj. madrone
354	coast live oak			good	14					
355	coast live oak			good	15					
356	coast live oak			good	16					
389	coast live oak		X	good	14	14				
390	coast live oak			poor	12					
391	coast live oak			fair	11	6				
392	coast live oak		X	fair	13	11	10			
393	coast live oak	X		good	13					
394	coast live oak		X	good	14	8	5			
395	coast live oak	X	X	good	10	8				
396	coast live oak			fair	10	7				
397	coast live oak		X	fair	20	18	16			
398	valley oak		X	poor	21	10				
593	coast live oak		X	good	16	14				
594	coast live oak	X	X	poor	17	12				
595	coast live oak		X	good	16	15				
596	coast live oak			good	14					
597	coast live oak			good	14					
599	coast live oak			poor	8	5				
600	coast live oak			good	11					
601	coast live oak	X	X	poor	13	11	10			
602	coast live oak	X	X	poor	15	13	10			
604	coast live oak	X	X	poor	13	5	4			
605	coast live oak		X	good	11	9	6			
606	coast live oak			fair	10	5				
607	coast live oak			fair	16					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
608	coast live oak		X	good	10	7	6			
609	coast live oak			fair	13					
610	coast live oak			fair	10					
611	coast live oak			good	16					
612	coast live oak		X	good	17	10	9	5		
613	coast live oak		X	fair	9	8	8	6		
614	coast live oak		X	good	11	6	6			
615	coast live oak		X	fair	24	16				
617	coast live oak		X	fair	11	9	8			
622	coast live oak		X	fair	17	15	12	9		
623	coast live oak		X	fair	21					
625	coast live oak		X	good	31	17	14			
626	coast live oak	X	X	fair	23					
627	coast live oak	X	X	poor	28	21	16			
628	coast live oak	X	X	poor	17	15	10			
629	coast live oak		X	good	11	11	10			
630	coast live oak		X	fair	12	11	8			
631	coast live oak		X	good	10	10	7	6		
633	coast live oak		X	fair	33					trunk decay
634	coast live oak		X	fair	22	15	12			
635	coast live oak		X	good	22					
636	coast live oak		X	fair	23	16				
637	coast live oak		X	good	10	7	6			
638	coast live oak		X	good	14	6				
639	coast live oak			poor	10	6				
640	coast live oak			fair	11	6				
641	coast live oak			poor	14					
642	coast live oak			good	12					
643	coast live oak		X	poor	15	10				
644	coast live oak		X	good	16	15				
645	coast live oak		X	fair	37					
646	coast live oak			good	17					
648	coast live oak		X	poor	17	10				
649	coast live oak			poor	8	7				

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
650	coast live oak			poor	10	7				
651	coast live oak		X	good	18					
652	coast live oak			poor	11					
653	coast live oak		X	good	20	19	14			
654	coast live oak		X	fair	18					
655	coast live oak	X	X	good	36					
656	coast live oak	X	X	poor	23					
657	coast live oak	X		fair	14					
659	coast live oak	X	X	fair	20					
661	coast live oak	X	X	poor	17	16	15	14	9	
663	coast live oak	X		good	14					
664	coast live oak	X	X	poor	12	11				
665	coast live oak	X	X	poor	31					
666	coast live oak	X		good	11					
668	coast live oak	X	X	poor	19					
669	coast live oak	X	X	poor	27					
670	valley oak	X	X	poor	30					
683	coast live oak	X	X	poor	15	8				
685	coast live oak	X		fair	14					
688	coast live oak	X		fair	9					
689	coast live oak	X	X	poor	11	11				
690	coast live oak	X	X	poor	18					
898	valley oak		X	fair	39	21				bee hive
899	coast live oak			fair	13					
900	coast live oak			good	16					
902	coast live oak		X	good	15	13	13			
903	coast live oak			fair	13					
904	coast live oak	X	X	poor	13	12				
905	coast live oak			good	14					
5798	madrone		X	good	14	13	8			
5799	madrone	X		poor	5					
5800	coast live oak	X		poor	7					
5803	coast live oak	X		poor	6					
5804	coast live oak	X		fair	10					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5807	coast live oak	X		good	6					
5809	coast live oak	X		good	11					
5812	coast live oak	X		good	7					
5813	coast live oak	X		poor	5					
5814	coast live oak			poor	6					
5815	coast live oak	X		poor	9	7				
5816	coast live oak	X		fair	7					
5817	coast live oak	X		poor	7					
5818	coast live oak	X		good	9					
5819	coast live oak			poor	6	6				
5820	coast live oak			good	9					
5821	coast live oak			good	8					
5822	coast live oak	X	X	fair	22					
5823	coast live oak	X		good	17					
5824	coast live oak	X		poor	6					
5825	coast live oak	X		poor	7					
5826	coast live oak	X		good	8					
5827	valley oak	X	X	poor	10					
5828	coast live oak	X		fair	7					
5829	coast live oak	X		good	9					
5830	coast live oak	X		good	13					
5831	coast live oak	X		poor	6	5				
5832	coast live oak	X		good	13					
5833	coast live oak	X		good	14					
5834	coast live oak	X		fair	10					
5835	coast live oak	X		good	10					
5836	coast live oak	X		fair	9					
5837	black oak	X		good	6	6				
5838	coast live oak	X		good	11					
5839	coast live oak	X	X	poor	10	8				
5840	coast live oak	X		poor	9					
5841	coast live oak	X		good	9					
5842	coast live oak	X		poor	4					
5843	coast live oak	X		good	7	7				

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5844	coast live oak	X		good	12					
5845	coast live oak	X		good	8	6				
5846	coast live oak	X		poor	6					
5847	coast live oak	X		fair	10					
5848	coast live oak	X		good	8	5				
5849	coast live oak			fair	7	6				
5850	coast live oak	X		good	9					
5851	coast live oak	X	X	poor	9	8	4			
5852	coast live oak	X		fair	10					
5853	coast live oak	X		good	7	4				
5854	coast live oak	X	X	poor	11	7	7			
5855	coast live oak	X	X	poor	9	9				
5856	coast live oak	X		good	8					
5857	coast live oak	X		fair	10					
5858	coast live oak	X	X	poor	12	10				
5859	coast live oak	X	X	poor	10	8				
5860	coast live oak	X		poor	6	6				
5861	coast live oak	X		poor	7					
5862	coast live oak	X		fair	6					
5863	coast live oak	X		poor	8	6				
5864	coast live oak	X		good	14					
5865	coast live oak	X		good	11					
5866	coast live oak	X		poor	7					
5867	coast live oak	X		poor	8					
5868	coast live oak	X		good	8	7				
5869	coast live oak	X		poor	9					
5870	coast live oak	X	X	poor	10	9				
5871	coast live oak	X		good	11					
5872	coast live oak	X		fair	8	6				
5873	coast live oak	X		good	8					
5874	coast live oak	X		poor	6					
5875	coast live oak	X		fair	7					
5876	coast live oak	X		good	11					
5877	coast live oak	X		fair	7					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5878	coast live oak	X	X	poor	8	8	6	4		
5879	coast live oak	X	X	poor	12	12	6			
5880	coast live oak	X		fair	9					
5881	coast live oak	X		good	9					
5882	coast live oak	X		good	9					
5883	coast live oak	X		fair	6					
5884	coast live oak	X		good	14					
5885	coast live oak	X		fair	8					
5886	coast live oak	X		poor	9					
5887	coast live oak	X	X	poor	16	9	4			
5888	coast live oak	X		good	9	5				
5889	coast live oak	X		poor	6	6	4			
5890	coast live oak	X		good	9					
5891	coast live oak	X		fair	7					
5892	coast live oak	X	X	poor	11	10				
5893	coast live oak	X		good	10	7				
5894	coast live oak	X		poor	6					
5895	coast live oak	X		good	8					
5896	coast live oak	X		good	9					
5897	coast live oak	X		good	9					
5898	coast live oak	X		fair	7					
5899	coast live oak	X		fair	6					
5900	coast live oak	X	X	poor	14	8				
5901	coast live oak			fair	7	5				
5902	coast live oak		X	good	11	10	6			
5903	coast live oak		X	fair	11	9	8			
5904	coast live oak			fair	10					
5905	coast live oak			fair	8					
5906	coast live oak			good	7					
5907	coast live oak		X	good	10	10	6			
5908	black oak		X	good	6	6	4	4		
5909	coast live oak			good	10					
5910	coast live oak			fair	10					
5911	coast live oak	X	X	fair	14	10	8			

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5912	coast live oak	X		fair	9					
5913	coast live oak		X	poor	7	6	6			
5914	coast live oak			good	8					
5915	coast live oak			fair	11					
5916	coast live oak		X	fair	33					
5917	madrone	X		fair	11					
5918	madrone	X		good	7					
5919	coast live oak	X		good	8	6				
5920	coast live oak	X		good	10					
5921	coast live oak	X		good	7					
5922	coast live oak	X		good	8					
5923	madrone	X	X	poor	10	9				
5924	coast live oak	X		poor	7					
5925	coast live oak	X		good	13					
5926	coast live oak	X		poor	6					
5927	coast live oak	X		fair	8					
5928	coast live oak	X		fair	9					
5929	coast live oak	X		good	6	6	4			
5930	coast live oak	X		good	8					
5931	coast live oak	X	X	poor	12	8				
5932	coast live oak	X		poor	6					
5933	madrone	X	X	poor	12					
5934	coast live oak	X		good	9					
5935	coast live oak	X		good	7					
5936	coast live oak	X		fair	6					
5937	coast live oak	X		fair	6					
5938	coast live oak	X		good	7					
5939	coast live oak	X		poor	6					
5940	coast live oak	X		fair	6					
5941	coast live oak	X		good	8					
5942	coast live oak	X		good	8	7				
5943	coast live oak	X		good	11					
5944	coast live oak	X		poor	8					
5945	coast live oak	X		poor	6					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5946	coast live oak	X		good	16					
5947	coast live oak		X	fair	14	9				
5948	coast live oak	X		good	10					
5949	coast live oak	X		good	11					
5950	coast live oak	X		poor	12					
5951	coast live oak	X		good	10	6				
5952	coast live oak	X		good	9					
5953	coast live oak	X		good	9					
5954	coast live oak	X		poor	9					
5955	coast live oak	X		poor	7	6				
5956	coast live oak	X		good	15					
5957	coast live oak	X		good	10					
5958	coast live oak	X		poor	8					
5959	coast live oak	X		fair	12					
5960	coast live oak	X		poor	5					
5961	coast live oak	X		poor	8					
5962	coast live oak	X		poor	7					
5963	coast live oak	X		good	12					
5964	coast live oak	X		good	11					
5965	coast live oak	X		good	12					
5966	coast live oak	X		good	13					
5967	coast live oak	X		good	10					
5968	coast live oak	X		good	12					
5969	coast live oak	X		fair	8					
5970	coast live oak			good	14					
5971	coast live oak			good	8					
5972	coast live oak	X		poor	7					
5973	coast live oak			good	16					
5974	coast live oak	X		good	12					
5975	coast live oak	X		good	10					
5976	coast live oak	X		good	12					
5977	coast live oak	X	X	fair	14	5				
5978	coast live oak	X		fair	12	5				
5979	coast live oak	X		good	8	7				

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5980	coast live oak	X		good	10					
5981	coast live oak	X		good	10					
5982	coast live oak	X		fair	11					
5983	coast live oak	X		fair	8	7				
5984	coast live oak	X		good	8					
5985	coast live oak	X		fair	9					
5986	coast live oak	X		good	10					
5987	coast live oak	X		good	11					
5988	coast live oak	X		poor	6					
5989	coast live oak	X		poor	5					
5990	coast live oak	X		fair	10					
5991	coast live oak	X	X	poor	14	10				
5992	coast live oak	X		poor	7					
5993	coast live oak	X		poor	6					
5994	coast live oak	X		poor	8					
5995	coast live oak	X		poor	11					
5996	coast live oak	X		fair	7					
5997	coast live oak	X		good	9					
5998	coast live oak	X		good	8					
5999	coast live oak	X		poor	6					
6000	coast live oak	X		good	10					
6250	madrone	X		fair	9					
6259	madrone	X		good	10					
6260	madrone	X		good	8					
6261	coast live oak		X	good	15	12	11			
6262	coast live oak	X		fair	10					
6263	coast live oak	X		fair	8					
6264	coast live oak	X		good	12					
6265	coast live oak	X		fair	7					
6266	coast live oak	X		good	10					
6267	coast live oak	X		poor	6					
6268	coast live oak	X	X	poor	18	16	9			
6269	coast live oak	X	X	poor	12	11				
6270	coast live oak	X		poor	6					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6271	madrone	X	X	poor	13					
6272	coast live oak	X		fair	8					
6273	coast live oak	X		fair	7	6				
6274	coast live oak	X		good	12					
6275	coast live oak	X		good	10					
6276	valley oak	X	X	poor	7					
6277	coast live oak	X		poor	6					
6278	coast live oak	X		good	9					
6279	coast live oak	X	X	poor	12	7				
6280	coast live oak	X		fair	6					
6281	coast live oak	X		poor	6					
6282	coast live oak	X		poor	6					
6283	coast live oak	X		good	10					
6284	coast live oak	X		good	13					
6285	coast live oak	X		fair	7					
6286	coast live oak	X		good	7					
6287	madrone			good	11	4				
6288	coast live oak		X	fair	30	20	12			
6289	coast live oak			fair	6					
6290	coast live oak			good	9					
6291	coast live oak	X		good	7					
6292	coast live oak	X		poor	7					
6293	coast live oak			good	7					
6294	coast live oak		X	good	19	13				
6295	madrone		X	good	17	16				
6296	madrone			good	11					
6297	coast live oak	X		fair	6					
6298	coast live oak	X		fair	6					
6299	coast live oak	X		good	8					
6300	coast live oak	X		good	8					
6501	coast live oak	X		fair	8					
6502	coast live oak	X		good	7					
6503	coast live oak	X		fair	8					
6504	coast live oak	X		poor	6					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6505	coast live oak	X		good	9					
6506	coast live oak	X		good	7					
6507	coast live oak	X		fair	7	6				
6508	coast live oak	X		good	10	7				
6509	coast live oak	X		good	8					
6510	coast live oak	X	X	poor	12	10				
6511	coast live oak	X	X	poor	9	9	5			
6512	coast live oak	X		good	8	6				
6513	coast live oak	X	X	poor	12	10				
6515	coast live oak	X		fair	7					
6516	coast live oak	X		good	10					
6517	coast live oak	X		good	10					
6518	coast live oak	X		good	9	6				
6519	coast live oak	X		good	12					
6520	coast live oak	X		fair	9					
6521	coast live oak	X		good	15					
6522	coast live oak	X	X	fair	11	7				
6523	coast live oak	X		good	9					
6524	madrone	X	X	fair	14					
6525	coast live oak	X		good	12					
6526	coast live oak	X		good	8					
6527	coast live oak	X		fair	6					
6528	coast live oak	X		good	8	7				
6529	coast live oak	X		good	13					
6530	coast live oak	X		good	10					
6531	coast live oak	X		fair	6					
6532	coast live oak	X		good	8					
6533	coast live oak	X		good	12					
6534	coast live oak	X		fair	8					
6535	coast live oak	X		fair	8					
6536	coast live oak	X		good	9					
6537	coast live oak	X		good	8	8				
6538	coast live oak	X	X	poor	12	10	7			
6539	coast live oak	X	X	poor	14	9	6			

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6540	coast live oak	X		good	8					
6541	coast live oak	X		good	11					
6542	coast live oak	X		good	9	8				
6543	coast live oak	X		good	9					
6544	coast live oak	X		good	11					
6545	coast live oak	X		good	14					
6546	coast live oak	X		good	16					
6547	coast live oak	X		good	10					
6548	coast live oak	X		good	9					
6550	madrone	X	X	poor	12					
6551	coast live oak	X		good	9					
6552	madrone	X	X	good	9	4				
6553	coast live oak	X		good	16					
6554	coast live oak	X		good	15					
6555	coast live oak	X		good	6	6				
6556	black oak	X	X	poor	11	8				
6557	coast live oak	X		fair	9					
6558	coast live oak	X		good	9					
6559	coast live oak	X		good	7					
6560	coast live oak	X		good	10					
6561	coast live oak	X		poor	5	3				
6562	coast live oak	X		good	7	7				
6563	coast live oak	X		good	10					
6564	coast live oak	X		good	10					
6565	coast live oak	X	X	good	12	7				
6566	coast live oak	X		fair	7					
6567	coast live oak	X		good	9					
6568	coast live oak	X		good	7					
6569	coast live oak	X		good	13					
6570	coast live oak	X		good	7	5				
6572	coast live oak	X		good	8					
6573	coast live oak	X		good	9	8				
6574	coast live oak	X		good	8	8				
6575	coast live oak	X		good	8					

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TREE TABLE
The Arbors
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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6576	coast live oak	X		fair	6					
6577	coast live oak	X		good	7	7				
6578	coast live oak	X		fair	10					
6579	coast live oak	X		good	7					
6580	coast live oak	X		good	7	6				
6581	black oak	X		good	7	5				
6582	coast live oak	X		good	8					
6583	coast live oak	X		good	9					
6584	coast live oak	X		good	8	7				
6585	coast live oak	X		good	8	6				
6586	madrone			good	9					
6587	madrone			poor	5					
6588	coast live oak			fair	7	6				
6589	coast live oak			fair	7					
6590	coast live oak			good	9					
6591	coast live oak		X	good	8	7	5			
6592	coast live oak		X	good	13	9				
6593	coast live oak			fair	9					
6594	coast live oak			good	6					
6595	coast live oak		X	good	10	9				
6596	coast live oak			good	10					
6597	coast live oak	X		good	9					
6598	coast live oak		X	good	9	9	9	8	6	
6599	madrone			good	10					
6601	coast live oak			poor	9					
6602	coast live oak		X	good	10	9				
6603	coast live oak			poor	8					
6604	coast live oak			fair	7					
6605	coast live oak		X	good	10	9	9			
6606	coast live oak			good	7	5	5			
6607	coast live oak	X		good	7	7				
6609	coast live oak	X		good	5	5	5			
6610	coast live oak	X		good	6	5	4			
6611	coast live oak	X	X	fair	10	8	7			

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TREE TABLE
The Arbors
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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6612	coast live oak	X		poor	6					
6613	coast live oak	X		good	8					
6614	coast live oak	X		fair	7	6				
6615	coast live oak	X		good	6	5				
6616	coast live oak	X		good	7					
6617	coast live oak	X		good	6					
6618	coast live oak	X		good	5	5				
6619	coast live oak	X		fair	7					
6620	coast live oak	X	X	poor	10	9	7			
6621	coast live oak	X		poor	4	4				
6622	coast live oak			good	9	7				
6623	coast live oak			good	8	5				
6625	coast live oak	X		good	7					
6626	coast live oak	X		good	7					
6627	coast live oak	X		poor	4					
6628	coast live oak	X		poor	5					
6629	coast live oak			poor	8	4				
6631	coast live oak	X		poor	4					
6632	coast live oak	X		poor	6					
6633	coast live oak	X		poor	5					
6634	coast live oak	X		poor	4					
6635	coast live oak	X		poor	5					
6636	coast live oak	X		good	7					
6638	coast live oak	X		poor	5	4				
6640	coast live oak			fair	5	5	4			
6641	coast live oak			fair	6					
6642	coast live oak			good	7	6				
6643	coast live oak			good	7					
6644	coast live oak	X		good	4					
6645	coast live oak	X		fair	6					
6646	coast live oak	X		poor	4					
6647	coast live oak	X		fair	5					
6648	coast live oak	X		good	6					
6650	coast live oak	X		poor	7					

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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6651	coast live oak	X		poor	4	2	2			
6652	coast live oak	X		poor	5					
6653	coast live oak	X		poor	4					
6654	coast live oak	X		poor	4					
6655	coast live oak	X		poor	4					
6656	coast live oak	X		fair	7					
6657	coast live oak	X		poor	5					
6658	coast live oak	X		poor	5					
6659	coast live oak	X		poor	5					
6660	coast live oak	X		good	5					
6661	coast live oak	X		poor	7					
6662	coast live oak	X		fair	6					
6663	coast live oak	X		good	7					
6664	coast live oak	X		good	6					
6665	coast live oak	X		poor	4	3	3	2		
6666	coast live oak	X		poor	6					
6667	coast live oak	X		poor	6					
6668	coast live oak	X		poor	6					
6669	coast live oak	X		poor	6					
6670	coast live oak	X		fair	6					
6671	coast live oak	X		good	5	4				
6672	coast live oak	X		fair	6					
6673	coast live oak	X		fair	6					
6674	coast live oak	X		fair	7					
6675	coast live oak	X		good	7					
6676	coast live oak	X		poor	4	3				
6677	coast live oak	X		poor	4					
6678	coast live oak	X		poor	5					
6679	coast live oak	X		good	5					
6680	coast live oak	X		poor	7	5	4			
6681	coast live oak	X		poor	4	3	3	2		
6682	coast live oak	X		poor	4					
6683	coast live oak	X		poor	6					
6684	coast live oak			poor	6					

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TREE TABLE
The Arbors
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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6685	coast live oak	X		poor	6	5				
6686	coast live oak	X		poor	4					
6687	coast live oak	X		good	6					
6688	coast live oak	X		poor	4					
6689	coast live oak	X		poor	5					
6690	coast live oak	X		fair	6					
6691	coast live oak	X		poor	6					
6692	coast live oak	X		fair	5					
6693	coast live oak	X		good	4					
6694	coast live oak	X		fair	4					
6695	coast live oak			fair	5					
6696	coast live oak	X		poor	4					
6697	coast live oak	X		poor	4					
6698	coast live oak	X		good	6					
6699	coast live oak	X		poor	5					
6700	coast live oak	X		fair	6					
6701	coast live oak	X		poor	5					
6702	coast live oak	X		poor	6	5				
6703	coast live oak	X		poor	9					
6704	coast live oak	X		fair	6					
6705	coast live oak	X		fair	6					
6706	coast live oak	X		fair	7	3				
6707	coast live oak	X		fair	7					
6708	coast live oak	X		poor	6					
6709	coast live oak	X		poor	5					
6710	coast live oak	X		fair	10					
6711	coast live oak	X		fair	9					
6712	coast live oak	X		fair	8					
6713	coast live oak	X		fair	6					
6716	coast live oak	X		fair	4	4				
6717	coast live oak	X		fair	6					
6719	coast live oak	X		poor	6					
6720	coast live oak	X		poor	5					
6721	plum	X		fair	4	1				

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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6722	coast live oak	X		poor	5	2	1			
6723	coast live oak	X		poor	5					
6724	coast live oak	X		poor	5					
6725	coast live oak	X		fair	4					
6726	coast live oak	X		poor	5					
6727	coast live oak	X		poor	4					
6728	coast live oak	X		poor	6					
6729	coast live oak	X		poor	5	2				
6730	coast live oak	X		poor	4					
6731	coast live oak	X		fair	4					
6732	coast live oak	X		fair	7					
6733	coast live oak	X		poor	5					
6734	coast live oak	X		poor	5	2				
6735	coast live oak	X		fair	5					tag 617
6736	coast live oak	X		fair	7					
6737	coast live oak	X		fair	6					
6738	coast live oak	X		poor	5					
6739	coast live oak	X		fair	6	2				
6740	coast live oak	X		good	9					
6741	coast live oak	X		poor	5					
6742	valley oak	X	X	poor	7					
6743	coast live oak	X		fair	5					tag 621
6744	black oak	X		fair	6					
6745	coast live oak	X		fair	6					
6746	coast live oak	X		fair	3	3	3			
6747	coast live oak	X		fair	5	3	1			
6748	coast live oak	X		poor	5					big tree
6749	coast live oak	X		fair	6					
6750	coast live oak	X		good	7	5				
6751	coast live oak	X		fair	7					
6752	coast live oak	X		fair	6	3				
6753	coast live oak	X		fair	4					
6754	coast live oak	X		poor	4					
6755	coast live oak	X		fair	8					

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TREE TABLE
The Arbors
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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6756	coast live oak	X		poor	4					
6757	coast live oak	X		poor	5					
6758	coast live oak	X		fair	7	4	2			
6759	coast live oak	X		good	7					
6760	coast live oak	X		fair	8	6	2	1		
6761	coast live oak	X		poor	5					
6762	coast live oak	X		poor	4					
6763	coast live oak	X		poor	5					
6764	coast live oak			good	9	8				
6765	coast live oak			fair	6	1				
6766	coast live oak	X		poor	5					
6767	coast live oak	X		fair	9					
6768	coast live oak	X		fair	7					
6769	coast live oak	X		good	9	3				
6770	coast live oak	X		fair	7					
6771	coast live oak	X		fair	8					
6772	coast live oak	X		poor	5					
6773	coast live oak	X		fair	4	3	1			
6774	coast live oak	X		poor	7					
6775	coast live oak	X		poor	5					
6776	coast live oak	X		fair	6					
6777	coast live oak	X		poor	7					
6778	coast live oak	X		fair	7					
6779	coast live oak			fair	6					
6780	coast live oak	X		poor	5					
6781	coast live oak			poor	4					
6782	coast live oak			fair	5					
6783	coast live oak	X		fair	6					
6784	coast live oak	X		fair	5					
6785	coast live oak	X		fair	6					
6786	coast live oak	X		good	6	1				
6787	coast live oak	X	X	fair	13	5				
6789	coast live oak	X		fair	6					
6790	coast live oak	X		poor	7	6				

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TREE TABLE
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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6791	coast live oak			fair	7					
6792	coast live oak			poor	7	5				
6793	coast live oak		X	poor	10	10				
6794	coast live oak	X		good	7	6				
6795	coast live oak	X		fair	9	6				
6796	coast live oak	X		fair	7					
6797	coast live oak	X		fair	6					
6798	coast live oak	X		fair	8					
6799	coast live oak	X		good	7					
6800	coast live oak	X		good	9					
6801	plum	X		good	5					
6802	coast live oak	X		fair	7	4				
6803	coast live oak	X		fair	6	3				
6804	coast live oak	X		fair	5					
6805	coast live oak	X		good	7					
6806	coast live oak	X		good	7					
6807	coast live oak	X		poor	4					
6808	coast live oak	X		fair	7					
6809	coast live oak	X		good	8					
6810	coast live oak	X		good	6					
6811	coast live oak	X		fair	5					
6812	coast live oak	X		fair	8	4				
6813	coast live oak			good	5					
6814	coast live oak	X		good	7					
6815	coast live oak	X		good	7					
6816	coast live oak	X		good	7	6				
6817	coast live oak	X		good	9					
6818	coast live oak	X		good	7					
6819	coast live oak	X	X	fair	8	6	4			
6820	coast live oak	X		good	8					
6821	coast live oak			good	8	5	3			
6822	coast live oak			good	8					
6824	coast live oak			good	7					
6825	coast live oak			good	6	6				

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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6826	coast live oak			good	5					
6827	coast live oak			good	5					
6828	coast live oak	X		fair	6	6				
6829	coast live oak	X		good	5	3	2			
6830	coast live oak	X		fair	7					
6831	coast live oak	X		good	3	3	3			
6832	coast live oak	X		good	5					
6833	coast live oak	X		good	3	3	3			
6834	coast live oak	X		good	4	3				
6835	coast live oak	X		good	6	4				
6837	coast live oak	X		good	8					
6838	coast live oak	X		good	5					
6839	coast live oak	X		good	7					
6840	coast live oak	X		good	4	3	3			
6841	coast live oak	X		fair	5	4				
6842	coast live oak	X		good	6	5	5			
6843	coast live oak	X		fair	4					
6844	coast live oak	X		good	5					
6845	coast live oak	X		good	7					
6846	coast live oak	X		good	6	3	2			
6847	coast live oak	X		good	6	5				
6848	coast live oak	X		good	6	5				
6849	coast live oak	X		good	7	3				
6850	coast live oak	X		fair	6					
6851	coast live oak	X		good	7					
6901	coast live oak	X		fair	4					
6902	coast live oak	X		good	8	5	2			
6903	coast live oak	X		poor	6					
6904	coast live oak	X		fair	9					
6905	coast live oak	X		fair	6					
6906	coast live oak	X		good	8					
6907	coast live oak	X		poor	5					
6908	coast live oak	X		good	9					
6909	coast live oak	X		fair	6					

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Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6911	coast live oak	X		poor	4					
6912	coast live oak	X		poor	5					
6913	coast live oak	X		good	10					
6914	coast live oak	X		fair	5	5	2			
6915	coast live oak	X		fair	4	3				
9000	coast live oak	X		fair	5					
9001	coast live oak	X		fair	7					
9002	coast live oak			fair	7					
9003	coast live oak		X	fair	11	7	5			
9005	coast live oak	X		good	8					
9006	black oak	X		good	7					
9007	coast live oak	X		good	5					
9013	coast live oak	X		fair	5					
9014	coast live oak	X		fair	5					
9015	coast live oak			fair	5					
10000	coast live oak	X		fair	7					
10001	madrone			good	6					
10002	coast live oak			good	6					
10003	coast live oak	X		poor	5					
10004	coast live oak	X		fair	6					
10005	coast live oak	X		fair	6					
10006	coast live oak	X		fair	7					
15214	coast live oak			fair	5					
15216	coast live oak	X		fair	5					
15218	coast live oak			fair	5					
15220	coast live oak	X		fair	4					
15221	coast live oak	X		good	8					
15223	coast live oak	X		good	5					
15224	coast live oak	X		good	5					
15225	coast live oak	X		good	4					
15226	coast live oak	X		fair	6					
15227	coast live oak	X		fair	4					
15228	coast live oak	X		good	5					
15229	coast live oak	X		good	5					

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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15230	coast live oak		X	poor	12	9				
15231	coast live oak			fair	5					
15232	coast live oak	X		fair	5					
15233	coast live oak	X		fair	4					
15234	coast live oak	X		good	12					
15235	coast live oak	X		fair	8					
15236	coast live oak	X		poor	8					
15273	coast live oak	X		fair	4					
15274	coast live oak	X		fair	4					
15275	coast live oak	X		fair	5					
15276	coast live oak	X		fair	4					
15277	coast live oak	X		fair	5					
15278	coast live oak			fair	4					
15279	coast live oak			poor	5					
15280	coast live oak			fair	4					
15281	coast live oak	X		fair	5	4	4			
15282	coast live oak	X		fair	4					
15283	valley oak	X		fair	4					
15284	coast live oak	X		poor	4					
15285	madrone	X		fair	5					
15286	coast live oak	X		poor	4					
15287	coast live oak	X		poor	5					
15288	coast live oak	X		fair	5					
15289	coast live oak	X		fair	5					
15290	coast live oak	X		fair	5					
15291	coast live oak	X		fair	5					
15292	coast live oak	X		fair	4					
15293	coast live oak	X		poor	5					
15294	coast live oak	X		fair	5					
15295	coast live oak	X		fair	4					
15296	coast live oak	X		poor	4					
15297	coast live oak	X		fair	5					
15298	coast live oak	X		poor	4					
15299	coast live oak	X		poor	5					

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TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15300	coast live oak	X		fair	4					
15301	coast live oak	X		fair	4					
15302	coast live oak	X		fair	4					
15303	coast live oak	X		poor	5					
15304	coast live oak	X		poor	4					
15305	coast live oak	X		poor	4					
15306	coast live oak	X		fair	4					
15307	coast live oak	X		fair	4					
15308	coast live oak	X		poor	5					
15309	coast live oak	X		poor	4					
15310	coast live oak	X		fair	5					
15311	coast live oak	X		poor	5					
15312	coast live oak	X		fair	4					
15313	coast live oak	X		fair	5					
15314	coast live oak	X		good	5					
15315	coast live oak	X		good	6					
15316	coast live oak	X		good	5					
15317	coast live oak	X		good	6					
15318	coast live oak	X		good	4					
15319	coast live oak	X		good	6					
15320	coast live oak	X		good	7	4				
15321	coast live oak	X		fair	4					
15322	coast live oak	X		good	6					
15323	coast live oak	X		good	5					
15324	coast live oak	X		good	5					
15325	coast live oak	X		good	5					
15326	coast live oak	X		fair	4					
15327	madrone	X		good	4					
15328	coast live oak	X		fair	4					
15329	coast live oak	X		good	5					
15330	coast live oak	X		fair	4					
15331	coast live oak	X		fair	5					
15332	coast live oak	X		fair	5					
15333	coast live oak	X		fair	5					

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Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15334	coast live oak	X		fair	5					
15335	coast live oak	X		poor	4					
15336	coast live oak	X		fair	5					
15337	coast live oak	X		fair	4					
15338	coast live oak	X		fair	4					
15339	coast live oak			fair	4	4				
15341	coast live oak	X		good	4					
15342	coast live oak			fair	4					
15343	coast live oak			good	4					
15344	coast live oak			fair	6	5				
15345	coast live oak			fair	4					
15346	coast live oak			good	7					
15347	coast live oak			good	7					
15348	coast live oak			good	6					
15349	coast live oak	X		good	5					
15350	coast live oak	X		good	5					
15351	coast live oak	X		good	4					
15352	coast live oak			fair	5					
15353	coast live oak			fair	5					
15354	coast live oak	X		good	6					
15355	coast live oak			good	5					
15356	coast live oak	X		fair	6	5				
15357	coast live oak	X		fair	6	4				
15358	coast live oak	X		fair	6					
15359	coast live oak	X		fair	5					
15360	coast live oak		X	fair	12	11				
15361	coast live oak			poor	7					
15362	coast live oak			fair	5					
15363	coast live oak	X		fair	8					
15364	coast live oak	X		fair	5					
15365	coast live oak	X		fair	8					
15366	coast live oak	X		fair	11	5				
15367	coast live oak	X		good	10					
15368	coast live oak		X	fair	8	6	6	5		

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15369	coast live oak			fair	13					
15370	coast live oak			fair	16					
15371	coast live oak	X		poor	6					
15372	coast live oak	X		good	7	7				
15373	coast live oak	X		good	9					
15374	coast live oak	X		good	8					
15375	coast live oak	X		fair	11					
15376	coast live oak	X		fair	7					
15377	coast live oak	X		poor	5					
15378	coast live oak	X		fair	6					
15379	coast live oak	X		fair	6	6				
15380	coast live oak	X		poor	4	4				
15381	coast live oak			good	11					
15382	coast live oak	X		good	7					
15383	coast live oak			good	8					
15384	coast live oak	X		good	11					
15385	coast live oak	X		poor	7					
15386	coast live oak	X		poor	5					
15387	coast live oak	X		fair	8	7				
15388	coast live oak			fair	7					
15389	coast live oak			fair	7					
15390	coast live oak	X		poor	5					
15391	coast live oak	X		fair	7	5				
15392	coast live oak			fair	6					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15393	coast live oak			poor	8					
15394	coast live oak			fair	4					
15395	coast live oak	X		fair	5					
15396	coast live oak			fair	13					
15397	coast live oak			good	8	5				
15398	coast live oak			fair	7					
15399	coast live oak			fair	9					
15400	coast live oak			good	7					
15457	coast live oak	X		fair	5					
15458	coast live oak	X		fair	4	5				
15459	coast live oak	X		fair	6					
15460	coast live oak			good	8					
15461	coast live oak		X	fair	8	6	5			
15462	coast live oak	X		good	8	6				
15464	coast live oak			good	14					
15465	coast live oak			good	8					
15466	coast live oak		X	good	18	7				
15467	coast live oak			good	9	6				
15468	coast live oak			good	10					
15469	coast live oak			good	9	2				
15470	coast live oak	X		fair	9	7				
15501	coast live oak	X		fair	6	5	4			
15502	coast live oak	X		fair	6					
15503	coast live oak	X		poor	4					
15504	coast live oak	X		fair	4					
15505	coast live oak			good	12					
15506	coast live oak			fair	4					
15507	coast live oak			good	11					
15508	coast live oak		X	fair	12	11	8			
15509	coast live oak			good	12					
15510	coast live oak			fair	8					
15511	madrone			fair	8					
15512	coast live oak			fair	5					
15513	coast live oak			fair	8					

TABLE A
TREE TABLE
The Arbors
Santa Rosa, California

Tree No.	Species	Remove	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15514	coast live oak			fair	5					
15515	coast live oak			good	14					
15516	coast live oak		X	good	14	12				
15517	coast live oak			fair	6					
15518	coast live oak			good	9					
15519	coast live oak			good	6					
15520	coast live oak			fair	7					
15521	coast live oak			good	13					
15522	coast live oak			good	10					
16192	coast live oak			good	12					
16193	coast live oak			good	11					
16194	coast live oak			good	12					
16195	coast live oak			good	10					
16196	coast live oak			fair	10					
16197	coast live oak			good	14					
16198	coast live oak			good	10					
16199	coast live oak			fair	5					
16200	coast live oak			good	10					

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July 8, 2009

Mr. Jack Chamberlain
Chamberlain Lake Park LLC
655 Skyway Road, Suite 230
San Carlos, CA 94070

RE: The Arbors Project, 3500 Lake Park Drive, Santa Rosa, CA
APN 173-270-005; File No. MJ07-016

Dear Mr. Chamberlain:

This letter report provides the final and complete results of surveys conducted from March to June 2009 for special status plants for The Arbors project site located at 3500 Lake Park Drive in Santa Rosa, Sonoma County, California. This report updates the May 19, 2009 report and includes an updated plant species list.

SITE DESCRIPTION

The project area is located in Section 11 of the Santa Rosa 7.5-minute topographic quadrangle, within Township 7N and Range 8W. The property is approximately 5.69 acres in size and the assessor parcel number is 173-270-005. The Arbors project is located on the south side of Lake Park Drive. The site is bounded on the east by residential development, on the south by Russell Creek, on the west by open lands and Bicentennial Way and on the north by residential development. The surrounding land uses consist of mainly of urban and residential development. The Arbors is part of the larger 70-acre Nielsen Ranch which includes existing development west and northwest of the site and proposed development on the western portion of the site. The Arbors proposed project includes subdividing the 5.69 acres into 37 lots for 37 single family attached homes. The proposed lot sizes range from 1,648 square feet to 7,290 square feet with an average lot size of 2,638 square feet. Access to 35 of the new lots would be provided via a new private loop street, Arbor Circle, which would connect with Lake Park Drive.

Approximately 72% (4.06 acres) is proposed for development with a private open space of 1.54 acres on the south side of the parcel that will be contiguous with the privately owned permanent open space Russell Creek parcel of 3.63 acres. The surrounding area is transitioning from an undeveloped hillside area to residential developments. The approved Bicentennial Estates II, located west of the Arbors, at 3450 and 3551 Lake Park Drive, is an 8.03- acre parcel that will be subdivided into 12 single family lots and two duplex lots. Single family detached residential uses occur to the east and north and the public Russell Creek trail occurs on the south and east side of the parcel.

METHODS

Prior to fieldwork an initial query was conducted from the On-line 7th Edition of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2009) and the California Natural Diversity Database (CNDDB 2009) for the records of special-status plant species within the Santa Rosa USGS quad and the eight surrounding contiguous quadrangles. These include the Mark West Springs, Calistoga, Kenwood, Glen Ellen, Cotati, Two Rock, Sebastopol and Healdsburg quadrangles. From this

query it was determined that 76 special status plant species have potential to occur on the project site based on the presence of potential habitat. A list of special status plants that could potentially occur in the area based on the CNDDB and CNPS data base searches is provided as Attachment A.

Surveys were conducted by Geri Hulse-Stephens, botanist, as subconsultant to Jane Valerius Environmental Consulting on March 16, April 10, May 9, June 8 and June 25, 2009. As required by the California Department of Fish & Game (CDFG) guidelines (CDFG 2000) Ms. Valerius and Ms. Hulse-Stephens are both botanists with extensive experience conducting floristic field surveys and with knowledge of plant taxonomy and plant community ecology and are familiar with the plants of the Santa Rosa and Sonoma County area including rare, threatened and endangered species. Surveys conducted for special status plants surveys for the project were floristic in nature and took into account all vascular plant species encountered. A list of plant species observed during the spring to summer surveys is provided as Attachment B. The entire project site was walked on foot and covered thoroughly so that all representative habitat types, topographic features and aspects were investigated. Plant communities occurring on the site are also described. Surveys were conducted in the field at the proper time of year when rare, threatened or endangered species were both evident and identifiable.

RESULTS

A total of 136 plant species representing 32 families were identified during the spring to summer surveys. A list of plant species observed is provided as Attachment B. The site has a rich diversity of plant species, however 68 species, or 50% of the total number of plant species are non-native plants. Several of these species are considered to be invasive and include English ivy (*Hedera helix*), Italian thistle (*Carduus pycnocephalus*), Napa thistle (*Centaurea melitensis*), French broom (*Genista monspessulana*), subterranean clover (*Trifolium subterraneum*), Himalayan blackberry (*Rubus discolor*), and medusa head grass (*Taeniatherum caput-medusae*). However, 50% of the plant species are natives including 5 species of oaks: coast live oak (*Quercus agrifolia*), Garry oak (*Quercus garryana* var. *garryana*), black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*) and interior live oak (*Quercus wislizeni*). The other native tree species on the site is madrone (*Arbutus menziesii*). Native shrubs and vines include poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), honeysuckle (*Lonicera hispidula* var. *vacillans*), blue elderberry (*Sambucus mexicana*), snowberry (*Symphoricarpos albus* var. *laevigatus* and *S. mollis*), manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), toyon (*Heteromeles arbutifolia*) and California blackberry (*Rubus ursinus*). Three species of fern were also observed: bracken fern (*Pteridium aquilinum*), goldenback fern (*Pentagramma triangularis* ssp. *triangularis*) and wood fern (*Dryopteris arguta*). Notable native forb species include Kellogg's yampa (*Perideridia kelloggii*), yarrow (*Achillea millefolium*), mule's ears (*Wyethia angustifolia* and *W. glabra*), rancher's fireweed (*Amsinckia menziesii* var. *intermedia*), lupines (*Lupinus bicolor* and *L. nanus*), checkermallow (*Sidalcea diploscypha*), sun cup (*Camissonia ovata*), miner's lettuce (*Claytonia perfoliata*), bird's-beak (*Cordylanthus pilosus*), iris (*Iris macrosiphon*), blue-eyed grass (*Sisrynchium bellum*), brodiaea (*Brodiaea elegans*), yellow mariposa (*Calochortus luteus*), soap plant (*Chlorogalum pomeridianum* var. *pomeridianum*), blue dicks (*Dichelostemma capitatum* ssp. *capitatum*), and white brodiaea (*Triteleia hyacinthina*). In addition three species of sedge and three species of rush occur on the site: clustered field sedge (*Carex praegracilis*), foothill sedge (*Carex tumulicola*), nut-grass (*Cyperus eragrostis*), common rush (*Juncus patens*), western rush (*Juncus occidentalis*), and slender rush (*Juncus tenuis*).

Plant communities that occur on the site are oak woodland and non-native annual grassland which are described in detail below. Within the non-native annual grassland are patches of native perennial grasses, specifically California oatgrass (*Danthonia californica*) and purple needlegrass (*Nasella pulchra*). California Oatgrass Bunchgrass Grassland and Purple Needlegrass Grasslands are special community types as designated by the California Department of Fish and Game (CDFG) on their List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database (CDFG 2003).

California oatgrass and purple needlegrass occur as small patches within the overall non-native annual grassland and constituent a very small percentage of the overall project area. Areas with California oatgrass and purple needlegrass also occur in the open space areas within the property boundary and adjacent public and private open space so that even though there would be some loss from the project development these two native perennial grasses, along with other native species, will be preserved in the open space areas. As a note, of the 25 grass species on the site 19 of them are non-native. Native grasses on the site are California brome (*Bromus carinatus* ssp. *carinatus*), California oatgrass, slender hairgrass (*Deschampsia elongata*), blue wildrye (*Elymus glaucus ssp. glaucus*), meadow barley (*Hordeum brachyantherum* ssp. *brachyantherum*) and purple needlegrass. Please refer to Attachment B for a list of all plant species observed.

Oak woodland

The oak woodland community on the project site is equivalent to the Coast Live Oak Series as described by The Manual of California Vegetation (Sawyer and Keeler-Wolf 1995). More than three quarters of the The Arbors project area is comprised of oak woodland. The dense woodland canopy is dominated by coast live oak with some madrone and black oak in the woodland composition. Other oak species that occur in this community type are Oregon or Garry oak, valley oak, and interior live oak.

The understory vegetation within the oak woodland is sparsely covered with poison oak near the edges of the canopy. Where the understory is more open Italian thistle is very common and abundant. The outer edges of the woodland are bordered by shrubs including coyote brush and French broom. French broom is an invasive weed and it is evident from aerial photographs of the site that this species is extending into grasslands from the edges of the woodlands. Many seedlings were observed underneath and at the edges of these newer stands. Valley oak occurs along a swale with an understory of Himalayan blackberry, California blackberry and poison oak. As mentioned above, 50% of the plants on the site are native and 50% are non-native. There is a high diversity of plant species on the project site with many of them being natives. Unfortunately the non-natives also comprise a significant portion of the plant species diversity and of the overall understory vegetation cover.

Coast live oak series is not listed as a special community type as designated by the CDFG on their List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database (CDFG 2003) and is therefore not considered to be a vegetation community that is either known or believed to be of high priority of inventory in the CNDDB. Senate Bill 1334, the Oak Woodlands Conservation Act, became law on January 1, 2005, and was added to the CEQA statutes as Section 21083.4. This law protects oak woodlands that are not protected under the State Forest Practice Act. This act imposes requirements on counties when determining what environmental document must be prepared for a project over which the county has jurisdiction. Because The Arbors project is within the City of Santa Rosa its approval is within the jurisdiction of the City, rather than Sonoma County. Consequently, the Oak Woodlands Conservation Act does not apply to this proposed development decision. Based on the mitigated negative declaration (MND) prepared by the City of Santa Rosa for this project, compensation for the loss of oak woodland will be through the replacement as described in the Tree Mitigation Plan (City of Santa Rosa 2008). The Tree Mitigation Plan is based on the Arborist Report for The Arbors prepared by Ralph Osterling and Consultants revised on January 14, 2002.

Annual Grassland

The annual grassland community on the project site is equivalent to the California Annual Grassland type described in The California Manual of Vegetation (Sawyer and Keeler-Wolf 1995). This vegetation type occurs in grassy openings along Lake Park Drive especially on the fill slope below Lake Park Drive across from Bella Vista Way and on the slope above the trailhead to the east as well as parts of the grasslands to the south of the project area. The dominant species in this habitat is oat grass (*Avena sativa*). Other non-native or exotic grasses such as big quaking grass (*Briza maxima*), soft chess (*Bromus*

hordaceus) and Italian rye (*Lolium multiflorum*) are included in this plant community. The herbaceous plants within this grassland are primarily exotic herbs and include white-stemmed filaree (*Erodium bothrys*), rose clover (*Trifolium hirtum*), crimson clover (*Trifolium incarnatum*) and spring vetch (*Vicia sativa* ssp. *sativa*). Native herbs observed in this plant community were blue-eyed grass, miniature lupine and sky lupine.

Bordering the oak woodland to the north and south and within the narrow opening in the woodland are areas with perennial native grasses. The native grasses occur where soils have not been disturbed by fill from road building. Native grasses found in this limited area include purple needlegrass, California oatgrass and blue wild rye. The non-native annual grasses are mixed in with the native grasses and since the areas with native grasses are so small they have not been separated out from the annual grassland type. As described above non-native/exotic grasses include soft chess, Italian rye and slender wild oat (*Avena barbata*). Native forbs include California buttercup (*Ranunculus californica)* slender cottonweed (*Micropus californicus*), purple sanicle (*Sanicula bipinnidafida*) rattlesnake weed (*Daucus pusillus*), yarrow and *Plantago erecta*. The exotic herbs included in this community are white-stemmed filaree and Shepard's needle (*Scandix pectens-veneris*). On the south border of this area above the improved trail is a dense stand of narrow-leaved mule ears (*Wyethia angustifolia*). As mentioned above, French broom has expanded into narrow strips of grassland and along the edges of the grasslands evidenced by the presence of young shrubs and dense patches of seedlings.

Special-Status Plants

Surveys were conducted in March 16, April 10, May 6, June 8 and June 25, 2009. These survey dates cover the flowering period of all the special status plant species that could potentially occur on the site based on a 9-quadrangle search of the CNDDB and CNPS on-line electronic inventory and the presence of potential habitat. No special status plant species have been identified on the project site.

Surveys were conducted in accordance with CDFG guidelines and are in compliance with these guidelines and with the standard protocol for conducting plant surveys. A separate arborist report was prepared that identifies each of the trees on the site and provides and inventory and analysis of the health and vigor of the tree species. Please refer to this report for details regarding the trees on the site.

SUMMARY AND CONCLUSION

Surveys conducted in March, April, May and June of 2009 did not find any special status plants on the site and no special status plants are expected to occur on the project site. The loss of oak woodland will be compensated by replacing trees in accordance with Title 17-24.050(C) of the Municipal Code as described in the Initial Study/Mitigated Negative Declaration (City of Santa Rosa 2008). The project includes 1.54 acres of private open space on the south side of the parcel that will be contiguous with the City-owned Russell Creek parcel of 3.63 acres. The open space areas will preserve oak woodland and grassland areas within the project property boundary and within the overall Nielsen Ranch Planned Community. A total of approximately 10 acres of open space will be preserved within the planned community area and includes the Francis Nielsen park that also includes a lake. I hope this information is helpful. If you have any questions, please do not hesitate to contact me.

Sincerely,

Jane Valerius

Jane Valerius, Botanist

Attachments

REFERENCES

California Department of Fish & Game (CDFG). 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. State of California, The Resources Agency, Department of Fish and Game. Dated December 9, 1983, Revised May 8, 2000.

California Natural Diversity Database (CNDDB). 2009. Reported occurrences for the Santa Rosa and surrounding 7.5-minute topographic USGS quadrangles. California Department of Fish & Game, Sacramento, CA.

California Native Plant Society (CNPS). 2009. On-line 7th Edition of the Inventory of Rare and Endangered Plants of California. www.cnps.org

City of Santa Rosa. 2008. The Arbors, 3500 Lake Park Drive, Santa Rosa, CA (Sonoma County), Assessor's Parcel No. 173-270-005, Initial Study/Mitigated Negative Declaration. Lead Agency: City of Santa Rosa, Community Development Department, Santa Rosa, CA. November 20, 2008.

Attachment A.
Special status plant species that could potentially occur within The Arbors Project Site based on a review of the CNDDB and CNPS Electronic Inventory for the Santa Rosa and surrounding USGS quadrangles (2009).

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Allium peninsulare var. *franciscanum* Franciscan onion	-/-/L1B	May-June	Cismontane woodland, grassland/clay, volcanic, often serpentine	Not present. Not observed during surveys.
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE/-/L1B	May-July	Marshes & swamps (freshwater), riparian scrub.	No habitat on site. Not observed during surveys.
Amorpha californica var. *napensis* Napa false indigo	-/-/L1B	April-July	Broadleafed upland forest (openings), chaparral, cismontane woodland.	Not present. Not observed during surveys.
Anomobryum julaceum	-/-/L2		Broadleafed upland forest, lower montane coniferous forest/ damp rock and soil on outcrops, usually on roadcuts.	Not present. Not observed during surveys.
Arctostaphylos canescens ssp. *sonomensis* Sonoma canescent manzanita	-/-/L1B	January-June	Chaparral, lower montane coniferous forest-sometimes serpentinite.	Not present. Not observed during surveys.
Arctostaphylos densiflora Vine Hill manzanita	-/CE/L1B	February-April	Chaparral (acid marine sand).	No habitat on site. Not observed during surveys.
Arctostaphylos stanfordiana ssp. *decumbens* Sonoma canescent manzanita	-/-/L1B	February-April	Chaparral (rhyolitic), cismontane woodland.	Not present. Not observed during surveys.
Astragalus breweri Brewer's milkvetch	-/-/L4	April-July	Chaparral (openings), cismontane woodland, grassland/ serpentinite or volcanic, rocky, clay.	Not present. Not observed during surveys.
Astragalus claranus Clara Hunt's milk-vetch	FE/CT/L1B	March-May	Grassland/serpentinite or volcanic, rocky clay.	Not present. Not observed during surveys..
Balsamorhiza macrolepis var. *macrolepis* Big scale balsamroot	-/-/L1B	March-June	Grassland/sometimes serpentinite.	Not present. Not observed during surveys.
Blennosperma bakeri Sonoma sunshine	FE/CE/1B	March-May	Mesic grasslands and vernal pools.	No habitat on site. Not observed during surveys.
Brodiaea californica var. *leptandra* Narrow-anthered California brodiaea	-/-/L1B	May-July	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, grassland/volcanic.	Not present. Not observed during surveys.

Attachment A (continued)

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Calamagrostis bolanderi Bolander's reed grass	-/-/L4	May-August	Bogs and fens, broadleafed upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps, marshes and swamps (freshwater), North Coast coniferous forest/mesic.	No habitat on site. Not observed during surveys.
Calamagrostis crassiglumis Thurber's reed grass	-/-/L2	May-July	Coastal scrub (mesic); marshes & swamps (freshwater)	No habitat on site. Not observed during surveys.
Calamagrostis ophitidis Serpentine reed grass	-/-/L4	April-July	Chaparral, lower montane coniferous forest, meadows and seeps, grassland (vernally mesic)/ serpentinite, rocky.	No habitat on site. Not observed during surveys.
Calandrinia breweri Brewer's calandrinia	-/-/L4	March-June	Chaparral, coastal scrub, sandy or loamy, disturbed sites and burns.	No habitat on site. Not observed during surveys.
Calystegia collina ssp. *oxyphylla* Mt. Saint Helena morning-glory	-/-/L4	April-June	Chaparral, lower montane coniferous forest, grassland/ serpentinite.	No habitat on site. Not observed during surveys.
Campanula californica Swamp harebell	-/-/L1B	June-October	Bogs and fens, closed cone coniferous forest.	No habitat on site. Not observed during surveys.
Carex albida Sonoma white sedge	FE/CE/L1B	May-July	Bogs and fens, marshes and swamps (freshwater).	No habitat on site. Not observed during surveys.
Castilleja uliginosa Pitkin Marsh Indian paintbrush	-/CE/L1A	June-July	Marshes and swamps (freshwater).	No habitat on site. Not observed during surveys.
Ceanothus confusus Rincon Ridge ceanothus	-/-/L1B	February-June	Closed-cone coniferous forest, chaparral, cismontane woodland/volcanic or serpentinite.	No species of *Ceanothus* observed on the site. Not observed during surveys.
Ceanothus divergens Calistoga ceanothus	-/-/L1B	February-March	Chaparral (serpentinite or volcanic, rocky).	No species of *Ceanothus* observed on the site. Not observed during surveys.
Ceanothus foliosus var. *vineatus* Vine Hill ceanothus	-/-/L1B	March-May	Chaparral.	No species of *Ceanothus* observed on the site. Not observed during surveys.

Attachment A (continued)

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Ceanothus purpureus Holly-leaved ceanothus	-/-/L1B	February-June	Chaparral, cismontane woodland/volcanic, rocky.	No species of *Ceanothus* observed on the site. Not observed during surveys.
Ceanothus sonomensis Sonoma ceanothus	-/-/L1B	February-April	Chaparral (sandy, serpentinite or volcanic).	No species of *Ceanothus* observed on the site. Not observed during surveys.
Centromadia parryi ssp. *parryi* Pappose tarplant	-/-/L1B	May-November	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), grassland (vernally mesic)/often alkaline.	Not present. Not observed during surveys. Typical habitat not present on site.
Chorizanthe valida Sonoma spineflower	FE/CE/L1B	June-August	Coastal prairie (sandy).	Not present. Not observed during surveys.
Clarkia imbricata Vine Hill clarkia	FE/CE/L1B	June-August	Chaparral, grassland/acidic sandy loam.	Not present. Not observed during surveys.
Cordylanthus tenuis ssp. *capillaris* Pennell's bird's-beak	FE/CR/L1B	June-September	Closed-cone coniferous forest, chaparral/serpentinite.	Not present. Not observed during surveys.
Delphinium luteum Golden larkspur	FE/CR/L1B	March-May	Chaparral, coastal prairie, coastal scrub/ rocky.	Not present. Not observed during surveys. Typical habitat not present on site.
Downingia pusilla Dwarf downingia	-/-/L2	March-May	Grassland (mesic), vernal pools.	Not present. Not observed during surveys. Typical habitat not present on site.
Erigeron biolettii Streamside daisy	-/-/L3	June-October	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest/rocky, mesic.	Not present. Not observed during surveys.
Erigeron serpentinus Serpentine daisy	-/-/L1B	May-August	Chaparral (serpentinite, seeps).	Not present. Not observed during surveys. Typical habitat not present on site.
Eryngium constancei Loch Lomond button-celery	FE/CE/L1B	April-June	Vernal pools.	No habitat on site. Not observed during surveys.
Eryngium pinnatisectum Tuolumne button-celery	-/-/L1B	May-August	Cismontane woodland, lower montane coniferous forest, venal pools/ mesic.	Not present. Not observed during surveys. Typical habitat not present on site.

Attachment A (continued)

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Fritillaria liliacea Fragrant fritillary	-/-/L1B	February-April	Grassland/often serpentinite.	Not present. Not observed during surveys.
Gilia capitata ssp. *tomentosa* Woolly-headed gilia	-/-/L1B	May-July	Coastal bluff scrub (rocky, outcrops).	Not present. Not observed during surveys. Typical habitat not present on site.
Hemizonia congesta ssp. *congesta* Seaside tarplant	-/-/L1B	April-November	Grassland-sometimes roadsides.	Not present. Not observed during surveys.
Horkelia tenuiloba Thin-lobed horkelia	-/-/L1B	May-July	Broadleafed upland forest, chaparral, grassland/mesic openings, sandy.	Not present. Not observed during surveys. Typical habitat not present on site.
Lasthenia burkei Burke's goldfields	FE/CE/1B	April-June	Meadows and seeps (mesic), vernal pools.	Not present. Not observed during surveys. Typical habitat not present on site.
Lasthenia californica ssp. *bakeri* Baker's goldfields	-/-/L1B	April-October	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps.	Not present. Not observed during surveys. Typical habitat not present on site.
Lasthenia conjugens Contra Costa goldfields	FE/-/L1B	March-June	Cismontane woodland, playas (alkaline), grassland, vernal pools/mesic.	Not present. Not observed during surveys. Typical habitat not present on site.
Layia septentrionalis Colusa layia	-/-/L1B	April-May	Chaparral, cismontane woodland, grassland/sandy, serpentintie.	Not present. Not observed during surveys. Typical habitat not present on site.
Legenere limosa Legenere	-/-/L1B	April-June	Vernal pools	Not present. Not observed during surveys. Typical habitat not present on site.
Leptosiphon jepsonii Jepson's leptosiphon	-/-/L1B	March-May	Chaparral, cismontane woodland – usually volcanic	Not present. Not observed during surveys.
Lessingia hololeuca Woolly-headed lessingia	-/-/L3	June-October	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, grassland/clay, serpentinite.	Not present. Not observed during surveys.

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Lilium pardalinum ssp. *pitkinense* Pitkin Marsh lily	FE/CE/L1B	June-July	Cismontane woodland, meadows and seeps, marshes and swamps (freshwater)/mesic, sandy.	Not present. Not observed during surveys.
Limnanthes vinculans Sebastopol meadowfoam	FE/CE/1B	April-May	Meadows and seeps, grasslands, vernal pools/ vernally mesic.	No habitat on site. Not observed during surveys.
Lomatium repostum Napa lomatium	-/-/L4	March-June	Chaparral, cismontane woodland, serpentinite.	No habitat on site (no serpentinite). Not present. Not observed during surveys.
Lotus formosissimus Harlequin lotus	-/-/L4	March-July	Broadleafed upland forest, coastal bluff scrub, closed cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, grassland, wetlands, roadsides.	Not present. Not observed during surveys.
Lupinus sericatus Cobb Mountain lupine	-/-/L1B	March-June	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest.	Not present. Not observed during surveys.
Mertensia bella Oregon lungwort	-/-/L2	May-July	Meadows and seeps, upper montane coniferous forest/mesic.	Not present. Typical habitat not present. Not observed during surveys.
Micropus amphibolus Mt. Diablo cottonweed	-/-/L3	March-May	Broadleafed upland forest, chaparral, cismontane woodland, grassland/rocky.	Not present. Not observed during surveys.
Microseris paludosa Marsh microseris	-/-/L1B	April-June	Closed-cone coniferous forest, cismontane woodland.	Not present. Not observed during surveys.
Monardella villosa ssp. *globosa* Robust monardella	-/-/L1B	June-July	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, coastal scrub, grassland.	Not present. Not observed during surveys.
Monardella viridis ssp. *viridis* Green monardella	-/-/L4	June-September	Broadleafed upland forest, chaparral, cismontane woodland.	Not present. Not observed during surveys.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	-/-/1B	May-July	Cismontane woodland, lower montane coniferous	Not present. Typical habitat not present. Not observed during

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
			forest, meadows and seeps, grasslands, vernal pools/mesic.	surveys.
Navarretia leucocephala ssp. *plieantha* Many-flowered navarretia	FE/CE/L1B	May-June	Vernal pools (volcanic ash flow)	No habitat on site. Not observed during surveys.
Penstemon newberryi var. *sonomensis* Sonoma beardtongue	-/-/L1B	April-August	Chaparral (rocky).	Not present. Not observed during surveys.
Plagiobothrys strictus Calistoga popcorn-flower	FE/CT/L1B	March-June	Meadows and seeps, grassland, vernal pools/alkaline areas near thermal springs.	Habitat not present on site. Not observed during surveys.
Pleuropogon hooverianus North Coast semaphore grass	-/CT/L1B	April-August	Broadleafed upland forest, meadows and seeps, North Coast coniferous forest/open areas, mesic.	Not present. Not observed during surveys.
Pleuropogon refractus Nodding semaphore grass	-/-/L4	April-August	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest.	Not present. Not observed during surveys.
Poa napensis Napa blue grass	FE/CE/L1B	April-August	Meadows and seeps, grassland/alkaline, near thermal springs.	Not present. Not observed during surveys.
Potentilla hickmanii Hickman's cinquefoil	FE/CE/L1B	April-August	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps (vernally mesic), marshes and swamps (freshwater).	Not present. Not observed during surveys.
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	-/-/L4	June-October	Broadleafed upland forest, chaparral, coastal prairie, grassland, vernal pools, vernally mesic.	Not present. Not observed during surveys.
Ranunculus lobbii Lobb's aquatic buttercup	-/-/L4	February-May	Cismontane woodland, North Coast coniferous forest, grassland, vernal pools/mesic.	Not present. Not observed during surveys.
Rhynchospora alba White beaked-rush	-/-/L2	July-August	Bogs and fens, meadows and seeps, marshes and swamps.	No habitat on site. Not likely to occur.
Rhynchospora californica California beaked-rush	-/-/L1B	May-July	Bogs and fens, lower montane coniferous forest, meadows and seeps marshes and swamps.	Not present. Not observed during surveys.
Rhynchospora capitellata	-/-/L2	July-August	Lower montane	No habitat on site.

Attachment A (continued)

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Brownish beaked-rush			coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest/ mesic.	Not present. Not observed during surveys.
Rhynchospora globularis var. *globularis* Round-headed beaked-rush	-/-/L2	July-August	Marshes and swamps (freshwater).	No habitat on site. Not present. Not observed during surveys.
Sidalcea hickmanii ssp. *viridis* Marin checkerbloom	-/-/L1B	May-June	Chaparral (serpentinite).	No habitat on site. Not present. Not observed during surveys.
Sidalcea oregana ssp. *valida* Kenwood Marsh checkerbloom	FE/CE/L1B	June-September	Marshes and swamps (freshwater).	No habitat on site. Not present. Not observed during surveys.
Trifolium amoenum Two-fork clover	FE/-/L1B	April-June	Coastal bluff scrub, grassland (sometimes serpentinite).	Not present. Not observed during surveys.
Trifolium buckwestiorum Santa Cruz clover	-/-/L1B	April-October	Broadleafed upland forest, cismontane woodland, coastal prairie/gravelly, margins.	Not present. Not observed during surveys.
Trifolium depauperatum var. *hydrophilum* Saline clover	-/-/L1B	April-June	Marshes and swamps, grassland (mesic, alkaline), vernal pools.	No habitat on site. Not present. Not observed during surveys.
Viburnum ellipticum Oval-leaved viburnum	-/-/L2	May-June	Chaparral, cismontane woodland, lower montane coniferous forest.	Not present. Not observed during surveys.

Status:

FE: Federally listed endangered.
CE: State listed endangered
CT: State listed threatened.
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and elsewhere.
List 2: Plants rare, threatened or endangered in California but more common elsewhere.
List 3: Plants about which more information is needed– a review list.
List 4: Plants of limited distribution – a watch list.

ATTACHMENT B:

Vascular Plants of The Arbors Project

Surveys conducted March 16, April 10, May 6, June 8, and June 25, 2009
Nomenclature follows the Jepson Manual, Higher Plants of California, Hickman, 1993
Note: Exotic species followed by an asterix have the potential to become invasive

Total Taxa =136, Families = 32

Family	Scientific Name	Common Name	Exotic
PTEROPHYTA - Ferns and other non-seed plants			
Dennstaedtiaceae - Bracken Family (1 taxon)			
	Pteridium aquilinum var. *pubescens*	Bracken Fern	
Pteridaceae - Brake Fern Family (1 taxon)			
	Pentagramma triangularis ssp. *triangularis*	Goldenback Fern	
Dryopteridaceae -Wood Fern Family (1 taxon)			
	Dryopteris arguta	Wood Fern	
ANTHOPHYTA - Dicotyledones (Dicots)			
Anacardiaceae - Sumac Family (1 taxon)			
	Toxicodendron diversilobum	Poison Oak	
Apiaceae - Carrot Family (8 taxa)			
	Daucus pusillus	Rattlesnake Weed	
	Foeniculum vulgare	Fennel	x
	Perideridia kelloggii	Yampah	
	Sanicula bipinnatifida	Purple Sanicle	
	Sanicula crassicaulis	Gamble Weed	
	Scandix pecten-veneris	Shepard's Needle	x
	Torilis arvensis	Japanese Hedge Parsley	x
	Yabea microcarpa	Hedge-Parsley	
Araliaceae - Ginseng Family (1 taxon)			
	Hedera helix	English Ivy	x*
Asteraceae - Aster Family (18 taxa)			
	Achillea millefolium	Yarrow	
	Aster radulinus	Broad-leaf Aster	
	Baccharis pilularis	Coyote Brush	
	Carduus pycnocephalus	Italian Thistle	x*
	Centaurea melitensis	Napa Thistle, Tocalote	x*
	Filago gallica		
	Hedypnois cretica	Crete Weed	x
	Helmenthoteca echioides(Picris)	Ox-Tongue	x
	Hypochaeris glabra	Smooth Cat's Ear	x
	Hypochaeris radicata	Hairy Cat's Ear	x
	Lagophylla ramosissima		
	Madia gracilis	Slender Tarweed	
	Micropus californicus	Slender Cottonweed	
	Senicio vulgaris	Common Groundsel	x
	Silybum marianum	milk thistle	x

	Taraxacum officionale	Common Dandelion	x
	Wyethia angustifolia	Narrow-leaved Mule Ears	
	Wyethia glabra	Coast Mule Ears	
Boraginaceae - Borage Family (1 taxon)			
	Amsinckia menziesii var. *intermedia*	Rancher's Fireweed	
Brassicaceae - Mustard Family (3 taxa)			
	Brassica nigra	Black Mustard	x
	Cardamine californica var. *cardiophylla*	Milk Maids	
	Cardamine oligosperma		
Caprifoliaceae - Honeysuckle Family (4 taxa)			
	Lonicera hispidula var. *vacillans*	Honeysuckle	
	Sambucus mexicana	Blue elderberry	
	Symphoricarpos albus var. *laevigatus*	Snowberry	
	Symphoricarpos mollis	Creeping Snowberry	
Caryophyllaceae - Pink Family (3 taxa)			
	Cerastium glomeratum	Mouse-ear Chickweed	x
	Silene gallica	Windmill Pink	x
	Stellaria media	Common Chickweed	x
Convululaceae - Morning-Glory Family (1 taxon)			
	Convulvulus arvensis	Bindweed	x
Dipsacaceae - Teasel Family (1 taxon)			
	Dipsacus sativus	Wild Teasel	x
Ericaceae - Heath Family (2 taxa)			
	Arbutus menziesii	Madrone	
	Arctostaphylos manzanita ssp. *manzanita*	Manzanita	
Fabaceae - Pea Family (13 taxa)			
	Genista monspressulana	French Broom	x*
	Lotus corniculatus	Bird's foot treefoil	x
	Lotus micranthus		
	Lupinus bicolor	Miniature Lupine	
	Lupinus nanus	Sky Lupine	
	Medicago polymorpha	California Burclover	x
	Trifolium dubium	Shamrock Clover	x
	Trifolium hirtum	Rose Clover	x
	Trifolium incarnatum	Crimson Clover	x
	Trifolium subterraneum	Subterranean Clover	x*
	Vicia sativa ssp. *nigra*	Common Vetch	x
	Vicia sativa ssp. sativa	Spring Vetch	x
	Vicia villosa ssp. *villosa*	Hairy Vetch	x
Fagaceae - Beech Family (5 taxa)			
	Quercus agrifolia	Coast Live Oak	
	Quercus garryana var. *garryana*	Oregon Oak, Garry Oak	
	Quercus kelloggii	Black Oak	
	Quercus lobata	Valley Oak	
	Quercus wislizeni	Interior Live Oak	

Gentianaceae - Gentian Family (I taxon)			
	Centaurium mehlenbergii		
Geraniaceae - Geranium Family (4 taxa)			
	Erodium botrys	Broadleaf Filaree	x
	Erodium cicutarium	Red-stemmed Filaree	x
	Geranium dissectum	Cut-leaf Geranium	x
	Geranium molle	Dove-foot Geranium	x
Lamiaceae - Mint Family (3 taxa)			
	Glechoma hederacea	Ground Ivy	x
	Lamium purpureum	Red Henbit	x
	Stachys ajugoides		
Malvaceae - Mallow Family (1 taxon)			
	Sidalcea diploscypha	Checkermallow	
Onagraceae - Evening Primrose Family (1 taxon)			
	Camissonia ovata	Sun Cup	
Plantaginaceae - Plantain Family (2 taxa)			
	Plantago erecta		
	Plantago lanceolata	English Plantain	x
Polygonaceae - Buckwheat Family (2 taxa)			
	Rumex acetosella	Sheep Sorrel	x
	Rumex pulchra	Fiddleleaf Dock	x
Portulacaceae - Purslane Family (1 taxon)			
	Claytonia perfoliata	Minor's Lettuce	
Primulaceae - Primrose Family (1 taxon)			
	Anagallis arvensis	Scarlet Pimpernel	x
Ranunculaceae - Buttercup Family (1 taxon)			
	Ranunculus californicus	California Buttercup	
Rosaceae - Rose Family (5 taxa)			
	Cotoneaster pannosa	Cotoneaster	x
	Heteromeles arbutifolia	Toyon	
	Photinia serrulata	Chinese Photinia	x
	Pyracantha angustifolia	Firethorn	x
	Rubus discolor	Himalayan Blackberry	x
	Rubus ursinus	California Blackberry	
Rubiaceae - Madder Family (4 taxa)			
	Galium aparine	Goose Grass	x
	Galium californicum ssp. *californicum*	California Bedstraw	
	Galium parisiense	Wall Bedstraw	x
	Galium porrigens	Climbing Bedstraw	
Scrophulariaceae - Figwort Family (5 taxa)			
	Bellardia trixago	Bellardia	x
	Castilleja attenuata	Valley Tassels	
	Cordylanthus pilosus	Bird's Beak	
	Kickxia elantine	Fluellin	x
	Parentucellia viscosa	Parentucellia	x
MONOCOTYLEDONES - The Monocots			
Araceae - Arum Family (1 taxon)			
	Arum italicum	Arum	x

Cyperaceae - Sedge Family (3 taxa)			
	Carex praegracilis	Clustered Field Sedge	
	Carex tumulicola	Foothill Sedge	
	Cyperus eragrostis	Nut-grass	
Iridaceae - Iris Family (2 taxa)			
	Iris macrosiphon	Iris	
	Sisyrinchium bellum	Blue-eyed Grass	
Juncaceae - Rush Family (3 taxa)			
	Juncus patens	Common Rush	
	Juncus occidentalis	Western Rush	
	Juncus tenuis	Slender Rush	
Lilaceae - Lily Family (5 taxa)			
	Brodiaea elegans	Harvest Brodiaea	
	Calochortus luteus	Yellow Mariposa	
	Chlorogalum pomeridianum var. *pomeridianum*	Soap Plant	
	Dichelostemma capitatum ssp. *capitatum*	Blue Dicks	
	Triteleia hyacinthina	White Brodiaea	
Poaceae - Grass Family (25 taxa)			
	Anthoxanthum odoratum	Sweet Vernal Grass	x
	Avena barbata	Slender Wild Oat	x
	Avena fatua	Wild Oat	x
	Avena sativa	Cultivated Oat	x
	Brachypodium distachyon	False Brome	x
	Briza maxima	Big Quacking Grass	x
	Briza minor	Little Quaking Grass	x
	Bromus carinatus ssp. *carinatus*	California Brome	
	Bromus diandrus	Ripgut Grass	x
	Bromus hordeaceus	Soft Chess	x
	Bromus sterilis	Brome	x
	Cynosurus echinatus	Hedgehog Dogtail Gras	x
	Dactylis glomerata	Orchard Grass	x
	Danthonia californica var. *americana*	California Oat Grass	
	Deschampsia elongata	Slender Hairgrass	
	Elymus glaucus ssp. *glaucus*	Blue Wildrye	
	Festuca arundinaceae	Tall Fescue	x
	Festuca trachyphylla	Sheep Fescue	x
	Hordeum brachyantherum ssp. *brachyantherum*	Meadow Barley	
	Lolium multiflorum	Italian Rye	x
	Nassella pulchra	Purple Needle Grass	
	Phalaris aquatica	Harding Grass	x
	Taeniatherum caput-medusae	Medusa Head	x*
	Vulpia bromoides	Six's Weeks Fescue	x
	Vulpia myuros var. *myuros*	Rattail Fescue	x

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May 19, 2009

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

MAY 20 2009

DEPARTMENT OF
COMMUNITY DEVELOPMENT

Mr. Jack Chamberlain
Chamberlain Lake Park LLC
655 Skyway Road, Suite 230
San Carlos, CA 94070

RE: The Arbors Project, 3500 Lake Park Drive, Santa Rosa, CA
APN 173-270-005; File No. MJ07-016

Dear Mr. Chamberlain:

This letter report provides the results of surveys conducted in the spring of 2009 for special status plants for The Arbors project site located at 3500 Lake Park Drive in Santa Rosa, Sonoma County, California. The project area is located in Section 11 of the Santa Rosa 7.5-minute topographic quadrangle, within Township 7N and Range 8W. The property is approximately 5.69 acres in size and the assessor parcel number is 173-270-005.

SITE DESCRIPTION

The Arbors project is located on the south side of Lake Park Drive. The site is bounded on the east by residential development, on the south by Russell Creek, on the west by open lands and Bicentennial Way and on the north by residential development. The surrounding land uses consist of mainly of urban and residential development. The Arbors is part of the larger 70-acre Nielsen Ranch which includes existing development west and northwest of the site and proposed development on the western portion of the site. The Arbors proposed project includes subdividing the 5.69 acres into 37 lots for 37 single family attached homes. The proposed lot sizes range from 1,648 square feet to 7,290 square feet with an average lot size of 2,638 square feet. Access to 35 of the new lots would be provided via a new private loop street, Arbor Circle, which would connect with Lake Park Drive.

Approximately 72% (4.06 acres) is proposed for development with a private open space of 1.54 acres on the south side of the parcel that will be contiguous with the City-owned Russell Creek parcel of 3.63 acres. The surrounding area is transitioning from an undeveloped hillside area to residential developments. The approved Bicentennial Estates II, located west of the Arbor s, at 3450 and 3551 Lake Park Drive, is an 8.03- acre parcel that will be subdivided into 14 single family lots to duplex lots. Single family detached residential uses occur to the east and north and the public Russell Creek trail occurs on the south and east side of the parcel.

METHODS

Prior to fieldwork an initial query was conducted from the On-line 7th Edition of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants and the California Natural Diversity Database (CNDDB 2009) for the records of special-status plant species within the Santa Rosa USGS quad and the eight surrounding contiguous quadrangles. These include the Mark West Springs, Calistoga, Kenwood, Glen Ellen, Cotati, Two Rock, Sebastopol and Healdsburg quadrangles. From this query it was determined that 76 special status plant species have potential to occur on the project site based on the

presence of potential habitat. A list of special status plants that could potentially occur in the area based on the CNDDB and CNPS data base searches is provided as Attachment A.

Surveys were conducted by Geri Hulse-Stephens, botanist, as subconsultant to Jane Valerius Environmental Consulting on March 16, April 10, and May 9, 2009. An additional plant survey will be conducted in June to cover the full flowering season for all the potential special status plant that could occur in the area but given the habitats for the later flowering species it is unlikely that they would occur on the site as the site does not support the type of habitat that these species typically occur or does not have the microhabitat on which these species normally occur. Please refer to the Results section for further discussion.

Surveys conducted were floristic in nature and took into account all vascular plant species encountered. The entire project site was walked on foot and covered thoroughly so that all representative habitat types, topographic features and aspects were investigated. Plant communities occurring on the site are also described.

RESULTS

A total of 161 plant species representing 31 families have been identified in the surveys to date. A list of plant species observed is provided as Attachment B. Plant communities that occur on the site are oak woodland and non-native annual grassland which are described in detail below.

Oak woodland

The oak woodland community on the project site is equivalent to the Coast Live Oak Series as described by The Manual of California Vegetation (Sawyer and Keeler-Wolf 1995). More than three quarters of the The Arbors project area is comprised of oak woodland. The dense woodland canopy is dominated by coast live oak *(Quercus agrifolia)* with some madrone (*Arbutus menziesii*) and black oak (*Quercus kelloggii*) in the woodland composition.

The understory vegetation within the oak woodland is sparsely covered with poison oak (*Toxicodendron diversilobum*) near the edges of the canopy. Where the understory is more open Italian thistle (*Carduus pycnocephalus*) is very common and abundant. The outer edges of the woodland are bordered by shrubs including coyote brush (*Baccharis pilularis*) and French broom (*Genista monspessulana*). French broom is an invasive weed and it is evident from aerial photographs of the site that this species is extending into grasslands from the edges of the woodlands. Many seedlings were observed underneath and at the edges of these newer stands. Valley oak (*Quercus lobata*) occurs along a swale with an understory of Himalayan blackberry *(Rubus discolor)*, California blackberry (*Rubus ursinus*) and poison oak.

Annual Grassland

The annual grassland community on the project site is equivalent to the California Annual Grassland type described in The California Manual of Vegetation (Sawyer and Keeler-Wolf 1995). This vegetation type occurs in grassy openings along Lake Park Drive especially on the fill slope below Lake Park Drive across from Bella Vista Way and on the slope above the trailhead to the east as well as parts of the grasslands to the south of the project area. The dominant species in this habitat is oat grass (*Avena sativa*). Other non-native or exotic grasses such as big quaking grass (*Briza maxima*), soft chess (*Bromus hordaceus*) and Italian rye (*Lolium multiflorum*) are included in this plant community. The herbaceous plants within this grassland are primarily exotic herbs and include white-stemmed filaree (*Erodium bothrys*), rose clover (*Trifolium hirtum*), crimson clover (*Trifolium incarnatum*) and spring vetch (*Vicia sativa* ssp. *sativa*). Native herbs observed in this plant community were blue-eyed grass (*Sisyrinchium bellum*), miniature lupine (*Lupinus bicolor*) and sky lupine (*Lupinus nanus*).

Bordering the oak woodland to the north and south and within the narrow opening in the woodland are areas with perennial native grasses. The native grasses occur where soils have not been disturbed by fill from road building. Native grasses found in this limited area include purple needlegrass (*Nasella pulchra*), California oatgrass (*Danthonia californica*) and blue wild rye (*Elymus glaucus*). The non-native annual grasses are mixed in with the native grasses and since the areas with native grasses are so small they have not been separated out from the annual grassland type. As described above non-native/exotic grasses include soft chess, Italian rye and slender wild oat (*Avena barbata*). Native forbs include California buttercup (*Ranunculus californica)* slender cottonweed (*Micropus californicus*), purple sanicle (*Sanicula bipinnidafida*) rattlesnake weed (*Daucus pusillus*), yarrow (*Achillia millefolium*) and *Plantago erecta.* The exotic herbs included in this community are white-stemmed filaree and Shepard's needle (*Scandix pectens-veneris*). On the south border of this area above the improved trail is a dense stand of narrow-leaved mule ears (*Wyethia angustifolia*). As mentioned above, French broom has expanded into narrow strips of grassland and along the edges of the grasslands evidenced by the presence of young shrubs and dense patches of seedlings.

Special-Status Plants

Surveys were conducted in March, April and May of 2009. As of the date of the May 9, 2009 survey no special status plant species have been identified on the project site. An additional survey is proposed for June to cover the entire flowering season but special status plant species with flowering periods in June or later that have the potential to occur in the area based on the CNDDB are considered not likely to occur on the project site (please refer to Attachment A). It unlikely that any of the later flowering species would occur on the site based on the fact that the site does not support the type of habitat that these species typically occur or and/or does not have the microhabitat on which these species normally occur. However, to be in full compliance with the CDFG guidelines one final plant survey will be conducted.

The following 15 special status plant species (Attachment A) begin to flower in June or later: 1) swamp harebell (*Campanula californica*); 2) Pitkin Marsh Indian paintbrush (*Castilleja uliginosa*); 3) Sonoma spineflower (*Chorizanthe valida*); 4) Vine Hill clarkia (*Clarkia imbricata*); 5) Pennell's bird's-beak (*Cordylanthus tenuis* ssp. *capillaris*); 6) streamside daisy (*Erigeron biolettii*); 7) woolly-headed lessingia (*Lessingia hololeuca*); 8) Pitkin Marsh lily (*Lilium pardalinum* ssp. *pitkinense*); 9) robust monardella (*Monardella villosa* ssp. *globosa*); 10) green monardella (*Monardella viridis* ssp. *viridis*); 11) Gairdner's yampa (Perideridia gairdneri ssp. *gairdneri*); 12) white beaked-rush (*Rhynchospora alba*); 13) brownish beaked-rush (*Rhynchospora capitellata*); 14) round-headed beaked-rush (*Rhynchospora globularis* var. *globularis*); and 15) Kenwood Marsh checkerbloom (*Sidalcea oregana* ssp. *valida*). There is no habitat on site for swamp harebell, Pitkin Marsh Indian paintbrush, Sonoma spineflower, Vine Hill clarkia, Pennell's bird's-beak, Pitkin Marsh lily, white beaked-rush, brownish beaked-rush, round-headed beaked-rush, or Kenwood Marsh checkerbloom and these species are not expected to occur on the site based on the lack of suitable habitat.

Potential habitat does occur on site for streamside daisy, woolly-headed lessingia and Gairdner's yampa but the first two species are CNPS List 3 species and the yampa is a CNPS List 4 species which have no formal protection. List 3 is a review list and List 4 is a watch list. There is no requirement under CEQA to address these plants although information about the occurrence of these species is helpful for determining if these species are truly diminishing or not. No species of *Erigeron* or *Lessingia* have been noted on the site so the streamside daisy and woolly-headed lessingia are not likely to occur on the site. One species of yampa (*Perideridia* sp.) has been observed on the site but as mentioned previously, Gairdner's yampa is a CNPS List 4 species and there is no requirement under CEQA to address List 4 species.

There is potential habitat on site for robust monardella and green monardella. These are both perennial plant species and plants in the genus *Monardella* are identifiable when only the leaves are present. No plants in the genus *Monardella* have been observed on the site. Therefore it is safe to conclude that neither of these species occur on the project site.

SUMMARY AND CONCLUSION

Even though the site supports a number of native plants and is dominated by oak woodland, which is a native plant community type, herbaceous plants on the site are mostly non-native and invasive plants such as French broom, Italian thistle, fennel, English ivy, black mustard, Himalayan blackberry, rose and crimson clovers, filarees, and annual grasses. Given the dominance in the herbaceous layer of non-native species and some very aggressive noxious weeds like French broom it is unlikely that any special status plants occur on the site. In addition, the site does not provide habitat for most of the special status plants known to occur in the area based on the CNPS and CNDDB data bases. Surveys conducted in March, April and May of 2009 did not find any special status plants on the site and no special status plants are expected to occur on the project site

I hope this information is helpful. If you have any questions, please do not hesitate to contact me.

Sincerely,

Jane Valerius

Jane Valerius
Botanist

Attachments

Attachment A.
Special status plant species that could potentially occur within The Arbors Project Site based on a review of the CNDDB and CNPS Electronic Inventory for the Santa Rosa and surrounding USGS quadrangles (2009).

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Allium peninsulare var. *franciscanum* Franciscan onion	-/-/L1B	May-June	Cismontane woodland, grassland/clay, volcanic, often serpentine	Not present. Not observed during surveys.
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE/-/L1B	May-July	Marshes & swamps (freshwater), riparian scrub.	No habitat on site. Not observed during surveys.
Amorpha californica var. *napensis* Napa false indigo	-/-/L1B	April-July	Broadleafed upland forest (openings), chaparral, cismontane woodland.	Not present. Not observed during surveys.
Anomobryum julaceum	-/-/L2		Broadleafed upland forest, lower montane coniferous forest/ damp rock and soil on outcrops, usually on roadcuts.	Not present. Not observed during surveys.
Arctostaphylos canescens ssp. *sonomensis* Sonoma canescent manzanita	-/-/L1B	January-June	Chaparral, lower montane coniferous forest-sometimes serpentinite.	Not present. Not observed during surveys.
Arctostaphylos densiflora Vine Hill manzanita	-/CE/L1B	February-April	Chaparral (acid marine sand).	No habitat on site. Not observed during surveys.
Arctostaphylos stanfordiana ssp. *decumbens* Sonoma canescent manzanita	-/-/L1B	February-April	Chaparral (rhyolitic), cismontane woodland.	Not present. Not observed during surveys.
Astragalus breweri Brewer's milkvetch	-/-/L4	April-July	Chaparral (openings), cismontane woodland, grassland/ serpentinite or volcanic, rocky, clay.	Not present. Not observed during surveys.
Astragalus claranus Clara Hunt's milk-vetch	FE/CT/L1B	March-May	Grassland/serpentinite or volcanic, rocky clay.	Not present. Not observed during surveys..
Balsamorhiza macrolepis var. *macrolepis* Big scale balsamroot	-/-/L1B	March-June	Grassland/sometimes serpentinite.	Not present. Not observed during surveys.
Blennosperma bakeri Sonoma sunshine	FE/CE/1B	March-May	Mesic grasslands and vernal pools.	No habitat on site. Not observed during surveys.
Brodiaea californica var. *leptandra* Narrow-anthered California brodiaea	-/-/L1B	May-July	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, grassland/volcanic.	Not present during May survey.

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Calamagrostis bolanderi Bolander's reed grass	-/-/L4	May-August	Bogs and fens, broadleafed upland forest, closed-cone coniferous forest, coastal scrub, meadows and seeps, marshes and swamps (freshwater), North Coast coniferous forest/mesic.	No habitat on site. Not observed during surveys.
Calamagrostis crassiglumis Thurber's reed grass	-/-/L2	May-July	Coastal scrub (mesic); marshes & swamps (freshwater)	No habitat on site. Not observed during surveys.
Calamagrostis ophitidis Serpentine reed grass	-/-/L4	April-July	Chaparral, lower montane coniferous forest, meadows and seeps, grassland (vernally mesic)/ serpentinite, rocky.	No habitat on site. Not observed during surveys.
Calandrinia breweri Brewer's calandrinia	-/-/L4	March-June	Chaparral, coastal scrub, sandy or loamy, disturbed sites and burns.	No habitat on site. Not observed during surveys.
Calystegia collina ssp. *oxyphylla* Mt. Saint Helena morning-glory	-/-/L4	April-June	Chaparral, lower montane coniferous forest, grassland/ serpentinite.	No habitat on site. Not observed during surveys.
Campanula californica Swamp harebell	-/-/L1B	June-October	Bogs and fens, closed cone coniferous forest.	No habitat on site. Not observed during surveys.
Carex albida Sonoma white sedge	FE/CE/L1B	May-July	Bogs and fens, marshes and swamps (freshwater).	No habitat on site. Not observed during surveys.
Castilleja uliginosa Pitkin Marsh Indian paintbrush	-/CE/L1A	June-July	Marshes and swamps (freshwater).	No habitat on site. Not observed during surveys.
Ceanothus confusus Rincon Ridge ceanothus	-/-/L1B	February-June	Closed-cone coniferous forest, chaparral, cismontane woodland/volcanic or serpentinite.	No species of *Ceanothus* observed on the site. Not observed during surveys.
Ceanothus divergens Calistoga ceanothus	-/-/L1B	February-March	Chaparral (serpentinite or volcanic, rocky).	No species of *Ceanothus* observed on the site. Habitat not present. Not observed during surveys.
Ceanothus foliosus var. *vineatus* Vine Hill ceanothus	-/-/L1B	March-May	Chaparral.	No species of *Ceanothus* observed on the site. Habitat not present. Not observed during surveys.

Attachment A (continued)

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
Ceanothus purpureus Holly-leaved ceanothus	-/-/L1B	February-June	Chaparral, cismontane woodland/volcanic, rocky.	No species of *Ceanothus* observed on the site. Not observed during surveys.
Ceanothus sonomensis Sonoma ceanothus	-/-/L1B	February-April	Chaparral (sandy, serpentinite or volcanic).	No species of *Ceanothus* observed on the site. Habitat not present. Not observed during surveys.
Centromadia parryi ssp. *parryi* Pappose tarplant	-/-/L1B	May-November	Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), grassland (vernally mesic)/often alkaline.	Not present. Not observed during surveys. Typical habitat not present on site.
Chorizanthe valida Sonoma spineflower	FE/CE/L1B	June-August	Coastal prairie (sandy).	Not present. Not observed during surveys.
Clarkia imbricata Vine Hill clarkia	FE/CE/L1B	June-August	Chaparral, grassland/acidic sandy loam.	Not present. Not observed during surveys.
Cordylanthus tenuis ssp. *capillaris* Pennell's bird's-beak	FE/CR/L1B	June-September	Closed-cone coniferous forest, chaparral/serpentinite.	No habitat on site. Not likely to occur.
Delphinium luteum Golden larkspur	FE/CR/L1B	March-May	Chaparral, coastal prairie, coastal scrub/ rocky.	Not present. Not observed during surveys. Typical habitat not present on site.
Downingia pusilla Dwarf downingia	-/-/L2	March-May	Grassland (mesic), vernal pools.	Not present. Not observed during surveys. Typical habitat not present on site.
Erigeron biolettii Streamside daisy	-/-/L3	June-October	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest/rocky, mesic.	Potential habitat on site. Survey will be conducted in June. List 3 plants have no formal protection – they are plants about which more information is needed.
Erigeron serpentinus Serpentine daisy	-/-/L1B	May-August	Chaparral (serpentinite, seeps).	Not present. Not observed during surveys. Typical habitat not present on site.
Eryngium constancei Loch Lomond button-celery	FE/CE/L1B	April-June	Vernal pools.	No habitat on site. Not observed during surveys.

Scientific Name **Common Name**	**Status: Federal/ State/CNPS List**	**Flowering Period**	**Habitat and Notes**	**Potential for Occurrence**
Eryngium pinnatisectum Tuolumne button-celery	-/-/L1B	May-August	Cismontane woodland, lower montane coniferous forest, venal pools/ mesic.	Not present. Not observed during surveys. Typical habitat not present on site.
Fritillaria liliacea Fragrant fritillary	-/-/L1B	February-April	Grassland/often serpentinite.	Not present. Not observed during surveys.
Gilia capitata ssp. *tomentosa* Woolly-headed gilia	-/-/L1B	May-July	Coastal bluff scrub (rocky, outcrops).	Not present. Not observed during surveys. Typical habitat not present on site.
Hemizonia congesta ssp. *congesta* Seaside tarplant	-/-/L1B	April-November	Grassland-sometimes roadsides.	Not present. Not observed during surveys.
Horkelia tenuiloba Thin-lobed horkelia	-/-/L1B	May-July	Broadleafed upland forest, chaparral, grassland/mesic openings, sandy.	Not present. Not observed during surveys. Typical habitat not present on site.
Lasthenia burkei Burke's goldfields	FE/CE/1B	April-June	Meadows and seeps (mesic), vernal pools.	Not present. Not observed during surveys. Typical habitat not present on site.
Lasthenia californica ssp. *bakeri* Baker's goldfields	-/-/L1B	April-October	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps.	Not present. Not observed during surveys. Typical habitat not present on site.
Lasthenia conjugens Contra Costa goldfields	FE/-/L1B	March-June	Cismontane woodland, playas (alkaline), grassland, vernal pools/mesic.	Not present. Not observed during surveys. Typical habitat not present on site.
Layia septentrionalis Colusa layia	-/-/L1B	April-May	Chaparral, cismontane woodland, grassland/sandy, serpentintie.	Not present. Not observed during surveys. Typical habitat not present on site.
Legenere limosa Legenere	-/-/L1B	April-June	Vernal pools	Not present. Not observed during surveys. Typical habitat not present on site.
Leptosiphon jepsonii Jepson's leptosiphon	-/-/L1B	March-May	Chaparral, cismontane woodland – usually volcanic	Not present. Not observed during surveys.
Lessingia hololeuca Woolly-headed lessingia	-/-/L3	June-October	Broadleafed upland forest, coastal scrub, lower montane	Typical habitat not present on site. Survey will be

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
			coniferous forest, grassland/clay, serpentinite.	conducted in June. List 3 plants have no formal protection – they are plants about which more information is needed.
Lilium pardalinum ssp. *pitkinense* Pitkin Marsh lily	FE/CE/L1B	June-July	Cismontane woodland, meadows and seeps, marshes and swamps (freshwater)/mesic, sandy.	Typical habitat is not present on site. Survey will be conducted in June. Known occurrence is from Pitkin Marsh in Sebastopol.
Limnanthes vinculans Sebastopol meadowfoam	FE/CE/1B	April-May	Meadows and seeps, grasslands, vernal pools/ vernally mesic.	No habitat on site. Not observed during surveys.
Lomatium repostum Napa lomatium	-/-/L4	March-June	Chaparral, cismontane woodland, serpentinite.	No habitat on site (no serpentinite). Not present. Not observed during surveys.
Lotus formosissimus Harlequin lotus	-/-/L4	March-July	Broadleafed upland forest, coastal bluff scrub, closed cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, grassland, wetlands, roadsides.	Not present. Not observed during surveys.
Lupinus sericatus Cobb Mountain lupine	-/-/L1B	March-June	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest.	Not present. Not observed during surveys.
Mertensia bella Oregon lungwort	-/-/L2	May-July	Meadows and seeps, upper montane coniferous forest/mesic.	Not present. Typical habitat not present. Not observed during surveys.
Micropus amphibolus Mt. Diablo cottonweed	-/-/L3	March-May	Broadleafed upland forest, chaparral, cismontane woodland, grassland/rocky.	Not present. Not observed during surveys.
Microseris paludosa Marsh microseris	-/-/L1B	April-June	Closed-cone coniferous forest, cismontane woodland.	Not present. Not observed during surveys.
Monardella villosa ssp. *globosa* Robust monardella	-/-/L1B	June-July	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland,	Potential habitat is present on site. Survey will be conducted in June. No

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
			coastal scrub, grassland.	species of *Monardella* observed on site to date- not likely to occur as this genus would be identifiable if present on site.
Monardella viridis ssp. *viridis* Green monardella	-/-/1A	June-September	Broadleafed upland forest, chaparral, cismontane woodland.	Potential habitat is present on site. Survey will be conducted in June. No species of *Monardella* observed on site to date- not likely to occur as this genus would be identifiable if present on site.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	-/-/1B	May-July	Cismontane woodland, lower montane coniferous forest, meadows and seeps, grasslands, vernal pools/mesic.	Not present. Typical habitat not present. Not observed during surveys.
Navarretia leucocephala ssp. *plieantha* Many-flowered navarretia	FE/CE/L1B	May-June	Vernal pools (volcanic ash flow)	No habitat on site. Not observed during surveys.
Penstemon newberryi var. *sonomensis* Sonoma beardtongue	-/-/L1B	April-August	Chaparral (rocky).	Typical habitat not on site. Not present. Not observed during surveys.
Plagiobothrys strictus Calistoga popcorn-flower	FE/CT/L1B	March-June	Meadows and seeps, grassland, vernal pools/alkaline areas near thermal springs.	Habitat not present on site. Not observed during surveys.
Pleuropogon hooverianus North Coast semaphore grass	-/CT/L1B	April-August	Broadleafed upland forest, meadows and seeps, North Coast coniferous forest/open areas, mesic.	Typical habitat not on site. Not present. Not observed during surveys.
Pleuropogon refractus Nodding semaphore grass	-/-/1A	April-August	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest.	Typical habitat not on site. Not present. Not observed during surveys.
Poa napensis Napa blue grass	FE/CE/L1B	April-August	Meadows and seeps, grassland/alkaline, near thermal springs.	Typical habitat not on site. Not present. Not observed during surveys.
Potentilla hickmanii Hickman's cinquefoil	FE/CE/L1B	April-August	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps (vernally mesic),	Potential habitat not on site. Not present. Not observed during surveys.

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
			marshes and swamps (freshwater).	
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	-/-/L4	June-October	Broadleafed upland forest, chaparral, coastal prairie, grassland, vernal pools, vernally mesic.	Potential habitat on site. Survey will be conducted in June. List 4 plants have no formal protection – they are plants of limited distribution-a watch list.
Ranunculus lobbii Lobb's aquatic buttercup	-/-/L4	February-May	Cismontane woodland, North Coast coniferous forest, grassland, vernal pools/mesic.	Typical habitat not on site. Not present. Not observed during surveys.
Rhynchospora alba White beaked-rush	-/-/L2	July-August	Bogs and fens, meadows and seeps, marshes and swamps.	No habitat on site. Not likely to occur.
Rhynchospora californica California beaked-rush	-/-/L1B	May-July	Bogs and fens, lower montane coniferous forest, meadows and seeps marshes and swamps.	Typical habitat not on site. Not present. Not observed during surveys.
Rhynchospora capitellata Brownish beaked-rush	-/-/L2	July-August	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest/ mesic.	No habitat on site. Not likely to occur.
Rhynchospora globularis var. *globularis* Round-headed beaked-rush	-/-/L2	July-August	Marshes and swamps (freshwater).	No habitat on site. Not likely to occur.
Sidalcea hickmanii ssp. *viridis* Marin checkerbloom	-/-/L1B	May-June	Chaparral (serpentinite).	No habitat on site. Not present. Not observed during surveys.
Sidalcea oregana ssp. *valida* Kenwood Marsh checkerbloom	FE/CE/L1B	June-September	Marshes and swamps (freshwater).	No habitat on site. Not likely to occur.
Trifolium amoenum Two-fork clover	FE/-/L1B	April-June	Coastal bluff scrub, grassland (sometimes serpentinite).	Not present. Not observed during surveys.
Trifolium buckwestiorum Santa Cruz clover	-/-/L1B	April-October	Broadleafed upland forest, cismontane woodland, coastal prairie/gravelly, margins.	Not present. Not observed during surveys.
Trifolium depauperatum var. *hydrophilum* Saline clover	-/-/L1B	April-June	Marshes and swamps, grassland (mesic, alkaline), vernal	No habitat on site. Not observed during surveys.

Scientific Name Common Name	Status: Federal/ State/CNPS List	Flowering Period	Habitat and Notes	Potential for Occurrence
			pools.	
Viburnum ellipticum Oval-leaved viburnum	-/-/L2	May-June	Chaparral, cismontane woodland, lower montane coniferous forest.	Not present. Not observed during surveys.

Status:

FE: Federally listed endangered.
CE: State listed endangered
CT: State listed threatened.
List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and elsewhere.
List 2: Plants rare, threatened or endangered in California but more common elsewhere.
List 3: Plants about which more information is needed– a review list.
List 4: Plants of limited distribution – a watch list.

ATTACHMENT B

List of Plant Species Observed for The Arbors Project March to May 2009

Family	Scientific Name	Common Name	Exotic	Grassland	Woodland
PTEROPHYTA - Ferns and other non-seed plants					
Dennstaedtiaceae - Bracken Family (I taxon)					
	Pteridium aquilinum var pubescens	Bracken Fern		x	x
Pteridaceae - Brake Fern Family (1 taxon)					
	Pentagramma triangularis ssp. *triangularis*	Goldenback Fern			x
Dryopteridaceae -Wood Fern Family (1 taxon)					
	Dryopteris arguta	Wood Fern			x
ANTHOPHYTA - Dicotyledones (Dicots)					
Anacardiaceae - Sumac Family (1 taxon)					
	Toxicodendron diversilobum	Poison Oak			x
Apiaceae - Carrot Family (8 taxa)					
	Daucus pusillus	Rattlesnake Weed		x	
	Foeniculum vulgare	Fennel	x	x	
	Perideridia sp	Yampah		x	
	Sanicula bipinnatifida	Purple Sanicle			
	Sanicula crassicaulis	Gamble Weed			
	Scandix pecten-veneris	Shepard's Needle	x	x	
	Torilis arvensis	Japanese Hedge Parsley	x	x	
	Yabea microcarpa	Hedge-Parsley			x
Araliaceae - Ginseng Family (1 taxon)					
	Hedera helix	English Ivy	x		x
Asteraceae - Aster Family (15 taxa)					
	Achillea millefolium	Yarrow		x	x
	Aster radulinus	Broad-leaf Aster			x
	Baccharis pilularis	Coyote Brush		x	x
	Carduus pycnocephalus	Italian Thistle	x	x	x
	Hedypnois cretica	Crete Weed	x	x	
	Helmentotheca echioides(Picris)	Ox-Tongue	x	x	
	Hypochaeris glabra	Smooth Cat's Ear	x	x	x
	Hypochaeris radicata	Hairy Cat's Ear	x	x	x
	Lagophylla ramosissima			x	
	Micropus californicus	Slender Cottonweed			
	Senecio vulgaris	Common Groundsel	x	x	
	Silybum marianum	milk thistle	x	x	x
	Taraxacum officinale	Common Dandelion	x	x	
	Wyethia angustifolia	Narrow-leaved Mule Ears		x	
	Wyethia glabra	Coast Mule Ears		x	
Boraginaceae - Borage Family (1 taxon)					
	Amsinckia menziesii var. intermedia	Rancher's Fireweed		x	
Brassicaceae - Mustard Family (3 taxa)					

	Brassica nigra	Black Mustard	x		
	Cardamine californica var. cardiophylla	Milk Maids		x	x
	Cardamine oligosperma			x	x
Caprifoliaceae - Honeysuckle Family (4 taxa)					
	Lonicera hispidula var. vacillans	Honeysuckle			x
	Sambucus sp.				x
	Symphoricarpos albus var. laevigatus	Snowberry			x
	Symphoricarpos mollis	Creeping Snowberry			x
Caryophyllaceae - Pink Family (3 taxa)					
	Cerastium glomeratum	Mouse-ear Chickweed	x	x	
	Silene gallica	Windmill Pink	x	x	
	Stellaria media	Common Chickweed	x	x	
Dipsacaceae - Teasel Family (1 taxon)					
	Dipsacus sativus	Wild Teasel	x		
Ericaceae - Heath Family (2 taxa)					
	Arbutus menziesii	Madrone			x
	Arctostaphylos manzanita ssp. manzanita	Manzanita			x
Fabaceae - Pea Family (13 taxa)					
	Genista monspressulana	French Broom	x		x
	Lotus corniculatus	Bird's foot treefoil	x		
	Lotus micranthus			x	
	Lupinus bicolor	Miniature Lupine		x	
	Lupinus nanus	Sky Lupine		x	
	Medicago polymorpha	California Burclover	x	x	
	Trifolium dubium	Shamrock Clover	x	x	
	Trifolium hirtum	Rose Clover	x	x	
	Trifolium incarnatum	Crimson Clover	x		
	Trifolium subterraneum	Subterranean Clover	x	x	
	Vicia sativa ssp. nigra	Common Vetch	x	x	
	Vicia sativa ssp. sativa	Spring Vetch	x	x	
	Vicia villosa ssp. villosa	Hairy Vetch	x	x	
Fagaceae - Beech Family (5 taxa)					
	Quercus agrifolia	Coast Live Oak			x
	Quercus garryana var. garryana	Oregon Oak, Garry Oak			x
	Quercus kelloggii	Black Oak			x
	Quercus lobata	Valley Oak			x
	Quercus wislizeni	Interior Live Oak			x
Geraniaceae - Geranium Family (4 taxa)					
	Erodium botrys	Broadleaf Filaree	x	x	
	Erodium cicutarium	Red-stemmed Filaree	x	x	
	Geranium dissectum	Cut-leaf Geranium	x	x	
	Geranium molle	Dove-foot Geranium	x	x	
Lamiaceae - Mint Family (3 taxa)					
	Glechoma hederacea	Ground Ivy	x		
	Lamium purpureum	Red Henbit	x		
	Stachys ajugoides				

Malvaceae - Mallow Family (1 taxon)					
	Sidalcea diploscypha			x	
Onagraceae - Evening Primrose Family (1 taxon)					
	Camissonia ovata	Sun Cup		x	
Plantaginaceae - Plantain Family (2 taxa)					
	Plantago erecta				
	Plantago lanceolata	English Plantain	x	x	
Polygonaceae - Buckwheat Family (2 taxa)					
	Rumex acetosella	Sheep Sorrel	x	x	
	Rumex pulchra	Fiddleleaf Dock	x		
Portulacaceae - Purslane Family (1 taxon)					
	Claytonia perfoliata	Minor's Lettuce			x
Primulaceae - Primrose Family (1 taxon)					
	Anagallis arvensis	Scarlet Pimpernel	x	x	
Ranunculaceae - Buttercup Family (1 taxon)					
	Ranunculus californicus	California Buttercup			x
Rosaceae - Rose Family (3 taxa)					
	Heteromeles arbutifolia	Toyon			x
	Rubus discolor	Himalayan Blackberry	x		x
	Rubus ursinus	California Blackberry			
Rubiaceae - Madder Family (4 taxa)					
	Galium aparine	Goose Grass	x	x	x
	Galium californicum ssp. californicum	California Bedstraw			x
	Galium parisiense	Wall Bedstraw	x	x	
	Galium porrigens	Climbing Bedstraw		x	x
Scrophulariaceae - Figwort Family (3 taxa)					
	Castilleja attenuata	Valley Tassels			
	Cordylanthus sp.	bird's beak			
	Parentucellia viscosa		x		
MONOCOTYLEDONES - The Monocots					
Cyperaceae - Sedge Family (2 taxa)					
	Carex praegracilis	Clustered Field Sedge		x	
	Cyperus eragrostis	Nut-grass		x	
Iridaceae - Iris Family (2 taxa)					
	Iris macrosiphon				x
	Sisyrinchium bellum	Blue-eyed Grass		x	x
Juncaceae - Rush Family (2 taxa)					
	Juncus patens	Common Rush		x	
	Juncus tenuis				
Liliaceae - Lily Family (3 taxa)					
	Chlorogalum pomeridianum var. *pomeridianum*	Soap Plant		x	x
	Dichelostemma capitatum ssp. capitatum	Blue Dicks		x	x
	Triteleia hyacinthina	White Brodiaea		x	
Poaceae - Grass Family (21 taxa)					
	Avena barbata	Slender Wild Oat	x	x	
	Avena fatua	Wild Oat	x		

	Avena sativa	Cultivated Oat	x	x	
	Briza maxima	Big Quacking Grass	x	x	
	Briza minor	Little Quaking Grass	x	x	
	Bromus carinatus ssp. carinatus	California Broom		x	x
	Bromus diandrus	Ripgut Grass	x	x	
	Bromus hordeaceus	Soft Chess	x	x	
	Bromus sterilis		x		x
	Cynosurus echinatus	Hedgehog Dogtail Gras	x	x	
	Dactylis glomerata	Orchard Grass	x	x	
	Danthonia californica var. americana	California Oat Grass		x	
	Deschampsia elongata	Slender Hairgrass		x	
	Elymus glaucus ssp. glaucus	Blue Wildrye		x	x
	Festuca trachyphylla	Sheep Fescue	x		x
	Hordeum brachyantherum ssp. brachyantherum	Meadow Barley			
	Lolium multiflorum	Italian Rye	x		
	Nassella pulchra	Purple Needle Grass		x	
	Phalaris aquatica	Harding Grass	x	x	
	Vulpia bromoides	Six's Weeks Fescue	x	x	
	Vulpia myuros var. myuros	Rattail Fescue	x	x	

Nomenclature follows The Jepson Manual of Higher Plants of Califofnia (Hickman 1993).

Wildlife Research Associates

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January 21, 2009

Mr. Jack Chamberlain
Chamberlain Lake Park LLC
P.O. Box 970
San Carlos, CA 94070

Ph: 650-595-5582

RE: Wildlife Habitat Assessment for The Arbors, Sonoma County, CA

Dear Mr. Chamberlain,

The following is a letter report describing the results of our wildlife habitat assessment of The Arbors property located at 3500 Lake Park Drive (APN 173-270-005), in the northeastern portion of the City of Santa Rosa, Sonoma County, California. This assessment was conducted to determine the potential for occurrence of special-status animal species and the limitations for potential development, such as a residential development. This report does not address the potential for occurrence of or impacts to vegetation communities, or special-status plant species.

Reports reviewed for this assessment include the *Notice of Public Review and Intent to Adopt a Mitigated Negative Declaration* (City of Santa Rosa 2008a), *Department of Community Development Staff Report for Planning Commission, The Arbors* (City of Santa Rosa 2008b), *The Arbors – File MJ07-016CNPS E-mail Letter November 27, 2007* (Ralph Osterling Consultants, Inc. 2008), and *Arborist Report for The Arbors* (Ralph Osterling Consultants 2007).

SITE AND PROJECT DESCRIPTION

The roughly rectangular-shaped 5.69-acre parcel, located on the south side of Lake Park Drive, is bounded on the east by residential development, on the south by Russell Creek, on the west by open lands and Bicentennial Way and on the north by residential development. Beyond the immediate boundaries, surrounding land uses consist of mainly of urban and residential development. The project area is located in Section 11 of the Santa Rosa 7.5-minute topographic quadrangle, within Township 7N and Range 8W.

The proposed project, The Arbors, is part of the larger 70-acre Nielsen Ranch which includes existing development west and northwest of the site and proposed development on the western portion of the proposed project. The Arbors proposed project includes subdividing the 5.6 acres into 37 lots for 37 single-family attached homes (City of Santa Rosa 2008a). The proposed lot sizes range from 1,648 square feet to 7,290 square feet with an average lot size of 2,638 square feet (City of Santa Rosa 2008b). Access to 35 of the new lots would be provided via a new private loop street, Arbor Circle, which would connect with Lake Park Drive (City of Santa Rosa 2008b).

Approximately 72% (4.06 acres) is proposed for development with a private open space of 1.54 acres on the south side of the parcel that will be contiguous with the City-owned Russell Creek parcel of 3.63 acres (Ralph Osterling Consultants 2008). Approximately 36% of the site exceeds a 25% slope with an overall

slope average of 22% (City of Santa Rosa 2008a) and the proposed project will avoid development on areas of the site exceeding 25 % slope (City of Santa Rosa 2008b). The development will be located between 65 feet and 90 feet upslope from Russell Creek.

The project would remove approximately 400 native trees and preserve approximately 460 native trees. A significant amount of the oak trees planned for removal appear stunted and bush-like; it is speculated by the project arborist that a previous fire in the 1960s may be the cause of the current condition of these trees (City of Santa Rosa 2008b). A total of 70 Significant and heritage trees, occur on the site, of which 28 will be preserved and are presented in the Tree Exhibit which identifies the location and health of trees on the site (Ralph Osterling Consultants 2007). The heritage trees that are to be removed are all located within the new private street or within foundations of new homes (City of Santa Rosa 2008b).

The surrounding area is transitioning from an undeveloped hillside area to residential developments. The approved Bicentennial Estates II, located west of the Arbor s, at 3450 and 3551 Lake Park Drive, is an 8.03-acre parcel that will be subdivided into 14 single family lots to duplex lots (Santa Rosa Department of Community Development 2005). The trees on the north and south side of Lake Park Drive were removed n January 2009, resulting in the loss of 25% of the existing woodland. Single family detached residential uses occur to the east and north and the public Russell Creek trail occurs on the south and east side of the parcel.

METHODS

Information on special-status animal species was compiled through a review of the California Natural Diversity Data Base (CNDDB 2009) for the Santa Rosa 7.5-minute topographic quadrangle, the California Department of Fish and Game's (CDFG) Special Animals List (CDFG 2009), the U.S. Fish and Wildlife Service (USFWS) electronic list of Endangered and Threatened Species for the same quadrangle (http://www.fws.gov/sacramento/es/spp_lists/make_the_list.cfm) and the State and Federally Listed Endangered and Threatened Animals of California (CDFG 2009).

I conducted a daytime survey on January 6, 2009 from 1000 to 1300 hours. I also surveyed the trees for suitable habitat for nesting birds and assessed potential for roosting habitat for bats using 8 x 42 roof-prism binoculars, noting presence of cavities, old bird nests and squirrel nests. The reconnaissance-level site visit was intended only as an evaluation of on-site and adjacent habitat types, and no special-status species surveys were conducted as part of this effort.

Wildlife Research Associates bat biologist Greg Tatarian conducted a daytime habitat assessment on January 15, 2009, of all trees (approximately 860) identified in the *Arborist Report for The Arbors* (Ralph Osterling Consultants 2007). The survey was conducted between 1030 and 1330 on a calm, clear day, with temperatures ranging from 60F to 68F. A 500,000 candlepower spotlight and 10 x 42 roof-prism binoculars were used to view cavity and crevice features of trees. No night emergence surveys were conducted; this assessment and survey was intended to identify potential tree habitat and provide recommendations for safe removal of those trees, under the assumption that any potentially suitable roost trees could be occupied at the time of removal.

All potential habitat trees were recorded, and marked with the letter "B" using either yellow or orange spray paint and further marked with orange flagging tape. Potential habitat tree locations were marked by encircling tree symbols on the *Lake Park Apartments Tree Location Map* (Oberkamper & Associates, undated).

EXISTING CONDITIONS

The Arbors project area is located within the San Francisco Bay Coastal Bioregion (Welsh 1994). This bioregion is located within central California and encompasses the San Francisco Bay and the Sacramento Delta, extending from the Pacific Ocean to the eastern portion of the tule marsh zone, which is defined by

Highway 99 (Welsh 1994). Habitats within this bioregion include both mesic (moist) habitats, such as freshwater marsh, and xeric (dry) habitats, such as chaparral, and are typical of a Mediterranean type climate.

The project area is located on the hills east of the San Miguel Rancheria and the Santa Rosa Plain and northwest of Sonoma Mountain (Figure 1). Topographically, the project site is located on a predominantly south facing slope with a plateau on the northern portion and steep slopes, greater than 25%, on the southern portion of the site. The property ranges in elevation between 320 and 330 feet.

No blue-lined creeks occur in the area. Several reservoirs occur in the area, with a large reservoir occurring 1.2 miles north of the site. The closest reservoir occurs at the Nielson Ranch Park, less than 1,000 feet east of the site and was dammed prior to 1989 to store irrigation water for a tree farm (EIP 1989). The overflow from the Nielson Ranch Park Reservoir feeds into Russell Creek, which is located on the southern boundary of The Arbors project site.

Although located outside of The Arbors project site, Russell Creek was evaluated as part of the proposed project. Russell Creek, which flows from east to west, is located within the Piner Creek watershed. West of the project site, at Bicentennial Way and Park Lane Drive, the creek flows through a storm drain and heads north west, where it daylights again west of Mendocino Avenue and north of Kaiser Hospital approximately 0.5 miles west. Russell Creek then crosses under Highway 101 and flows west to meet Piner Creek. A concrete check dam at Range Avenue, one mile west of the project site, is considered a barrier to fish movement upstream (City of Santa Rosa 2007).

Wildlife Habitats

The value of a site to wildlife is influenced by a combination of the physical and biological features of the immediate environment. Species diversity is a function of diversity of abiotic and biotic conditions and is greatly affected by human use of the land. The wildlife habitat quality of an area, therefore, is ultimately determined by the type, size, and diversity of vegetation communities present and their degree of disturbance. Wildlife habitats are typically distinguished by vegetation type, with varying combinations of plant species providing different resources for use by wildlife. The following is a discussion of the wildlife species supported by the on-site habitats, as described by *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1989).

The site is dominated by coast live oak (*Quercus agrifolia*) woodland, with several Valley oaks (*Quercus lobata*), black oaks (*Quercus kelloggii*) and madrone (*Arbutus menziesii*) mixed throughout the site. The oaks vary in size between 4 inches and 36 inches dbh (Ralph Osterling Consultants 2007) and the canopy cover varies between 60% and 99%. A total of 860 trees occur on the site. Understory shrub species observed in the woodland include, coyote bush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), Himalayan blackberry (*Rubus discolor*), manzanita (*Arctostaphylos* sp.), and the highly invasive French broom (*Genista monspessulana*).

The coast live oak woodland provides habitat for reptiles, such as western fence lizards (*Sceloporus occidentalis*), northern alligator lizards (*Gerrhonotus coeruleus*) and gopher snakes (*Pituophis melanoleucus*), and foraging and nesting habitat for passerines (perching birds) and raptors (birds of prey), and roosting habitat for bats. Smaller passerines, such as black-capped chickadee (*Poecile atricapillus*), bushtit (*Psaltriparus minimus*) and acorn woodpecker (*Melanerpes formicivorus*) observed on the site may nest and forage in the senescent trees and cavities in the woodlands. Although no large cavities capable of supporting larger raptors, such as great horned owl (*Bubo virginianus*), were observed, smaller cavities large enough to support the small western screech-owl (*Megascops kennicottii*) and American kestrel (*Falco sparverius*) were observed. Other species observed on the site include spotted towhee (*Pipilo maculatus*), dark eyed junco (*Junco hyemalis*), California towhee (*Pipilo crissalis*), Townsend's warbler (*Dendroica townsendii*), and ruby-crowned kinglet (*Regulus calendula*). Oak trees may also provide potential nesting habitat for tree swallows (*Tachycineta bicolor*). Several of the trees were of a diameter large enough to support roosting bats species, and 16 trees were found to contain suitable cavities or crevices for colonial

species, such as long-eared myotis (*Myotis evotis*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), California myotis (*Myotis californicus*), big brown bat (*Eptesicus fuscus*), silver-haired bat (*Lasionycteris noctivagans*) and pallid bat (*Antrozous pallidus*), a California Special Concern (CSC) species.

Grassland habitat, including native and non-native grasslands, typically provides habitat for a wide variety of wildlife species. However, the small size and degraded nature of the grassland, invaded by French broom, present along the northern portion of the site reduces the suitability of this habitat for many species. The downed shrubs and logs in the southern portion of the site provide foraging and cover for California towhee and California quail (*Callipepla californica*). Subterranean mammals, such as California vole (*Microtus californicus*), and Botta's pocket gopher (*Thomomys bottae*), observed on the site, forage and nest within grasslands. The south facing slopes on the parcel would be suitable nesting habitat for western pond turtle, if they are present in Russell Creek.

An intermittent drainage occurs on the eastern portion of the site and receives water from the surface runoff from the residential development on the north side of Lake Park Drive. The channel appears to be undefined, with no bed or bank. An understory of Himalayan blackberry and poison oak provides foraging for deer and raccoon (*Procyon lotor*).

Adjacent to the project area, Russell Creek is an intermittent drainage, and during the field survey, very few pools greater than 12 inches were observed and the depth ranged between 8 to 12 inches. Large boulders, acting as slope stabilizers, occur along the entire reach and may create pools downstream of the boulders during periods with greater rainfall. The creek has a canopy of coast live oak, madrone, willows (*Salix* sp.) with an understory of Himalayan blackberry and poison oak, among other species. The majority of the creek along the project boundary supports a 100% canopy cover, as well as shading from a hillside to the south, while the western portion, outside of the project boundary, supports no canopy cover.

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 between primary habitat areas and occur on a large scale throughout California. Habitat linkages facilitate movement among 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 comprising 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. Potentially low frequency genetic flow may lead to complete isolation, and if pressures are strong, potential extinction (McCullough 1996; Whittaker 1998).

Hydrologic connectivity of this site to other open lands in the area occurs via Russell Creek, which occurs on the southern portion of the project site. A barrier to fish passage occurs one mile west of the site on Piner Creek, into which Russell Creek flows. Terrestrial connectivity occurs from the oak woodlands which are connected to woodlands to the north and east via remnant woodlands in the valleys and steeper slopes. However, 25% of the woodlands on the west side of the parcel have been removed, reducing the connectivity of the site to the surrounding areas.

SPECIAL-STATUS BIOLOGICAL RESOURCES

Certain animal species are designated as having special-status based on their overall rarity, endangerment, restricted distribution, and/or unique habitat requirements. In general, special-status is a combination of these factors that leads to the designation of a species as sensitive. The Federal Endangered Species Act (FESA) outlines the procedures whereby species are listed as endangered or threatened and established a program for the conservation of such species and the habitats in which they occur. The California Endangered Species Act (CESA) amends the California Fish and Game Code to protect species deemed to be locally endangered and essentially expands the number of species protected under the FESA.

Special-status Animal Species

Special-status animal species include those listed by the USFWS (2009) and the CDFG (2009a, 2009b). The USFWS officially lists species as either Threatened or Endangered, and as candidates for listing. Additional species receive federal protection under the Bald Eagle Protection Act *(e.g.*, bald eagle, golden eagle), the Migratory Bird Treaty Act (MBTA), and state protection under CEQA Section 15380(d). In addition, many other species are considered by the CDFG to be species of special concern; these are listed in Remsen (1978), Williams (1986), and Jennings and Hayes (1994). Although such species are afforded no official legal status, they may receive special consideration during the planning and CEQA review stages of certain development projects. The CDFG further classifies some species under the following categories: "fully protected", "protected fur-bearer", "protected amphibian", and "protected reptile". The designation "protected" indicates that a species may not be taken or possessed except under special permit from the CDFG; "fully protected" indicates that a species can be taken for scientific purposes by permit only.

Of the 12 special-status animal species identified as potentially occurring in the vicinity of the project area (CNDDB 2008, USFWS 2009), several additional species have potential to occur on or near the site based on the habitats present (please refer to Table 1). This resulted in a total of 16 special-status animal species that were evaluated for their potential to occur within the study area, based on: 1) review of the CNDDB, 2) the "Special Animals" list (CDFG 2009) that includes those wildlife species whose breeding populations are in serious decline, and 3) the habitat present on site. See Table 1 for a list of the species evaluated.

Table 1: Potentially Occurring Special-Status Animal Species in the Project Area

Common Name *Scientific Name*	Status USFWS/ CDFG	Habitat Affinities and Reported Localities in the Project Area	Occurrence Potential
Invertebrates			
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	-/CSC	Oligolectic (specialist pollinator) on vernal pool Blennosperma and nests the uplands around vernal pools.	None: no habitat present.
California linderiellla *Linderiella ocidentalis*	-/CSC	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	None: no habitat present.
California freshwater shrimp *Syncaris pacifica*	FE/SE	Endemic to Napa, Sonoma and Marin Counties. Occurs in low elevation and low gradient perennial streams with moderate to heavy riparian cover.	None: no suitable habitat present.
Fish			

Common Name *Scientific Name*	Status USFWS/ CDFG	Habitat Affinities and Reported Localities in the Project Area	Occurrence Potential
Coho salmon - Central California Coast ESU *Onchorhynchus kisutch*	FT/SE	Occurs from Punta Gorda, in northern California, to the San Lorenzo River, in Santa Cruz County, and includes coho salmon populations from several tributaries of San Francisco Bay (e.g., Corte Madera and Mill Valley Creek).	None: no habitat present.
steelhead - Central California Coast ESU *Onchorhynchus mykiss*	FT/-	Requires beds of loose, silt-free, coarse gravel for spawning and cover, cool water and sufficient dissolved oxygen.	None: no habitat present.
Chinook salmon *Oncorhynchus tshawytscha*	FT	Requires gravel diameter of 2 to 3 inches, with depths generally less than 36 inches but more than 20 inches and a velocity of more than 3 ft/sec. Requires water temperatures from 42°F to 51°F.	None: no habitat present.
Amphibians			
California tiger salamander *Ambystoma californiense*	FT (Central Valley), FE (Sonoma County)/CSC	Breeds in temporary or semi-permanent pools. Seeks cover in rodent burrows in grasslands and oak woodlands.	None: no habitat present and outside species range.
foothill yellow-legged frog *Rana boylii*	-/CSC	Prefers permanent stream pools, and creeks with emergent and/or riparian vegetation.	None: no suitable habitat present.
California red-legged frog *Rana draytonii*	FT/-	Prefers semi-permanent and permanent stream pools, ponds and creeks with emergent and/or riparian vegetation. Occupies upland habitat especially during the wet winter months.	None: no suitable habitat present.
Reptiles			
northwestern pond turtle *Actinemys marmorata marmorata*	SC/CSC	Prefers permanent, slow-moving creeks, streams, ponds, rivers, marshes and irrigation ditches with basking sites and a vegetated shoreline. Requires upland sites for egg-laying.	**Low**: suitable upland habitat present.
Birds			
Cooper's hawk *Accipiter cooperii*	MBTA/CSC	Nests in forests and woodlands with relatively dense canopy cover near water	**Moderate**: suitable habitat present.
sharp-shinned hawk *Accipiter striatus*	MBTA/CSC	Nests in coniferous forests and riparian corridors with relatively dense canopy cover near water.	**Moderate**: suitable habitat present.
white-tailed kite *Elanus leucurus*	MB/CFP	Inhabits low rolling foothills and valley margins with scattered oaks and river bottom- lands or marshes adjacent to deciduous woodlands. Prefers open grasslands, meadows and marshes for foraging close to isolated, dense-topped trees for nesting and perching.	None: no suitable habitat present.
Acorn woodpecker *Melanerpes formicivorus*	MBTA	Nests in cavities of oak trees in woodlands and forests.	**High**: suitable nesting habitat.

Common Name *Scientific Name*	Status USFWS/ CDFG	Habitat Affinities and Reported Localities in the Project Area	Occurrence Potential
Northern spotted owl *Strix occidentalis*	FT, MB/-	Dense coniferous and hardwood forest, shaded, steep sided canyons.	None: no suitable habitat present.
Mammals			
pallid bat *Antrozous pallidus*	-/CSC	Day roosts include rock outcrops, mines, caves, hollow trees, buildings and bridges. High reliance on tree roosts in some areas.	**Moderate**: some suitable habitat present in tree cavities.
Townsend's big-eared bat *Corynorhinus townsendii*	-/CSC	Roosts in caves, mines buildings and bridges. Recently found roosting in very large redwood basal cavities.	None: no suitable habitat present.
Western red bat *Lasiurus blossevillii*	-/CSC	Solitary foliage-roosting species; strongly associated with cottonwood and sycamore riparian habitat, but also uses orchards, non-native trees, shrubs, oak woodlands. The California Central Valley of California and surrounding foothills comprise primary habitat of reproductive females.	**Low**: large leaves of madrone and density of oak canopy may provide potentially suitable habitat

U.S. FISH AND WILDLIFE SERVICE

FE = federally listed Endangered
FT = federally listed Threatened
SC[1] = federal Species of Concern
MBTA = Migratory Bird Treaty Act.

CALIFORNIA DEPT. OF FISH AND GAME

CE = California listed Endangered
CT = California listed as Threatened
CSC = California Special Concern species

Although none of these species have a high potential for occurrence at the project site, six species are considered to have a low to moderate potential for occurrence within or adjacent to the study area based on the habitats present. These species are discussed below. Species that have no likelihood to occur on site but are prominent in today's regulatory environment (e.g., amphibians) are also discussed below.

Amphibians: California red-legged frog (CRF), federally listed Threatened, foothill yellow-legged frog (FYF), California Specie of Concern

Breeding habitat for CRF includes ponds, slow moving streams, or deep pools in intermittent streams with emergent and shoreline vegetation. Breeding habitat for FYF includes perennial streams in woodland, chaparral or forests with little to no bank vegetation cover, preferring small to moderate sized streams with at least some cobble-sized substrate (Jennings and Hayes 1994).

Although no surveys were conducted of Russell Creek, no special-status amphibians are expected to occur in the creek. The closest reported sighting for CRF is 2 miles southeast of the project site and the closest reported sighting for FYF is in Porter Creek, more than 5 miles north of the project site (CNDDB 2009).

Based on the habitats within Russell Creek and the distance of reported sightings, neither of these species is expected to occur in Russell Creek.

Reptiles: Northwestern pond turtle, a California Species of Concern

The northwestern pond turtle is a medium-sized turtle that ranges in size to just over 8 inches (21cm) with a low carapace that is generally olive, brownish or blackish (Stebbins 1985, Jennings and Hayes 1994). Primary habits include permanent water sources such as ponds, streams and rivers. It is often seen basking on logs, mud banks or mats of vegetation, a behavior that allows for thermoregulation and territory establishment.

No surveys have been conducted for this species; however, there is a low likelihood that they may use Russell Creek and the grassland habitats on the south-facing slopes of The Arbors project site. Western pond turtle were reported occurring in the Nielsen Lake reservoir in 1989 (EIP Associates 1989), but the closest reported occurrence is located 0.84 miles northwest of the project site, with no hydrologic connection (CNDDB 2009). If western pond turtles still occur in Nielsen Lake reservoir, there is a low likelihood that they would use Russell Creek as a movement corridor.

Nesting Raptors: Birds of prey are protected under the federal Migratory Bird Treaty Act, Fish and Game Code 3503.5, and as a California fully protected species (white-tailed kite).

Raptors nest in a variety of substrates including, cavities, ledges and stick nests. For example, Cooper's hawks are small bird hunters, hunting on the edges of forests in broken forest and grassland habitats where passerines forage for seeds and insects. Nests occur in heavily forested areas near a water source. Research sites on nesting Cooper's hawks rarely show the nests more than a quarter of a mile away from water, whether it is a cattle tank, stream or seep (Snyder and Snyder 1975). Trees typically used by Cooper's hawks include cottonwoods, coast live oaks and black oaks (Call 1978), as well as second growth conifer stands or deciduous riparian areas. The breeding season occurs in late March-June, depending on the climate, with young fledging by mid-July.

No focused surveys for nesting raptors were conducted to determine the presence of such nests, since the time of the year of the survey, January, was too early to determine occupancy. Several large oaks occur on the site, and may support nesting habitat for raptors such as American kestrel, Cooper's hawk, sharp-shinned hawk and red-shouldered hawk. There is a moderate potential for these species to occur on the site. Please see below to avoid impacts to potentially nesting raptors.

Nesting Passerines: Perching birds are protected under the Federal Migratory Bird Treaty Act and the Fish and Game Code 3503.

Most habitats support a variety of nesting passerines, with the limiting factors being prey base and nesting structures. Passerines nest structures vary depending on the species and include everything from stick nests to cavities to mud ledges. Some species are solitary nesters, such as Anna hummingbirds, while others nest colonially, with family members helping to raise young, such as acorn woodpeckers.

No focused surveys for nesting passerines were conducted to determine the presence of such nests, since the time of the year, January, was too early to determine occupancy of any nests. However, several trees showed evidence of previous bird nest structures, as well as red-squirrel nests and early territory establishment by ground nesting birds were observed. Several passerine (perching birds) species observed on site, such as California towhee and scrub jays, nest in stick nests, while others, such as the acorn woodpecker and chestnut-backed chickadee, nest in tree cavities. Other species potentially nesting on the site include Anna's hummingbird and black phoebe. Please see below to avoid impacts to potentially nesting passerines.

Roosting Bats: Bats are protected as California Species of Concern and under the Fish and Game Code 5050.

Bats that use trees fall into three categories; 1) solitary, obligate tree-roosting bats that roost in the foliage or bark such as Western red-bat (*Lasiurus blossevillii*), a California Special Concern (CSC) species, or hoary bat (*Lasiurus cinereus*), 2) frequent tree-roosting bats that form colonies of varying size in tree cavities, such as silver-haired bats (*Lasionycteris noctivagens*), and 3) more versatile bat species that will use a wide variety of roosts from buildings to bridges to trees, such as various *Myotis* species, pallid bat (*Antrozous pallidus*), another CSC species, and others. Solitary-roosting bats consist either of single males or females either alone or with young. Colonial-roosting bats form maternity colonies in cavities or crevices where young are left behind while females forage, then return to nurse their young.

Although strongly associated with large leave trees such as cottonwood and sycamore riparian stands (Pierson, et. al. 2004, Bat Conservation International), *L. blossevillii* also roosts in the foliage of oaks, walnuts, orchard trees, and non-native vegetation. For example, we recovered a dead *L. blossevillii* in coast redwood habitat in a residential portion of Santa Rosa, and captured several individuals within oak woodland and savannah habitat in Lake County. It is possible that the large leaves of the madrones present on the site, and perhaps the dense canopy of coast live oaks, could provide suitable roost habitat for this solitary species. One other CSC species, *A. pallidus,* could potentially roost in the cavities and crevices in some of the trees.

Within The Arbors project site, a total of sixteen (16) trees have the potential to support cavity or crevice-roosting bats. Please refer to Table 2 for the tree numbers, species of tree and bat roost habitat type. No large cavities were observed, however some of those present could provide day and/or night roosting habitat for small colonies of several individuals.

Table 2: Potential Bat Habitat Trees and Locations

Tree Number	Species	Roost Habitat Type	Removal
615	Coast live oak	Cavities in limbs	No
626*	Coast live oak	Cavities in limbs	Yes
627	Coast live oak	Cavities in limbs	Yes
628	Coast live oak	Cavities in limbs	Yes
634	Coast live oak	Cavities in limbs	No
635	Coast live oak	Cavities in limbs	No
643	Coast live oak	Cavities in limbs	No
644	Coast live oak	Cavities in limbs	No
645	Coast live oak	Cavities in limbs	No
646	Coast live oak	Cavities in limbs	No
665	Coast live oak	Cavities in base, limbs; bark fissures	Yes
668	Coast live oak	Cavities in limbs, bark fissures	Yes
669	Coast live oak	Cavities in limbs, bark fissures	Yes
898**	Coast live oak	Cavities in limbs	No
5916	Coast live oak	Cavities in limbs	No
6288	Coast live oak	Cavities in base, limbs – snag limbs	No

*- Tag not visible, but corresponds to plan and tree data
** - Not shown on tree data report, but numbered

The trees in Table 1 were identified as supporting potential roosting bat habitat and, although not all of the trees will be removed they may be impacted by removal of adjacent trees. Please see below to avoid impacts to potentially roosting bats.

IMPACTS AND MITIGATION MEASURES

This section summarizes the potential temporary biological impacts from construction activities within the study area. The analysis of these impacts is based on a single reconnaissance-level survey of the study area, a review of existing databases and literature, and personal professional experience with biological resources of the region. Potential impacts to special-status biotic resources, namely to individual special-status animal species may occur from the proposed project. Mitigations for these biological impacts are provided below.

Project Direct Impacts 1: A total of 41 heritage trees occur on the site, of which 17 will be removed. The City of Santa Rosa defines a heritage tree as one that is native to Sonoma County and when their diameter or circumference is greater than 14 dbh. An additional 392 trees will be removed as part of the proposed project. Individuals nesting in the coast live oak woodland, or non-native grasslands on the site could be taken if construction occurs during the nesting season (February through August).

Project Mitigation 1: The following mitigation measures should be followed in order to avoid or minimize impacts to birds that may potentially nest in the trees:

1) Grading or removal of nesting trees and habitat should be conducted outside the nesting season, which occurs between approximately February 15 and August 15.
2) If grading between August 15 and February 15 is infeasible and groundbreaking must occur within the nesting season, a pre-construction nesting bird (both passerine and raptor) survey of the grasslands and adjacent trees shall be performed by a qualified biologist within 7 days of ground breaking. If no nesting birds are observed no further action is required and grading shall occur within one week of the survey to prevent "take" of individual birds that could begin nesting after the survey.
3) If active bird nests (either passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged, as determined by a qualified biologist.
4) The radius of the required buffer zone can vary depending on the species, (i.e., 75-100 feet for passerines and 200-300 feet for raptors), with the dimensions of any required buffer zones to be determined by a qualified biologist in consultation with CDFG.
5) To delineate the buffer zone around a nesting tree, orange construction fencing shall be placed at the specified radius from the base of the tree within which no machinery or workers shall intrude.
6) After the fencing is in place there will be no restrictions on grading or construction activities outside the prescribed buffer zones. The buffer zone shall remain in place until after the young have fledged.

This is a less than significant impact with the above mitigation measures incorporated.

Project Direct Impacts 2: Direct mortality of bats roosting in the trees on the site could result if construction occurs during the roosting season (April through August), or during winter torpor months (October through February). The greatest potential for mortality to bats exists with removal of trees containing cavities that could support colonies, particularly with non-volant young. Because many bats frequently switch tree roosts, relying on negative results from night emergence surveys may be ineffective. This is because night surveys of trees often need to be repeated several times on different nights to establish a reasonable confidence in negative results. Also, bats could begin roosting in trees previously established as unoccupied; removal of those trees without suitable precautions would then cause direct mortality. As a result, night surveys would be of minimal value and are therefore not recommended for this project. There is a smaller risk of direct

mortality to any solitary *L. blossevillii* that could be roosting on the site because this species roosts within the foliage, where disturbance from tree cutting is likely to cause abandonment before the tree has fallen.

Project Mitigation 2: To avoid or minimize risk of mortality to bats, tree removal must occur during specific seasonal periods when adult and young bats are actively flying in and out of their tree roost, and must follow certain procedures that cause bats to abandon the tree roost prior to tree removal. This method provides a level of disturbance that should be sufficient to cause any roosting bats to abandon the roost immediately, or choose not to return to the roost tree after night emergence and foraging activity due to alteration and disturbance of the tree.

The following mitigation measures should be followed in order to avoid or minimize impacts to bats that may potentially roost in the trees:

1) Conduct tree removal only during seasonal periods of activity; starting about March 1 (or when night temperatures are above 45F and when rains have ceased) until April 15 (prior to when females begin to give birth to young), or from August 15 (when young bats are self-sufficiently volant) until about October 15 (before night temperatures fall below 45F and rains begin, causing torpor).

2) Trees *not* identified as providing potential habitat that occur within a 50-foot radius of potential habitat trees listed in Table 1 shall be removed 1 day prior to removing potential habitat trees. This will cause noise and vibration disturbance around the roost trees that should help cause bats that may be roosting in habitat trees to either abandon immediately (though this rarely occurs in our experience), or avoid returning to the roost tree after nightly foraging activities.
    a. Removal of non-habitat trees may be accomplished using chainsaws or any other desired equipment. It should be noted that no removal of non-habitat trees may cause damage to habitat trees; so the applicant shall not allow falling trees, limbs or branches to fall onto habitat trees.

3) One day after removal of non-habitat trees within a 50-foot radius of habitat trees, those trees may be removed using a two-stage process. The two stage process must be conducted over two consecutive days.
    a. On Day 1 (e.g., Tuesday), under instruction and supervision of a qualified bat expert, selected branches and limbs not containing cavities are to be removed using only chainsaws (no excavators, etc.). The noise and vibration from this activity should be sufficient to cause bats roosting in those trees to abandon the roost immediately, or choose not to return to the tree after night emergence and foraging, as a result of the daytime disturbance and significant physical modification to the structure and appearance of the tree and surrounding area. Specifically, late in the afternoon on Day 1 only small branches (<4" dia.) not containing cavities or fissures are removed using chainsaws (no heavy equipment). Only branches with leaves should be removed, which can include the crown or perimeter leafy canopy of each tree.
    b. The following day (Day 2, e.g., Wednesday), the remainder of the tree is removed, either using chainsaws or other equipment. Supervision is required to provide identification of branches and limbs safe for removal and instruction to tree cutters in suitable procedures.

4) No diesel or gas-powered equipment shall be stored or operated directly beneath trees with potential roosts, except for chainsaws used for removal of those trees.

This is a less than significant impact to individual roosting bats with the above mitigation measures incorporated.

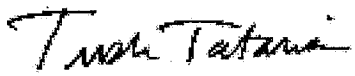
SUMMARY AND CONCLUSIONS

This report assessed the potential for occurrence of special-status species based on the habitats on the site and nearby. Although the late winter season is an inappropriate time to conduct occupancy surveys for either nesting birds or roosting bats, based on the high mobility and seasonal occurrence of these species, we were able to draw conclusions about previous occupancy based on the evidence left behind by these species, i.e., nesting material (birds), and fecal staining and guano (bats). Special attention was also paid to the habitats along Russell Creek and nearby reservoir for potential to support special status amphibians and reptiles. Again, a daytime survey in the winter is an inappropriate time to determine occupancy for many amphibians and reptiles, as the cold weather often stimulates seasonal hibernation or torpor.

Based on this assessment and with the above mitigation measures to prevent take of individuals adhered to, we feel that the proposed project The Arbors satisfies the CEQA review and no further studies are necessary.

Please call if you have any questions regarding this report.

Sincerely,



Trish Tatarian

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Figure 1

Figure 2. Coast live oak grove.

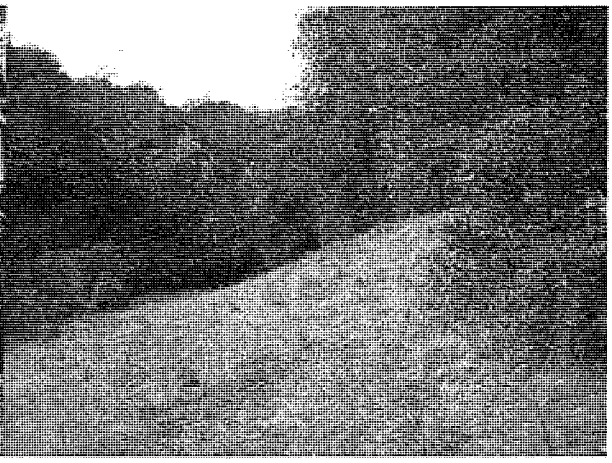


Figure 3. Non-native grasslands, southern portion of site.

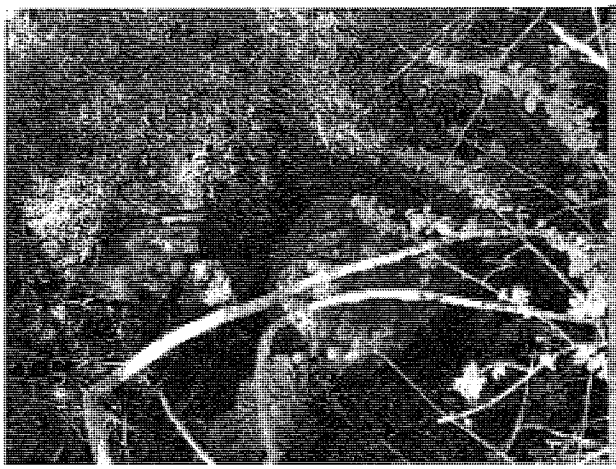


Figure 4. Russell Creek, west of site.

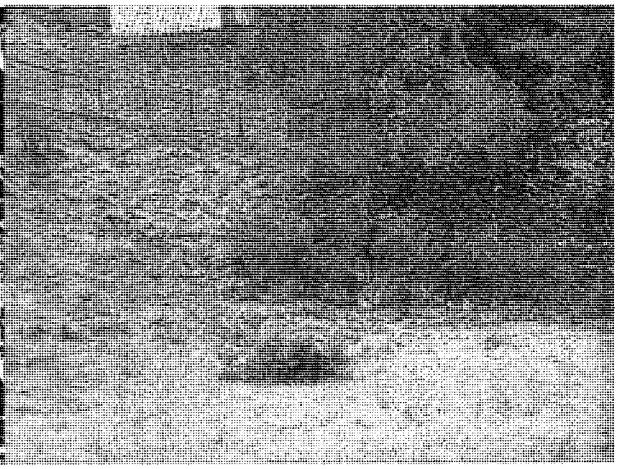


Figure 5. Culvert in Russell Creek, eastern portion of site.

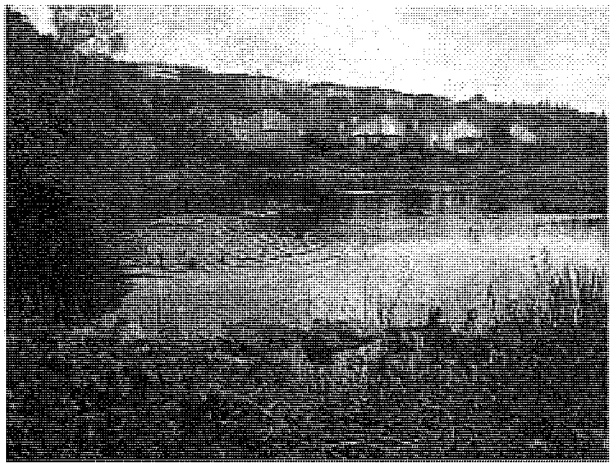


Figure 6: Nielsen Ranch Park Reservoir.

Ralph Osterling Consultants, Inc.

1650 Borel Place, Suite 204
San Mateo, CA 94402-3508

January 8, 2008

Mr. Jack Chamberlain
The Chamberlain Group
655 Skyway, Suite 230
San Carlos, CA 94070

RE: The Arbors - File MJ07-016CNPS E-mail Letter November 27, 2007

Dear Mr. Chamberlain:

Below are my response comments to Ms. Houser's letter, dated November 27, 2007, in which several issues are raised regarding the oak tree resources. The following are germane and reflect my professional perspectives:

1. The Arbors are part of a Neilson Ranch Master Plan previously approved by the City of Santa Rosa. The impacts of the entire project were discussed in the initial documents; apparently she does not have that information.

2. In Paragraph 2, she states "no effort was taken to optimize the design with respect to the oak resources." This, I believe, is simply false, for the lots are small and are focused to be adjacent to Lakepark Drive. In addition the plan calls for retaining walls to save trees growing adjacent to the proposed Arbors development.

3. With the design close to Lakepark Drive, a private open space reserve of 1.54 acres retains oak resources on the lower side of Arbors. This open space is contiguous with the Bicentennial open space parcel of 3.63 acres. All of these open space areas are open to the public and are maintained by the project. The oak resources and the other natural environmental features located on those acres are to be retained.

4. In Paragraph 3 of Ms. Houser's letter concerns are expressed regarding future vegetation management and impact to the remaining trees. Fuel management practices require only the removal of flashy light fuels and flammable brush concentrations. With proper fuel management, including brush removal and possibly control burns, the oak resources are fire safe and tree removal is not necessary nor required. If the development were not to go in and fuel management not be proposed, a wildfire could go through this area and readily consume these oak resources.

Phone: (650) 573-8733 **Fax: (650) 345-7890** **Email: roc@ralphosterling.com**

Regarding the Sudden Oak Disease (SOD), pruning and other activities have little or no impact on the spread, except for the removal of alternate host species. Alternate hosts in this area consist of primarily of bay trees but also some lesser species. I do recommend that where possible, the bays be removed since they have been clearly shown to be an alternate host to SOD plus being flammable.

The CNPS should recognize the acreage which includes oak resources being set aside as private open spaces and are open for public appreciation and enjoyment. The proposed Arbors private open space ties directly to the existing open space that extends all the way from Bicentennial Drive on the westerly side up through Neilson Ranch Park and Kirkridge Street.

I professionally feel the project is being sensitive to the oak resources and does provide for public access and enjoyment of those resources. If I can be of further assistance or responses are required by the City, I will be pleased to respond.

Sincerely,

Ralph S. Osterling
President
Registered Professional Forester #38

RSO:js

THE
CHAMBERLAIN GROUP

January 8, 2008

Erin Morris, Senior Planner
City of Santa Rosa
Department of Community Development
100 Santa Rosa Avenue
Santa Rosa, Ca 95402-1678

Re: The Arbors, 3500 Lake Park Drive, File No. MJPO7-016

Dr. Ms. Morris,

I am writing you in regards to the letter dated November 27, 2007 which you received from Lynn Houser of the California Native Plant Society. We believe that Ms. Houser's comments are unwarranted.

It is important that Ms. Houser's comments be weighed within the context of "The Arbors" as an integral component of the overall "Nielsen Ranch development which was approved many years ago. As you correctly noted in your November 30, 2007 e-mail to Chuck Regalia, "the Arbors project involves development of one of the last remaining parcels within the Nielsen Ranch subdivision in Fountaingrove". Specifically, " The Arbors" 5+ acre site is not a stand alone, isolated development proposal, and is not one of the last remaining parcels, but is, in fact, the last remaining parcel representing the last phase of our "Nielsen Ranch" effort, a 115+ acre development plan which has been under design development and construction since 1985.

Since 1985, and through out the course of design and construction of "Nielsen Ranch" we have expended a great deal of effort to preserve existing trees.

Our efforts have included:

Preserving as many trees as possible on each lot outside of the building structure area

Locating buildings to minimize the effects of construction on the surrounding vegetation

Clustering buildings to minimize the site coverage and to maximize lot open space

In addition to preserving trees within the residential development, we created and dedicated to the City of Santa Rosa "Francis Nielsen" Park, which:

- Preserved an additional 10 acres of trees
- created a small lake, and

655 SKY WAY, SUITE 230 ▪ SAN CARLOS, CA 94070
TELEPHONE: 650/595-5582 ▪ FAX: 650-595-5066

- has provided a hiking trail within this forested area open to the public through park dedication and privately maintained open space

Additionally, during the construction of much of the earlier phases, we contributed annually $10,000 and two hundred 15 gallon trees for a total of $60,000 and 1200 trees, to RELEAF for the planting of trees elsewhere with in the City of Santa Rosa.

Moreover, in addition to the above, we have planted at least two trees per improved lot. We have also planted and additional 189 trees spread throughout the development to further mitigate for the loss of trees which were removed pursuant to City of Santa Rosa approval during the residential construction.

Most of the residences which have been approved and constructed within" Nielsen Ranch" are single family detached dwelling units. Initially, it was anticipated that there would be 64 attached dwelling units within "The Arbors", providing some variety and diversity of dwelling unit types within the overall 115+ acre development. Accordingly, we had designed a development consisting of ten buildings housing 6 condominium dwelling units per building. However, the Hillside Development Standards adopted as part of the new Zoning Code in 2004 made it much more difficult for us to attain that density.

Working with our architects, engineers and City staff, we have altered our proposed development from the 60 unit condominium concept to a total of 37 attached single homes – the application that is currently on file and being processed by City Staff. Our current proposal includes clustering of dwelling units on very small lots and setting aside a 1 ½ acre open space reserve specifically to avoid and to preserve trees to the extent feasible. We believe that our current 37 dwelling unit development proposal satisfies all City standard and zoning requirements. .

In summary, it is clear that during the course of development and construction of the "Nielsen Ranch" we have gone to a great deal of effort to preserve the existing trees and to replace trees at a generous rate. Please note the enclosed Tree Exhibit plan and aerial photographs, which, I believe substantiate our efforts.

Also enclosed for your reference is a copy of the letter from Lynn Houser together with a response to her letter from our arborist Ralph Osterling.

I hope that the above discussion and overview of the "Nielsen Ranch" and "The Arbors" as an integral component thereof as well as the enclosed Arborist Letter is helpful to you in your evaluation of the CNPS comments.

Cordially,

Chamberlain Lakepark LLC.
Jack T. Chamberlain

Ralph Osterling Consultants, Inc.

1650 Borel Place, Suite 204
San Mateo, CA 94402-3508

September 18, 2007

Jack Chamberlain
The Chamberlain Group
P.O. Box 970
San Carlos, CA 94070

Re: Arborist Report for The Arbors

Dear Jack:

During July 2007 we completed a field update of the tree inventory data for The Arbors project in Santa Rosa. It had been a number of years since the original tree inventory was prepared so we have updated the inventory to reflect the current size, health and condition of the trees. In addition, a number of trees that did not meet the size requirement when the original report was prepared have since grown to meet the minimum diameter requirement (4"). These new trees have been added to the data. Data for all trees within the development area is included in the attached Table 1. Table 1 provides the individual tree tag numbers, species, removal/preservation status, heritage tree status, health/condition rating, and diameter measurements.

Using the May 2007 Site Plan prepared by Carlenzoli and Associates, we have updated the proposed tree removal for the project. A total of 409 native trees will be removed. Seventeen (17) of the trees to be removed are "heritage trees". There are a total of 861 trees in the project area. The trees to be removed have a combined total diameter of 4,529 inches. Using the City of Santa Rosa's mitigation formula (total combined diameter divided by 6 x 2) 1,510 15-gallon size trees are required to be replanted on site. If the site cannot accommodate all of the trees, then an in-lieu fee of $100 per tree may be submitted in place of the tree planting.

The following tree protection and preservation measures have been prepared for those trees to be retained in the project area. All protected tree fencing areas are shown on the Site Plan. The tree protection zone is shown as a bold dashed line and corresponds to the location of the tree protection fencing. The following measures will be implemented to provide protection to the trees during project construction:

Phone: (650) 573-8733 **Fax: (650) 345-7890** **Email: roc@ralphosterling.com**

1. **Tree Protection Fencing** - Prior to the start of construction, tree protection fencing will be installed in the locations shown on the final grading plan. Tree protection fencing shall be four (4') foot high orange plastic protection fencing. The fencing will be mounted on steel "T" drive posts driven into the ground to a depth of at least one foot with a spacing of no more than eight (8') feet.

   Tree fencing is to be erected and approved by the Project Forester before any demolition, grading, or construction begins and remain in place until final inspection of the project permit. A durable warning sign measuring 8.5" x 11.0" that reads, **"ENVIRONMENTALLY SENSITIVE AREA-NO ENTRY"**, will be prominently displayed on each fence.

2. **Tree Protection Zone or (TPZ)** - each tree to be retained to will have a designated TPZ identifying an area sufficiently large enough to protect the tree and roots from disturbance. The TPZ shall be shown on all site plans for the project. Improvement activities such as paving, utility and irrigation trenching and other ancillary activities shall occur outside of the TPZ, unless authorized by the Project Forester, or by project approval. The tree protection fencing will be used to delineate the extent of the TPZ.

   The following activities are prohibited within the TPZ:

   - Storage or parking vehicles, building materials, refuse, excavated spoils or dumping of poisonous materials on or around trees and roots. Poisonous materials include, but are not limited to, paint, petroleum products, concrete or stucco mix, dirty water or any other material that may be deleterious to tree health.
   - The use of tree trunks as a winch support, anchorage, as a temporary power pole, sign posts or other similar function.
   - Cutting tree roots by utility trenching, foundation digging, placement of curbs and trenches and other miscellaneous excavation without prior approval of the Project Forester.
   - Soil disturbance or grade change
   - Drainage changes

The following activities may be permitted in the TPZ:

- Mulching. During construction, wood chips may be spread within the TPZ to a 4-6-inch depth, leaving the trunk clear of mulch to help inadvertent compaction and moisture loss from occurring. The mulch may be removed if improvements or other landscaping is required.

- Root Buffer. When areas under the tree canopy cannot be fenced, a temporary buffer is required and shall cover the root zone and remain in place at the specified thickness until final grading stage.

- Irrigation, aeration, fertilizing or other beneficial practices that have been specifically approved for use within the TPZ.

3. **Tree Pruning, Surgery and Removal** - Prior to the start of construction, the contractor and Project Forester will conduct an onsite review of trees adjacent to the construction area to identify any pruning necessary for vehicle and equipment clearance. Where needed, limbs will be professionally pruned to provide the minimum necessary vehicle clearance. Pruning shall not be attempted by construction or contractor personnel, but shall be performed by a qualified tree care specialist or certified tree worker.

4. **Grade Limitations within the Tree Protection Zone**

- Grade changes outside of the TPZ shall not significantly alter drainage to the tree. Where drainage alteration is unavoidable, supplemental drip irrigation may be required for two growing seasons following the drainage alteration to mitigate for the loss of natural soil water.

- Grade changes within the TPZ are prohibited, except as previously noted for "line" trees that will be impacted, but preserved.

- Grade changes under specifically approved circumstances shall not allow more than six (6") inches of fill soil added or allow more than four (4") inches of existing soil to be removed from natural grade unless mitigated.

- Grade fills over six (6") inches or impervious overlay shall incorporate an approved permanent aeration system,

permeable material or other approved mitigation.

5. **Trenching, Excavation and Equipment Use** - Trenching, excavation or boring activity within the TPZ is restricted to the following activities, conditions and requirements if approved by the Project Forester.

- Notification. Contractor shall notify the Project Forester a minimum of 24 hours in advance of any activity in the TPZ.

- Root Severance. Roots that are encountered shall be cut to sound wood and repaired. Roots two (2") inches and greater must remain injury free.

- Excavation. Any approved excavation, demolition or extraction of material shall be performed with equipment sitting outside the TPZ. Methods permitted are by hand digging, hydraulic or pneumatic air excavation technology. Excavation in the TPZ should be avoided during hot dry weather.

  If excavation or trenching for drainage, utilities, irrigation lines, etc., the contractor shall tunnel under any roots two (2") inches in diameter and greater. Prior to excavation for foundations, footings, walls, grading or trenching within the TPZ, roots shall first be severed cleanly one (1') foot outside the TPZ and to the depth of the future excavation. The trench must then be hand dug and the roots pruned with a saw, sawzall, narrow trencher with sharp blades or other approved root pruning equipment.

- Heavy Equipment. Use of backhoes, steel tread tractors or any heavy vehicles within the TPZ is prohibited unless approved by the Project Forester. If allowed, a protective root buffer is required. The protective root buffer shall consist of a base course of tree chips spread over the root area to a minimum depth of six (6") inches, layered by 3/4-inch quarry gravel to stabilize 3/4-inch plywood on top. This buffer within the TPZ shall be maintained throughout the entire construction process.

- Structural Design. If injurious activity or interference with roots greater than two (2") inches in diameter will occur within the TPZ, plans shall specify a design of special foundation, footing, walls, concrete slab or pavement designs subject to Project Forester approval. Discontinuous foundations such as concrete pier and structural grade beam must maintain natural grade (not to exceed a four

(4") inch cut), to minimize root loss and allow the tree to use the existing soil.

6. **Injury Mitigation** - The following mitigation measures will be used as need to address project induced drought stress, dust ccumulation, or soil compaction to trees that are to be saved. To help reduce impact injury, one or more of the following mitigation measures will be implemented, as necessary and supervised by the Project Forester.

   - Irrigation Program. Irrigate to wet the soil within the TPZ to a depth of 24" to 30". Or, apply sub-surface irrigation at regular specified intervals by injecting on approximate three (3') foot centers, ten (10) gallons of water per inch of trunk diameter within the TPZ. Duration shall be until project completion or monthly until seasonal rainfall totals at least eight (8") inches of rain.

   - Dust Control Program. If grading occurs during the dry summer months, dust shall be controlled by wetting all disturbed areas as needed with a water truck.

   - Soil Compaction Damage. If a compaction event to the upper 12-inch soil horizon within the tree protection zone has or will occur by any means, then one or more of the following mitigation measures will be implemented.

     - Type 1 Mitigation. If an approved paving, hardscape or other compromising material encroaches within the TPZ, an aeration system shall be designed by the Project Forester and used within this area. **See Attached - Tree Protection Detail Drawings** for a typical aeration system design.

     - Type 2 Mitigation. If inadvertent compaction of the soil has occurred within the TPZ, the soil shall be loosened by one or more of the following methods to promote favorable root conditions: vertical mulching, soil fracturing, core-venting, radial trenching or other method approved by the Project Forester.

Damage to Trees requires reporting of any damage or injury to protected trees to the Project Forester and job superintendent within six (6) hours so that mitigation can take place immediately. All mechanical or chemical injury to branches, trunk or to roots over two (2") inches in diameter shall be reported in the weekly inspection report. In the event of injury, the following mitigation and damage control measures shall apply:

- Root Injury. When approved trenches within the TPZ are excavated and tree roots two (2") inches in diameter or larger are encountered, they must be cleanly cut back to a sound wood lateral root. The end of the root shall be covered with either a plastic bag and secured with tape or rubber band, or be coated with latex paint. All exposed root areas within the TPZ shall be backfilled or covered within one hour. Exposed roots may be kept from drying out by temporarily covering the roots and draping layered burlap or carpeting over the upper three (3') feet of trench walls. The materials must be kept wet until backfilled to reduce evaporation from the trench walls.

- Bark or Trunk Wounding. Current bark tracing and treatment methods shall be performed by a qualified tree care specialist within two days.

- Scaffold Branch or Leaf Canopy Injury. Within five days, remove broken or torn branches back to an appropriate branch capable of resuming terminal growth. If leaves are heat scorched from equipment exhaust pipes, consult the project arborist within six (6) hours.

Inspection Schedule

During grading activities, the Project Forester shall inspect the site twice each week to verify that protected trees have not been damaged. If any native tree greater than or equal to four (4") dbh is determined by the Project Forester to be damaged, the tree(s) will be replaced at a 2:1 ratio, and temporary fencing of the tree drip lines within the remaining construction area shall be required.

Inspection Reports will be submitted at the end of each week to the City of Santa Rosa summarizing the week's observations, problems or violations, and the corrective measures taken.

Due to the density of the preserved woodland areas, most mitigation planting will occur in areas devoid of trees or areas cleared for project construction. As a matter of procedure, any mitigation planting or landscape planting that may occur within the drip line of any native oak tree must be done in a manner that does not damage or weaken the preserved tree. Any irrigation within the drip line must be drip type irrigation. Area sprays are prohibited within the drip line of native oak trees. In addition, the area around the root collar (min. 6' radius) of the native oak trees must remain dry throughout the summer season.

Visual Impacts

Visual impacts will be limited to the interior portion of the project; primarily the view from Lake Park Drive. Offsite views from the south and west will be screened by the dense tree cover that will remain in these areas.

Should you have any questions or need additional information regarding the tree at The Arbors, please do not hesitate to contact me.

Respectfully,

Douglas E. Nix, RPF #2246
Vice President

Enc.

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
126	valley oak		X	good	14					
345	coast live oak		X	good	26	18	13	11		
346	coast live oak			fair	11	10				
347	coast live oak			good	15					
348	coast live oak			poor	7	5				
349	coast live oak			good	16					
389	coast live oak			good	14	14				
390	coast live oak			poor	12					
391	coast live oak			fair	11	6				
392	coast live oak			fair	13	11	10			
393	coast live oak			good	13					
394	coast live oak			good	13	8	7			
395	coast live oak			good	10	9				
396	coast live oak			fair	10	7				
397	coast live oak		X	fair	20	18	16			
398	valley oak		X	poor	21	10				
593	coast live oak			good	16	14				
594	coast live oak	X		good	17	12				
595	coast live oak			good	16	15				
596	coast live oak			good	14					
597	coast live oak			good	14					
599	coast live oak			poor	8	5				
600	coast live oak	X		good	11					
601	coast live oak	X		poor	14	11	11			
602	coast live oak	X		fair	14	12	11	6		
604	coast live oak	X		good	13	5	4			
605	coast live oak			good	11	9	6			
606	coast live oak			fair	10	5				
607	coast live oak			fair	16					
608	coast live oak			good	10	7	6			
609	coast live oak			fair	13					
610	coast live oak			fair	10					
611	coast live oak			good	16					
612	coast live oak			good	17	10	9	5		

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
613	coast live oak			fair	9	8	8	6		
614	coast live oak			good	11	6	6			
615	coast live oak			fair	9	5	5	5	4	
615	coast live oak		X	fair	20					
615	coast live oak		X	fair	24					
617	coast live oak			fair	11	9	8			
622	coast live oak			fair	17	14	12	9		
623	coast live oak		X	fair	21					
625	coast live oak		X	good	31	17	14			
626	coast live oak	X	X	fair	23					
627	coast live oak	X	X	fair	30	21	15			
628	coast live oak	X	X	fair	20	20	17			
629	coast live oak			good	11	11	10			
630	coast live oak			fair	12	11	8			
631	coast live oak			good	10	10	7	6		
634	coast live oak		X	fair	22	15	12			
635	coast live oak		X	good	22					
636	coast live oak		X	fair	23	16				
637	coast live oak			good	10	7	6			
638	coast live oak			good	14	6				
639	coast live oak			poor	10	6				
640	coast live oak			fair	11	6				
641	coast live oak			poor	14					
642	coast live oak			good	12					
643	coast live oak			poor	15	10				
644	coast live oak			good	16	15				
645	coast live oak		X	fair	37					
646	coast live oak			good	17					
648	coast live oak			poor	17	10				
649	coast live oak			poor	8	7				
650	coast live oak			poor	10	7				
651	coast live oak		X	good	18					
652	coast live oak			poor	11					
653	coast live oak		X	good	20	19	14			

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
654	coast live oak		X	fair	18					
655	coast live oak		X	good	36					
656	coast live oak		X	fair	22					
657	coast live oak			fair	14					
659	coast live oak	X	X	good	20					
661	coast live oak	X	X	good	18	17	15	15	10	
663	coast live oak	X		good	14					
664	coast live oak	X		good	12	12				
665	coast live oak	X	X	poor	27					
666	coast live oak			good	11					
668	coast live oak	X	X	good	21					
669	coast live oak	X	X	good	27					
670	valley oak	X	X	good	31					
683	coast live oak	X		good	15	7				
685	coast live oak	X		fair	14					
687	coast live oak	X		DEAD	11					
688	coast live oak	X		fair	9					
689	coast live oak	X		fair	11	11				
690	coast live oak	X		good	17	5				
899	coast live oak			fair	13					
902	coast live oak			good	15	13	13			
903	coast live oak			fair	13					
904	coast live oak			good	14	12				
5798	madrone		X	good	14	13	8			
5799	madrone	X		poor	5					
5800	coast live oak	X		poor	7					
5803	coast live oak	X		poor	6					
5807	coast live oak	X		good	6					
5809	coast live oak	X		good	11					
5812	coast live oak	X		good	7					
5813	coast live oak	X		poor	5					
5814	coast live oak			poor	6					
5815	coast live oak	X		poor	9	7				
5816	coast live oak	X		fair	7					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5817	coast live oak	X		poor	7					
5818	coast live oak			good	9					
5819	coast live oak			poor	6	6				
5820	coast live oak			good	9					
5821	coast live oak			good	8					
5822	coast live oak	X	X	good	22					
5823	coast live oak	X		good	17					
5824	coast live oak	X		poor	6					
5825	coast live oak	X		poor	7					
5826	coast live oak	X		good	8					
5827	valley oak	X	X	good	9					
5828	coast live oak	X		fair	7					
5829	coast live oak	X		good	9					
5830	coast live oak	X		good	13					
5831	coast live oak	X		poor	6	5				
5832	coast live oak			good	13					
5833	coast live oak	X		good	14					
5834	coast live oak	X		fair	10					
5835	coast live oak			good	10					
5836	coast live oak	X		fair	9					
5837	black oak	X		good	6	6				
5838	coast live oak	X		good	11					
5839	coast live oak	X		good	10	8				
5840	coast live oak	X		poor	9					
5841	coast live oak	X		good	9					
5842	coast live oak	X		poor	4					
5843	coast live oak	X		good	7	7				
5844	coast live oak	X		good	12					
5845	coast live oak	X		good	8	6				
5846	coast live oak	X		poor	6					
5847	coast live oak	X		fair	10					
5848	coast live oak	X		good	8	5				
5849	coast live oak			fair	7	6				
5850	coast live oak	X		good	9					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5851	coast live oak	X		good	9	8	4			
5852	coast live oak	X		fair	10					
5853	coast live oak	X		good	7	4				
5854	coast live oak	X		good	10	7	7			
5855	coast live oak	X		good	9	9				
5856	coast live oak	X		good	8					
5857	coast live oak	X		fair	10					
5858	coast live oak	X		good	12	9				
5859	coast live oak	X		good	10	8				
5860	coast live oak	X		poor	6	6				
5861	coast live oak			poor	7					
5862	coast live oak	X		fair	6					
5863	coast live oak	X		poor	8	6				
5864	coast live oak	X		good	14					
5865	coast live oak	X		good	11					
5866	coast live oak			poor	7					
5867	coast live oak	X		poor	8					
5868	coast live oak	X		good	8	7				
5869	coast live oak	X		poor	9					
5870	coast live oak	X		good	11	9				
5871	coast live oak	X		good	11					
5872	coast live oak	X		fair	8	6				
5873	coast live oak	X		good	8					
5874	coast live oak	X		poor	6					
5875	coast live oak	X		fair	7					
5876	coast live oak	X		good	11					
5877	coast live oak	X		fair	7					
5878	coast live oak	X		good	8	8	6			
5879	coast live oak	X		good	13	12	7			
5880	coast live oak	X		fair	9					
5881	coast live oak	X		good	9					
5882	coast live oak	X		good	9					
5883	coast live oak	X		fair	6					
5884	coast live oak	X		good	14					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5885	coast live oak	X		fair	8					
5886	coast live oak	X		poor	9					
5887	coast live oak	X		good	16	8				
5888	coast live oak	X		good	9	5				
5889	coast live oak	X		poor	6	6	4			
5890	coast live oak	X		good	9					
5891	coast live oak	X		fair	7					
5892	coast live oak	X		good	11	9				
5893	coast live oak	X		good	10	7				
5894	coast live oak	X		poor	6					
5895	coast live oak	X		good	8					
5896	coast live oak	X		good	9					
5897	coast live oak	X		good	9					
5898	coast live oak	X		fair	7					
5899	coast live oak	X		fair	6					
5900	coast live oak	X		fair	13	8				
5901	coast live oak			fair	7	5				
5902	coast live oak			good	11	10	6			
5903	coast live oak			fair	11	9	8			
5904	coast live oak			fair	10					
5905	coast live oak			fair	8					
5906	coast live oak			good	7					
5907	coast live oak			good	10	10	6			
5908	black oak			good	6	6	4	4		
5909	coast live oak			good	10					
5910	coast live oak			fair	10					
5911	coast live oak	X		good	14	11	7			
5912	coast live oak	X		fair	9					
5913	coast live oak			poor	7	6	6			
5914	coast live oak			good	8					
5915	coast live oak			fair	11					
5916	coast live oak		X	fair	33					
5917	madrone	X		good	11	5				
5918	madrone	X		good	7					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5919	coast live oak	X		good	8	6				
5920	coast live oak	X		good	10					
5921	coast live oak	X		good	7					
5922	coast live oak	X		good	8					
5923	madrone	X		good	11	8				
5924	coast live oak			poor	7					
5925	coast live oak	X		good	13					
5926	coast live oak	X		poor	6					
5927	coast live oak	X		fair	7					
5928	coast live oak	X		fair	9					
5929	coast live oak	X		good	6	6	4			
5930	coast live oak	X		good	8					
5931	coast live oak	X		good	12	8				
5932	coast live oak	X		poor	6					
5933	madrone	X	X	good	12					
5934	coast live oak	X		good	9					
5935	coast live oak	X		good	7					
5936	coast live oak	X		fair	6					
5937	coast live oak	X		fair	6					
5938	coast live oak	X		good	7					
5939	coast live oak			poor	6					
5940	coast live oak	X		fair	6					
5941	coast live oak	X		good	8					
5942	coast live oak	X		good	8	7				
5943	coast live oak	X		good	11					
5944	coast live oak	X		poor	8					
5945	coast live oak	X		poor	6					
5946	coast live oak			good	16					
5947	coast live oak			fair	14	9				
5948	coast live oak	X		good	10					
5949	coast live oak	X		good	11					
5950	coast live oak	X		poor	12					
5951	coast live oak	X		good	10	6				
5952	coast live oak	X		good	9					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5953	coast live oak	X		good	9					
5954	coast live oak	X		poor	9					
5955	coast live oak	X		poor	7	6				
5956	coast live oak	X		good	15					
5957	coast live oak			good	10					
5958	coast live oak	X		poor	8					
5959	coast live oak	X		fair	12					
5960	coast live oak	X		poor	5					
5961	coast live oak	X		poor	8					
5962	coast live oak	X		poor	7					
5963	coast live oak	X		good	12					
5964	coast live oak	X		good	11					
5965	coast live oak	X		good	12					
5966	coast live oak	X		good	13					
5967	coast live oak	X		good	10					
5968	coast live oak	X		good	12					
5969	coast live oak	X		fair	8					
5970	coast live oak	X		good	14					
5971	coast live oak	X		good	8					
5972	coast live oak	X		poor	7					
5973	coast live oak			good	16					
5975	coast live oak	X		good	10					
5976	coast live oak	X		good	12					
5977	coast live oak	X		good	14	6				
5978	coast live oak	X		good	12	6				
5979	coast live oak	X		good	8	7				
5980	coast live oak	X		good	10					
5981	coast live oak	X		good	10					
5982	coast live oak	X		fair	11					
5983	coast live oak	X		fair	8	7				
5984	coast live oak	X		good	8					
5985	coast live oak	X		fair	9					
5986	coast live oak	X		good	10					
5987	coast live oak	X		good	11					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
5988	coast live oak	X		poor	6					
5989	coast live oak	X		poor	5					
5990	coast live oak			fair	10					
5991	coast live oak	X		good	13	9				
5992	coast live oak	X		poor	7					
5993	coast live oak	X		poor	6					
5994	coast live oak	X		poor	8					
5995	coast live oak	X		poor	11					
5996	coast live oak	X		fair	7					
5997	coast live oak	X		good	9					
5998	coast live oak	X		good	8					
5999	coast live oak	X		poor	6					
6000	coast live oak	X		good	10					
6001	coast live oak	X		fair	8					
6250	madrone	X		fair	9					
6259	madrone			good	10					
6260	madrone	X		good	8					
6261	coast live oak	X		good	15	12	11			
6262	coast live oak	X		fair	10					
6263	coast live oak	X		fair	8					
6264	coast live oak	X		good	12					
6265	coast live oak	X		fair	7					
6266	coast live oak	X		good	10					
6267	coast live oak	X		poor	6					
6268	coast live oak	X	X	good	19	17	8			
6269	coast live oak	X		good	12	11	0			
6270	coast live oak	X		poor	6					
6271	madrone	X	X	fair	13					
6272	coast live oak	X		fair	8					
6273	coast live oak	X		fair	7	6				
6274	coast live oak	X		good	12					
6275	coast live oak	X		good	10					
6276	valley oak	X	X	fair	7	5	double tag 6637			
6277	coast live oak	X		poor	6					

Table 1. The Arbors Tree Data Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6278	coast live oak	X		good	9					
6279	coast live oak	X		good	12	8				
6280	coast live oak	X		fair	6					
6281	coast live oak	X		poor	6					
6282	coast live oak	X		poor	6					
6283	coast live oak	X		good	10					
6284	coast live oak	X		good	13					
6285	coast live oak	X		fair	7					
6286	coast live oak	X		good	7					
6287	madrone			good	11	4				
6288	coast live oak		X	fair	30	20	12			
6289	coast live oak			fair	6					
6290	coast live oak			good	9					
6291	coast live oak	X		good	7					
6292	coast live oak	X		poor	7					
6293	coast live oak			good	7					
6294	coast live oak		X	good	19	13				
6295	madrone		X	good	17	16				
6296	madrone			good	11					
6297	coast live oak			fair	6					
6298	coast live oak			fair	6					
6299	coast live oak	X		good	8					
6300	coast live oak	X		good	8					
6501	coast live oak			fair	8					
6502	coast live oak			good	7					
6503	coast live oak	X		fair	8					
6504	coast live oak	X		poor	6					
6505	coast live oak	X		good	9					
6506	coast live oak	X		good	7					
6507	coast live oak			fair	7	6				
6508	coast live oak	X		good	10	7				
6509	coast live oak	X		good	8					
6510	coast live oak	X		good	13	9				
6511	coast live oak	X		good	9	9	5			

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6512	coast live oak	X		good	8	6				
6513	coast live oak	X		good	11	10				
6514	manzanita	X		poor	7	7	6			
6515	coast live oak			fair	7					
6516	coast live oak	X		good	10					
6517	coast live oak	X		good	10					
6518	coast live oak	X		good	9	6				
6519	coast live oak	X		good	12					
6520	coast live oak	X		fair	9					
6521	coast live oak	X		good	15					
6522	coast live oak	X		good	11	7				
6523	coast live oak	X		good	9					
6524	madrone	X	X	good	15					
6525	coast live oak	X		good	12					
6526	coast live oak	X		good	8					
6527	coast live oak	X		fair	6					
6528	coast live oak	X		good	8	7				
6529	coast live oak	X		good	13					
6530	coast live oak	X		good	10					
6531	coast live oak	X		fair	6					
6532	coast live oak	X		good	8					
6533	coast live oak	X		good	12					
6534	coast live oak	X		fair	8					
6535	coast live oak	X		fair	8					
6536	coast live oak	X		good	9					
6537	coast live oak	X		good	8	8				
6538	coast live oak	X		good	12	10	7			
6539	coast live oak	X		good	13	10	5			
6540	coast live oak	X		good	8					
6541	coast live oak	X		good	11					
6542	coast live oak	X		good	9	8				
6543	coast live oak	X		good	9					
6544	coast live oak	X		good	11					
6545	coast live oak	X		good	14					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6546	coast live oak			good	16					
6547	coast live oak			good	10					
6548	coast live oak	X		good	9					
6549	manzanita	X		poor	6	6	6			
6550	madrone	X	X	good	12					
6551	coast live oak	X		good	9					
6552	madrone	X		good	9	4				
6553	coast live oak	X		good	16					
6554	coast live oak	X		good	15					
6555	coast live oak	X		good	6	6				
6556	black oak	X		good	11	8				
6557	coast live oak	X		fair	9					
6558	coast live oak	X		good	9					
6559	coast live oak	X		good	7					
6560	coast live oak	X		good	10					
6561	coast live oak	X		poor	5	3				
6562	coast live oak	X		good	7	7				
6563	coast live oak	X		good	10					
6564	coast live oak	X		good	10					
6565	coast live oak	X		good	12	7				
6566	coast live oak			fair	7					
6567	coast live oak	X		good	9					
6568	coast live oak			good	7					
6569	coast live oak	X		good	13					
6570	coast live oak	X		good	7	5				
6571	coast live oak	X		good	6					
6572	coast live oak	X		good	8					
6573	coast live oak	X		good	9	8				
6574	coast live oak	X		good	8	8				
6575	coast live oak	X		good	8					
6576	coast live oak	X		fair	6					
6577	coast live oak	X		good	7	7				
6578	coast live oak	X		fair	10					
6579	coast live oak	X		good	7					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6580	coast live oak	X		good	7	6				
6581	black oak	X		good	7	5				
6582	coast live oak	X		good	8					
6583	coast live oak	X		good	9					
6584	coast live oak			good	8	7				
6585	coast live oak	X		good	8	6				
6586	madrone			good	9	0				
6587	madrone			poor	5					
6588	coast live oak			fair	7	6				
6589	coast live oak			fair	7					
6590	coast live oak			good	9					
6591	coast live oak			good	8	7	5			
6592	coast live oak			good	13	9				
6593	coast live oak			fair	9					
6594	coast live oak			good	6					
6595	coast live oak			good	10	9				
6596	coast live oak			good	10					
6597	coast live oak	X		good	9					
6598	coast live oak			good	9	9	9	8	6	
6599	madrone			good	10					
6600	MISSING									
6601	coast live oak			poor	9					
6602	coast live oak			good	10	9				
6603	coast live oak			poor	8					
6604	coast live oak			fair	7					
6605	coast live oak			good	10	9	9			
6606	coast live oak			good	7	5	5			
6607	coast live oak	X		good	7	7				
6608	coast live oak			fair	11	8				
6609	coast live oak	X		good	5	5	5			
6610	coast live oak	X		good	6	5	4			
6611	coast live oak	X		good	10	8	6			
6612	coast live oak	X		poor	6					
6613	coast live oak	X		good	8					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6614	coast live oak			fair	7	6				
6615	coast live oak	X		good	6	5				
6616	coast live oak	X		good	7					
6617	coast live oak	X		good	6					
6618	coast live oak	X		good	5	5				
6620	coast live oak			good	10	9	6			
6621	coast live oak			poor	4	4				
6622	coast live oak			good	9	7				
6623	coast live oak			good	8	5				
6625	coast live oak			good	7					
6626	coast live oak			good	7					
6627	coast live oak			poor	4					
6628	coast live oak			poor	5					
6629	coast live oak			poor	8	4				
6631	coast live oak			poor	4					
6632	coast live oak			poor	6					
6633	coast live oak			poor	5					
6634	coast live oak			poor	4					
6635	coast live oak			poor	5					
6636	coast live oak			good	8					
6637	valley oak		X	fair	7	5				double tag 6276
6638	coast live oak			poor	5	4				
6639	madrone			good	4					
6640	coast live oak			fair	5	5	4			
6641	coast live oak			fair	6					
6642	coast live oak			good	7	6				
6643	coast live oak			good	7					
6644	coast live oak			good	4					
6645	coast live oak			fair	6					
6646	coast live oak			poor	4					
6647	coast live oak			fair	5					
6648	coast live oak			good	6					
6650	coast live oak			poor	7					
6651	coast live oak			poor	4	0	2	2		

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6653	coast live oak			poor	4	0				
6654	coast live oak			poor	4					
6655	coast live oak			poor	4					
6656	coast live oak			fair	7					
6657	coast live oak			poor	5					
6658	coast live oak			poor	5					
6659	coast live oak			poor	5					
6660	coast live oak			good	5					
6661	coast live oak			poor	7					
6662	coast live oak			fair	6					
6663	coast live oak			good	7					
6664	coast live oak			good	6					
6665	coast live oak			poor	4	3	3	2		
6666	coast live oak			poor	6					
6667	coast live oak			poor	6					
6668	coast live oak			poor	6					
6669	coast live oak			poor	6					
6670	coast live oak			fair	6					dia 20 on map
6671	coast live oak			good	5	4				
6672	coast live oak			fair	6					
6673	coast live oak			fair	6					
6674	coast live oak			fair	7					
6675	coast live oak			good	7					
6676	coast live oak			poor	4	3				
6677	coast live oak			poor	4					
6678	coast live oak			poor	5					
6679	coast live oak			good	5					
6680	coast live oak			poor	7	5	4			
6681	coast live oak			poor	4	3	3	2		
6682	coast live oak			poor	4					
6683	coast live oak			poor	6					
6684	coast live oak			poor	6					
6685	coast live oak			poor	6	5				
6686	coast live oak			poor	4	0				

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6687	coast live oak			good	6					
6688	coast live oak			poor	4					
6689	coast live oak			poor	5					
6690	coast live oak			fair	6					
6691	coast live oak			poor	6					
6692	coast live oak			fair	5					
6693	coast live oak			good	4					
6694	coast live oak			fair	4					
6695	coast live oak			fair	5					
6696	coast live oak			poor	4					
6697	coast live oak			poor	4					
6698	coast live oak			good	6					
6699	coast live oak			poor	5					
6700	coast live oak			fair	6					
6701	coast live oak			poor	5					
6702	coast live oak			poor	6	5				
6703	coast live oak			poor	9					
6704	coast live oak			fair	6					
6705	coast live oak			fair	6					
6706	coast live oak			fair	7	3				
6707	coast live oak			fair	7					
6708	coast live oak			poor	6					
6709	coast live oak			poor	5					
6710	coast live oak			fair	10					
6711	coast live oak			fair	9					
6712	coast live oak			fair	8					
6713	coast live oak			fair	6					
6715	coast live oak			fair	4					
6716	coast live oak			fair	4	4				
6717	coast live oak			fair	6					
6718	plum			DEAD	4					
6719	coast live oak			poor	6					
6720	coast live oak			poor	5					
6721	plum			fair	4	1				

Table 1. The Arbors Tree Data Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6722	coast live oak			poor	5	2	1			
6723	coast live oak			poor	5					
6724	coast live oak			poor	5					
6725	coast live oak			fair	4					
6726	coast live oak			poor	5					
6727	coast live oak			poor	4					
6728	coast live oak			poor	6					
6729	coast live oak			poor	5	2				
6730	coast live oak			poor	4					
6731	coast live oak			fair	4					
6732	coast live oak			fair	7					
6733	coast live oak			poor	5					
6734	coast live oak			poor	5	2				
6735	coast live oak			fair	5					tag 617
6736	coast live oak			fair	7					
6737	coast live oak			fair	6					
6738	coast live oak			poor	5					
6739	coast live oak			fair	6	2				
6740	coast live oak			good	9					
6741	coast live oak			poor	5					
6742	valley oak		X	fair	7					
6743	coast live oak			fair	5					tag 621
6744	black oak			fair	6					
6745	coast live oak			fair	6					
6746	coast live oak			fair	3	3	3			
6747	coast live oak			fair	5	3	1			
6748	coast live oak			poor	5					big tree
6749	coast live oak			fair	6					
6750	coast live oak			good	7	5				
6751	coast live oak			fair	7					
6752	coast live oak			fair	6	3				
6753	coast live oak			fair	4					
6754	coast live oak			poor	4					
6755	coast live oak			fair	8					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6756	coast live oak			poor	4					
6757	coast live oak			poor	5					
6758	coast live oak			fair	7	4	2			
6759	coast live oak			good	7					
6760	coast live oak			fair	8	6	2	1		
6761	coast live oak			poor	5					
6762	coast live oak			poor	4					
6763	coast live oak			poor	5					
6764	coast live oak			good	9	8				
6765	coast live oak			fair	6	1				
6766	coast live oak			poor	5					
6767	coast live oak			fair	9					
6768	coast live oak			fair	7					
6769	coast live oak			good	9	3				
6770	coast live oak			fair	7					
6772	coast live oak			poor	5					
6773	coast live oak			fair	4	3	1			
6774	coast live oak			poor	7					
6775	coast live oak			poor	5					
6776	coast live oak			fair	6					
6777	coast live oak			poor	7					
6778	coast live oak			fair	7					
6779	coast live oak			fair	6					
6780	coast live oak			poor	5					
6781	coast live oak			poor	4					
6782	coast live oak			fair	5					
6784	coast live oak			fair	5					
6785	coast live oak			fair	6					
6786	coast live oak			good	6	1				
6787	coast live oak			good	10	6	5			
6788	coast live oak			good	4					
6789	coast live oak			fair	6					
6790	coast live oak			poor	7	6				
6791	coast live oak			fair	7					

Table 1. The Arbors Tree Data Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6792	coast live oak			poor	7	5				
6793	coast live oak			poor	10	10				
6794	coast live oak			good	7	6				
6795	coast live oak			good	8	6	4			
6796	coast live oak			fair	7					
6797	coast live oak			fair	6					
6798	coast live oak			fair	8					
6799	coast live oak			good	7					
6800	coast live oak			good	9					
6801	plum			good	5					
6802	coast live oak			fair	7	4				
6803	coast live oak			fair	6	3				
6804	coast live oak			fair	5					
6805	coast live oak			good	7					
6806	coast live oak			good	7					
6807	coast live oak			poor	4					
6808	coast live oak			fair	7					
6809	coast live oak			good	8					
6810	coast live oak			good	6					
6811	coast live oak			fair	5					
6812	coast live oak			fair	8	4				
6813	coast live oak			good	5					
6814	coast live oak			good	7					
6815	coast live oak			good	7					
6816	coast live oak			good	7	6				
6817	coast live oak			good	9					
6818	coast live oak			good	7					
6819	coast live oak			good	7	6	4	4		
6820	coast live oak			good	7					
6820	coast live oak			good	8					
6821	coast live oak			good	8	5	3			
6822	coast live oak			good	8					
6823	manzanita			poor	5					
6824	coast live oak			good	7					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6825	coast live oak			good	6	6				
6826	coast live oak			good	5					
6827	coast live oak			good	5					
6828	coast live oak			fair	6	6				
6829	coast live oak			good	5	3	2			
6830	coast live oak			good	7					
6831	coast live oak			good	3	3	3			
6832	coast live oak			good	5					
6833	coast live oak			good	3	3	3			
6834	coast live oak			good	4	3				
6835	coast live oak			good	6	4				
6836	coast live oak			good	5					
6837	coast live oak			good	8					
6838	coast live oak			good	5					
6839	coast live oak			good	7					
6840	coast live oak			good	4	3	3			
6841	coast live oak			fair	5	4				
6842	coast live oak			good	6	5	5			
6843	coast live oak			fair	4					
6844	coast live oak			good	5					
6845	coast live oak			good	7					
6846	coast live oak			good	6	3	2			
6847	coast live oak			good	6	5				
6848	coast live oak			good	6	5				
6849	coast live oak			good	7	3				
6850	coast live oak			fair	6					
6851	coast live oak			good	7					
6901	coast live oak			fair	4					
6902	coast live oak			good	8	5	2			
6903	coast live oak			poor	6					
6904	coast live oak			fair	9					
6905	coast live oak			fair	6					
6906	coast live oak			good	8					
6907	coast live oak			poor	5					

Table 1. The Arbors Tree Data Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
6908	coast live oak			good	9					
6909	coast live oak			fair	6					
6910	manzanita			dead						
6911	coast live oak			poor	4					
6912	coast live oak			poor	5					
6913	coast live oak			good	10					
6914	coast live oak			fair	5	5	2			
6915	coast live oak			fair	4	3				
9000	coast live oak			fair	5					
9001	coast live oak	X		fair	7					
9002	coast live oak			fair	7					
9003	coast live oak			fair	11	7	5			
9004	coast live oak			fair	7					
9005	coast live oak	X		good	8					
9006	black oak			good	7					
9007	coast live oak			good	5					
9008	coast live oak			good	5					
9010	coast live oak			good	6					
9011	coast live oak			fair	5					
9012	coast live oak	X		good	10	10	8			
9013	coast live oak	X		fair	5					
9014	coast live oak			fair	5					
9015	coast live oak			fair	5					
10000	coast live oak	X		fair	7					
10001	madrone			good	6					
10002	coast live oak			good	6					
10003	coast live oak			poor	5					
10004	coast live oak	X		fair	6					
10005	coast live oak	X		fair	6					
10006	coast live oak	X		fair	7					
15214	coast live oak			fair	5					
15215	madrone			good	5					
15216	coast live oak			fair	5					
15217	coast live oak			fair	5					

Table 1. The Arbors Tree Data Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15218	coast live oak			fair	5					
15219	coast live oak			fair	4	4	4			
15220	coast live oak	X		fair	4					
15221	coast live oak	X		good	8					
15222	coast live oak			good	5					
15223	coast live oak			good	5					
15224	coast live oak			good	5					
15225	coast live oak			good	4					
15226	coast live oak	X		fair	6					
15227	coast live oak			fair	4					
15228	coast live oak	X		good	5					
15229	coast live oak			good	5					
15230	coast live oak			poor	12	9				
15231	coast live oak			fair	5					
15232	coast live oak	X		fair	5					
15233	coast live oak			fair	4					
15234	coast live oak	X		good	12					
15235	coast live oak	X		fair	8					
15236	coast live oak	X		poor	8					
15273	coast live oak	X		fair	4					
15274	coast live oak	X		fair	4					
15275	coast live oak	X		fair	5					
15276	coast live oak	X		fair	4					
15277	coast live oak	X		fair	5					
15278	coast live oak			fair	4					
15279	coast live oak			poor	5					
15280	coast live oak			fair	4					
15281	coast live oak	X		fair	5	4	4			
15282	coast live oak			fair	4					
15283	valley oak	X		fair	4					
15284	coast live oak			poor	4					
15285	madrone	X		fair	5					
15286	coast live oak			poor	4					
15287	coast live oak			poor	5					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15288	coast live oak	X		fair	5					
15289	coast live oak	X		fair	5					
15290	coast live oak	X		fair	5					
15291	coast live oak	X		fair	5					
15292	coast live oak	X		fair	4					
15293	coast live oak			poor	5					
15294	coast live oak			fair	5					
15295	coast live oak			fair	4					
15296	coast live oak			poor	4					
15297	coast live oak	X		fair	5					
15298	coast live oak			poor	4					
15299	coast live oak	X		poor	5					
15300	coast live oak	X		fair	4					
15301	coast live oak			fair	4					
15302	coast live oak	X		fair	4					
15303	coast live oak	X		poor	5					
15304	coast live oak	X		poor	4					
15305	coast live oak	X		poor	4					
15306	coast live oak	X		fair	4					
15307	coast live oak			fair	4					
15308	coast live oak	X		poor	5					
15309	coast live oak	X		poor	4					
15310	coast live oak	X		fair	5					
15311	coast live oak	X		poor	5					
15312	coast live oak			fair	4					
15313	coast live oak			fair	5					
15314	coast live oak	X		good	5					
15315	coast live oak	X		good	6					
15316	coast live oak	X		good	5					
15317	coast live oak	X		good	6					
15318	coast live oak	X		good	4					
15319	coast live oak	X		good	6					
15320	coast live oak	X		good	7	4				
15321	coast live oak	X		fair	4					

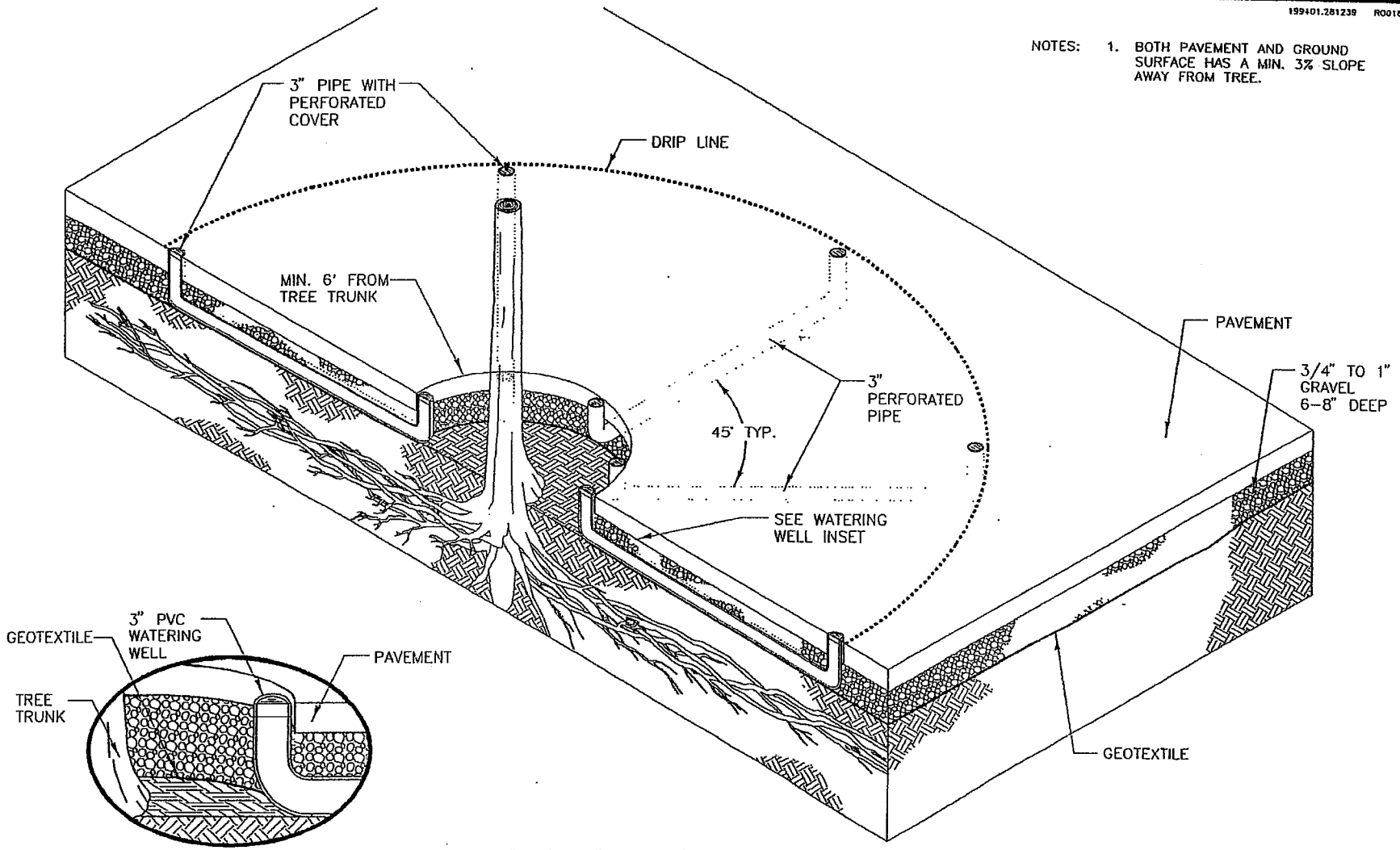
Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15322	coast live oak	X		good	6					
15323	coast live oak	X		good	5					
15324	coast live oak	X		good	5					
15325	coast live oak	X		good	5					
15326	coast live oak	X		fair	4					
15327	madrone	X		good	4					
15328	coast live oak	X		fair	4					
15329	coast live oak	X		good	5					
15330	coast live oak	X		fair	4					
15331	coast live oak	X		fair	5					
15332	coast live oak	X		fair	5					
15333	coast live oak	X		fair	5					
15334	coast live oak	X		fair	5					
15335	coast live oak	X		poor	4					
15336	coast live oak	X		fair	5					
15337	coast live oak			fair	4					
15338	coast live oak	X		fair	4					
15339	coast live oak			fair	4	4				
15340	not used									
15341	coast live oak			good	4					
15342	coast live oak			fair	4					
15343	coast live oak			good	4					
15344	coast live oak			fair	6	5				
15345	coast live oak			fair	4					
15346	coast live oak			good	7					
15347	coast live oak			good	7					
15348	coast live oak			good	6					
15349	coast live oak			good	5					
15350	coast live oak	X		good	5					
15351	coast live oak	X		good	4					
15352	coast live oak			fair	5					
15353	coast live oak			fair	5					
15354	coast live oak	X		good	6					
15355	coast live oak			good	5					

Table 1. The Arbors Tree Data										
Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15356	coast live oak			fair	6	5				
15357	coast live oak			fair	6	4				
15358	coast live oak	X		fair	6					
15359	coast live oak	X		fair	5					
15360	coast live oak			fair	12	11				
15361	coast live oak			poor	7					
15362	coast live oak			fair	5					
15363	coast live oak			fair	8					
15364	coast live oak	X		fair	5					
15365	coast live oak	X		fair	8					
15366	coast live oak	X		good	13	5	4			
15367	coast live oak	X		good	10					
15368	coast live oak	X		good	10	9	6			
15369	coast live oak			fair	13					
15370	coast live oak			fair	16					
15371	coast live oak	X		poor	6					
15372	coast live oak	X		good	7	7				
15373	coast live oak	X		good	9					
15374	coast live oak	X		good	8					
15375	coast live oak	X		fair	11					
15376	coast live oak	X		fair	7					
15377	coast live oak	X		poor	5					
15378	coast live oak	X		fair	6					
15379	coast live oak	X		fair	6	6				
15380	coast live oak	X		poor	4	4				
15381	coast live oak	X		good	11					
15382	coast live oak	X		good	7					
15383	coast live oak	X		good	8					
15384	coast live oak	X		good	11					
15385	coast live oak	X		poor	7					
15386	coast live oak	X		poor	5					
15387	coast live oak	X		fair	8	7				
15388	coast live oak	X		fair	7					
15389	coast live oak	X		fair	7					

Table 1. The Arbors Tree Data Updated 07-17-07										
Tree No.	Species	Removed	Heritage Tree	Health	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5	Comments
15390	coast live oak	X		poor	5					
15391	coast live oak	X		fair	7	5				
15392	coast live oak	X		fair	6					
15393	coast live oak	X		poor	8					
15394	coast live oak	X		fair	4					
15395	coast live oak	X		fair	5					
15396	coast live oak	X		fair	13					
15397	coast live oak	X		good	8	5				
15398	coast live oak	X		fair	7					
15399	coast live oak	X		fair	9					
15400	coast live oak	X		fair	8					

199401.281239 R0015

NOTES: 1. BOTH PAVEMENT AND GROUND SURFACE HAS A MIN. 3% SLOPE AWAY FROM TREE.



WATERING WELL INSET

IRRIGATION DETAIL

not to scale

January 27, 1994

RALPH OSTERLING CONSULTANTS, INC.
1650 Borel Place, Suite 204
San Mateo, California 94402
(415) 573-8733

TYPICAL AERATION AND IRRIGATION SYSTEM

• Drawn By: NORTH GRAPHICS • San Mateo, California • (415) 572-8690 • Fax: (415) 345-1858 •

Ralph Osterling Consultants, Inc.
1650 Borel Place, Suite 204
San Mateo, CA 94402-3508

June 17, 2007

Jack Chamberlain
The Chamberlain Group
P.O. Box 970
San Carlos, CA 94070

Re: Tree Removal for The Arbors

Dear Jack:

I have reviewed the May 2007 Tree Exhibit for The Arbors prepared by Carlenzoli and Associates. Attached is a table containing a list of the significant and Heritage Trees to be removed. The City of Santa Rosa tree ordinance requires the replacement of 2 trees for every six inches of trunk diameter removed. The Arbors tree removal has a combined total trunk diameter of 882 inches. Two hundred and ninety-four 15-gallon size trees will be required to mitigate the tree loss. If all of the trees cannot be accommodated onsite, an in-lieu of $100 per tree may be required.

Should you have any questions, please give me a call at 415-269-0337.

Respectfully,

Douglas E. Nix, RPF #2246

Enc.

Phone: (650) 573-8733 **Fax: (650) 345-7890** **Email: roc@ralphosterling.com**

The Arbors Tree Survey Data
Revised June 14, 2007

Tree No.	Species	Removed	Heritage Tree	Health	Combined Dia.	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5
394	coast live oak	y		good	27	12	8	7		
626	coast live oak	y	y	fair	20	20				
627	coast live oak	y	y	fair	48	30	18			
628	coast live oak	y	y	fair	57	20	20	17		
659	coast live oak	y	y	fair	19	19				
661	coast live oak	y	y	good	79	18	18	17	16	10
664	coast live oak	y		good	24	12	12			
665	coast live oak	y	y	fair	27	27				
668	coast live oak	y	y	good	20	20				
669	coast live oak	y	y	good	24	24				
670	valley oak	y	y	good	24	24				
689	coast live oak	y		fair	16	8	8			
690	coast live oak	y		good	21	16	5			
5801	coast live oak	y		good	8	8				
5802	coast live oak	y		good	6	6				
5822	coast live oak	y	y	good	18	18				
5827	valley oak	y	y	good	7	7				
5870	coast live oak	y		good	11	11				
5884	coast live oak	y		good	12	12				
5887	coast live oak	y		good	21	13	8			
5888	coast live oak	y		good	8	8				
5892	coast live oak	y		good	16	8	8			
5893	coast live oak	y		good	13	7	6			
5911	coast live oak	y		good	30	12	10	8		
5933	madrone	y		good	9	9				
5943	coast live oak	y		good	11	11				
5944	coast live oak	y		fair	6	6				
5970	coast live oak	y		good	12	12				
5971	coast live oak	y		good	6	6				
5974	coast live oak	y		good	10	10				
6268	coast live oak	y		good	42	16	15	11		

The Arbors Tree Survey Data
Revised June 14, 2007

Tree No.	Species	Removed	Heritage Tree	Health	Combined Dia.	Dia. 1	Dia. 2	Dia. 3	Dia. 4	Dia. 5
6276	valley oak	y	y	poor	6	6				
6509	coast live oak	y		good	7	7				
6510	coast live oak	y		good	17	9	8			
6511	coast live oak	y		good	14	8	6			
6512	coast live oak	y		good	7	7				
6513	coast live oak	y		good	15	8	7			
6519	coast live oak	y		good	11	11				
6520	coast live oak	y		good	9	9				
6522	coast live oak	y		good	9	9				
6524	madrone	y	y	good	13	13				
6529	coast live oak	y		good	11	11				
6538	coast live oak	y		good	24	10	8	6		
6539	coast live oak	y		good	18	10	8			
6545	coast live oak	y		good	14	14				
6553	coast live oak	y		good	13	13				
6554	coast live oak	y		good	13	13				
6556	black oak	y		good	20	10	10			
6565	coast live oak	y		good	9	9				
Total Combined Diameter (in.)					**882**					
Mitigation Trees Required					**294**					

Appendix B
Correspondence

California Regional Water Quality Control Board
North Coast Region
Bob Anderson, Chairman

Linda S. Adams
Secretary for
Environmental Protection

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Arnold
Schwarzenegger
Governor

July 1, 2009

In the Matter of
Water Quality Certification
for
Jack Chamberlain
Chamberlain Lake Park LLC
Nielsen Ranch Slide Repair, Bicentennial Estates II
WDID No. 1B09023WNSO

APPLICANT:	Jack Chamberlain, Chamberlain Lake Park LLC
RECEIVING WATER:	Russell Creek
HYDROLOGIC AREA:	Santa Rosa Hydrologic Subarea No. 114.22, Russian River Hydrologic Unit No. 114.00
COUNTY:	Sonoma County
FILE NAME:	Nielsen Ranch Slide Repair, Bicentennial Estates II

BY THE EXECUTIVE OFFICER:

1. On February 13, 2009, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from Ms. Jane Valerius acting on behalf of Chamberlain Lake Park LLC (Applicant), requesting a Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) for the Nielsen Ranch Slide Repair, Bicentennial Estates II Project (Project) in Santa Rosa, Sonoma County. A fee in the amount of $1,888.00 was received on the same day (February 13, 2009). The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on June 8, 2009, and posted information describing the Project on the Regional Water Board's website. No comments were received.

2. The purpose of the Project is to develop a 14 lot residential subdivision, totaling 8.03 acres and repair landslides adjacent to Russell Creek. The area along Russell Creek will remain undeveloped as a 3.63 acre open space parcel to be owned and maintained by a homeowner's association for the Project. The Project has been designed to avoid grading on the more significant slopes located adjacent to Russell Creek, with the exception of the slide repair work. A combination creek trail and maintenance road already exists along the creek and will be repaired as needed with the development of the project. The Applicant will construct 14 single family units with a common open space parcel with a hillside development permit located east of Bicentennial Way at 3450 Lake Park Drive, Santa Rosa, CA. The latitude and longitude is 38.473647° N and 122.719738° W. The project causes permanent

impacts to approximately 0.03 acres, 195 linear feet, of waters of the State associated with Russell Creek within the Santa Rosa Hydrologic Sub Area No. 114.22, Russian River Hydrologic Unit No. 114.00.

3. The slide repair project includes grading of the slope south of Russell Creek. Grading will be conducted in compliance with the technical documents prepared for the Project. Work will be done within Russell Creek (in the dry season) from the existing culvert and wing wall at the western end of the project site adjacent to Bicentennial Way approximately 195 feet east or upstream. The south bank of Russell Creek will have riprap keyed into the toe of slope. Riprap will be placed along the south bank to prevent undermining of the slide repair by high velocity flows within the creek. Riprap will be placed from the edge of bank to 3 feet high along the creek bank. With the exception of the culvert and wing wall area, no riprap will be placed within the bed of the existing creek. Post-construction stormwater treatment features will be incorporated to treat the increase in stormwater runoff as well as pollutants created by the increase in impervious surface and other activities associated with development and future use of the site. Landscape-based treatments, such as vegetated swales, bio-retention units, and vegetated buffer strips, will treat stormwater before it is discharged to Russell Creek. The maintenance of the post-construction stormwater treatment features will be done by the City of Santa Rosa and the Homeowners Association. Details on the plan are contained in the *Preliminary Storm Water Mitigation Plan, Bicentennial Estates,* dated November 2008, by Carlenzoli and Associates.

4. Compensatory mitigation consists of habitat restoration. The placement of fill is for bank stabilization and only on the south bank. The creek will remain essentially in its natural state. The creek banks will be planted with native trees and shrubs. The site will be seeded with native grasses and forbs and the habitat restoration plan includes removal of non-native weedy plants along with the planting of native trees and shrubs. The trees and shrubs will be irrigated and the site will be maintained and monitored for a minimum of 5 years, with an 85% survival rate of thriving vegetation. Yearly monitoring reports shall be submitted to the Regional Water Board.

5. Non-compensatory mitigation measures include the use of Best Management Practices (BMPs) to be employed during construction to minimize sediment production and prevent the movement of loose soil off-site. A Stormwater Mitigation Plan has been created to minimize construction related disturbances to water quality. All erosion control measures will be installed and in place by October 15 and maintained thereafter by the contractor. Drain inlets will be protected by gravel bags, straw wattles or other filtering devices and all exposed areas will be treated with mulch or hydro-seeding or covered with plastic sheeting. Additionally, all required BMPs shall be on-site and ready for timely deployment before the start of construction activities.

6. The California Department of Fish and Game has determined that a Lake or Streambed Alteration Agreement is not required for this project.

7. The Applicant has applied for a permit from the United States Army Corps of Engineers, to perform the project pursuant to Clean Water Act, section 404 (USACE File No. 2008-00449).

8. The City of Santa Rosa, as the lead California Environmental Quality Act (CEQA) agency, has filed a Mitigated Negative Declaration, with the Office of Planning and Research, on October 13, 2005 pursuant to California Environmental Quality Act (CEQA) guidelines.

9. Because the Project involves construction that may adversely affect waters of the State, the Regional Water Board has regulatory jurisdiction under Water Code Section 13269.

Receiving Water:	Russell Creek Santa Rosa Hydrologic Sub Area No. 114.22 Russian River Hydrologic Unit No. 114.00
Filled or Excavated Area:	0.03 acres of permanent impacts
Latitude/Longitude:	38.473647° N and 122.719738° W
Expiration:	July 01, 2014

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Nielsen Ranch Slide Repair, Bicentennial Estates II Project (WDID No. 1B09023WNSO), as described in the application, will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the Applicant complies with the following terms and conditions:

1. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.

2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. This certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 2200, and owed by the Applicant.

4. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" which requires compliance with all conditions of this Order (Enclosed).

5. The Russian River watershed is identified on the State of California Clean Water Act Section 303(d) list. The Russian River is listed as impaired for sediment and temperature. Activities that impact the riparian zone and riparian vegetation are identified as sources contributing to increased stream temperatures in the watershed. At present, there are no watershed specific total maximum daily loads (TMDLs) have not been established for this water body. If TMDLs are established and implementation plans are adopted for this watershed prior to the expiration date of this Order, the Regional Water Board may revise the provisions of this Order to address actions identified in such action plans.

6. The Regional Water Board shall be notified in writing at least five working days (working days are Monday – Friday) prior to the commencement of ground disturbing activities, with details regarding the construction schedule, in order to allow staff to be present onsite during construction, and to answer any public inquiries that may arise regarding the project.

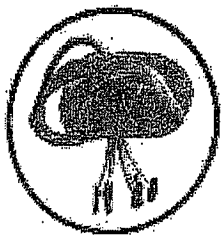
7. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Order, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the State. When operations are completed, any excess material or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

8. BMPs for erosion, sediment and turbidity control shall be implemented and in place at commencement of, during and after any ground clearing activities or any other project activities that could result in erosion or sediment discharges to surface water.

9. All activities and BMPs shall be implemented according to the submitted application and the conditions in this certification.

10. A copy of this Order and the application documents submitted by the Applicant for this certification shall be provided to all contractors and subcontractors conducting the work, and shall be in their possession at the work site.

11. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities shall cease immediately until adequate BMPs are implemented.



California Native Plant Society
Milo Baker Chapter

June 8, 2009

Via email
City of Santa Rosa
Planning Commission
Santa Rosa, California
Attn: Erin Morris

Subject: Further comments on The Arbors, 3500 Lake Park Drive, File No. MJ07-016
On behalf of the Milo Baker Chapter of the California Native Plant Society (CNPS), we thank you for the opportunity to comment on the subject planning matter and we wish to express our concerns regarding the proposed subdivision The Arbors, at 3500 Lake Park Drive.

The herein comments amplify our earlier comments on the subject project; both the herein and earlier comments should be considered fully as part of the administrative record for the subject project.

Our chief concerns are:

(1) The absence or paucity of current relevant environmental impact analysis on botanical and other environmental features as required by the California Environmental Quality Act (CEQA)
(2) The incomplete and misleading characterization of the understory flora on the subject property
(3) The lack of effective mitigation measures to address botanical impacts
(4) The lack of integrated environmental impact analysis to assess the interaction of vegetation loss and slope stability and fire hazard maintenance.
(5) The misleading statement in the recent botanical study that CEQA does not require attention to CNPS List 4 species. That statement reveals a deep lack of understanding of the basic construction of CEQA, since CEQA does not structurally address many specifics of plant listings, but rather requires lead agencies to consider fully the "significant adverse impacts" to individual species or collections of species. Under any reasonable interpretation of this requirement, the city must fully consider impacts to listed plants as significant.
(6) The lack of understanding of the slope stabilization that the present native vegetation serves, and corresponding impact analysis of slope instability induced by vegetative removal.

Even with the recently produced botanical study, the project database still does not reflect comprehensive state-of-the-art techniques of resource inventory that are presently

available and are incomplete in their needs to inventory critical ecological elements of the property. In particular the following study elements are essential for an adequate due diligence required by CEQA: This parcel represents an almost unique asset within Santa Rosa of a dense oak woodland (Coast Live Oak and Pacific Madrone dominant with admixture of Valley Oak) with rich understory. The loss of such a resource cannot simply be mitigated by planting a finite number of oak trees, since the total resource is the complex ecological intact forest plus forest understory, the latter of which is unusually endowed with undisturbed biodiversity and prime amphibian habitat.

The following is a minimum set of detailed specifications for analysis that is presently lacking:

A. Conducting a complete understory inventory in the spring blooming season in order to assess the complexity of the native understory (not only examining listed species, but the entirety of natives on site), including the intact native character of the site flora. This understory survey is vital, since this parcel has an unusually rich and intact forest floor; on our site visit of Dec 8, 2008 we observed healthy populations of Spicebush, Toyon, Sword Fern, Wood Fern, Goldback Fern, California Blackberry and numerous other bulb flowers, wildflowers and native grasses. The forest floor also had an appreciable layer of leaf litter and organic detritus, signs of a healthy and undisturbed forest that are capable of harboring a diversity of native species. The most recent botanical survey does not adequately characterize the totality and richness of the native flora on site, but is misleading in its attention to dominant plants along the path and project perimeter. A more careful and scientifically complete analysis is needed to characterize adequately the native understory.

B. Conducting a rainy season amphibian study of the drainage swale that crosses the site. This drainage was flowing with a notable lack of turbidity on the date of our site visit of December 8, 2008. Such a condition of water flow is very unusual for tributaries of mainstem creeks in Sonoma County at a seasonal time before onset of significant persistent rains. The condition of the undisturbed forest floor as noted above is also conducive to burrowing and aestivation by native amphibians, making this parcel a prime location within Santa Rosa for amphibian habitat.. Therefore, this site must be viewed as an unusual resource for riparian amphibian taxa, including potential listed (threatened) species of Sonoma County. To satisfy CEQA requirements one must assess this location for breeding area of amphibians, especially special status species

C. Conducting an analysis of a clustered density alternative, which would allow the applicant to realize significant residential unit yield from a single building on the high ground eastern side of the site, which is virtually the only portion of the site which can be developed without substantial grading, slope stabilization and encountering high seismic risk.

We have further concerns, some of which parallel our earlier transmittals. These concerns involve destruction not only of trees, but also the rich understory vegetation, which can not be reproduced with urban landscaping. The concerns also relate to the excessive

grading that will be necessary to accommodate the subdivision layout on the project's severe slopes; the grading will eliminate understory and also necessitate frequent continuing disturbance to effect erosion control and slope stability.

The proposed project of 37 single family lots would remove significant, intact oak woodland, including 409 native trees, of which 17 are heritage trees. This loss of one of the few remaining dense intact oak woodlands in Santa Rosa is not acceptable, and represents the continuing loss of one of Sonoma County's treasures. It appears that little effort was made to save any substantial portion of the woodland. The lots take virtually no account of the location of the stands of trees to optimize design in this sensitive habitat. If redesign is not possible, then the number of units should be reduced, to preserve this valuable oak woodland resource.

We also are concerned about future vegetation management. How will the recent safety requirements for vegetation clearing affect the remaining trees? This parcel is labeled a high fire severity zone which will require 100' fire breaks around the development; what measures would be taken to mitigate against subsequent vegetation clearing of the remaining trees and other native vegetation? The severe fire hazard designation means that continual vegetation clearing will take place, further reducing the tree canopy and habitat. What guarantee do the people of Santa Rosa have that the preserved trees will be spared from heavy equipment, severe pruning, and potential contamination with Sudden Oak Death pathogen as vegetation removal continues?
With regard to climate change, has the impact on the loss of this significant carbon sink been taken into account in the environmental document for the proposed? Concerns over climate change were not taken into account in the original documentation and represent an important example of the current standard of care for environmental due diligence.

We are concerned with the arborist's report. It appears from reading of the tentative map that the information provided by the arborist does not appear on the map as required. Article 4 Section 17-24.050 of the City's Tree Ordinance requires that the tentative map shall indicate genus and species of each tree and Heritage tree. Each tree is not shown, and yet this info is needed to evaluate impact.

We recommend that significant changes be made to the proposal in order to protect the native vegetation to the greatest extent possible. The parcel is best suited for open space, to function as a wildlife corridor that would protect the watershed and valuable oak habitat, especially given the cumulative loss of oaks and history of geologic instability of the immediate area for housing. The evidence of slope instability of the subject parcel is overwhelming with the extensive and repeated need for slope stabilization on the neighboring property to the west, the excessive slopes on site (greater than 30 percent) and the massive recent movement in slopes leading to the deeply fissured asphalt path. (There are presently warning signs on the path resulting from the slope instability.)

In summation, approval of the proposed project with simplistic mitigation of tree replacement would constitute abuse of discretion by the city and violation of the California Environmental Quality Act for incomplete analysis of environmental impacts under current standards of environmental assessment for ecological systems. Moreover, any approval would constitute an irreversible loss of a unique community resource, which would cease to exist as an important recreational and educational element of open space within Santa Rosa.
We appreciate the opportunity to comment on this project. Please keep me informed of its progress. Feel free to contact me if I can be of assistance or if you have any questions.

Sincerely,

Lynn Houser, President, Milo Baker Chapter
C.Michael Hogan, PhD, Conservation Chair, Milo Baker Chapter
California Native Plant Society (CNPS)
(707) 568-3230 (415) 4201029

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1398

APR 8 2009

Regulatory Division

SUBJECT: File Number 2008-00449N

Mr. Jack Chamberlain
Chamberlain Lake Park LLC
655 Skyway Road, Suite 230
San Carlos, California 94070

Dear Mr. Chamberlain:

This letter is written in response to your submittal of February 10, 2009, concerning Department of the Army authorization for repair and restoration of a landslide occurring on the bank of Russell Creek at the Nielsen Ranch (a.k.a. Bicentennial Estates) project located at the corner of Bicentennial Way and Lake Park Drive in the City of Santa Rosa, Sonoma County, California. The project site is defined as two parcels identified as Assessor's Parcel Numbers 173-270-002 and 173-270-003. You are authorized to repair and stabilize an approximately 200-foot segment of creek bank located along the southern bank of Russell Creek that failed and slid downslope. The project is authorized to place approximately 3640 cubic yards of riprap in an area of approximately 1305 square feet, resulting in fill to approximately 0.03 acres of jurisdictional waters of the US for placement of hardscapes necessary for the bank stabilization.

Based on a review of the information you submitted and an inspection of the project site conducted by Corps personnel on January 6, 2009, your project qualifies for authorization under Department of the Army Nationwide Permit 13 – Bank Stabilization (72 Fed. Reg. 11092, March 12, 2007), pursuant to Section 404 of the Clean Water Act (33 U.S.C. Section 1344). See Enclosure 1. All work shall be completed in accordance with the plans and drawings submitted with your February 10, 2009 submittal titled "Slide Repair Grading Plan", dated November 18, 2008, prepared by Carlenzoli and Associates.

The project must be in compliance with the General Conditions cited in Enclosure 2 for this Nationwide Permit authorization to remain valid. Non-compliance with any condition could result in the suspension, modification or revocation of the authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This Nationwide Permit authorization does not obviate the need to obtain other State or local approvals required by law.

This authorization will remain valid for two years from the date of this letter unless the Nationwide Permit is modified, suspended or revoked. If you have commenced work or are under contract to commence work prior to the suspension, or revocation of the Nationwide Permit and the project would not comply with the resulting Nationwide Permit authorization, you have twelve (12) months from that date to complete the project under the present terms and

conditions of the Nationwide Permit. Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, Enclosure 3, verifying that you have complied with the terms and conditions of the permit.

This authorization will not be effective until you have obtained a Section 401 water quality certification from the North Coast Regional Water Quality Control Board (RWQCB). You shall submit a copy of the certification to the Corps prior to the commencement of work.

To ensure compliance with this Nationwide Permit authorization, the following special conditions shall be implemented:

1. All work occurring below the plane of ordinary high water shall be confined to the low-flow period, during summer months to avoid excessive sedimentation of creek waters.

2. All construction work shall incorporate appropriate best management practices, including stabilizing and seeding exposed upland slopes, to control and minimize bank erosion, sediment input, and turbidity in the affected creek.

3. Authorized discharges of fill material occurring below ordinary high water shall consist solely of sand, gravel, cobble, boulder, rock or other inert riprap materials that are free of toxic pollutants.

4. No concrete washings or concrete shall be allowed to enter the creek.

5. All material and debris generated as a result of project construction shall be removed from the site and disposed of in an approved location outside Corps jurisdiction.

6. Heavy equipment shall be used in Corps jurisdiction only where necessary and shall be removed from the site at the earliest opportunity

7. On-site mitigation will be achieved through re-vegetation of the project area as outlined in the "Bicentennial Estates Unit 2 – Common Area / HOA Area Landscape Improvement Plans" dated January 21, 2009, prepared by Van Dorn ABED.

8. The project site shall be monitored annually for three years to qualitatively assess channel conditions and re-establishment of riparian vegetation as described in the February 10, 2009, submittal. The first monitoring report is due at the end of the year following the year of installation of mitigation plantings (greater than 12 months following initial planting, but not more than 24 months following planting). Evidence of channel instability, such as migrating headcuts, substantial changes in bedload characteristics, or bank erosion shall be documented, as well as qualitative and quantitative analysis of

mitigation vegetation. Photographs and a brief summary discussion shall be provided with the annual monitoring report. The report shall be submitted to the Corps by December 31 of each year.

9. Only California native plants and/or seeds shall be used to revegetate all exposed areas throughout the project site at project completion.

Should you have any questions regarding this matter, please call Cameron Johnson of our Regulatory Division at (415) 503-6790. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter. If you would like to provide comments on our permit review process, please complete the Customer Survey Form available online at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

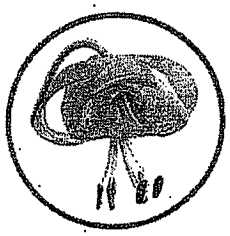
for Jane M. Hicks
Chief, Regulatory Division

Enclosures

Copies furnished (w/o enclosures):

US EPA, San Francisco, CA
US FWS, Sacramento, CA
US NMFS, Santa Rosa, CA
CA DFG, Yountville, CA
CA RWQCB, Santa Rosa, CA

Ms. Jane Valerius
Environmental Consulting
152 Weeks Way
Sebastopol, CA 95472



California Native Plant Society
Milo Baker Chapter

November 27th, 2007

Via email

To: Erin Morris

From: Lynn Houser

Subject: Comments on The Arbors, 3500 Lake Park Drive, File No. MJ07-016

On behalf of the Milo Baker Chapter of the California Native Plant Society (CNPS), I wish to express our concerns regarding the proposed subdivision The Arbors, at 3500 Lake Park Drive.

The proposed project of 37 single family lots would remove significant, intact oak woodland, including 409 native trees, of which 17 are heritage trees. This loss of one of the few remaining dense oak woodlands in Santa Rosa is not acceptable, and represents the continuing loss of one of Sonoma County treasures. It appears that no effort was made to save any substantial portion of the woodland. The lots take virtually no account of the location of the stands of trees to optimize design in this sensitive habitat. If redesign is not possible, then the number of units should be reduced, to preserve this valuable oak woodland resource.

We also are concerned about future vegetation management. How will the recent safety requirements for vegetation clearing affect the remaining trees? This parcel is labeled a high fire severity zone which will require 100' fire breaks around the development; what measures would be taken to mitigate against subsequent vegetation clearing of the remaining trees and other native vegetation? The severe fire hazard designation means that continual vegetation clearing will take place, further reducing the tree canopy and habitat. What guarantee do the people of Santa Rosa have that the preserved trees will be spared from heavy equipment, severe pruning, and potential contamination with Sudden Oak Death pathogen as vegetation removal continues?

With regards to climate change, has the impact on the loss of this significant carbon sink been taken into account in the environmental document for the proposed?

We are concerned with the arborist's report. It appears from reading of the tentative map that the information provided by the arborist does not appear on the map as required. Article 4 Section 17-24.050 of the City's Tree Ordinance requires that the tentative map

June 15, 2007

Erin Morris, Department of Community Development
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404

Dear Ms. Morris:

As near neighbors of the proposed "Arbors" development, we wish to register the following concerns:

- the density of the project does not match the neighborhood; single-family residences are more in keeping with the neighborhood.
- the number of mature oak trees proposed for removal decimates a pristine oak-covered knoll; our view and property value will be negatively affected.
- we don't want to look at the back side of typical apartment decks
- traffic will be increased on Lake Park Drive; speeding and the safety of children and pets are issues that you must be painfully aware of.
- noise in our canyon has been an issue and will be exacerbated.

Please continue to keep us informed.

Sincerely,
Patrick Shockey Michele Shockey

Patrick and Michele Shockey
3435 Terra Linda Drive
Santa Rosa, CA 95404
(707)568-1677

Leonard and Melinda Cairney
3434 Terra Linda Drive
Santa Rosa, California 95404
707-566-7142
Melinda Cairney
Leonard Cairney

June 22, 2007

To: Erin Morris
Dept. of Comm. Dev.

From: Richard Howell
Concerned Neighbor

Re: The Arbors
3500 Lake Park Dr., Santa Rosa

Erin:

I wanted to provide some written comment on the proposed development, known as The Arbors on Lake Park Drive in Santa Rosa.

The positive items that come to mind are:

- Tree Preservation, leaving a minimum of 26 existing, mature trees.
- Having only (2) lots accessing directly off Lake Park Drive.
- Developer (Neilson Homes) is known for well designed and attractive homes, promoting the values of surrounding neighborhoods

The negative items are as follows:

- Density of 6.5 units per acre with no common areas, except in the very rear of the parcel. This is simply a case of too much in too little, benefiting only the developer.
- Side Elevations dominating the frontage on Lake Park Dr. will be overwhelming unless upscaled through design and landscaping.
- With both projects in close proximity, The Arbors and Bicentennial Estates – Unit 2, the building of each project must be done in separate time phases, not together. If they are constructed at the same time, the NOISE, TRAFFIC, DUST and OTHER IRRITATES inherent in the building pro-

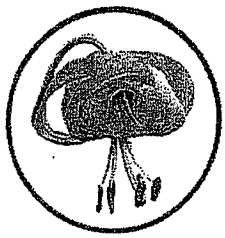
cess, would prove too much for the existing neighborhoods to handle without necessitating the complete loss of normalcy in daily living.

Another consideration is the pricing of the new units and will they support the present values of adjacent properties. Also, the prevention of buyers of new homes from making them RENTALS. This situation has hurt every neighborhood where it exists and it must be controlled primarily by the developer at time of sale.

Thank you for your time and please let me know when the next public hearing will be held.

Sincerely,

Richard Howell
Richardhowell@sbcglobal.net



California Native Plant Society
Milo Baker Chapter

November 27th, 2007

Via email
City of Santa Rosa
Planning Commission
Santa Rosa, California

Attn: Erin Morris

Subject: Comments on The Arbors, 3500 Lake Park Drive, File No. MJ07-016

On behalf of the Milo Baker Chapter of the California Native Plant Society (CNPS), we thank you for the opportunity to comment on the subject planning matter and we wish to express our concerns regarding the proposed subdivision The Arbors, at 3500 Lake Park Drive.

Our overarching comment is that extensive reliance is being placed on studies and environmental documents that are approximately 18 years old; such studies do not represent state-of-the-art techniques of resource inventory that are presently available and are incomplete in their needs to inventory critical ecological elements of the property. In particular the following study elements are essential for an adequate due diligence required by CEQA: This parcel represents an almost unique asset within Santa Rosa of a dense oak woodland (Coast Live Oak and Pacific Madrone dominant with admixture of Valley Oak) with rich understory. The loss of such a resource cannot simply be mitigated by planting a finite number of oak trees, since the total resource is the complex ecological intact forest plus forest understory, the latter of which is unusually endowed with undisturbed biodiversity and prime amphibian habitat.

1. Conducting a complete understory inventory in the spring blooming season in order to assess possible presence of rare and endangered species. There are a number of candidate Sonoma County species which may be present on this site, We can assist your staff and consultants to insure that investigation of each of the candidate special status taxa are investigated. This understory survey is vital, since this parcel has an unusually rich and intact forest floor; on our site visit of Dec 8, 2008 we observed healthy populations of Spicebush, Toyon, Sword Fern, Wood Fern, Goldback Fern, California Blackberry and numerous other bulb flowers, wildflowers and native grasses. The forest floor also had an appreciable layer of leaf litter and organic detritus, signs of a healthy and undisturbed forest that are capable of harboring a diversity of native species.

2. Conducting a rainy season amphibian study of the drainage swale that crosses the site. This drainage was flowing with a notable lack of turbidity on the date of our site visit of December 8, 2008. Such a condition of water flow is very unusual for tributaries of mainstem creeks in Sonoma County at a seasonal time before onset of significant persistent rains. The condition of the undisturbed forest floor as noted above is also conducive to burrowing and aestivation by native amphibians, making this parcel a prime location within Santa Rosa for amphibian habitat.. Therefore, this site must be viewed as an unusual resource for riparian amphibian taxa, including potential listed (threatened) species of Sonoma County. To satisfy CEQA requirements one must assess this location for breeding area of amphibians, especially special status species

3. Conducting an analysis of a clustered density alternative, which would allow the applicant to realize significant residential unit yield from a single building on the high ground eastern side of the site, which is virtually the only portion of the site which can be developed without substantial grading, slope stabilization and encountering high seismic risk.

We have further detailed comments, some of which parallel our earlier transmittals. These concerns involve destruction not only of trees, but also the rich understory vegetation, which can not be reproduced with urban landscaping. The concerns also relate to the excessive grading that will be necessary to accommodate the subdivision layout on the project's severe slopes; the grading will eliminate understory and also necessitate frequent continuing disturbance to effect erosion control and slope stability.

The proposed project of 37 single family lots would remove significant, intact oak woodland, including 409 native trees, of which 17 are heritage trees. This loss of one of the few remaining dense intact oak woodlands in Santa Rosa is not acceptable, and represents the continuing loss of one of Sonoma County's treasures. It appears that little effort was made to save any substantial portion of the woodland. The lots take virtually no account of the location of the stands of trees to optimize design in this sensitive habitat. If redesign is not possible, then the number of units should be reduced, to preserve this valuable oak woodland resource.

We also are concerned about future vegetation management. How will the recent safety requirements for vegetation clearing affect the remaining trees? This parcel is labeled a high fire severity zone which will require 100' fire breaks around the development; what measures would be taken to mitigate against subsequent vegetation clearing of the remaining trees and other native vegetation? The severe fire hazard designation means that continual vegetation clearing will take place, further reducing the tree canopy and habitat. What guarantee do the people of Santa Rosa have that the preserved trees will be spared from heavy equipment, severe pruning, and potential contamination with Sudden Oak Death pathogen as vegetation removal continues?

With regard to climate change, has the impact on the loss of this significant carbon sink been taken into account in the environmental document for the proposed? Concerns over climate change were not taken into account in the original documentation and represent an important example of the current standard of care for environmental due diligence.

We are concerned with the arborist's report. It appears from reading of the tentative map that the information provided by the arborist does not appear on the map as required. Article 4 Section 17-24.050 of the City's Tree Ordinance requires that the tentative map shall indicate genus and species of each tree and Heritage tree. Each tree is not shown, and yet this info is needed to evaluate impact.

We recommend that significant changes be made to the proposal in order to protect the native vegetation to the greatest extent possible. The parcel is best suited for open space, to function as a wildlife corridor that would protect the watershed and valuable oak habitat, especially given the cumulative loss of oaks and history of geologic instability of the immediate area for housing. The evidence of slope instability of the subject parcel is overwhelming with the extensive and repeated need for slope stabilization on the neighboring property to the west, the excessive slopes on site (greater than 30 percent) and the massive recent movement in slopes leading to the deeply fissured asphalt path. (There are presently warning signs on the path resulting from the slope instability.)

In summation, approval of the proposed project with simplistic mitigation of tree replacement would constitute abuse of discretion by the city and violation of the California Environmental Quality Act for incomplete analysis of environmental impacts under current standards of environmental assessment for ecological systems. Moreover, any approval would constitute an irreversible loss of a unique community resource, which would cease to exist as an important recreational and educational element of open space within Santa Rosa.

We appreciate the opportunity to comment on this project. Please keep me informed of its progress. Feel free to contact me if I can be of assistance or if you have any questions.

Sincerely,

Lynn Houser, President, Milo Baker Chapter
C.Michael Hogan, PhD, Conservation Chair, Milo Baker Chapter
California Native Plant Society (CNPS)
(707) 568-3230

Cc:

Santa Rosa City Council Members and Mayor Blanchard
Liam Davis and Gene Cooley, Department of Fish and Game