

**INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

**for the**

**ROSE GARDEN COMMUNITY FACILITY PARCEL MASTER PLAN**

Prepared for

City of Larkspur  
400 Magnolia Avenue  
Larkspur, CA 94939

February 2013

Prepared by

Lorraine Weiss, Principal  
Lorraine Weiss Design & Development Review



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## CHAPTER 1 - PROJECT DESCRIPTION

1. Project Title  
Rose Garden Community Facilities Parcel Master Plan  
File: #12-47
2. Lead Agency  
City of Larkspur  
400 Magnolia Avenue  
Larkspur, CA 94939
3. Contact Person  
Lorraine Weiss, Project Planner  
415-987-3057
4. Project Location  
APN #022-110-45

5. Project Applicant  
City of Larkspur  
400 Magnolia Avenue  
Larkspur, CA 94939

Property Owner  
City of Larkspur  
400 Magnolia Avenue  
Larkspur, CA 94939

6. General Plan Designation  
Residential Parkland/ Public Facilities
7. Zoning  
Planned Development (PD)
8. Description of project

### *Background*

In 2006, the City of Larkspur adopted the Central Larkspur Specific Plan (CLASP) by Resolution 48/06 which proposes a mixture of residential, retail, recreation, cultural, and civic uses to contribute to the vitality of the Downtown area of the City. Three distinct planning units, or subareas, were identified as part of the CLASP. Subarea 3 encompasses what has been commonly referred to as the Niven Nursery site, a 16.8 acre site proposed for residential uses and community facilities, for which the overall Rose Garden Development was approved (Figure 1).

A full Environmental Impact Report (EIR) was completed for the CLASP in 2004 and certified in 2006 at the same time as adoption of the CLASP. This EIR addressed the three subareas of the CLASP, including Subarea 3. CLASP identified numerous goals, policies and programs for the development of up to 85 housing units and a preferable mix of single-family homes and senior

**Rose Garden Community  
Facilities Parcel**

**New Home Company Development**



**FIGURE 1:**  
Larkspur City-Wide Plan Project Location



**GROUP 4**



**LARKSPUR RGCCFP MASTER PLAN**

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housing with an affordable housing component.

Also, noted was a correction to the potential impacts of the project as related to tree removal. Based on the updated and more detailed Preliminary Development Plan, a Tree Inventory Report was prepared in April of 2007 (Landwatch Associates, 2007) and found that 71 trees that meet the City's definition of a "heritage tree" would be removed within Subarea 3, and one heritage tree would be removed and relocated.

In September 2007, an Initial Study and associated Mitigated Negative Declaration were prepared to focus on the potential impacts associated with the removal of heritage trees, the two CLASP amendments, and the exceptions to the CLASP standards proposed by the applicant for the CLASP Subarea 3 (Niven Property) Preliminary Development Plan which was approved by the City Council on July 9, 2008 (Ordinance No. 962). The Specific Plan text amendments and Preliminary Development Plan changes including the following:

1. Specific Plan text amendment to lot size for single-family detached dwellings from 7,500 square feet to 9,050 square feet.
2. Specific Plan text amendment indicating that the average size of living area of all cottage homes shall not exceed 1,250 square feet exclusive of garage and carport.
3. Preliminary Development Plan exceptions to the CLASP standards regarding the allowable FAR would range from 0.26 to 0.45, and tandem parking be allowed for the smaller cottages.

On February 10, 2010, the Larkspur City Council approved the Rose Garden Precise Development Plan (PD-Prec 08-54) for the development of the 42 senior housing condominium units, 8 senior cottage homes, 6 affordable cottage townhomes, and 29 single family detached dwelling on the 16-acre site located within Sub-Area 3 of the CLASP. The approval included the dedication of a combination of 0.84 acres for park and recreational uses and 1.59 acres for a 'Communities Facilities' site, which comprise Parcel A of the Rose Garden subdivision. The Rose Garden Residential Development project is currently under construction. A 0.25 acre site (Parcel B) on the west side of Rose Lane is dedicated for public use and utility easements. During the planning process for the Rose Garden Planned Development project, no specific uses or development standards were included with the 'Community Parcel'. Although the underlying zoning for the residential parcels is R-1. A Master Plan is currently proposed for planning of community facilities on Parcel A and Parcel B, a 2.64-acre site, known as the Rose Garden Community Facilities Parcel Master Plan which is the focus of this Initial Study.

*Project Description*

This Master Plan proposes to construct a park and community facility building ranging in size from 20,000 square feet to 24,000 square feet that would house both library and community center functions. The Community Facility is planned to utilize be shared use spaces, and will be designed to maximize flexibility to accommodate future operational changes. Approximately, 7,500 square feet would be attributed to core library services. The project would also provide open space with multi-use amenities on the remainder of the 2.64-acre site. Refer to Figure 2 for the Master Plan.

The building footprint shall be approximately 20,000 square feet with a preference for a single story. If a larger building program is provided, a two-story option may be considered. The project would also provide open space with multi-use amenities on the remainder of the 2.64-acre site. Sixty (60) to seventy-two (72) parking spaces are associated with the project depending on whether the community facility is 20,000 square feet or 24,000 square feet. Parking will be



**Rose Garden Community  
Facilities Parcel**

**New Home Company Development**

FIGURE 2:  
Master Plan



GROUP 4



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provided on-site in addition to approximately nineteen (19) adjacent on-street parking spaces located along Rose Lane and Orchid Drive frontages. Shared off-site parking strategies will be utilized during large events and peak use. Refer to Figure 3 for Access & Circulation.

A north site option and southwest site option are identified in the Master Plan. The north site option has a strong street presence with building frontage on Doherty Drive (Figure 4). The open space in this option is a "pocket park" tucked behind the building. Pedestrian pathways from the parking lot and Rose Lane lead to the main building entry plaza. Views of Mt. Tamalpais and Blithedale Ridge are most prominent from the open space and adjacent outdoor rooms on the south side of the facility.

The southwest option has both civic and park presence along Doherty Drive (Figure 5). The building is tucked back from the thoroughfare in this option, with the open space on the north side of the site, serving as a strong connection to Piper Park. Pedestrian walkways from Doherty bring visitors to the entry plaza on the north side of the building. Additional walkways from Rose Lane and the parking lot lead to an entry plaza along the southwest building frontage. The most prominent views of Mt. Tamalpais and Blithedale Ridge in this option are from the southwest entry plaza and south facing outdoor rooms. In this scheme, the drop-off is connected to the parking lot.

Both options provide the majority of the parking on the southern portion of Parcel 'A' adjacent to Orchid Drive with access from both Rose Lane and Orchid Drive. Each option includes a drop-off area accessed and egressed via Rose Lane. Both options also provide additional parking on Parcel 'B'.

The Master Plan will develop policies for building height, floor area ratio, lot coverage and setbacks based on CLASP standards for residential development. In addition, the Master Plan will define design standards for landscaping, lighting, site amenities, and parking. The Master Plan recommends a parking ratio minimum of 2.5 spaces per 1,000 square feet of building area on-site, while a minimum of 3.0 spaces per 1,000 square feet of building area will be provided for "convenient" on-site and off-site parking.

Driveways locations will avoid direct sight lines to first floor windows of the housing units proposed across Orchid Drive. Berms and landscaping will front the parking areas and lighting will be down-lit, directional, and shielded in order to avoid light and glare spillover beyond the perimeter of the project site and into the Rose Garden development. The project further proposes to achieve a minimum LEED (Leadership in Energy and Environmental Design) rating of silver.

The Master Plan also anticipates relocation of the majority or all of existing library services from the existing City Hall to the proposed Community Facility. As such, the plan envisions a combination of community rooms and City Council meeting chambers on the lower level and a consolidation of many of the City's administrative services to the upper level of City Hall, as part of a future seismic upgrade and interior renovation of the structure. All exterior historic elements of the structure would be preserved.

The Master Plan project will require the following permits from the City: Planning Commission approval of a Design Review application, and administrative approval of Grading and Building Permits.

9. Surrounding land uses and setting

The project site is an irregular shaped rectangular 27,725 square-foot vacant level parcel. The property is located on the northwest corner of Assessor's Parcel No. 022-110-45, on the south side of Doherty Drive across from the intersection with Larkspur Plaza Drive.



FIGURE 3:  
Access & Circulation

Doherty Drive



FIGURE 4:  
North Site Option



FIGURE 5:  
Southwest Site Option  
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Doherty Drive forms the northern border of the site. The Mt. Tam Racquet Club, Hall Middle School and the entrance to Piper Park and Twin Cities Police Department Facilities are located immediately north of Doherty Drive. Tamalpais High School District Facilities and Redwood High School are located immediately east of the site. A mix of commercial uses is located to the west across the former railroad right-of-way. To the south and east is the proposed single-family and senior residential Rose Garden project development. The Larkspur Plaza Shopping Center and parking are located north and west of the subject site. Larkspur Creek is located at the eastern and southern edges of the Rose Garden Development, but not immediately adjacent to the Community Parcel.

10. The City of Larkspur is the primary permitting agency for the proposed Master Plan project. Following adoption of the Master Plan, approval will also be required of the following:
- Design Review (Planning Commission approval)
  - Grading and Building Permits (administrative approval)

Other agencies that may need to issue permits include

- Bay Area Air Quality Management District
- Marin Municipal Water District
- Regional Water Quality Control Board (storm water improvements)
- Ross Valley Sanitary District

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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.

- |  |   |
|--|---|
| <input type="checkbox"/> 1. Aesthetics                               | <input type="checkbox"/> 10. Land Use/Planning                  |
| <input type="checkbox"/> 2. Agricultural & Forestry Resources        | <input type="checkbox"/> 11. Mineral Resources                  |
| <input checked="" type="checkbox"/> 3. Air Quality                   | <input checked="" type="checkbox"/> 12. Noise                   |
| <input type="checkbox"/> 4. Biological Resources                     | <input type="checkbox"/> 13. Population/Housing                 |
| <input type="checkbox"/> 5. Cultural Resources                       | <input type="checkbox"/> 14. Public Services                    |
| <input type="checkbox"/> 6. Geology/Soils                            | <input type="checkbox"/> 15. Recreation                         |
| <input checked="" type="checkbox"/> 7. Greenhouse Gas Emissions      | <input type="checkbox"/> 16. Transportation/Traffic             |
| <input checked="" type="checkbox"/> 8. Hazards & Hazardous Materials | <input type="checkbox"/> 17. Utility/Service Systems            |
| <input type="checkbox"/> 9. Hydrology/Water Quality                  | <input type="checkbox"/> 18. Mandatory Findings of Significance |

DETERMINATION (completed by the Lead Agency)

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 least 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,

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- because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable 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.

Lorraine Weiss

Lorraine Weiss, Planning Consultant

2-28-13

Date

Neal Toft

Neal Toft, Planning Director, City of Larkspur

2/28/13

Date

## CHAPTER II - ENVIRONMENTAL CHECKLIST

### INTRODUCTION

The EIR that was completed and certified for the CLASP in 2006 addressed a number of environmental topics that are not required to be reassessed because few changes have occurred between the project evaluated in the CLASP, the approved Rose Garden Development Plan, and the proposed Master Plan for the Rose Garden Communities Facilities Parcel. Modifications have been made to the CEQA Initial Study Environmental Checklist since the adoption of the CLASP EIR and approved Rose Garden Development Plan.

Modifications to the Initial Study CEQA Environmental Checklist include the following: 1) Changes to the Agricultural Resources section; 2) a new Greenhouse Gas Emissions section; and 3) Modifications to the Transportation/Traffic section.

This Initial Study identifies which effects from the checklist were within the scope of and adequately analyzed in the 2006 Environmental Impact Report (EIR) and the Supplemental Initial Study/Mitigated Negative Declaration (September 2007) and states whether such effects were addressed by mitigation measures based on the earlier analyses. For effects that are “Less Than Significant With Mitigation Measures Incorporated,” the Initial Study identifies the mitigation measures which were incorporated into the EIR or supplemental 2007 Initial Study. Relevant pages of the EIR and supplemental 2007 Initial Study are identified in this Initial Study for the Master Plan. A copy of the Draft and Final EIRs and 2007 Initial Study can be reviewed at the City of Larkspur Planning Department, and the Draft EIR can be viewed on the City’s website ([www.ci.larkspur.ca.us](http://www.ci.larkspur.ca.us); under CLASP Archived Files).

When the analysis below identifies potentially significant **new** impacts additional mitigation measures are recommended. The level of significance, after mitigation, is identified at the conclusion of the mitigation measure. A list of references is provided in Chapter III and is cited as a source at the end of each topic area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>1. AESTHETICS</b>				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>

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Aesthetics continued

- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

DISCUSSION:

- a) **Less than Significant Impact.** Potential interference with scenic vistas was determined to be less than significant (see pages 4.10-6 and 4.10-7 of the Draft EIR). The proposed Community Facilities Parcel Master Plan project would not have an adverse effect on a scenic vista. The proposed structure would remain in scale with surrounding development and would not obstruct a scenic vista.
- b) **Less than Significant Impact.** The EIR did not identify any impacts to scenic resources, as addressed on pages 4.10-8 and 4.10-9 of the Draft EIR, but pages 3-31 and 3-33 of the Final EIR recommended changes to the wording of policies related to the creek resources and the open space network. These changes were incorporated into the adopted CLASP. No scenic highway is located in the vicinity of the Community Facilities Parcel Master Plan project and thus the removal of scenic resources within a State scenic highway would not apply to the project. The impact of trees located on the project site is addressed in the response to item (c), below.
- c) **Less than Significant Impact.** Impacts to visual character were found to be less than significant in the Draft EIR. Previously, the site was part of the Niven Nursery with degraded greenhouses and accessory structures. The new library/community facilities building, park and open space, and parking areas, would be subject to the City's Design Review process to ensure that the necessary findings can be made per the City's zoning code and to ensure no significant visual impacts would occur from the project. While the new community facilities building, open space, landscape, and parking area would be a change to the visual character of the site, the new facility would preserve views of Mt. Tamalpais and Blithedale Ridge. The project site is currently a vacant property that was previously used as a gas station and car wash. Since the former uses were vacated, a site clean-up has been underway and the site exists with a gravel surface and chain link fence on its perimeter. The General Plan designation is Residential Parkland/Public Facilities and the zoning is Planned Development (PD). The proposed project will not change the general plan land use designation or zoning that was approved by the Larkspur City Council. A library/community facility and park space are consistent with the Residential Parkland/Public Facilities general plan and PD zoning designations.

The proposed project would not block views of Mt. Tamalpais for traffic, bicyclists and pedestrians on Doherty Drive.

The project site is within a built-up urban area and would be consistent with its surroundings. The visual character of the site and surrounding areas would not be degraded by construction of this project. The proposed building has been sited so that it is not directly across from houses in the Rose Garden Development. The project is oriented to the side of new homes to the east. This offers separation between the new homes and the Park and Community Facility project and preserves views of Mt. Tamalpais and Blithedale Ridge. The Master Plan includes policies to assure that building and site improvements would both preserve and enhance natural features enjoyed by neighboring properties. During the design review process of the actual park and library/community facility building, the Planning Commission will look at findings to ensure that the proposed architecture and site design of the project complements the surrounding neighborhood, bulk, overall design, preservation of natural landscape, relationship between structures within the development and between structures and the site, materials and colors, and landscaping. The design review

Aesthetics continued

process ensures that the project will not be approved without the Planning Commission's determination that the required design review findings can be made for the project. Therefore, impacts on visual quality and character would be less than significant.

The Draft EIR did identify removal of heritage trees as a potential significant visual impact if not adequately mitigated. The updated Preliminary Development Plan included protection of all of the identified trees and a detailed tree survey was done based on the updated Preliminary Development Plan in April 2007 and revised in June 2007 (LandWatch, Inc., 2007). Mitigation Measures in the Draft EIR imposes required mitigation for the loss of heritage trees at the site, which also addresses the replacement tree requirements to minimize visual impacts from the project. A total of 244 trees are required in the Rose Garden Development to meet the mitigation goal. No additional trees are proposed for removal with the Master Plan project.

- d) **Less than Significant Impact.** Potential light and glare impacts were addressed on page 4.10-12 of the Draft EIR and no significant impacts were identified. Development of the Community Facilities Parcel Master Plan as proposed would result in the construction of new structures, parking areas, open space, and landscape. The proposed structures, and the vehicles that would be parked in the parking areas, would represent new sources of light and glare. The Specific Plan incorporates policies and standards intended to reduce the effects associated with the development-related increase in street lighting within the Specific Plan area. No additional light and glare impacts from the Master Plan would occur.

**Sources:** 1, 2, 3, 4, 9

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**2. AGRICULTURE AND FORESTRY RESOURCES**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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Agriculture & Forestry Resources continued

- |  |                          |                          |                          |          |
|--|--------------------------|--------------------------|--------------------------|----------|
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |

DISCUSSION:

- a) **No impact.** The project does not contain prime agricultural land. Refer to pages 4.1-15 of the Draft EIR.
- b) **No impact.** Such zoning does not apply to the site. Refer to pages 4.1-15 of the Draft EIR.
- c) **No impact.** Loss of forest land or conversion of lands designated as “farmland” would not occur with the Community Facilities Parcel Master Plan project.
- d) **No impact.** As part of the Community Facilities Parcel Master Plan project, changes to the site due to their location or nature would not result in conversion of farmland or to non-agricultural use or conversion of forest land to non-forest use.
- e) **No impact.** The existing site and proposed project do not contain involve farmland or forest land.

**Sources:** 2, 3, 9

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**3. AIR QUALITY**

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- |   |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?   | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?  | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of 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)? | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations?  | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people?   | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |

**DISCUSSION:**

- a) **Less than Significant Impact.** No significant impacts related to conflicts with the Bay Area Air Quality Management District (BAAQMD) Clean Air Plan were identified in the Draft EIR (refer to pages 4.6-8 and 4.6-9). The Preliminary Development Plan did not result in any air quality plan impacts. The entire San Francisco Bay Area is currently designated as “non-attainment” for the state one-hour ozone standard. Because the General Plan is used to help forecast the emissions budget within the BAAQMD’s 2007 Clean Air Plan, consistency with the City’s General Plan would mean that the proposed project does not conflict with the 2007 Clean Air Plan. The proposed project is currently within the Planned Development (PD) land use designation, which is consistent with the General Plan’s zoning for the project site. Consequently, operational emissions associated with implementation of the proposed project are not anticipated to conflict with the BAAQMD’s 2007 Clean Air Plan and are considered less than significant. Additionally, the proposed Communities Facility Parcel Master Plan project is within the downtown Larkspur area, which further fosters the reduction of operational emissions in perpetuity. Furthermore, this project would not be considered growth-inducing as it would not include any residential development that would permanently increase the City of Larkspur’s population and library services would be relocated from City Hall to the proposed Community Facilities Parcel. As previously indicated, construction-related emissions of ozone precursors and CO have

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Air Quality continued

already included in the emission inventory that forms the basis for the BAAQMD's regional air quality plans and are not expected to impede attainment or maintenance of ozone and CO standards in the Bay Area. Consequently, this impact is considered less than significant, as the proposed project would not impact or obstruct the implementation of the applicable air quality plans, and no mitigation is required.

- b) **Less than Significant Impact with Mitigation Incorporated.** The Draft EIR identified a potential impact related to violations of air quality standards due to reactive organic gases associated with wood-burning stoves. A mitigation measure was identified and the CLASP includes a policy to forbid use of wood-burning stoves and fireplaces. The Preliminary Development Plan and requested amendments did not create any further violation of air quality standards. The entire San Francisco Bay Area is currently designated "non-attainment" for the state particulate matter (PM) PM<sub>10</sub> and PM<sub>2.5</sub> standards, the state one-hour and the national eight-hour ozone standards. As part of the effort to reach attainment of these standards, the BAAQMD has established thresholds of significance for several criteria air pollutants associated with operation of projects. Specifically, a project is considered to have a potential to violate air quality standards if it would result in an increase in emissions of 80 pounds per day or 15 tons per year of PM<sub>10</sub>, reactive organic gases (ROG) or nitrogen oxides (NO<sub>x</sub>). ROG and NO<sub>x</sub> are both ozone precursors.

Development of the project would require preparation of the site and construction of the proposed project. Construction activities typically result in emissions of PM, usually in the form of fugitive dust from activities such as demolition, excavation, grading, and vehicle travel on unpaved surfaces. In the absence of mitigation, construction activities may result in significant quantities of dust on a temporary and intermittent basis during the construction period. BAAQMD's approach to analyses of construction impacts as noted in the *BAAQMD CEQA Guidelines* is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. With implementation of these dust control measures, the project's construction-related dust impacts would be less than significant.

Construction activities would also result in the emission of other criteria pollutants from equipment exhaust and construction-related vehicular activity. While emissions of ROG and NO<sub>x</sub> from these sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction, these emissions are included in the emission inventory that is the basis for regional air quality plans. As such, construction emissions are not expected to impede attainment or maintenance of ozone standards in the Bay Area, and the project's impact related to construction-vehicle emissions would be less than significant.

The proposed project adds a 24,000 square foot library/community facilities building to a vacant site which is designated in the General Plan for Residential Parkland/Public Facilities and zoned Planned Development (PD) which allows for park and library/community facilities use. As noted above, emissions of particulate matter from construction would be reduced to less than significant with implementation of Mitigation Measure Air Quality-1. Likewise, operation of the proposed project would result in less than significant air quality impacts for all pollutants.

MITIGATION MEASURE: The following mitigation measure shall be implemented to reduce the potential for impacts associated with air quality to a less than significant level.

- AQ-1.** Prior to the issuance of a Building or Grading Permit, whichever comes first, the applicant shall submit a dust and debris control plan for the review and approval of the City Engineer. The dust

Air Quality continued

and debris control plan shall include the following measures for all phases of construction:

- a. Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences should be kept damp at all times.
- b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- c. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- d. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- e. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent road surface.
- f. Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas that are inactive for 10 days or more).
- g. Enclose, cover, water twice daily, or apply (nontoxic) soil binders to exposed stockpiles.
- h. Limit traffic speeds on any unpaved roads to 15 mph.
- i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- j. Replant vegetation in disturbed areas as quickly as possible.
- k. Install wheel washers for all existing trucks, or wash off the tires or tracks of all trucks and equipment leaving the construction site.
- l. Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- m. Designate an air quality coordinator for the project. Prominently post a phone number for this person on the job site, and distribute same to all nearby residents and businesses. The coordinator will respond to and remedy any complaints about dust, exhaust, or other air quality concerns. A log shall be kept of all complaints and how and when the problem was remedied.

RESULT AFTER MITIGATION: It is anticipated that the mitigation measure listed above will adequately reduce the project's impacts to a less than significant level.

- c) **Less than Significant Impact with Mitigation Incorporated.** Refer to response b) above. As noted above, emissions of particulate matter from construction would be reduced to less than significant with implementation of Mitigation Measure Air Quality-1. Likewise, operation of the proposed project would result in less than significant air quality impacts for pollutants for which the project region is non-attainment under an applicable federal or State ambient air quality standard.
- d) **Less than Significant Impact.** Dust emission was addressed on page 4.6-11 of the Draft EIR and 3-24 and 3-25 of the Final EIR. Construction-related asbestos and lead were addressed on page 4.6-10 of the Draft EIR. Mitigation measures were identified on pages 4.6-13 through 4.6-16 of the Draft EIR, and page 3-25 of the Final EIR. No additional mitigation measures were required as result of the Preliminary Development Plan. The project is located in downtown Larkspur and within an urbanized area. Since construction emissions will be mitigated, and there will be no change in emissions from operations, the impacts to sensitive receptors in the area will be less than significant. It is noted that the site was previously occupied by a nursery, which has been removed. As further discussed in the Transportation/Traffic section below, while the scope of the project represents 146 new vehicle trips than the former use and, therefore, it is not anticipated that the project will create substantial pollutant concentrations.

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Air Quality continued

- e) **Less than Significant Impact.** No significant odor impacts were identified in the Draft EIR and the Preliminary Development Plan. Construction of the proposed project would result in diesel exhaust emissions due to the use of on-site diesel equipment. Diesel exhaust would be short-term in duration and only temporary during construction activities, and would dissipate rapidly from the source with an increase in distance. The proposed Community Facility Parcel Master Plan project would not include the long-term odorous emission source as defined by BAAQMD Guidelines due to the park and library/community facilities building development, which do not generate objectionable odors. Therefore, construction and operation of the project would result in less than significant objectionable odors.

**Sources:** 4, 5, 9, 12

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>4. BIOLOGICAL RESOURCES</b>				
Would the proposal:				
a) Have a substantial adverse effect, either directly or indirectly 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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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 U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
e) Conflict with any local policies or ordinances	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>

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Biological Resources continued

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:

- a) **Less than Significant Impact.** The Draft EIR concluded that loss of habitat would be less than significant (see pages 4.5-15 and 4.5-16 of the Draft EIR). However, the Draft EIR assumed that mature trees and all heritage trees at the site would be protected. Since completion of the Development Plan and an updated tree survey, the applicant has determined that 173 trees would be removed, and that 71 of these would meet the City's definition of heritage trees, plus one heritage tree which would be removed and relocated. The issue of heritage trees is discussed under (e) below.

The 2007 Initial Study identified a biological impact in that one or more special-status bird species under the Migratory Bird Treaty Act could establish nests in trees planned for removal. The disturbance or destruction of active nests would be a significant impact (Impact Biology-1). It was determined that implementation of Mitigation Measure Biology-1 would reduce this impact to a less-than-significant level.

- b) **Less than Significant Impact.** Potential impacts on Larkspur Creek and associated habitat were addressed on pages 4.5-17 and 4.5-18 of the Draft EIR. Recommended mitigation measures were addressed on page 4.5-21 of the Draft EIR. The Preliminary Development Plan complied with CLASP policies regarding protection of riparian habitat and required setbacks. The proposed Community Facilities Parcel Master Plan is not located near Larkspur Creek and is not in proximity to habitat for any species identified as a candidate, sensitive, or special status species. Therefore, there would be a less than significant to habitat species.
- c) **No Impact.** The project site itself does not contain any wetlands. Therefore, there would be no impact to wetlands.
- d) **No Impact.** The parcel is not located near a wildlife corridor or wildlife nursery site. Therefore, there would be no impact to wildlife movement or nursery sites.
- e) **Less than Significant.** The project involves development of a site that was formerly the Niven Nursery. As of the preparation of this Initial Study, remediation to mitigate soils is underway and is near completion as noted in a letter from the Department of Toxic Substances and Control, dated July 24, 2012. The Draft EIR and subsequent updated tree survey identified trees to be protected, 173 trees to be removed, and trees to be relocated. Two hundred and forty-four (244) new trees are required to meet the mitigation goal. Heritage trees along Doherty Drive are being protected under the Rose Garden Development project and will not be affected by this Master Plan project. The Community Facilities Parcel Master Plan would not affect any additional trees for removal.
- f) **No Impact.** The project would not conflict with an adopted habitat conservation plan.

Sources: 3, 4, 5, 9

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>5. CULTURAL RESOURCES</b>				
Would the Proposal:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>

**DISCUSSION:**

- a) **No Impact.** Page 8-6 of the CLASP and page 4.11-11 of the Draft EIR required documentation of the Niven Nursery structures according to Historic American Buildings Survey (HABS) standards before any demolition of these on-site structures was permitted. The nursery structures date back to the 1920s and 1930s. The 2007 Initial Study for the Preliminary Development Plan did not identify any additional impacts. The site no longer contains any original structures. Therefore, the proposed Community Facilities Parcel Master Plan would not have any additional impacts on historic structures.
- b) **No impact.** Page 4.11-8, 11 and 12 of the Draft EIR and pages 3-32 and 3-33 of the Final EIR address the potential impact to archaeological resources and the required mitigation. The 2007 Initial Study for the Preliminary Development Plan did not identify any additional impacts beyond those identified in the EIR. The site is currently being remediated and all potential impacts are being addressed under the current project. Therefore, the proposed Community Facilities Parcel Master Plan would not have any additional impacts on archaeological resources.
- c) **No impact.** No impacts to paleontological resources were identified in the Draft EIR and 2007 Initial Study for the Preliminary Development Plan. The site is currently being remediated and all potential impacts are being addressed under the current project. Therefore, the proposed Community Facilities Parcel Master Plan would not have any additional impacts on paleontological resources.
- d) **No impact.** Potential disturbance to unknown human remains are addressed on page 4.11-10 of the Draft EIR. The mitigation measure constituted a new policy incorporated into the CLASP, as stated on page 4.11-11 and 12 of the Draft EIR. No additional impacts from the Preliminary Development Plan were identified in the 2007 Initial Study. No additional impacts to human remains would occur as a

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Cultural Resources continued

result of the proposed Community Facilities Parcel Master Plan.

**Sources:** 2, 3, 9, 11

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>6. GEOLOGY &amp; SOILS</b>				
Would the project:				
a) 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)	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>

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Geology & Soils continued

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

DISCUSSION:

- a) **Less than Significant Impact.** Pages 4.3-11 through 4.3-13 of the Draft EIR and 2007 Initial Study for the Preliminary Development Plan address seismic-related impacts of CLASP development. All such impacts were found to be less than significant. All structures will be constructed to per the seismic standards of the current California Building Code (CBC). The proposed Community Facilities Parcel Master Plan would not result in any additional impacts.
- b) **Less than Significant Impact.** The site is flat and has been graded. Soil erosion during construction was identified as a potentially significant impact, page 4.3-13 of the Draft EIR. An Erosion Control Plan in the form of a Stormwater Pollution Protection Plan was addressed as the need mitigation on page 4.3-18 of the Draft EIR. This impact and mitigation measure was also addressed on pages 3-22 and 3-23 of the Final EIR. The 2007 Initial Study did not identify additional impacts as a result of the Preliminary Development Plan. The Community Facilities Parcel Master Plan would be designed to National Pollutant Discharge Elimination System (NPDES) Phased II standards. Surface runoff associated with the proposed project would be collected and conveyed through a stormwater collection system consisting of drains and a pipe that would connect to the City's existing storm drainage system, which discharges stormwater to San Francisco Bay. All run-off would be managed on-site. Additionally, the applicant would be required to implement performance standards set forth under the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) Action Plan. The site is subject to an NPDES permit. The proposed Community Facilities Parcel Master Plan would not result in any additional impacts to soil erosion or the loss of topsoil.
- c) **Less than Significant Impact.** No significant impacts related to unstable geologic units were identified in the Draft EIR, Final EIR or 2007 Initial Study for the Preliminary Development Plan. The proposed Community Facilities Parcel Master Plan would not result in any additional impacts to a geologic unit or unstable soil.
- d) **Less than Significant Impact.** Expansion of clay soils was identified as a less than significant impact on page 4.3-16 of the Draft EIR as soils in the underlying Specific Plan area include fill, Bay Mud, and alluvium, and not clay soils. The 2007 Initial Study did not identify any additional impacts as a result of the Preliminary Development Plan. The proposed Community Facilities Parcel Master Plan would not result in any additional impacts to expansive soil.
- e) **No Impact.** The proposed Community Facilities Parcel Master Plan project would not require the use of septic tanks or alternative waste water disposal systems.

**Sources:** 1, 2, 3, 9, 11

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**7. GREENHOUSE GAS EMISSIONS**

Would the project:

- |  |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> | <input type="checkbox"/> |

**DISCUSSION:**

Pacific Municipal Consultants (PMC) was hired by the City of Larkspur to prepare a Greenhouse Gas (GHG) Emissions analysis in accordance with the CEQA and with consideration of the GHG reduction actions and programs contained within the City of Larkspur Climate Action Plan (CAP). Refer to Appendix B for the entire GHG analysis.

- a) **Less than Significant Impact.** GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts.

Construction GHG Emissions

GHG emissions associated with the Community Facility Parcel Master Plan project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. The approximate quantity of GHG emissions generated by construction equipment used to build the proposed project is depicted in Table 1 below.

**TABLE 1  
CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR**

Construction	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)	CO <sub>2</sub> e
Construction	240	0.04	0.00	241

*Source: CalEEMod version 2011.1.1. Diesel-fueled construction equipment load factors reduced 33% to account for off-road emission overestimation (CARB 2010b). See Appendix A of PMC, Greenhouse Gas Emissions analysis, for emission model outputs.*

Table 1 illustrates the construction-related GHG emissions that would result from construction of the proposed project. As shown, project construction would result in the generation of approximately 241 metric tons of CO<sub>2</sub>e over the course of construction.

Greenhouse Gas Emissions continued

Operational GHG Emissions

There would also be long-term regional emissions associated with project-related new vehicular trips and indirect source emissions, such as electricity usage for lighting. As shown in Table 2 below, the long-term operations of the proposed project would produce 1,083 metric tons of CO<sub>2</sub>e annually, primarily from motor vehicles that travel to and from the site. To be conservative, total construction-generated GHG emissions (see Table 1) were amortized over the estimated life of the project. A project life of 30 years was assumed for the proposed project.

**TABLE 2  
OPERATIONAL GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR  
(UNMITIGATED)**

Source	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Construction (Amortized over 30 Years)	8	0.00	0.00	8
Area	0	0.00	0.00	0
Energy	91	0.00	0.00	91
Mobile	970	0.04	0.00	971
Solid Waste	4.5	0.27	0.00	10
Water	2	0.02	0.00	3
<b>Total</b>	<b>1,075.5</b>	<b>0.33</b>	<b>0.00</b>	<b>1,083</b>
BAAQMD Threshold				1,100

*Source: CalEEMod version 2011.1.1. While Larkspur is approximately three square miles in size, CalEEMod defaults estimated an average trip rate of 4.6 miles per trip. Therefore mobile-source GHG emission estimates are conservative. See Appendix A of PMC, Greenhouse Gas Emissions analysis, for emission model outputs.*

As shown in the table, the proposed project would not exceed BAAQMD significance thresholds for operational GHG emissions and would result in less than significant GHG impacts on the environment.

- b) **Less than Significant Impact with Mitigation Incorporated.** The City of Larkspur has developed a CAP to address climate change and reduce the community’s GHG emissions at the local level. The CAP identifies five action areas and 58 implementing programs that the community can take to reduce both emissions and communitywide contributions to global climate change. The City CAP describes actions and program necessary to reduce GHG emissions throughout the City.

The CAP establishes a reduction target of 15 percent below 2005 emissions by 2020. (According to the CAP, in 2005, approximately 106,222 metric tons of CO<sub>2</sub>e emissions were generated within the City). These CAP projections are based, in part, on the land use assumptions of the City of Larkspur General Plan. Therefore, proposed project consistency with the CAP includes project consistency with the land use and population growth projections of the Larkspur General Plan. The proposed project is consistent with the General Plan land use designation and development density, and since the proposed project does not include residential development, it will not add new population to the area. Therefore, there no inconsistencies with the project and the overall basis of the CAP.

As stated, the CAP identifies five action areas and 58 implementing programs that the community can

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Greenhouse Gas Emissions continued

take to reduce both emissions and communitywide contributions to global climate change. The list of CAP measures is shown in Table 3.

**TABLE 3  
CITY OF LARKSPUR CAP GHG REDUCTION ACTIONS AND PROGRAMS**

Program Number	Description
<b><i>Natural Systems, Carbon Sequestration, and Emissions Offset</i></b>	
1	Continue to enforce policies and programs that regulate the removal and replacement of significant trees and preclude the sale of exotic and invasive plants.
2	Develop and implement a community-wide tree-planting program for streets and parks to significantly increase the carbon storage potential of trees and other vegetation in the community.
3	Encourage and, when feasible, require removal of concrete from creek channels and creek restoration and enhancement.
4	Encourage use of pervious paving materials when practical
5	Continue to enforce zoning regulations for parking lot landscaping to increase shading and reduce thermal gain.
6	To the extent possible, require new development to be planned around existing trees and require new or replacement tree planting as carbon offsets where increased intensity of use, development or activity results in increased GHG emissions.
7	Continue to support the use of tax benefits for land deeds and the use of planning and zoning tools such as conservation easements and Transfer of Development Rights (TDR) to promote cluster development and secure "climate reserve" zones on tree covered undeveloped hillside parcels and other open space.
8	As may be necessary, investigate achieving further carbon reductions for city operations by purchasing carbon offsets or participating in a program such as ClimateSmart, after maximizing GHG reductions through conservation, energy efficiency and renewable energy measures.
9	Provide educational opportunities and creative incentives for community organizations and residents to reduce their carbon footprint.
10	Support and promote local farmers markets.
11	Partner with Master Gardeners and others to provide education and resources to residents on backyard gardening.
12	Encourage the creation of community gardens, including possible use of surplus City properties.
<b><i>Land Use and Transportation</i></b>	
1	Reduce and encourage the reduction of GHG emissions through the General Plan and environmental and project review processes by: <ul style="list-style-type: none"> <li>a. Adopting policies that promote compact and efficient development, such as orienting new development to capitalize on transit system investments and services.</li> <li>b. Adopting policies that encourage a "balanced" community, where residents do not have to travel long distances for service needs.</li> <li>c. To the extent feasible, products are grown or manufactured locally or within the region; and growing food is given a priority over planting ornamentals.</li> <li>d. Establishing planning processes that encourage reducing GHG emissions, including the development of workforce housing and a diversity of housing types.</li> <li>e. Using transportation models and surveys to capture data for and accurately reflect all modes of transportation.</li> <li>f. Making reductions in vehicle-miles traveled (VMT) a high-priority criterion in evaluation of policy, program and project alternatives.</li> <li>g. Implementing transportation planning procedures that consider demand management solutions</li> </ul>

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	<p>equally with strategies to increase capacity.</p> <p>h. As appropriate, analyzing impacts of development projects on safety, availability, and use of alternative transportation in CEQA documents.</p> <p>i. Adopting local CEQA Guidelines to explain how analysis of greenhouse gas emissions will be treated, such as thresholds of significance.</p>
2	Educate residents and employees about the health and environmental benefits of walking, cycling, or taking public transit, and ride sharing, and information to assist in these modes of travel (e.g., information available in public places and employment centers regarding bus schedules, pedestrian pathways and trails, and the 511 Rideshare Program and related vanpool incentive programs).
3	<p>Encourage the use of sustainable transportation modes by identifying where the Community's pedestrian, bicycle, and mass transit facilities are deficient and updating the community-wide pedestrian and bicycle plan and capital improvement program that maximizes the potential to:</p> <p>a. Continue improving bicycle infrastructure (e.g., Class 1, 2, and 3 paths)</p> <p>b. Update (e.g., include specifications for bicycle racks) and enforce bicycle parking requirements for public and private developments.</p> <p>c. Improve commercial and residential pedestrian infrastructure (e.g., sidewalks, paths, and walkways) and expanded programs that encourage walking (e.g., safe routes to school program).</p> <p>d. Continue to improve mass-transit infrastructure (e.g., bus stops, transit stations, park and ride) and coordinate with the regional transit providers and the Transportation Authority of Marin (TAM) to pursue funding opportunities to expand local and regional bus service in range and/or frequency. Oppose reductions in transit service.</p> <p>e. Study the Larkspur Landing Circle area and enhance the opportunities presented by the location of the Larkspur Ferry, the Marin Airporter, and eventually the SMART train station.</p> <p>f. Support and encourage the implementation of TAM's vision for the future, "Moving Forward: A 25-Year Transportation Vision for Marin County."</p> <p>g. Increase bicycle and pedestrian safety through traffic calming devices and other measures to reduce traffic speeds and volumes, and design standards for multi-modal mobility and access.</p> <p>h. Encourage innovated ideas for allowing residents to swap/trade bicycles that no longer meet their needs for ones that do (e.g., potential for trading bike pulled kid-carts to someone that wants to use the cart to haul groceries.)</p>
4	Green the City Fleet. Reduce greenhouse gas emissions from municipal fleet operations by purchasing or leasing high MPG, low carbon fuel or hybrid vehicles, or by using an external car sharing program in lieu of city/county fleet.
5	Provide agency employees with incentives to use alternatives to single occupant auto commuting, such as parking cash-out, flexible schedules, transit incentives, bicycle facilities, ridesharing services and subsidies, and telecommuting when practical.
6	<p>When auto and truck transportation remain necessary, improve GHG emissions by:</p> <p>a. Implementing Intelligent Transportation Systems (ITS) for surveillance and traffic control, such as synchronized signals, transit and emergency signal priority, and other traffic flow management techniques, to improve traffic flow and reduce vehicle idling.</p> <p>b. Encouraging private development to encourage the use of hybrids, electric vehicles, and carpools.</p> <p>c. Working with school districts and private schools to encourage carpooling and participation in safe routes to school.</p> <p>d. Working with and encouraging the County in developing a community carsharing, when determined to be feasible.</p> <p>e. Adopting and implementing a policy requiring limitations on idling for commercial vehicles, construction vehicles, buses and other similar vehicles, beyond state law, where feasible.</p> <p>f. Designing right-of-way widths to the minimum acceptable safety standards for both traffic calming and auto, bicycle and pedestrian safety.</p>
7	Encouraging ownership of plug-in electric vehicles (EV) by providing EV charging station infrastructure, where appropriate, and encouraging property owners and developers to install EV charging stations in commercial and residential projects.
<b>Green Building, Energy Efficiency, and Renewable Energy</b>	

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1	Update and strengthen the City's Green Building Ordinance and apply green building requirements to new residential, commercial and civic construction and remodeling projects to increase energy efficiencies. For the remodel of existing homes, the Building Official should provide homeowners information regarding the benefits of energy retrofits, but be allowed some discretion relative to applying the green building requirements.
2	Develop a citywide Green Building promotional campaign. Educate City staff and policy makers about best practices; provide checklists and specification guidelines for contractors; post green building information on the City's website.
3	Provide incentives to development projects that meet or exceed specified standards under green building programs such as Build It Green.
4	Train existing staff (and possibly offer a pay incentive for certification or accreditation) or contract out for expertise in LEED and GPR (e.g., projects not designed by a LEED accredited architect/engineer could pay a fee for review by someone with LEED expertise).
5	As part of the Green Building Ordinance update, require energy efficiency audits for residences and businesses during major remodeling projects. Consider requirements and incentives for minimum energy efficiency upgrades.
6	Replace lamps in street and parking lot lighting with energy-efficient technologies, such as LED and induction lighting.
7	Support efforts of PG&E to maximize residential and business subscription rates for energy efficiency programs and to promote conservation and renewable energy use.
8	Adopt policies and incentives to encourage residents and businesses to install solar/renewable energy systems.
9	Research and consider possibilities for residential wind power generators and for location of solar collectors.
10	Participate in a countywide or regional assessment district bond-financing program to assist homeowners in funding installation of energy efficiency upgrades and renewable energy systems.
11	Complete energy efficiency upgrades to City facilities as recommended by the Marin Energy Management Team, to include: a. Re-roof Fire Station No. 15 (#1) with energy efficient roofing. b. Replace the HVAC and diesel generator at Fire Station No.15 (#1) with more efficient equipment. c. Replace windows in City Hall and Fire Station No.15 (#1). d. Enclose the understory of City Hall and provide understory insulation.
12	Install photovoltaic panels at City facilities, such as the south-facing roof of City Hall and the two fire stations.
13	Upgrade incandescent bulbs in traffic signals and pedestrian signals to LED technologies.
<b>Green Purchasing</b>	
1	Prioritize purchases of products and services with superior environmental performance that are economically competitive on a life-cycle basis.
2	Implement operational changes that can offset environmentally preferable product costs. Green purchasing policies also include operational steps for reducing environmental and economic costs derived from the use of products or services. For example, green policies call for periodic energy efficiency audits of major facilities.
3	Purchase products only when needed and not solely on a replacement schedule. Many durable manufactured goods – from computers to motor vehicles — embody much of the energy used (and carbon emitted) over their life span in their initial production. Optimizing purchasing schedules according to ongoing needs assessment, rather than a fixed replacement schedule, can lower environmental burden and cost.
4	Create an interdepartmental Green Purchasing Team.
5	Complete a Green Purchasing Policy & Implementation Plan.
6	Provide each City Department with an easy reference binder for finding "green" products and distributors.
7	Engage city staff in support of Green Purchasing goals and processes by including them in the review

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	of draft documents to seek their comment and input.
8	Implement Green Purchasing reporting to capture GHG impacts.
9	Update City's website to allow for electronic noticing to interested persons regarding City meetings, events, proposed projects, etc.
<b>Waste Reduction, Recycling, and Zero Waste</b>	
1	Adopt a policy to achieve zero waste going to landfills.
2	Endorse an Extended Producer Responsibility resolution. The JPA proposes that the member agencies endorse an Extended Producer Responsibility resolution and sign the California Product Stewardship Council pledge to shift California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on extended producer responsibility (EPR) in order to reduce public costs and drive improvements in product design that promote environmental sustainability.
3	Enhance existing waste reduction and recycling activities at City buildings and in the community.
4	Expand education to the public about the benefits of waste reduction, via informational materials, organized events and workshops, including backyard composting workshops, office paper recycling programs, and organized brush drop-off programs.
5	Adopt a Construction and Demolition Ordinance to comply with the JPA's model ordinance.
6	Strengthen recycling programs, purchasing policies, and employee education, to reduce the amount of waste produced in Larkspur.
7	Promote commercial and residential backyard composting. Recommended composting programs: <ul style="list-style-type: none"> <li>a. Partner with Master Gardeners and others to provide education and resources to residents on backyard composting.</li> <li>b. Work with Marin Sanitary Service to develop commercial and residential food waste collection routes and to create centrally located facilities to process all green and food waste. Process this waste in anaerobic digesters for soil amendments and the production of biogas. Biogas is the gas produced by anaerobic digestion of organic matter and consists of 60-80 percent methane (natural gas), 30-40 percent carbon dioxide, and other trace gases such as hydrogen sulfide, ammonia and hydrogen. The predominance of methane means it can be used as a fuel source.</li> <li>c. Support Marin Municipal Wastewater District in its feasibility study of providing feedstock for biogas.</li> </ul>
<b>Water and Wastewater</b>	
1	Assess, maintain and repair existing plumbing fixtures, pipes, and irrigation systems in all agency buildings and facilities to minimize water use, including building and parking lot landscaping, public rest rooms and parks, golf courses and other recreational facilities. As feasible, upgrade and retrofit agency plumbing and irrigation systems with state-of-the-art water conserving technology.
2	Audit the City's water and stormwater pumps and motors to evaluate equipment efficiency and, as funding allows, replace least efficient equipment with more efficient units.
3	Retrofit existing agency buildings and facilities to meet standards for the LEED Standards Rating Systems for Existing Buildings (EB) or Commercial Interiors (CI).
4	Plant materials native to northern California and Marin County, and encourage the use of drought-tolerant plant material.
5	Minimize turf areas and avoid narrow turf areas, such as in parking strips. Encourage homeowners to avoid turf and replace existing turf areas.
6	Consider water heater upgrade incentives. Larkspur may develop incentive programs for updated water heater systems, such as tankless or on-demand.
7	Adopt retrofit program to encourage or require installation of water conservation measures in existing businesses and homes.
8	Require dual plumbing for use of recycled water for new commercial and/or residential developments.
9	Increase customer education programs on water conservation and intelligent irrigation systems.
10	Provide information related to greywater use and plumbing codes.

Source: City of Larkspur 2010

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Greenhouse Gas Emissions continued

The strategies included in the City of Larkspur CAP that apply to a land use development proposal such as the Rose Garden Community Facility project are contained in Table 4, which also summarizes the extent to which the project would comply with the strategies. The strategies listed in Table 4 are either required mitigation measures or requirements under local or state ordinances. With implementation of these strategies/measures, the project's contribution to cumulative GHG emissions would be reduced. In order to ensure that the proposed project complies with and would not conflict with or impede the implementation of reduction goals identified in the City of Larkspur CAP, mitigation measure GHG-1, is recommended.

**TABLE 4  
CITY OF LARKSPUR CAP COMPLIANCE**

Strategy	Project Compliance
<b><i>Natural Systems, Carbon Sequestration, and Emissions Offset</i></b>	
<p><b>Program 2</b></p> <p>Develop and implement a community-wide tree-planting program for streets and parks to significantly increase the carbon storage potential of trees and other vegetation in the community.</p>	<p><b>Compliant</b></p> <p>While the development of a community-wide tree-planting program is beyond the scope of requirement for a single land use project, trees would be planted on the project site as part of the site landscape plan. An occupancy permit for part or whole of the proposed project building shall not be issued unless and until the site is landscaped per Chapter 18.64 of the City Municipal Code. As further required by Chapter 18.64 of the Municipal Code, landscaping, which would include trees, shall be well designed with appropriate variations and shall be included as an integral enhancement of the site and, where needed, for the purposes of screening. Plant materials shall be suitable for the functions to be served and all landscaping has to be maintained in good condition. Any dead or dying plants, bushes or trees are required to be replaced with new healthy stock as appropriate.</p> <p>Also, Chapter 12.16 of the Municipal code specifically mentions that native trees such as redwood, oak, and madrone are especially important to the community. The City provides a Master Tree List, which encourages the planting of native trees, to be used as a guide when trees are planted on private property.</p> <p>Lastly, the project site is encapsulated by the CLASP (Subarea 3), and the CLASP DEIR (2003) identified several City-defined heritage trees located along the western edge of the proposed project site. According to the CLASP DEIR, these heritage trees are required to be retained and incorporated into the design of this project.</p>
<p><b>Program 4</b></p> <p>Encourage use of pervious paving materials when practical.</p>	<p><b>Compliant</b></p> <p>The project would comply with mitigation measure GHG-1, identified below, which requires the use of pervious paving material for the project's proposed 75 parking spaces as well as project sidewalk features, to the maximum extent feasible.</p>
<p><b>Program 6</b></p>	<p><b>Compliant</b></p>

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<p>To the extent possible, require new development to be planned around existing trees and require new or replacement tree planting as carbon offsets where increased intensity of use, development or activity results in increased GHG emissions.</p>	<p>As previously stated, the project site is encapsulated by the CLASP (Subarea 3), and the CLASP DEIR (2003) identified several City-defined heritage trees located along the western edge of the proposed project site. According to the CLASP DEIR, these heritage trees are required to be retained and incorporated into the design of this development.</p>
<p><b>Land Use and Transportation</b></p>	
<p><b>PROGRAM 1 - (a) and (b)</b></p> <p>a. Adopting policies that promote compact and efficient development, such as orienting new development to capitalize on transit system investments and services.</p> <p>b. Adopting policies that encourage a “balanced” community, where residents do not have to travel long distances for service needs.</p>	<p><b>Compliant</b></p> <p>While the adoption of sustainable land use and transportation policies is beyond the scope of requirement for a single land use project, the proposed project does fulfill the intent of this CAP Program. The proposed project promotes compact, walkable, infill development and focuses redevelopment along a transit corridor, Doherty Drive. There are 3 public transit bus stops within 350 feet of the project site and the proposed community facility, which includes 12,000 square feet of library space and an equal amount of meeting and program spaces, are types of land uses that are especially strategic for the concept of a “balanced” community (i.e., a library located at a walkable distance of less than 300 feet from Hall Middle School and 0.4 mile from the High School. Similarly, the project site would be located adjacent to an 85-lot residential community. Furthermore, the project would provide open space with multi-use trail amenities on a portion of the 2.84-acre site.</p>
<p><b>PROGRAM 3 - (a), (c), and (d)</b></p> <p>a. Continue improving bicycle infrastructure (e.g., Class 1, 2, and 3 paths).</p> <p>c. Improve commercial and residential pedestrian infrastructure (e.g., sidewalks, paths, and walkways) and expanded programs that encourage walking (e.g., safe routes to school program).</p> <p>d. Continue to improve mass-transit infrastructure (e.g., bus stops, transit stations, park and ride) and coordinate with the regional transit providers and the Transportation Authority of Marin (TAM) to pursue funding opportunities to expand local and regional bus service in range and/or frequency. Oppose reductions in transit service.</p>	<p><b>Compliant</b></p> <p>As previously stated, the project site is encapsulated by the CLASP (Subarea 3). In terms of bicycle infrastructure, the circulation system for the Specific Plan area is required to be designed to facilitate traffic flow, improve safety, and incorporate a bikeway, according to the CLASP DEIR (2003). A Class 1 bike path has been incorporated along the south side of Doherty Drive as part of the overall CLASP, which borders the north side of the project site. Additionally, the CLASP implements a system of integrated pedestrian and bicycle routes within the Specific Plan area (including the project site) that would provide safe circulation and connections to existing area facilities (City of Larkspur 2003). The CLASP pedestrian and bicycle circulation system creates links between the CLASP area and Downtown, Larkspur Plaza, schools, parks and transit areas (City of Larkspur 2003).</p> <p>Concerning pedestrian infrastructure, the encouragement of walking, and mass-transit infrastructure, please refer to the consistency analysis of Program 1 – (a) and (b) above.</p> <p>Lastly, the project would comply with mitigation measure GHG-1, identified below, which requires the provision of bicycle parking facilities and preferential parking for carpooling and alternative-fueled vehicles.</p>
<p><b>Program 6 - (b)</b></p> <p>b. Encouraging private development to encourage the use of hybrids, electric vehicles, and carpools.</p>	<p><b>Compliant</b></p> <p>As stated above, the project would comply with mitigation measure GHG-1, identified below, which requires the provision of preferential parking for carpooling and</p>

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	alternative-fueled vehicles.
<p><b>Program 7</b></p> <p>Encouraging ownership of plug-in electric vehicles (EV) by providing EV charging station infrastructure, where appropriate, and encouraging property owners and developers to install EV charging stations in commercial and residential projects.</p>	<p><b>Compliant</b></p> <p>The project would comply with mitigation measure GHG-1, identified below. While this mitigation does not expressly require electric vehicle charging station infrastructure, it does encourage the use of plug-in electric vehicles by requiring the provision of preferential parking for alternative-fueled vehicles.</p>
<b>Green Building, Energy Efficiency, and Renewable Energy</b>	
<p><b>Program 3</b></p> <p>Provide incentives to development projects that meet or exceed specified standards under green building programs such as Build It Green.</p>	<p><b>Compliant</b></p> <p>The proposed project will be required to comply with the updated Title 24 standards, including the new 2010 California Building Code (CBC), for building construction. These standards require new buildings to reduce water consumption by 20 percent, which results in less energy consumption for pumping water. In addition, the project proposes to construct the Rose Garden Community Facility to achieve a minimum LEED (Leadership in Energy and Environmental Design) silver rating. LEED is a voluntary, consensus-based, market-driven program that provides third-party verification of environmentally sustainable buildings. The goal of the LEED performance credit system is to allocate points "based on the potential environmental impacts and human benefits of each credit." To weight these impacts, USGBC relies upon the environmental impact categories of the <a href="#">United States Environmental Protection Agency's</a> Tools for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI) as a basis for weighting each credit. Points are distributed across major credit categories, one being Energy and Atmosphere, which addresses energy efficiency.</p>
<b>Waste Reduction, Recycling, and Zero Waste</b>	
<p><b>Program 6</b></p> <p>Strengthen recycling programs, purchasing policies, and employee education, to reduce the amount of waste produced in Larkspur.</p>	<p><b>Compliant</b></p> <p>The project site is located with the CLASP area and CLASP Policy U-15, Solid Waste Disposal, requires the provision of adequate storage for waste and recycling bins for all new development. More specifically, mitigation measure GHG-1 requires that the proposed project provide interior and exterior storage areas for recyclables and adequate recycling containers. This mitigation measure also instigates the reuse and recycling of construction waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) to the extent practical. Lastly, the proposed project will be required to comply with the updated Title 24 standards, including the new 2010 CBC, for building construction and these standards require the diversion of 50 percent of the resultant construction waste from landfills.</p>
<b>Water and Wastewater</b>	
<p><b>Program 1</b></p> <p>Assess, maintain and repair existing plumbing fixtures, pipes, and irrigation systems in all</p>	<p><b>Compliant</b></p> <p>As previously stated, the proposed project will be required to comply with the updated Title 24 standards, including the</p>

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<p>agency buildings and facilities to minimize water use, including building and parking lot landscaping, public rest rooms and parks, golf courses and other recreational facilities. As feasible, upgrade and retrofit agency plumbing and irrigation systems with state-of-the-art water conserving technology.</p>	<p>new 2010 CBC, for building construction. These standards require new buildings to reduce water consumption by 20 percent. Furthermore, the project proposes to construct the Rose Garden Community Facility to achieve a minimum LEED silver rating. The goal of the LEED performance credit system is to allocate points "based on the potential environmental impacts and human benefits of each credit." To weight these impacts, USGBC relies upon the environmental impact categories of the <a href="#">United States Environmental Protection Agency's</a> TRACI as a basis for weighting each credit. Points are distributed across major credit categories, one being Water Efficiency.</p> <p>The proposed project would also be required to comply with Marin Municipal Water District (MMWD) regulations. The City has required compliance with MMWD regulations as a condition of approval for projects subject to the design review and planning permits (City of Larkspur 2010), such as the proposed project. For the last several years, the water district's water conservation measures have been outlined under MMWD Ordinance No. 385. This ordinance has required water conserving landscaping review and compliance for all public, industrial, commercial, and multifamily residential projects. The ordinance outlined prescriptive irrigation efficiency methods such as automatic irrigation systems, proper soil preparation, and a limited percentage of high-water use plants. On December 16, 2009, the MMWD Board adopted Ordinance No. 414, providing updated water efficient landscaping requirements as well as other water conservation measures (City of Larkspur 2010).</p>
<p><b>Program 4</b></p> <p>Plant materials native to northern California and Marin County, and encourage the use of drought-tolerant plant material.</p>	<p><b>Compliant</b></p> <p>Chapter 12.16 of the Municipal code specifically mentions that native trees such as redwood, oak, and madrone are especially important to the community. The City provides a Master Tree List, which encourages the planting of native trees, to be used as a guide when trees are planted on private property. In addition, mitigation measure GHG-1 requires that at least 75 percent of all landscaping plants be drought-tolerant as determined by a licensed landscape architect or contractor.</p>

**MITIGATION MEASURE:** The following mitigation measure shall be implemented to reduce the potential for impacts associated with greenhouse gas emissions to a less than significant level.

**GHG-1** Prior to building permit approval, the City of Larkspur Planning Department shall require that the project applicant implement the following measures to reduce short-term and long-term emissions of GHGs associated with construction and operation of the proposed project:

Construction

- a. Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) to the extent practical.

Greenhouse Gas Emissions continued

Operation

- a. The proposed project shall be designed to include impervious surfaces for outdoor parking lot surfaces and sidewalks to the greatest extent feasible.
- b. Bicycle parking facilities and preferential parking for carpooling and alternative-fueled vehicles shall be provided in close proximity to the entrance of the Community Facility. This measure encourages use of alternative transportation by employees and helps to reduce the amount vehicle miles traveled by the project.
- c. The proposed Community Facility shall provide interior and exterior storage areas for recyclables and adequate recycling containers located in public areas.
- d. The proposed Community Facility shall ensure that low-water use landscaping (i.e., drought-tolerant plants and drip irrigation) are installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor and in conformance with MMWD Ordinance No. 414.

RESULT AFTER MITIGATION: It is anticipated that the mitigation measures listed above would adequately reduce the project's impacts to greenhouse gas emissions to a less than significant level.

Table 5 identifies the estimated GHG emissions resulting from long-term operations of the proposed project with the imposition of the mitigation identified in mitigation measure GHG-1. Due to current limitations in modeling software however, GHG emission reductions associated with the aspects of mitigation measure GHG-1, impervious surfaces, the provision of bicycle parking and preferential parking for carpooling and alternative-fueled vehicles, and the provision for interior and exterior storage areas for recyclables and adequate recycling containers cannot be quantified.

However, in addition to the GHG emissions reductions attributed to mitigation measure GHG-1, Table 5 accounts for GHG emissions reductions associated with project features described in Table 4 above, such as the increased density the project would provide for this area, specifically the projection of 9 jobs. (According to the Energy Information Administration [2001], public assembly buildings contain an average of one employee per 1,350 square feet. Applying this ratio to the proposed project equates to 9 jobs.) Also accounted for in Table 5, in addition to mitigation measure GHG-1, are GHG emission reductions associated the three bus stops on Doherty Drive within 350 feet of the project site; increased diversity of land use provided by the project which proposes a library and meeting space uses in the vicinity of two schools and adjacent to residential land uses; the improved pedestrian network resulting from the project which includes a proposed multi-use trail which would provide accessible, non-motorized connections off-site providing ready access to the community facility and adjacent properties. The proximity of the proposed project to downtown Larkspur is also accounted. Due to the fact that the specific features needed to achieve the LEED silver rating has not been identified at the drafting of this document, the GHG emissions reductions associated with the proposed LEED silver rating are not quantified.

As shown in Table 4, implementation of mitigation measure GHG-1 as well as the increased density, increased land use diversity, increased access to public transit, improved pedestrian network, and project proximity to downtown would result in a reduction of 317 metric tons of CO<sub>2</sub>e annually compared with baseline emissions estimates identified in Table 5. Accounting for mitigation measure GHG-1 and the other quantifiable project features proposed, the project would generate 758 metric tons of CO<sub>2</sub>e annually.

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**TABLE 5  
OPERATIONAL GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR (MITIGATED)**

Source	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Construction (Amortized over 30 Years)	8	0.00	0.00	8
Area	0	0.00	0.00	0
Energy	91	0.00	0.00	91
Mobile	653.5	0.03	0.00	654
Solid Waste	4.5	0.27	0.00	10
Water	2	0.02	0.00	3
<b>Total</b>	<b>759</b>	<b>0.32</b>	<b>0.00</b>	<b>766</b>
BAAQMD Threshold				1,100

Source: CalEEMod version 2011.1.1. See Appendix A of PMC, Greenhouse Gas Emissions analysis, for emission model outputs.

With implementation of mitigation measure GHG-1, the proposed project would not impede any of the applicable GHG emissions reduction measures of the City of Larkspur CAP, as demonstrated in Table 4. Also, as previously stated, the proposed project does not include residential development and would not add new population to the area. As a result, the proposed project would not conflict with Larkspur CAP population assumptions and thus population-based GHG emission projections. No inconsistencies between the project and the CAP would occur. This impact is less than significant.

**Sources: 6**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**8. HAZARDS AND HAZARDOUS MATERIALS**

Would the proposal:

- |   |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?   | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?                                 | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |

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Hazards and Hazardous Materials continued

- |  |                          |                                     |                                     |                                     |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 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?                                   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 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? | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

DISCUSSION:

- a) **Less than Significant Impact with Mitigation.** The Draft EIR, on pages 4.12-19 through 4.12-22 addresses potential impacts related to hazardous materials, primarily as related to on-site contaminated soils and groundwater from previous nursery activities and other on-site uses outside of Subarea 3. Mitigation measures were recommended on pages 4.12-22 through 4.12-26 of the Draft EIR. Subsequently, the Preliminary Development Plan did not result in any additional impacts. A remediation plan is in place which addresses the aforementioned mitigation measures and will be completed by Spring 2014 and prior to start of construction of the Rose Garden housing development. The City of Larkspur has received a letter, dated July 24, 2012, from the Department of Toxic Substances and Control indicating that the items required remediation will be completed before the parcel is transferred to the City for construction of facilities (refer to Appendix D). Therefore, the potential impact to the public and environment as it relates to hazardous materials would be less than significant once the remediation closure has been determined to be acceptable by the RWQCB, which is required in the following mitigation measure HAZMAT-1.

MITIGATION MEASURE: The following mitigation measure shall be implemented to reduce the potential for impact associated with a hazardous materials site to a less than significant level.

**HAZMAT-1.** Prior to issuance of a building permit, the applicant shall submit documentation from the Regional Water Quality Control Board (RWQCB) indicating that a closure summary report has been submitted and accepted for this site.

Hazards and Hazardous Materials continued

RESULT AFTER MITIGATION: It is anticipated that the mitigation measure above will adequately reduce the project's impacts from hazardous materials at the site to a less than significant level.

- b) **Less than Significant Impact.** Based on the proposed use of the Community Facilities Parcel Master Plan site, there is no indication that the proposed project would transport, use, or dispose of any significant quantities of hazardous substances or waste as defined by the State of California. The proposed park and library/community facility use would involve minimal handling and storage of office and commercially packaged hazardous materials in relatively small quantities. These chemicals may include but not be limited to familiar materials such as toners, correction fluid, paints, lubricants, kitchen and restroom cleaners, and other maintenance materials. Because the amount of these materials would be used in minimal amounts, the construction and operational use of the community facilities building on the site would not create a significant hazard to the public or the environment through the routine transport, use, emission or disposal of hazardous materials, nor is it expected to cause significant hazards to the public or the environment through an accidental release of hazardous materials into the environment in that the use does not involve such acts. Therefore, the potential impact to hazards and hazardous materials would be less than significant.
- c) **Less than Significant Impact.** Redwood High School property is adjacent to Subarea 3, and Hall Middle School is located to the north across Doherty Drive, within 0.25 mile of the subject site, and San Andreas High School is within 0.25 mile to the southeast. As indicated in the previous response to a) and b) above, while these schools could be affected by the release of hazardous materials, the Communities Facilities Plan Master Plan project and uses are not expected to result in the transport, use, or dispose of any significant quantities of hazardous substances or waste as defined by the State of California. Therefore, less-than-significant impacts would occur related to emissions or handling of hazardous materials in close proximity to schools.
- f) **Less than Significant Impact with Mitigation Incorporated.** Please refer to a) and b) above.
- g) **No Impact.** The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the project does not have the potential to result in a safety hazard impact for people residing or working in the project area.
- h) **No Impact.** The project is not located within the vicinity of a private airstrip. Therefore, the project does not have the potential to result in a safety hazard impact for people residing or working in the project area.
- i) **Less than Significant Impact.** The Draft EIR addressed this issue on page 4.12-21 and found the potential impact to be less than significant. The Preliminary Development Plan did not result in any additional impacts related to an adopted emergency response plan or emergency evacuation plan, nor would the Communities Facilities Parcel Master Plan project.
- j) **Less than Significant Impact.** The Draft EIR addressed this issue on page 4.12-21 and found the potential impact to be less than significant. The Preliminary Development Plan did not result in any additional impacts related to risk of loss, injury or death involving wildland fires. The subject parcel is located in downtown Larkspur, not located within an Urban Wildland Interface Zone, and in a developed area not subject to wildland fires. Therefore, the Community Facilities Parcel Master Plan project would not have less than significant impact of exposing people to risk as a result of wildland fires.

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Hazards and Hazardous Materials continued

**Sources:** 1, 2, 3, 4, 7, 8, 9, 11

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>9. HYDROLOGY AND WATER QUALITY</b>				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Hydrology and Water Quality continued

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

DISCUSSION:

- a) **Less than Significant Impact.** Potential impacts related to surface water quality and groundwater quality were addressed on pages 4.4-15 through 4.4-20 of the Draft EIR and pages 3-24 of the Final EIR. Mitigation measures were identified on page 4.4-21 of the Draft EIR. The Preliminary Development Plan did not result in any additional impacts. The Community Facilities Parcel Master Plan would be designed to National Pollutant Discharge Elimination System (NPDES) Phased II standards. Surface runoff associated with the proposed project would be collected and conveyed through a stormwater collection system consisting of drains and a pipe that would connect to the City's existing storm drainage system, which discharges stormwater to San Francisco Bay. All run-off would be managed on-site. Additionally, the applicant would be required to implement performance standards set forth under the Marin County Stormwater Pollution Prevention Program (MCSTOPPP) Action Plan. MCSTOPPP agencies inspect businesses for compliance with environmental laws and regulations. The MCSTOPPP program establishes performance standards for new development, redevelopment, and construction site controls. The performance standards include water quality protection to the maximum extent practicable. The storm drains would be required to meet the City requirements for treatment of urban run-off. Because the stormwater drainage system would include filtration equipment that complies with the City's urban run-off requirements, the project would include a storm drain system that complies with the City's existing storm drain system, and violation of water quality standards and waste discharge requirements is not anticipated. Implementation of the BMPs, MCSTOPPP performance standards, and City standard conditions would minimize the potential for construction-related surface water pollution and would ensure that water quality in the nearby Corte Madera Creek would not be compromised by erosion and sedimentation during construction. Therefore, the Community Facilities Parcel Master Plan project would not result in any additional water quality standards impacts and this impact would be less than significant.
- b) **Less than Significant Impact.** Refer to a) above which also addresses groundwater quality. Development of the proposed library and community facilities building and park would not result in the substantial depletion of groundwater resources. No groundwater extraction is proposed with project development, as the water supply for the proposed building would be supplied by the Marin Municipal Water District (MMWD) and groundwater supplies would not be required for the project. Therefore, the proposed project would not effect groundwater supplies.
- c) **Less than Significant Impact.** Increased runoff from site development was addressed on pages 4.4-15 and 4.4-16 of the Draft EIR and impacts were found to be less than significant and the Preliminary Development Plan did not result in any additional impacts. The site would be designed to reduce the outflow of existing watershed areas to less than pre-existing condition and is not altering a course of a stream or river. The drainage system would be required to be designed and improved in accordance

Hydrology and Water Quality continued

with the objectives of the Marin County Clean Water Program and MCSTOPPP. Additionally the project would be required as a condition of approval to comply with the City's Grading Ordinance which prohibits surface grading between October 15 and April 15, unless an erosion control plan is prepared by the applicant and approved by the City Engineer. The decrease in the amount of runoff and sediment generated from the site would be a less than significant impact.

- d) **Less than Significant Impact.** Potential hazards from tidal flooding or stormwater flooding was addressed on pages 4.4-14 and 4.4-15 of the Draft EIR and pages 3-24 of the Final EIR, and the Preliminary Development Plan did not result in any additional impacts. Refer to response c) above which addresses this topic. Therefore, impacts associated with alteration of existing drainage patterns would be less than significant.
- e) **Less than Significant Impact.** Refer to responses c) and d) above. The project would utilize low impact approach, bio-filtration and bio-remediation. Therefore, impacts associated with runoff water exceeding the capacity is less than significant.
- f) **Less than Significant Impact.** Refer to response a) above. The proposed project would construct a new public facilities building for library and community use. Development projects can degrade water quality through temporary construction impacts or over the long term through operations. The proposed development is not industrial in nature and there is no indication that the proposed project would degrade Larkspur's water quality. Conditions of project approval would be required to minimize the impacts to the existing hydrology and drainage of the property. Water quality degradation associated with long term operations are less than significant.
- g) **No Impact.** While the a portion of the Rose Garden Housing Development is within 100-year floodplain and was addressed on page 4.4-14 of the Draft EIR, and the Preliminary Development Plan did not result in any additional impacts, the Community Facilities Master Plan project does not involve the construction of housing units, nor is the site within a 100-year flood hazard area. Therefore, the project would not result in impacts to flooding.
- h) **No Impact.** Refer to response g) above. The proposed library/community facilities structure would not impede or redirect 100-year flood flows as the site is located adjacent to the 100-year floodplain. Therefore, no impacts related to flooding would occur as a result of project development.
- i) **No Impact.** Refer to response g) above. The project is not located near a levee or dam and is not within a flood zone. Therefore, the project would not expose people to risk as a result of flooding and no impacts related to flooding or dam failure would occur with project development.
- j) **Less than Significant Impact.** The project site would not be exposed to hazards associated with a seiche, tsunami, or mudflow. Tsunamis, which are large ocean waves generated by seismic events are rare, and if generated would be expected to inundate lower-lying coastal areas east of the project site. Seiches are seismically-induced waves that occur in an enclosed body of water such as a lake, and would not affect the project site. Additionally, areas in the vicinity of the subject site are flat and there is no risk of mudflows in these areas. Therefore, this is a less than significant impact.

**Sources:** 1, 2, 3, 9, 11

**INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>10. LAND USE AND PLANNING</b>				
Would the proposal:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>

**DISCUSSION:**

- a) **Less than Significant Impact.** Land use impacts associated with the CLASP were addressed on pages 4.1-14 and 4.1-15 of the Draft EIR and page 3-22 of the Final EIR. No significant impacts were identified and no mitigation measures were found necessary. This Master Plan project does not change this impact. Therefore, the project will not physically divide an established community and have no impact related to such.
  
- b) **Less than Significant Impact.** The parcel is designated for Residential Parkland/Public Facilities in the General Plan, and is zoned Planned Development (PD). The proposed project would not change the General Plan land use designation or zoning. Because the proposed project would be located on a site designated in the City's General Plan for parkland/public facilities and a park with a library/community facilities building on the site are permitted within the PD zoning. The Community Facilities Parcel Master Plan project outlines the design and development standards for this site. The future park and library/community facility building associated with this project would be constructed and implemented to be consistent with the applicable development standards of the Master Plan. Therefore, the project would not conflict with applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.
  
- c) **No Impact.** There would be no conflict with a habitat conservation plan or natural community conservation plan, since no such plans have been developed on or adjacent to the site. Therefore, no impact would occur with project development as it relates to a habitat conservation plan or natural community conservation plan.

**Sources:** 2, 3, 9, 11

**INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**11. MINERAL RESOURCES**

Would the proposal result in:

- |   |                          |                          |                          |          |
|---|--------------------------|--------------------------|--------------------------|----------|
| 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?                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |

DISCUSSION:

- a) **No impact.** No known mineral resources exist at the project site. Therefore, there would be no environmental impact associated with mineral resources as a result of this project.
- b) **No impact.** The Larkspur General Plan does not discuss any locally-important mineral resource recovery site in the vicinity of the proposed project. Therefore, there would be no environmental impact associated with locally important mineral resources as a result of this project.

**Sources:** 2, 3, 9, 11

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**12. NOISE**

Would the proposal 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? | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> | <input type="checkbox"/> |

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Noise continued

- |   |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 |

DISCUSSION:

The Master Plan does not propose active outdoor recreation and/or sports facilities. The Master Plan will require site amenities or amenities and programs which will compliment adjacent residential uses particularly nearby senior housing.

**a,b,c) Less than Significant Unless Mitigation Incorporated.** Potential noise impacts associated with development under the CLASP were addressed on page 4.8-12 through 4.8-17 of the Draft EIR. Mitigation measures were addressed on pages 4.8-17 through 4.8-18 of the Draft EIR. The Preliminary Development did not result in any additional impacts. The mitigation measures listed on pages 4.8-17 and 4.8-18 of the Draft EIR continue to apply to the development of the Community Facilities Parcel Master Plan, in addition to the following:

MITIGATION MEASURES: The following mitigation measures shall be implemented to reduce the potential for impacts associated with temporary ambient noise levels to a less than significant level.

- NOISE-1** Minimize amount and duration of noise intrusion during construction and take measures to correct problems. The City shall take the following measures to minimize noise intrusion during construction in the Specific Plan area:
- a. Limit construction to the hours of 7:00 a.m.; and 6:00 p.m. on weekdays, and 9 a.m. to 5 p.m. on Saturdays, Sundays or legal holidays in accordance with Chapter 9.54 of the Larkspur Municipal Code.
  - b. Ensure that all equipment driven by internal combustion engines are equipped with mufflers that are in good condition and appropriate for the equipment.
  - c. Use “quiet” models of air compressors and other stationary noise sources where technology exists.
  - d. Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a remediation or construction project area.

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Noise continued

- e. Prohibit unnecessary idling of internal combustion engines.

**NOISE-2** Minimize amount and duration of noise to nearby residences. Limit daytime and nighttime outdoor events and activities associated with the Community Facility Parcel to the regulations of the Noise Ordinance of the City of Larkspur Municipal Code, Chapter 9.54. The City shall manage all of the outdoor events and activities to assure compliance with the noise regulations.

RESULT AFTER MITIGATION: Upon implementation of the above mitigation measures, the potential project impacts regarding exposure of persons to or generation of noise levels in excess of standards established would be reduced to less than significant level.

- a) **No impact.** The project is not located within an airport land use plan, within two miles of an airport, or within the vicinity of a private airstrip. The nearest airport is the Smith Ranch Road airport approximately 9 miles northeast of the project site. Due to the distance of the nearest airport, the project site would not be subject to high levels of aircraft noise. Therefore, there is no environmental impact associated with an airport land use plan or proximity to an airport.

**No impact.** The project is not located within the vicinity of a private airstrip. The nearest airport is the Smith Ranch Road airport approximately 9 miles northeast of the project site. Due to the distance of the nearest airport, the project site would not be subject to high levels of aircraft noise. Therefore, there is no environmental impact associated with a private airstrip.

**Sources:** 1, 2, 3, 9, 10, 11

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**13. POPULATION AND HOUSING**

Would the proposal:

- |   |                          |                          |                          |          |
|---|--------------------------|--------------------------|--------------------------|----------|
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> |

DISCUSSION:

- a) **No Impact.** Development of the Community Facilities Parcel Master Plan project would not result in an

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Population and Housing

increase in the population as it does not involve the construction of any new housing or the extension of roads or other infrastructure, and relocates an existing library in City Hall to the new location at the Community Facilities Parcel. Therefore, the project would not induce substantial population growth in the project area, either directly or indirectly and there is no impact related to population growth as a result of this project.

b) **No Impact.** There are no existing residential dwellings on the subject site. Therefore, the proposed project would not displace a substantial number of existing housing units and there is no impact related to this is as a result of this project.

c) **No Impact.** See the discussion of b) above.

**Source:** 2, 3, 4, 9,11

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**14. PUBLIC SERVICES**

a) 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:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Public Services continued

DISCUSSION:

Potential impacts related to public services were addressed on pages 4.9-6 through 4.9-13 of the Draft EIR and page 3-31 of the Final EIR. No significant impacts were identified and no mitigation measures were required. The Preliminary Development Plan did not result in any additional impacts.

- a) **Less than Significant Impact.** Fire protection: The proposed project would not substantially result in an increase in population growth which would otherwise result in an increase in the demand for emergency medical services and police services and an increase in traffic-related emergencies. In accordance with standard City practices, the Fire Department would review project plans before permits are issued to ensure compliance with all applicable fire and building code standards and to ensure that adequate fire and life safety measures are incorporated into the project in compliance with all applicable State and City fire safety regulations. The Community Facilities Parcel Master Plan project actually improves fire protection because with more road access in the CLASP Subarea 3, there would be a fire hydrant for every 300 feet, and any building constructed on this site would be fire sprinklered in accordance with current fire and building code regulations. Because the proposed project would not result in the need for new or expanded public services, the project's potential impact on fire protection services would be less than significant.

**Less than Significant Impact.** Police Protection: The project site is located across the street from the Twin Cities Police Department. As the Community Facilities Parcel Master Plan would not add persons to the site, the proposed project would not result in the need for new or expanded public services, the project's potential impact on police protection services would be less than significant.

**No Impact.** Schools: Relocation and expansion of the library will provide resources and study areas to support local education and school programs. The proposed project would not generate any demand for increased school services as no housing is proposed. Therefore, no impact to schools would occur with project development.

**No Impact.** Parks: The project will provide passive park facilities as well as community gathering spaces. The CLASP calls for a public park in Specific Plan Subarea 3 for which has been included in the Community Facilities Parcel Master Plan, and no housing is proposed in the Master. Therefore, there would not be an increased demand for park facilities and no impact to parks would occur with project development.

**No Impact.** Other public facilities: Development of the Community Facilities Master Plan would provide a library/community facility and park space to the City of Larkspur in accordance with the CLASP Subarea 3. As discussed in the Traffic and Circulation section, the proposed project would not result in an increase in traffic and would not increase the need for maintenance of local roadways. In fact, the project provides improvements to the sidewalks and bicycle paths fronting the project. In addition, as described in the above discussion, no other significant impacts to public services are anticipated as a result of the proposed project. Therefore, no impact to other public facilities would occur with project development.

**Sources:** 2, 3, 4, 8, 9, 11

**INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>15. RECREATION</b>				
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>

**DISCUSSION:**

- a) **No Impact.** The Community Facilities Master Plan project adds a library/community facility and park to the area which would reduce the demand usage on nearby Piper Park. Additionally, the project does not add housing rather it is providing a library/community facility and park space for the Rose Garden Housing Development. Therefore, no impact would occur on recreational resources with project development.
- b) **No Impact.** The proposed Master Plan provides passive recreation space and offices to support recreation facilities and programs. Therefore, there would be no adverse physical effect on the environment from the construction or expansion of recreational facilities on-site.

**Sources:** 2, 3, 9,11

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>16. TRANSPORTATION/TRAFFIC</b>				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<b>X</b>	<input type="checkbox"/>

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Transportation/Traffic continued

- |   |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| b) Conflict with applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |
| e) Result in inadequate emergency access?   | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?  | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b>                 | <input type="checkbox"/> |

DISCUSSION:

- a) **Less than Significant Impact.** The project is consistent with the City of Larkspur’s Circulation Element of the General Plan, the City’s Bicycle and Pedestrian Master Plan, and with the various objectives, policies and standards of the Central Larkspur Area Specific Plan. The City retained a traffic engineer, Parisi and Associates, to prepare a traffic analysis of the project (refer to Appendix C). The analysis indicated that a 24,000 square foot project would be estimated to generate a total of 20 vehicle trips during the weekday a.m. peak hour, 63 vehicle trips during the p.m. peak hour, and 506 vehicle trips over the course of the day. This would result in 4 additional a.m. peak hour vehicle trips and 46 additional p.m. peak hour vehicle trips compared to the 10,000 square foot facility approved as part of the CLASP. It would result in 196 additional weekday vehicle trips over the course of a weekday. The additional project-related traffic would retain the study intersections at acceptable service levels. The inclusion of a traffic signal at Doherty Drive/Larkspur Plaza will improve the intersection’s operations to level of service “A” conditions. Although the intersection at Piper Park entrance and Doherty Drive would change from a level of service “B” to level of service “C”, this remains consistent with the City of Larkspur Circulation Element, Policy D. Its traffic generation would not result in any study intersections operating at less than acceptable service levels. The project would be adequately served by existing and planned pedestrian, bicycle, and transit systems. Therefore, development of the Community Facilities Parcel Master Plan would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system and this is a less than significant impact.
- b) **No Impact.** The project’s study area roadways are not subject to Marin County’s Congestion Management Program. Furthermore, the project’s traffic would not result in any study intersection operating at or below unacceptable service level standards. Therefore, the project would not cause an

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Transportation/Traffic continued

exceedance, either individually or cumulatively, of a level of service standard established by the Marin County Congestion Management Agency, and would result in no impact.

- c) **No Impact.** No uses or structures are proposed that could affect air traffic patterns, nor is an airport located in proximity to the project site. Therefore, the proposed project would not result in substantial safety risks related to air traffic and would have no impact.
- d) **Less than Significant Impact.** The project is consistent with the design features per the CLASP. The traffic, parking, pedestrian and bicycle features enable smooth and standard access and circulation. The project would not involve hazards to design features, such as sharp curves or dangerous intersections, or create hazardous conditions by introducing incompatible uses. Final location and design of all driveways entrances and exits will be reviewed and approved by the City Engineer. Therefore, there would be no substantial increase in traffic hazards as a result of the proposed design of the project or incompatible uses and this impact would be less than significant.
- e) **Less than Significant Impact.** The project provides adequate emergency access through its roadway, driveway, and parking lot design features. The proposed project would not have a substantial effect on emergency access to the project area. Two alternative site layouts are proposed for the Community Center: the “north option” and the “southwest option.” Both options would have similar circulation patterns, with on-site parking accessed via driveways with Rose Lane and Orchid Lane. The project site will be served from Rose Lane, which will extend opposite Larkspur Plaza Drive. Fire suppression and emergency response would continue to be provided by the City of Larkspur Fire Department from the Greenbrae Fire Station (Station 16). The Larkspur Fire Department has reviewed the plans and indicated that the project could be adequately accessed for emergency services. Therefore, the project would have a less than significant impact related to emergency access.
- f) **Less than Significant Impact.** The project is consistent with the City of Larkspur’s Circulation Element of the General Plan, the City’s Bicycle and Pedestrian Master Plan, and with the various objectives, policies and standards of the CLASP. Its traffic generation would not result in any study intersections operating at less than acceptable service levels. The project would be adequately served by existing and planned pedestrian, bicycle and transit systems and would not decrease the performance or safety of such facilities and has been determined to be a less than significant impact.

**Sources:** 3, 4, 9, 11, 12

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**17. UTILITIES AND SERVICE SYSTEMS**

Would the project:

- |   |                          |                          |          |                          |
|---|--------------------------|--------------------------|----------|--------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?               | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing | <input type="checkbox"/> | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> |

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
ROSE GARDEN COMMUNITY FACILITIES PARCEL MASTER PLAN

Utilities and Service Systems continued

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?                                     | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?  | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project' solid waste disposal needs?   | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/> | <input type="checkbox"/> | X | <input type="checkbox"/> |

DISCUSSION:

- a) **Less than Significant Impact.** Water, wastewater, solid waste removal, and storm water impacts were addressed on pages 4.9-9 through 4.9-13 of the Draft EIR, and no significant impacts requiring mitigation were identified. The Preliminary Development Plan did not result in any additional impacts. Wastewater generated on-site would be conveyed to the Central Marin Sanitation Agency (CMSA) located on Anderson Drive in San Rafael that provides wastewater treatment and disposal for Larkspur via the Ross Valley Sanitary District No. 1 sewer system. The amount of wastewater that is anticipated by the project is incremental and would not be expected to exceed the wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. No expansion in wastewater treatment facilities is expected to be necessary as a result of the proposed Community Facilities Parcel Master Plan project. The anticipated impact is less than significant for exceeding wastewater treatment requirements.
- b) **Less than Significant Impact.** Refer to response a) above. No new construction of water or wastewater treatment facilities or expansion of existing facilities is expected to be necessary as a result of the proposed Community Facilities Parcel Master Plan project. The anticipated impact is less than significant for new construction of water or wastewater treatment facilities or expansion requirements.
- c) **Less than Significant Impact.** Refer to response a) above. To the extent that the site is not developed in excess of the previously approved project, including approximately 75% is permeable, than the existing and proposed storm water facilities are adequate. As a result, this would be a less

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Utilities and Service Systems continued

than significant impact to storm water drainage facilities.

- d) **Less than Significant Impact.** Refer to response a) above. New and expanded entitlements would be required per Marin Municipal Water (MMWD). MMWD has established new standards since the adoption of the Draft EIR and the site will be required to comply with the new standards for water conservation, landscaping, and building use. Because the subject site is presently vacant, Marin Municipal Water District (MMWD) must indicate the availability of water and any associated requirements (such as pipe size). Once the site plan and building plans are submitted for Design Review, they would be routed to MMWD who would specify associated requirements which would become conditions of project approval. Additionally, MMWD will have to issue a Maximum Applied Water Allowance (MAWA). As a result, water supply availability would be a less than significant impact.
- e) **Less than Significant Impact.** Refer to response a) above. The proposed project would generate a small amount of waste that would not be expected to exceed the wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. The existing facilities would be used for the proposed project, and no additional wastewater treatment facilities would need to be constructed to accommodate the proposed project. Therefore, no impact to wastewater services would occur with development of the Communities Facility Parcel Master Plan project.
- f) **Less than Significant Impact.** The proposed project would generate a small amount of solid waste. Furthermore, the proposed waste generated by the proposed project would not be expected to exceed the capacity of the existing landfill, The Redwood Sanitary Landfill, a Class III facility, which is anticipated to remain in operation until 2039. At that point, if space still exists at the landfill, they would continue to contract with disposal companies. Therefore, the Communities Facility Parcel Master Plan project's impact on solid waste disposal services would be less than significant.
- g) **Less than Significant Impact.** The proposed project would comply with all federal, state, and local statues and regulations related to solid waste. As described in response to f) above, the project's solid waste would be disposed in a permitted Class III facility, Redwood Sanitary Landfill. Therefore, the Communities Facility Parcel Master Plan project's impact on solid waste disposal would be less than significant.

**Sources:** 2, 3, 9, 11

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

**18. MANDATORY FINDINGS OF SIGNIFICANCE**

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 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 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

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Mandatory Findings of Significance continued

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?

- |  |                          |          |                          |                          |
|--|--------------------------|----------|--------------------------|--------------------------|
| 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)? | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <b>X</b> | <input type="checkbox"/> | <input type="checkbox"/> |

DISCUSSION:

- a) **Less than Significant Impact.** Based on background research and site visits, with the implementation of proposed project with mitigation, the project does not have the potential to 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.
- b) **Less than Significant with Mitigation.** Development of the proposed project would not result in significant cumulative environmental impacts. The proposed project could contribute to environmental effects in the areas of aesthetics, air quality, biological resources, greenhouse gas emissions, hazardous materials, and noise with new development. Mitigation measures incorporated throughout the Initial Study, however, mitigate any potential contribution to cumulative impacts associated with these environmental issues. Therefore, the proposed project does not have impacts that are individually limited, but cumulatively considerable.
- c) **Less than Significant with Mitigation.** The project's identified impacts with mitigation would not cause substantial adverse effects on human beings, either directly or indirectly with recommended mitigation measures.

**Sources:** 2, 4, 5

**19. SIGNIFICANT UNAVOIDABLE IMPACTS**

No additional findings are required at this time because no new significant, unavoidable impacts have been identified.

### CHAPTER III - REFERENCES

The following is a list of references used in this Initial Study. References to the numbers of the reports are provided at the end of each topic listed under "Source".

1. Amy Skewes-Cox, AICP, September 2007. Initial Study/Mitigated Negative Declaration for the CLASP Subarea 3 (Niven Property) Preliminary Development Plan
2. City of Larkspur, 2006. Central Larkspur Specific Plan, September 2006 (Resolution No. 48/06).
3. City of Larkspur, 2001. Chapter 12.16 of the City's Zoning Code (Trees, Including Heritage Trees).
4. EDAW, 2003. Revised Draft Environmental Impact Report – Central Larkspur Specific Plan, Volumes 1 and 2, November 14, 2003.
5. EDAW, 2004. Final Environmental Impact Report – Central Larkspur Specific Plan, November 2004.
6. PMC, 2012. Rose Garden Community Facility Project Greenhouse Gas Emissions, December 2012.
7. California Department of Toxic Substances Control letter, July 24, 2012
8. Bob Sinnott, Fire Department, phone conversation on January 16, 2013.
9. Group 4 Architecture, 2013. Community Facilities Parcel Master Plan Site Plan.
10. City of Larkspur Municipal Code, Chapter 9.54, Noise Control Regulations
11. City of Larkspur, 1990, General Plan
12. Parisi Transportation Consulting, 2013, Traffic Analysis, Rose Garden Community Facilities Project, February 11, 2013



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**APPENDICES**

## Rose Garden Community Facilities Parcel Master Plan (File: 12-47)

### Mitigation Measures and Monitoring Program

#### **Mitigation Measure AQ-1:**

Prior to the issuance of a Building or Grading Permit, whichever comes first, the applicant shall submit a dust and debris control plan for the review and approval of the City Engineer. The dust and debris control plan shall include the following measures for all phases of construction:

- a. Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences should be kept damp at all times.
- b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- c. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- d. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- e. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent road surface.
- f. Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas that are inactive for 10 days or more).
- g. Enclose, cover, water twice daily, or apply (nontoxic) soil binders to exposed stockpiles.
- h. Limit traffic speeds on any unpaved roads to 15 mph.
- i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- j. Replant vegetation in disturbed areas as quickly as possible.
- k. Install wheel washers for all existing trucks, or wash off the tires or tracks of all trucks and equipment leaving the construction site.
- l. Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- m. Designate an air quality coordinator for the project. Prominently post a phone number for this person on the job site, and distribute same to all nearby residents and businesses. The coordinator will respond to and remedy any complaints about dust, exhaust, or other air quality concerns. A log shall be kept of all complaints and how and when the problem was remedied.

**Monitoring:** The City Planning staff and City Engineer shall be responsible for ensuring that Mitigation Measure AQ-1 is implemented by requiring that the measures are included on the Building Plan set. The Public Works/Building Inspectors shall ensure the measures are carried out through inspection.

#### **Mitigation Measure GHG-1**

Prior to building permit approval, the City of Larkspur Planning Department shall require that the project applicant implement the following measures to reduce short-term and long-term emissions of GHGs associated with construction and operation of the proposed project:

##### **Construction**

- a. Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) to the extent practical.

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Operation

- a. The proposed project shall be designed to include impervious surfaces for outdoor parking lot surfaces and sidewalks to the greatest extent feasible.
- b. Bicycle parking facilities and preferential parking for carpooling and alternative-fueled vehicles shall be provided in close proximity to the entrance of the Community Facility. This measure encourages use of alternative transportation by employees and helps to reduce the amount vehicle miles traveled by the project.
- c. The proposed Community Facility shall provide interior and exterior storage areas for recyclables and adequate recycling containers located in public areas.
- d. The proposed Community Facility shall ensure that low-water use landscaping (i.e., drought-tolerant plants and drip irrigation) are installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor and in conformance with MMWD Ordinance No. 414.

Monitoring: The City Planning staff and City Engineer shall be responsible for ensuring that Mitigation Measure GHG-1 is implemented by requiring that the measures are included on the Building Plan set. The Public Works/Building Inspectors shall ensure the measures are carried out through inspection.

**Mitigation Measure HAZMAT-1.**

Prior to issuance of a building permit, the applicant shall submit documentation from the Regional Water Quality Control Board (RWQCB) indicating that a closure summary report has been submitted and accepted for this site.

Monitoring: The City Planning and Public Works staff shall be responsible for ensuring that Mitigation Measure HAZMAT-1 is implemented by requiring that the necessary documentation is submitted prior to issuance of a grading or building permit.

**Mitigation Measure NOISE-1**

Minimize amount and duration of noise intrusion during construction and take measures to correct problems. The City shall take the following measures to minimize noise intrusion during construction in the Specific Plan area:

- a. Limit construction to the hours of 7:00 a.m.; and 6:00 p.m. on weekdays, and 9 a.m. to 5 p.m. on Saturdays, Sundays or legal holidays in accordance with Chapter 9.54 of the Larkspur Municipal Code.
- b. Ensure that all equipment driven by internal combustion engines are equipped with mufflers that are in good condition and appropriate for the equipment.
- c. Use “quiet” models of air compressors and other stationary noise sources where technology exists.
- d. Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a remediation or construction project area.
- e. Prohibit unnecessary idling of internal combustion engines.

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**Mitigation Measure NOISE 2**

Minimize amount and duration of noise to nearby residences. Limit daytime and nighttime outdoor events and activities associated with the Community Facility Parcel to the regulations of the Noise Ordinance of the City of Larkspur Municipal Code, Chapter 9.54. The City shall manage all of the outdoor events and activities to assure compliance with the noise regulations.

Monitoring: The City Planning staff shall be responsible for ensuring that NOISE-1 and NOISE-2 are implemented by including the mitigation measures as conditions of project approval and requiring inclusion of the measures on the Building Permit plans. Additionally, Planning and Building Department staff and Twin Cities Police would be responsible for code enforcement action it was determined that construction activities were being conducted outside of the permitted hours outlined in the mitigation measure, and outdoor events and activities do not comply with the City's Noise Ordinance.

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**ROSE GARDEN COMMUNITY FACILITY  
PROJECT**  
GREENHOUSE GAS EMISSIONS

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**PREPARED BY**

**PMC**

**DECEMBER 2012**



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Appendix A: CalEEMod Output Files



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# **1.0 INTRODUCTION**

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This report documents the results of a greenhouse gas (GHG) impact analysis completed for the proposed Rose Garden Community Facility project (project). The purpose of this impact analysis is to identify potential environmental impacts associated with GHG emissions as required by the California Environmental Quality Act (CEQA). The GHG impact analysis was prepared with consideration of the GHG reduction actions and programs contained within the City of Larkspur Climate Action Plan (CAP) (City of Larkspur 2010).

### 1.1 PROJECT LOCATION

The City of Larkspur is located in Marin County, California, approximately 3 miles south of San Rafael and 10 miles north of San Francisco. The proposed project site contains 2.84 acres, is located in central Larkspur near downtown (see **Figure 1**) and is bounded by an existing supermarket to the west, Doherty Drive to the north with Hall Middle School beyond, and a partially constructed residential neighborhood to the east and to the south. This partially constructed residential neighborhood will eventually build out to consist of 85 residential units and is a portion of the overall Rose Garden Development.

The proposed Rose Garden Community Facility project is also a part of the overall Rose Garden Development area. Additionally, the project site is encapsulated by the Central Larkspur Area Specific Plan (Subarea 3). The Central Larkspur Area Specific Plan (CLASP) was adopted in 2006 by Resolution 48/06 and proposes a mix of residential, retail, recreation, cultural, and civic uses in three subareas to contribute to the vitality of the downtown area of the City. Subarea 3 is the former Niven Nursery site, for which the overall Rose Garden Development was approved.

### 1.2 PROJECT DESCRIPTION

The project proposes to construct a 24,000 square foot community facility building that includes a library (12,000 square feet), meeting and program spaces (12,000 square feet), and 75 parking spaces. The project would also provide open space with multi-use trail amenities on the remainder of the 2.84-acre site. The 2006 CLASP states that Subarea 3, which encapsulates the project site, shall be developed exclusively with housing and a community facility such as the one proposed under this project.

The project further proposes to achieve a minimum LEED (Leadership in Energy and Environmental Design) silver rating. LEED is a voluntary, consensus-based, market-driven program that provides third-party verification of environmentally sustainable buildings. The goal of the LEED performance credit system is to allocate points "based on the potential environmental impacts and human benefits of each credit." To weight these impacts, the U.S. Green Building Council (USGBC) relies upon the environmental impact categories of the United States Environmental Protection Agency's Tools for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI) as a basis for weighting each credit. Points are distributed across major credit categories such as Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, and Indoor Environmental Quality. Basic prerequisites for participating in LEED include compliance with all environmental laws and regulations, occupancy scenarios, building permanence and pre-rating completion, site boundaries and area-to-site ratios, and obligatory five-year sharing of whole building energy and water use data from the start of occupancy (for new construction) or date of certification (for existing buildings).







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## **2.0 CLIMATE CHANGE**

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### 2.1 CLIMATE CHANGE SETTING

Since the early 1990s, scientific consensus holds that the world's population is releasing GHG emissions faster than the earth's natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, energy use, land-use changes, and other human activities. This release of gases, such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

While often used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period of time that can be caused by both natural factors and human activities. Global warming, on the other hand, is an average increase in the temperature of the atmosphere caused by increased GHG emissions. The use of the term climate change is becoming more prevalent because it encompasses all changes to the climate, not just temperature.

To fully understand global climate change, it is important to recognize the naturally occurring greenhouse effect and to define the GHGs that contribute to this phenomenon. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

For most nonindustrial development projects, motor vehicles make up the bulk of GHG emissions produced on an operational basis. The primary GHGs emitted by motor vehicles include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and hydrofluorocarbons (CARB 2004). **Table 1** provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

## 2.0 CLIMATE CHANGE

**TABLE 1  
GREENHOUSE GASES**

Greenhouse Gas	Description
Carbon Dioxide (CO <sub>2</sub> )	CO <sub>2</sub> is a colorless, odorless gas. CO <sub>2</sub> is emitted in a number of ways, both naturally and through human activities. The largest source of CO <sub>2</sub> emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO <sub>2</sub> emissions. The atmospheric lifetime of CO <sub>2</sub> is variable because it is so readily exchanged in the atmosphere. <sup>1</sup>
Methane (CH <sub>4</sub> )	CH <sub>4</sub> is a colorless, odorless gas that is not flammable under most circumstances. CH <sub>4</sub> is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH <sub>4</sub> to the atmosphere. Natural sources of CH <sub>4</sub> include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH <sub>4</sub> is about 12 years. <sup>2</sup>
Nitrous oxide (N <sub>2</sub> O)	N <sub>2</sub> O is a clear, colorless gas with a slightly sweet odor. Primary human-related sources of N <sub>2</sub> O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N <sub>2</sub> O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N <sub>2</sub> O is approximately 120 years. <sup>3</sup>
Hydrofluorocarbons (HFCs)	HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years). <sup>4</sup>
Perfluorocarbons (PFCs)	PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF <sub>4</sub> ), perfluoroethane (C <sub>2</sub> F <sub>6</sub> ), perfluoropropane (C <sub>3</sub> F <sub>8</sub> ), perfluorobutane (C <sub>4</sub> F <sub>10</sub> ), perfluorocyclobutane (C <sub>4</sub> F <sub>8</sub> ), perfluoropentane (C <sub>5</sub> F <sub>12</sub> ), and perfluorohexane (C <sub>6</sub> F <sub>14</sub> ). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF <sub>4</sub> and C <sub>2</sub> F <sub>6</sub> as byproducts. The estimated atmospheric lifetimes for CF <sub>4</sub> and C <sub>2</sub> F <sub>6</sub> are 50,000 and 10,000 years, respectively. <sup>4,5</sup>
Sulfur Hexafluoride (SF <sub>6</sub> )	SF <sub>6</sub> is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF <sub>6</sub> is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF <sub>6</sub> produced worldwide. Significant leaks occur from aging equipment and during equipment maintenance and servicing. SF <sub>6</sub> has an atmospheric life of 3,200 years. <sup>4</sup>

Sources: <sup>1</sup>EPA 2011a, <sup>2</sup>EPA 2011b, <sup>3</sup>EPA 2010a, <sup>4</sup>EPA 2010b, <sup>5</sup>EFCTC 2003

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Gases with high global warming potential, such as HFCs, PFCs, and SF<sub>6</sub>, are the most heat-absorbent. CH<sub>4</sub> traps over 21 times more heat per molecule than CO<sub>2</sub>, and N<sub>2</sub>O absorbs 310 times more heat per molecule than CO<sub>2</sub>. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO<sub>2</sub>e), which weights each gas by its global warming potential (GWP). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted. **Table 2** shows the GWPs for different greenhouse gases for a 100-year time horizon.

**TABLE 2**  
**GLOBAL WARMING POTENTIAL FOR GREENHOUSE GASES**

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	21
Nitrous oxide (N <sub>2</sub> O)	310
Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs)	6,500
Sulfur Hexafluoride (SF <sub>6</sub> )	23,900

Source: California Climate Action Registry 2009

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California is a significant emitter of CO<sub>2</sub> in the world and produced 477 million gross metric tons of CO<sub>2</sub>e in 2008 (CARB 2010a). Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2008, accounting for 36.4 percent of total GHG emissions in the state (CARB 2010a). This category was followed by the electric power sector (including both in-state and out-of-state sources) (24.3 percent) and the industrial sector (19.3 percent) (CARB 2010a).

### EFFECTS OF GLOBAL CLIMATE CHANGE

California can draw on substantial scientific research conducted by experts at various state universities and research institutions. With more than a decade of concerted research, scientists have established that the early signs of climate change are already evident in the state—as shown, for example, in increased average temperatures, changes in temperature extremes, reduced snowpack in the Sierra Nevada, sea level rise, and ecological shifts.

Many of these changes are accelerating—locally, across the country, and around the globe. As a result of emissions already released into the atmosphere, California is anticipated to face intensifying climate changes in coming decades (CNRA 2009). Generally, research indicates that California should expect overall hotter and drier conditions with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures, and accelerating sea level rise. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing (CNRA 2009). According to the 2009 California Climate Adaptation Strategy, the impacts of climate change in California have the potential to include, but are not limited to, the areas discussed in **Table 3**.

## 2.0 CLIMATE CHANGE

**TABLE 3  
POTENTIAL STATEWIDE IMPACTS FROM CLIMATE CHANGE**

Potential Statewide Impact	Description
Public Health	Climate change is expected to lead to an increase in ambient (i.e., outdoor) average air temperature, with greater increases expected in summer than in winter. The potential health impacts from sustained and significantly higher than average temperatures include heat stroke, heat exhaustion, and the exacerbation of existing medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Numerous studies have indicated that there are generally more deaths during periods of sustained higher temperatures. The elderly, infants, and socially isolated people with pre-existing illnesses who lack access to air conditioning or cooling spaces are among the most at risk during heat waves.
Floods and Droughts	<p>The impacts of flooding may include population displacement, severe psychosocial stress with resulting mental health impacts, exacerbation of pre-existing chronic conditions, and infectious disease. Additionally, impacts can range from a loss of personal belongings, and the emotional ramifications from such loss, to direct injury and/or mortality. Drinking water contamination outbreaks in the U.S. are associated with extreme precipitation events. Floodwaters may contain household, industrial, and agricultural chemicals as well as sewage and animal waste. Flooding and heavy rainfall events can wash pathogens and chemicals from contaminated soils, farms, and streets into drinking water supplies. Flooding may also overload storm and wastewater systems, or flood septic systems, also leading to possible contamination of drinking water systems.</p> <p>Drought impacts develop more slowly over time. Risks to public health from drought include impacts on water supply and quality, food production (both agricultural and commercial fisheries), and risks of waterborne illness. As surface water supplies are reduced as a result of drought conditions, the amount of groundwater pumping is expected to increase to make up for the water shortfall. The increase in groundwater pumping has the potential to lower the water tables and cause land subsidence. Communities that utilize well water will be adversely affected by drops in water tables or through changes in water quality. Drought may also lead to increased concentration of contaminants in drinking water supplies.</p>
Habitats and species	Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures continue to rise, wildfire occurrence statewide could increase from 57 percent to 169 percent by 2085. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state.
Sea Level Rise	The San Francisco Bay Conservation and Development Commission (BCDC) issued a report on sea level rise that states that sea level along the West Coast rises approximately 7.9 inches per century, or approximately 0.08 inches per year (BCDC 2011). However, the rate of sea level rise is increasing. During the period of 1993–2003, the rate was approximately 0.12 inches per year, which could demonstrate the result of human-induced warming on sea level. The BCDC estimates that the sea level in the Bay Area will rise 16 inches by mid-century and 55 inches by the end of the century.

Source: CNRA 2009

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**CURRENT GREENHOUSE GAS EMISSIONS****California Emissions**

The California Energy Commission estimates that California is the second-largest state emitter of GHG emissions in the United States, behind Texas in absolute emissions (CEC 2006). However, the state has relatively low carbon intensity when considering GHG emissions per person or GHG emissions per unit gross state product. Worldwide, California is responsible for approximately 2 percent of the world's CO<sub>2</sub> emissions (CEC 2006). The California Air Resources Board (CARB) released estimates of California's 1990 emissions inventory, which amounted to 433.29 million gross metric tons of carbon dioxide equivalent (MMT CO<sub>2</sub>e) (CARB 2009). CARB has also estimated that 2008 emissions levels were 477 MMT CO<sub>2</sub>e (CARB 2010a).

**Bay Area Emissions**

In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of the Bay Area's GHG emissions, accounting for just over half of the Bay Area's 85 million tons of GHG emissions in 2002. Industrial and commercial sources were the second largest contributors of GHG emissions with about 25 percent of total emissions. Domestic sources (e.g., home water heaters, furnaces, etc.) account for about 11 percent of the Bay Area's GHG emissions, followed by power plants at 7 percent. Oil refining currently accounts for approximately 6 percent of the total GHG emissions attributed to the Bay Area (BAAQMD 2008).

**City of Larkspur Emissions**

A GHG inventory for the City of Larkspur was conducted as a component of the 2010 CAP. The City of Larkspur's GHG inventory utilizes a baseline year of 2005 to inventory CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> generated from activities by the Larkspur community. The emissions sources calculated in the baseline GHG inventory include commercial, residential, and industrial electricity and natural gas use, on-road transportation, solid waste disposal, energy use and direct process emissions related to water and wastewater. In 2005 under baseline conditions, the community emitted approximately 106,222 metric tons of CO<sub>2</sub>e (MTCO<sub>2</sub>e).

**2.2 GREENHOUSE GAS LAWS AND REGULATIONS**

The adoption of recent legislation has provided a clear mandate that climate change must be included in an environmental review for a project subject to CEQA. Several GHG emission-related laws and regulations are provided as follows.

**FEDERAL REGULATION AND THE CLEAN AIR ACT**

In the past, the US Environmental Protection Agency (EPA) has not regulated GHGs under the Clean Air Act because it asserted that the act did not authorize the EPA to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. However, the US Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, twelve states and cities, including California, together with several environmental organizations, sued to require the EPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 [2007]). The court ruled that GHGs fit within the Clean Air Act's definition of a pollutant and that

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the EPA did not have a valid rationale for not regulating GHGs. In response to this ruling, the EPA has recently made an endangerment finding that GHGs pose a threat to the public health and welfare. This is the first step necessary for the establishment of federal GHG regulations under the Clean Air Act.

In April 2010, the EPA issued the final rule on new standards for GHG emissions and fuel economy for light-duty vehicles in model years 2017–2025. In November 2010, the EPA published the "Prevention of Significant Deterioration (PSD) and Title V Permitting Guidance for Greenhouse Gases," which provides the basic information that permit writers and applicants need to address GHG emissions regulated under the Clean Air Act. In that document, the EPA described the "Tailoring Rule" in the regulation of GHG emissions. With the Tailoring Rule, the EPA established a phased schedule in the regulation of stationary sources. The first phase of the Tailoring Rule began January 2, 2011, and focuses the GHG permitting programs on the largest sources with the most Clean Air Act permitting experience. In step two, which began June 1, 2011, the rule expands to cover large sources of GHGs that may not have been previously covered by the Clean Air Act for other pollutants. The rule also describes the EPA's commitment to future rulemaking that will describe subsequent steps of the Tailoring Rule for GHG permitting (EPA 2010c).

### Federal Heavy-Duty National Program

In August 2011, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced the first-ever program to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses. The EPA and the NHTSA have each adopted complementary standards under their respective authorities covering model years 2014–2018, which together form a comprehensive Heavy-Duty National Program. The goal of the joint rulemakings is to present coordinated federal standards that help manufacturers to build a single fleet of vehicles and engines that are able to comply with both. The EPA and the NHTSA have adopted standards for CO<sub>2</sub> emissions and fuel consumption, respectively, tailored to each of three main regulatory categories: (1) combination tractors; (2) heavy-duty pickup trucks and vans; and (3) vocational vehicles. The EPA has additionally adopted standards to control HFC leakage from air conditioning systems in pickups and vans and combination tractors. Also exclusive to the EPA program are the EPA's N<sub>2</sub>O and CH<sub>4</sub> standards that will apply to all heavy-duty engines, pickups, and vans. For purposes of this program, the heavy-duty fleet incorporates all on-road vehicles rated at a gross vehicle weight at or above 8,500 pounds, and the engines that power them, except those covered by the current GHG emissions and Corporate Average Fuel Economy standards for model year 2012–2016 passenger vehicles.

The Heavy-Duty National Program is projected to reduce fuel use and GHG emissions from medium- and heavy-duty vehicles, from semi-trucks to the largest pickup trucks and vans, as well as all types and sizes of work trucks and buses in between. Vehicles covered by this program make up the transportation segment's second largest contributor to oil consumption and GHG emissions. This comprehensive program is designed to address the urgent and closely intertwined challenges of dependence on oil, energy security, and global climate change. The EPA and the NHTSA estimate that the combined standards will reduce CO<sub>2</sub> emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years, providing \$49 billion in net program benefits. A second phase of regulations is planned for model years beyond 2018. The goals would include spurring innovation as well as updating the assessment of actual emissions and fuel use from this sector. Such future regulation would also be designed to align with similar programs developed outside the United States.

**State Regulation and Assembly Bill 32, the California Global Warming Solutions Act of 2006**Assembly Bill 32, the California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, nitrogen trifluoride, and SF<sub>6</sub>. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that are being phased in as of 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. CARB is implementing this program. The CARB Board adopted a draft resolution for formal cap-and-trade rulemaking on December 16, 2010. The program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions. The cap-and-trade program is a central element of AB 32 and covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The regulation includes an enforceable GHG cap that will decline over time. CARB is responsible to distribute allowances, which are tradable permits, equal to the emission allowed under the cap.

AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, CARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of CO<sub>2</sub>e, or approximately 30 percent from the state's projected 2020 emissions level of 596 MMT of CO<sub>2</sub>e under a business-as-usual scenario (this is a reduction of 42 MMT CO<sub>2</sub>e, or almost 10 percent, from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO<sub>2</sub>e), implementation of the Low Carbon Fuel Standard (15.0 MMT CO<sub>2</sub>e) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO<sub>2</sub>e), and a renewable portfolio standard for electricity production (21.3 MMT CO<sub>2</sub>e). The Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008. The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, CARB is also developing an additional

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protocol for community emissions.) CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects approximately 5.0 MMT CO<sub>2</sub>e will be achieved associated with implementation of Senate Bill 375, which is discussed further below. The Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.

The status of the Scoping Plan had been uncertain as a result of a court decision in the case of *Association of Irrigated Residents v. California Air Resources Board* (San Francisco Superior Court Case No. CPF-09-509562). The court found that CARB, in its CEQA review, had not adequately explained why it selected a scoping plan that included a cap-and-trade program rather than an alternative plan. While CARB disagrees with the trial court finding and has appealed the decision, in order to remove any doubt about the matter and in keeping with CARB's interest in public participation and informed decision-making, CARB revisited the alternatives. The revised analysis includes the five alternatives included in the original environmental analysis: a "no project" alternative (that is, taking no action at all); a plan relying on a cap-and-trade program for the sectors included in a cap; a plan relying more on source-specific regulatory requirements with no cap-and-trade component; a plan relying on a carbon fee or tax; and a plan relying on a variety of proposed strategies and measures. The revised analysis relies on emissions projections updated in light of current economic forecasts, accounting for the economic downturn since 2008 and reduction measures already approved and put in place.

The public hearing to consider approval of the AB 32 Scoping Plan Functional Equivalent Document (including the Supplement) and the AB 32 Scoping Plan was held on August 24, 2011. On this date, the Scoping Plan was re-approved by the Board.

### Assembly Bill 1493

Assembly Bill (AB) 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the California Air Resources Board (CARB) to develop and adopt the nation's first GHG emissions standards, also known as Pavley 1, for automobiles. The California legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the state of California submitted a request for a waiver from federal clean air regulations, as the state is authorized to do under the Clean Air Act, to allow the state to require reduced tailpipe emissions of CO<sub>2</sub>. In late 2007, the EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the state brought suit against the EPA related to this denial.

In January 2009, President Obama instructed the EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the EPA granted California's waiver request, enabling the state to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012–2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers showing compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards requiring a 45 percent GHG reduction from the 2020 model year vehicles.

### **Senate Bill 1078, Governor’s Order S-14-08, and Senate Bill 2X (California Renewables Portfolio Standards)**

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, and 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the renewable portfolio standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target.

Prior to the Executive Order, the CPUC and the CEC were responsible for implementing and overseeing the Renewables Portfolio Standards. The Executive Order shifted that responsibility to the California Air Resources Board (CARB), requiring them to adopt regulations by July 31, 2010. CARB is required by current law, AB 32 of 2006, to regulate sources of greenhouse gases to meet a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050.

In March 2011, Senate Bill 2X establishing S-14-08 as law passed the state's legislature. While Senate Bill 2X contains the same targets as Governor's Order S-14-08 (33 percent of supply from renewable sources by 2020), as an executive order it did not have the force of law (Governor's Orders can be reversed by future governors).

### Senate Bill 375

SB 375 (codified at Government Code and Public Resources Code<sup>1</sup>), signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy or alternative planning strategy, which will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years, but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternative planning strategy for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

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<sup>1</sup> Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01 as well as Public Resources Code Sections 21061.3, 21159.28, and Chapter 4.2.

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### California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. On January 1, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the US to adopt a statewide green building standards code. CALGreen requires new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low-pollutant-emitting materials. On May 31, 2012, the California Building Standards Commission adopted standards that exceed the energy efficiency requirements of the 2010 version, which will go into effect on January 1, 2014

### Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines were developed to assist lead agencies in evaluating air quality impacts for projects and plans in the San Francisco Bay Area Air Basin. The guidelines were updated in 2010 to include guidance on assessing GHG and climate change impacts as required under CEQA Section 15183.5(b) and to establish thresholds of significance for impacts related to GHG emissions. These thresholds can be used to assess plan-level and project-level impacts and allow a lead agency to determine that a project's impact on GHG emissions is less than significant.<sup>2</sup>

### City of Larkspur Climate Action Plan

The City of Larkspur has developed a Climate Action Plan (CAP) to address climate change and reduce the community's GHG emissions at the local level. The CAP identifies five action areas and 58 implementing programs that the community can take to reduce both emissions and communitywide contributions to global climate change. The City CAP describes measures and actions necessary to reduce GHG emissions throughout the City.

### City of Larkspur Municipal Code

In 2007, the City Adopted the Green Building Ordinance (Ord. 956) which outlined a minimum LEED standard for new commercial structures and additions as well as all City-sponsored facilities. In 2010, the City began drafting an update to the Green Building Ordinance, with updated thresholds based on the Draft CALGreen Code and the work of the Building Energy Retrofit and Solar Transformation Committee (BERST), a countywide committee organized by the City of San Rafael to update and unify Green Building standards for the County.

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<sup>2</sup> The thresholds BAAQMD adopted were called into question by a minute order issued January 9, 2012, in *California Building Industry Associated v. BAAQMD*, Alameda Superior Court Case No RG10548693. On March 5, 2012, the Alameda County Superior Court issued a judgment finding that BAAQMD had failed to comply with CEQA when it adopted the thresholds. The court did not determine whether the thresholds were valid on the merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering BAAQMD to set aside the thresholds and cease dissemination of them until BAAQMD had complied with CEQA. The claim made in the case concerned the CEQA impacts of adopting the thresholds; that is, how the thresholds would affect land use development patterns. Those issues are not relevant to the scientific soundness of the BAAQMD's analysis of what levels of pollutants should be deemed significant, or the threshold to use in assessing any air quality-related impact the project would have on the existing environment. These thresholds are based on substantial evidence identified in Appendix D of the Guidelines and are therefore used within this analysis.

In 2008, the City adopted a Wood-Burning Ordinance (Ord. 943) to educate the public regarding the negative impacts of burning wood-based fuels, regulate the installation of wood-burning appliances, and prohibit the use of polluting fuel-types.

### Marin Municipal Water District

Larkspur falls within the Marin Municipal Water District's (MMWD's) jurisdiction and all properties in Larkspur are subject to the agency's water conservation regulations. The water conservation requirements, particularly irrigation efficiency, are fairly complex, and the City has relied on MMWD to provide technical review and oversight on water conservation and direction in regard to drought-tolerant landscaping. The City has required compliance with MMWD regulations as a condition of approval for projects subject to the design review and planning permits (City of Larkspur 2010).

For the last several years, the water district's water conservation measures have been outlined under MMWD Ordinance No. 385. This ordinance has required water conserving landscaping review and compliance for all public, industrial, commercial, and multifamily residential projects and only for one- or two- family residential projects involving ½ acre or more of landscaped area. The ordinance outlined prescriptive irrigation efficiency methods such as automatic irrigation systems, proper soil preparation, and a limited percentage of high-water use plants. On December 16, 2009, the MMWD Board adopted Ordinance No. 414, providing updated water efficient landscaping requirements as well as other water conservation measures (City of Larkspur 2010).

## **2.3 CLIMATE CHANGE IMPACTS AND MITIGATION MEASURES**

### STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the application of the following State CEQA Guidelines Appendix G thresholds of significance:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Thresholds of significance illustrate the extent of an impact and are a basis from which to apply mitigation measures. Currently, neither the CEQA statutes, the Office of Planning and Research (OPR) guidelines, nor the State CEQA Guidelines prescribe specific quantitative thresholds of significance or a particular methodology for performing an impact analysis. Significance criteria are left to the judgment and discretion of the lead agency.

Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects be disclosed and mitigated to the extent feasible whenever the lead agency determines that a project contributes to a significant cumulative climate change impact. In June 2008, the OPR issued a Technical Advisory titled "CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review." The recommended approach for GHG analysis included in the Governor's OPR June 2008 Technical Advisory (TA) is to: (1) identify and quantify GHG emissions, (2) assess the significance of the impact on global climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below significance.

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This analysis identifies and quantifies the GHG emissions of the proposed project. Moreover, it assesses the project's potential to result in a significant GHG impact by (1) comparing GHG emissions projected to be generated by the proposed project with the BAAQMD significance threshold of 1,100 metric tons of CO<sub>2</sub>e annually and (2) determining its consistency with strategies identified in the City of Larkspur CAP for reducing GHG emissions. As stated previously, the Larkspur CAP contains actions and programs necessary to reduce GHG emissions throughout the City.

### METHODOLOGY

The resultant GHG emissions of the proposed project were calculated by PMC using the California Emissions Estimator Model (CalEEMod), version 2011.1.1, computer program (see **Appendix A**). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for the use of government agencies, land use planners, and environmental professionals. This model is the most current emissions model approved for use in California by various other air districts.

### PROJECT IMPACTS AND MITIGATION MEASURES

**Impact 1** Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts.

#### Construction GHG Emissions

GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. The approximate quantity of GHG emissions generated by construction equipment used to build the proposed project is depicted in **Table 4**.

**TABLE 4**  
**CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR**

Construction	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)	CO <sub>2</sub> e
Construction	240	0.04	0.00	241

Source: CalEEMod version 2011.1.1. Diesel-fueled construction equipment load factors reduced 33% to account for off-road emission overestimation (CARB 2010b). See **Appendix A** for emission model outputs.

**Table 4** illustrates the construction-related GHG emissions that would result from construction of the proposed project. As shown, project construction would result in the generation of approximately 241 metric tons of CO<sub>2</sub>e over the course of construction.

### Operational GHG Emissions

There would also be long-term regional emissions associated with project-related new vehicular trips and indirect source emissions, such as electricity usage for lighting. As shown in **Table 5**, the long-term operations of the proposed project would produce 1,083 metric tons of CO<sub>2</sub>e annually, primarily from motor vehicles that travel to and from the site. To be conservative, total construction-generated GHG emissions (see **Table 4**) were amortized over the estimated life of the project. A project life of 30 years was assumed for the proposed project.

**TABLE 5**  
**OPERATIONAL GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR**  
**(UNMITIGATED)**

Source	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Construction (Amortized over 30 Years)	8	0.00	0.00	8
Area	0	0.00	0.00	0
Energy	91	0.00	0.00	91
Mobile	970	0.04	0.00	971
Solid Waste	4.5	0.27	0.00	10
Water	2	0.02	0.00	3
<b>Total</b>	<b>1,075.5</b>	<b>0.33</b>	<b>0.00</b>	<b>1,083</b>
BAAQMD Threshold				1,100

Source: CalEEMod version 2011.1.1. While Larkspur is approximately three square miles in size, CalEEMod defaults estimated an average trip rate of 4.6 miles per trip. Therefore mobile-source GHG emission estimates are conservative. See **Appendix A** for emission model outputs.

As shown in the table, the proposed project would not exceed BAAQMD significance thresholds for operational GHG emissions and would result in less than significant GHG impacts on the environment.

**Impact 2** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As previously stated, the City of Larkspur has developed a CAP to address climate change and reduce the community's GHG emissions at the local level. The CAP identifies five action areas and 58 implementing programs that the community can take to reduce both emissions and communitywide contributions to global climate change. The City CAP describes actions and program necessary to reduce GHG emissions throughout the City.

The CAP establishes a reduction target of 15 percent below 2005 emissions by 2020. (According to the CAP, in 2005, approximately 106,222 metric tons of CO<sub>2</sub>e emissions were generated within the City). These CAP projections are based, in part, on the land use assumptions of the City of Larkspur General Plan. Therefore, proposed project consistency with the CAP includes project consistency with the land use and population growth projections of the Larkspur General Plan. The proposed project is consistent with the General Plan land use designation and development density, and since the proposed project does not include residential development, it will not add new population to the area. Therefore, there no inconsistencies with the project and the overall basis of the CAP.

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As stated, the CAP identifies five action areas and 58 implementing programs that the community can take to reduce both emissions and communitywide contributions to global climate change. The list of CAP measures is shown in **Table 6**.

**TABLE 6**  
**CITY OF LARKSPUR CAP GHG REDUCTION ACTIONS AND PROGRAMS**

<b>Program Number</b>	<b>Description</b>
<b><i>Natural Systems, Carbon Sequestration, and Emissions Offset</i></b>	
1	Continue to enforce policies and programs that regulate the removal and replacement of significant trees and preclude the sale of exotic and invasive plants.
2	Develop and implement a community-wide tree-planting program for streets and parks to significantly increase the carbon storage potential of trees and other vegetation in the community.
3	Encourage and, when feasible, require removal of concrete from creek channels and creek restoration and enhancement.
4	Encourage use of pervious paving materials when practical
5	Continue to enforce zoning regulations for parking lot landscaping to increase shading and reduce thermal gain.
6	To the extent possible, require new development to be planned around existing trees and require new or replacement tree planting as carbon offsets where increased intensity of use, development or activity results in increased GHG emissions.
7	Continue to support the use of tax benefits for land deeds and the use of planning and zoning tools such as conservation easements and Transfer of Development Rights (TDR) to promote cluster development and secure "climate reserve" zones on tree covered undeveloped hillside parcels and other open space.
8	As may be necessary, investigate achieving further carbon reductions for city operations by purchasing carbon offsets or participating in a program such as ClimateSmart, after maximizing GHG reductions through conservation, energy efficiency and renewable energy measures.
9	Provide educational opportunities and creative incentives for community organizations and residents to reduce their carbon footprint.
10	Support and promote local farmers markets.
11	Partner with Master Gardeners and others to provide education and resources to residents on backyard gardening.
12	Encourage the creation of community gardens, including possible use of surplus City properties.
<b><i>Land Use and Transportation</i></b>	
1	Reduce and encourage the reduction of GHG emissions through the General Plan and environmental and project review processes by: <ul style="list-style-type: none"> <li>a. Adopting policies that promote compact and efficient development, such as orienting new development to capitalize on transit system investments and services.</li> <li>b. Adopting policies that encourage a "balanced" community, where residents do not have to travel long distances for service needs.</li> <li>c. To the extent feasible, products are grown or manufactured locally or within the region; and growing food is given a priority over planting ornamentals.</li> <li>d. Establishing planning processes that encourage reducing GHG emissions, including the development of workforce housing and a diversity of housing types.</li> <li>e. Using transportation models and surveys to capture data for and accurately reflect all modes of transportation.</li> <li>f. Making reductions in vehicle-miles traveled (VMT) a high-priority criterion in evaluation of policy, program and project alternatives.</li> <li>g. Implementing transportation planning procedures that consider demand management solutions equally with strategies to increase capacity.</li> <li>h. As appropriate, analyzing impacts of development projects on safety, availability, and use of alternative transportation in CEQA documents.</li> <li>i. Adopting local CEQA Guidelines to explain how analysis of greenhouse gas emissions will be treated, such as thresholds of significance.</li> </ul>
2	Educate residents and employees about the health and environmental benefits of walking, cycling, or taking public transit, and ride sharing, and information to assist in these modes of travel (e.g., information available in public places and employment centers regarding bus schedules, pedestrian pathways and trails, and the 511 Rideshare Program and related vanpool incentive programs).

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Program Number	Description
3	<p>Encourage the use of sustainable transportation modes by identifying where the Community's pedestrian, bicycle, and mass transit facilities are deficient and updating the community-wide pedestrian and bicycle plan and capital improvement program that maximizes the potential to:</p> <ol style="list-style-type: none"> <li>Continue improving bicycle infrastructure (e.g., Class 1, 2, and 3 paths)</li> <li>Update (e.g., include specifications for bicycle racks) and enforce bicycle parking requirements for public and private developments.</li> <li>Improve commercial and residential pedestrian infrastructure (e.g., sidewalks, paths, and walkways) and expanded programs that encourage walking (e.g., safe routes to school program).</li> <li>Continue to improve mass-transit infrastructure (e.g., bus stops, transit stations, park and ride) and coordinate with the regional transit providers and the Transportation Authority of Marin (TAM) to pursue funding opportunities to expand local and regional bus service in range and/or frequency. Oppose reductions in transit service.</li> <li>Study the Larkspur Landing Circle area and enhance the opportunities presented by the location of the Larkspur Ferry, the Marin Airpoter, and eventually the SMART train station.</li> <li>Support and encourage the implementation of TAM's vision for the future, "Moving Forward: A 25-Year Transportation Vision for Marin County."</li> <li>Increase bicycle and pedestrian safety through traffic calming devices and other measures to reduce traffic speeds and volumes, and design standards for multi-modal mobility and access.</li> <li>Encourage innovated ideas for allowing residents to swap/trade bicycles that no longer meet their needs for ones that do (e.g., potential for trading bike pulled kid-carts to someone that wants to use the cart to haul groceries.)</li> </ol>
4	<p>Green the City Fleet. Reduce greenhouse gas emissions from municipal fleet operations by purchasing or leasing high MPG, low carbon fuel or hybrid vehicles, or by using an external car sharing program in lieu of city/county fleet.</p>
5	<p>Provide agency employees with incentives to use alternatives to single occupant auto commuting, such as parking cash-out, flexible schedules, transit incentives, bicycle facilities, ridesharing services and subsidies, and telecommuting when practical.</p>
6	<p>When auto and truck transportation remain necessary, improve GHG emissions by:</p> <ol style="list-style-type: none"> <li>Implementing Intelligent Transportation Systems (ITS) for surveillance and traffic control, such as synchronized signals, transit and emergency signal priority, and other traffic flow management techniques, to improve traffic flow and reduce vehicle idling.</li> <li>Encouraging private development to encourage the use of hybrids, electric vehicles, and carpools.</li> <li>Working with school districts and private schools to encourage carpooling and participation in safe routes to school.</li> <li>Working with and encouraging the County in developing a community carsharing, when determined to be feasible.</li> <li>Adopting and implementing a policy requiring limitations on idling for commercial vehicles, construction vehicles, buses and other similar vehicles, beyond state law, where feasible.</li> <li>Designing right-of-way widths to the minimum acceptable safety standards for both traffic calming and auto, bicycle and pedestrian safety.</li> </ol>
7	<p>Encouraging ownership of plug-in electric vehicles (EV) by providing EV charging station infrastructure, where appropriate, and encouraging property owners and developers to install EV charging stations in commercial and residential projects.</p>
<p><b>Green Building, Energy Efficiency, and Renewable Energy</b></p>	
1	<p>Update and strengthen the City's Green Building Ordinance and apply green building requirements to new residential, commercial and civic construction and remodeling projects to increase energy efficiencies. For the remodel of existing homes, the Building Official should provide homeowners information regarding the benefits of energy retrofits, but be allowed some discretion relative to applying the green building requirements.</p>
2	<p>Develop a citywide Green Building promotional campaign. Educate City staff and policy makers about best practices; provide checklists and specification guidelines for contractors; post green building information on the City's website.</p>
3	<p>Provide incentives to development projects that meet or exceed specified standards under green building programs such as Build It Green.</p>

Program Number	Description
4	Train existing staff (and possibly offer a pay incentive for certification or accreditation) or contract out for expertise in LEED and GPR (e.g., projects not designed by a LEED accredited architect/engineer could pay a fee for review by someone with LEED expertise).
5	As part of the Green Building Ordinance update, require energy efficiency audits for residences and businesses during major remodeling projects. Consider requirements and incentives for minimum energy efficiency upgrades.
6	Replace lamps in street and parking lot lighting with energy-efficient technologies, such as LED and induction lighting.
7	Support efforts of PG&E to maximize residential and business subscription rates for energy efficiency programs and to promote conservation and renewable energy use.
8	Adopt policies and incentives to encourage residents and businesses to install solar/renewable energy systems.
9	Research and consider possibilities for residential wind power generators and for location of solar collectors.
10	Participate in a countywide or regional assessment district bond-financing program to assist homeowners in funding installation of energy efficiency upgrades and renewable energy systems.
11	Complete energy efficiency upgrades to City facilities as recommended by the Marin Energy Management Team, to include: a. Re-roof Fire Station No. 15 (#1) with energy efficient roofing. b. Replace the HVAC and diesel generator at Fire Station No.15 (#1) with more efficient equipment. c. Replace windows in City Hall and Fire Station No.15 (#1). d. Enclose the understory of City Hall and provide understory insulation.
12	Install photovoltaic panels at City facilities, such as the south-facing roof of City Hall and the two fire stations.
13	Upgrade incandescent bulbs in traffic signals and pedestrian signals to LED technologies.
<b>Green Purchasing</b>	
1	Prioritize purchases of products and services with superior environmental performance that are economically competitive on a life-cycle basis.
2	Implement operational changes that can offset environmentally preferable product costs. Green purchasing policies also include operational steps for reducing environmental and economic costs derived from the use of products or services. For example, green policies call for periodic energy efficiency audits of major facilities.
3	Purchase products only when needed and not solely on a replacement schedule. Many durable manufactured goods – from computers to motor vehicles — embody much of the energy used (and carbon emitted) over their life span in their initial production. Optimizing purchasing schedules according to ongoing needs assessment, rather than a fixed replacement schedule, can lower environmental burden and cost.
4	Create an interdepartmental Green Purchasing Team.
5	Complete a Green Purchasing Policy & Implementation Plan.
6	Provide each City Department with an easy reference binder for finding “green” products and distributors.
7	Engage city staff in support of Green Purchasing goals and processes by including them in the review of draft documents to seek their comment and input.
8	Implement Green Purchasing reporting to capture GHG impacts.
9	Update City’s website to allow for electronic noticing to interested persons regarding City meetings, events, proposed projects, etc.
<b>Waste Reduction, Recycling, and Zero Waste</b>	
1	Adopt a policy to achieve zero waste going to landfills.
2	Endorse an Extended Producer Responsibility resolution. The JPA proposes that the member agencies endorse an Extended Producer Responsibility resolution and sign the California Product Stewardship Council pledge to shift California’s product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on extended producer responsibility (EPR) in order to reduce public costs and drive improvements in product design that promote environmental sustainability.

## 2.0 CLIMATE CHANGE

Program Number	Description
3	Enhance existing waste reduction and recycling activities at City buildings and in the community.
4	Expand education to the public about the benefits of waste reduction, via informational materials, organized events and workshops, including backyard composting workshops, office paper recycling programs, and organized brush drop-off programs.
5	Adopt a Construction and Demolition Ordinance to comply with the JPA's model ordinance.
6	Strengthen recycling programs, purchasing policies, and employee education, to reduce the amount of waste produced in Larkspur.
7	Promote commercial and residential backyard composting. Recommended composting programs: <ol style="list-style-type: none"> <li>Partner with Master Gardeners and others to provide education and resources to residents on backyard composting.</li> <li>Work with Marin Sanitary Service to develop commercial and residential food waste collection routes and to create centrally located facilities to process all green and food waste. Process this waste in anaerobic digesters for soil amendments and the production of biogas. Biogas is the gas produced by anaerobic digestion of organic matter and consists of 60-80 percent methane (natural gas), 30-40 percent carbon dioxide, and other trace gases such as hydrogen sulfide, ammonia and hydrogen. The predominance of methane means it can be used as a fuel source.</li> <li>Support Marin Municipal Wastewater District in its feasibility study of providing feedstock for biogas.</li> </ol>
<b>Water and Wastewater</b>	
1	Assess, maintain and repair existing plumbing fixtures, pipes, and irrigation systems in all agency buildings and facilities to minimize water use, including building and parking lot landscaping, public rest rooms and parks, golf courses and other recreational facilities. As feasible, upgrade and retrofit agency plumbing and irrigation systems with state-of-the-art water conserving technology.
2	Audit the City's water and stormwater pumps and motors to evaluate equipment efficiency and, as funding allows, replace least efficient equipment with more efficient units.
3	Retrofit existing agency buildings and facilities to meet standards for the LEED Standards Rating Systems for Existing Buildings (EB) or Commercial Interiors (CI).
4	Plant materials native to northern California and Marin County, and encourage the use of drought-tolerant plant material.
5	Minimize turf areas and avoid narrow turf areas, such as in parking strips. Encourage homeowners to avoid turf and replace existing turf areas.
6	Consider water heater upgrade incentives. Larkspur may develop incentive programs for updated water heater systems, such as tankless or on-demand.
7	Adopt retrofit program to encourage or require installation of water conservation measures in existing businesses and homes.
8	Require dual plumbing for use of recycled water for new commercial and/or residential developments.
9	Increase customer education programs on water conservation and intelligent irrigation systems.
10	Provide information related to greywater use and plumbing codes.

Source: City of Larkspur 2010

The strategies included in the City of Larkspur CAP that apply to a land use development proposal such as the Rose Garden Community Facility project are contained in **Table 7**, which also summarizes the extent to which the project would comply with the strategies. The strategies listed in **Table 7** are either required mitigation measures or requirements under local or state ordinances. With implementation of these strategies/measures, the project's contribution to cumulative GHG emissions would be reduced. In order to ensure that the proposed project complies with and would not conflict with or impede the implementation of reduction goals identified in the City of Larkspur CAP, mitigation measure **MM-1**, described below, is recommended.

**TABLE 7  
CITY OF LARKSPUR CAP COMPLIANCE**

Strategy	Project Compliance
<b><i>Natural Systems, Carbon Sequestration, and Emissions Offset</i></b>	
<p><b>Program 2</b> Develop and implement a community-wide tree-planting program for streets and parks to significantly increase the carbon storage potential of trees and other vegetation in the community.</p>	<p><b>Compliant</b> While the development of a community-wide tree-planting program is beyond the scope of requirement for a single land use project, trees would be planted on the project site as part of the site landscape plan. An occupancy permit for part or whole of the proposed project building shall not be issued unless and until the site is landscaped per Chapter 18.64 of the City Municipal Code. As further required by Chapter 18.64 of the Municipal Code, landscaping, which would include trees, shall be well designed with appropriate variations and shall be included as an integral enhancement of the site and, where needed, for the purposes of screening. Plant materials shall be suitable for the functions to be served and all landscaping has to be maintained in good condition. Any dead or dying plants, bushes or trees are required to be replaced with new healthy stock as appropriate.  Also, Chapter 12.16 of the Municipal code specifically mentions that native trees such as redwood, oak, and madrone are especially important to the community. The City provides a Master Tree List, which encourages the planting of native trees, to be used as a guide when trees are planted on private property.  Lastly, the project site is encapsulated by the CLASP (Subarea 3), and the CLASP DEIR (2003) identified several City-defined heritage trees located along the western edge of the proposed project site. According to the CLASP DEIR, these heritage trees are required to be retained and incorporated into the design of this project.</p>
<p><b>Program 4</b> Encourage use of pervious paving materials when practical.</p>	<p><b>Compliant</b> The project would comply with mitigation measure <b>MM-1</b>, identified below, which requires the use of pervious paving material for the project's proposed 75 parking spaces as well as project sidewalk features, to the maximum extent feasible.</p>
<p><b>Program 6</b> To the extent possible, require new development to be planned around existing trees and require new or replacement tree planting as carbon offsets where increased intensity of use, development or activity results in increased GHG emissions.</p>	<p><b>Compliant</b> As previously stated, the project site is encapsulated by the CLASP (Subarea 3), and the CLASP DEIR (2003) identified several City-defined heritage trees located along the western edge of the proposed project site. According to the CLASP DEIR, these heritage trees are required to be retained and incorporated into the design of this development.</p>
<b><i>Land Use and Transportation</i></b>	
<p><b>PROGRAM 1 - (a) and (b)</b> a. Adopting policies that promote compact and efficient development, such as orienting new development to capitalize on transit system investments and services. b. Adopting policies that encourage a "balanced" community, where residents do not have to travel long distances for service needs.</p>	<p><b>Compliant</b> While the adoption of sustainable land use and transportation policies is beyond the scope of requirement for a single land use project, the proposed project does fulfill the intent of this CAP Program. The proposed project promotes compact, walkable, infill development and focuses redevelopment along a transit corridor, Doherty Drive. There are 3 public transit bus stops within 350 feet of the project site and the proposed community facility, which includes 12,000 square</p>

## 2.0 CLIMATE CHANGE

Strategy	Project Compliance
	feet of library space and an equal amount of meeting and program spaces, are types of land uses that are especially strategic for the concept of a “balanced” community (i.e., a library located at a walkable distance of less than 300 feet from Hall Middle School and 0.4 mile from the High School. Similarly, the project site would be located adjacent to an 85-lot residential community. Furthermore, the project would provide open space with multi-use trail amenities on a portion of the 2.84-acre site.
<p><b>PROGRAM 3 - (a), (c), and (d)</b></p> <p>a. Continue improving bicycle infrastructure (e.g., Class 1, 2, and 3 paths).</p> <p>c. Improve commercial and residential pedestrian infrastructure (e.g., sidewalks, paths, and walkways) and expanded programs that encourage walking (e.g., safe routes to school program).</p> <p>d. Continue to improve mass-transit infrastructure (e.g., bus stops, transit stations, park and ride) and coordinate with the regional transit providers and the Transportation Authority of Marin (TAM) to pursue funding opportunities to expand local and regional bus service in range and/or frequency. Oppose reductions in transit service.</p>	<p><b>Compliant</b></p> <p>As previously stated, the project site is encapsulated by the CLASP (Subarea 3). In terms of bicycle infrastructure, the circulation system for the Specific Plan area is required to be designed to facilitate traffic flow, improve safety, and incorporate a bikeway, according to the CLASP DEIR (2003). A Class 1 bike path has been incorporated along the south side of Doherty Drive as part of the overall CLASP, which borders the north side of the project site. Additionally, the CLASP implements a system of integrated pedestrian and bicycle routes within the Specific Plan area (including the project site) that would provide safe circulation and connections to existing area facilities (City of Larkspur 2003). The CLASP pedestrian and bicycle circulation system creates links between the CLASP area and Downtown, Larkspur Plaza, schools, parks and transit areas (City of Larkspur 2003). Concerning pedestrian infrastructure, the encouragement of walking, and mass-transit infrastructure, please refer to the consistency analysis of Program 1 – (a) and (b) above.</p> <p>Lastly, the project would comply with mitigation measure <b>MM-1</b>, identified below, which requires the provision of bicycle parking facilities and preferential parking for carpooling and alternative-fueled vehicles.</p>
<p><b>Program 6 - (b)</b></p> <p>b. Encouraging private development to encourage the use of hybrids, electric vehicles, and carpools.</p>	<p><b>Compliant</b></p> <p>As stated above, the project would comply with mitigation measure <b>MM-1</b>, identified below, which requires the provision of preferential parking for carpooling and alternative-fueled vehicles.</p>
<p><b>Program 7</b></p> <p>Encouraging ownership of plug-in electric vehicles (EV) by providing EV charging station infrastructure, where appropriate, and encouraging property owners and developers to install EV charging stations in commercial and residential projects.</p>	<p><b>Compliant</b></p> <p>The project would comply with mitigation measure <b>MM-1</b>, identified below. While this mitigation does not expressly require electric vehicle charging station infrastructure, it does encourage the use of plug-in electric vehicles by requiring the provision of preferential parking for alternative-fueled vehicles.</p>
<p><b>Green Building, Energy Efficiency, and Renewable Energy</b></p>	
<p><b>Program 3</b></p> <p>Provide incentives to development projects that meet or exceed specified standards under green building programs such as Build It Green.</p>	<p><b>Compliant</b></p> <p>The proposed project will be required to comply with the updated Title 24 standards, including the new 2010 California Building Code (CBC), for building construction. These standards require new buildings to reduce water consumption by 20 percent, which results in less energy consumption for pumping water. In addition, the project proposes to construct the Rose Garden Community Facility to achieve a minimum LEED (Leadership in Energy and Environmental Design) silver</p>

Strategy	Project Compliance
	<p>rating. LEED is a voluntary, consensus-based, market-driven program that provides third-party verification of environmentally sustainable buildings. The goal of the LEED performance credit system is to allocate points "based on the potential environmental impacts and human benefits of each credit." To weight these impacts, USGBC relies upon the environmental impact categories of the United States Environmental Protection Agency's Tools for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI) as a basis for weighting each credit. Points are distributed across major credit categories, one being Energy and Atmosphere, which addresses energy efficiency.</p>
<b>Waste Reduction, Recycling, and Zero Waste</b>	
<p><b>Program 6</b>  <b>Strengthen recycling programs, purchasing policies, and employee education, to reduce the amount of waste produced in Larkspur.</b></p>	<p><b>Compliant</b>                      The project site is located with the CLASP area and CLASP Policy U-15, Solid Waste Disposal, requires the provision of adequate storage for waste and recycling bins for all new development. More specifically, mitigation measure <b>MM-1</b> requires that the proposed project provide interior and exterior storage areas for recyclables and adequate recycling containers. This mitigation measure also instigates the reuse and recycling of construction waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) to the extent practical. Lastly, the proposed project will be required to comply with the updated Title 24 standards, including the new 2010 CBC, for building construction and these standards require the diversion of 50 percent of the resultant construction waste from landfills.</p>
<b>Water and Wastewater</b>	
<p><b>Program 1</b>                      Assess, maintain and repair existing plumbing fixtures, pipes, and irrigation systems in all agency buildings and facilities to minimize water use, including building and parking lot landscaping, public rest rooms and parks, golf courses and other recreational facilities. As feasible, upgrade and retrofit agency plumbing and irrigation systems with state-of-the-art water conserving technology.</p>	<p><b>Compliant</b>                      As previously stated, the proposed project will be required to comply with the updated Title 24 standards, including the new 2010 CBC, for building construction. These standards require new buildings to reduce water consumption by 20 percent. Furthermore, the project proposes to construct the Rose Garden Community Facility to achieve a minimum LEED silver rating. The goal of the LEED performance credit system is to allocate points "based on the potential environmental impacts and human benefits of each credit." To weight these impacts, USGBC relies upon the environmental impact categories of the United States Environmental Protection Agency's TRACI as a basis for weighting each credit. Points are distributed across major credit categories, one being Water Efficiency.                      The proposed project would also be required to comply with Marin Municipal Water District (MMWD) regulations. The City has required compliance with MMWD regulations as a condition of approval for projects subject to the design review and planning permits (City of Larkspur 2010), such as the proposed project. For the last several years, the water district's water conservation measures have been outlined under MMWD Ordinance No. 385. This ordinance has required water conserving landscaping review and compliance for all public, industrial, commercial, and multifamily residential projects. The ordinance outlined prescriptive irrigation</p>

## 2.0 CLIMATE CHANGE

Strategy	Project Compliance
	efficiency methods such as automatic irrigation systems, proper soil preparation, and a limited percentage of high-water use plants. On December 16, 2009, the MMWD Board adopted Ordinance No. 414, providing updated water efficient landscaping requirements as well as other water conservation measures (City of Larkspur 2010).
<p><b>Program 4</b> Plant materials native to northern California and Marin County, and encourage the use of drought-tolerant plant material.</p>	<p><b>Compliant</b> Chapter 12.16 of the Municipal code specifically mentions that native trees such as redwood, oak, and madrone are especially important to the community. The City provides a Master Tree List, which encourages the planting of native trees, to be used as a guide when trees are planted on private property. In addition, mitigation measure <b>MM-1</b> requires that at least 75 percent of all landscaping plants be drought-tolerant as determined by a licensed landscape architect or contractor.</p>

### Mitigation Measure

#### **MM-1**

Prior to building permit approval, the City of Larkspur Planning Department shall require that the project applicant implement the following measures to reduce short-term and long-term emissions of GHGs associated with construction and operation of the proposed project:

#### Construction

- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) to the extent practical.

#### Operation

- The proposed project shall be designed to include impervious surfaces for outdoor parking lot surfaces and sidewalks to the greatest extent feasible.
- Bicycle parking facilities and preferential parking for carpooling and alternative-fueled vehicles shall be provided in front of the Rose Garden Community Facility. This measure encourages use of alternative transportation by employees and helps to reduce the amount vehicle miles traveled by the project.
- The proposed Rose Garden Community Facility shall provide interior and exterior storage areas for recyclables and adequate recycling containers located in public areas.

- The proposed Rose Garden Community Facility shall ensure that low-water use landscaping (i.e., drought-tolerant plants and drip irrigation) are installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor and in conformance with MMWD Ordinance No. 414.

*Timing/Implementation: During Construction Activities and Project Operations.*

*Enforcement/Monitoring: City of Larkspur Planning Department.*

**Table 8** identifies the estimated GHG emissions resulting from long-term operations of the proposed project with the imposition of the mitigation identified in mitigation measure **MM-1**. Due to current limitations in modeling software however, GHG emission reductions associated with the aspects of mitigation measure **MM-1**, impervious surfaces, the provision of bicycle parking and preferential parking for carpooling and alternative-fueled vehicles, and the provision for interior and exterior storage areas for recyclables and adequate recycling containers can not be quantified.

However, in addition to the GHG emissions reductions attributed to mitigation measure **MM-1**, **Table 8** accounts for GHG emissions reductions associated with project features described in **Table 7** above, such as the increased density the project would provide for this area, specifically the projection of 9 jobs. (According to the Energy Information Administration [2001], public assembly buildings contain an average of one employee per 1,350 square feet. Applying this ratio to the proposed project equates to 9 jobs.) Also accounted for in **Table 8**, in addition to mitigation measure **MM-1**, are GHG emission reductions associated the three bus stops on Doherty Drive within 350 feet of the project site; increased diversity of land use provided by the project which proposes a library and meeting space uses in the vicinity of two schools and adjacent to residential land uses; the improved pedestrian network resulting from the project which includes a proposed multi-use trail which would provide accessible, non-motorized connections off-site providing ready access to the community facility and adjacent properties. The proximity of the proposed project to downtown Larkspur is also accounted. Due to the fact that the specific features needed to achieve the LEED silver rating has not been identified at the drafting of this document, the GHG emissions reductions associated with the proposed LEED silver rating are not quantified.

As shown in **Table 8**, implementation of mitigation measure **MM-1** as well as the increased density, increased land use diversity, increased access to public transit, improved pedestrian network, and project proximity to downtown would result in a reduction of 317 metric tons of CO<sub>2e</sub> annually compared with baseline emissions estimates identified in **Table 5**. Accounting for mitigation measure **MM-1** and the other quantifiable project features proposed, the project would generate 758 metric tons of CO<sub>2e</sub> annually.

## 2.0 CLIMATE CHANGE

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**TABLE 8**  
**OPERATIONAL GREENHOUSE GAS EMISSIONS – METRIC TONS PER YEAR (MITIGATED)**

Source	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Construction (Amortized over 30 Years)	8	0.00	0.00	8
Area	0	0.00	0.00	0
Energy	91	0.00	0.00	91
Mobile	653.5	0.03	0.00	654
Solid Waste	4.5	0.27	0.00	10
Water	2	0.02	0.00	3
<b>Total</b>	<b>759</b>	<b>0.32</b>	<b>0.00</b>	<b>766</b>
BAAQMD Threshold				1,100

Source: CalEEMod version 2011.1.1. See **Appendix A** for emission model outputs.

With implementation of mitigation measure **MM-1**, the proposed project would not impede any of the applicable GHG emissions reduction measures of the City of Larkspur CAP, as demonstrated in **Table 7**. Also, as previously stated, the proposed project does not include residential development and would not add new population to the area. As a result, the proposed project would not conflict with Larkspur CAP population assumptions and thus population-based GHG emission projections. No inconsistencies between the project and the CAP would occur. This impact is less than significant.

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## **3.0 REFERENCES**

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#### REFERENCES

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# **APPENDICES**

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## **APPENDIX A - CALEEMOD OUTPUT FILES**



**Rose Garden Community Facility**  
Marin County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric
Library	24	1000sqft
Parking Lot	75	Space

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2
Climate Zone	5	Precipitation Freq (Days)	69

**1.3 User Entered Comments**

Off-road Equipment - Diesel-fueled construction equipment load factors reduced 33% to account for offroad emission overestimation. Source - California Air Resources Board. 2010. "Staff Report: Proposed Amendments to the Regulation for In-Use Off Road Diesel-Fueled Fleets and the OFFROAD Large Spark-Ignition Fleet Requirements." October 2010.

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
2013											0.00	240.46	240.46	0.04	0.00	241.20
<b>Total</b>											<b>0.00</b>	<b>240.46</b>	<b>240.46</b>	<b>0.04</b>	<b>0.00</b>	<b>241.20</b>

### 2.2 Overall Operational

#### Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	90.63	90.63	0.00	0.00	91.19
Mobile											0.00	969.86	969.86	0.04	0.00	970.79
Waste											4.49	0.00	4.49	0.27	0.00	10.05
Water											0.00	2.39	2.39	0.02	0.00	3.06
<b>Total</b>											<b>4.49</b>	<b>1,062.88</b>	<b>1,067.37</b>	<b>0.33</b>	<b>0.00</b>	<b>1,075.09</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Area											0.00	0.00	0.00	0.00	0.00	0.00
Energy											0.00	90.63	90.63	0.00	0.00	91.19
Mobile											0.00	653.52	653.52	0.03	0.00	654.19
Waste											4.49	0.00	4.49	0.27	0.00	10.05
Water											0.00	2.31	2.31	0.02	0.00	2.99
<b>Total</b>											<b>4.49</b>	<b>746.46</b>	<b>750.95</b>	<b>0.32</b>	<b>0.00</b>	<b>758.42</b>

**3.0 Construction Detail**

**3.1 Mitigation Measures Construction**

**3.2 Grading - 2013**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	3.25	3.25	0.00	0.00	3.26
<b>Total</b>											<b>0.00</b>	<b>3.25</b>	<b>3.25</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	0.16	0.16	0.00	0.00	0.16
<b>Total</b>											<b>0.00</b>	<b>0.16</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>

**3.3 Building Construction - 2013**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Off-Road											0.00	184.98	184.98	0.03	0.00	185.65
<b>Total</b>											<b>0.00</b>	<b>184.98</b>	<b>184.98</b>	<b>0.03</b>	<b>0.00</b>	<b>185.65</b>

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	tons/yr				MT/yr					CO2e			
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2		CH4	N2O	
Hauling									0.00		0.00			0.00			0.00
Vendor									0.00		21.02			21.02			21.04
Worker									0.00		23.58			23.58			23.62
<b>Total</b>									<b>0.00</b>		<b>44.60</b>			<b>44.60</b>		<b>0.00</b>	<b>44.66</b>

**3.4 Paving - 2013**

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	tons/yr				MT/yr					CO2e			
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2		CH4	N2O	
Off-Road									0.00		5.26			5.26		0.00	5.28
Paving									0.00		0.00			0.00		0.00	0.00
<b>Total</b>									<b>0.00</b>		<b>5.26</b>			<b>5.26</b>		<b>0.00</b>	<b>5.28</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	tons/yr				MT/yr				CO2e				
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2		Total CO2	CH4	N2O	
Hauling												0.00	0.00	0.00	0.00	0.00	0.00
Vendor												0.00	0.00	0.00	0.00	0.00	0.00
Worker												0.00	0.67	0.67	0.00	0.00	0.67
<b>Total</b>												<b>0.00</b>	<b>0.67</b>	<b>0.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.67</b>

**3.5 Architectural Coating - 2013**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	tons/yr				MT/yr				CO2e				
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2		Total CO2	CH4	N2O	
Archit. Coating												0.00	0.00	0.00	0.00	0.00	0.00
Off-Road												0.00	1.28	1.28	0.00	0.00	1.28
<b>Total</b>												<b>0.00</b>	<b>1.28</b>	<b>1.28</b>	<b>0.00</b>	<b>0.00</b>	<b>1.28</b>

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2	CH4	N2O	CO2e
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	0.26	0.26	0.00	0.00	0.26
<b>Total</b>											<b>0.00</b>	<b>0.26</b>	<b>0.26</b>	<b>0.00</b>	<b>0.00</b>	<b>0.26</b>

**4.0 Mobile Detail**

**4.1 Mitigation Measures Mobile**

- Increase Density
- Increase Diversity
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2	CH4	N2O	CO2e
Mitigated											0.00	653.52	653.52	0.03	0.00	654.19
Unmitigated											0.00	969.86	969.86	0.04	0.00	970.79
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Library	1,349.76	1,117.20	611.76	2,052,656	1,357,307
Parking Lot	0.00	0.00	0.00		
<b>Total</b>	<b>1,349.76</b>	<b>1,117.20</b>	<b>611.76</b>	<b>2,052,656</b>	<b>1,357,307</b>

#### 4.3 Trip Type Information

Land Use	Miles				Trip %	
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Library	9.50	7.30	7.30	52.00	43.00	5.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00

#### 5.0 Energy Detail

#### 5.1 Mitigation Measures Energy

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated											0.00	57.74	57.74	0.00	0.00	58.10
Electricity Unmitigated											0.00	57.74	57.74	0.00	0.00	58.10
Natural Gas Mitigated											0.00	32.89	32.89	0.00	0.00	33.09
Natural Gas Unmitigated											0.00	32.89	32.89	0.00	0.00	33.09
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>



## 6.0 Area Detail

### 6.1 Mitigation Measures Area

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Mitigated											0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated											0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

### 6.2 Area by SubCategory

#### Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Landscaping											0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>											0.00	0.00	0.00	0.00	0.00	0.00

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

Category	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr							MT/yr
Mitigated					2.31	0.02	0.00	2.99
Unmitigated					2.39	0.02	0.00	3.06
<b>Total</b>	NA	NA	NA	NA	NA	NA	NA	NA

### 7.2 Water by Land Use

#### Unmitigated

Land Use	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Mgal	tons/yr							MT/yr
Library	0.750934 / 1.17454					2.39	0.02	0.00	3.06
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
<b>Total</b>						<b>2.39</b>	<b>0.02</b>	<b>0.00</b>	<b>3.06</b>

**Mitigated**

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr							
Library	0.750934 /					2.31	0.02	0.00	2.99
Parking Lot	1.10289 /					0.00	0.00	0.00	0.00
	0 / 0								
<b>Total</b>						<b>2.31</b>	<b>0.02</b>	<b>0.00</b>	<b>2.99</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr							
	MT/yr							
Mitigated					4.49	0.27	0.00	10.05
Unmitigated					4.49	0.27	0.00	10.05
<b>Total</b>	NA	NA	NA	NA	NA	NA	NA	NA

8.2 Waste by Land Use

Unmitigated

Land Use	Waste Disposed tons	ROG tons/yr	NOx tons/yr	CO tons/yr	SO2 tons/yr	Total CO2 MT/yr	CH4 MT/yr	N2O MT/yr	CO2e MT/yr
Library	22.1					4.49	0.27	0.00	10.05
Parking Lot	0					0.00	0.00	0.00	0.00
<b>Total</b>						<b>4.49</b>	<b>0.27</b>	<b>0.00</b>	<b>10.05</b>

To: Dawn Merkes, Group 4 Architecture  
From: David Parisi, PE, TE, Parisi Transportation Consulting  
CC: Lorraine Weiss, Design and Development Review, City of Larkspur  
Neal Toff, Director of Planning and Building, City of Larkspur  
Date: February 11, 2013  
Subject: Rose Garden Community Facility Master Plan

The purpose of this memorandum is to assess the potential transportation-related impacts related to the Rose Garden Community Facility Master Plan. The memorandum provides a description of the existing transportation conditions, as well as those planned or under construction as a part of the Rose Garden residential development project. It also provides a discussion of potential transportation impacts related to the Community Facility Master Plan.

## **SETTING**

This section describes the existing transportation conditions, as well as those currently planned or under construction, for the project area.

## **ROADWAY NETWORK**

Currently, Doherty Drive is 40 feet wide measured curb to curb adjacent to the project site. It has two 12-foot wide travel lanes and an eight-foot marked shoulder in each direction. While parking is prohibited in the shoulder, it serves as both a bicycle lane and drop-off/pick-up zone for Hall Middle School.

To the west of Larkspur Plaza Drive, Doherty Drive's westbound lane widens and forms two lanes, one to turn right and one to turn left onto Magnolia Avenue. Its intersection with Magnolia Avenue is signalized.

To the east, Doherty Drive crosses over Larkspur Creek. Between the bridge and Riviera Circle, Doherty Drive was recently reconstructed. It includes a vehicular travel lane in each direction, as well as Class II bicycle lanes.

Doherty Drive, from the Larkspur Creek Bridge to Magnolia Avenue, is planned to be widened to 48 feet between curbs to accommodate a vehicular travel lane in each direction, a left-turn lane, and Class II bicycle lanes in each direction. This improvement will be in conjunction with the Rose Garden development project.

The Doherty Drive/Larkspur Plaza intersection is currently controlled with a stop sign facing Larkspur Plaza traffic. As part of the above improvements, this intersection will be signalized and left turn lanes will be added to Doherty Drive.

The Doherty Drive/Piper Park intersection is controlled with a stop sign facing Piper Park. This intersection will continue to be stop sign-controlled in the future. A left turn lane will be added on Doherty Drive, serving Piper Park.

The project site will be served from Rose Lane, which will extend opposite Larkspur Plaza Drive. Rose Lane will be 26 feet wide, which will accommodate one vehicular travel lane in each direction, as well as parallel parking along the eastern side of the roadway. Rose Lane will intersect with a driveway serving the shopping center to the west.

Orchid Lane will be peripheral to the southern edge of the project site. Orchid Lane will be 26 feet wide, with parallel parking along the northern side of the roadway.

## TRAFFIC OPERATING CONDITIONS

This study focuses its traffic level of service analysis at three intersections along Doherty Drive: Magnolia Avenue, Larkspur Plaza, and Piper Park. The selection of these study intersection was based upon the project's estimated vehicle trip generation and its potential effect on key intersections. Level of service analysis was conducted for the commute hours during the morning and late afternoon/evening. At signalized intersections, the City sets level of service "D" as the minimum acceptable condition. For unsignalized intersections, level of service "C" is the minimum acceptable condition as noted in General Plan Circulation Policy d and Section 18.14.10 (J) of the City Municipal Code. Tables 1 and 2 provide qualitative descriptions of level of service conditions.

**Table 1. Signalized Intersection Level of Service Criteria**

Level of Service	Average Control Delay	Description
A	$\leq 10.0$ sec./veh.	Operations with very slight delay, with no approach phase fully utilized.
B	10.1 – 20.0 sec./veh.	Operations with slight delay, and an occasional approach phase is fully utilized.
C	20.1 – 35.0 sec./veh.	Operations with average delay. Individual cycle failures begin to appear.
D	35.1 – 55.0 sec./veh.	Operations with tolerable delay. Many vehicles stop and individual cycle failures are noticeable.
E	55.1 – 80.0 sec./veh.	Operations with high delay, up to several signal cycles. Long queues form upstream of intersection.
F	$> 80.0$ sec./veh.	Operation with excessive and unacceptable delays. Volumes vary widely depending on downstream queue

		locations.
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Source: Transportation Research Board, Highway Capacity Manual.

**Table 2. Stop Sign-Controlled Intersection Level of Service Criteria**

Level of Service	Average Control Delay	Description
A	$\leq 10.0$ sec./veh.	Minimal delay for stop-controlled approaches.
B	10.1 – 15.0 sec./veh	Very light congestion; short delays.
C	15.1 – 25.0 sec./veh.	Light congestion; average delays.
D	25.1 – 35.0 sec./veh.	Significant congestion on critical approaches, but intersection is functional. Moderate to lengthy delays.
E	35.1 – 50.0 sec./veh.	Severe congestion with some longstanding queues on critical approaches. Extremely lengthy delays.
F	$> 50.0$ sec./veh.	Extreme congestion, with very high delays and lengthy queues unacceptable to most drivers.

Source: Transportation Research Board, Highway Capacity Manual.

Table 3 reports the existing service levels and average motorist delays at each of the study intersections. Each of the three intersections currently operates acceptably.

**Table 3. Existing Intersection Level of Service and Delay**

Intersection	Traffic Control	Level of Service and Delay	
		AM Peak Hour	PM Peak Hour
Doherty/Magnolia	Signalized	D / 28 sec.	C / 23 sec.
Doherty/Larkspur Plaza	Side-Street Stop	C / 32 sec.	C / 25 sec.
Doherty/Piper Park	Side-Street Stop	B / 14 sec.	B / 15 sec.

Notes: Signalized intersection level of service (LOS) based on average intersection delay, as per methodology in the Highway Capacity Manual (HCM). Side-street stop-controlled LOS based on the worst lane delay, per the HCM.

## TRANSIT NETWORK

Golden Gate Transit presently operates two bus routes in the vicinity. Golden Gate Transit Routes 18 and 22 travel along Magnolia Avenue and have stops near Ward Street in downtown Larkspur. Route 18 operates on weekdays and serves commuters between the College of Marin, Larkspur, Corte Madera and San Francisco. It operates seven southbound buses between 6:05 a.m. and 8:16 a.m., and seven northbound buses between 5:03 p.m. and 7:34 p.m.

Route 22 operates on weekdays, as well as on weekends and holidays. It serves San Rafael, San Anselmo, Ross, Kentfield Larkspur, Corte Madera, Strawberry, Marin City and Sausalito. During weekdays 19 southbound buses serve Larkspur, between 8:02 a.m. and 9:01 p.m., and 24 northbound buses provide service between 7:25 a.m. and 11:27 p.m. Fourteen southbound buses are in service on weekends and holidays between 7:57 a.m. and 8:57 p.m., and 15 northbound buses run between 7:22 a.m. and 9:22 a.m.

Marin Transit Route 117 runs along Doherty Drive and serves Hall Middle School. Its bus stops are located on Doherty Drive midway between Larkspur Plaza Drive and the Piper Park driveway. It operates eastbound along Doherty Drive during the morning, with drop-offs at 8:06 a.m. and 8:07 a.m., and runs westbound during the afternoon with pick-ups at 3:13 p.m. and 3:15 p.m. on Wednesdays and Thursdays and at 3:42 p.m. and 3:44 p.m. on Mondays, Tuesdays and Fridays.

## **PEDESTRIAN AND BICYCLE CONDITIONS**

Currently, both the Doherty Drive/Larkspur Plaza Drive and Doherty Drive/Piper Park driveway intersections are unsignalized and each provides one marked crosswalk across Doherty Drive, as well as marked crosswalks across both legs of the side street. During Hall Middle School commencement and adjournment periods, school crossing guards control traffic at the intersections so students can cross.

The vast majority of students traveling to and from school use the Larkspur Plaza Drive crosswalk. Recent counts showed over 130 students crossing at this location during a 15-minute morning period, contracting with only nine crossings during the same time at Piper Park. Most students live west of the school.

The north side of Doherty Drive has a continuous five-foot sidewalk. On the south side of Doherty Drive, the sidewalk is ten feet wide. West of the project site, the sidewalk narrows to five feet. East of the site, a new 12-foot wide multi-use pathway was recently constructed, extending from the east end of the Larkspur Creek bridge to Riviera Circle.

As a part of the Rose Garden development project, the 12-foot wide multi-use pathway is planned to be extended along the periphery of the project site. This pathway will be constructed westerly to Magnolia Drive. In addition, in conjunction with the signalization of the Doherty Drive/Larkspur Plaza Drive intersection, all four legs of the intersection will have crosswalks and pedestrian signals.

Separated sidewalks are proposed along Rose Lane and Orchid Lane as part of the Rose Garden development. A 4.5-foot wide sidewalk is proposed along the west side of Rose Lane and a 12-foot wide sidewalk is proposed along the east side in the vicinity of the project. An 8.5-foot sidewalk is proposed along the north side of Orchid Lane, with a 4.5-foot wide sidewalk on the south side.

## **PARKING CONDITIONS**

On-street parking in the vicinity of the project site is currently limited. However, there are several off-street sites in proximity. These include the Larkspur Plaza lot (170 spaces), the Nazari Property lot (21 spaces), the railroad right-of-way (10 spaces), and Piper Park (110 spaces).

As discussed previously, Rose Lane and Orchid Lane will serve the project site. On-street parallel-oriented parking will be provided on both of these roadways, including 10 spaces on Orchid Lane adjacent to the site and nine spaces on Rose Lane.

## ENVIRONMENTAL IMPACTS

This section provides a discussion of potential transportation impacts related to the Rose Garden Community Facility Master Plan.

### TRIP GENERATION

The project would consist of a Community Facility ranging in size from 20,000 square feet to 24,000 square feet. To be conservative and estimate the higher number of vehicle-trips that the project could generate, this study assumes that the community facility would be 24,000 square feet.

The facility would consist of a mix of community center and library uses. Vehicle trip generation studies have been conducted by the Institute of Transportation Engineers (ITE) for these separate uses. The ITE trip generation rates generally reflect suburban settings and assume almost all trips to these uses are by vehicles destined solely to these uses. In other words, the ITE trip generation rates do not fully consider that many trips to and from the proposed use would actually be made by transit, bicycle, or by foot, or may be made by a vehicle already traveling along Doherty Drive (“passby trip”). Thus, with the Community Facility’s proximity to downtown Larkspur, Piper Park, Hall Middle School and Redwood High School, and residential uses, a high level of trips will be made by transit, bicycle, or by foot. In addition, it is likely that many vehicle trips to and from the site would be linked with other vehicle trips or already passing by the site. It is estimated that about 60 percent of the Community Facilities trips would consist of primary vehicle trips.

A 10,000 square foot community center was approved as part of the Central Larkspur Area Specific Plan. Previous traffic projections for study area intersections included estimated traffic associated with a 10,000 square foot facility, assuming almost all trips were vehicle trips.

Table 4 provides an estimate of the number of additional vehicle trips the proposed Community Facility could generate.

**Table 4. Project Trip Generation**

Conditions	AM Peak Hour		PM Peak Hour		Daily	
	In	Out	In	Out	In	Out
<b>Vehicle Trip Rates (per 1,000 SF)</b>	0.876	0.464	1.94	2.43	17.6	17.6
<b>24,000 SF Community Facility</b>	21	11	47	58	422	422
<b>60% Primary Vehicle Trips</b>	<b>13</b>	<b>7</b>	<b>28</b>	<b>35</b>	<b>253</b>	<b>253</b>
<b>Less 10,000 SF Center per CLASP</b>	[10]	[6]	[5]	[12]	[82]	[82]
<b>Maximum Difference</b>	<b>3</b>	<b>1</b>	<b>23</b>	<b>23</b>	<b>98</b>	<b>98</b>

Source: Institute of Transportation Engineers, Trip Generation, 9<sup>th</sup> Edition; Central Larkspur Area Specific Plan

A 24,000 square foot Community Facility would be estimated to generate a total of 20 vehicle trips during the weekday a.m. peak hour, 63 vehicle trips during the p.m. peak hour, and 506 vehicle trips over the course of the day. This would result in 4 additional a.m. peak hour vehicle trips and 46 additional p.m. peak hour vehicle trips compared to the 10,000 square foot community center facility approved as part of the Central Larkspur Area Specific Plan. It would result in 196 additional weekday vehicle trips over the course of a weekday.

It was estimated that 73 percent of the site-generated vehicle trips would be to and from the east along Doherty Drive, while 27 percent would be to and from the west (with 14 percent via Magnolia Drive to the north and 13 percent via Magnolia Drive to the south), consistent with the trip distribution estimates from the Central Larkspur Area Specific Plan.

## TRAFFIC

The project's potential additional 4 weekday a.m. peak hour vehicle trips and 46 weekday p.m. peak hour vehicle trips were assigned to the three study intersections. Table 5 presents the estimated resulting intersection service levels and average motorist delays. The results in Table 5 assume all traffic associated with the Rose Garden development.

**Table 5. Project Conditions Intersection Level of Service and Delay**

Intersection	Traffic Control	Level of Service and Delay	
		AM Peak Hour	PM Peak Hour
Doherty/Magnolia	Signalized	D / 28 sec.	C / 24 sec.
Doherty/Larkspur Plaza	Signalized	A / 8 sec.	A / 10 sec.
Doherty/Piper Park	Side-Street Stop	B / 12 sec.	C / 20 sec.

Notes: Signalized intersection level of service (LOS) based on average intersection delay, as per methodology in the Highway Capacity Manual (HCM). Side-street stop-controlled LOS based on the worst lane delay, per the HCM.

The additional project-related traffic would retain the study intersections at acceptable service levels. The inclusion of a traffic signal at Doherty Drive/Larkspur Plaza, as well as left turn lanes, will improve the intersection's operations to level of service "A" conditions. The stop sign-controlled intersection at Doherty Drive/Piper Park will slightly improve during the a.m. peak hour due to provision of a new left turn on Doherty Drive serving Piper Park. It will also degrade to level of service "C" conditions during the late afternoon/evening peak hour. Therefore, any impacts would be less than significant.

Two alternative site layouts are currently proposed for the Community Facility: the "north option" and the "southwest option." Both options would have similar circulation patterns, with on-site parking accessed via driveways with Rose Lane and Orchid Lane. They would each have a one-way northbound drop-off lane accessed and egressed via Rose Lane. Both options would also have an angled parking area located just west of Rose Lane, accessed via a one-way southbound lane.

The traffic plan is consistent with the Central Larkspur Area Specific Plan's access and circulation elements, designed to allow smooth flow of traffic through the project area and provide for public safety. Impacts associated with access and circulation elements would be less than significant.

## **TRANSIT**

The project would be served by Golden Gate Transit Routes 18 and 22, which travel along Magnolia Avenue, as well as Marin Transit Route 117 which operates along Doherty Drive, serving Hall Middle School. The bus stops are within walking distance of the project site, and accessed via accessible walkways. The buses retain adequate capacity to accommodate riders to and from the project site.

Public transit would serve the project via routes along Magnolia Avenue and Doherty Drive. Impacts would be less than significant.

## **PEDESTRIAN AND BICYCLE**

The project would be accessed via multiple pedestrian and bicycle routes, including a multi-use pathway along the south side of Doherty Drive, a five-foot wide sidewalk along the north side of Doherty Drive, Class II bicycle lanes in both direction on Doherty Drive, and crosswalks across Doherty Drive, including signalized crosswalks at the Doherty Drive/Larkspur Plaza intersection.

Separated sidewalks are proposed along Rose Lane and Orchid Lane as part of the Rose Garden development. A 4.5-foot wide sidewalk is proposed along the west side of Rose Lane and a 12-foot wide sidewalk is proposed along the east side in the vicinity of the project. An 8.5-foot sidewalk is proposed along the north side of Orchid Lane, with a 4.5-foot wide sidewalk on the south side.

Bicycle parking would be provided on-site.

The project is consistent with the Central Larkspur Area Specific Plan, which includes a system of integrated pedestrian and bicycle routes that enhance existing pedestrian paths and bikeways. Impacts would be less than significant.

## **PARKING**

The City's architect has proposed a parking rate of 3.0 spaces per 1,000 square feet of building area for "convenient parking" – on-site and nearby off-site parking – related to community facilities. This rate is based on best practices and case studies undertaken by the architect and would require 60 convenient spaces for a 20,000 square-foot facility to 72 convenient spaces for a 24,000 square-foot facility.

Community input gathered during the master plan process has identified a high value on maximizing open space. Therefore nearby on-street parking is factored into meeting the above convenient parking requirement. Nine on-street parking spaces are planned to be provided along the east side of Rose Lane as part of the overall Rose Garden development project. Ten spaces are planned to be provided along the north side of Orchid Lane. More than ten additional on-street parking spaces are planned to be available elsewhere in the Rose Garden development project within walking distance to the community facility parcel. In total, more than a dozen on-street spaces may be considered convenient to the Community Facility site.

After factoring in the availability of on-street parking, the City's architect recommends an on-site parking standard of 2.5 spaces per 1,000 square feet of building; this is equivalent to a range of 50 spaces for a 20,000 square-foot facility to 60 spaces for a 24,000 square-foot facility. On-site parking may be provided on either or both parcel "A" (larger parcel to east of Rose Lane) and parcel "B" (smaller parcel to the west side of Rose Lane). If this parking is provided on-site then there would be no parking deficit and no parking impact would result.

As previously stated, due to the Community Facility's proximity to downtown Larkspur, Piper Park, schools, and residential uses, it is likely that many vehicle trips to and from the site would be linked with other vehicle trips. In other words, some patrons may park at another location and walk to the site. In addition, the site is conveniently serviced by public transit, and soon by continuous wide pathways and bicycle lanes. It is likely that a high level of trips would be made by transit, bicycle, or by foot, resulting in lower parking demands.

Community input gathered during the master plan process was favorable to utilizing off-site parking options to meet peak use parking demands. The City's Piper Park has parking that is located across from the Community Facility Parcel to the north of Doherty Drive. Hall Middle School is also directly across Doherty Drive and school peak parking is complementary to the proposed uses of the Community Facilities Parcel. The Community Facility should estimate parking demands for special activities and work with nearby properties to assure parking demands can be met off-site. It is recommended that the facility's special events be coordinated in conjunction with planned activities at Piper Park, Hall Middle School, Redwood High School, and the adjacent shopping center. The Community Facility should also encourage visitors, particularly to special events, to carpool, take public transit, bicycle or walk.

## INITIAL STUDY QUESTIONS

Would the project:

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The project is consistent with the City of Larkspur's Circulation Element of the General Plan, the City's Bicycle and Pedestrian Master Plan, and with the various objectives, policies and standards of the Central Larkspur Area Specific Plan. Its traffic generation would not result in any study intersections operating at less than acceptable service levels. The project would be adequately served by existing and planned pedestrian, bicycle and transit systems.

**Less than significant impact.**

- b) Conflict with applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The project's study area roadways are not subject to Marin County's Congestion Management Program. Regardless, the project's traffic would not result in any study intersection operating at or below unacceptable service level standards. **No impact.**

- 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?

The project will not affect air traffic patterns. **No impact.**

- d) 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?

The project will not affect air traffic patterns. **No impact.**

- e) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project is consistent with the design features per the Central Larkspur Area Specific Plan. The traffic, parking, pedestrian and bicycle features enable smooth and standard access and circulation. **Less than significant impact.**

- f) Result in inadequate emergency access?

The project provides adequate emergency access through its roadway, driveway, and parking lot design features. **Less than significant impact.**

- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The project is consistent with the City of Larkspur's Circulation Element of the General Plan, the City's Bicycle and Pedestrian Master Plan, and with the various objectives, policies and standards of the Central Larkspur Area Specific Plan. Its traffic generation would not result in any study intersections operating at less than acceptable service levels. The project would be adequately served by existing and planned pedestrian, bicycle and transit systems. **Less than significant impact.**



**Matthew Rodriguez**  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Deborah O. Raphael, Director  
700 Heinz Avenue  
Berkeley, California 94710-2721



**Edmund G. Brown Jr.**  
Governor

July 24, 2012

Mr. Brian Olin  
Larkspur Land 8 Owner, LLC  
2220 Douglas Boulevard, Suite 240  
Roseville, California 95661

### APPROVAL OF PARTIAL COMPLETION, FORMER NIVEN NURSERY SITE, LARKSPUR, CALIFORNIA

Dear Mr. Olin:

The purpose of this letter is to approve the Completion Report submitted on June 15, 2012, as a partial completion of the Removal Action Workplan (RAW) submitted on October 14, 2009 and to review the status of the cleanup actions at the Former Niven Nursery site located in Larkspur, California.

On March 17, 2010, the Department of Toxic Substances Control (the Department) approved the RAW to clean up soil and buried cultural resources contaminated primarily with lead. The RAW includes excavation of approximately 1000 cubic yards of contaminated soil from the site and disposal of that soil at an offsite facility. The RAW also includes excavation, physical stabilization, and interment of an undetermined volume of contaminated cultural resources at the site. Under the RAW, interment of the contaminated cultural resources is to take place under the roads to be constructed as part of the final development of the site.

At the meetings of February 14 and April 11, 2012, and in the email dated April 6, 2012, the Department approved modifications to the approved RAW. These modifications included: excavation and offsite disposal of contaminated soil encountered during cleanup and demolition operations, and to stabilize and inter 2,400 cubic yards of contaminated cultural resources at the site.

On June 15, 2012, the Department received a document entitled "Completion Report" which describes tasks in the RAW that have been completed to date. Those tasks largely include completion of all excavation required to meet the Remedial Action Objectives, with offsite disposal of contaminated soil. Also included in the RAW is segregation of discernible cultural resources from the larger body of nondescript sacred

Brian Olin  
July 24, 2012  
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materials, confirmation that the discernible cultural resources are not contaminated, stockpiling of the contaminated cultural resources for future stabilization and interment of contaminated cultural resources beneath the roads at the site.

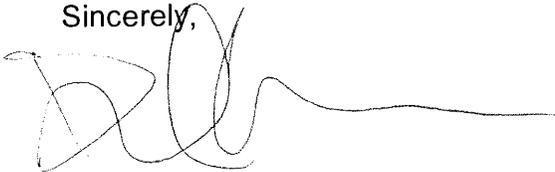
Because the RAW specifies that contaminated cultural resources will be stabilized and interred under roads not yet constructed, the Department cannot at this time certify that all remedial actions have been taken.

However, it is the Department's view that proposed site grading and other activities intended to prepare the site for final development, including grading necessary to construct the roads under which the cultural resources will be interred, can be undertaken. Care must be taken to ensure that grading activities do not preclude completion of the interment task specified in the RAW and subsequent modifications, and that the stockpiles are managed appropriate to minimize the risk that they could pose to public health and the environment, with the sensitivity appropriate to sacred materials, and that the stockpiled cultural resources will be interred consistent with the RAW.

Of course, the Department reserves the right to act on any new information suggesting the presence of additional contamination or independent liability at the site.

If you have any further questions, please contact Milly Pekke at (510) 540-3777 or [Milly.Pekke@dtsc.ca.gov](mailto:Milly.Pekke@dtsc.ca.gov).

Sincerely,



Daniel Murphy, P.E., Chief  
Cleanup Unit  
Brownfields and Environmental Restoration Program, Berkeley Office

