



### 3.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Each environmental section in this chapter presents information in four parts:

- **Environmental Setting** - The Environmental Setting section provides a general overview of the conditions on and adjacent to the planning area.
- **Regulatory Setting** - The Regulatory Setting presents local, state and federal regulations which are relevant to the proposed project.
- **Relevant Project Characteristics** - The Relevant Project Characteristics section provides a more detailed description of the elements of the proposed project that are relevant to the impact analysis for a particular topic. Relevant project information may relate to the size, characteristics and/or location of project elements. Any project elements that may cause impacts, as well as those that may serve to minimize impacts, are identified.
- **Impacts and Mitigation Measures** - The Impacts and Mitigation Measures section provides a brief description of standards that were used to evaluate whether an impact is considered significant based on standards identified in CEQA, the State CEQA Guidelines, and agency policy or regulations. Impacts are identified and analyzed. Mitigation measures that would reduce potentially significant or significant impacts are identified, as well as the significance of the impact after implementation of mitigation measures. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

Referenced graphics are presented at the end of each section.



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## 3.1 Aesthetics and Visual Character

This section describes the aesthetic and visual resource conditions at the planning area and project vicinity and discusses the potential aesthetic impacts that could result from implementation of the proposed project. The primary visual and aesthetic concerns are the general changes in land use and visual character within the planning area from primarily agricultural uses and rural residential uses to urban uses and the potential impacts to existing views from adjacent properties and visual compatibility of the proposed project. Visual impacts were evaluated using a combination of a site reconnaissance; review of photo documentation and aerial photographs, and a review of existing policy documents (e.g. *County of Santa Cruz General Plan* and *City of Watsonville General Plan*).

### 3.1.1 Environmental Setting

#### Visual Image

Visual images dominate an observer's impressions of a region. To understand how visual images influence an observer's impressions, the aesthetic value of an area must first be defined. Aesthetic value is a measure of visual character and scenic quality combined with a viewer's response to the area. Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure to a viewshed varies with the number of viewers, the number of views seen, the distance of the views, and the viewing duration. Viewer sensitivity is related to the extent of the public's concern for particular visual resources.

Both natural and artificial landscape features contribute to perceived visual images and aesthetics value of a view. Aesthetic value is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. Visual images and their perceived visual quality can vary significantly seasonally and even hourly as weather, light, shadow, and the elements that compose the resource change.

#### Definition of Terms

Numerous methods have been developed to characterize the scenic quality of a visual resource and the viewer response to that resource. No standard approach to visual analysis exists. Instead, several approaches that focus on different visual aspects or issues are used. One commonly used set of criteria includes vividness, intactness, and unity.

- Vividness is the visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, as well as in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape.



## Regional Visual Setting

The City of Watsonville is located in the Pajaro Valley along the western base of Santa Cruz County approximately 47 miles south of the City of San José. Neighboring communities within 25 miles of the planning area include the following: the City of Santa Cruz and City of Capitola which are each respectively located 20 miles and 14 miles north of the planning area and the community of Castroville and the City of Salinas which are each respectively located approximately 11 miles to the southwest and 23 miles to the southeast.

The City of Watsonville is surrounded by agricultural land and rangeland, which is offset by the ridgeline of the Santa Cruz Mountains to the north and east. The wooded nature of these mountains provides both color and textural contrast to the agricultural land and urban development in the valley below. The agricultural land and undeveloped ridgeline encircling Watsonville lend to a distinct rural character to an urban viewshed in the central core.

The City's western edge is defined by Highway 1 and agricultural land that extends to the Monterey Bay. Landscape features within and surrounding the City are diverse, exhibiting substantial visual variety. Representing visual features include the overall urban landscape, major arterial thoroughfares, scenic corridors, agricultural lands, open space, and ridgelines.

## Project Setting

The majority of the planning area is currently in agricultural production in strawberries and apple orchards. A seasonal wetland/riparian area is located in the western portion of the planning area on the southern end of Assessor Parcel Number (APN) 048-221-09. Corralitos Creek and associated riparian vegetation trends roughly west to east along the proposed project's northern boundary within APNs 048-231-17 and 048-231-18. On-site topography is approximately 70 to 110 feet above mean sea level (msl) and slopes to the west within the western portion of the site and to the east within the eastern portion of the planning area.

Four single-family residences and various structures used for farming practices are located within the planning area. A private dirt road extending north from Wagner Avenue provides access to the residential use on this parcel. Two residential homes are located within APN 048-211-25 (Michelle and Corwyn Mosiman parcel) adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. A private unimproved road extends south from Atkinson Lane providing access to these residences. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane.

A series of unimproved dirt roads run throughout the planning area to access the agricultural fields and the existing development. The PG&E property (APN: 048-211-24) contains an electrical plant/station at the west side of the planning area. A large overhead electrical utility line bisects the planning area along APN 048-251-09 (Grimmer Orchard parcel) along the northern boundary and cuts north through APN 048-231-17 and APN 048-231-18 (Israel Zepeda parcels). **Figures 2-5 through Figure 2-7: Photographs of the Planning Area**, present photographs of existing conditions at the planning area. **Figure 2-8: Existing Site Characteristics** presents an aerial view of existing site characteristics.

From the planning area, there are views of the Santa Cruz Mountains to the north, as well as surrounding farmland in the Pajaro Valley to the east. Views to and from the planning area are



located along Atkinson Lane looking south and at the terminus of Brewington Avenue looking north into the planning area. The planning area is also visible from surrounding residential uses.

### Surrounding Land Uses

The planning area is bordered by residential development to the south, north and west, and private agricultural fields to the northeast and east. The *City of Watsonville General Plan* designates the land uses surrounding the planning area as: “Specific Plan Area” to the north and northwest; “High Density Residential” to the southwest; and “Medium Density Residential” to the south. The agricultural land uses east of the planning area are located in unincorporated Santa Cruz County. The agricultural uses are designated as “Agriculture Commercial (CA)” in the Santa Cruz County Zoning Code and as “Agriculture” in the *Santa Cruz County General Plan*. **Figure 2-11: Surrounding Land Uses** shows land uses surrounding the planning area.

### Scenic Vistas

A scenic vista is a view of natural environmental, historic and/or architectural features possessing visual and aesthetic qualities of value to the community. The term “vista” generally implies an expansive view, usually from an elevated point or open area. There are no designated scenic vistas in the vicinity of the planning area.

### Scenic Resources and Roadways

Scenic resources include, but are not limited to, trees, rock outcroppings and historic buildings within a scenic highway. According to the California Department of Transportation (Caltrans) Scenic Highway Program (CSHP), Highway 1 and Highway 152, which traverse the City of Watsonville are eligible for the official State Scenic Highway designation. According to the *Santa Cruz County General Plan* portions of Highway 1, State Route 129, State Route 152, and Buena Vista Drive are designated as scenic roadways.

According to Figure 5-2, Scenic Routes in the *City of Watsonville General Plan*, several scenic routes are designated as scenic roadways in the vicinity of the planning area including East Lake Avenue/Highway 152 from Main Street to Carlton Road and Holohan Road, paralleling Corralitos Creek between Green Valley Road and East Lake Avenue. Due to the existing riparian corridor located along Corralitos Creek, views of the planning area from Holohan Road are obscured by existing vegetation.

### Light and Glare

Lighting nuisances can generally be categorized by the following:

- Glare – Intense light that shines directly, or is reflected from a surface into a person’s eyes;
- “Skyglow”/Nighttime Illumination – Artificial lighting from urbanized sources that alters the rural landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features; and
- “Spillover” Lighting – Artificial lighting that spills over onto adjacent properties, which could interrupt sleeping patterns or cause other nuisances to neighboring residents.



The planning area is surrounded on three sides by existing urban development, which contributes to nighttime lighting in the vicinity of the planning area. The eastern boundary of the City consists of existing agricultural land and therefore, the light and glare from existing development within the City is a stark contrast to the fields and a visible boundary in the evening from higher elevations overlooking the City.

### 3.1.2 Regulatory Setting

#### State

##### California Public Resources Code Section 21001(b)

CEQA established that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic and historic environmental qualities.” [CA Public Resources Code Section 21001(b)].

##### Streets and Highway Code, Section 260 et seq. - State Scenic Highway Program

The California Scenic Highway Program (CSHP) was created by the Legislature in 1963 and the purpose is to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. The stated intent (Streets and Highway Code Section 260) of the California Scenic Highway Program is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The CSHP includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

State highways nominated for scenic designation must first be on the statutory list of highways eligible for scenic designation in the State Scenic Highway System. A process for adding eligible highways to the statutory list is described in Section III: Obtaining Eligibility. County highways nominated for scenic designation that are believed to have outstanding scenic values are considered eligible and do not require any legislative action. Both State and county highway nominations follow the same process and have the same requirements. Scenic highway nominations are evaluated using the following criteria:

- The State or county highway consists of a scenic corridor that is comprised of a memorable landscape that showcases the natural scenic beauty or agriculture of California (see definition for “vividness”, under Section III: Step 1, Visual Assessment).
- Existing visual intrusions do not significantly impact the scenic corridor (see definitions for “intactness” and “unity” below, under Section III. Step 1: Visual Assessment).
- Demonstration of strong local support for the proposed scenic highway designation.
- The length of the proposed scenic highway is not less than a mile and is not segmented.



The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. According to the *California Department of Transportation (Caltrans) Scenic Highway Program (CSHP)*, Highway 1 and Highway 152, which traverse the City of Watsonville, are eligible for the official State Scenic Highway designation. However, none of the designated scenic highways are visible from the planning area.

## Local

### County of Santa Cruz General Plan

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994.

The following policies in the Santa Cruz County General Plan are applicable to aesthetics and visual character.

**5.10.5 Preserving Agricultural Vistas (LCP).** Continue to preserve the aesthetic value of agricultural vistas. Encourage development to be consistent with the agricultural character of the community. Structures appurtenant to agricultural uses on agriculturally designated parcels shall be considered to be compatible with the agricultural character of surrounding areas.

**Policy 8.3.1, Clustering for Environmental Protection.** Require development clustering where clustering of units is essential to meet the intent of the General Plan and LCP Land Use Plan to preserve protected use areas such as scenic areas, riparian corridors, coastal lagoons and marshes, or other natural features. (See Conservation and Open Space Element and sections regarding protection of Agriculture and Timber.)

**Policy 8.3.2, Urban Development.** Encourage development clustering in urban areas to achieve maximum open space for recreational use, for the design of focal points, and to promote energy-efficient and cost-efficient site planning.

**Policy 8.4.1 Neighborhood Character.** Based on the Zoning ordinance, require new infill development on vacant land within established residential neighborhoods to be consistent with the existing residential character of the neighborhood, dwelling unit types, and where appropriate, architectural style, allowing for innovative design for clustering or solar design. Project density in established residential neighborhoods shall be compatible with existing neighborhood density, consistent with the land use designations, with incentives given to accommodate elderly and low and moderate income housing, but not to exceed densities designated in the General Plan and LCP Land Use Plan.

**Policy 8.6.5, Designing With the Environment.** Development shall maintain a complementary relationship with the natural environment and shall be low-profile and stepped-down on hillsides.

**Policy 8.6.1, Maintaining a Relationship Between Structure and Parcel Sizes.** Recognize the potential for significant impacts to community character from residential structures which are not well-proportioned to the site; and require residential structures to have a direct relationship to the parcel size as per the Residential Site and Development Standards ordinance.





[City of Watsonville General Plan](#)

The following policies in the 2005 *City of Watsonville General Plan* are applicable to aesthetics and visual character at the planning area.

**Goal 5.1, Visual Resources.** Preserve and enhance the built and natural visual resources within Watsonville.

**Goal 5.2, Community Appearance.** Blend new development and recognized values of community appearance and scenic qualities, and ensure that new development enhances, rather than detracts from its surroundings.

**Goal 5.5, Viewscape.** Preserve scenic rural qualities surrounding the urbanized portions of the Planning Area.

**Goal 5.8, Urban Beautification.** Support public and private urban beautification activities and promote pride in community appearance.

**Goal 5.9, Scenic Corridors.** Protect and enhance views to and from the scenic streets and highways and the Planning Area.

**Goal 5.10, Natural Scenic Resources.** Conserve and enhance natural resources that contribute to the visual, recreational, and educational aesthetics of Watsonville. Such resources include wetlands, sloughs, rivers, lakes, hillsides, and stands of vegetation.

**Policy 5.A, Project Design Review.** The preservation of visual resources shall be accomplished through the design review process.

**Policy 5.B, Design Consistency.** The City shall review new development proposals to encourage high standards or urban design and to ensure that elements of architectural design and site orientation do not degrade or conflict with the appearance of existing structures.

**Policy 5.E, Viewshed Protection.** The City shall use the General Plan Land Use chapter and the design review process to ensure that major new development projects do not impact scenic vistas now enjoyed throughout the City.

**Policy 5.I, Scenic Streets and Highways.** The City shall identify scenic streets and highways in the planning area according to adopted criteria.

**Policy 5.J, Scenic Natural Resources.** The City shall conserve and enhance natural resources that contribute to visual, recreational, and educational aesthetics of Watsonville. Such resources include: wetlands, sloughs, rivers, lakes, hillsides, and stands of vegetation.

**Implementation Measure 5.J.1, Natural Heritage Preservation.** The City should conserve and enhance the natural resource areas of the community that give residents passive recreational and educational opportunities connected with the natural heritage of Watsonville.





**Implementation Measure 5.J.2, Compatability.** Whenever a new development is proposed next to a scenic resource, the design review process will be used to maintain or create visual harmony between new and old structures and their natural setting.

### Watsonville Livable Community Residential Design Guidelines

In 2002, the Watsonville City Council adopted the Watsonville Livable Community Residential Design Guidelines (Guidelines), which served as a basis for developing the Design Guidelines for the Plan.

The document is designed to respond to the growing housing needs of Watsonville's residents. The Guidelines express the City's objective to develop more housing in a way that conserves the desirable characteristics of established neighborhoods, while improving new and evolving neighborhoods.

Based on seven neighborhood and architectural design principles, the Guidelines provide a framework of neighborhood and design criteria for shaping residential development in Watsonville. The Guidelines indicate that new housing should 1) connect to the community, 2) use block patterns that are similar to Watsonville's traditional neighborhoods, 3) avoid flood and wetland areas, and 4) fully integrate parks and community facilities where appropriate.

### 3.1.3 Relevant Project Characteristics

The land use plan for the proposed Specific Plan and PUD are comprised of approximately 34.7 acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for "Residential-High Density" and 14.2 net-acres for "Residential-Medium Density;" 10 net-acres for "Residential – Low Density," and 3.5 acres of parks for expansion of the adjacent Crestview Park. The proposed project would also include 3.1 acres of a designated riparian area and a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated "Environmental Management;" preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated "Urban Open Space;" a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

For the residential component, the proposed project would be comprised of mix of housing types and densities that will meet a variety of the City's future housing needs, including the City's goal of making 50 percent of the units available as affordable housing. Approximately 10.5 acres of the planning area is designated as Residential – High Density (R-HD). This land use designation allows development of up to 20-units per acre. Development within the R-HD components of the proposed project would result in development of two- to three- story multi-family residential projects. The R-HD components of the planning area are expected to yield 210 units.

Approximately 14.2 net acres of the planning area is designated as Residential – Mixed Density (R-MD). The R-MD designation would allow a mix of unit types and densities ranging from 10 to 12 dwelling units per acre. Buildout is expected to average 11-units per acre. Allowed unit types range from attached single-family residences on relatively small lots to three or four-unit clustered development. Given an average expected buildout density of 11 units per acre, the R-MD components of the planning area are expected to yield 156 units.



Approximately 10 net acres of the planning area is designated as Residential – Low Density (R-LD). The R-LD designation would allow a mix of densities ranging from 8 to 10 dwelling units per acre. Buildout is expected to average 9-units per acre. Allowed unit types include detached single-family residences. Given an average expected buildout density of 9 units per acre, the R-LD site is expected to yield 90 units.

#### Development Standards and Design Guidelines

Development standards are included in the proposed Specific Plan for: allowed uses, density, setbacks, lot coverage, building height, parking, and open space. Development standards are intended to provide consistent design guidance for development of the planning area, which provides the vision for the planning area as defined in the MOU, the guiding principles, and the City's Livable Community Design Guidelines. The development standards supersede the zoning requirements as set forth in the City of Watsonville Municipal Code and the Santa Cruz County Code. Development standards are provided for each of the three residential land use designations. The development standards relate to: site planning, architecture, materials and colors, landscaping, and lighting.

Several objectives in the design guidelines within the proposed Specific Plan are applicable to the aesthetic and visual character of future development at the planning area:

#### *Site Planning*

- Where natural features exist, such as wetlands and drainages, open spaces should be preserved and used to frame and define residential areas.
- Grading should limit the visual distinction between graded and adjacent natural landforms and be contoured to blend into adjacent open spaces.
- Varied building heights are encouraged, both to provide visual interest and give the appearance of a collection of smaller structures. Building heights at the edge of the subdivision should be considered within the context of the project's surroundings, the adjacent uses, and should create a transition from the heights of adjacent existing residential development rather than form abrupt height changes.
- Arrange unit types to provide a logical transition between existing neighborhoods and higher density portions and provide complete consistent streetscapes along existing street frontages.
- Orient buildings and associated improvements to minimize noise, light, glare, and other visual impacts to adjacent residential neighborhoods.

#### *Architecture*

- Create visual interest through the use of articulated facades, forms, and color, but maintain consistent architectural style and details on both the exposed facades of corner lots. Break up large wall and roof surfaces using three dimensional elements on facades, such as chimneys, balconies, bay windows or dormers.

#### *Landscaping*

- All site areas not covered by structures, walkways, driveways or parking spaces should be landscaped.



- Parking lots should be generously landscaped to provide shade, reduce glare and provide visual interest. Parking lots shall provide shade trees (of at least 15 gallon in size) for each four (4) spaces.
- Incorporate natural features and existing trees into the landscape plan to the extent practical and feasible.

### Lighting

- Place and design outdoor lighting around buildings, in parking lots, and along streets to prevent excessive “spillover” glare into adjacent residential and habitat areas and minimize night sky illumination.
- Lighting in parking areas should be arranged to prevent direct glare into adjacent dwelling units and onto neighboring uses/properties.
- Incorporate cutoffs into light fixtures to screen the view of light sources from residences.
- Provide safe but environmentally sensitive walkway lighting along the wetland buffer.

## 3.1.4 Impacts and Mitigation Measures

### Criteria for Determining Significance

In accordance with the CEQA, State CEQA Guidelines, and agency and professional standards, a project impact would be considered significant if the project would:

- Eliminate or substantially adversely affect a scenic vista or scenic resource, including substantially block existing views of scenic vistas or resources (e.g. mountains, ocean, etc.);
- Substantially degrade the existing visual character or quality of the site and surroundings, i.e., be incompatible with the scale or visual character of the surrounding area or substantially detract from the integrity, character and/or aesthetic character of the neighborhood;
- Create a new source of substantial light or glare, such that it poses a hazard or nuisance; and/or
- Have a demonstrable negative aesthetic effect.

### Methodology

The analysis of potential aesthetic impacts within this section is based on a site reconnaissance of the planning area and surrounding area, the *Santa Cruz County General Plan*, the *Watsonville General Plan*, and photographs of the planning area and project vicinity. The site reconnaissance and photo documentation of the planning area was performed by RBF Consulting in the Spring of 2008. Photos were taken to characterize the visual character of the planning area and surrounding area.

Potential impacts were assessed by forecasting the anticipated appearance of future development at the planning area based on the proposed Specific Plan. Nighttime lighting and day and nighttime glare are assessed qualitatively through comparative analysis of existing and proposed



conditions and evaluation of design guidelines and development standards included in the proposed Specific Plan. Existing sources of light and glare are identified and quantified where possible.

## Project Impacts and Mitigation Measures

### Degradation of a Scenic Highway/Scenic Vista

**Impact 3.1-1:** The proposed project would alter the aesthetic character of the planning area, however the planning area is not visible from a designated scenic road or scenic vista. Therefore, the proposed project would have a less than significant impact.

A scenic vista is generally described as a clear, expansive view of significant regional features possessing visual and aesthetic qualities of value to the community. Views to and from the planning area are located along Atkinson Lane looking south and at the terminus of Brewington Avenue look north into the planning area. Surrounding residential uses enjoy private views of the planning area. The planning area includes existing agricultural crops and an orchard which contribute to the rural agricultural character of this portion of the City. See Impact 3.1-2 for an analysis of the change in the aesthetic character of the planning area.

A “substantial” alteration is characterized by a negative “sense of loss” of character or unique resources or a change that is an obvious and disharmonious modification of the overall scene, to the extent that the change clearly dominates the view. According to the *City of Watsonville General Plan*, the planning area is not within a designated visually sensitive corridor or a clearly defined sensitive viewshed. Figure 5-2, Scenic Routes in the *City of Watsonville General Plan*, designates several scenic routes in the vicinity of the planning area include East Lake Avenue/Highway 152 from Main Street to Carlton Road and Holohan Road paralleling Corralitos Creek between Green Valley Road and East Lake Avenue. The existing riparian corridor located along Corralitos Creek substantially screens views of the planning area from Holohan Road in the vicinity of the planning area and therefore the proposed project would not result in a substantial alteration from this viewpoint along this designated scenic roadway in the *City of Watsonville General Plan*. Portions of the planning area and the Wagner Avenue extension would be visible from East Lake Avenue/Highway 152. However, the Wagner Avenue extension would widen an existing roadway and therefore would not be considered a substantial alteration over existing conditions. Views of the planning area from East Lake Avenue/Highway 152 would be distant and somewhat obscured and therefore, the proposed project would not result in a substantial alteration in the views from this designated scenic roadway.

Policy 5.J, Scenic Natural Resources in the City of Watsonville General Plan states that the “City shall conserve and enhance natural resources that contribute to visual, recreational, and educational aesthetics of Watsonville. Such resources include: wetlands, sloughs, rivers, lakes, hillsides, and stands of vegetation.” The proposed project includes preservation of 3.1 acres of a designated riparian area and a 1.6 acre riparian buffer adjacent to Corralitos Creek, as well as preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer area in order to enhance the visual character of the proposed project and ensure consistency with this policy.

Policy 5.10.5, Preserving Agricultural Vistas (LCP) in the *Santa Cruz County General Plan* encourages development to be consistent with the agricultural character of the community in order to preserve agricultural vistas. The proposed project includes 14.1 acres for preservation of a 200-foot agricultural buffer located on the eastern boundary of the planning area adjacent to the



existing agricultural fields, which would provide continuity with the surrounding agricultural uses and views. Although future development would be visible from surrounding residential uses, there is not an identifiable viewpoint or elevated vista on these adjacent properties from which the proposed project would ultimately detract in a significant way. In addition, the planning area was identified as a primary area of growth in Measure U, which was passed by a vote of the people in order to direct new growth to designated areas within and around the City of Watsonville in order to protect agricultural lands and environmentally sensitive areas. Therefore, implementation of the proposed project would not result in a degradation of a scenic vista or roadway. This is considered **less than significant** impact.

#### Degradation of the Visual Character of the Planning Area and Surrounding Area

**Impact 3.1-2: The proposed project would alter the existing aesthetic character of the planning area through the conversion of agricultural land and rural residential uses to development of the planning area into primarily high and medium density residential uses. This is considered a less than significant impact.**

The proposed project would result in the conversion of agricultural and rural residential uses to urban uses, which would change the existing views to and from surrounding properties. The proposed Specific Plan includes development standards and design guidelines for: allowed uses, density, setbacks, lot coverage, building height, parking, and open space. Design guidelines provided in the proposed Specific Plan are intended to provide consistent guidance for development of the planning area, which provides the vision for the planning area as defined in the MOU, the guiding principles, and the City's Livable Community Design Guidelines. The design guidelines relate to: site planning, architecture, materials and colors, landscaping, and lighting. Several design guidelines (as listed above in the Relevant Project Characteristics section) ensure a unified and consistent character in order to be responsive to adjacent neighborhoods; provide for a variety of styles and high quality architecture; and include materials and colors that would provide an enduring quality and enhance the architectural and massing concepts for the buildings. In addition, the guidelines provide for limiting distinction between graded and adjacent natural landforms as well as a logical transition between existing neighborhoods and higher density development within the planning area. Change in the visual character of the planning area would occur over time as the proposed project would be built-out in two phases, with the 16-acre County Site proceeding after consideration of the PUD by the Board of Supervisors in June 2009 and development of the City portion of the Specific Plan proceeding after January 1, 2010 following consideration of the annexation and Sphere of Influence (SOI) amendment by LAFCO, in accordance with Measure U.

The overall change in the visual character of the planning area from a primarily agricultural and rural residential uses to more urban and suburban land uses would result in a permanent change in the rural character of the planning area. However, the planning area is bordered by residential development to the south, north and west, and private agricultural fields to the northeast and east. The proposed project would compliment the surrounding development and would include a 200-foot agricultural buffer on the eastern edge of the planning area to provide some continuity with existing agricultural uses. The proposed project would be of quality design and incorporates design features, such as preservation and enhancement of the existing wetland and riparian buffer area, which would enhance the visual character of the planning area, providing a visual buffer and visual screen. Design of the proposed project would be required to comply with strict design standards and design guidelines in the proposed Specific Plan to ensure the proposed project is of quality design and is consistent with Policy 5.B, Design Consistency in the *City of Watsonville*



*General Plan.* Implementation of these measures would ensure that the proposed project does not result in a significant degradation of the visual character of the planning area and surrounding area. Therefore, the proposed project would have a **less than significant impact**.

#### Increased Light and Glare

**Impact 3.1-3: The proposed project would introduce additional daytime glare and the amount of nighttime lighting. The increased direct and residual light and glare is considered a less than significant impact.**

Implementation of the proposed project would result in the installation of new sources of light into an area that contains a moderate amount of lighting with the exception of lighting from surrounding residential uses. The main sources of daytime glare are from sunlight reflecting from structures with reflective surfaces such as windows. Subsequent development within the planning area would include new residential uses containing structures and other potential sources of glare. A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential lighting, street lighting, lights associated with vehicular travel (i.e., car headlights) and any new security lighting associated with future development in the Specific Plan area.

New light sources would result in an incremental increase in ambient daytime and nighttime light at the planning area and surrounding area, potentially affecting the adjacent residential neighborhoods located on the north, west, and south of the planning area. The proposed Specific Plan includes design guidelines which address lighting at the planning area. Design guidelines (as listed above in the Relevant Project Characteristics section) include standards to ensure that lighting is architecturally designed and does not create excessive “spillover” glare into adjacent residential and habitat areas and minimize night sky illumination. Future development within the Specific Plan area would be required to comply with the design guidelines by demonstrating the proposed exterior lighting is non-intrusive quality while still providing an adequate amount of light. Compliance with the design guidelines would therefore ensure that the proposed Specific Plan does not introduce substantial light and glare, which would pose a hazard or nuisance. Therefore, the proposed project would have a **less than significant impact**.





## 3.2 Agricultural Resources

This section of the Draft EIR describes the agricultural resources at the planning area and surrounding the project site. The discussion of potential impacts within this section focuses on the conversion of agricultural crops within the project site; compatibility of the proposed project with surrounding farmland; and conflicts with zoning for agricultural use or a Williamson Act contract. This analysis is based primarily on information contained within the *City of Watsonville General Plan*, the California Department of Conservation *Important Farmlands Map for Santa Cruz County* and the *Soil Survey of Santa Cruz County*, and a site reconnaissance of existing conditions within the planning area.

### 3.2.1 Environmental Setting

#### Soil Characteristics and Farmland Classifications

Agricultural resources are often defined in terms of their soil characteristics and farmland class. The classification systems most commonly used to define these parameters are the Land Capability Classification (LCC) and the Store Index rating system, which describes soil characteristics, and the Farmland Mapping and Monitoring Program, which describes farmland classes. Each of these classification systems are described below.

#### Land Capability Classification System

The LCC system is used by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), to determine a soil's agricultural productivity. The LCC indicates the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops and the way they respond to management. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). The "prime" soil classification indicates the absence of soil limitations which, if present, would not require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production. Specific subclasses are also utilized to further characterize soils.

A general description of soil classification, as defined by the NRCS, is provided below in **Table 3.2-1: Land Capability Classification**.





**Table 3.2-1: Land Capability Classification**

<b>Class</b>	<b>Definition</b>
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants, or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants, require conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants, require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove soils that limit their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plant production and restrict their use to recreation, wildlife habitat, or water supply, or to aesthetic purposes.

Source: USDA, Natural Resources Conservation Service

[Storie Index Rating System](#)

The Storie Index Rating System ranks soil characteristics according to their suitability for agriculture. Ratings range from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production, to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definitions of grades, as defined by the NRCS, are provided below in **Table 3.2-2: Storie Index Rating System**.



Table 3.2-2: Storie Index Rating System

Grade	Index Rating	Definition
1 – Excellent	80 through 100	Soils are well suited to intensive use for growing irrigated crops that are climatically suited to the region.
2 – Good	60 through 79	Soils are good agricultural soils, although they may not be so desirable as Grade 1 because of moderately coarse, coarse, or gravelly surface soil texture; somewhat less permeable subsoil; lower plant available water holding capacity, fair fertility; less well drained conditions, or slight to moderate flood hazards, all acting separately or in combination.
3 – Fair	40 through 59	Soils are only fairly well suited to general agricultural use and are limited in their use because of moderate slopes; moderate soil depths; less permeable subsoil; fine, moderately fine or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 – Poor	20 through 39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil textures than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or fair to poor fertility levels, all acting alone or in combination.
5 – Very Poor	10 through 19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 – Nonagricultural	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.

Source: USDA, Natural Resources Conservation Service

### Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 by the State Department of Conservation (DOC) to continue the Important Farmland mapping efforts begun in 1975 by the NRCS. The intent of the NRCS was to produce agricultural resource maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the NRCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land’s suitability for agricultural production; suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland Maps are derived from the NRCS soil survey maps using the LIM criteria.

Since 1980, the State of California has assisted the NRCS with completing its mapping in the state. The FMMP was created in the DOC to continue the mapping activity with a greater level of detail. Under the FMMP, the DOC modified the LIM criteria for use in California. The LIM criteria in California utilize the NRCS and Storie Index Rating systems, but also consider



physical conditions such as irrigation, soil temperature range, depth of the ground water table, flooding potential, rock fragment content and rooting depth.

Important Farmland Maps for California are compiled using the modified LIM criteria, as described above, and current land use information. The minimum mapping unit is ten acres unless otherwise specified. Units of land smaller than ten acres are incorporated into the surrounding classification. The Important Farmland Maps identify five agriculture related categories plus three non-agriculture listings: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban Land, Other Land, and Water. Each of these categories is described briefly below:

- Prime Farmland. Prime Farmland has the physical and chemical characteristics, including soil quality, length of growing season, and moisture supply, that are required to sustain long-term agricultural crop production. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime farmlands must have been used for the production of irrigated crops at some time during the two update cycles (four years) prior to the FMMP's most recent mapping date and cannot have been used for non-agricultural uses.
- Farmland of Statewide Importance. Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- Unique Farmland. Unique Farmland is comprised of lower quality soils that are used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards. The land must have been cropped at some time during the two update cycles (i.e., four years) prior to the mapping date.
- Farmland of Local Importance. Farmland of Local Importance is land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the Board of Supervisors in each county. Soils used for Christmas tree farms and nurseries, and that do not meet the definition for Prime, Statewide, or Unique are classified as Farmland of Statewide Importance in Santa Cruz County.
- Grazing Land. Grazing Land refers to open space that is generally unsuited for farming due to hydrology, soils and vegetation but which can support livestock grazing. The minimum FMMP mapping unit for grazing land is 40 acres.
- Urban and Built-Up Land. Urban and Built-Up Land is defined as areas with a building density of at least one structure per one and one-half acres, or approximately six structures to a ten-acre parcel.



- **Other Land.** Other Land is defined as land that does not meet the criteria of any other FMMP category. Common examples include low density rural developments; brush, timber, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is also mapped as Other Land.
- **Water.** Water is defined as perennial water bodies with an extent of at least 40 acres.

## Regional Setting

### Farmland Conversion in Santa Cruz County

One of the underlying premises of agricultural conversion is that proximity of agricultural land to urban uses increases the monetary value of the agricultural land, either directly through formal purchase offers, indirectly through recent sales in the vicinity, or through the extension of utilities and other urban infrastructure into productive agricultural areas.

The conversion of Important Farmlands, as designated by the California Department of Conservation, in Santa Cruz County from 2002 to 2004 is presented below in **Table 3.2-3: Santa Cruz County Farmlands, 2002-2004**. According to the California Farmland Conversion Report 2002-2004 published by the California Department of Conservation, Division of Land Resource Protection (DOC 2006a), 669 acres of prime farmland was converted to urban uses between 2002 and 2004 in Santa Cruz County.

Table 3.2-3: Santa Cruz County Farmlands, 2002-2004

Land Use Category	Total Acreage Inventoried		Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
	2002	2004				
Prime Farmland	15,540	15,214	415	89	504	-326
Farmland of Statewide Importance	3,367	3,268	131	32	163	-99
Unique Farmland	5,557	3,367	351	161	512	-190
Farmland of Local Importance	811	757	90	36	126	-54
<b>Total Important Farmland</b>	<b>25,275</b>	<b>24,606</b>	<b>987</b>	<b>318</b>	<b>1,305</b>	<b>-669</b>

Source: DLRP 2006

## Project Setting

Approximately 37.5 acres of the planning area are currently in agricultural production as strawberry fields and apple orchards. A seasonal wetland/riparian area is located in the western portion of the planning area on the south end of APN 048-221-09. Corralitos Creek and associated riparian vegetation trends roughly west to east along the proposed project's northern boundary within APNs 048-231-17 and 048-231-18. On-site topography is approximately 70 to 110 feet above mean sea level (msl) and slopes to the west within the western portion of the site



and to the east within the eastern portion of the site. Various unimproved farm roads traverse the project site.

Five single-family residences and various structures used for farming practices are located on the project site. One residence and agricultural related structures and equipment are located within APN 048-231-18 (Israel Zepeda property) near the northeastern boundary of the project site. Two residential homes are located within APN 048-211-25 (Michelle and Corwyn Mosiman parcel) adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. A private unimproved road extends south from Atkinson Lane providing access to these residences. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane.

A series of unimproved dirt roads run throughout the planning area to access the agricultural fields and the existing development. The PG&E property (APN: 048-211-24) contains an electrical plant/station at the west side of the planning area and south of APN: 048-211-25. A large overhead electrical utility line bisects the planning area along APN: 048-251-09 (Grimmer Orchard parcel) along the northern boundary and cuts north through APN 048-231-17 and APN 048-231-18 (Israel Zepeda parcels). **Figures 2-4** through **Figure 2-6: Photographs of the Planning area** presents existing conditions at the project site. **Figure 2-7: Existing Site Characteristics** presents existing site characteristics.

#### Surrounding Land Uses

The planning area is bordered by residential development to the south, north and west, and private agricultural fields to the northeast and east. The *City of Watsonville General Plan* designates the land uses surrounding the planning area as: “Specific Plan Area” to the north and northwest; “High Density Residential” to the southwest; and “Medium Density Residential” to the south. The agricultural land uses east of the planning area are located in unincorporated Santa Cruz County. The agricultural uses are designated as “Agriculture Commercial (CA)” in the Santa Cruz County Zoning Code and as “Agriculture” in the *Santa Cruz County General Plan*. **Figure 2-12: Surrounding Land Uses** shows land uses surrounding the project site.

#### Soil Characteristics

According to the *Soil Survey of Santa Cruz County*, the planning area is comprised of five soil series. Four soil series are located within the planning area and an additional soil series located within the right-of-way of the proposed Wagner Avenue extension. The eastern and southern portions of the planning area are comprised of approximately 19.2 acres of Baywood loamy sand, 0 to 2 percent slopes and 25.3 acres of Elder sandy loam, 0 to 2 percent slopes. The western and northern portions of the planning area are comprised of approximately 7.1 acres of Pinto loam, 2 to 9 percent slopes, and approximately 14.2 acres of Watsonville loam, 2 to 15 percent slopes. The remaining 2.4 acres covers the wetland/riparian area and is classified as water. Option A of the proposed Wagner Avenue extension is comprised of between 0.3 acres of Baywood loamy sand, 0 to 2 percent slopes; 1.06 acres of Conejo loam, 0 to 2 percent slopes; and 0.15 acres of Elder sandy loam, 0 to 2 percent slopes. Option B of the proposed Wagner Avenue extension is comprised of approximately 0.21 acres of Baywood loamy sand, 0 to 2 percent slopes and 0.59 acres of Conejo loam, 0 to 2 percent slopes. These options are based on the right-of-way acquisition that may be needed for the proposed extension of Wagner Avenue. Soil map units at



the planning area are illustrated in **Figure 3.2-1: Site Soils**. The soils at the planning area consist of the following characteristics:

*Baywood loamy sand, 0 to 2 percent slopes*

Baywood loamy sand is a very deep, somewhat excessively drained soil. Permeability of this soil is rapid, surface runoff is slow, and the erosion hazard is slight. As with Elder sandy loam, most areas of this soil are cultivated for apples, strawberries, and brussel sprouts. Unlike the Elder sandy loam, this soil is typically found in areas susceptible to flooding.

*Elder sandy loam, 0 to 2 percent slopes*

Elder sandy loam is a deep, well-drained soil. The permeability of this soil is moderate and the erosion hazard is either not present or slight. Elder sandy loam is an agriculturally productive soil throughout the region and is intensively cultivated for strawberries, lettuce, and apples. The soil has few constraints for construction of homes.

*Pinto loam, 2 to 9 percent slopes*

Pinto loam is a very deep, moderately well drained soil that typically occurs on coastal terraces and old alluvial fans. Permeability of this soil is slow, surface runoff is slow to medium, and the erosion hazard is slight to moderate. Many areas containing this soil type are used for row crops such as Brussel sprouts. The shrink-swell potential ranges from low to high between surface and subsurface layers in the Pinto loam (2 to 9 percent slopes). A special design is needed for building pads, roads, and other structures to compensate for this soil's low strength and limited shrink-swell potential.

*Watsonville loam, 2 to 15 percent slopes*

Watsonville loam is a very deep, somewhat poorly drained soil. The soil has a subsoil clay layer about 21 inches thick. Permeability of this soil is very slow, runoff is slow or moderate, and the erosion hazard is slight to moderate. The shrink-swell potential is low at the surface and high in the subsurface layer. The soil's shrink-swell potential and low strength act to constrain its use for home sites. A special design is needed for building pads, roads, and other structures to compensate for the soil's shrink-swell potential and low strength.

*Conejo Loam, 0 to 9 percent slopes*

The Conejo loam soil series consists of very deep, well drained soils on alluvial fans and plains. These soils formed in alluvium derived from sedimentary rock. Slope ranges from 0 to 9 percent. The mean annual precipitation ranges from 20 to 30 inches, and the mean annual air temperature is about 58 degrees F.

The Land Capability Classification and the Storie Index Rating of each soil is described below in **Table 3.2-4: Soils Within Planning Area**.



Table 3.2-4: Soils Within Planning Area

Soil Map Units	Acres	Land Capability Classification (LCC) <sup>3</sup>	Storie Index Rating	Grade <sup>1</sup>
Baywood loamy sand, 0 to 2 percent slopes	19.41 to 19.5 <sup>2</sup>	IIIs-e	72	2
Elder sandy loam, 0 to 2 percent slopes	25.3 to 25.45 <sup>2</sup>	IIIs-e	90	1
Pinto loam, 2 to 9 percent slopes	7.1	Ie-III	62	2
Watsonville loam, 2 to 15 percent slopes	14.2	IIIe-III	36	4
Conejo Loam, 0 to 9 percent slopes	0.59 to 1.06 <sup>2</sup>	I	85	1
Water	2.4	--	--	--
Note: 1. Grade 1 – Well suited to intensively grown irrigated crops. Grade 2 – Good irrigated soils. Grade 4 – Poorly suited to agriculture. 2. Acreage varies based on amount of right-of-way acquisition that may be needed for the Wagner Avenue extension (Option A or Option B). 3. Land Capability Classifications assume that the soil is irrigated.				

Source: Natural Resource Conservation Service

Important Farmland Mapping

The California *Department of Conservation Santa Cruz County Important Farmlands Map* designates approximately 42.4 acres of the planning area as “Prime Farmland,” 1.4 acres as “Farmland of Statewide Importance,” 6.7 acres as “Urban and Built-Up Land,” and 16.2 acres of “Other Land.” The proposed right-of-way for the Wagner Avenue extension would be comprised of 1.15 acres of “Prime Farmland” for Option A and 0.8 acres of “Prime Farmland” under Option B. Prime Farmland has the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. This land has the soil quality, growing season and moisture supply needed to produce sustained high yields. Farmland of Local Importance is land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. As shown in **Figure 3.2-2: Farmland Mapping and Monitoring Program (FMMP) Farmland**, the majority of the Prime Farmland at the planning area is located in the eastern portion of the planning area within Phase 2 (City site).

In addition, construction of the off-site improvements for the proposed Wagner Avenue extension would result in the conversion of an additional 0.8 acres of “Prime Farmland” under the 36 foot right of way (Option B) and 1.51 acres for the 52 foot right of way (Option A) for a total maximum conversion of 45.31 acres of Important Farmland.





### 3.2.2 Regulatory Setting

#### State

##### Land Conservation Act (Williamson Act)

The California Land Conservation Act, better known as the Williamson Act, has been the state's premier agricultural land protection program since its enactment in 1965. The Williamson Act is a means to preserve farmlands and ranchlands and to restrict the uses of agricultural and open space lands to farming and ranching uses during the length of the contract period. The Williamson Act Program was also envisioned as a way for local governments to integrate the protection of open space and agricultural resources into their overall strategies for planning urban growth patterns.

The Williamson Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The vehicle for these agreements is a rolling term 10-year contract. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. The minimum term for a contract is 10 years. However, some jurisdictions exercise the option of making the term longer, up to 20 years. Contracts renew automatically every year unless the non-renewal process is initiated. Contracts may be exited at the option of the landowner or local government by, among others, initiating the process of "term non-renewal."

While the Land Conservation Act sets forth its own definition of prime agricultural lands, these lands are not necessarily identified by the Williamson Act as a higher priority for enrollment. As a result, the Land Conservation Act Program protects primarily range and grazing land as opposed to the state's highest quality (prime) agricultural land. Roughly two-thirds of the land enrolled under Land Conservation Act contracts on a statewide basis is classified as nonprime. Section 51201(c) of the California Government Code (California Land Conservation Act of 1965 or the Williamson Act) defines prime agricultural lands as:

All land that qualifies for rating as class I or class II in the Natural Resource Conservation Service (NRCS) Land Use Capability Classifications (LCC).<sup>1</sup>

Land, which qualifies for rating 80 through 100 in the Storie Index Rating.

Land, which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.

None of the parcels in the planning area are currently in a Williamson Act contract.

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<sup>1</sup> The LCC system is used by the USDA-NRCS to determine a soil's agricultural productivity. The LCC rates soils from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I).



Cortese-Knox-Hertzberg Local Government Reorganization Acts

The Cortese-Knox-Hertzberg Local Government Reorganization Acts of 1985 and 2000 govern the incorporation of new cities and city boundaries. The 1985 Act gives authority to the Local Agency Formation Commission in each county to consider proposals for incorporation and annexations. The Act also established five criteria for determining the quality of agricultural lands. Land is defined as “prime agricultural land” if it meets any of the listed criteria (Section 56064). **Table 3.2-5: Cortese Knox Hertzberg Local Government Reorganization Act of 2000-Criteria for Prime Agricultural Land Discussion** below, provides a discussion of the proposed project relative to the five criteria for evaluating agricultural lands.

Table 3.2-5: Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 Criteria for Prime Agricultural Land Discussion

Standard	Discussion
Does the land qualify for rating as Class I or Class II in the Natural Resources Conservation Service land use classification system?	According to the NRCS <i>Soil Survey of Santa Cruz County</i> , the planning area is comprised of four soil series. The eastern and southern portions of the planning area are comprised of approximately 17.7 acres of Baywood loamy sand, 0 to 2 percent slopes and 24.6 acres of Elder sandy loam, 0 to 2 percent slopes. The western and northern portions of the planning area are comprised of approximately 7.1 acres of Pinto loam, 2 to 9 percent slopes, and approximately 14.2 acres of Watsonville loam, 2 to 15 percent slopes. The remaining 2.4 acres covers the wetland/riparian area and is classified as water. The NRCS Land Capability Classification (LCC) for the Baywood loamy sand and the Elder Sandy Loam is Class IIIs-e, the LCC for the Pinto loam soil is Class IIe-III, and the LCC for the Watsonville loam is Class IIIe-III. Therefore, only the Pinto Loam soil classifies as a Class II soil.
Does the land qualify for rating 80 through 100 Storie Index Rating?	Approximately 24.6 acres of the planning area contains the Elder sandy loam soil series. The proposed right-of-way for the Wagner Avenue extension is comprised of 0.15 acres of the Elder sandy loam soil series and 1.06 acres of Conejo loam soil series for Option A and 0.59 acres of Conejo loam for Option B. Each of these soils are considered Grade 1 soils that are well suited to intensively irrigated crops. The remaining portions of the planning area contain soils that have Storie Index ratings between 36 and 72 and therefore do not qualify.
Does the land support livestock used for the production of food and which has an annual carry capacity of at least one animal per acre?	The planning area does not currently support livestock.



Standard	Discussion
Is the land planted with fruit or nut-bearing trees, vines, bushes, or crops which have a non-bearing period of less than five years and which will return on an annual basis not less than \$400 per acre?	The planning area has approximately 25.2 acres that are currently planted as an apple orchard. These orchards likely produce a return of more than \$400 per acre.
Has the land returned from production an annual gross value of not less than \$400 per acre for three of the last five years?	

## Local

### [County of Santa Cruz General Plan and Local Coastal Program](#)

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies are applicable to agricultural resources.

**Policy 5.13.20, Conversion of Commercial Agricultural Lands (LCP).** Consider development of commercial agricultural lands to non-agricultural uses only under the following circumstances:

- (a) It is determined that the land is not viable for agriculture and that it is not likely to become viable in the near future (See policy 5.13.21);
- (b) Findings are made that new information has been presented to demonstrate that the conditions on the land in question do not meet the criteria for commercial agricultural land; and
- (c) The conversion of such land will not impair the viability of, or create potential conflicts with, other commercial agricultural lands in the area.

**Policy 5.13.21, Determining Agricultural Viability (LCP).** Require a viability study conducted in response to an application which proposes to convert agricultural land to non-agricultural land to include, but not limited to, an **economic feasibility evaluation** which contains at least:

- (a) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of filing the application.
- (b) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of filing the application.



- (c) An identification of the geographic area used in the analyses. The area shall be of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for the land stated in the application.

Recommendations regarding viability shall be made by the Agricultural Policy Advisory Commission based on evaluation of the viability study and the following criteria: parcel size, sizes of adjacent parcels, degree of non-agricultural development in the area, inclusion of the parcel in utility assessment districts, soil capabilities and topography, water availability and quality, and proximity to other agricultural use.

**Policy 5.13.22, Conversion to Non-Agricultural Uses Near Urban Areas (LCP).** Prohibit the conversion of agricultural lands (changing the land use designation from Agriculture to non-agriculture uses) around the periphery of urban areas except where it can be demonstrated that the viability of existing agricultural use is already severely limited by conflicts with the urban uses, where the conversion of land would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development and where the conversion of such land would not impair the viability of other agricultural lands in the area. Within the Sphere of Influence (SOI) of the City of Watsonville, no conversion of agricultural land is allowed which would adversely affect the city's General Plan affordable housing goals, unless determined to be of an overriding public benefit. (See policy 2.1.5.)

**Policy 5.13.23, Agricultural Buffers Required (LCP).** Require a 200 foot buffer area between commercial agricultural and non-agricultural land uses to prevent or minimize potential land use conflicts, between either existing or future commercial agricultural and non-agricultural land uses.

**Policy 5.13.24, Agricultural Buffer Findings Required for Reduced Setbacks (LCP).** A 200 foot buffer setback is required between habitable development and commercial agricultural land (including residential development, farm labor housing, commercial or industrial establishments on commercial agricultural land), unless a lesser distance is established as set forth in the Agricultural Land Preservation and Protection ordinance. Any amendments to the language of the agricultural buffer ordinance shall require a finding demonstrating that agricultural lands shall be afforded equal or greater protection with the amended language.

**Policy 5.13.25, Agricultural Policy Advisory Commission Review (LCP).** Require the following projects to be reviewed by the Agricultural Policy Advisory Commission for the purpose of recommending an appropriate setback and/or buffer area of non-developable land adjacent to commercial agriculture lands, consistent with the Agriculture Preservation and Protection ordinance:

- (a) Habitable structures within 200 feet of commercial agricultural lands.
- (b) Land divisions within 200 feet of commercial agricultural lands.

Density Credit shall be given for the buffer area.

**Policy 5.13.31, Agricultural Notification Recordation for Land Divisions (LCP).** Continue to require an Agriculture Notification statement to be included on the Final Map or Parcel Map and in each parcel deed for land divisions within 200 feet of commercial agriculture land in



accordance with the Subdivision Regulations ordinance. The purpose of the statement is to inform property owners about adjacent agricultural practices, and advise them to be prepared to accept such inconvenience or discomfort from normal operations.

**Policy 5.13.32, Agricultural Statement of Acknowledgement (LCP).** In accordance with the Agricultural Land Preservation and Protection ordinance and the Subdivision Regulations ordinance, continue to require, prior to issuance of building permits, the recordation of a Statement of Acknowledgement or evidence that the statement has already been made part of the parcel deed, for parcels within 200 feet of commercial agricultural land as identified on the Agricultural Resources Maps and General Plan and LCP Land Use Maps. The purpose of the statement is to inform property owners about adjacent agricultural practices, and advise them to be prepared to accept such inconvenience or discomfort from normal operations. Where a reduction of the 200 foot buffer is approved, such deed notice shall also contain a statement that the permanent provisions and maintenance of the specified buffer setback shall be required, and shall include a notice of any requirement for fencing, vegetative screening and/or other barrier that has been incorporated as part of the required buffer.

**Policy 5.13.33, Density on Parcels Adjacent to Commercial Agricultural Lands.** Require, in rural areas, (i.e., areas outside the Urban Services Line and Rural Services Line), minimum densities of 2.5 net developable acres for newly created residential parcels which adjoin Commercial Agricultural Land except where the General Plan and LCP Land Use Map provides for suburban densities and

- (a) The new parcels constitute infill development within the mapped Suburban designation,
- (b) The resulting parcel sizes will be no smaller than the smallest existing conforming parcel within that designation which adjoins said agricultural land, and
- (c) The Agricultural Policy Advisory Commission has recommended that parcel sizes smaller than 2.5 net developable acres will not conflict with or otherwise hamper or discourage long-term commercial agricultural uses of said agricultural lands.

#### [Santa Cruz County Local Agency Formation \(LAFCO\)](#)

Santa Cruz County LAFCO is responsible for coordinating logical and timely changes in local governmental boundaries (reorganizations), including SOI amendments, annexations, incorporations of new cities and boundary changes in special districts such as schools, assessment, and utility and service districts. The objectives of LAFCO are: to encourage efficient service areas for services provided by cities, counties, and special districts; to guide urban development away from prime agricultural lands and open space resources; and to promote orderly growth and discourage urban sprawl.

LAFCO has adopted policies to guide the agency in its decisionmaking process. The primary purpose of the standards are to identify issues and requirements associated with boundary change proposals in order to promote achievement of LAFCO goals and objectives. The following policies and standards are applicable to the proposed project. Additional LAFCO policies and standards are included in **Section 3.9: Land Use and Planning**.



**Policy 3.1 - Prime Agricultural Lands.** Urban growth shall be guided away from prime agricultural lands, unless such action would not promote planned, orderly, efficient development of an area.

**Standard 3.1.1.** A change of organization is considered to promote the planned, orderly, and efficient development of an area when:

- 1) It is consistent with the spheres of influence maps and policies adopted by LAFCO for the affected agencies.
- 2) It conforms to all other policies and standards contained herein.

**Policy 3.2 – Infill.** LAFCO shall encourage the urbanization of vacant lands and non-prime agricultural lands within an agency's jurisdiction and within an agency's sphere of influence before the urbanization of lands outside the jurisdiction and outside the sphere of influence, and shall encourage detachments of prime agricultural lands and other open space lands from cities, water districts, and sewer districts if consistent with the adopted sphere of influence of the affected agency.

**Standard 3.2.1.** The priorities for urbanization are:

- 1) open-space lands within existing boundaries,
- 2) open-space lands within an adopted sphere of influence,
- 3) prime agricultural lands within existing boundaries,
- 4) prime agricultural lands within an adopted sphere of influence.

**Standard 3.2.2.** Proposals involving urbanization of prime agricultural lands within adopted spheres of influence shall not be approved unless it can be demonstrated that (a) there is insufficient land in the market area for the type of land use proposed, (b) there is no vacant land in the subject jurisdiction available for that type of use.

[City of Watsonville General Plan](#)

The following goals, policies, and implementation measures in the 2005 *City of Watsonville General Plan* are applicable to agricultural resources.

**Goal 3.3, Agricultural Land Use.** Foster the continuation of agriculture in the Pajaro Valley.

**Policy 3.B, Annexation.** The City shall pursue annexation of undeveloped and underdeveloped land between the City limit and the urban limit line.

**Policy 3.F, Agricultural Land Conservation.** The City shall plan for the preservation and enhancement of important agricultural soils by encouraging the County and LAFCO to prohibit continued urbanization of lands beyond the urban limit line and by encouraging the retention of land beyond the urban limit line for long-term agricultural purposes.



**Goal 9.7, Agricultural Soils.** Limit the urbanization of productive agricultural soils to only those parcels contiguous with existing urban use, best suited for urban development, and within the urban limit line.

**Policy 9.E, Soil Conservation.** The City shall prevent degradation of local soil resources through erosion control improvement and grading guidelines.

**Implementation Measure 9.E.6 Agricultural Land Conservation.** The City shall encourage retention of agricultural land beyond its urban limit line.

[City of Watsonville Agricultural Buffer Policy](#)

The purpose of the City of Watsonville Agricultural Buffer Policy is to assist in the preservation of agriculture uses on Santa Cruz County Commercial Agriculture (CA) Zoned lands adjacent to the City's urban growth boundary and to address urban/agriculture conflicts by providing buffers between certain urban uses and agriculture activities.

The policy requires an agriculture buffer of not less than 200 lineal feet, located entirely within the urban area, and not on any portion of the County CA-zoned lands. The policy also requires preparation of an Agriculture Buffer Report that specifies fencing/ wall requirements at the boundary, vegetative buffering, signage, long-term maintenance and other related design considerations, to minimize potential land-use conflicts. To mitigate sound, sight, trespassing, and/or other urban/agricultural conflicts, the buffer needs to include at least one or more of the following:

Eight-foot chain link fencing

- Mounding
- Natural buffers
- Solid/Masonry fencing
- Thorny bushes, trees, vines and other extensive landscaping

Other than fencing, regional drainage facilities, and underground utilities, only landscape and related non-accessible open space components are allowed within the first 150 feet of the buffer.

Within the remaining 50 feet of buffer, the following may be permitted:

- a. Public streets and roads (including curb, gutter, sidewalk, bicycle lanes, and parkway plantings) necessary to serve the project, provided any sidewalk and on-street parking is located on the development side of the roadway;
- b. Regional and local storm-drainage improvements, and other underground utilities; and
- c. If a public street or road is not required for travel access, pedestrian and bicycle trails as identified on the City's General Plan Transportation Element will be allowed and will be located adjacent to the development area.

Recording of an agriculture buffer/conservation easement is required for the entire buffer area in conjunction with a Final Map or prior to issuance of a Certificate of Occupancy. The City or City approved non-profit conservation entity may hold the easement. The buffer report must indicate





the location of required signage, which will notify that the area is an agriculture buffer, subject to no trespass, and indicate ownership and contact information.

### 3.2.3 Relevant Project Characteristics

The proposed Specific Plan and PUD designate approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated as “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated as “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes a 200-foot interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

Future development within the planning area would result in the conversion of approximately 42.4 acres of “Prime Farmland” and 1.4 acres of “Farmland of Statewide Importance” as designated on the *California Department of Conservation Santa Cruz County Important Farmlands Map* to urban uses. In addition, construction of the off-site improvements to the proposed Wagner Avenue extension would result in the conversion of an additional 0.8 acres of “Prime Farmland” under the 36-foot right of way (Option B) and 1.51 acres for the 52-foot right of way (Option A) for a total maximum conversion of 45.31 acres of Important Farmland.

### 3.2.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with the CEQA, State CEQA Guidelines, and agency and professional standards, a project impact would be considered significant if the project would:

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.

Conflict with existing zoning for agricultural use, or a Williamson Act contract.

Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

#### Methodology

The analysis of potential agricultural impacts within this section is based on a site reconnaissance of the planning area and surrounding area, the *City Watsonville General Plan*, the *Santa Cruz County General Plan* and photographs of the planning area and vicinity.



### Important Farmland Conversion

**Impact 3.2-1:** Future development within Phase 2 (City site) of the planning area would result in the conversion of approximately 42.4 acres of Prime Farmland and 1.4 acres of Farmland of Statewide Importance as designated on the *California Department of Conservation Santa Cruz County Important Farmlands Map* to urban uses. In addition, construction of the off-site improvements to Wagner Avenue would result in the conversion of an additional 0.8 acres of Important Farmland under the 36 foot right of way and 1.51 acres for the 52-foot right of way for a total maximum conversion of 45.31 acres of Important Farmland. This would be considered a significant impact.

According to the *California Department of Conservation Santa Cruz County Important Farmlands Map*, the planning area contains approximately 6.7 acres of “Urban and Built-Up Land,” 42.4 acres of “Prime Farmland,” 1.4 acres of “Farmland of Statewide Importance,” and 16.2 acres of “Other” land (DOC 2006b). As shown in **Figure 3.2-2: Farmland Mapping and Monitoring Program Designations**, the Prime Farmland and Farmland of Statewide Importance is located in the eastern portion of the planning area outside of the City’s existing SOI within Phase 2 (City site) of the proposed project. There would be no impact to Important Farmland within the City or County Phase 1 of the proposed project.

The 2005 *City of Watsonville General Plan EIR* recognized that approximately 580 acres of Prime Farmland located within the SOI would eventually be converted to urban uses. The City Council adopted a Statement of Overriding Considerations for the conversion of the Prime Farmland to urban use when it certified the EIR for the 2005 *City of Watsonville General Plan*. Following adoption of the 2005 *City of Watsonville General Plan* by the City in 1994, Measure U was passed by 60 percent of the voters in 2002. Measure U directs new growth to designated areas within and around the City of Watsonville in order to protect agricultural lands and environmentally sensitive areas, while providing the means for the City to address housing and job needs for the next 20 to 25 years. Measure U established an urban limit line (ULL) along the northern boundary, which excludes land previously included east and west of East Lake Avenue, and directs growth into several unincorporated areas. The three primary areas of growth include the Atkinson Lane, Buena Vista, and Manabe-Burgstrom (now Manabe-Ow) Specific Plan areas. A western boundary west of Highway 1 was defined by Measure U to remain undeveloped.

Since approximately 43.8 acres of the planning area on Assessors Parcel Numbers 048-231-17, 048-231-18, and 048-251-09 within the planning area are located outside of the existing SOI, the conversion of this Important Farmland was not considered in the 2005 *City of Watsonville General Plan*. The *Watsonville Vista 2030 EIR* evaluated the conversion of the Important Farmlands within the ULL, consistent with Measure U within the planning area and the City Council adopted a Statement of Overriding Considerations for the conversion in 2006. However, this section of the EIR does not rely on the Statement of Overriding Considerations that was previously adopted for the *Watsonville Vista 2030 EIR*. In addition, the off-site improvements to the proposed Wagner Avenue extension would result in the conversion of a maximum of an additional 1.51 acres of Prime Farmland in order to widen the roadway for a total maximum conversion of approximately 45.31 acres. Although, the planning area is designated as a future growth area in Measure U, the physical conversion of this Important Farmland was not considered in the 2005 *City of Watsonville General Plan* and therefore the conversion within the planning area would be considered a significant impact.



The County of Santa Cruz and the City of Watsonville contain no policies or implementation programs that require mitigation or offsets for the conversion of Important Farmland. Therefore, there are no feasible mitigation measures available to reduce the impact of agricultural land conversion to a less than significant level. However, if an agricultural compensation program is developed, future development within the planning area would be required to participate in order to address the conversion of prime farmland. Since conversion of Prime Farmland and Farmland of Statewide Importance cannot be reproduced elsewhere, this would be considered a **significant and unavoidable impact** under Phase 2 (City site) for which no feasible mitigation measures are available to reduce the impact to a less than significant level.

#### Conflicts with Existing Agricultural Zoning or a Williamson Act Contract

The northwest corner of the planning area is located within the City limits and the remainder of the planning area is located in unincorporated Santa Cruz County. Approximately one half of the planning area is located within the City's SOI and the entire planning area is located within the City's 25-Year ULL. As shown in **Figure 2-9: Watsonville General Plan Land Use**, the *City of Watsonville General Plan* designates the majority of the planning area as "Specific Plan Area" with a smaller portion designated as "Agricultural" and "Environmental Management" in the northeastern portion of the project site. The *County of Santa Cruz General Plan* designates the majority of the planning area as "Urban Residential-Low Density (R-1)" and "Agriculture," with the PG&E electrical substation parcel designated as "Public Facility" as shown in **Figure 2-10: Santa Cruz County General Plan Land Use**. The portions of the planning area that are currently located within the City Limits are zoned "Single Family Residential-Low Density (R-1)." The remainder of the planning area is located in unincorporated Santa Cruz County is zoned "Agricultural Commercial (CA)" in the eastern portion of the project site; "Residential Single Family (R-1)" in the central and western portion of the project site; and "Public Facility (PF)" in the southwestern portion of the project site. **Figure 2-11: Existing Zoning** presents the zoning designations at the project site.

Upon adoption of the PUD by the County of Santa Cruz, the County site would be rezoned to "Regional Housing Needs Combining District." As defined by Measure U, City may consider adoption of the Specific Plan and certification of the EIR as a responsible agency following certification of the EIR by the County of Santa Cruz. Upon adoption of the Specific Plan, the proposed project would require an annexation and Sphere of Influence (SOI) amendment request for those portions of the planning area located outside of the City limits and the SOI. The annexation and SOI amendment would require approval by the Santa Cruz County Local Agency Formation Commission (LAFCO). Once the Final EIR is certified by the County of Santa Cruz, the City of Watsonville, as a responsible agency under CEQA, may consider approval of the Specific Plan and certification of the EIR. Following approval of the Specific Plan and certification of the EIR, a petition may be filed to LAFCO for the annexation and Sphere of Influence boundary adjustment. However, no tentative map shall be approved by the City until after January 1, 2010. Upon completion of these actions, the proposed project would not conflict with the agricultural zoning. There are no Williamson Act contracts or conflicts with any other farmland conservation plans on the project site. Therefore, **no impact** is anticipated.



### Conflict with Surrounding Agricultural Land Uses

**Impact 3.2-2:** The proposed project would place urban land uses adjacent to agricultural uses, which may impair agricultural production and result in land use compatibility conflicts. This is considered a potentially significant impact.

The planning area is adjacent to existing agricultural uses that are located east of the project site. Development of residential uses, as proposed in the Specific Plan and PUD, in proximity to agricultural operations could result in compatibility impacts, encroachment and the disruption of farming operations. Potential conflicts may include dust, odors, noise and pesticide or herbicide run-over. The potential for dust generation associated with existing agricultural operations that would impact the planning area would occur only occasionally when fields are plowed or when bare soils are exposed under high wind conditions. In addition, depending on the time of year, the generation of dust from project construction could negatively impact adjacent agricultural activity.

The proposed project incorporates a 200-foot buffer from the edge of the parcel on the eastern portion of the planning area adjacent to existing agricultural uses. In addition, the proposed project incorporates an interim agricultural buffer within Phase 2 (County site) as shown in **Figure 2-14, Phasing Plan**, which would provide a buffer entirely within the County site prior to development of the Phase 2 (City site) of the proposed Specific Plan. City and County policies require the dedication of an agriculture buffer of not less than 200 lineal feet, located entirely within the project site. Other than fencing, regional drainage facilities, and underground utilities, only landscape and related non-accessible open space components are allowed within the first 150 feet of the buffer. Within the remaining 50 feet of buffer, adjacent to the proposed development area, uses such as public streets and roads, regional and local storm-drainage improvements, and other underground utilities; and pedestrian and bicycle trails are allowed. Implementation of these agricultural buffers as part of the proposed Specific Plan and PUD would minimize conflicts with adjacent agricultural uses. To ensure that proposed buffers are consistent with City and County policies and the proposed Specific Plan and PUD and to notify future residents of potential agricultural/urban conflicts, the following mitigation measures shall be required to reduce **potentially significant impacts** to adjacent agricultural uses to a less than significant level.

### Mitigation Measures

**MM 3.2-2a** Consistent with Policy 5.13.23 (Agricultural Buffers Required) in the *Santa Cruz County General Plan* project applicants shall demonstrate adequate land use separation in conjunction with Final Map consistent with the proposed Specific Plan and PUD for Phase 2 (County site) subject to review and approval by the County of Santa Cruz Planning Department. Final site plans shall include an interim 200-foot agricultural buffer within Phase 2 (County site) consistent with the conceptual land use plan for the proposed Specific Plan and PUD. The buffer distance shall be measured from the edge of the parcel to the nearest residential property line. Other than fencing, regional drainage facilities, and underground utilities, only landscape and related non-accessible open space components are allowed within the first 150 feet of the buffer. Within the remaining 50 feet of buffer, adjacent to the proposed development area, uses such as public streets and roads, regional and local storm-drainage improvements, and other underground utilities; and pedestrian and bicycle trails are allowed. Upon annexation and



rezoning of Phase 2 by the City, the interim 200-foot agricultural buffer within Phase 2 (County site) shall terminate.

- MM 3.2-2b** Consistent with the *City of Watsonville Agricultural Buffer Policy*, project applicants shall demonstrate adequate land use separation in conjunction with Final Map consistent with the proposed Specific Plan and PUD for Phase 2 (City site) subject to review and approval by the City of Watsonville Community Development Department. Final site plans shall include a 200-foot minimum land use buffer along the eastern boundary of the planning area within Phase 2 (City site) of the proposed project consistent with the conceptual land use plan. The buffer distance shall be measured from the edge of the parcel to the nearest residential property line. Other than fencing, regional drainage facilities, and underground utilities, only landscape and related non-accessible open space components are allowed within the first 150 feet of the buffer. Within the remaining 50 feet of buffer, adjacent to the proposed development area, uses such as public streets and roads, regional and local storm-drainage improvements, and other underground utilities; and pedestrian and bicycle trails are allowed.
- MM 3.2-2c** Consistent with Policy 5.13.31 (Agricultural Notification Recordation for Land Divisions) in the *Santa Cruz County General Plan*, project applicants within the planning area shall file a Right-to-Farm Notification Statement to run with the Title as disclosure and notice in deeds at the time of transfer or sale of all properties within the planning area. The statement shall inform any future property owners of the continuation of agricultural activities, including agricultural processing, in the area and shall disclose the potential effects of agricultural activities on adjacent land uses to future residents.

Implementation of the above mitigation measures would ensure that the potential for urban and agricultural land use conflicts are reduced to a **less than significant** level by implementing the land use buffers between future residential development and agricultural areas and by ensuring that new property owners near agricultural land are properly notified of adjacent agricultural practices.

#### Conversion of Adjacent Farmland to Non-Agricultural Uses

The agricultural land uses east of the planning area are located outside of the ULL in unincorporated Santa Cruz County and are designated “Agriculture Commercial (CA)” in the *Santa Cruz County Zoning Code* and as “Agriculture” in the *Santa Cruz County General Plan*. The proposed project incorporates a 200-foot buffer on the eastern portion of the planning area adjacent to existing agricultural uses as a permanent limit to urban development on the eastern border. Measure U established the ULL in order to protect agricultural lands and environmentally sensitive areas, while providing the means for the City to address housing and job needs for the next 20 to 25 years. Since the surrounding agricultural land is located outside of the ULL, significant constraints would preclude conversion of adjacent farmland to urban use. Therefore, **no impact** is anticipated.





### 3.3 Air Quality

This section analyzes the impacts associated with implementation of the proposed project on air quality including short-term construction emissions, long-term operational impacts, and potential impacts on sensitive receptors. Information in this section is derived primarily from the following references and sources:

- U.S. Environmental Protection Agency (EPA)
- Federal Clean Air Act (FCAA)
- National Ambient Air Quality Standards (NAAQS)
- California Air Resource Board (CARB)
- California Clean Air Act (CCAA)
- State Office of Environmental Health Hazard Assessment (OEHHA)
- California Environmental Quality Act (CEQA) Air Quality Guidelines
- Monterey Bay Unified Air Pollution Control District (MBUAPCD)

Global climate change analysis in accordance with AB 32 (Global Climate Change) is contained in **Chapter 4: CEQA Considerations**.

#### 3.3.1 Environmental Setting

##### Regional Setting

##### North Central Coast

The North Central Coast Air Basin (hereinafter “Basin”), which is just south of the San Francisco Bay Area Air Basin, covers an area of 5,159 square miles and consists of the counties of Santa Cruz, San Benito, and Monterey. Marine breezes from Monterey Bay dominate the climate of this portion of the Basin. Westerly winds predominate in all seasons, but are strongest and most persistent during the spring and summer months.

The extent and severity of the air pollution problems in the Basin are a function of the area's natural physical characteristics (weather and topography), as well as human created influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin area.

In general, the air pollution potential of the coastal areas is relatively low due to persistent winds. The Basin is, however, subject to temperature inversions that restrict vertical mixing of pollutants and the warmer inland valleys of the Basin have a high pollution potential.

##### Topography and Meteorology

Topography and meteorology greatly influence air quality. A semi-permanent high pressure cell in the eastern Pacific Ocean is the basic controlling factor in the climate of the Basin. In the summer, the high-pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High pressure cell forming a stable



temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air can inhibit vertical air movement.

Existing mountain ranges in the Basin, including the Santa Cruz Mountains in the north and the Gabilan Range in the east in the Salinas Valley restrict and channel summer onshore air currents. Hot temperatures in the inland valleys warm the ground and intensify onshore airflow during the afternoon and evening. In the fall, the surface winds weaken and the marine layer becomes shallow and eventually dissipates. The airflow is occasionally reversed, creating weak offshore winds. The stationary air mass held in place by the Pacific High pressure cell can allow pollutants to build up over a period of days. These conditions also occur when north or east winds cause pollutant transport from the San Francisco Bay area or the Central Valley into the Basin. In the winter, the Pacific High moves south and has a lesser influence on the Basin. Northwest winds are still dominant in winter, but easterly winds are more frequent. Air quality usually remains good in the winter and early spring due to the absence of deep, persistent inversions and occasional storms. Typically, year-round marine airflow allows coastal areas to maintain good air quality.

The average annual temperature in the City of Watsonville is 67.1 degrees Fahrenheit with August and September as the hottest months with temperatures of 71.8 and 73.2 degrees Fahrenheit respectively and the coldest month in December and January at 60.3 degrees and 60.4 Fahrenheit, respectively. The average rainfall for the area is approximately 21 inches.

Because of the moderating marine influence in the Basin, which decreases with distance from the ocean, monthly and annual spreads between temperatures are greatest inland and smallest at the coast. The planning area is mostly along the coast and therefore the temperature spreads are relatively moderate.

### Sunlight

The presence and intensity of sunlight is another important factor that affects air pollution. Typically, ozone is formed at higher temperatures. In the presence of ultraviolet sunlight and warm temperatures, volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) react to form secondary photochemical pollutants, including ozone.

### Temperature Inversions

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). The highest air pollutant concentrations in the Basin generally occur during inversions.

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air would be mixed and dispersed into the upper atmosphere. However, the region experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the Basin. The cool, damp and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise.





## Local Ambient Air Quality

### Criteria Air Pollutants

Local ambient air quality is monitored by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) and the California Air Resources Board (CARB); refer to **Table 3.3-1: Local Ambient Air Quality Levels**. CARB monitors ambient air quality at approximately 250 air-monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above-ground level; therefore, air quality is often referred to in terms of ground-level concentrations.

The nearest monitoring to the planning area is located at the Watsonville Airport at 444 Airport Boulevard in the City of Watsonville. This station monitors coarse particulate matter (PM<sub>10</sub>) and ozone (O<sub>3</sub>). Other monitoring stations within the project vicinity include the Santa Cruz-Soquel monitoring station located at 2544 Soquel Avenue in the City of Santa Cruz and the Salinas #3 monitoring station located on East Laurel Drive in the City of Salinas. Although both the Salinas #3 and Santa Cruz stations were located outside of the City of Watsonville, they provide a representative sample of the air quality in the Basin. Davenport monitoring station is the only station in the North Central Coast Air Basin that monitors SO<sub>2</sub> and as such is included in **Table 3.3-1: Local Ambient Air Quality Levels**. The following air quality information briefly describes the various types of pollutants monitored at the local stations.

### *Ozone*

Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately ten miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B).

“Bad” ozone is a photochemical pollutant, and needs VOCs, NO<sub>x</sub>, and sunlight to form; therefore, VOCs and NO<sub>x</sub> are ozone precursors. VOCs and NO<sub>x</sub> are emitted from various sources throughout the area. To reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.



Table 3.3-1 Local Ambient Air Quality Levels

Pollutant	Standards (Allowable Amount)		Year	Maximum Concentration <sup>1</sup>	Days (Samples) State/Federal Standards was Exceeded
	California	Federal Primary			
Ozone (O <sub>3</sub> ) for 1 hour <sup>2</sup>	0.09 ppm	0.12 ppm	2003	0.074	0/0
			2004	0.087	0/0
			2005	0.070	0/0
			2006	0.072	0/0
			2007	0.074	0/0
Ozone (O <sub>3</sub> ) for 8 hour <sup>2</sup>	0.07 ppm	0.08 ppm	2003	0.063	NA/0
			2004	0.071	NA/0
			2005	0.061	0/0
			2006	0.058	0/0
			2007	0.061	0/0
Carbon Monoxide(CO) <sup>4</sup>	9.0 ppm (8 hour)	9.0 ppm (8 hour)	2003	1.09	0/0
			2004	1.21	0/0
			2005	0.86	0/0
			2006	1.04	0/0
			2007	1.15	0/0
Nitrogen Dioxide(NO <sub>2</sub> ) <sup>4</sup>	0.18 ppm(1 hour)	0.053 ppm annual average	2003	0.053	0/NA
			2004	0.139	0/NA
			2005	0.052	0/NA
			2006	0.067	0/NA
			2007	0.050	0/NA
Particulate Matter(PM <sub>10</sub> ) <sup>2,5,6</sup>	50 mg/m <sup>3</sup> (24 hours)	150 mg/m <sup>3</sup> (24 hours)	2003	43.0	NA /0
			2004	37.0	NA /0
			2005	37.0	0/0
			2006	42.0	0/0
			2007	46.0	0/0
Fine Particulate Matter(PM <sub>2.5</sub> ) <sup>3,6</sup>	12 mg/m <sup>3</sup> annual arithmetic mean	65mg/m <sup>3</sup> (24 hours)	2003	15.0	NA/0
			2004	22.6	NA/0
			2005	21.7	0/0
			2006	12.6	0/0
			2007	18.3	0/0
Sulfur Dioxide (SO <sub>2</sub> ) <sup>7</sup>	0.04 ppm (24 hours)	0.14 ppm (24 hours)	2003	0.005	0/0
			2004	0.005	0/0
			2005	0.004	0/0
			2006	0.005	0/0
			2007	0.004	0/0

NOTES:

- 1 - Maximum concentrations are measured over the same period as the California standard.
- 2 - Watsonville Airport air quality monitoring station is located at 444 Airport Boulevard, Watsonville, California 95706.
- 3 - Santa Cruz-Soquel air quality monitoring station is located at 2544 Soquel Av, Santa Cruz, California 95062.
- 4 - Salinas #3 air quality monitoring station is located at East Laurel Drive, Salinas, California 93901.
- 5 - PM<sub>10</sub> exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
- 6 - PM<sub>10</sub> and PM<sub>2.5</sub> exceedances are derived from the number of samples exceeded, not days.
- 7 - Davenport monitoring station is the only station in the North Central Coast Air Basin that monitors SO<sub>2</sub> and is located at the intersection of Marine View and Center Avenue, Davenport, California 95006

Source: Aerometric Data Analysis and Measurement System, Summaries from 2003 to 2007 as found at <http://www.arb.ca.gov/adam/>



While ozone in the stratosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system and other tissues. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels.

Ozone also damages natural ecosystems (such as forests and foothill communities) and damages agricultural crops and some man-made materials (such as rubber, paint, and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

The state ozone standard is 0.09 parts per million (ppm), averaged over one hour. The O<sub>3</sub> levels at the Watsonville monitoring station ranged between 0.070 ppm and 0.087 ppm between years 2003 and 2007. Therefore, the 1-hour state standard was not exceeded between 2003 and 2007. Effective July 26, 2007, the CARB designated the Basin as a nonattainment area for the state O<sub>3</sub> standards.

#### *Carbon Monoxide*

Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, unconsciousness and death. Attainment designations for the state and federal CO standards are made on a county basis. For the state 1-hour and 8-hour CO standards, Monterey County is classified as an attainment area and Santa Cruz and San Benito Counties are unclassified. For the federal 1-hour and 8-hour CO standards, all three counties (Monterey County, Santa Cruz County, and San Benito County) are designated as unclassified/attainment. State and federal standards were not exceeded between 2003 and 2007.

#### *Nitrogen Dioxide*

Nitrogen oxides (NO<sub>x</sub>) are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. Nitrogen dioxide (NO<sub>2</sub>), often used interchangeably with NO<sub>x</sub>, is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO<sub>2</sub> occur in areas that have a high concentration of combustion sources (e.g. motor vehicle engines, power plants, refineries, and other industrial operations).

NO<sub>x</sub> can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO<sub>x</sub> concentrations that is much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO<sub>2</sub> may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Attainment designations for the state and federal NO<sub>2</sub> standards are made on an air-basin basis. The Basin designation is attainment under the state 1-hour and annual standards and unclassified/attainment under the federal annual standard. State and federal standards were not exceeded between 2002 and 2006.



### *Coarse Particulate Matter (PM<sub>10</sub>)*

PM<sub>10</sub> is suspended particulate matter that is smaller than 10 microns (ten one-millionths of a meter). PM<sub>10</sub> develop from sources such as road dust, diesel soot, combustion products, construction operations and dust storms. PM<sub>10</sub> scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003 the CARB amended the statewide 24-hour particulate matter standards to 50 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25). The federal 24-hour standard of  $150 \mu\text{g}/\text{m}^3$  was retained. The state standard for PM<sub>10</sub> is  $50 \mu\text{g}/\text{m}^3$  averaged over 24 hours; This standard was not exceeded between 2003 and 2007 at the Watsonville Airport air quality monitoring station. The federal standard for PM<sub>10</sub> is  $150 \mu\text{g}/\text{m}^3$  averaged over 24 hours; this standard was not exceeded between 2003 and 2007 at the Watsonville Airport monitoring station. The Basin is designated as non-attainment under the state 24-hour and annual standards and attainment under the federal 24-hour standard.

### *Fine Particulate Matter (PM<sub>2.5</sub>)*

Because of recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both state and federal PM<sub>2.5</sub> standards have been created. Particulate matter impacts primarily affect infants, children, the elderly and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new PM<sub>2.5</sub> standards; industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards. The federal Standard is  $35 \mu\text{g}/\text{m}^3$  over an average of 24 hours.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised because of increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts from particulate matter exposure was determined to be large and wide-ranging. Based upon a desire to set clean air goals throughout the state, the CARB created a new annual average standard for PM<sub>2.5</sub> at  $12 \mu\text{g}/\text{m}^3$ . As indicated in **Table 3.3-1: Local Ambient Air Quality Levels**, PM<sub>2.5</sub> levels have not been exceeded between 2003 and 2007. On January 5, 2005, the EPA published the area designations and classifications for the PM<sub>2.5</sub> National Ambient Air Quality Standards (NAAQS) in the federal Register.

Attainment designations for the state and federal PM<sub>2.5</sub> standards are made on an air-basin basis. The Basin is designated as attainment under the state annual standard and also under the federal 24-hour and annual standards.

### *Sulfur Dioxide*

Sulfur dioxide is a colorless, pungent gas belonging to the family of sulfur oxide gases (SO<sub>x</sub>), formed primarily by combustion of sulfur-containing fossil fuels (primarily coal and oil), and during metal smelting and other industrial processes. Sulfur dioxide (SO<sub>2</sub>) often used interchangeably with sulfur oxides (SO<sub>x</sub>) did not exceed federal or state standards between 2002 and 2006. Attainment designations for the state and federal SO<sub>2</sub> standards are made on a county basis. For the state 1-hour and 24-hour SO<sub>2</sub> standards, all three counties are designated as



attainment. For the federal 24-hour and annual SO<sub>2</sub> standards, all three counties are designated as attainment.

The major health concerns associated with exposure to high concentrations of SO<sub>x</sub> are effects on breathing, respiratory illness, diminishment of pulmonary defenses, and aggravation of existing cardiovascular disease. Major subgroups of the population that are most sensitive to SO<sub>x</sub> are individuals with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema), as well as children and the elderly. Emissions of SO<sub>x</sub> also can damage the foliage of trees and agricultural crops. Together, SO<sub>x</sub> and NO<sub>x</sub> are the major precursors to acid rain, which is associated with the acidification of lakes and streams, and the accelerated corrosion of buildings and public monuments. Sulfur oxides can react to form sulfates, which significantly reduce visibility.

#### Other Pollutants

CARB has identified lead and vinyl chloride as 'toxic air contaminants' (TACs) with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants. Additionally, because ambient concentrations of lead have decreased in the Basin, these pollutants are not measured at the monitoring stations.

Toxic Air Contaminants (TACs) - According to Section 39655 of the California Health and Safety Code, a toxic air contaminant is "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health". In addition, substances that have been listed as federal hazardous air pollutants (HAPs) pursuant to Section 7412 of Title 42 of the United States Code are TACs under the state's air toxics program pursuant to Section 39657 (b) of the California Health and Safety Code.

TACs can cause various cancers, depending on the particular chemicals, their type and duration of exposure. Additionally, some of the TACs may cause other health effects over the short or long term. TACs of particular concern for posing health risks in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter.

Reactive Organic Gases and Volatile Organic Compounds – Volatile organic compounds (VOCs) are organic chemical compounds with sufficiently high vapor pressure such that they will tend to vaporize and enter ambient air under standard conditions. A wide range of carbon-based molecules, such as aldehydes, ketones, and hydrocarbons are VOCs. Hydrocarbons are organic gases, liquids, or solids that are formed solely of hydrogen and carbon. A subset of VOCs are reactive in the context of ozone formation at urban (and possibly regional) scales. Reactive Organic Gases (ROGs) are defined to be those VOCs that are regulated because they lead to ozone formation. Both ROGs and VOCs can be emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of VOCs are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions and paint (via evaporation).

Reactive VOCs may result in the formation of ozone and its related health effects. Carcinogenic forms of VOCs are considered toxic air contaminants ("air toxics"). There are no separate



National Ambient Air Quality Standards for reactive VOCs, although some reactive VOCs are also toxic; an example is benzene, which is both a reactive VOC and a carcinogen.

### Sensitive Receptors

Certain land uses are considered particularly sensitive to noise. Schools, hospitals, rest homes, long-term medical and mental care facilities, parks and recreation areas are all considered sensitive receptors. The planning area contains four existing residential homes and is bordered by residential development to the south, north and west. Crestview Park is located adjacent to the southern border of the project site. MacQuidy Elementary School and Hyde Elementary School are the closest schools to the planning area located approximately one quarter mile and a half mile, respectively.

### Odors

Offensive odors rarely cause physical harm, however they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and agencies. Facilities commonly known to produce odors include wastewater treatment facilities, chemical manufacturing, painting/coating operations, feed lots/dairies, composting facilities, landfills and transfer stations. Because offensive odors rarely cause physical harm and no requirements for their control are included in state and federal air quality regulations, the MBUAPCD has no rules or standards related to odor emissions, other than its nuisance rule. There are no facilities in the vicinity of the planning area that have the potential to result in offensive odors. Surrounding agricultural fields may result in slight odors from the application of pesticide and fertilizer applications.

## 3.3.2 Regulatory Setting

Regulatory oversight for air quality in the Basin rests at the regional level with the MBUAPCD, the CARB at the state level, and the EPA Region IX office at the federal level.

### Federal

#### Environmental Protection Agency

The principal air quality regulatory mechanism on the federal level is the Clean Air Act (FCAA) and, in particular, the 1990 amendments to the FCAA and the National Ambient Air Quality Standards (NAAQS) that it establishes. These standards identify levels of air quality for “criteria” pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are O<sub>3</sub>, CO, NO<sub>2</sub> (a form of NO<sub>x</sub>), SO<sub>2</sub> (a form of SO<sub>x</sub>), PM<sub>10</sub>, PM<sub>2.5</sub>, and lead (Pb); refer to **Table 3.3-2: National and California Ambient Air Quality Standards**. The EPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf) and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking.





Table 3.3-2: National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards <sup>1</sup>	Federal Standards <sup>2</sup>	
		Concentration <sup>3</sup>	Primary <sup>3,4</sup>	Secondary <sup>3,5</sup>
Ozone (O <sub>3</sub> )	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	N/A <sup>6</sup>	N/A <sup>6</sup>
	8 Hour	0.070 ppm	0.08 ppm (157 µg/m <sup>3</sup> )	0.08 ppm (157 µg/m <sup>3</sup> )
Particulate Matter (PM <sub>10</sub> )	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
Fine Particulate Matter (PM <sub>2.5</sub> )	24 Hour	No Separate State Standard	65 µg/m <sup>3</sup>	65 µg/m <sup>3</sup>
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 µg/m <sup>3</sup> )	9 ppm (10 µg/m <sup>3</sup> )	9 ppm (10 µg/m <sup>3</sup> )
	1 Hour	20 ppm (23 µg/m <sup>3</sup> )	35 ppm (40 µg/m <sup>3</sup> )	35 ppm (40 µg/m <sup>3</sup> )
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	N/A	0.053 ppm (100 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (470 µg/m <sup>3</sup> )	N/A	N/A
Lead (Pb)	30 Days Average	1.5 µg/m <sup>3</sup>	N/A	N/A
	Calendar Quarter	N/A	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	N/A	0.030 ppm (80 µg/m <sup>3</sup> )	N/A
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (365 µg/m <sup>3</sup> )	N/A
	3 Hour	N/A	N/A	0.5 ppm (1300 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	N/A	N/A
Visibility-Reducing Particles	8 Hour (10 am to 6 pm, PST)	Extinction Coefficient = 0.23 km@<70% RH	<b>No Federal Standards</b>	
Sulfates	24 Hour	25 µg/m <sup>3</sup>		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )		

ppm = parts per million; µg/ m<sup>3</sup> = micrograms per cubic meter; mg/ m<sup>3</sup> = milligrams per cubic meter; km = kilometers; RH = relative humidity; PST = Pacific Standard Time; N/A = not applicable

Notes:

- California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter (PM<sub>10</sub>), and visibility-reducing particles are values that are not to be exceeded. All other values are not to be equaled or exceeded. California ambient air quality standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, the CARB identified vinyl chloride as a Toxic Air Contaminant and determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010-ppm ambient concentration specified in the 1978 standard.
- Federal standards (other than for ozone, for particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as attainment/unclassifiable if (1) monitored air quality data show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM<sub>10</sub>, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over the three years, are equal to or less than the standard. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees centigrade (°C) and a reference pressure of 760 millimeters (mm) of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); parts per million (ppm) in this table refers to ppm by volume (micromoles of pollutant per mole of gas).
- Federal Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- Federal Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- The Federal 1-hour ozone standard was revoked as of June 2005.

Source: California Air Resources Board





## State

### California Air Resources Board

The CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. Its responsibility lies with ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the FCAA requirements and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish California Ambient Air Quality Standards (CAAQS) and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as the FCAA and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride; refer to **Table 3.3-2: National and California Ambient Air Quality Standards**.

## Local

### Monterey Bay Unified Air Pollution Control District

The proposed project is located within the Basin, which is under the jurisdiction of the MBAUPCD. The MBAUPCD is responsible for regulating stationary, indirect and area sources of pollution within the Basin. The MBUAPCD's jurisdiction includes Monterey, Santa Cruz and San Benito Counties. The MBUAPCD is one out of 35 air quality management districts that have prepared Air Quality Management Plans (AQMPs) to accomplish the five percent annual reduction goal required by the CCAA. As previously noted, the Basin is not in attainment of the CAAQS for PM<sub>10</sub> and O<sub>3</sub>. The Basin is in attainment of all NAAQS; in March 2007, the MBUAPCD adopted a *Federal Maintenance Plan for the Monterey Bay Region* for the federal 8-hour ozone standard.

Attainment of the PM<sub>10</sub> CAAQS is addressed in the District's *Senate Bill 656 Implementation Plan*. This plan describes the greater vulnerability of coastal locations within the Basin to PM<sub>10</sub> standards violations, due largely to the contribution from sea salt. It focuses primarily on controlling particulate sources related to fugitive dust and smoke related to combustion, but also addresses NO<sub>x</sub>- and ROG-related particulate formation. Consistent with the requirements of SB 656, and with the difficulty in estimating future ambient concentrations of particulate matter substantially influenced by fugitive dust sources (even disregarding unusual burn events), this plan concentrates on identification of and implementation scheduling for available PM emission control measures. Implementation of these measures is currently underway.

CARB has established a state, health-based, air quality standard for ozone. Under the CCAA, areas not in compliance with this standard must prepare an ozone reduction plan. The 1991 AQMP for the Monterey Bay Area was the first plan prepared in response to the CCAA of 1998 that established specific planning requirements to meet the ozone standard. The CCAA requires that the AQMP be updated every three years. The 2004 AQMP is the fifth update to the 1991 AQMP.

The 2008 AQMP relies on a multi-level partnership of governmental agencies at the federal, state, regional and local level. These agencies (EPA, CARB, local governments, Association of Monterey Bay Area Governments [AMBAG]) and the MBUAPCD are the primary agencies that implement the AQMP programs.



The main objective of the AQMP is to reduce emissions of certain air pollutants that lead to the formation of ozone, or “smog,” in the lower atmosphere. The 2008 AQMP shifts emphasis from achieving the State's 1-hour ozone standard, to achieving the more stringent 8-hour requirement. Other air quality issues are included in this plan for informational purposes. The AQMP represents a comprehensive strategy to reduce ozone emissions from area and mobile sources. The AQMP includes specific measures that encourage cities and counties to develop and implement local plans, policies and programs to reduce auto use and improve air quality.

The MBUAPCD's primary means of implementing air quality plans and policies is through adoption and enforcement of rules and regulations. Some of the key rules that may be applicable to the proposed project are discussed below:

- **Rule 439 (Building Removals)** establishes work practice standards to limit lead exposure during building removals.
- **Rule 424 (National Emissions Standards for Hazardous Air Pollutants (NESHAPS)).**

The MBAUPCD has developed *CEQA Air Quality Guidelines* that are intended to facilitate the review and evaluation of air quality impacts for projects subject to CEQA. The advisory document provides lead agencies, consultants and project proponents with standardized procedures for assessing potential air quality impacts associated with a proposed project and prepare the environmental air quality section of environmental review documents.

### State Air Toxics Program

In addition to the criteria pollutants discussed above TACs are another group of pollutants of concern. There are hundreds of different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle engine exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset spill conditions. Health effects of TACs include cancer, birth defects, neurological damage, and death.

California regulates TACs through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC Section 39660 et. seq.) and Part 6 (Air Toxics “Hot Spots” Information and Assessment) (H&SC Section 44300 et. seq.). The CARB, working in conjunction with the state Office of Environmental Health Hazard Assessment (OEHHA), identifies TACs. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified TAC to below a specific threshold, based on its effects on health, or to the lowest concentration achievable through use of best available control technology for toxics (T-BACT). The program is administered by the CARB. Air quality control agencies, including the MBUAPCD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB.

The Air Toxics “Hot Spots” Information and Assessment Act, codified in the Health and Safety Code, requires operators of specified facilities in the MBUAPCD to submit to the MBUAPCD comprehensive emissions inventory plans and reports by specified dates (H&SC Section 39660 et. seq. and Section 44300 et. seq.). The MBUAPCD reviews the reports and then places the facilities into high-, intermediate-, and low-priority categories, based on the potency, toxicity, quantity, and volume of hazardous emissions and on the proximity of potential sensitive receptors



to the facility. Facilities designated as high priority (Category A) must prepare a health risk assessment (HRA). If the HRA finds a significant risk, the surrounding population must be notified. The emissions inventory data are to be updated every two years.

The CARB in 1998 identified diesel engine particulate matter as a TAC. Mobile sources (including trucks, buses, automobiles, trains, ships and farm equipment) are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles, and because diesel particles are very small, they are able to penetrate deeply into the lungs. Diesel engine particulate matter is a human carcinogen. The cancer risk from exposure to diesel exhaust may be much higher than the risk associated with any other toxic air pollutant routinely measured in the region.

Before California listed particulate matter from diesel engine exhaust as a TAC, it had already adopted various regulations that would reduce diesel emissions. These regulations include new standards for diesel engine fuel; exhaust emission standards for new diesel trucks, buses, autos, and utility equipment; and inspection and maintenance requirements for health duty vehicles. Since listing diesel exhaust as a TAC, the CARB has been evaluating what additional regulatory action is needed to reduce public exposure. The CARB does not anticipate banning diesel fuel or engines; however, it may consider additional requirements for diesel fuel and engines, as well as other measures to reduce public exposure.

#### Attainment Status

The Basin is considered in attainment or unclassified for most of the criteria pollutants for state and federal considerations except for O<sub>3</sub> and PM<sub>10</sub>. Under federal regulations the Basin is designated an unclassified/attainment area for PM<sub>2.5</sub> standards (See **Table 3.3-3: North Central Coast Air Basin Attainment Status**).



Table 3.3-3: North Central Coast Air Basin Attainment Status <sup>1</sup>

Pollutant	State	Federal
Carbon Monoxide (CO)	Monterey – Attainment San Benito – Unclassified Santa Cruz – Unclassified	Attainment
Ozone (O <sub>3</sub> )	<b>Non-attainment</b>	Attainment
Nitrogen Oxides (NO <sub>2</sub> )	Attainment	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Particulate Matter (PM <sub>10</sub> )	<b>Non-Attainment</b>	Attainment
Particulate Matter (PM <sub>2.5</sub> )	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Notes: N/A – Not Applicable <sup>1</sup> – In order for an area to meet a particular standard, all time tests of the applicable standard must be met. Separate designations are not made for each time component of the standard. For instance, an area might meet the annual criteria of the state PM <sub>10</sub> standard but not the 24-hour requirement. In that case, the area fails to meet the standard and would be designated nonattainment for the state PM <sub>10</sub> standard. Thus, a single designation is made for each state and federal standard based on whether or not the area meets all the aspects of the standard. Designations for state standards are made by ARB while designations for federal standards are made by EPA.		

Source: MBUAPCD 2008

### County of Santa Cruz General Plan

The County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan) was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies are applicable to air quality.

**Objective 3.1, Vehicle Miles.** To limit the increase in Vehicle Miles Traveled (VMT) to achieve as a minimum, compliance with the current Air Quality Management Plan.

**Policy 3.1.1, Land use Patterns (Jobs/Housing Balance).** Encourage concentrated commercial centers, mixed residential and commercial uses, and overall land use patterns which reduce urban sprawl and encourage the reduction of vehicle miles traveled per person.

**Policy 3.1.3, Neighborhood Facilities.** Support the development of neighborhood facilities such as parks, schools, and neighborhood commercial services.

**Policy 5.17.2, Design Structures for Solar Gain (LCP).** Require the incorporation of environmentally sound active and passive heating and cooling and/or natural day lighting design principles in the location and construction of all new buildings and in the renovation and remodeling of existing buildings.

**Policy 5.17.3, Solar Access (LCP).** Encourage maximum solar access orientation in siting new development, and require protection of solar access in existing development.

**Policy 5.17.7, Street Lighting.** Require installation of energy-efficient street lighting.

**Objective 5.18, Air Resources.** To improve the air quality of Santa Cruz County by meeting or exceeding state and federal ambient air quality standards, protect County residents from the



health hazards of air pollution, protect agriculture from air pollution induced crop losses and prevent degradation of the scenic character of the area.

**Policy 5.18.1, New Development.** Ensure new development projects are consistent at a minimum with the Monterey Bay Unified Air Pollution Control District Air Quality Management Plan and review such projects for potential impact on air quality.

**Policy 5.18.6, Plan for Transit Use.** Encourage commercial development and higher density residential development to be located in designated centers or other areas that can be easily served by transit.

**Policy 5.18.7, Alternatives to the Automobile.** Emphasize transit, bicycles and pedestrian modes of transportation rather than automobiles.

**Policy 5.18.8, Encouraging Landscaping.** Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.

[City of Watsonville General Plan](#)

The following policies in the 2005 *City of Watsonville General Plan* are applicable to air quality within the planning area.

**Goal 9.4, Air Quality.** Maintain or improve the present air quality level in the Pajaro Valley.

**Goal 9.12, Energy.** Promote the conservation of energy and the use of alternative energy resources in transportation and residential, commercial, and industrial development.

**Policy 9.C, Air Quality.** The City shall cooperate with the Monterey Bay Unified Air Pollution Control District (MBUAPCD) to maintain and improve regional air quality.

**Implementation Measure 9.C.1, Referral to MBUAPCD.** The City shall refer projects with identifiable air quality impacts to the MBUAPCD for recommendation on appropriate air quality mitigations.

**Implementation Measure 9.C.2, Alternate Travel Modes.** In order to reduce automobile related pollution, the city shall plan for and encourage the use of transit, ridesharing, bicycles, and walking as alternatives to automobile travel, and the use low-emission and electric vehicles.

**Implementation Measure 9.C.3, Housing Jobs Linkage.** The City shall encourage new residential development to include housing suitable to employees of workplaces in the city and its immediate environs in order to minimize commuting and the motor vehicle emissions thus generated. The City shall strive to locate housing and job land uses to enhance the use of carpooling and transit.

**Implementation Measure 9.C.4, Design Review.** The City shall require new development to include consideration for transit, Transportation Demand Management (TDM), and alternative travel modes in project designs including but not limited to transit stops, car and van pool preferred parking, and bicycle access and storage facilities.



### 3.3.3 Relevant Project Characteristics

The proposed Specific Plan and PUD include approximately 34.7 net-acres designated for residential uses, including 10.5 net-acres for “Residential-High Density;” and 14.2 net-acres for “Residential-Medium Density;” 10.0 net-acres for “Residential Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of Phase 2 (City site) adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once the Phase 2 (City site) is rezoned.

### 3.3.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, and agency and professional standards, a project impact would be considered significant if the project would:

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

#### MBUAPCD Significance Threshold Criteria

##### *Operational Air Emission Thresholds*

MBUAPCD’s thresholds of significance for operational impacts, specific to the Basin, are shown in Table 3.3-4: Operational Air Emissions Thresholds.



Table 3.3-4 Operational Air Emissions Thresholds

Criteria Pollutant	Daily Thresholds (lbs)
Volatile Organic Compounds (VOC)	137
Oxides of Nitrogen (NO <sub>x</sub> )	137
Particulate Matter (PM <sub>10</sub> )	82
Carbon Monoxide (CO)	550
SO <sub>x</sub> as SO <sub>2</sub>	150

Source: MBUAPCD 2008

The MBUAPCD also uses many EPA and state requirements as the basis for determining the significance of air quality impacts under CEQA, including:

- Ambient Air Quality Standards. Exceedance of any national AAQS is considered a significant impact to air quality.
- New Source Review Offset Requirements. The MBUAPCD uses federal offset thresholds for PM<sub>10</sub> and CO as criteria for significance (82 and 550 lb/day, respectively).
- Conformity. Federal regulations requiring that certain general and transportation projects conform with the State Implementation Plan (SIP) are used to help determine the cumulative significance of air quality impacts.
- Air Quality Management Plans. Project emissions that are not accounted for in the AQMP's emissions inventory are considered a significant cumulative impact to regional air quality.
- New Source Review Offset Requirements. Under State regulations, new or modified stationary sources that would emit 137 pounds per day or more of VOC or NO<sub>x</sub> are required to offset their emissions.

#### *Construction Emissions Thresholds*

Construction impact thresholds are as follows:

- Construction activities such as excavation, grading, and onsite vehicle/equipment use that generate 82 pounds or more of PM<sub>10</sub> would have a significant impact on local air quality when they are located nearby and upwind of sensitive receptors. A construction site with minimal earthmoving activity would have potentially significant PM<sub>10</sub> impacts when active construction covers 8.1 acres or more per day. A construction site with earthmoving activity would have potentially significant PM<sub>10</sub> impacts when active construction covers 2.2 acres or more per day.
- Construction activities involving typical construction equipment (defined by the *MBUAPCD CEQA Guidelines* as scrapers, tractors, dozers, graders, loaders, and rollers) that temporarily emit precursors of ozone (i.e., reactive organic gases or oxides of nitrogen) are accommodated in the emission inventories of State and Federally required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS.





- Construction projects that may cause or substantially contribute to the violation of other State or National AAQS or that could emit toxic air contaminants that would present a substantial health risk to sensitive receptors could result in temporary significant impacts.

#### *Localized Carbon Monoxide Emissions*

According to the *MBUAPCD CEQA Guidelines*, the following would represent a potentially significant impact to roadway intersections or segments:

- Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic;
- Intersections or road segments that operate at LOS E or F where the volume-to-capacity (V/C) ratio would increase 0.05 or more with the project's traffic;
- Intersections or road segments that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic;
- Un-signalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic (this criterion is based on the turning movement with the worst reserve capacity); or
- The project would generate substantial heavy-duty truck traffic, substantial traffic along urban street canyons, or substantial traffic near a major stationary source of CO.

#### *Odors*

According to the MBUAPCD, if the proposed project has the potential to frequently expose members of the public to objectionable odors, it would represent a potentially significant impact.

#### **Methodology**

Air quality modeling was conducted to evaluate both short-term construction impacts and long-term operational impacts (e.g. area source, mobile source, and stationary source emissions) using URBEMIS2007 (Version 9.2.4), an air quality-modeling program, which is released by the CARB. URBEMIS2007 uses EMFAC2007 and OFFROAD2007 to calculate short-term construction and long-term operational emissions associated with the proposed project. CO dispersion modeling, using the BREEZE ROADS dispersion modeling was performed to estimate worst-case ambient concentrations of CO that sensitive receptors may be exposed to during long-term operation of the proposed project.

#### Short-Term Construction Emissions

For short-term construction emissions, the URBEMIS2007 air quality model was used to evaluate fugitive dust emissions from earth-handling activities and evaporative emissions from architectural coatings and asphalt pavement, during construction activities, including grading, building construction, architectural coating, and paving. The air quality modeling used the default standards for construction equipment and grading estimates contained within URBEMIS2007. However, the analysis assumed a construction start date of 2009 for Phase 1 and a construction start date of 2010 for Phase 2 of the proposed project.



### Long-Term Operational Emissions (Mobile Source and Area Source Emissions)

The URBEMIS2007 air quality model was used to evaluate mobile source and area source emissions associated with the proposed project. The key input parameters into the URBEMIS2007 model consisted of land use designations (e.g., number of residential units), trip rates (i.e., number of vehicle trips per day per land use unit), assumptions regarding the vehicle fleet (e.g., analysis year, vehicle type and technology class), trip lengths (i.e., miles traveled per trip), and pollutant emission factors (i.e., mass of pollutant emitted per mile traveled). The latest project-specific trip rates and lengths were incorporated into the URBEMIS2007 air quality modeling based on data provided from the traffic impact analysis that was prepared for the proposed project. Default values in URBEMIS2007, which are consistent with the MBUAPCD CEQA Guidelines were retained for parameters where project-specific values were unavailable. The default values in URBEMIS2007 were used for all activity and emission factor input parameters to evaluate area source emissions.

The proposed project is consistent with the Air Quality Management Plan for the Monterey Bay Region as confirmed by the Association of Monterey Bay Area Governments in a letter dated October 22, 2008 (see **Appendix B** in Volume II of the Draft EIR). As the proposed project is a residential development, it would not create objectionable odors affecting a substantial number of people.

#### **3.3.4 Impacts and Mitigation Measures**

**Impact 3.3-1: The proposed project would result in short-term air quality impacts associated with construction activities, including grading, operation of construction equipment, and demolition of existing structures within the planning area. This is considered a potentially significant impact.**

Emissions produced during grading and construction activities are “short-term” because they occur only during construction. Construction emissions would include the generation of fugitive dust, onsite generation of construction equipment exhaust emissions, and the off-site generation of mobile source emissions related to construction traffic. The proposed project would require grading of the entire planning area over a period of two phases. Construction activities are a source of fugitive dust (PM<sub>10</sub>) emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions.

Fugitive dust from grading and construction is expected to be short-term and would cease following completion of the initial development. Additionally, most of this material is inert silicates and is less harmful to health than the complex organic particulates released from combustion sources. Dust (larger than ten microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM<sub>10</sub> generated as a part of fugitive dust emissions.

#### Particulate Matter

The *MBUAPCD CEQA Guidelines* state that construction activities (e.g., excavation, grading, on-site vehicles), which emit 82 pounds per day or more of PM<sub>10</sub>, would have a significant impact on



local air quality when they are located nearby and upwind of sensitive receptors. Based on this emission threshold, construction activity occurring on more than 2.2 acres per day may result in significant PM<sub>10</sub> emissions. The Basin is currently in non-attainment of the state PM<sub>10</sub> standard. The Basin designation of non-attainment is based on exceedances measured at the Davenport, Moss Landing, Salinas, and King City monitoring stations. Emissions associated with construction of the proposed project were estimated using the URBEMIS2007 model (Version 9.2.4). Un-mitigated construction emissions from the grading and building-construction phases are summarized in **Table 3.3-5: Summary of Construction Emissions** and air quality modeling is provided in **Appendix B, Air Quality Modeling**. As shown in **Table 3.3-5: Construction Emissions**, un-mitigated construction emissions associated with the proposed project are predicted to exceed the 82 lb/day threshold of significance for PM<sub>10</sub>, during the mass grading phase of construction activities associated with the proposed project.

Table 3.3-5: Summary of Construction Emissions

Emissions Source	Pollutant (pounds/day)							
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>			CO <sub>2</sub>
					Exhaust	Dust	Total	
Phase 1								
2009	6.98	47.20	28.66	0.00	3.00	31.82	34.82	28.66
2010	101.73	44.64	34.18	0.01	2.84	31.82	34.66	34.18
Phase 2								
2010	4.25	33.83	19.43	0.00	1.80	196.61	198.41	19.43
2011	5.16	31.75	18.63	0.01	1.69	196.61	198.3	18.63
2012	270.89	39.55	64.10	0.04	2.62	0.21	2.83	64.10

Source: URBEMIS2007 (Version 9.2.4) and RBF Consulting

Implementation of the following mitigation measure would reduce this impact to a **less than significant level** for all phases of the proposed project.

Mitigation Measures

**MM 3.3-1a** Project applicants limit areas of active disturbance to no more than 2.2 acres per day for initial site preparation activities that involve extensive earth moving activities (grubbing, excavation, rough grading), or 8.1 acres per day for activities that involve minimal earth moving (e.g. finish grading) during all phases of construction activities within the planning area in accordance with the *Monterey Bay Unified Air Pollution Control District CEQA Guidelines*. If the proposed project requires that grading and excavation exceed those acreages, project applicants shall implement the following fugitive dust measures during grading and excavation and incorporate these measures on all grading plans for future development within the planning area subject to review and approval by the County of Santa Cruz Planning Department or the City of Watsonville Community Development Department:

- Water all active construction areas at least twice daily;



- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
- 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;
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites;
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.);
- Limit traffic speeds on unpaved roads to 15 mph;
- Install appropriate best management practices or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- Limit the area subject to excavation, grading and other construction activity at any one time;
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints (the person shall respond to complaints and take corrective action within 48 hours); and
- Ensure that the phone number of MBUAPCD is visible to the public for compliance with Rule 402 (Nuisance).

Implementation of the above mitigation measure would reduce fugitive dust emissions associated with individual construction activities/components by approximately four to 90 percent, with overall fugitive dust reductions of up to approximately 50 percent, or more, depending on the activities conducted, which would ensure that future development within the planning area does not exceed the MBUAPCD thresholds for short-term construction emissions.

#### Short-term Construction Emissions During Demolition Activities

**Impact 3.3-2: The proposed project may result in the demolition of four residential homes and associated structures within the planning area, which may contain asbestos and/or lead. This would be considered a potentially significant impact.**

There are approximately seven structures located on the planning area including four residential homes and three outbuildings that would be demolished with implementation of the proposed project. It is not known whether or not any of the buildings contain asbestos or lead paint, but if the structures were constructed prior to 1980 they may contain friable asbestos, which has been identified as a hazardous airborne contaminant. Regulations are already in place, which require demolition activities to minimize asbestos released into the air. All demolition activities would



be required to be undertaken according to OSHA standards to protect workers from asbestos and lead based paint. Demolition of buildings containing asbestos would be required to comply with the MBUAPCD's Rule 306 that requires reporting and investigation of certain buildings with asbestos as established under federal law. The National Emissions Standards for Hazardous Air Pollutants (NESHAPS) as set forth in the Code of Federal Regulations—40CFR61, which is designed to prevent “visible emissions” of asbestos when buildings are renovated or demolished. Under federal law, a building must be inspected for asbestos prior to demolition or renovation, and federal and state agencies must be notified prior to demolition. According to the CARB, removal and disposal of asbestos procedures and controls must be specified in the notification form. The asbestos NESHAP specifies work practices to be followed during demolition of all structures that contain, or may contain asbestos. These work practices have been designed to effectively reduce airborne asbestos to safe levels.

The proposed project is subject to the asbestos NESHAP, and thus would be required to comply with these specified work practices. The proposed project must also comply with MBUAPCD Rule 304 (Asbestos NESHAP Fees), which determines fees for asbestos removal. Additionally, the proposed project shall comply with the NESHAP as established by the EPA. NESHAP specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos containing materials. The requirements for demolition and renovation activities include asbestos surveying, notification, asbestos containing materials removal procedures and time schedules, asbestos containing materials handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings. In addition, mitigation measures **MM 3.7-3a** and **MM 3.7-3b** in **Section 3.7, Hazards and Hazardous Materials** would require that each structure is inspected by a qualified environmental specialist for the presence of asbestos containing materials (ACMs) and lead based paints (LBPs). If ACMs and LBPs are found during the investigations, a remediation program shall be developed to ensure that these materials are removed and disposed of by a licensed contractor in accordance with all federal, state and local laws and regulations, subject to approval by the MBUAPCD, City of Watsonville, and the Santa Cruz County Environmental Health Department, as applicable. Any hazardous materials that are removed from the structures will be disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations. With implementation of this mitigation measure, the proposed project would not result in the emission of asbestos or lead based paint.

#### Long-Term Operational Emissions

**Impact 3.3-3:** The proposed project would result in long-term stationary and vehicular emissions, which would exceed the MBUAPCD thresholds. This is considered a potentially significant impact.

The proposed project would result in long-term stationary and vehicular emissions with implementation of the proposed project.

#### Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy for proposed residential uses, which is generated from power plants utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin, and their emissions contribute to the



total regional pollutant burden. The primary use of natural gas within the planning area would be for combustion to produce space heating, water heating and other miscellaneous heating or air conditioning, typical of a residential subdivision.

### Mobile and Area Source Emissions

#### *Area Source Emissions*

Area source emissions are generally a function of land use (e.g., number of single-family residential units), activity (e.g., fuel use per residential unit), and emission factor (e.g., mass of pollutant emitted per fuel usage). These include the following:

- Natural gas fuel combustion. This source includes natural gas combustion for water and space heating, in residential and non-residential buildings.
- Hearth fuel combustion. This source includes wood stoves, wood fireplaces, and natural gas-fired stoves.
- Landscape fuel combustion. This source includes exhaust and evaporative emissions from landscaping equipment including lawnmowers, rototillers, shredders/grinders, trimmers, chain saws, and hedge trimmers, used in residential and commercial applications.
- Consumer products. This source category comprises a wide range of products including air fresheners, automotive products, household cleaners, and personal care products.
- Architectural coatings. This source includes reactive organic gases (ROG; similar to VOCs) emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings, from residential and nonresidential structures.

#### *Mobile Source Emissions*

Mobile source emissions may include, but would not be limited to the following: running exhaust emissions of ROG, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), oxides of nitrogen (NO<sub>x</sub>), and respirable particulate matter (PM<sub>10</sub>); tire wear emissions of PM<sub>10</sub>; and brake wear emissions of PM<sub>10</sub>.

The amount of mobile source emissions associated with the proposed project is based on land use designations (e.g., number of single-family residential units; square footage of various educational, recreational, retail, commercial, and industrial uses), trip rates (i.e., number of vehicle trips per day per land use unit), assumptions regarding the vehicle fleet (e.g., analysis year, vehicle type and technology class), trip lengths (i.e., miles traveled per trip), and pollutant emission factors (i.e., mass of pollutant emitted per mile traveled). According to the traffic impact analysis prepared for the proposed project, the proposed project would result in a net total of 3,814 trips per day. The traffic impact analysis was a conservative analysis, which analyzed construction of a maximum of 498 residential units at the project site, which is approximately 48 units more than the proposed project. As the air quality modeling is based on the traffic impact analysis, the analysis is considered conservative.





The internal circulation network of the proposed project would include public streets with a 52-foot right-of-way that would include vehicle travel lanes designated as Class 3 bicycle lanes, sidewalks. In addition, the proposed project includes pedestrian pathways within the riparian and wetland buffers. Pedestrian connections would be provided between the existing and proposed residential land uses, and active and passive recreation areas. The planning area does not fall within a planned public transit route, but safe and adequate pedestrian passage would connect the proposed project to existing public transit routes along Freedom Boulevard in order to encourage alternative transportation within the planning area.

The operational emissions, which include both area and mobile emissions resulting from the proposed project, were analyzed using the CARB-approved URBEMIS2007 model (see **Appendix B** for more detail). Long-term operational emissions are presented in **Table 3.3-6: Long-term Operational Emissions-Un-mitigated**.

Table 3.3-6: Long-term Operational Emissions – Un-Mitigated

Un-Mitigated Emission Source	Pollutants (pounds/day)				
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO <sub>x</sub> )	Carbon Monoxide (CO)	Particulate Matter (<10 microns [PM <sub>10</sub> ])	Sulfur Dioxide (SO <sub>x</sub> )
<b>Phase 1</b>					
Area Source Emissions	30.52	3.44	105.92	16.83	0.32
Mobile Source Emissions	11.46	17.17	127.18	12.79	0.07
Emissions Subtotal	41.98	20.61	233.1	29.62	0.39
<b>Phase 2</b>					
Area Source Emissions	70.01	8.24	242.15	38.47	0.74
Mobile Source Emissions	31.59	47.44	351.36	6.21	0.03
Emissions Subtotal	101.60	55.68	593.51	44.68	.77
Total	143.58	76.29	826.61	74.3	1.16
MBUAPCD Threshold	137	137	550 <sup>2</sup>	82	150
Are Thresholds Exceeded?	Yes	No	No	No	No
Notes: Area source emissions include natural gas fuel combustion, landscape fuel combustion, consumer products, architectural coatings, and hearth fuel combustion (i.e., wood stoves, wood fireplaces, natural gas fireplace/stoves). Applies to Area Source (Direct) emissions of Carbon Monoxide only.					

Source: URBEMIS2007 and RBF Consulting 2008

The proposed project would result in long-term regional emissions of approximately 41.98 lbs/day of ROG, 20.61 lbs/day of NO<sub>x</sub>, 233.1 lbs/day of CO, 29.62 lbs/day of PM<sub>10</sub>, and 0.39 lbs/day of SO<sub>2</sub> during Phase 1 of the proposed project. Phase 2 of the proposed project would result in long-term regional emissions of 101.60 lbs/day, 55.68 lbs/day of NO<sub>x</sub>, 593.51 lbs/day of CO, 44.68 lbs/day of PM<sub>10</sub>, and .77 lbs/day of SO<sub>x</sub>. Long-term operational emissions with buildout of the proposed project would result in approximately 143.58 lbs/day of ROG, 76.29 lbs/day of NO<sub>x</sub>, 826.61 lbs/day of CO; .77 lbs/day of SO<sub>x</sub>, and 74.3 lbs/day of PM<sub>10</sub>. As shown in **Table 3.3-6: Long-term Operational Emissions - Un-Mitigated**, the proposed project would exceed the MBUAPCD significance thresholds for ROG. This is considered a **potentially significant impact**. The proposed Specific Plan and PUD includes a pedestrian network and





Class 3 bicycle trails that link to outside uses in order to facilitate use of alternative transportation. In addition, implementation of the following mitigation measure would reduce emissions associated with the proposed project to a **less than significant level** by prohibiting the use of wood-burning fireplaces and wood stoves within each residential unit within the planning area.

#### Mitigation Measure

**MM 3.3-3** Fireplaces proposed for future residential development within the planning area shall be gas-fired and meet U.S. Environmental Protection Agency (EPA) certification requirements. The use of wood-burning fireplaces shall be prohibited. This measure shall be demonstrated on all proposed tentative maps and improvement plans prior to approval of building permits within the planning area. In addition, project applicants within the planning area shall consider implementation of MBUAPCD-recommended mitigation. The City of Watsonville Community Development Department and the County of Santa Cruz Planning Department shall review proposed tentative maps and improvement plans to identify emission reduction measures that are incorporated into the plans and staff may recommend additional measures as practical and feasible including the following:

- Incorporate energy-efficient appliances into residential uses.
- Orient buildings to minimize heating and cooling needs;
- Provide shade trees to reduce cooling needs;
- Include energy-efficient lighting systems;
- Include solar water heaters or centralized water heating systems; and
- Increase insulation beyond Title 24 requirements to minimize heating and cooling needs.

Predicated operational emissions attributable to the proposed project requiring the use of only natural gas fired, EPA-certified fireplaces are summarized in **Table 3.3-7: Long-term Operational Emissions – Mitigated**. Using only natural gas fired EPA certified fireplace inserts would result in a reduction of long-term operational emissions to approximately 64.38 lbs/day of ROG, 60.53 lbs/day of NO<sub>x</sub>, 445.51 lbs/day of CO; 1.23 lbs/day of SO<sub>x</sub>, and 48.23 lbs/day of PM<sub>10</sub> as shown in **Table 3.3-7: Long-term Operational Emissions – Mitigated**, which would be within the MBUAPCD significance thresholds for all pollutants. Incorporation of additional measures, as recommended by the MBUAPCD, would result in further reductions in long-term operational emissions attributable to the proposed project. As a result, increases in long-term operational emissions would be considered **less than significant**.



Table 3.3-7: Long-Term Operational Emissions – Mitigated

Mitigated Emission Source	Pollutants (pounds/day)				
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO <sub>x</sub> )	Carbon Monoxide (CO)	Particulate Matter (<10 microns [PM <sub>10</sub> ])	Sulfur Dioxide (SO <sub>x</sub> )
<b>Phase 1</b>					
Area Source Emissions	7.39	1.86	0.79	0.06	0
Mobile Source Emissions	11.46	17.17	127.18	12.79	0.07
Emissions Subtotal	<b>18.85</b>	<b>19.03</b>	<b>127.97</b>	<b>12.85</b>	<b>0.07</b>
<b>Phase 2</b>					
Area Source Emissions	17.94	2.84	7.89	0.03	0
Mobile Source Emissions	27.59	38.66	309.65	35.35	0.18
Emissions Subtotal	45.53	41.50	317.54	35.38	0.18
Total	64.38	60.53	445.51	48.23	1.23
MBUAPCD Threshold	137	137	550 <sup>2</sup>	82	150
Are Thresholds Exceeded?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Notes: Area source emissions include natural gas fuel combustion, landscape fuel combustion, consumer products, architectural coatings, and hearth fuel combustion (i.e., wood stoves, wood fireplaces, natural gas fireplace/stoves). Applies to Area Source (Direct) emissions of Carbon Monoxide only.					

Source: URBEMIS2007 and RBF Consulting 2008.

Local Mobile-Source Carbon Monoxide (CO) Concentrations

**Impact 3.3-4:** Carbon monoxide concentrations are low in the project vicinity and the proposed project would result in carbon monoxide concentrations that would be well below the state and federal standards. Therefore, the proposed project would have a less than significant impact on localized carbon monoxide concentrations.

Local air quality is a major concern along roadways. Carbon monoxide (CO) is a primary pollutant, and unlike ozone, is directly emitted from a variety of sources. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of its impacts upon the local air quality. Areas of vehicle congestion have the potential to create “pockets” of CO called “hot spots.” These pockets have the potential to exceed the state 1-hour standard of 20 parts per million (ppm) and/or the 8-hour standard to 9 ppm.

To identify CO hotspots, the MBUAPCD criterion recommends performing a CO hotspot analysis when a project increases the volume to capacity (v/c) ratio (also called the intersection capacity utilization [ICU]) by 0.05 (5 percent) for any intersection with an existing level of service (LOS) D or worse. In addition, CO hotspot modeling is recommended when intersection or road segments that operate at LOS D or better would operate at LOS E or F with the proposed project’s traffic. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations. Typically, the LOS at an intersection producing a hot spot is at D or worse during the peak hour.



**Table 3.3-8: Carbon Monoxide Concentrations**, includes the intersections within the study that required CO hotspot modeling.

A receptor height of 1.8 meters was used in accordance with the EPA's recommendations. The calculations assume a meteorological condition of almost no wind (0.5 meters/second), a flat topological condition between the source and the receptor, and a mixing height of 1,000 meters. A standard deviation of five degrees was used for the deviation of wind direction. The suburban land classification was used for the aerodynamic roughness coefficient. This follows the BREEZE ROADS user's manual definition of suburban as, "regular coverage with large obstacles, open spaces roughly equal to obstacle heights, villages, mature forests."

For the purposes of this analysis, the ambient concentration used in the modeling was the highest one-hour measurement from the past year of MBUAPCD monitoring data at the Davenport Monitoring Station. Actual future ambient CO levels may be lower due to emissions control strategies that would be implemented between now and the project buildout date.

The projected traffic volumes were modeled using the BREEZE ROADS dispersion model (which includes the CALINE4 plugin). The resultant values were added to an ambient concentration. The intersections currently operate at a LOS ranging A to F for PM peak hour activities. At project buildout, the intersections would still operate at a LOS A or LOS F in an unmitigated condition. As indicated in **Table 3.3-8: Carbon Monoxide Concentrations**, CO concentrations would be well below the state and federal standards. The modeling results are compared to the California Ambient Air Quality Standards for carbon monoxide of 9 ppm on an 8-hour average and 20 ppm on a 1-hour average. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere; adherence to the Ambient Air Quality Standards is typically demonstrated through an analysis of localized CO concentrations. Neither the 1-hour average nor the 8-hour average would be equaled or exceeded. Impacts in regards to CO hot spots would be less than significant.



Table 3.3-8: Carbon Monoxide Concentrations

Intersection <sup>1</sup>	1-Hour CO (ppm)		8-Hour CO (ppm) <sup>3</sup>	
	1-Hour Standard <sup>2</sup>	Future + Project	8-Hour Standard <sup>3</sup>	Future + Project
East Lake Avenue and Holohan Road	20 ppm	1.9	9 ppm	1.33
Green Valley Road and Airport Boulevard/Holohan Road	20 ppm	1.8	9 ppm	1.26
Green Valley Road and Main Street (SR-152)	20 ppm	2.1	9 ppm	1.47
Freedom Boulevard and Green Valley Road	20 ppm	1.8	9 ppm	1.26
Source: RBF Consulting Notes: 1. As measured at a distance of 10 feet from the corner of the intersection predicting the highest value. Presented 1-hour CO concentrations include a background concentration of 1.7 ppm. Eight-hour concentrations are based on a persistence of 0.7 of the 1-hour concentration. 2. The state 1-hour standard is 20 ppm. The federal standard is 35 ppm. The most stringent standard is reflected in the Table. 3. The state 8-hour and federal 8-hour standard is 9 ppm.				

Exposure to Toxic Air Contaminants (TACs)

**Impact 3.3-5:** No major existing stationary or area sources of TACs were identified in the vicinity of the planning area. The proposed project would not result in increased exposure of sensitive land uses in excess of applicable standards. This is considered a less than significant impact.

No major existing stationary or area sources of toxic air contaminants (TACs) were identified in the project vicinity. The proposed project includes the development of residential uses and a park, which are not considered TAC sources of potential concern. As a result, implementation of the proposed project would not result in increased exposure of sensitive land uses to localized concentrations of TACs that would exceed MBUAPCD’s recommended significance thresholds. This impact would be considered **less than significant**. No mitigation measures are necessary.

Exposure to Odorous Emissions

**Impact 3.3-6:** The proposed project may be exposed to an indirect source of odors from adjacent agricultural activities. This is considered a less than significant impact.

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to violate the MBUAPCD standards.

Compliance with MBUAPCD permit and nuisance rules related to odors would help to control odorous emissions from stationary sources. For instance, MBUAPCD Rule 402 (Nuisances) prohibits the discharge of air contaminants or other materials, which cause injury, detriment, nuisance, or annoyance to any considerable numbers of persons. However, exposure to an area or



indirect source of odors, such as from adjacent agricultural activities may still occur. However, the frequency and the intensity of odors from adjacent agricultural practices would be very low. Therefore, this would be considered a **less than significant impact**.



## 3.4 Biological Resources

EcoSystems West Consulting Group (EcoSystems West) and Bryan M. Mori Biological Consulting Services conducted an assessment of biological resources within the Atkinson Lane planning area. The assessment consisted of review of the project description, data collection during reconnaissance level surveys, and evaluation of maps and available literature from federal, state and local agencies and databases. Based on occurrence records of special-status species in the project vicinity and site visits conducted on March 13, May 23, June 16, August 21, and November 6, 2008, EcoSystems West and Bryan M. Mori Consulting Services identified sensitive habitats and special-status species known to occur or with potential to occur within the planning area (Volume II, Appendix D). In addition, RBF Consulting conducted an analysis of drainage patterns in March 2008 (Volume II, Appendix G).

In this section of the Draft EIR, RBF and the County of Santa Cruz Planning Department evaluates impacts to biological resources associated with the proposed project based on the following documents, included in **Appendix D** in Volume II of the Draft EIR.:

- Draft *Biotic Assessment for the Proposed Atkinson Lane Specific Plan and PUD, Santa Cruz County, California* prepared by EcoSystems West Consulting Group (EcoSystems West 2009a);
- Draft *Delineation of Wetlands and Waters of the U.S. Subject to Section 404 Jurisdiction for the Atkinson Lane Specific Plan*, by EcoSystems West (EcoSystems West 2009b);
- *Special-status Amphibian and Reptile Preliminary Site Assessment for the Atkinson Lane Specific Plan, Santa Cruz County, California* prepared by Bryan M. Mori, Biological Consulting Services in July 2008 (Mori, B. M. Biological Consulting Services 2008); and
- *USFWS Response to the Special-status Amphibian and Reptile Preliminary Site Assessment* dated October 2008 (USFWS 2008g).

In assessing impacts to wetlands, the following document was reviewed and is included in **Appendix G** in Volume II of the Draft EIR:

- *Atkinson Lane Specific Plan Stormwater Constraints and Opportunities* prepared by RBF Consulting in March 2008.

### 3.4.1 Environmental Setting

#### Regional Setting

The City of Watsonville and adjacent unincorporated areas of Santa Cruz County encompass significant, though disturbed, natural areas. These include wetland habitat within Watsonville, Struve, and Harkins Sloughs, important remnants of riparian habitat along sloughs, the Pajaro River, Pinto Lake, Corralitos Creek, and small areas of intact oak woodland and grasslands. These areas provide important habitat for wildlife, including migratory birds and several species listed under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA).



## Project Setting

Existing features within the planning area include a freshwater marsh/seasonal wetland complex with an associated drainage/swale, an irrigated agricultural basin, a segment of Corralitos Creek, open ruderal/cultivated fields, orchards, unpaved farm roads and a few private residential and agricultural-related buildings as shown in **Figure 3.4-1: Existing Habitat and Land Use**.

## Floristic Inventory and Habitat Characterization/Land Use

The majority of vegetation within planning area consists of an assortment of weedy annual grasses and forbs with Coast live oak, eucalyptus, sycamore, acacia and willows dominating riparian areas along Corralitos Creek. Freshwater marsh and seasonal wetlands within the planning area include an assortment of hydrophytic<sup>1</sup> plants typical of the supporting hydrologic regimes of these features. A total of 113 species of vascular plants were recorded within the planning area. Of these, 47 species are native, and 66 species are non-native. A complete species list is presented in **Appendix D** in Volume II of the Draft EIR.

As shown in **Figure 3.4-1: Existing Habitats and Land Use**, EcoSystems West identified ten predominant habitat and land use types occurring in the planning area: freshwater marsh, seasonal wetland, ephemeral drainage, perennial stream, riparian woodland, California annual grassland, blackberry scrub, agricultural fields, ruderal, and developed/landscaped areas, described below. Where applicable, plant communities designations are derived from descriptions in Sawyer Keeler-Wolf (1995), Holland (1986), and CDFG (2003). Habitat types within the planning area are listed in **Table 3.4-1: Existing Habitat Types within the Planning Area in Acres**.

Table 3.4-1: Existing Habitat Types within the Planning Area in Acres

Habitat Type	Acres
Freshwater Marsh	2.4
Seasonal Wetland	1.9
Ephemeral Drainage	0.3
Perennial Stream	0.5
Riparian Woodland	4.1
California Annual Grassland	13.1
Blackberry Scrub	0.5
Agricultural Fields	38.6
Ruderal	3.8
Developed/Landscaped	3.3
Totals	68.5

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<sup>1</sup> water-loving



### Wetland/Aquatic Habitat Types

Wetlands and aquatic features are valued for the ability to filter and absorb contaminants present in stormwater runoff and as wildlife habitat. The wetland and aquatic features within the planning area provide a variety of habitats for common wildlife and are important resources for breeding, foraging, refuge, dispersal, and watering. Amphibians and reptiles such as the western toad (*Bufo boreas*); Pacific treefrog (*Hyla regilla*); California newt (*Taricha torosa*); and garter snake (*Thamnophis* sp.) may disperse between aquatic features on the site to breed and forage. Birds and mammals observed within this community included great blue heron (*Ardeo herodias*), Canada goose (*Branta Canadensis*), mallard (*Anas platyrhynchos*), Virginia rail (*Rallus limicola*), red-winged blackbird (*Agelaius phoeniceus palustris*); black phoebe (*Sayornis nigricans*) Wilson's warbler (*Wilsonia pusilla*) and raccoon (*Procyon lotor*). Bat species may drink from seasonal pools and/or forage over wetland/aquatic habitat. Wetland and aquatic habitats within the planning area are described in detail below.

#### *Freshwater Marsh*

The freshwater marsh areas within the planning area are contained within deep, depressional basins. The larger marsh complex located in the western portion of the planning area is fed by seasonal precipitation and surface runoff conveyed by an ephemeral drainage entering the basin from the north. The feature is enclosed by a six-foot levee to the east. The smaller marsh is located in the northern portion of the planning area near the terminus of Atkinson lane. This feature is situated in a man-made detention basin used for irrigating agricultural crops on the property.

Freshwater marsh habitat is dominated by emergent wetland vegetation including California bulrush (*Scirpus californicus*) and narrow-leaved cattail (*Typha angustifolia*). The larger marsh also contains a dense cover of water smartweed (*Polygonum amphibium* var. *emersum*) and scattered to locally dense patches of arroyo willow (*Salix lasiolepis*).

#### *Seasonal Wetland*

Two seasonal wetlands occur within the planning area. A larger seasonal wetland is located immediately northeast of the levee abutting the potential freshwater marsh, while a smaller seasonal wetland is located immediately west of an ephemeral drainage and north of the freshwater marsh. Seasonal wetlands are primarily characterized by shallow depressional topography and are supported by a combination of direct precipitation, surface runoff from adjacent uplands, and seasonal fluctuations in the water table. Seasonal wetlands are defined as naturally occurring wetlands that periodically lack indicators of hydrophytic vegetation, hydric<sup>2</sup> soil, or wetland hydrology<sup>3</sup> due to normal seasonal or annual variability. Within the planning area, seasonal wetlands are infrequently saturated or inundated during the rainy season and are dominated by curly dock (*Rumex crispus*), soft chess (*Bromus hordeaceus*), prickly ox-tongue (*Picris echioides*), water smartweed, and Italian ryegrass.

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<sup>2</sup> developed under periods of prolonged inundation or saturation

<sup>3</sup> inundated or saturated soils for a minimum of 14 consecutive days

### *Ephemeral Drainage*

An ephemeral drainage is located immediately north of the large freshwater marsh/wetland complex in the western portion of the planning area. This feature conveys surface runoff from Atkinson Lane and surrounding uplands into the marsh during periods of heavy rainfall. This drainage is entirely dry for the majority of the year and is dominated by an assortment of annual grasses and forbs including Italian ryegrass, prickly ox-tongue and prickly lettuce (*Lactuca serriola*). The lower extent is dominated by Himalayan blackberry (*Rubus discolor*) and a stand of mature Pacific willow trees (*Salix lasiandra* ssp. *lasiandra*).

### *Perennial Stream*

Within the planning area, Corralitos Creek is a perennial stream with intermittent flow due to groundwater overdraft. The creek has steep streambanks and a sandy alluvial bottom. Flowing or standing water is absent for the majority of the year allowing for the persistence of herbaceous vegetation along cobbly portions of the streambed. Mugwort (*Artemisia douglasiana*), periwinkle (*Vinca major*) and flatsedge (*Cyperus eragrostis*) predominate below the ordinary high water mark of the creek.

### Riparian Habitat Types

#### *Riparian Woodland*

The riparian woodland is associated with Corralitos Creek and the freshwater marsh habitats located within the planning area. Riparian woodland occurs on the intermediate to steep embankments of Corralitos Creek. Although flowing water was not observed in Corralitos Creek at the time of site visits by EcoSystems West, it appears that a seasonal/intermittent hydrologic regime supports this riparian woodland complex. Additional riparian woodland is situated on the embankments of freshwater marsh habitat in the western portion of the planning area and surrounding the irrigated agricultural basin near the terminus of Atkinson Lane.

The riparian woodland associated with Corralitos Creek is dominated by several species of willow including the following: arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and Pacific willow (*Salix lasiandra* ssp. *lasiandra*). While Pacific willow and red willow generally have a typical tree growth form, with a single trunk well above the base, arroyo willow is typically an arborescent (tree-sized) shrub, with multiple trunks from the base. Coast live oak (*Quercus agrifolia*), black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), sycamore (*Platanus racemosa*), and big leaf maple (*Acer macrophyllum*) are other commonly associated tree species. The native woody vine Pacific blackberry (*Rubus ursinus*) and the non-native Himalayan blackberry (*Rubus discolor*), largely dominates the understory, forming dense, often impenetrable tangles. The native sub-shrub mulefat (*Baccharis salicifolia*), and invasive species such as veldt grass (*Ehrharta erecta*), German ivy (*Delairea odorata*), and periwinkle are also relatively common.

Coast live oak and arroyo willow dominate the riparian woodland habitat associated with freshwater marsh features, including the irrigated agricultural basin, on the planning area. The understory in these areas is comprised of patchy Himalayan blackberry and an assortment of non-native grasses and forbs.

Riparian woodland habitat provides important nesting/roosting, foraging, refuge, and dispersal habitat for a variety of common species. Common species of amphibians such as the slender salamander (*Batrachoseps* sp.), and California newt may seek refuge and forage in the moist



substrate of the woodland understory. Common reptiles including the western fence lizard (*Sceloporus occidentalis*), and gopher snake (*Pituophis melanoleucus*) seek cover and forage among woody debris in the understory. A variety of birds observed in the riparian woodland include the Anna's hummingbird (*Calypte anna*), chestnut-backed chickadee (*Poecile rufescens*), bushtit (*Psaltriparus minimus*), western scrub jay (*Aphelocoma californica*), California towhee (*Pipilo crissalis*), downy woodpecker (*Picoides pubescens*), Townsend's warbler (*Dendroica townsendii*); and house finch (*Carpodacus mexicanus*). Red shouldered hawks (*Buteo lineatus*) and great horned owls (*Bubo virginianus*) may nest in the woodland canopy and forage for small mammals such as the broad-footed mole (*Scapanus latimanus*) and Botta's pocket gopher (*Thomomys bottae*). Other mammal species that may utilize the riparian woodland community include striped-skunk (*Mephitis mephitis*), eastern fox squirrel (*Sciurus niger*), raccoon, coyote (*Canis latrans*), bats and black-tailed deer (*Odocoileus hemionus columbianus*).

### Upland Habitat Types/Land Uses

#### *California Annual Grassland*

California annual grassland occurs on the flat to moderately sloped areas throughout a significant percentage of the undeveloped portions of the planning area. Due to isolation from nearby coastal prairie habitat, as well as the proximity to urban development and annual spring discing, grassland habitat within the planning area is highly disturbed and comprised primarily of weedy, non-native species.

Within the planning area, California annual grassland is dominated by brome grasses (*Bromus diandrus*, *B. hordeaceus*), wild oats (*Avena* spp.), foxtail barley (*Hordeum murinum*), Italian ryegrass, filaree (*Erodium botrys*), wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), English plantain (*Plantago lanceolata*), and rough cat's ear (*Hypochaeris radicata*). The native annual herb, Santa Cruz tarplant (*Holocarpha macradenia*), a state Endangered and federally Threatened species, also occurs in the western half of the planning area on the PG&E parcel (Assessors Parcel Number: 048-211-24). In general, a large percentage of plant species identified within this habitat type are listed as invasive weeds with "moderate to high ecological impacts" by the California Invasive Plant Council (Cal-IPC 2007).

Although the majority of annual grasslands found throughout the planning area are periodically disced, native wildlife within the region utilize this vegetation community. Areas of grassland that are not subject to discing practices are productive habitats and provide food plants and cover for granivorous and insectivorous wildlife such as lizards, birds, and small mammals. Small mammal burrows of the broad footed mole and pocket gopher provide upland refuge and nesting sites for amphibians and reptiles that may travel to moist conditions offered in the wetland aquatic habitats on site. Western toads (*Bufo boreas*), Pacific treefrogs (*Hyla regilla*), and California newts may use mammal burrows for refuge when dispersing between wetland aquatic sites. Western fence lizards and gopher snakes may also seek refuge, or forage, within the grassland areas. Birds observed foraging over the grassland area of the site included Say's phoebe (*Sayornis saya*) and meadowlark (*Sturnella neglecta*). These grasslands also provide foraging sites for raptors such as red-tailed hawks (*Buteo jamaicensis*), barn owls (*Tyto alba*) and other scavengers/predators including turkey vultures (*Cathartes aura*) and coyote. Black-tailed deer may also forage or migrate through the grasslands of the planning area.

### *Blackberry Scrub*

Dense, impenetrable thickets of Himalayan blackberry are located along the levees and embankments surrounding the large freshwater marsh complex in the western portion of the project area. No other plant species are associated with this habitat type.

Blackberry scrub provides upland foraging, refuge, and nesting habitat for many species associated with the nearby freshwater marsh/seasonal wetland habitat. Pacific tree frogs were heard chorusing from the blackberry thicket along the border between the residential homes along Paloma Way and the marsh/wetland feature. Song sparrows (*Melospiza melodia*) and house finches were also observed perching among this scrub habitat, while a brush rabbit (*Sylvilagus bachmani*) sought cover from foraging red-tailed hawks.

### *Agricultural Fields*

Much of the land in the eastern half of the planning area is presently used to grow strawberries and apples. The proposed extension of Wagner Avenue is also comprised of agricultural crops. The majority of these agricultural fields and orchards have been actively cultivated for many decades. Present management includes the seasonal application of herbicides and discing with heavy machinery. As a result, these areas have marginal habitat value and do not support native vegetation or sensitive plant communities.

The cultivated agricultural field provides marginal dispersal habitat for wildlife moving between aquatic features in the planning area. Red-tailed hawks, turkey vultures, and American crows (*Corvus brachyrhncus*) were observed flying and foraging over the fields. Raccoon tracks were observed along the margins of the cultivated fields and unpaved access road adjacent to Corralitos Creek.

### *Ruderal*

Ruderal habitat consists of highly disturbed, weedy areas immediately adjacent to existing urban and agricultural infrastructure or along dirt access roads throughout the planning area. Ruderal vegetation is comprised of aggressive, early-successional species such as bull mallow (*Malva nicaensis*), pineapple weed (*Chamomilla suaveolens*), wild radish, black mustard, and filaree.

Ruderal areas among highly cultivated fields provide marginal foraging and cover for dispersing wildlife. Groups of western meadowlarks, house sparrows, and American crows were observed flying and foraging within this habitat type.

### *Developed/Landscaped*

Developed and landscaped areas are comprised of urban and light-industrial infrastructure including residential housing, agricultural facilities and paved roads as well as actively landscaped areas associated with these features. Within the planning area, several developed areas occur along the western and northeastern perimeters of the boundary of the planning area. Additionally, the eastern terminus of Atkinson Lane, a paved residential road, is also located north of the boundary of the planning area.

Developed/landscaped areas provide marginal habitat for wildlife. A variety of wildlife species have adapted to occupy developed/landscaped areas within residential neighborhoods. Representative species observed in this area include the American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), Anna's hummingbird, house finch, house sparrow,



California towhee, western scrub jay, Botta's pocket gopher, raccoon, striped skunk, eastern fox squirrel, and possibly bats.

### 3.4.2 Regulatory Background

#### Federal

Local, state, and federal regulations have been enacted to provide for the protection and management of sensitive biological and wetland resources.

#### Federal Endangered Species Act

Federal Endangered Species Act (ESA) of 1973 (Title 16 United States Code, Section 1531 *et seq.*, as amended) provisions protect federally listed threatened and endangered species and their habitats from unlawful take (<http://endangered.fws.gov/ESA.html>). "Take" under ESA includes activities such as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." Activities that may result in "take" of individuals are regulated by the United States Fish and Wildlife Service (USFWS). Listed species are taxa for which proposed and final rules have been published in Federal Register (USFWS 2008a, b, c, d).

Unlike threatened and endangered species, candidate species are not afforded any legal protection under ESA but typically receive special attention from federal and state agencies during the environmental review process.

#### Migratory Bird Treaty Act

All migratory birds and their nests are federally protected under the Migratory Bird Treaty Act of 1918 (MBTA) (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13) and by CDFG codes that support the act. The MBTA makes it unlawful to "take" (e.g., pursue, kill, harm, harass) any migratory bird or raptor listed in the 50 Code of Federal Regulations Section 10, including nests, eggs, or products.

#### Federal Clean Water Act (Section 404)

Under Section 404 of the Clean Water Act, the Army Corps of Engineers (ACOE) is responsible for regulating the discharge of fill materials into waters of the United States, including wetlands. Wetlands are defined as, "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include; swamps, marshes, bogs, and similar areas" (EPA, 40 CFR 230.3, and CE 33 CFR 328.3). The three criteria used to delineate wetlands are the presence of: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. According to the ACOE Manual, evidence of at least one positive wetland indicator from each parameter must be found in order to make a positive determination. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation, such as lakes and ponds, or convey water, such as streams, are also subject to Section 404 jurisdiction. Along the Central California coast, these "other waters" can include intermittent and ephemeral streams, as well as lakes, and rivers. "Other waters" are identified by the presence of an ordinary high water (OHW) mark, a defined river or stream bed, a bank, or by the absence of emergent vegetation in ponds or lakes. An OHW mark is defined as the natural line on the shore established by fluctuations of water.



### Federal Clean Water Act (Section 401)

Under Section 401 of the Clean Water Act, the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) must certify that the activities permitted by the ACOE under Section 404 of the CWA will not violate water quality standards individually or cumulatively over the term of the issued permit (the term is typically five years). Water quality certification must be consistent with the requirements of the Federal Clean Water Act, the California Environmental Quality Act, the California Endangered Species Act, and the SWRCB's mandate to protect beneficial uses of waters of the State known as the California Porter-Cologne Water Quality Control Act.

### Executive Order 11990

Executive Order 11990 mandates that federal or federally assisted projects and programs minimize the destruction, loss or degradation of wetlands and avoid new construction in wetlands, taking into account public health and safety, maintenance of natural systems, and other public interests.

## State

### The California Endangered Species Act

The 1984 California Endangered Species Act (CESA) (Fish and Game Code, Section 2050-2098) prohibits the “take” of State-listed threatened and endangered species. The CESA authorizes the California Fish and Game Commission to designate Endangered and Threatened species and to regulate the taking of these species. The Habitat Conservation Planning Branch of CDFG administers the State’s rare species program. The CDFG maintains lists of designated Endangered, Threatened, and Rare plant and animal species. Listed species were either designated under NPPA or by the Fish and Game Commission. In addition to recognizing three levels of endangerment, the CDFG can afford interim protection to candidate species while the Fish and Game Commission is reviewing them.

### *Species of Special Concern*

In addition to lists of designated Endangered, Threatened, and Rare plant and animal species, the CDFG maintains a list of animal “Species of Special Concern” (CDFG 2008b), most of which are species whose breeding populations in California may face extirpation.<sup>4</sup> Although these species have no legal status under CESA, the CDFG recommends considering these species during analysis of proposed project impacts to protect declining populations, and to avoid the need to list them as Threatened or Endangered in the future. These species may “be considered rare or endangered [under CEQA] if the species can be shown to meet the criteria.”

### *Sensitive Natural Communities*

In addition to species-oriented management, protecting habitat on an ecosystem level is increasingly recognized as vital to the protection of natural diversity in the state. Ecosystem protection is considered the most effective means of providing long-term protection of ecologically viable habitat, and can include whole watersheds, ecosystems, and sensitive natural

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<sup>4</sup> “Extirpate” means to destroy completely; to pull up by the root; to exterminate (Merriam-Webster).



communities. Providing functional habitat connectivity between natural areas is essential to sustaining healthy wildlife populations and allowing for the continued dispersal of native plant and animal species.

Although sensitive natural communities have no legal protective status under the California or federal Endangered Species Acts, they are provided some level of protection under CEQA. A discretionary project that has a substantial adverse effect on riparian habitat, native grassland, valley oak woodland, or other sensitive natural community is considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on the community's relative abundance, quality, and degree of past disturbance, and the anticipated impacts to the specific community type. Where determined to be significant under CEQA, the potential impact would require mitigation through avoidance, minimization of disturbance or loss, or some type of compensatory mitigation when unavoidable.

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species and CDFG 'Species of Special Concern', areas of high biological diversity, areas providing important wildlife habitat, unusual or regionally restricted habitat types, and habitats identified as sensitive under local ordinances or regulations. Habitat types considered sensitive include those listed on the California Natural Diversity Data Base (CNDDDB) working list of 'high priority' habitats for inventory (i.e., those habitats that are rare or endangered within the borders of California) (Holland 1986; CDFG 2003) and areas considered to be 'sensitive habitats' under county General Plans, and Local Coastal Programs (LCPs).

The CNDDDB maintains a working list of "high priority" habitats for inventory (i.e., those habitats that are rare or endangered within the borders of California) (Holland 1986, CDFG 2003). CNDDDB "high priority" habitats are generally considered sensitive habitats under CEQA.

#### [California Native Plant Protection Act](#)

Project permitting and approval require compliance with the 1977 California Native Plant Protection Act (NPPA) (Fish and Game Code, Section (1900-1913). In addition to the Endangered and Threatened categories established by CESA, the NPPA establishes a rare category for plant species only. It authorizes the California Fish and Game Commission to designate Endangered, Threatened, and Rare plant species and to regulate the taking of these species.

#### [California Environmental Quality Act](#)

The California Environmental Quality Act (CEQA) requires that California's state and local agencies prepare multidisciplinary environmental impact analyses and make decisions based on those studies' findings regarding the environmental effects of the proposed Project. The main objectives of CEQA are to disclose to decision makers and the public the significant environmental effects of proposed activities and to require agencies to avoid or reduce environmental effects by implementing feasible alternatives or mitigation measures.

Based on provisions of Section 15380 of the *CEQA Guidelines*, plants and animals with the following protected status must be addressed in CEQA documents on proposed development projects: federally listed Endangered or Threatened species under the ESA, federal Proposed and

Candidate species, and species listed by the state of California as Endangered, Threatened, or Rare under the CESA or NPPA.

In addition, under Section 15380(d) of the *CEQA Guidelines*, a species not included on any list recognized by the State “shall nevertheless be considered rare or endangered if the species can be shown to meet the criteria” for listing. The CDFG, USFWS and U.S. Forest Service all maintain independent lists of species with designated conservation status that meet the *CEQA Guidelines* criterion for consideration. Based on provisions of Section 15380(d) of the *CEQA Guidelines*, the lead agency and the CDFG, in making a determination of impact significance, must treat non-listed plant and animal species as equivalent to listed species if the non-listed species satisfy the minimum biological criteria for listing.

#### [Porter Cologne Water Quality Control Act](#)

The Porter-Cologne Water Quality Control Act (SWRCB 2002) assigns overall responsibility for water rights and water quality protection to the SWRCB and directs the nine statewide RWQCBs to develop and enforce water quality standards within their boundaries. Under California State law, “waters of the state” pertains to “any surface water or groundwater, including saline waters, within the boundaries of the state.” As a result, water quality laws and permitting authority apply to both surface and groundwater. In the absence of a federal permit requirement, impacts to waters of the state, including wetlands, requires a Waste Discharge Requirement (WDR) authorization from the RWQCB (SWRCB 2004).

#### [Lake and Streambed Alteration \(Section 1600-1616 of the Fish and Game Code\)](#)

Jurisdictional authority of the CDFG over relatively permanent bodies of standing or flowing water is established under Sections 1600-1616 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any lake, river, or stream without notifying CDFG, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement.

The Wetlands Resources Policy of the CDFG states that the Fish and Game Commission will strongly discourage development in or conversion of wetlands, unless, at a minimum, project mitigation assures that there will be no net loss of either wetland habitat values or acreage. The CDFG is also responsible for commenting on projects requiring ACOE permits under the Fish and Wildlife Coordination Act of 1958.

#### **Other**

#### [California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California](#)

In general, the CDFG considers plant species on List 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere) or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the California Native Plant Society’s (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (Tibor 2001, CNPS 2008) as qualifying for legal protection under CEQA. Species on CNPS List 3 (Plants About Which We Need More Information--A Review List) or List 4 (Plants of Limited Distribution – A Watch List) may, but generally do not, qualify for protection under CEQA.



### Western Bat Working Group Listings

The CDFG maintains a list of bat species designated as “High Priority” by the Western Bat Working Group (WBWG). Species designated “High Priority” are defined as “imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats” (CDFG 2008b). These species qualify for protection under Section 15380(d) of the *CEQA Guidelines*.

### Local

#### City of Watsonville 2005 General Plan

The following policies in the 2005 *City of Watsonville General Plan* are applicable to biological resources within the planning area.

**Goal 9.8, Wildlife Habitat.** Preserve and protect the remaining areas of wildlife habitat for their scenic and scientific value.

**Policy 9.F, Wildlife Habitat Protection.** The City shall designate for open space and environmental management those areas rich in wildlife species and fragile in ecological make-up. These habitat zones shall be made part of the greenbelt where appropriate.

**Implementation Measure 9F.1, Habitat Protection.** Impacts to important wildlife habitat areas shall be identified as part of the City’s development review and environmental review processes, and appropriate mitigations shall be considered. Mitigation measures to be considered include: designation of sensitive areas as open space, restrictions of new development on lands that provide important wildlife habitat, setback requirements, habitat conservation plans, and habitat mitigation banking. Lands within the urban limit line that provide important wildlife habitat include, but are not limited to riparian corridors, fresh water marshes and sloughs, woodlands, and steep slopes.

#### County of Santa Cruz 1994 General Plan

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994.

The Conservation and Open Space Element provides general plan policies of which support and implement the County’s Riparian Corridor Protection Ordinance and Sensitive Habitat Protection Ordinance. The following policies are applicable to biological resources at the planning area.

**Policy 5.1.6, Development within Sensitive Habitats.** Sensitive habitats shall be protected against any significant disruption of habitat values; and any proposed development within or adjacent to these areas must maintain or enhance the functional capacity of the habitat. Reduce in scale, redesign, or, if no other alternative exists, deny any project which cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of a project is legally necessary to allow a reasonable use of the land.

**Policy 5.1.10, Species Protection.** Recognize that habitat protection is only one aspect of maintaining biodiversity and that certain wildlife species, such as migratory birds, may not utilize

specific habitats. Require protection of these individual rare, endangered and threatened species and continue to update policies as new information becomes available.

**Policy 5.1.12, Habitat Restoration with Development Approval.** Require as a condition of development approval, restoration of any area of the subject property which is an identified degraded sensitive habitat, with the magnitude of restoration to be commensurate with the scope of the project. Such conditions may include erosion control measures, removal of non-native or invasive species, planting with characteristic native species, diversion of polluting run-off, water impoundment, and other appropriate means. The object of habitat restoration activities shall be to enhance the functional capacity and biological productivity of the habitat(s) and whenever feasible, to restore them to a condition which can be sustained by natural occurrences, such as tidal flushing of lagoons.

**Policy 5.1.14, Removal of Invasive Plant Species.** Encourage the removal of invasive species and their replacement with characteristic native plants, except where such invasive species provide significant habitat value and where removal of such species would severely degrade the existing habitat. In such cases, develop long-term plans for gradual conversion to native species providing equal or better habitat values.

**Policy 5.2.1, Designation of Riparian Corridors and Wetlands.** Designate and define the following areas as Riparian Corridors:

- (a) 50 feet from the top of a distinct channel or physical evidence of high water mark of a perennial stream;
- (b) 30 feet from the top of a distinct channel or physical evidence of high water mark of an intermittent stream as designated on the General Plan maps and through field inspection of undesignated intermittent and ephemeral streams;
- (c) 100 feet of the high water mark of a lake, wetland, estuary, lagoon, or natural body of standing water;
- (d) The landward limit of a riparian woodland plant community;
- (e) Wooded arroyos within urban areas.

Designate and define the following areas as Wetlands:

Transitional areas between terrestrial and aquatic systems, where the water table is usually at or near the surface or the land is covered by shallow water periodically or permanently. Examples of wetlands are saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps mudflats, and fens.

The U.S. Army Corps of Engineers and other federal agencies utilize a “unified methodology” which defines wetlands as “those areas meeting certain criteria for hydrology, vegetation, and soils.”

**Policy 5.2.3, Activities Within Riparian Corridors and Wetlands.** Development activities, land alteration and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of riparian exception, require evidence of approval for development from the U.S. Army Corps of Engineers, California Department of Fish and Game,



and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.

**Policy 5.2.4, Riparian Corridor Buffer Setback.** Require a buffer setback from riparian corridors in addition to the specified distances found in the definition of riparian corridor. This setback shall be identified in the Riparian Corridor and Wetland Protection ordinance and established based on stream characteristics, vegetation and slope. Allow reductions to the buffer setback only upon approval of a riparian exception. Require a 10 foot separation from the edge of the riparian corridor buffer to any structure.

**Policy 5.2.5, Setbacks From Wetlands.** Prohibit development within the 100-foot riparian corridor of all wetlands. Allow exceptions to this setback only where consistent with the Riparian Corridor and Wetlands Protection ordinance, and in all cases, maximize distance between proposed structures and wetlands. Require measures to prevent water quality degradation from adjacent land uses, as outlined in the Water Resources section.

**Policy 5.2.6, Riparian Corridors and Development Density.** Exclude land within riparian corridors in the calculation of development density or net parcel size. Grant full density credit for the portion of the property outside the riparian corridor which is within the required buffer setback, excluding areas over 30 percent slope, up to a maximum of 50 percent of the total area of the property which is outside the riparian corridor. (See policy 5.11.2.)

**Policy 5.2.7, Compatible Uses With Riparian Corridors.** Allow compatible uses in and adjacent to riparian corridors that do not impair or degrade the riparian plant and animal systems, or water supply values, such as non-motorized recreation and pedestrian trails, parks, interpretive facilities and fishing facilities. Allow development in these areas only in conjunction with approval of a riparian exception.

**Policy 5.2.9, Management Plans for Wetland Protection.** Require development in or adjacent to wetlands to incorporate the recommendations of a management plan which evaluates: migratory waterfowl use December 1 to April 30; compatibility of agricultural use and biotic and water quality protection; maintenance of biologic productivity and diversity; and the permanent protection of adjoining uplands.

**Policy 5.2.10, Development in Wetland Drainage Basins.** Require development projects in wetland drainage basins to include drainage facilities or Best Management Practices (BMPs) which will maintain surface runoff patterns and water quality, unless a wetland management plan specifies otherwise, and minimize erosion, sedimentation, and introduction of pollutants.

#### County of Santa Cruz Riparian Corridor and Wetlands Protection Ordinance

The County of Santa Cruz Riparian Corridor and Wetlands Protection Ordinance contains guidelines for controlling development in riparian corridors. A riparian exception is required for grading, land clearing, building and tree or shrub removal, and the topping or felling of any standing vegetation greater than eight feet in height in these areas. Deposition of debris and use of pesticides are prohibited. Certain activities are exempt from the ordinance, including:

- Continuance of a pre-existing use (both agricultural and non-agricultural).
- Work done in accordance with a valid State Timber Harvesting Permit.



- Activities listed in the California Food and Agricultural Code for pest control.
- Drainage, erosion control, or habitat restoration required as a condition of County approval of a project.

Additionally, this Ordinance requires a wetland buffer of at least 50 feet from the edge of riparian vegetation and at least 20 feet from the edge of all other vegetation. Once the buffer is determined, a 10-foot setback from the edge of the buffer will be required for all structures to allow for construction equipment and use of yard area.

#### [County of Santa Cruz Sensitive Habitat Protection Ordinance](#)

The Sensitive Habitat Protection Ordinance was designed to minimize disturbance in sensitive habitats and to protect these areas for their genetic, scientific, and educational value. The ordinance states that:

- No toxic substance that will have adverse effects on the biotic community can be used in a sensitive habitat. In some instances, such substances can be used for agricultural purposes but only if mitigation measures can ensure protection.
- No development activities or land disturbance can occur in a sensitive habitat until a biotic review has been completed. This review determines what kinds of development activities can be conducted and what mitigation measures may be necessary to ensure protection of the habitat.
- Development activity includes any action that results in disturbance to rare, endangered, or locally unique plants and animals or to their habitats. Development includes, but is not limited to:
  - building, reconstruction, or alteration of structures on land, in or near natural bodies of water
  - grading, land clearing
  - change in density (including land divisions) or intensity of land use
- The removal or harvesting of major vegetation other than for agricultural purposes is prohibited.

These activities may be restricted depending on the specific sensitive habitat under consideration. Development may be permitted as long as the habitat remains undisturbed; permitted as long as mitigation measures can correct any resulting adverse effects; or prohibited.

### **3.4.3 Relevant Project Characteristics**

The proposed Specific Plan and PUD designates approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” and 10 net-acres for “Residential – Low Density. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; 3.5 acres of parks/recreational uses; and 14.1



acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of Phase 2 (City site) adjacent to Corralitos Creek. The proposed project also includes an interim agricultural buffer within the County site (Phase 1) that would be terminated once Phase 2 (City site) is rezoned.

The proposed Specific Plan and PUD includes dedication of a 2.7 acre wetland buffer around the freshwater marsh in the western portion of the planning area and a 1.9 acre riparian buffer. The proposed Specific Plan includes a pedestrian trail along Corralitos Creek within the riparian buffer zone. The proposed Specific Plan would remove the existing irrigated agricultural basin in the northern portion of the planning area.

#### 3.4.4 Sensitive Biological Resources

A summary of sensitive biological resources is presented in **Table 3.4-2: Special Status Species and Sensitive Habitats Occurring or with Potential to Occur Within the Planning Area**. These resources are described in detail below.

##### Special-Status Species

EcoSystems West identified one special-status plant species and ten special-status wildlife species known to occur or with potential to occur within the planning area (Appendix D, Volume II of the Draft EIR). One plant species, Santa Cruz tarplant (*Holocarpha macradenia*), and one wildlife species, western pond turtle (*Actinemys marmorata*), were observed to be 'Present' within the planning area. The potential for occurrence of the remaining wildlife species' were designated as 'Possible', based on the presence of suitable habitat and proximity to known occurrences.

All other special-status species with potential to occur in the vicinity were eliminated from consideration based on lack of suitable habitat, agricultural practices on the planning area that preclude utilization of the site for many species, and isolation and distance from known populations (EcoSystems West 2009a; Mori 2008; USFWS 2008g).



Table 3.4-2: Special-Status Species and Sensitive Habitats Occurring or with Potential to Occur within the Planning Area

Common Name <i>Scientific Name</i>	Status			Habitat Requirements	Potential Occurrence*
	Federal	State	Other		
<b>BOTANY</b>					
Holocarpha macradenia Santa Cruz tarplant	FT	SE	CNPS 1B.1	Coastal prairie, valley and foothill grassland, coastal scrub; often in clay or sandy soils. Flowering period: late May-October	<b>Present</b> Found in poor quality annual grassland habitat in westernmost portion of the planning area on the PG&E parcel. Not observed in annually tilled grassland throughout the remainder of the site.
<b>WILDLIFE</b>					
<b>Amphibians and Reptiles</b>					
California red-legged frog <i>Rana draytonii</i>	FT	SC	-	Requires the presence of surface water until mid to late summer for reproduction; utilizes ephemeral and/or perennial systems with standing or slow moving flows; upland habitat includes leaf litter, burrows and crevices; adults may travel over 2 miles overland between aquatic sites.	<b>Possible</b> Occurrences nearest to the planning area are located approximately 1.2 miles southwest in Watsonville Slough and 1.6 miles southwest in Struve Slough, both bordered by urban environments. The planning area provides potential dispersal and aquatic habitat; bullfrogs are present within the aquatic habitat (CRLF predators). Occurrence is unlikely (Mori 2008).
Western pond turtle <i>Actinemys marmorata</i>	-	SC	-	Found in ponds, marshes, rivers, streams, and ditches containing aquatic vegetation. Basks on logs, debris, banks and/or rocks. Moves up to 4 miles within a creek/drainage system, especially during 'walk-about' before a female lays eggs. Forms nesting burrows in upland areas up to several hundred feet away from aquatic habitat in woodlands, grasslands, or open areas.	<b>Present</b> Observed within the large wetland feature in the project area during site visits in 2007 and 2008 (K. Glinka and B. Mori pers. obs.). Nearest known additional records are from 1.2 miles southwest in Struve Slough and 1.4 miles north in Pinto Lake. Project area provides aquatic, upland nesting, and dispersal habitat (Mori 2008).
<b>Raptors and Birds (Nesting and/or Wintering)**</b>					
Nesting birds of prey (Various species)	-	-	CDFG	Variety of woodland, riparian, and savanna habitats	<b>Possible</b> Tree stands in project area provide potential nesting habitat for birds of prey including owls and hawks.
Ferruginous hawk <i>Buteo regalis</i>	BCC	-		Winter visitor to open field and grasslands	<b>Possible (wintering)</b> Nearest record is from north Monterey Co.; May forage or occur as seasonal migrant.



**Table 3.4-1. (continued)**

Common Name <i>Scientific Name</i>	Status			Habitat Requirements	Potential Occurrence*
	Federal	State	Other		
White-tailed kite <i>Elanus leucurus</i>	-	FP	--	Nests in conifers on the margins of open areas including grasslands and sloughs containing a high abundance of small mammals and lizards.	<b>Possible</b> Project area provides potential nesting and wintering habitat in tree stands. May forage over site or occur as migrant.
Yellow warbler <i>Dendroica petechia brewsteri</i>	-	SC	-	Nests in deciduous riparian woodland with open canopy along streams or other watercourses; forages in dense understory of riparian woodland.	<b>Possible</b> Project area provides riparian vegetation for marginal potential nesting habitat. May forage or occur as migrant.
<b>Mammals</b>					
Pallid bat <i>Antrozous pallidus</i>	-	SC	HP	Roost sites are primarily associated with oak, redwood, ponderosa pine, and giant sequoia forests. Will also roost under bridges and in buildings and rock outcrops.	<b>Possible</b> Project area provides potential roosting habitat features. May forage over site or occur as migrant.
Western red bat <i>Lasiurus blossevillii</i>	-	SC	HP;**	Roosts in foliage, primarily in riparian and wooded habitats.	<b>Possible</b> Project area provides potential roosting habitat in riparian and/wooded canopy. May forage over site or occur as migrant.
Fringed myotis <i>Myotis thysanodes</i>	-	-	HP: **	Roosts sites in California are primarily in buildings or mines; will also roost in large conifer snags and caves.	<b>Possible</b> Potential roosting habitat available in tree stands and structures in study area. May forage over site or occur as migrant.
Long-legged myotis <i>Myotis volans</i>	-	-	HP;**	Roosts primarily in large hollow tree snags or live trees with exfoliating bark; also uses rock crevices, mines, and buildings.	<b>Possible</b> Potential roost sites available in structures, snags, and trees with exfoliating bark, and broken tops in project area. May forage over site or occur as migrant.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	-	SC	-	Associated with riparian, oak woodland and redwood forest habitats. Builds stick nests under or in buildings, hollow trees, or in tree canopy.	<b>Possible</b> Potential habitat occurs in project area in willow riparian habitat, dense understory surrounding the irrigation pond and along Corralitos Creek. Minimal additional potential habitat occurs among scattered old structures on site. No dusky-footed woodrat nests were observed during site surveys.



Common Name <i>Scientific Name</i>	Status/Regulatory Authority	Habitat/Resource Description
<b>SENSITIVE HABITATS</b>		
<b>Wetlands and Other Waters</b>		
Freshwater Marsh	CNDDDB WGP SCCGP SCCO	Supported by perennial hydrology and dominated by emergent wetland vegetation including bulrush ( <i>Scripus californicus</i> ), cattail ( <i>Typha angustifolia</i> ), smartweed ( <i>Polygonum amphibium</i> ), and arroyo willow ( <i>Salix lasiolepis</i> ). RBF (2008) concluded that this feature lacks direct connectivity to navigable waters of the U.S. and may be considered an isolated wetland. Isolated wetlands are not subject to Section 404 jurisdiction.
Irrigated Agricultural Basin (Freshwater Marsh)	WGP SCCGP SCCO	Irrigated agricultural basin is perennially inundated due to flooding of feature via mechanical pumps. Presently, the basin is dominated by emergent wetland vegetation including bulrush and cattail. RBF (2008) suggests this feature lacks direct connectivity to navigable waters of the U.S. and may be considered an isolated wetland. Isolated wetlands are not subject to Section 404 jurisdiction.
Seasonal wetland	CNDDDB WGP SCCGP SCCO	Supported by seasonal hydrology and periodic inundation and/or saturation. Dominated by hydrophytic vegetation characteristic of seasonally wet areas including curly dock ( <i>Rumex crispus</i> ), Italian ryegrass ( <i>Lolium multiflorum</i> ), prickly ox-tongue ( <i>Picris echioides</i> ) and smartweed. RBF (2008) suggests this feature lacks direct connectivity to navigable waters of the U.S. and may be considered an isolated wetland. Isolated wetlands are not subject to Section 404 jurisdiction.
Ephemeral drainage	CNDDDB WGP SCCGP SCCO	Conveys flowing water into freshwater marsh following heavy rainfall. Drainage is almost completely vegetated with Himalayan blackberry ( <i>Rubus discolor</i> ), Prickly lettuce ( <i>Lactuca serriola</i> ) and Italian ryegrass in the upper reach and blackberry and Pacific willow ( <i>Salix lasiandra</i> ) in the lower reach closer to the freshwater marsh. RBF (2008) suggests this feature lacks direct connectivity to navigable waters of the U.S. and may be considered an isolated wetland. Isolated wetlands are not subject to Section 404 jurisdiction.
Corralitos Creek	WGP SCCGP SCCO	Corralitos Creek flows intermittently in the segment within the project area boundary and has steep streambanks and a sandy alluvial streambed. Dense riparian woodland occurs on both embankments of the creek.
Riparian woodland	CNDDDB SCCO WGP SCCGP SCCO	Riparian woodland occurs along the embankments of Corralitos Creek, an irrigated agricultural basin presently functioning as freshwater marsh, and a large freshwater marsh fed by an ephemeral drainage. Riparian vegetation along Corralitos Creek is dominated by a diverse overstory of riparian trees including arroyo willow, Pacific willow, red willow ( <i>Salix laevigata</i> ), sycamore ( <i>Platanus racemosa</i> ), black cottonwood ( <i>Populus basalmifera</i> ), Eucalyptus ( <i>Eucalyptus globulus</i> ), and Coast live oak ( <i>Quercus agrifolia</i> ). Riparian vegetation around the irrigated agricultural basin consists almost entirely of Coast live oak, while the riparian canopy of the larger freshwater marsh to the west consists of coast live oak, arroyo willow and pacific willow.



### Table 3.4-1 Notes:

\* Potential Occurrence: Present = Biological resource has been identified within the proposed project area; Possible = Suitable potential habitat is located within the planning area and the planning area is within the known range of the resource and dispersal distance from known occurrences.

\*\* The Migratory Bird Treaty Act (MBTA) of 1918 (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13) and CDFG codes that support the act protect all nesting raptors (i.e., hawks and owls), native birds, and their occupied nests. The MBTA makes it unlawful to “take” (e.g., pursue, kill, harm, harass) any migratory bird or raptor listed in the 50 Code of Federal Regulations Section 10, including nests, eggs, or products.

#### Federal Status (USFWS 2008a, d; CDFG 2008a, b)

FT = Threatened: Any species, which is likely to become an endangered species within the foreseeable future throughout all, or a significant portion of its range.

State Status (Williams 1986; CDFG 2008b) SE = Endangered: A native species or subspecies of animal which is in serious danger of becoming extinct throughout all, or a significant portion of its range, due to loss of habitat, change in habitat, over exploitation, predation, competition and/or disease.

SC = CDFG ‘Species of Special Concern’ are taxa given special consideration because they are biologically rare, very restricted in distribution, declining throughout their range, or at a critical stage in their life cycle when residing in California or taxa that are closely associated with a habitat that is declining in California (e.g., wetlands).

CDFG = Protected birds of prey (Order Falconiformes and Strigiformes) under California Fish and Game Code 3503.5.

FP = Fully Protected: This classification was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

BCC = Birds of Conservation Concern: Species of migratory nongame birds that USFWS considers to be of concern in the United States because of (1) documented or apparent population declines, (2) small or restricted populations, (3) dependence on restricted or vulnerable habitats.

CNDDDB= CNDDDB ‘High Priority’ Habitat

#### County and City Ordinances

SCCGP = County of Santa Cruz General Plan

SCCO = County of Santa Cruz Ordinance

WGP = City of Watsonville General Plan

#### Other (WBWG 1998; CFGC 2006; CDFG 2008b)

HP =Considered “High Priority” on the Western Bat Working Group’s (WBWG) Western Bat Species Regional Priority Matrix (1998).

\*\*\* Included on preliminary list of CDFG Mammal Species of Special Concern (Williams 1986).

CNPS 1B.1





## Plants

**Santa Cruz Tarplant (*Holocarpha macradenia*).** One population of Santa Cruz tarplant (*Holocarpha macradenia*) was located in the PG&E easement in the westernmost portion of the planning area on Assessors Parcel Number: 048-211-24. This species is federally listed as Threatened (USFWS 2000) and listed by the state of California as Endangered (CDFG 2008a). It is also included on List 1B of the CNPS *Inventory* (Tibor 2001; CNPS 2008). This population was initially observed by Bryan Mori, a local biologist, approximately 15 years ago but was never reported to the CNDDDB. This population, comprised of 59 individuals (per the 2008 survey), is located on a flat terrace of California annual grassland. The majority of the plants observed are robust with several to many branching stems. The largest individuals were approximately 2 feet in height and had more than 20 flowering buds.

Although the soils are mapped as Watsonville loam, the artificially flattened terrace contains coarse gravelly aggregate several inches below the ground surface. Furthermore, burnt vegetation observed in the area indicates that a short duration, low intensity fire occurred in the area within the past 18 months. Santa Cruz tarplant is often found in disturbed grassland and coastal prairie habitat with a high percent cover of non-native species (Bainbridge 2003). Disturbance such as grazing, mowing, scraping and burning has been shown to reduce the distribution and cover of species that compete with Santa Cruz tarplant for resources (Holl and Hayes 2006, Hayes 1998). However, annual discing on the remainder of annual grassland habitat within the planning area is likely too disruptive to facilitate the germination and persistence of Santa Cruz tarplant.

## Wildlife

### *Amphibians and Reptiles*

The California red-legged frog (CRLF) (*Rana draytonii*) CRLF is considered unlikely although 'Possible' for occurrence within the planning area, while the WPT was observed to be 'Present'. The CRLF is federally-listed as threatened and listed by CDFG as a 'Species of Special Concern' (CDFG 2008b). The western pond turtle is a CDFG 'Species of Special Concern' (CDFG 2008b). No other special-status amphibian or reptile species are expected to occur.

**California Red-Legged Frog (*Rana draytonii*).** B. Mori (2008) and EcoSystems West (2009a) determined that the presence of CRLF within the planning area is unlikely due to the presence of bullfrogs (CRLF predators) in the aquatic habitats, limited upland habitat, and relative isolation due to urbanization of the planning area from localities of known occurrences. However, after reviewing the evaluation prepared by B. Mori (2008), the USFWS determined that CRLF may occur in the planning area and recommend federal protocol-level surveys (USFWS 2008g). This determination was based on the presence of suitable aquatic habitat within the planning area and known CRLF localities within dispersal distance of the planning area.

**Western Pond Turtle (*Actinemys marmorata*).** EcoSystems West and B. Mori made direct observations of WPT basking on floating debris within the freshwater marsh/seasonal wetland in the planning area during recent site visits (EcoSystems West 2009; B. Mori 2008). Anecdotal evidence documents the occurrence of WPT in this wetland feature since 1993 (EcoSystems West 2009). In 1996, an individual sub-adult WPT was documented near the intersection of Crestview Drive and Brewington Avenue approximately 1,500 feet southeast of the wetland (CNDDDB 2008). A WPT was observed in the wetland again in 1997 (CNDDDB 2008). The WPT is also known to occur approximately 1.2 miles southwest in Struve Slough, and 1.4 miles north in Pinto Lake (CNDDDB 2008; Mori 2008). Western pond turtles are known to inhabit the Pajaro River



system (CNDDDB 2008), of which Corralitos Creek is a tributary. These locations are within dispersal distance of WPT in the planning area.

The WPT is highly associated with freshwater aquatic environments, but also requires upland habitat for portions of its life cycle as well as dispersal routes to other aquatic habitats. Female WPT have been documented laying their eggs in upland habitat from a minimum distance of 165 feet to a maximum of 1,300 feet from their associated aquatic habitats (Holland 1994; Rathbun et al 1992). Male WPT have been documented nearly three miles from their associated aquatic habitat (B. Stafford, personal communication 2008). The freshwater marsh/seasonal wetland provides suitable aquatic habitat for WPT. As the wetland dries up, the nearby blackberry thickets and annual grasslands within the planning area provide potential upland nesting/aestivation<sup>5</sup> habitat; however, annual discing practices in the cultivated areas may preclude successful reproduction (Mori 2008). In addition, the planning area provides potential dispersal habitat between the occupied wetland feature and Corralitos Creek and the Pajaro River system. The irrigated agricultural basin offers potential nesting/aestivation habitat, refuge/cover, and temporary foraging habitat between these larger aquatic features.

WPT are capable of moving long distances between aquatic environments and/or upland habitat to mate, nest or aestivate (Rathbun et al. 1992). B. Mori (2008) states that there is uncertainty regarding the status of the WPT population in the planning area and whether the site is utilized seasonally or year-round. The WPT population has persisted in the freshwater marsh/seasonal wetland within the planning area since 1993 (B. Mori, personal observation, 2008) and has been documented a distance of 1,500 feet from this feature (CNDDDB 2008). This implies that WPT move from the occupied aquatic feature, disperse across/utilize other potential habitat within the planning area and in the vicinity of the planning area, and return to the wetland. According to the Mori (2008), Corralitos Creek/Salsipuedes Creek may serve as a dispersal/migration corridor for WPT since they are known to inhabit the Pajaro River system (CNDDDB 2008) and are capable of moving over long distances (Rathbun et al 1992).

It is unknown which portions of the planning area WPT utilize for nesting, aestivating, and/or dispersing; however minimum habitat requirements for WPT include aquatic, nesting/aestivation, and dispersal habitat to prevent loss of viability or extirpation of the population. WPT habitat, including upland nesting and dispersal habitat, is considered 'sensitive' and is protected under CEQA and County of *Santa Cruz General Plan Policies* (5.1.6) and the County of Santa Cruz Sensitive Habitat Protection Ordinance. Impacts to and development of important wildlife habitat are restricted under the *City of Watsonville General Plan* goals, policies and implementation measures (Goal 9.8, Policy 9.F, Implementation Measure 9F.1).

### *Raptors and Birds*

A total of ten potential stick-nest structures within the planning area were observed among the willow stands adjacent to the large seasonal wetland feature, within the stand of oaks surrounding the irrigated agricultural basin, and within the riparian woodland forest along Corralitos Creek. At the time of the site visits, no special-status raptors or active nests within the planning area were observed by EcoSystems West. It was determined that the planning area provides potential

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<sup>5</sup> State of dormancy



habitat for wintering ferruginous hawks (*Buteo regalis*), and nesting/wintering white tailed kites (*Elanus leucurus*) and nesting yellow warblers (*Dendroica petechia*). No other special-status birds are expected to nest within the planning area. Regular discing activities and agricultural cultivation practices on open landscapes within the planning area preclude successful reproduction of ground nesting birds. These practices also likely limit ground squirrels utilizing the planning area, restricting an important prey base for raptors and owls. Species such as the western burrowing owl are further limited from occupying the planning area because of the lack of ground squirrel burrows or other burrow features. While many special-status bird species are not expected to nest within the planning area, they may forage on the site or occur as seasonal migrants.

EcoSystems West heard an individual red-shouldered hawk (*Buteo lineatus*) calling within the vicinity of the planning area during the spring site visit. A pair of red-tailed hawks was observed in the late summer, and an individual was observed during the fall season visit. The tree stands adjacent to the seasonal wetland, the irrigated agricultural basin, and areas along Corralitos Creek provide potential habitat for more common species such as the red-shouldered hawk, red-tailed hawk, great horned owl, and many other passerine birds that are not considered special-status species. The federal MBTA and California Fish and Game Code (CFG) prohibit the destruction or possession of individual birds, birds of prey, eggs or active nests without federal and/or State authorization.

#### *Mammals*

Occurrences of four special-status bat species and the San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) are considered 'Possible' within the planning area. No other special-status mammal species are expected to occur.

**Special-Status Bats.** Limited access to many of the structures on site and lack of survey data prevents a definitive determination as to whether or not bats roost within the planning area. EcoSystems West determined that the planning area provides potential roosting habitat within the wooded areas, buildings, and structures for four special-status bat species: pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), fringed myotis (*Myotis thysanodes*), and long-legged myotis (*Myotis volans*). The pallid bat and the western red bat are CDFG 'Species of Special Concern'. All four bats are considered 'High Priority' on the Western Bat Working Group's (WBWG) Western Bat Species Regional Priority Matrix (1998).

The planning area is also within the range of more common bat species found in California. These species include but are not limited to the big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), and hoary bat (*Lasiurus cinereus*). These bats may forage in or migrate through the planning area. The CFGC protects non-listed bat species and their roosting habitat, including individual roosts and maternity colonies. These include CFGC Section 86; 2000; 2014; 3007; 4150, along with several sections under Title 14 of California Code of Regulations (CFGC 2006).

**San Francisco Dusky-Footed Woodrat (*Neotoma fuscipes annectens*).** The San Francisco dusky-footed woodrat is a CDFG 'Species of Special Concern'. During EcoSystems West assessment of the planning area, no San Francisco dusky-footed woodrat nest/house structures were observed. Marginal potential habitat is available among the willow riparian and tree stands near the large wetland feature, agricultural pond, and along Corralitos Creek. The planning area is within the range of the species.



## Sensitive Habitats and Significant Resources

### Riparian Habitat

The riparian woodland habitat within the planning area is recognized as a “high priority” habitat type by CNDDDB (CDFG 2003) and is recognized as a sensitive habitat under CEQA and local General Plan policies. The riparian woodland along Corralitos Creek is supported by an intermittent flow regime. The present vegetation structure along the stream corridor is indicative of a historic hydrologic regime prior to heavy water usage associated with adjacent agriculture. This riparian woodland habitat lies outside of the proposed impact area.

Additional riparian vegetation occurs on the embankments of the irrigated agricultural basin in the northwest corner of the site near the terminus of Atkinson Lane. The overstory is comprised almost entirely of coast live oak. The understory is lacking in riparian specific species although Himalayan blackberry and other ruderal weedy species are present in locally dense patches. This riparian feature is proposed for removal by the proposed project.

### Potential Wetlands and “Other Waters” of the United States

The freshwater marsh/seasonal wetland complex and ephemeral drainage, located in the western half of the planning area, and the irrigated agricultural basin, located in the northwestern corner of the planning area, are wetland features that meet ACOE parameters, based on the EcoSystems West (2009b). Through analysis of drainage patterns, an RBF Consulting hydrologist concluded that the freshwater marsh/seasonal wetland and ephemeral drainage features are likely isolated from navigable waters (**Appendix G in Volume II of the Draft EIR**), and may therefore be exempt from 404 jurisdiction. A hydrological connection was determined to be absent if (1) the wetland was located too far from another jurisdictional feature, and/or (2) the wetland did not have a discernable surface water connection that would allow surface water to be transported from the wetland directly into a jurisdictional feature.

The irrigated agricultural basin in the northwest corner of the planning area is also likely exempt from Section 404 jurisdiction due to both the *SWANCC* and *Rapanos* Supreme Court decisions. While this feature has characteristics of freshwater marsh, it does not appear to have a hydrological connection to navigable waters of the U.S. or one of its tributaries. Moreover, this wetland feature is actively flooded via mechanical pumps and retained water is used for irrigating agricultural crops throughout the property. Although situated in a deep basin, it is unlikely that this feature would continue to maintain characteristics of freshwater marsh if irrigation was removed. The agricultural basin is scheduled for removal by the proposed project.

Corralitos Creek, a perennial waterway with intermittent flow due to groundwater overdraft and a clearly defined bed and ordinary high water mark, is classified as “other waters” of the U.S. and is mapped as a blue line stream on the USGS Watsonville West 7.5 minute quadrangle map. This feature would be subject to 404 jurisdiction.

### Waters of the State of California

The freshwater marsh/seasonal wetland complex, ephemeral drainage, and irrigated agricultural basin would be considered waters of the State of California, subject to the regulation by the State Water Resource Control Board (SWRCB) and the Wetlands Resources Policy of the California Department of Fish and Game (CDFG) and the Fish and Game Commission. These features are all considered sensitive habitats under CEQA and local General Plan policies.



The large freshwater marsh/seasonal wetland is situated in a deep basin and receives surface runoff from the ephemeral drainage and surrounding uplands. The marsh is bounded to the north by a levee approximately 10-feet wide by 350-feet in length and is dominated by cattail, California bulrush, water smartweed, and arroyo willow.

Two seasonal wetlands are located within the planning area. The larger seasonal wetland is located immediately northeast of the levee abutting the potential freshwater marsh. The wetland is deepest in the southwest corner where it meets the levee. It contained several inches of standing water at the time of the delineation site visit and is dominated entirely by swamp smartweed. From here it gradates into shallower topography with plant species more typical of seasonal wetlands of the region. Dominant plants throughout this portion of the wetland include curly dock, Italian ryegrass, and prickly ox tongue. Several mature arroyo willows are also found along the northwest boundary of the wetland; however several of these willows have since been removed by annual discing activities. A smaller seasonal wetland is located immediately west of an ephemeral drainage and north of the freshwater marsh. This marginal wetland feature appears to be only periodically saturated during the rainy season and is comprised of a mix of hydrophytic and upland plants typical of seasonal wetlands including Italian ryegrass, curly dock, soft chess and spreading rush (*Juncus patens*).

The linear ephemeral drainage is located in the northwestern corner of the planning area and appears to convey surface water from residential development to the north into the freshwater marsh following storm events. Because the swale is almost entirely vegetated and lacks a clearly defined bed, bank or OHW mark, it is best classified as a wetland rather than waters of the U.S. The uppermost portion of the feature is dominated by Himalayan blackberry, tall flatsedge, Italian ryegrass and curly dock while the lower half is comprised of an overstory of Pacific willow and a dense understory of blackberry and water smartweed. Soils were saturated during the assessment site visit but flowing or standing water was not observed in the drainage/swale at this time. This feature is directly connected to the large freshwater marsh.

### 3.4.5 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, agency and professional standards, a project impact would be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.





- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

## Plants

**Impact 3.4-1:** A population of federally Threatened and California Endangered Santa Cruz tarplant (*Holocarpha macradenia*) is located entirely within the PG&E parcel in the westernmost portion of the planning area on Assessors Parcel Number 048-211-24. No development is proposed for this portion of the planning area; however the proposed residential development may result in indirect impacts to the population. This is considered a potentially significant impact.

The PG&E parcel is located within the boundary of the proposed project. No development is proposed for this parcel. A trail proposed along the freshwater marsh in the western portion of the planning area would not extend within the PG&E parcel. The existing Santa Cruz tarplant population would not be directly affected by implementation of future development within the planning area; however, development of the adjacent parcel may result in indirect impacts to the population of Santa Cruz tarplant. Resulting land use changes and increased human density may preclude effective management and/or may include landscape maintenance practices that could potentially harm the Santa Cruz tarplant population. Development in areas of existing California annual grassland would eliminate potential habitat for Santa Cruz tarplant elsewhere within the planning area. Implementation of the following mitigation measures would reduce this impact to a **less than significant** level.

### Mitigation Measures

**MM 3.4-1** Subject to review and approval by the County of Santa Cruz Planning Department and the City of Watsonville Community Development Department, project applicants shall ensure that all construction and staging activities occur outside of APN 048-211-24 (PG&E parcel) containing Santa Cruz tarplant during all phases of the proposed project. Prior to construction activities, project applicants shall install temporary construction fencing and informative signs around the perimeter of APN 048-211-24 as construction occurs in the vicinity of this parcel. The location and integrity of the fence shall be verified in the field by County or City prior to grading and periodically checked throughout the construction period. Following construction, project applicants within Phase 1 (County site) and Phase 2 (City site) shall install permanent fencing around of perimeter of APN 048-211-24.

Implementing these mitigation measures would reduce potential impacts to Santa Cruz tarplant to a **less than significant level**.





### California Red-legged Frog

**Impact 3.4-2:** The California red-legged frog (CRLF) is federally-listed as 'Threatened' and considered a CDFG 'Species of Special Concern.' Although presence is unlikely, potential habitat for CRLF is present within the planning area and the planning area is located within dispersal distance of known CRLF localities. Project activities such as vegetation removal, grading, excavating, and vehicle and equipment travel may result in "take" of CRLF. This adverse direct impact is considered a potentially significant impact.

Ecosystems West (2009a) and Mori (2008) concur that occurrence of CRLF in the planning area is unlikely, based on the presence of bullfrogs (CRLF predators) within aquatic habitat and the relative isolation due to urbanization of the planning area from known localities. However, based on the presence of suitable aquatic habitat and known CRLF localities within the dispersal distance of the planning area, USFWS (2008g) determined that occurrence is possible and recommends that protocol surveys be conducted (USFWS 2005). (Protocol-level surveys are valid for two years, unless determined otherwise on a case-by-case basis by the USFWS Ventura Office.)

CRLF may move into the planning area and occupy potential habitat. CRLF may occupy the freshwater marsh and riparian woodland habitats associated with the irrigated agricultural basin and would be displaced, harmed, or killed by removal of these habitat areas. CRLF may move into the construction area from wetland features, riparian woodland, or grassland habitats within or adjacent to the planning area, during the course of project activities and be harmed. This would be considered a **potentially significant impact**. Implementation of the following mitigation measures would reduce impacts to CRLF to a **less than significant** level.

### Mitigation Measures

**MM 3.4-2a** At the recommendation of the USFWS, project applicants shall conduct CRLF protocol level surveys within the planning area prior to issuance of the building permit. Surveys shall be conducted in accordance with the USFWS recommendations by an approved biologist and shall include a set of eight field surveys that shall be conducted between February and September in order to examine the site during the CRLF breeding, non-breeding, and dispersal seasons. If CRLF are observed in the planning area during protocol surveys, preconstruction surveys, inspections, or subsequent construction activities during all phases of the proposed project, project applicants shall cease all work within the planning area. Capturing, handling, moving, or harassing CRLF is considered a violation of the ESA. If CRLF are observed, the applicant shall initiate consultation with the USFWS and CDFG to determine the appropriate permitting action; a section 7 consultation and development of a Biological Opinion or a section 10a consultation and development of an HCP may be required. Project conditions may be developed in consultation with USFWS and CDFG to avoid "take" of CRLF that may occur within the planning area during construction activities. Project activities shall not resume until final federal approval of the proposed project is received.

**MM 3.4-2b** Project applicants shall have a USFWS-approved biologist conduct CRLF preconstruction surveys a minimum of 48 hours prior to initiation of project



activities. Pre-construction surveys shall consist of two days and two nights, spaced a week apart, with notification to the USFWS.

**MM 3.4-2c** Prior to initiating construction activities within Phase 2 (City site), the project applicant(s) shall ensure that the irrigated agricultural basin is dry through the following processes:

- Discontinue pumping into the basin and cap the adjacent well to prevent leakage.
- Allow remaining water to evaporate naturally; do not de-water the basin.

#### Western Pond Turtle

**Impact 3.4-3:** The WPT is a CDFG 'Species of Special Concern.' WPT is known to occur within the planning area. Project activities may result in direct impacts to WPT utilizing portions of the planning area that are scheduled for construction. Land use changes to upland areas and potential dispersal habitat may result in indirect impacts to the viability of the local WPT population. Interference with the movement of any native wildlife species is considered under CEQA as considered a potentially significant impact.

Construction activities may result in direct impacts to WPT utilizing upland areas for nesting or dispersing to other habitats. Land use changes associated with implementation of the proposed project, including dense development of potential upland and dispersal areas, increased human density, traffic, and domestic cats and dogs may result in increased loss of individual WPT and fragmentation of remaining aquatic and riparian habitat. The proposed removal of the irrigated agricultural basin and the concentration of proposed development between the marsh/seasonal wetland and Corralitos Creek may restrict WPT from successfully aestivating, nesting and dispersing. This is considered a **potentially significant impact**.

No mitigation banks for WPT are available within the bioregion of the proposed project; therefore off-site mitigation (mitigation banking) is not an available option for impacts to turtles. For on site mitigation, CDFG prescribes management recommendations for WPT in CDFG's *Amphibian and Reptile Species of Special Concern in California* (Jennings and Hayes 1994). While these recommendations provide an important model for protection of WPT, implementation is not always feasible for smaller-scale projects, especially those located within the urban-rural interface, where WPT are occupying significantly disturbed environments. CDFG is currently preparing a conservation strategy for WPT with more broadly applicable standards (S. de Leon, personal communication, 2008). In the absence of standardized agency guidance, the County of Santa Cruz developed the following mitigation measures to protect WPT and WPT habitat in the planning area. Implementation of these mitigation measures would reduce impacts to WPT to a **less than significant level**.



### Mitigation Measures

**MM 3.4-3a** Prior to the construction of the Phase 1 (County site) project, a qualified herpetologist shall conduct three consecutive days of pond turtle trapping within the freshwater marsh to evaluate the existing turtle population and to determine its viability. If it is determined that a viable western pond turtle population is present, a Western Pond Turtle Habitat Enhancement Plan shall be prepared as described in MM 3.4-3b. If it is determined that no pond turtles are present, or that the existing population is no longer viable, all captured western pond turtles shall be permanently relocated under the direction of the qualified herpetologist in consultation with the CDFG.

**MM 3.4 -3b** If it is determined that a viable western pond turtle population is present, a Habitat Enhancement Plan shall be prepared for the western pond turtle by a qualified herpetologist, wetland ecologist, hydrologist, and landscape architect. The plan shall provide specific habitat enhancement strategies intended to improve breeding, basking, aestivating, and reduced predation potential. The plan shall also specify the location of the temporary holding area and care requirements for captured pond turtles. The habitat enhancement plan may include the following improvements:

- (a) Removal of non-native species;
- (b) Removal of the earthen berm dividing the freshwater marsh from the seasonal wetland to create additional freshwater marsh habitat;
- (c) Eradication of bullfrogs from the pond to reduce predation and competition;
- (d) Placement of logs (living downed willows) and rocks at strategic locations to improve basking opportunities that are protected from predators;
- (e) Development of a wetland and upland planting plan;
- (f) Revegetation of the wetland buffer with native riparian and upland species to provide greater opportunity for breeding and aestivation;
- (g) Development of hydrologic requirements for freshwater marsh and western pond turtle;
- (h) Development of a monitoring program and;
- (i) Development of success criteria for habitat enhancement.

The Habitat Enhancement Plan shall be provided to the County of Santa Cruz Planning Department, and the City of Watsonville Community Development Department for review and approval in consultation with the CDFG prior to issuance of the building permit.



- MM 3.4-3c** If the existing pond turtle population is determined to be viable as a result of data collection during trapping, all captured western pond turtles shall be temporarily relocated to the a holding area until Phase 1 construction and habitat enhancement has been completed. Temporary relocation may be needed for up to two years. Upon completion of the construction and implementation of the Habitat Enhancement Plan, all relocated pond turtles shall be returned to the enhanced freshwater marsh within the planning area outside of the breeding season when the turtles are active. All turtle relocations efforts shall be coordinated with the CDFG.
- MM 3.4-3d** Prior to construction, exclusionary fencing shall be established around the perimeter of the 50-foot wetland buffer area around the freshwater marsh and seasonal wetland to prevent any potentially uncaptured western pond turtles from entering construction areas. The fencing shall be marked by highly visible signage indicating that human activity is prohibited within these areas. A qualified biologist shall be present during placement of the exclusionary fencing to ensure that no pond turtles are impacted. The establishment of pond turtle exclusion fencing shall only occur between the months of September and March outside of the breeding season.
- MM 3.4-3e** All captured pond turtles shall be tagged and fully documented at the time of capture (e.g., number, sex, age, carapace length, weight, overall condition, etc.). All non-native turtles that are captured shall also be documented and not returned to the wild. Trapping requirements, the holding location and required care during the holding period shall be coordinated with the CDFG and included in the Habitat Enhancement Plan.
- MM 3.4-3f** A “Species Sensitivity Training” program will be established for western pond turtle during all phases of the proposed project. This program will be designed to educate construction personnel about the mitigation measures required for the execution of the project. All construction personnel will attend the sensitivity training that will provide instruction on western pond turtle identification, status and detailed protocol of the actions that should be taken in the event that a western pond turtle is encountered onsite during construction activities.
- MM 3.4-3g** Implementation of the Habitat Enhancement Plan shall occur during the construction of the County Phase 1 portion of the project. During the Construction of the Phase 2 of the County site, exclusion fencing shall be placed around the eastern perimeter of the wetland buffer to preclude turtles from entering the construction area. In addition, brightly colored temporary construction fencing shall also be placed along the eastern perimeter to keep out construction personnel and equipment.
- MM 3.4-2h** To avoid harming WPT that may have evaded trapping (MM 3.4-3c), project applicants shall implement the following measures during Phase 1 construction. These measures shall also be implemented during Phase 2:
- Where trenching occurs, provide an escape ramp at each end of the open trench to avoid entrapment. The ramp may be constructed of dirt fill, wood planking, or other suitable material that is placed at an angle of 30 degrees or less. Backfill open segments of trench as soon as possible to avoid entrapment.



- At the beginning of each day, check under all parked equipment for WPT before use. If any WPT are observed under equipment or within the work area, do not disturb or handle it. Cease project activities and contact the CDFG and the City or County for further guidance.
- During project activities, all trash that may attract predators shall be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- All fueling and maintenance of vehicles and other equipment and staging areas shall not occur within or near wetland and/or riparian habitats or water bodies. A plan to allow a prompt and effective response to accidental spills shall be developed. All workers shall be informed of the importance of preventing spills and of the appropriate measures to be taken should a spill occur. The agencies should be contacted regarding spills if the approved biologist anticipates that impacts to WPT may occur as a result of the spill.
- Smoke in areas clear of vegetation and away from hazardous materials. Dispose of cigarette butts in an appropriate area away from the planning area.

**MM 3.4-3i** Before and during clearing of vegetation, or initial ground disturbing activities, a qualified biologist shall conduct a preconstruction survey for the WPT.

**MM 3.4-3j** Access into the freshwater marsh habitat and associated wetland buffer by humans and/or their pets shall be discouraged. Permanent signage shall be placed at the perimeter of the wetland buffer area clearly stating that people and their pets should not enter the wetland area or associated buffer due to the presence of sensitive habitat.

**MM 3.4-3k** Monitoring of the revegetation areas shall be conducted for a period of three years or until success criteria have been met, vegetation is established, and exotic species are controlled.

**MM 3.4-3l** Upon return to the enhanced freshwater marsh habitat, all relocated pond turtles shall be monitored annually for a period of three years to determine the overall success of the mitigation. Annual monitoring reports shall be prepared and provided to the County of Santa Cruz Planning Department, the City Watsonville Community Development Department, and the CDFG.

Implementation of these mitigation measures would reduce this impact to a **less than significant level**.



### Avian Species

**Impact 3.4-4:** The planning area provides potential wintering habitat for the ferruginous hawk (a 'Bird of Conservation Concern'), nesting and wintering habitat for the white tailed kite (a 'Fully Protected species'), and nesting habitat for the yellow warbler (a CDFG 'Species of Special Concern'), as well as other common raptor and bird species. The federal Migratory Bird Treaty Act (MBTA) and CDFG Codes prohibit the destruction or possession of individual birds, birds of prey, eggs or active nests without federal and/or state authorization. Project activities may disrupt avian species, including special-status bird species that may utilize habitats within the planning area. This is considered a potentially significant impact.

A total of ten potential stick-nest structures within the planning area were observed among the willow stands adjacent to the large seasonal wetland feature, within the stand of oaks surrounding the irrigated agricultural basin, and within the riparian woodland forest along Corralitos Creek. These nest structures may be occupied seasonally by special-status birds and birds protected under the MBTA. In addition, the proposed project may provide wintering habitat for the ferruginous hawk and white tailed kite. Project activities (e.g., construction noise, tree removal, and building demolition) may disrupt avian species that potentially nest or winter within the planning area. In response to disturbances, nesting birds may abandon their clutch or sensitive young may prematurely fledge, causing unsuccessful development of offspring or mortality, which would be considered a **potentially significant impact**. In addition, removal of the irrigated agricultural basin and surrounding riparian woodland would result in permanent loss of potential habitat for birds. Mitigation Measure MM 3.4-9b requires development of a restoration plan, replacement of removed trees, and enhancement to provide avian habitat. In addition, implementation of the following mitigation measures would reduce this impact to a **less than significant level**.

### Mitigation Measures

- MM 3.4-4a** Future development within the planning area shall retain mature trees to the extent possible and replace removed trees with in-kind species and vegetation structure within the planning area. Tree replacement shall be indicated on landscape plans subject to review and approval by the County of Santa Cruz Planning Department or the City of Watsonville Community Development Department.
- MM 3.4-4b** If the project applicant cannot avoid construction activities outside of the breeding season (February through August) and cannot clear vegetation prior to the breeding season, a qualified wildlife biologist shall conduct avian nest surveys prior to construction activities that may disturb nests (e.g. vegetation clearing, tree removal, grading, large equipment operation, or demolition) within the planning area during all phases of the proposed project. These surveys shall include special-status birds, and all birds (and their nests) protected under the MBTA, and shall encompass the planning area and a 200-foot-wide buffer, to examine nearby tree stands and structures. If an active nest is found, it will be necessary to consult with the appropriate resource agencies (CDFG, USFWS) to determine appropriate construction buffers or other avoidance measures. If nesting or wintering special-status birds are not found, no further action would be necessary.
- MM 3.4-4c** If the project applicant cannot avoid construction activities during the breeding season (February through August) and cannot clear vegetation prior to the breeding





season, a qualified biologist shall conduct a specific yellow warbler nest survey in the riparian and scrub habitats of the planning area during all phases of the proposed project during this period. If active nests are found within the planning area, a minimum 250-foot construction buffer shall be established during the peak of the warblers breeding season (April through July), or until the young have fledged. A qualified biologist shall monitor the activity of any warbler nests to determine when construction activities may re-commence within the established buffer area.

Implementing these mitigation measures would reduce the impact to avian species within and adjacent to the planning area to a **less than significant level**.

#### Special Status Bat Species

**Impact 3.4-5:** The planning area provides potential habitat for several special-status bat species. If special-status bat species roost within the planning area, construction-related activities could result in the direct loss of active roosts, which is considered a potentially significant impact.

Trees and snags, with small crevices or cavities, peeling bark, and areas with dense foliage, as well as structures/buildings, provide potential roosting habitat within the planning area for special-status bat species. Removal of these features may disrupt active bat roosts if conducted during the breeding season (April to September) or during the fall/winter migration/hibernating season (October to April) and may result in a loss of roost habitat, which is considered a **potentially significant impact**. Potential special-status bats are CDFG 'Species of Special Concern' and/or designated 'High Priority' by WBWG and qualify for protection under CEQA. In addition, California Fish and Game Code protects non-listed bat species and their roosting habitat. Implementation of the following mitigation measures would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.4-5a** Prior to initiation of project activities including, but not limited to, vegetation, snag, and tree removal and demolition of structures on Assessor Parcel Numbers: 019-226-043, 019-226-042, 048-211-25, 048-221-09, and 048-231-17, or loud construction-related noise within the work area, the County of Santa Cruz Planning Department and the City of Watsonville Community Development Department shall require that project applicants within the planning area implement the following measures:

- Conduct a pre-construction survey for bats over a minimum of four visits at least 15 days prior to the beginning of tree/vegetation removal, building demolition and other project activities, to determine if the area is being actively utilized by bats for spring/summer maternity colonies (April to September). Surveys shall also include determining if any trees or buildings marked for removal have characteristics that make them suitable bat roosting habitat (e.g., hollows, broken limbs, crevices, etc.). For any trees/snags that could provide roosting space for bats, thoroughly evaluate the trees/snags to determine if a colony is present prior to trimming or cutting. Visual inspection, trapping, and acoustic surveys may be utilized as initial techniques. Special permits from



CDFG are required if trapping is conducted. Removal of any native riparian tree shall be preceded by a thorough visual inspection of foliage to reduce the risk of displacing or harming foliage roosting bats. If no roosting bats are observed, no further mitigation would be required.

- If a tree or structure is determined not to be an active roost site, it may be immediately trimmed or removed. If the tree or structure is not trimmed or removed within four days of the survey, repeat night survey efforts.
- Removal of occupied trees/snags or structures shall be mitigated for by the creation of a snag or other artificial roost structure within suitable habitat located in the planning area. With the input from a professional bat specialist and coordination with CDFG, design alternative roost structure(s) that provide suitable habitat for evicted or displaced bats. Depending on the species, artificial roost structures may not be appropriate. Coordinate with CDFG for acceptable mitigation alternatives.
- Protect maternity colonies that have pre-volant young (not yet able to fly). If active bat roosts are observed during the maternity roosting season, avoid disturbing the roost until after all juvenile bats are able to fly from the roost. The project biologist must confirm there are no pre-volant young present before a colony is displaced. It is assumed that after September 1 colonies have no pre-volant young.
- Coordinate with CDFG and a biologist that is permitted to handle special-status bats to develop appropriate exclusion methods if necessary. Project activities involving potential disturbances to roosting bats shall correspond with the time frame stated in the California Fish and Game Commission regulations. The CFGC stipulates bats may be excluded from occupied roosts in two time periods; between September 1 and October 15 and between February 15 and April 15 (CFGC 2006). If bats are found roosting within these time frames, it may be necessary to passively exclude them from trees or structures scheduled for removal. If necessary, prior to initiating project activities, passive exclusion methods shall be installed for a minimum of two weeks and monitored by a qualified biologist within the appropriate time frames above. At a minimum, monitoring efforts shall include conducting acoustic and evening emergence surveys.

Implementation of this mitigation measure would reduce impacts to special status bat species to a **less than significant level**.



### San Francisco dusky-footed woodrat

**Impact 3.4-6:** The San Francisco dusky-footed woodrat is a CDFG 'Species of Concern.' Project activities may result in destruction of potential woodrat habitat and harm to the potential San Francisco dusky-footed woodrat population in the planning area. This is considered a potentially significant impact.

Potential habitat for the San Francisco dusky-footed woodrat occurs within the planning area in the willow riparian habitat, dense understory surrounding the irrigation pond and along Corralitos Creek. Minimal additional potential habitat occurs among scattered old structures located within the planning area. San Francisco dusky-footed woodrats may move into the potential habitat of the planning area in the interim between 2008 surveys and project initiation. Vegetation/tree removal, clearing activities, demolition of existing man-made structures, and initial ground disturbing activities may destroy potential refuge sites and entrap, or kill woodrats, which would be considered a **potentially significant impact**. Implementation of the following mitigation measures would reduce this impact to a **less than significant level**.

### Mitigation Measures

**MM 3.4-6a** The County of Santa Cruz Planning Department and the City of Watsonville Community Development Department shall require that project applicants have a qualified biologist examine the planning area for San Francisco dusky footed woodrats before and during any initial vegetation, woody debris, and/or tree removal, or other initial ground disturbing activities. If a woodrat nest/house structure is encountered in the area of disturbance, avoid disturbing the structure or evicting the individuals. Project applicants shall coordinate with CDFG to establish protective buffer widths around the structures and install exclusion zones around each structure before initiating tree/vegetation removal and ground disturbing activities. If a woodrat is incidentally encountered in the work area and does not voluntarily move out of the area, a biological monitor, with the appropriate CDFG permits, shall be on call during project activities to relocate the animal out of the construction area to the nearest safe location (as approved and authorized by CDFG). Woodrats shall not be handled without prior agency authorization from CDFG. If project activities cannot avoid any existing, underground, or unidentified woodrat nest structure in the work area, notify and coordinate with CDFG to develop appropriate avoidance and/or alternative habitat creation and recovery strategies.

Implementation of these mitigation measures would reduce potential impacts to San Francisco dusky-footed woodrats to a **less than significant level**.

### Sensitive Habitats

**Impact 3.4-7:** Construction activities may result in increased erosion, runoff, accumulation of water, and introduction of harmful materials to wetland habitats within the planning area. This is considered a potentially significant impact.

Construction activities including, but not limited to, grading, filling, and the presence of heavy equipment may result in increased erosion, run-off and accumulation of groundwater or stormwater in open trenches and excavated areas on the planning area. Erosion, runoff, and dewatering of accumulated waters from the planning area into Corralitos Creek and/or the



marsh/seasonal wetland, and ephemeral drainage may affect aquatic and riparian plants and/or wildlife and their habitat through (but not limited to) increased sediment loads, introduction of hazardous or petroleum-based materials, or altering the pH of water. Equipment or erosion control practices may inadvertently introduce invasive and non-native plants and seeds; harmful fungi, and micro-organisms; and/or hazardous or petroleum-based materials into the planning area, which is considered a **potentially significant impact**. In compliance with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), future development within the County site would require: preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. City Phases 1 and 2 would require compliance with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code. In addition, future development within the planning area would be required to comply with the National Pollution Discharge Elimination System (NPDES) permitting requirements for construction of site stormwater discharges in accordance with mitigation measure **MM 3.8-2** in **Section 3.8: Hydrology and Water Quality**. Compliance with the respective erosion control ordinances, and acquisition of the NPDES General Permit for construction activities would ensure that these impacts are reduced to a **less than significant level**.

#### Irrigated Agricultural Basin and Associated Coast Live Oak Riparian Habitat

**Impact 3.4-8:** Phase 2 (City site) of the proposed project would remove the irrigated agricultural basin and associated freshwater marsh and coast live oak riparian tree canopy in the northwest corner of the planning area near the terminus of Atkinson Lane. These habitat types are considered 'sensitive' and provide nesting and foraging habitat for avian species. Removal of this the freshwater marsh and riparian vegetation would be considered a potentially significant impact.

The hydrology within the irrigated agricultural basin is artificial, resulting from flooding by mechanical pumps; in addition, this feature does not have a hydrologic connection to jurisdictional waters, and may be exempt from ACOE jurisdiction, pending verification of the wetland delineation by the ACOE. This feature is likely considered a water of the state of California, subject to regulation by Section 1600-1610 of the California Department of Fish and Game Code.

Although the wetland feature may not be jurisdictional under Section 404 of the CWA, the freshwater marsh and surrounding riparian woodland, as supported by the current hydrological regime, are considered sensitive habitats. Riparian woodland is recognized as a 'high priority' habitat type by the CNDDDB (CDFG 2003). Riparian woodland and freshwater marsh are recognized as sensitive habitats by CEQA and the City of Watsonville. In addition, *City of Watsonville General Plan* goals, policies, and implementation measures designate, protect, and restrict development on lands that provide important wildlife habitat, including freshwater marshes and riparian habitat. Removal of these features results in a permanent loss of habitat, which is considered a **potentially significant impact**. Implementation of the following mitigation measures would reduce this impact to a **less than significant level**.

#### Mitigation Measures

**MM 3.4-8a** Project applicants within Phase 2 (City site) shall provide replacement wetland acreage that shall be created at a ratio of 2:1 acceptable to the City of Watsonville and the CDFG for removal of the agricultural basin in the northeastern portion of



the planning area. Because the agricultural basin is man-made and actively flooded by mechanical pumps, replacement wetlands shall not be required to support “in-kind” freshwater marsh habitat. Created wetland habitat will be designed by a certified landscape architect and wetland specialist to function as wetlands, support wetland vegetation during the rainy season, and will be planted with native wetland vegetation typical of the Central California coast region at the existing stormwater detention basin in the southern portion of the planning area.

Long-term monitoring of mitigation wetlands and existing wetlands within the planning area shall be conducted. Monitoring will be performed annually by a qualified botanist/wetland specialist to determine whether mitigation wetlands meet or exceed pre-established performance criteria. Recommendations for enhancement and continued long-term success of created wetlands will be included in annual monitoring reports submitted to the City of Watsonville, CDFG, and/or other regulatory agencies.

**MM 3.4-8b** For all oaks greater than 6 inches DBH or greater than 8 feet tall that are removed, project applicants within Phase 2 (City site) shall plant replacement oaks along the margins of the riparian buffer and ephemeral drainage in the western half of the planning area and within the designated agricultural buffer and along Corralitos Creek at a 3:1 ratio subject to review and approval by the City of Watsonville Community Development Department. A qualified biologist or restoration ecologist and landscape architect shall develop a planting plan that includes success criteria and conduct and/or oversee restoration and monitoring activities. The plan shall include, but shall be limited to, the following measures:

- Planting shall occur following completion of grading and construction activities. Replacement oaks will provide riparian habitat similar to impacted habitat around the irrigated agricultural basin.
- Enhance replacement oak habitat and existing habitat adjacent to the freshwater marsh/seasonal wetland and ephemeral drainage with local native species that have the same or similar vegetation structure as impacted habitat around the irrigated agricultural basin to provide replacement avian foraging and nesting habitat. If a Habitat Enhancement Plan is required by mitigation measure MM 3.4-3b, vegetation replacement shall be consistent with the Habitat Enhancement Plan.



## 3.5 Cultural Resources

The purpose of this section is to analyze potential impacts to archaeological and historical resources within the planning area. Background information and analysis within this section is based on the *Cultural Resources Evaluation of Six Areas Proposed for Annexation to the City of Watsonville* prepared by Archeological Resource Management in February 2005, a review of the files at the County Assessor's office, as well as a site reconnaissance of the planning area in July 2008. In addition, staff at the County of Santa Cruz and City of Watsonville was consulted regarding the existing structures within the planning area. The cultural resources evaluation is included as **Appendix C** in Volume II of the Draft EIR.

### 3.5.1 Environmental Setting

#### Regional Setting

##### Archaeological Setting

The region's first known inhabitants were the Costanoans, or Ohlone, a hunter and gatherer Indian tribe. Though known as hunters and gatherers, the abundance and high quality of natural resources allowed them to settle in semi-sedentary villages. Typically, they organized in groups of 100 to 250 individuals at one or two permanent villages, with smaller villages in proximity to each other. Remnants of their tribal campsites have been discovered on the Pajaro Dunes and along many coastal valley streambeds; it is believed that the Ohlone Indians inhabited the area since A.D. 500.

##### Historic Setting

European exploration of the area began with the first Portola expedition in 1769. By 1847, 40 people held claims to ranchlands in order to graze large herds of cattle. It wasn't until 1848 after the gold rush in the Sierra Nevada Mountains that new settlers settled and established large scale farming and ranching in the Monterey Bay Area.

Growth in the Pajaro Valley flourished when the Southern Pacific Railroad linked the area to the Santa Clara Valley in approximately 1871. Churches, schools, newspapers, libraries and major businesses appeared as electricity and telegraph lines worked their way into the lives and traditions of the Pajaro Valley. Two key businesses influenced growth in the City Watsonville including fruit packing houses, which processed a variety of fruit including apples, and the Speckles sugar beet factory, which closed after ten years of operating.

Today, agriculture and food processing remains the mainstay of the economic structure in the Pajaro Valley. Yet in keeping with recent trends, a new breadth of opportunity has opened for residents and businesses, including light industry, manufacturing, tourism and service oriented businesses. In general, Watsonville and the Pajaro Valley is one of the world's largest agricultural centers, which is famous for its strawberries, apples, and cut flowers.

##### Project Setting

The majority of the planning area is currently in agricultural production as strawberries and apple orchards. A seasonal wetland/riparian area is located in the western portion of the planning area on the south end of APN 048-221-09. Corralitos Creek and associated riparian vegetation trends roughly west to east along the proposed project's northern boundary within APNs 048-231-17 and 048-231-18. On-site topography is approximately 70 to 110 feet above mean sea level (msl)





and slopes to the west within the western portion of the site and to the east within the eastern portion of the site. Four single-family residences and various structures used for farming practices are located within the planning area. A series of unimproved dirt roads traverse the planning area in order to access the agricultural fields and the existing residential development. The PG&E property (APN: 048-211-24) contains an electrical plant/station at the west side of the planning area. A large overhead electrical utility line bisects the planning area along APN 048-251-09 (Grimmer Orchard parcel) along the northern boundary and cuts north through APN 048-231-17 and APN 048-231-18 (Israel Zepeda properties). **Figures 2-5** through **Figure 2-7: Photographs of the Planning Area** presents photographs of existing conditions at the planning area. **Figure 2-8: Existing Site Characteristics** presents an aerial view of existing site characteristics.

#### Archeological Setting

In February 2005, Archeological Resource Management (ARM) performed a cultural resource evaluation for six areas of land bordering the current city limits of Watsonville, including the Atkinson Lane planning area. Cultural research investigation included an archival search of the state records at the Northwestern Information Center of the California Archeological Site Inventory and a pedestrian surface reconnaissance on all open space of the planning area. The archeological records search conducted by ARM did not identify any cultural resources (e.g., prehistoric sites, historic sites, isolated artifacts, and/or historic buildings) within the boundaries of the planning area. In addition, no previously recorded sites are located and/or studies have been recorded within one half mile of the planning area. At the time of the surface reconnaissance by ARM, approximately 50 percent of the surface area was obscured by vegetation. Areas of native surface were visible and overall surface visibility was adequate to identify prehistoric and/or historic sites and features within the planning area. Conditions at the planning area have not changed since the study was performed.

#### Historic Setting

Four single-family residences and various structures used for farming practices were identified within the planning area. Two residential homes are located within APN 048-211-25 (Michelle and Corwyn Mosiman parcel) adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane. Property records obtained from the County of Santa Cruz Assessors Office stated that structures at the planning area were constructed between 1889 and 1947. None of the existing structures located within the planning area are included on the Watsonville Register of Historic Places or the County of Santa Cruz Historic Resources Inventory.

### 3.5.2 Regulatory Setting

#### State

##### Senate Bill 18

The Senate Bill 18 (SB 18) process mirrors the federal 106 Review process used by archaeologists as part of the environmental review conducted under the National Environmental Policy Act (36 CFR Part 800.16). Senate Bill 18 is the first law in the nation to mandate tribal



consultation at the local level. SB 18 incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies. CEQA has requirements for the evaluation of potential land use impacts to Native American artifacts and sites, but primarily from an archaeological point of view.

SB 18 is a process separate from CEQA that expands the focus from the protection and preservation of archaeological sites and artifacts to protection of traditional tribal cultural places on public and private lands for both federally and non-federally recognized tribes in the land use planning process. A cultural place is a landscape feature, site, or cultural resource that has some relationship to particular tribal religious heritage or is an historic or archaeological site of significance or potential significance. While SB 18 and CEQA are separate processes, SB 18 consultation occurs simultaneously with implementation of CEQA. SB 18 consultation applies to the adoption and amendment of both General and Specific Plans proposed on or after March 1, 2005. SB 18 consultation is a “government to government” interaction between tribal representatives and representatives of the local jurisdiction.

Since the proposed project includes a General Plan Amendment and a Specific Plan, the County of Santa Cruz and the City of Watsonville completed the Senate Bill 18 (SB 18) consultation process on January 13, 2009.

#### **Public Resources Code Section 5024.1**

Under California law, cultural resources are protected by California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. Section 5024 requires state agencies to provide notice to, and to confer with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned resources.

#### **California Environmental Quality Act**

California Environmental Quality Act (CEQA) requires that for public or private projects financed or approved by public agencies, the effects of the projects on historical resources and unique archeological resources must be addressed (Title 14 CCR §15064.5). Historical resources are defined as buildings, sites, structures, objects, or districts that have been determined to be eligible for listing in the California Register of Historical Resources. Properties listed in the National Register are automatically eligible for listing in the California Register.

#### **Local**

##### County of Santa Cruz

##### *County of Santa Cruz General Plan and Local Coastal Program*

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies in the *Santa Cruz County General Plan* are applicable to cultural resources.

**Policy 5.19.2 Site Surveys (LCP).** Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential as determined by the inventory of archaeological sites, within the Archaeological



Sensitive Areas, as designated on the General Plan and LCP Resources and Constraints Maps filed in the Planning Department.

**Policy 5.19.3 Development Around Archaeological Resources (LCP).** Protect archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the site through project design and/or use restrictions, such as covering the site with earth fill to a depth that ensures the site will not be disturbed by development, as determined by a professional archaeologist.

**Policy 5.19.4 Archaeological Evaluations (LCP).** Require the applicant for development proposals on any archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to achieve General Plan and LCP Land Use Plan objectives and policies.

*Santa Cruz County Native American Cultural Sites Ordinance (16.40)*

The Board of Supervisors of the County of Santa Cruz adopted the Native American Cultural Sites Ordinance, which establishes regulations for the protection, enhancement, and perpetuation of Native American cultural sites. The ordinance requires an archeological survey for any discretionary project resulting in ground disturbance and located within a mapped archeological sensitive area. In addition, an archeological survey is required for any project resulting in ground disturbance within 500 feet of a recorded Native American cultural site.

Furthermore, any person who discovers human remains, or any artifact or other evidence of a Native American cultural site during ground disturbance or excavation shall adhere to the following regulations:

- Cease and desist from all further excavations and disturbances within 200 feet of the discovery.
- Arrange for staking completely around the area of discovery by visible stakes no more than 10 feet apart, forming a circle having a radius of no less than 100 feet from the point of discovery.
- Notify the Sheriff-Coroner and Planning Director of the discovery.

If the Planning Director determines that the discovery is a site of cultural significance, an archeological report must be prepared and no further excavation or development may take place except as authorized by an Archeological Site Development Approval.

*Santa Cruz County Historic Preservation Ordinance (16.42)*

The Board of Supervisors of the County of Santa Cruz adopted the Historic Preservation Ordinance 16.42, which intends to implement the General Plan historic resources policies to designate, preserve, protect, enhance, and perpetuate those historic structures, districts and sites within the unincorporated area of the County. The Ordinance sets the procedures for designation of historic structures and standards for permit review for alteration of an historic structure.



## City of Watsonville

### *City of Watsonville General Plan*

The following policies in the 2005 *City of Watsonville General Plan* are applicable to cultural resources.

**Goal 9.10, Archaeological Resources.** Identify and protect prehistoric resources for their scientific, educational, and industrial development.

**Policy 9.H, Archaeological Resources.** The City shall foster and provide for the preservation of cultural resources and artifacts of historic and pre-historic human occupation within the Pajaro Valley.

### *City of Watsonville Historic Preservation Ordinance (8-13)*

The City of Watsonville adopted the Historic Preservation Ordinance 8-13, which assigns powers and duties to the Community Development Department and Planning Commission with respect to historical preservation. The Ordinance sets forth the procedures for designation of historic resources and standards for permit review for alteration of a historic resource.

## 3.5.3 Relevant Project Characteristics

The proposed Specific Plan and PUD designate approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which will be designated “Urban Open Space ;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields.

## 3.5.4 Impacts and Mitigation Measures

### Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, and agency and professional standards, a project impact would be considered significant if the project would:

- Cause a substantial adverse change in the significance of an historic resource,
- Cause a substantial adverse change in the significance of an archaeological resource, and/or
- Disturb any human remains, including those interred outside of formal cemeteries.

## Methodology

This analysis is based on *Cultural Resources Evaluation of Six Areas Proposed for Annexation to the City of Watsonville* prepared by ARM in February 2005, a review of the files at the County Assessor’s office on September 10, 2008, as well as a site reconnaissance of the planning area in July 2008. In addition, staff at the City of Watsonville was consulted regarding the existing



structures at the planning area. The cultural resources evaluation is included as **Appendix C** in Volume II of the Draft EIR.

## Project Impacts and Mitigation Measures

### Archeological and Cultural Resources

**Impact 3.5-1:** The planning area does not contain any recorded or anticipated resources of archeological, cultural, or pre-historic significance. However, site preparation and grading could disrupt undiscovered archeological and cultural resources of importance under CEQA and/or eligible for listing on the California Register. This is considered a potentially significant impact.

The planning area has been historically used for agricultural production and has been heavily disturbed due to development and grading over many years. Field inspections and an archival search in the state records on file at the Northwestern Information Center of the California Archeological Site Inventory were performed by ARM in February 2005 and did not identify any unique archeological resources within or in the vicinity of the planning area. However, it is possible to inadvertently uncover cultural resources or human remains during ground disturbing project activity (e.g. grading activities during construction). Any destruction or disturbance of undiscovered archeological resources, whether planned or inadvertent, is considered a **potentially significant impact**. The following mitigation measures would ensure that future development within Phase 1 and 2 of the proposed project does not result in the destruction or disturbance of undiscovered archaeological resources, which would reduce this impact to a **less than significant level**.

### Mitigation Measures

**MM 3.5-1a** Project applicants within County Phases 1 and Phase 2 of the proposed project shall comply with Sections 16.40.040 and 16.42.100 of the Santa Cruz County Code (Native American Cultural Sites Ordinance), which includes regulations for the protection, enhancement, and perpetuation of Native American cultural sites. If human remains or any artifact or other evidence of a Native American cultural site are found during ground disturbance or excavation, the project applicant(s) shall cease and desist from further excavations and disturbance within 200 feet of the discovery; stake around the discovery in accordance with the requirements in the ordinance; and notify the Sheriff-Coroner if the discovery contains human remains or the Santa Cruz County Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100 shall be observed.

**MM 3.5-1b** Project applicants within City Phase 1 and Phase 2 of the proposed project shall ensure that if any previously undisturbed cultural, historic, or archaeological resources are uncovered in the course of site preparation, clearing or grading activities that the City of Watsonville Community Development Director is notified and operations within 200 feet of the discovery are halted until such time as a qualified professional archaeologist can be consulted to evaluate the find and recommend appropriate action. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented subject to



review and approval by the City of Watsonville Community Development Department.

**MM 3.5-1c** If human remains of Native American origin are discovered during ground-disturbing activities, project applicant(s) shall comply with state laws relating to the dispositions of Native American burials, which falls within the jurisdiction of the California Native American Heritage Commission (NAHC) (Public Resources Code, Section 5097.98). If human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the planning area or any nearby area reasonably suspected to overlie adjacent human remains until:

- The Santa Cruz County Sherriff-Coroner has been informed and has determined that no investigation of the cease of death is required, and
- If the remains are of Native American origin,
  - The descendants from the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave good as provided in the Public Resources Code, Section 5097.98, or
  - The California NAHC was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the NAHC.

Implementation of the above mitigation measures would reduce the potential impact to undiscovered archaeological, historic, or cultural resources to a **less than significant level** by halting operations in the event of a discovery and assessing the find in accordance with Section 5097.98 of the Public Resources Code during all phases of the proposed project.

#### Historic Resources

**Impact 3.5-2: Implementation of the proposed project would result in the demolition of approximately four residential homes which were constructed more than 50 years ago. None of the buildings/structures within the planning area appear to meet the eligibility criteria for inclusion in the California Register of Historic Resources (CRHR) or for consideration as unique historic resources. Therefore, demolition of these structures would be considered a less than significant impact.**

Four single-family residences and various structures that are currently used for farming practices are located within the planning area (refer to Figure 2-8: Existing Site Characteristics). Two residential homes are located within APN 048-211-25 (Michelle and Corwyn Mosiman parcel) adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane.

Property records obtained from the County of Santa Cruz Assessors Office stated that structures at the planning area were constructed between 1889 and 1947. None of the existing structures





located within the planning area are included on the Watsonville Register of Historic Places or the County of Santa Cruz Historic Resources Inventory. In addition, none of the structures exhibit any unique or distinctive elements of design or construction and the integrity (i.e. integrity of design, workmanship, location, and setting) of the majority of these residences has been compromised due to various remodeling efforts. Therefore, in consultation with City staff, none of the buildings/structures within the planning area appear to meet the eligibility criteria for inclusion in the California Register of Historic Resources (CRHR) for consideration as a unique historic resource. Therefore, demolition of these structures within the planning area would be considered **less than significant**.



## 3.6 Geology and Soils

This section of the EIR provides a discussion of the geologic setting and soil characteristics within the planning area and vicinity. Impacts to geology and soils and recommended mitigation measures for reducing the identified impacts are identified within this section of the EIR. The analysis herein is based on the *Feasibility Level Geotechnical Investigation and Engineering Geology Report* prepared for the proposed project by Pacific Crest Engineering, Inc. in March 2009 and a *Geologic Feasibility Investigation* prepared for the proposed project by Zinn Geology prepared in March 2009. These reports are incorporated herein and supplemented with additional information. The *Feasibility Level Geotechnical Investigation and Engineering Geology Report* and *Geologic Feasibility Investigation* are included in **Appendix D** in Volume II of the EIR.

### 3.6.1 Environmental Setting

#### Geology

##### Regional Setting

The planning area is located in the “Watsonville lowlands,” on the western flank of the Santa Cruz Mountains, in the central portion of the Coast Ranges physiographic province of California. This portion of the Coast Range is formed by a series of rugged, linear ridges and valleys following the pronounced northwest to southeast structural grain of Central California geology. The Santa Cruz Mountains are mostly underlain by a large, elongated prism of granite and metamorphic basement rock types to the northeast and southwest by the San Andreas and San Gregorio-Nacimiento strike-slip fault systems, respectively. Overlying the granitic basement rocks is a sequence of dominantly marine sedimentary rocks of Paleocene to Pliocene age and non-marine sediments of Pliocene to Pleistocene age.

Throughout the Cenozoic Era, this portion of California has been dominated by tectonic forces associated with lateral or “transform” motion between the North American and Pacific lithospheric plates, producing long, northwest trending faults such as the San Andreas and the San Gregorio, with horizontal displacements measured in tens to thousands of miles. Accompanying the northwest direction of the horizontal (strike-slip) movement of the plates have been episodes of compressive stress, reflected by repeated episodes of uplift, deformation, erosion, and subsequent redeposition of sedimentary rocks. Near the crest of the Santa Cruz Mountains, this tectonic deformation is most evident in the sedimentary rocks older than the middle Miocene, and consists of steeply dipping folds, overturned bedding, faulting, jointing, and fracturing. Along the coast, the ongoing tectonic activity is most evident in the formation of a series of uplifted marine terraces. The Loma Prieta earthquake of 1989 is the most recent reminder of the geologic unrest in the region.

The Quaternary history of the “Watsonville lowlands” has been dominated by fluvial, marine, and eolian deposition because the central Monterey Bay region has been relatively stable, while the northern Monterey Bay region has been tectonically uplifted. The earth materials in the vicinity of the planning area are mostly fluvial and alluvial fan sediments graded to one or more Sangamon highstands of sea level.

##### *Faults and Seismic Hazards*

**Regional Faults.** Northern California is seismically active and the planning area can be expected to experience periodic minor earthquakes and possibly a major earthquake on one of the nearby active faults during the life of the proposed project. The active or potentially active faults that



may affect the planning area are the San Andreas, Zayante-Vergeles, and Monterey Bay-Tularcitos (see **Figure 3.6-1: Regional Fault Zones**) fault zones. These fault zones are considered to be capable of producing a large magnitude earthquake. The closest fault to the planning area is the Zayante-Vergeles fault located approximately 0.9 miles from the planning area. For each of the active faults, the distance from the site and estimated maximum moment magnitude are summarized in **Table 3.6-1: Regional Faults and Seismicity**. Following is a brief description of each of the faults.

**Table 3.6-1: Regional Faults and Seismicity**

Fault Segment	Approximate Distance from Site		Direction from Site	Slip Rate	Maximum Characteristic Magnitude
	Miles	Kilometers			
San Andreas - 1906 Segment	3.9	6.3	Northeast	24	7.90
Zayante-Vergeles	0.9	1.5	Northeast	0.1	7.00
Monterey Bay-Tularcitos	15.6	25.3	Southwest	0.5	7.30

Source: Pacific Crest Engineering 2008

- San Andreas Fault.** The San Andreas fault zone is located approximately 3.9 miles northeast of the planning area. The San Andreas fault is active and represents a major seismic hazard in northern California. The San Andreas fault zone extends nearly the entire length of California and marks the boundary between the North American plate to the east and the Pacific plate to the west. Historical earthquakes along the San Andreas fault and its branches have caused significant seismic shaking in the Monterey Bay area. The two largest historically recent earthquakes on the San Andreas to affect the area were the moment magnitude ( $M_w$ ) 7.9 San Francisco earthquake of April 1906 and the  $M_w$  6.9 Loma Prieta earthquake of October 1989. The San Francisco earthquake caused severe seismic shaking and structural damage to many buildings in the Monterey Bay area. The Working Group on Northern California Earthquake Potential (NCEP) estimates that the San Andreas - 1906 Segment experiences earthquakes of comparable magnitudes at intervals of about 200 years.
- Zayante-Vergeles Fault.** The Zayante-Vergeles fault is located approximately 0.9 miles northeast of the planning area. The Zayante fault lies west of the San Andreas fault and trends about 50 miles northwest from the “Watsonville lowlands” into the Santa Cruz Mountains. The southern extension of the Zayante fault, known as the Vergeles fault, merges with the San Andreas fault south of the City of San Juan Bautista in San Benito County.

The Zayante-Vergeles fault has a long, well-documented geological history of vertical movement, accompanied by right-lateral, strike-slip movement. Stratigraphic and geomorphic evidence indicates the Zayante-Vergeles fault has undergone late Pleistocene and Holocene movements and is considered potentially active. The NCEP considers it capable of generating a  $M_w$  6.8 earthquake with an effective recurrence interval of 10,000 years.



- **Monterey Bay-Tularcitos Fault.** The Monterey Bay-Tularcitos fault is located approximately 15.6 miles southeast of the planning area. The Monterey Bay-Tularcitos fault zone is approximately six to nine miles wide and approximately 25 miles long. The fault trends northwest-southeast and intersects the coast in the vicinity of the City of Seaside and the former Fort Ord. Several onshore fault traces have been tentatively correlated with offshore traces in the heart of Monterey Bay-Tularcitos fault zone. These onshore faults are, from southwest to northeast, the Tularcitos-Navy fault, Berwick Canyon, Chupines, Seaside, and Ord Terrace faults.

Outcrop evidence indicates a variety of strike-dip and dip-slip movement associated with onshore and offshore traces. Earthquake studies suggest the Monterey Bay-Tularcitos fault zone is predominantly right-lateral, strike-slip in character. Stratigraphically, both offshore and onshore fault traces in this zone have displaced Quaternary beds and therefore are considered potentially active. One offshore trace, which aligns with the trend of the Navy fault, has displaced Holocene beds and therefore is considered active.

Seismically, the Monterey Bay-Tularcitos fault zone may be historically active. The largest historical earthquakes tentatively located in the Monterey Bay-Tularcitos fault zone are two events, estimated at  $M_w$  6.2 on the Richter Scale, in October 1926. The NCEP has assigned an earthquake of  $M_w$  7.1 with an effective recurrence interval of 2,600 years to the Monterey Bay-Tularcitos fault zone.

## Planning Area Setting

### *Topography and Setting*

The planning area generally slopes from north to south with the highest point located near the northern boundary overlooking Corralitos Creek and the lowest points along the south and west boundaries. The western and northern portions of the planning area contain slopes reaching up to 15 percent, while the eastern and southern portions of the planning area are relatively flat. Elevation within the planning area varies from approximately 70 to 110 feet above sea level. **Figure 3.6-2: Site Topography** shows the topography within the planning area.

The planning area is extensively cultivated and used for agricultural production of primarily strawberries and apples. Disturbances within the planning area currently include tilling and minor unimproved roadways. The Corralitos Creek floodplain slopes very gently to the north, toward the creek, with the exception of a wetland near the western edge of the planning area.

### *Geologic Profile*

The planning area lies within the “Watsonville Lowlands” a nominally subsiding basin dominated by river and creek deposition in conjunction with fluctuating sea levels, caused by cycles of continental glaciation, over at least the last one million years. This interplay has given rise to a series of fluvial (creek) deposits interlayered with and overlain by sand dune and marine terrace deposits. The overall thickness of the unconsolidated floodplain deposits within the planning area is approximately 100 feet. The alluvial deposits overlie Pleistocene terrace deposits and Aromas Sand. The total thickness of the Quaternary sediments within the planning area is approximately 775 feet. The Quaternary sedimentary package is underlain by about 1,800 feet of Tertiary sedimentary rocks, and ultimately granitic basement rock.



The rolling hills terrain and the entire floodplain are most likely underlain at some depth by the mid-Quaternary age Aromas Sand, a sequence of fluvial and dune sediments. The Aromas Sand is a heterogeneous sequence of relatively well consolidated eolian and fluvial sand, silt, clay, and gravel.

Basin deposits, levee deposits, and younger and older floodplain deposits are exposed at the ground surface in the vicinity of the site. They are chiefly composed of unconsolidated, interfingering and interbedded layers of clay, silt, and fine sand.

#### *Field Investigation*

**Soils.** As part of the preliminary geotechnical feasibility investigation, Pacific Crest Engineering performed soil borings and Cone Penetrometer (CPT) soundings. The soil borings were performed in April and May of 2008 and were distributed throughout the planning area (refer to **Appendix D** for a map showing location of the borings). The drillings in April consisted of five eight-inch diameter borings drilled using hollow-stem drill augers. The borings conducted in May consisted of 15 six-inch diameter test borings drilled using solid-stem drill augers. The CPT soundings were performed in the northeastern portion of the site, along the Corralitos Creek. Four CPT soundings with pore pressure measurements were advanced in locations next to the hollow stem test borings completed in April of 2008. An additional 12 CPT soundings and 6 hollow-stem test borings were completed in February of 2009. Please refer to Appendix D for a map showing location of the borings and CPT soundings.

Findings of the on-site borings were consistent with the regional research regarding the underlying geology and earth materials. The planning area is predominately underlain by older floodplain deposits and the fluvial facies of the Watsonville Terrace Deposits, comprised of three stratigraphic sub-units, a sand layer, underlain by a clay layer, with a silt layer appearing to underlie everything across the planning area (see [the geologic site map in the Feasibility Level Geotechnical Investigation and Engineering Geology Report](#) in **Appendix D** for more information). The older floodplain deposits appear to thicken to the north and east across the planning area, consistent with the model of a backfilling basin starting in the late Pleistocene and continuing though today. The Corralitos Creek and the Pajaro River continue to experience high sediment loads as the Pacific Ocean continues to rise and encroach inland. Near the western edge of the planning area, a pond has been created and backfilled. Minor pockets of artificial fill are scattered across the planning area.

**Groundwater.** Groundwater was encountered in 17 of the 26 soils borings, at depths below the ground surface varying from 12.5 to 36.5 feet. However, these depths may not be reflective of stabilized<sup>1</sup> groundwater level. The groundwater level was not allowed to stabilize for more than a few hours, therefore the actual groundwater level may be lower or higher than initially encountered during this field observation. According to Zinn Geology, the regionally persistent groundwater in the Watsonville area is more than 100 feet below the ground surface, due to overdraft of the underlying aquifers. The ground water encountered by Pacific Crest Engineering

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<sup>1</sup> To obtain a stabilized groundwater level, the groundwater must be allowed to stabilize for more than few hours after a borehole is drilled. Stabilized groundwater level may be lower or higher than the initial measurements.



in their drilling program may have been seasonally-perched groundwater, or shallow groundwater resulting from seasonal irrigation on the property.

### *Geologic Hazards*

The primary geologic hazards that may affect the planning area include ground shaking, seismic accelerations, ground surface fault rupture, landsliding, and liquefaction induced settlement and lateral spreading.

***Seismic Ground Shaking.*** Intense ground shaking generated by earthquakes from nearby local faults will likely occur within the planning area. Structures located on thick soft soil deposits within the planning area are more likely to experience more destructive shaking, with higher amplitude and lower frequency, than structures founded on bedrock. The intensity of ground shaking is generally commensurate with distance to the earthquake epicenters. However, it should be noted that significantly higher ground accelerations may occur in thick soft soil deposits that are large distances from earthquake epicenters than bedrock at comparative distance.

A common measure of the intensity of ground shaking is the Modified Mercalli Intensity Scale. The modified Mercalli scale measures the intensity of ground shaking as determined from observations of an earthquake's effect on people, structures, and the earth's surface. Preliminary estimates of Modified Mercalli intensities within the planning area during the Loma Prieta earthquake are approximately VII, which would be very strong.

***Seismic Accelerations.*** For the purpose of evaluating peak ground accelerations, a site specific deterministic seismic hazard analysis was performed. Deterministic analysis for the planning area using a deep soil site attenuation relationship yields a mean peak ground acceleration of  $0.63g^2$  and a mean peak ground acceleration plus one dispersion of  $0.94g$  (based on the closest seismic shaking source, the Zayante-Vergeles fault). The analysis conducted also provides the "maximum considered earthquake ground motion" as defined by Federal Emergency Management Agency (FEMA).

***Ground Surface Fault Rupture.*** Ground surface fault rupture occurs along the surficial traces of active faults during significant seismic events. The *Feasibility Level Geotechnical Investigation and Engineering Geology Report* prepared by Pacific Crest Engineering determined that the potential for ground surface fault rupture to occur on the site is low, due to the location of the nearest active or potentially active fault, the Zayante-Vergeles fault, which is mapped approximately 0.9 miles from the planning area.

***Liquefaction and Lateral Spreading Hazards.*** Liquefaction tends to occur in loose, saturated fine grained sands, course silts or clays with low plasticity. The liquefaction process typically occurs at depths less than 50 feet below the ground surface, although liquefaction can occur at deeper intervals, given the right conditions. The most susceptible zone occurs at depths shallower than 30 feet below the ground surface. In order for liquefaction to occur there must be the proper soil type, soil saturation, and cyclic accelerations of sufficient magnitude to progressively increase the water pressures within the soil mass. Non-cohesive soil shear strength is developed

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<sup>2</sup> (g) – The acceleration due to gravity.





by the point-to-point contact of the soil grains. As the water pressures increase in the void spaces surrounding the soil grains, the soil particles become supported more by the water than the point-to-point contact. When the water pressures increase sufficiently, the soil grains begin to lose contact with each other resulting in the loss of shear strength and continuous deformation of the soil where the soil begins to liquefy.

Liquefaction can lead to several types of ground failure, depending on slope conditions and the geological and hydrological settings, of which the four most common types of ground failure are: 1) lateral spreads, 2) flow failures, 3) ground oscillation and 4) loss of bearing strength. Based on a review of regional liquefaction maps, the planning area is classified as having a high potential for liquefaction. The different types of ground failure associated with liquefaction often leaves geomorphic evidence after the event in the form of scarps, and open (or unfilled) groups cracks, and sand volcanoes. The planning area does not appear to have experienced liquefaction historically as no liquefactions or lateral spreading was reported to have occurred during the 1989 Loma Prieta earthquake on the subject site, or directly nearby.

The potential for liquefaction within the planning area was evaluated qualitatively for the proposed project based upon data obtained from the exploratory borings. The possible presence of liquefiable soils extending from the ground surface to a depth of 50 feet below the ground surface was determined using a peak ground acceleration value of 0.63g, which is somewhat higher than the procedure outlined in the 2007 California Building Code. The borings along the southern embankment of Corralitos Creek, central area, and near the pond in the western portion of the site were found to be most susceptible to liquefaction. Based on the evaluation, it was determined that an estimated magnitude of possible seismically-induced ground surface settlement could range from 0.5 to 10 inches.

**Landsliding.** Since the majority of the planning area is gently sloping, seismically-induced landsliding is considered low. However, the Corralitos Creek embankment is fairly steep and ranges in height between 10 and 32 feet above the thalweg<sup>3</sup> of the creek. The embankment is underlain by Pleistocene age sediment that can be prone to failure if undercut by the creek or subjected to strong seismic shaking on near by faults.

### *Soils*

According to the *Soil Survey of Santa Cruz County*, the eastern and southern portions of the planning area are comprised of approximately 19.2 acres of Baywood loamy sand, 0 to 2 percent slopes and 25.3 acres of Elder sandy loam soils, 0 to 2 percent slopes. The western and northern portions of the planning area are comprised of approximately 7.1 acres of Pinto loam, 2 to 9 percent slopes and 14.2 acres of Watsonville loam soils. The remaining 2.4 acres covers the wetland/riparian area and is classified as water. Option A of the proposed off-site improvement of the Wagner Avenue extension is comprised of between 0.3 acres of Baywood loamy sand, 0 to 2 percent slopes; 1.06 acres of Conejo loam, 0 to 2 percent slopes; and 0.15 acres of Elder sandy loam, 0 to 2 percent slopes. Option B of the proposed Wagner Avenue extension is comprised of approximately 0.21 acres of Baywood loamy sand, 0 to 2 percent slopes and 0.59 acres of Conejo

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<sup>3</sup> Thalweg – The line defining the lowest points along the length of a river bed or valley.



loam, 0 to 2 percent slopes. These options are based on the right-of-way acquisition that may be needed (see **Figure 3.2-1: Soils in Section 3.2, Agricultural Resources**).

- **Elder sandy loam, 0 to 2 percent slopes.** Elder sandy loam soil series is a deep, well-drained soil. The permeability of this soil is moderate and the erosion hazard is none to slight. The Elder sandy loam soil is an agriculturally productive soil throughout the region and is intensively cultivated for strawberries, lettuce, and apples. This soil has few constraints for the construction of homes.
- **Baywood loamy sand, 0 to 2 percent slopes.** Baywood loamy sand soil series is a very deep, somewhat excessively drained soil. Permeability of this soil is rapid, surface runoff is slow, and the erosion hazard is slight. As with the Elder sandy loam soil, most areas of this soil are cultivated for apples, strawberries, and Brussels sprouts. Unlike the Elder sandy loam, this soil is found in areas susceptible to flooding.
- **Pinto loam, 2 to 9 percent slopes.** The Pinto loam soil series is a very deep, moderately well drained soil that typically occurs on coastal terraces and old alluvial fans. Permeability of this soil is slow, surface runoff is slow to medium, and the erosion hazard is slight to moderate. Many areas of this soil are used for row crops such as Brussels sprouts. The shrink-swell potential of this soil ranges from low to high between surface and subsurface layers in the Pinto loam (2 to 9 percent slopes). A special design is needed for building pads, roads, and other structures to compensate for this soil's low strength and shrink-swell potential.
- **Watsonville loam, 2 to 15 percent slopes.** The Watsonville loam soil series is a very deep, somewhat poorly drained soil. The soil has a subsoil clay layer about 21 inches thick. Permeability of this soil is very slow, runoff is slow or moderate, and the erosion hazard is slight to moderate. The shrink-swell potential is low at the surface and high in the subsurface layer. The soil's shrink-swell potential and low strength are a constraint to development. A special design is needed for building pads, roads, and other structures to compensate for the soil's shrink-swell potential and low strength.
- **Conejo Loam, 0 to 9 percent slopes.** The Conejo loam soil series consists of very deep, well drained soils on alluvial fans and plains. These soils formed in alluvium derived from sedimentary rock. Slope ranges from 0 to 9 percent. The mean annual precipitation ranges from 20 to 30 inches, and the mean annual air temperature is about 58 degrees F. The Conejo loam soil series has a slow runoff potential with a slight erosion hazard.

## 3.6.2 Regulatory Setting

### State

#### [Alquist-Priolo Earthquake Fault Zoning Act](#)

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The law requires the State Geologist to establish



regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires.

#### Uniform Building Code

The Uniform Building Code (UBC) was first enacted by the International Conference of Building Officials (ICBO) on October 18-21, 1927. Revised editions of this code are published approximately every 3 years. The UBC (1997) includes provisions associated with engineering design and building requirements.

#### California Building Standards Code

The California Building Code (CBC) is another name for the body of regulations known as the California Code of Regulations (CCR), Title 24, Part 2, which is a portion of the California Building Standards Code and establishes minimum requirements for a buildings structural strength and stability to safeguard the public health, safety and general welfare. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.

Published by the International Conference of Building Officials, the UBC is a widely adopted model building code in the United States. The California Building Code incorporates by reference the 2006 International Building Code, referred in the CEQA standard of significance below, with necessary California amendments.

### **Local**

#### County of Santa Cruz General Plan and Local Coastal Program

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies are applicable to geology and soils.

**Policy 6.1.4 Site Investigation Regarding Liquefaction Hazard (LCP).** Require site-specific investigation by a certified engineering geologist and/or civil engineer of all development proposals of more than four residential units in areas designated as having a high or very high liquefaction potential. Proposals of four units and under and non-residential projects shall be reviewed for liquefaction hazard through environmental review and/or geologic hazards assessment, and when a significant potential hazard exists a site-specific investigation shall be required.

**Policy 6.3.4 Erosion Control Plan Approval Required for Development (LCP).** Require approval of an erosion control plan for all development, as specified in the Erosion Control ordinance. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.



**Policy 6.3.5 Installation of Erosion Control Measures.** Require the installation of erosion control measures consistent with the Erosion Control ordinance, by October 15, or the advent of significant rain, or project completion, whichever occurs first. Prior to October 15, require adequate erosion control to be provided to prevent erosion from early storms. For development activities, require protection of exposed soil from erosion between October 15 and April 15 and require vegetation and stabilization of disturbed areas prior to completion of the project. For agricultural activities, require that adequate measures are taken to prevent excessive sediment from leaving the property.

**Policy 6.3.7 Reuse of Topsoil and Native Vegetation Upon Grading Completion.** Require topsoil to be stockpiled and reapplied upon completion of grading to promote regrowth of vegetation; native vegetation should be used in replanting disturbed areas to enhance long-term stability.

**Policy 6.3.8 On-Site Sediment Containment (LCP).** Require containment of all sediment on the site during construction and require drainage improvements for the completed development that will provide runoff control, including onsite retention or detention where downstream drainage facilities have limited capacity. Runoff control systems or Best Management Practices shall be adequate to prevent any significant increase in site runoff over pre-existing volumes and velocities and to maximize on-site collection of non-point source pollutants.

**Policy 6.3.9 Site Design to Minimize Grading (LCP).** Require site design in all areas to minimize grading activities and reduce vegetation removal based on the following guidelines:

- (a) Structures should be clustered;
- (b) Access roads and driveways shall not cross slopes greater than 30 percent; cuts and fills should not exceed 10 feet, unless they are wholly underneath the footprint and adequately retained;
- (c) Foundation designs should minimize excavation or fill;
- (d) Building and access envelopes should be designated on the basis of site inspection to avoid particularly erodable areas;
- (e) Require all fill and sidecast material to be recompacted to engineered standards, reseeded, and mulched and/or burlap covered.

#### [City of Watsonville General Plan](#)

The following policies in the 2005 *City of Watsonville General Plan* are applicable to geology and soils within the planning area.

**Goal 12.1, Land Use Safety.** Plan for and regulate the uses of land in order to provide a pattern of urban development which will minimize exposure to hazards from either natural or human-related causes.

**Policy 12.A, Environmental and Public Safety.** The City shall plan for and maintain development standards that minimize risks to human lives and property resulting from environmental and man-caused hazards.



The City shall protect neighboring residential development from the immediate threats of potentially hazardous materials and airport hazards through careful land use planning.

**Goal 12.2, Seismic and Other Geologic Hazards.** Reduce the potential for loss of life, injury, and economic damage resulting from earthquakes and associated geologic hazards such as landslides and liquefaction.

**Policy 12.B, Seismic Hazards.** The City shall use the development review process to ensure that potential geologic hazards are evaluated and mitigated prior to construction.

**Policy 12.C, Soil Constraints.** The City shall take all appropriate actions to ensure that current land use activities and new developments are mitigated to prevent soil failure and other soil-related dangers.

**Goal 9.7 Soil Conservation.** Preserve and protect the soil resources throughout the community and minimize the environmental degradation caused by soil erosion, construction impact on soils, and deterioration in water quality caused by suspended solids.

**Policy 9.E. Soil Conservation.** The City shall prevent degradation of local soil resources through erosion control improvement and grading improvements.

#### Erosion Control Ordinance

Future development within the County Site would require compliance with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), which requires preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. Once the planning area is annexed to the City of Watsonville, future development within the City portion of the proposed project would be required to comply with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code.

#### **3.6.3 Relevant Project Characteristics**

The proposed Specific Plan and PUD designate approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200 foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer as part of Phase 1 (County site) that would be terminated once Phase 2 (City site) is annexed and rezoned.



### 3.6.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

The following thresholds of significance, based on the criteria contained in Appendix G of the State CEQA Guidelines, are used to determine whether or not implementation of the proposed Project would result in significant geologic impacts. Impacts would be considered significant if the proposed project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault,
  - Strong seismic ground shaking,
  - Seismic-related ground failure, including liquefaction, or
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- 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; or
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (UBC), creating substantial risks to life or property.
- 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.

#### Methodology

The following impact evaluation is based on the *Feasibility Level Geotechnical Investigation and Engineering Geology Report* prepared for the proposed project by Pacific Crest Engineering, Inc. in October 2008 and a *Geologic Feasibility Investigation* prepared for the proposed project by Zinn Geology in June 2008.

The field investigation performed for the reports consisted of geotechnical test borings throughout the planning area. The excavations and borings were used to verify and supplement information derived from published studies and aerial photographs. According to the *Feasibility Level Geotechnical Investigation and Engineering Geology Report*, the primary geotechnical hazard affecting the planning area is the potential for liquefaction and lateral spreading of the subsurface soils during a strong seismic event, as well as impacts associated with expansive soils.

#### Impacts and Mitigation Measures

##### Exposure to Surface Ground Rupture

The planning area is not located within an Alquist Priolo Earthquake Fault Zoning Map as mapped by the State Geologist. The closest known fault to the planning area is the Zayante-Vergeles fault, located approximately 0.9 miles northeast of the planning area. There are no known or potentially active faults located within the planning area. Based on the distance of the





planning area from the Zayante-Vergeles fault to the planning area, the proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture.

#### Exposure to Seismic Ground Shaking

**Impact 3.6-1:** The planning area would experience strong ground shaking during a major earthquake on any of the nearby faults, resulting in the exposure of people and/or structures to potentially substantial adverse effects, including the risk of loss, injury, or death. This is considered a potentially significant impact.

During a major earthquake on any of the nearby faults, strong ground shaking would be experienced within the planning area resulting in the exposure of people and/or structures to substantial adverse effects, including the risk of loss, injury, or death. A common measure of the potential intensity of ground shaking is the Modified Mercalli Intensity Scale. The Modified Mercalli Intensity Scale measures the intensity of ground shaking as determined from observations of an earthquake's effect on people, structures, and the earth's surface. Preliminary estimates of Modified Mercalli intensities within the planning area for the Loma Prieta earthquake is approximately VII, which would indicate that it would be difficult to stand during an earthquake. However, damage to structures would be negligible in buildings of good design and construction materials.

As a result, the proposed project may be exposed to some structural damage and associated human safety hazards due to stronger shaking. This would be considered a **potentially significant impact**. Future development within the planning area would be required to design and construct future development in conformance to the recently adopted 2007 California Building Code (CBC) for Seismic Zone VII. The CBC has incorporated the most recent seismic design parameters. Structures built in accordance with the latest edition of the CBC would experience relatively minor damage. The project geotechnical report outlines the values for the seismic design as established in the 2007 CBC (see **Appendix D**), which would mitigate the potential impacts due to seismic shaking. In addition, implementation of the following mitigation measure would reduce this potentially significant impact to a **less than significant** level.

#### Mitigation Measure

**MM 3.6-1** Future development within the planning area shall be designed in accordance with the requirements of the current edition of the CBC. Project applicants within the planning area shall consult with a qualified engineer to prepare a design level geotechnical report in accordance with the CBC and the recommendations contained with the *Feasibility Level Geotechnical Investigation and Engineering Geology Report*, prepared by Pacific Crest Engineering in March 2009. Recommendations included in the *Feasibility Geotechnical Investigation and Engineering Geology Report* include: site grading, cut and fill slopes, erosion control, utility trenches, surface drainage, pavement design, and soil corrosivity. Prior to final inspection, project applicants shall provide certification from a qualified professional that all development has been constructed in accordance with all geologic and geotechnical reports.



Implementation of mitigation measure **MM 3.6-1** would ensure that design level geotechnical reports are prepared for future development within the Specific Plan area and that development is constructed in accordance with the most current CBC.

#### Exposure to Ground Failure from Liquefaction and Lateral Spreading

**Impact 3.6-2:** The potential for liquefaction to occur along the southern embankment of Corralitos Creek, the central area, and near pond in the western portion of the site is high and consequently the potential for lateral spreading is high, which could result in potential structural damage and associated human safety hazards. This is considered a potentially significant impact.

#### Liquefaction

The potential for liquefaction within the planning area was evaluated qualitatively for the proposed project based upon data obtained from the exploratory borings. The possible presence of liquefiable soils extending from the ground surface to a depth of 50 feet below the ground surface was determined using a peak ground acceleration value of 0.63g, which is somewhat higher than the procedure outlined in the 2007 CBC. The borings along the southern embankment of Corralitos Creek, the central area, and near pond in the western portion of the site were found to be most susceptible to liquefaction. Based on the evaluation, it was determined that an estimated magnitude of possible seismically-induced ground surface settlement could range from 0.5 to 10 inches. The determination that the planning area has liquefiable soils would generally trigger a special Site Class F designation per the CBC. The *Feasibility Level Geotechnical Investigation and Engineering Geology Report* determined that a Class F designation was not appropriate for the planning area based on development proposed in the proposed Specific Plan and PUD.

#### Liquefaction Induced Lateral Spreading

Liquefaction induced lateral spreading occurs when a liquefied soil mass fails toward an open slope face, or on an inclined topographic slope. According to the *Feasibility Level Geotechnical Investigation and Engineering Geology Report*, the potential for liquefaction to occur within the planning area is high consequently the potential for lateral spreading is also high along the southern embankment of Corralitos Creek, the central area, and to a slightly lower extent near the pond in the western portion of the planning area.

The potential for ground failure from liquefaction and liquefaction induced lateral spreading within the planning area is considered a **potentially significant impact**. The following mitigation measures would reduce impacts related to ground failure induced liquefaction and lateral spreading to a **less than significant level**.

#### Mitigation Measure

**MM 3.6-2** Project applicants shall consult with a qualified engineer to perform a quantitative evaluation of liquefaction and liquefaction-induced lateral spreading in conjunction with a design level geotechnical report for future development within the planning area. The evaluation shall be in accordance with the recommendations contained with the Feasibility Level Geotechnical Investigation and Engineering Geology Report prepared by Pacific Crest Engineering in March 2009. The design level geotechnical report shall also specify foundations and structural elements that are designed to resist forces and



potential ground settlement generated by liquefaction and lateral spreading and shall incorporate the following into the final site plans, unless the additional analysis indicates it is not necessary:

- Development shall be set-back a minimum of 150 feet from the southern “top of bank” for Corralitos Creek and 50 feet from the delineated wetland boundary (Appendix D) for the pond located in the western portion of the planning area. The 50 foot set back should apply to the 100-year flood plain elevation or ordinary high water mark of the pond, and
- Development shall be constructed upon a structural mat foundation system; likely consisting of a 12-inch thick concrete slab, with one or two layers of reinforcing steel placed within the mat.

Implementation of mitigation measure **MM 3.6-2** would ensure that design level geotechnical reports are prepared for future development within the Specific Plan area in order to minimize the risk of ground failure from liquefaction and liquefaction induced lateral spreading within the planning area.

#### Exposure to Landsliding

**Impact 3.6-3:** The potential for seismically induced landsliding is considered low. However, slope failures are possible along the steep embankments of Corralitos Creek during strong seismic shaking, which could present a risk. This is considered a potentially significant impact.

The potential for seismically induced landsliding is considered low. However, slope failures are possible along the steep embankments of Corralitos Creek during strong seismic shaking, which could present a safety risk. This is considered a **potentially significant impact**. Implementation of mitigation measures **MM 3.6-1** and **MM 3.6-2**, which would require that development is set-back a minimum of 150 feet from the southern “top of bank” for Corralitos Creek would reduce this impact to a **less than significant** level. No additional mitigation measures are necessary.

#### Short-term Soil Erosion During Construction Activities

**Impact 3.6-4:** The proposed project is partially located on soils with slight to moderate erosion hazard and would result in substantial soil erosion or the loss of topsoil in these areas if disturbed during short-term construction activities. This is considered a potentially significant impact.

The planning area is extensively cultivated and used for agricultural production of primarily strawberries and apples. Disturbances within the planning area currently include tilling and minor unimproved roads that are located throughout the planning area. The Corralitos Creek floodplain slopes very gently to the north, toward the creek, with the exception of a wetland near the western edge of the planning area. There is no evidence of significant erosion within the planning area under existing conditions.

According to the *Santa Cruz County Soil Survey*, the planning area is underlain by soils with erosion potential ranging from none to “moderate.” The majority of the eastern portion of the



planning area is underlain by Elder Sandy Loam and Baywood Loamy Sand soils, which are characterized by “slight or not present” and “slight” erosion potential, respectively. The western portion of the site is underlain by Watsonville Loam and Pinto Loam soils, which are both characterized by a “slight to moderate” erosion potential. The proposed right-of way of the Wagner Avenue extension is comprised of the Baywood Loamy Sand soil and the Conejo loam soil, which has a “slow” erosion hazard.

The proposed project would involve the removal of vegetation and grading activities associated with the construction of buildings, infrastructure, parks, and roads. The loosening and exposure of soil makes it susceptible to erosion by rainfall and wind. The proposed project would also increase the amount of impervious surfaces, which may affect the natural drainage pattern on the planning area. During unusually high rainfall over a short duration, excessive erosion may occur. Soil particles may be carried by stormwater to receiving water bodies such as Corralitos Creek resulting in sedimentation. The effects of increased sediment loading could include increased turbidity and reduced light penetration.

Future development within the County Site would require compliance with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), which requires preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. Once the planning area is annexed to the City of Watsonville, future development within the City portion of the proposed Specific Plan would be required to comply with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code. In addition, in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements for construction of site storm water discharges, projects involving construction on sites that are 1 acre or more are required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies how the discharger will protect water quality during construction activities. These measures will include but not be limited to the following: design and construction of cut and fill slopes in a manner that will minimize erosion, protection of exposed slope areas, control of surface water flows over exposed soils, use of wetting or sealing agents or sedimentation ponds, limiting soil excavation in high winds, construction of beams and runoff diversion ditches, and use of sediment traps, such as hay bales. Compliance with the respective erosion control ordinances and acquisition of the NPDES General Permit for construction activities as required by **MM 3.8-2 in Section 3.8: Hydrology and Water Quality** would ensure that potential soil erosion impacts associated with the proposed project would be **less than significant**.

#### Exposure to Expansive Soils

**Impact 3.6-5: The proposed project includes approximately 22 acres of expansive soils of low strength, which could create substantial risk to life or property on these portions of the planning area. This is considered a potentially significant impact.**

Expansive soils tend to swell with seasonal increases in soil moisture and shrink during the dry season as the soil moisture decreases. Shrinking and swelling of some soils can cause damage to building foundations, basement walls, roads and other structures unless precautionary measures are incorporated into the design. According to the *Soil Survey of Santa Cruz County*, two of the soil types present on the planning area, the Pinto Loam and Watsonville Loam soil series have a high shrink-swell potential and low strength. These soils comprise approximately 22 acres in the western portion of the planning area. In addition, the *Feasibility Level Geotechnical*



*Investigation and Engineering Geology Report* prepared by Pacific Crest Engineering identified expansive soils in eastern portion of the planning area and in the western portion of the planning area adjacent to the PG&E substation. Implementation of mitigation measure **MM 3.6-1**, which would require that future development be designed in accordance with the recommendations contained within a design-level geotechnical report would reduce this impact to a **less than significant** level. No additional mitigation measures are necessary.

#### Septic Systems

Development resulting from the proposed Specific Plan and PUD would connect to the City of Watsonville sewer system and therefore would not involve the construction of septic tanks or an alternative wastewater treatment system. Therefore, the proposed development would have not impact on soils necessary to support septic systems within the planning area.



## 3.7 Hazards and Hazardous Materials

This section of the EIR discusses the potential presence of hazards and hazardous materials at or within the vicinity of the planning area and analyzes the potential risk of these conditions in the context of existing and proposed development and future human activities. This section is based on a *Preliminary Hazardous Materials Assessment* prepared by RBF Consulting in September 2008, as well as a review of the *Watsonville Municipal Airport Master Plan* (City of Watsonville 2008) to address any potential airport related hazards. The *Preliminary Hazardous Materials Assessment* evaluates the potential for hazardous materials within the planning area based on readily discernable and/or documented present and historic uses within the planning area and generally characterizes the expected nature of hazardous materials that may be present at the project site. The *Preliminary Hazardous Materials Assessment* is included in **Appendix E** of Volume II of the Draft EIR.

### 3.7.1 Environmental Setting

#### Regional Setting

##### Hazardous Materials

Hazardous materials include substances that are corrosive, poisonous, radioactive, flammable, or explosive. The City of Watsonville, similar to most cities, has industrial and commercial activities within and in the vicinity of the City that store, use, and must dispose of hazardous materials. Hazardous materials can be released into the environment accidentally during normal business operations or through transportation accidents.

Hazardous materials are transported through Watsonville regularly along major transportation corridors, including Highway 1, State Route 152, and State Route 129, and several arterial and local streets within the City provide access to commercial and industrial businesses. In addition, hazardous materials are also transported by freight rail through the City.

##### Airport Hazards

The Watsonville Municipal Airport is the only municipal airport in Santa Cruz County. It is considered a reliever airport for general aviation from the San Francisco Bay Area. In 2000, approximately 330 corporate and private aircraft were based at the airport. On average, 336 daily aircraft operations occurred in 2000. By 2020, the number of aircraft based out of the City of Watsonville is expected to increase to 381 and daily aircraft operations is expected to increase to 395.

The Watsonville Municipal Airport has a good safety record. Between 1973 and 2000, over one million operations have occurred at the airport. During this time, only 14 accidents were recorded. None of the accidents involved a serious injury to a civilian or resident not involved with flying the aircraft.

Safety issues regarding compatibility between airport operations and the surrounding environment include noise impacts, ground safety, and flight hazards. To address these issues, the City has prepared the *Watsonville Airport Master Plan 2001-2020*, which focuses on airport safety and noise abatement for future airport operations. The *Watsonville Municipal Airport Master Plan* is updated every five years to ensure that the airport's development is carried out in a manner that maintains an acceptable level of risk for the airport and its surroundings. In





addition, City has an Airport Safety Committee, which meets regularly to address issues of concern.

The planning area is located in the airport approach zone and according to the *Watsonville Municipal Airport Master Plan*. Assessors Parcel Number 019-226-43 and 019-226-44 and portions of Assessors Parcel Numbers 048-211-25 and 019-236-01 are located within the Zone 6 Safety Compatibility Zone as shown in **Figure 3.7-1: Safety Compatibility Zones** (City of Watsonville 2002 and personal communication with Don French, City of Watsonville on December 9, 2008). There are no maximum densities for residential units within Zone 6. However, for other uses the density of people is restricted to an average of 150 people per acre.

As discussed in **Section 3.10, Noise**, portions of the northern section of the planning area are located within the 55 decibels (dB) Community Noise Equivalent Level (CNEL) 2020 Noise Contour for the *Watsonville Municipal Airport Master Plan*. Residential, commercial, manufacturing and production uses are allowed uses within the 55dB CNEL contour for the *Watsonville Municipal Airport Master Plan* (City of Watsonville 2002).

#### Wildland Fire Hazards

Wildland fires occasionally break out in the grasslands and dry, chaparral-covered hills near the City of Watsonville. In May of 2008, the Summit fire, which was located approximately 15 miles north of the planning area, burned almost 5,000 acres. On June 20, 2008, the Trabling fire burned over a thousand acres when a fire was accidentally set from a vehicle's faulty exhaust system, approximately five miles north of the planning area.

According to the *City of Watsonville General Plan*, wildland fires are usually contained before they pose a threat to the urbanized area of the City and adjacent unincorporated area. Agricultural land, which serves as a buffer between the urbanized area of the City and areas that are prone to wildland fires, surrounds the majority of the City. This reduces potential risks from wildland fires.

#### Emergency Evacuation Routes

According to the *City of Watsonville General Plan* and the *Emergency Preparedness Plan*, East Lake Avenue and Green Valley Road, north of Freedom Boulevard are the primary emergency evacuation routes in the project vicinity.

#### Project Setting

The majority of the planning area is currently in agricultural production as strawberries and apple orchards. A seasonal wetland/riparian area is located in the western portion of the planning area on the south end of APN 048-221-09. Corralitos Creek and associated riparian vegetation trends roughly west to east along the proposed project's northern boundary within APNs 048-231-17 and 048-231-18. The topography is approximately 70 to 110 feet above mean sea level (msl) and slopes to the west within the western portion of the site and to the east within the eastern portion of the site.

Five single-family residences and various structures used for farming practices are located within the project site. A series of unimproved dirt roads traverse the planning area in order to access the agricultural fields and the existing residential development. The PG&E property (APN: 048-



211-24) contains an electrical plant/station at the west side of the project site. An overhead electrical utility line bisects the planning area along APN 048-251-09 (Grimmer Orchard parcel) along the northern boundary and cuts north through APN 048-231-17 and APN 048-231-18 (Israel Zepeda parcels). **Figures 2-5 through Figure 2-7: Photographs of the Planning Area** presents photographs of existing conditions at the project site. **Figure 2-8: Existing Site Characteristics** presents an aerial view of existing site characteristics.

### Hazardous Materials

RBF performed a site visit on May 20, 2008 as part of the *Preliminary Hazardous Materials Assessment*, which consisted of a visual examination of the planning area for visual evidence of potential environmental concerns, including existing or potential soil and groundwater contamination as evidenced by soil or pavement staining or discoloration; stressed vegetation; indications of waste dumping or burial; pits; ponds; or lagoons; containers of hazardous substances or petroleum products; electrical and hydraulic equipment that may contain PCBs, such as electrical transformers and hydraulic lifts; and underground and aboveground storage tanks. RBF Consulting observed the physical characteristics of the planning area (i.e., apparent runoff directions, location of paved areas, etc.), which included: 1) a preliminary visual examination of adjacent property conditions; 2) an investigation of historical uses of the planning area by examining locally available aerial photographs (including historical aerial photos) and historical topographic maps for evidence of potential environmental concerns associated with prior land uses; 3) a review of information available on general geology and topography of the subject properties and local groundwater conditions; 4) a review of the commercial database summaries, provided by Environmental Data Resources (EDR) regarding public agency records; and 5) a review of available property data for the project site.

### *Asbestos and Lead Based Paints*

Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products between the 1940s and the early 1970s. If inhaled, asbestos fibers can result in serious health problems. Asbestos Containing Materials (ACMs) are building materials containing more than one percent asbestos (some state and regional regulators impose a one-tenth of one percent (0.1 percent) threshold).

Until 1978, when the U.S. Consumer Product Safety Commission (CPSC) phased out the sale and distribution of residential paint containing lead, many homes were treated with paint containing some amount of lead. It is estimated that over 80 percent of all housing built prior to 1978 contains some Lead-Based Paints (LBP). The mere presence of lead in paint may not constitute a material to be considered hazardous. In fact, if in good condition (no flaking or peeling), most intact LBP is not considered to be a hazardous material. In poor condition LBPs can create a potential health hazard for building occupants, especially children.

Four single-family residences and various structures used for farming practices were identified on the project site. Two residential homes are located within APN 048-211-25 adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane. Property records obtained from the County of Santa Cruz Assessors Office stated that structures at the planning area were constructed between 1889 and 1947. Therefore, it is likely that ACMs may be associated with these structures. However, no visible ACMs or LBPs were being released into



the environment, as observed on May 20, 2008 site inspection by RBF Consulting. The interior of the on-site residential structures was not observed or tested for the presence of ACMs or LBPs.

#### *Historical and Regulatory Searches*

RBF Consulting performed interviews with the majority of the current property owners and contacted the City of Watsonville, Regional Water Quality Control Board-Central Coast Region, County of Santa Cruz Environmental Health Department, and the City of Watsonville Fire Department regarding potential hazardous conditions at the project site. According to the County of Santa Cruz Environmental Health Department, there are no underground storage tanks (USTs) located on site. However, there are aboveground storage tanks (ASTs) located on the project site. Typical hazardous materials associated with agricultural uses were noted in the planning area. The PG&E substation located in the western portion of the project site, reported the presence of insulating oil. However, this site underwent clean up activities to remove the oil.

Research included, but was not limited to historical topographic maps, aerial photographs, building department records, and Sanborn Fire Insurance Maps. Files were reviewed at the Santa Cruz Environmental Health Department, City of Watsonville Fire Department, Department of Toxic Substances and Control, and the Regional Water Quality Control Board.

A Phase I Environmental Site Assessment and a Phase II Limited Soil Investigation has been prepared for 56 Atkinson Lane (APNs 048-211-25 and 019-226-42) to determine information pertaining to past investigations of the property. These parcels are currently occupied by a residence and approximately seven sheds in the southwestern portion of the project site. The Phase II investigation that was conducted confirmed the presence of concentrations of commonly used agricultural pesticides, specifically DDD, DDE, DDT and  $\beta$ -BHC that were below Regional Water Quality Control Board (RWQCB) environmental screening levels for residential properties where groundwater is the potential source of drinking water. Additionally, detected concentrations of DDD, DDE, DDT, and  $\beta$ -BHC were below applicable United States Environmental Protection Agency (EPA) Preliminary Remediation Goals (PRGs) for residential properties. Therefore, these organochlorine pesticides do not appear to pose a significant long-term chronic threat to human health and the environment.

The presence of arsenic, copper, and lead could be the result of historical use of the property as a fruit orchard; however, these metals also occur naturally in the soil and may represent natural depositional processes. Chromium detected in soil samples appear to represent background chromium concentrations. Concentrations of chromium, copper, and lead detected in the soil are well below applicable ESLs and PRGs. These metals therefore do not appear to pose a significant, long-term (chronic) threat to human health and the environment. Concentrations of arsenic detected in the soil within the planning area are within the general background arsenic range of 5 mg/kg to 30 mg/kg for the greater Bay Area soils. Therefore, based on the Phase II Limited Soil Investigation, there would not be a human health risk on APNs 048-211-25 and 019-226-25 from residual pesticides in the soil.

***Off-Site Properties.*** In addition to on-site records, RBF Consulting obtained available records from the Santa Cruz County Environmental Health Department for three off-site addresses located at 1455 Freedom Boulevard, 1488 Freedom Boulevard, and 1597 Freedom Boulevard, which have reported contamination to groundwater and are located within proximity to and up-gradient from the planning area.



Based on records reviewed, the reported address 1455 Freedom Boulevard has been undergoing groundwater monitoring and sampling. The site is located on the southern corner of Freedom Boulevard and Alta Vista Avenue in the City of Watsonville (approximately 0.15 mile southwest of the project site). The Exxon Mobil site obtained Environmental Resolutions, Inc. (ERI) to operate a groundwater extraction and treatment (GET) remediation system at the site from September 1994 to August 2006. In August of 2006, ERI reviewed concentration trends and operation and performance data for the GET system. Concentrations of Methyl Tertiary Butyl Ether (MTBE) in the system influent samples and in the groundwater monitoring wells showed consistent declining trends.

According to the Groundwater Monitoring and Remediation Status Report, dated April 17, 2007, groundwater is flowing southwest, away from the project site. Additionally, based on groundwater monitoring well and recovery well locations, contamination does not appear to be migrating north, across Freedom Boulevard, toward the project site. Therefore, as the site is currently being remediated and monitored, and the contamination appears to be migrating south-southwest, away from the project site, there is a low likelihood that groundwater contamination, as a result of 1455 Freedom Boulevard, underlies the project site.

Based on records reviewed, the reported address 1488 Freedom Boulevard operated a Chevron Service Station from 1958 to 1984. Petroleum hydrocarbons are reported to have been released into the soil and groundwater. During construction of the recently installed SpeeDee Oil Change facility, contaminated soil and groundwater were removed from the site. According to the Third Quarter 2007 Groundwater Monitoring and Sampling Results, dated October 19, 2007, hydrocarbons were not detected in groundwater wells during the July 24, 2007 monitoring event. Depth to groundwater ranged from 3.06 feet below ground surface (bgs) in well MW-5 to 6.25 feet bgs in well MW-4. The groundwater flow direction was variable (to the north and east-southeast) with a groundwater gradient ranging from 0.002 to 0.005 foot/foot.

Based on data obtained, the report stated that the contamination plume is delineated in the historical downgradient direction to the south-southeast; however, the plume could not be fully delineated in the cross-gradient direction (west-southwest). The planning area is approximately 0.16-mile northeast of the site. The closest monitoring well to the planning area is MW-8, located approximately 0.16-mile southwest of the project site. Sampling has indicated the presence of total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), MTBE, and 1,2-dichloroethane (1, 2-DCA) at MW-8. The highest concentrations of petroleum hydrocarbons in the groundwater have been noted in MW-8. The contamination plume appears to be limited to the adjoining properties. Based on available maps, it is unlikely that the contamination plume originating from 1488 Freedom Boulevard has migrated onto the project site. Therefore, due to the location of the planning area (0.16-mile cross-gradient), it is unlikely that groundwater contamination from 1488 Freedom Boulevard currently underlies the project site.

Based on records reviewed, the reported address 1597 Freedom Boulevard (Beacon Station No. 3400) has prepared a *Quarterly Groundwater Monitoring and Remediation Status Report* in January 2008 (RBF Consulting 2008). The report stated that water-level data collected on October 24, 2007 was used to construct the Groundwater Contour Map. The planning area is located approximately 0.23-mile west of this site. The groundwater flow direction to the south of the site is reported to flow southeast (away from the project site). Therefore, due to the location



of the planning area (0.23 mile cross- and down-gradient), it is unlikely that groundwater contamination from 1597 Freedom Boulevard underlies the project site

### 3.7.2 Regulatory Setting

A material is considered hazardous if it has been designated as such by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. The California Code of Regulations defines a hazardous material as a substance that, because of physical or chemical properties, its quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed (22 CCR §66260.10 and California Health and Safety Code [HSC] §25501). Based on this definition, “hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (22 CCR §66260.10).

Chemical residuals in soil that are the result of the normal application of fertilizer, plant growth regulants, and pesticides for agricultural purposes do not constitute a release of hazardous substances under the California Hazardous Substances Account Act (HSC §25321 (d)). Similarly, the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) exempts parties from liability for the application of federally-registered pesticides (42 USC §9607(i)).

Regulation of hazardous materials and hazardous wastes occurs at the federal, state, and local levels of government. On the federal level, many hazardous materials-related regulations are promulgated by the EPA. Additional regulations pertaining to work place standards and for transportation of hazardous materials are enforced by the United States Department of Labor Occupational Health and Safety Administration (OSHA) and the United States Department of Transportation (DOT).

In 1993, Senate Bill 1082 gave the California Environmental Protection Agency (CalEPA) the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program (Unified Program). The purpose of the Unified Program is to consolidate and coordinate six different hazardous materials and hazardous waste programs, and to insure that they are consistently implemented throughout the state. The unified program is overseen by CalEPA with support from the Department of Toxic Substances Control, the State Water Resources Control Board, the Office of Emergency Services, and the State Fire Marshal.

State law requires county and local agencies to implement the Unified Program. The county and local agencies in charge of implementing the program are called “Certified Unified Program Agency” (CUPA). The County of Santa Cruz Environmental Health Services Department is the designated CUPA within the geographic boundaries of the County (including all four cities within the County). As such, Environmental Health Services is responsible for enforcing the local ordinance (Chapter 7.100) and State Laws pertaining to use and storage of hazardous materials.

In addition to the CUPA, other local agencies help to implement the Unified Program. These agencies are called Participatory Agencies (PA). The Watsonville Fire Department is the PA for





the City of Watsonville. The Department provides hazardous materials code enforcement, public education, and emergency response services. It also oversees enforcement of hazardous waste regulations, underground tank requirements, risk management requirements, and clean up of hazardous materials spills that occur within the City. In addition, the Department manages the City's hazardous materials management plans.

## Local

### County of Santa Cruz General Plan

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994.

The following policies in the *County of Santa Cruz General Plan* are applicable to hazards and hazardous materials at the project site.

**Policy 6.8.2, Measuring Ambient Magnetic Fields.** Require the measurement of the ambient magnetic fields for all residential land divisions or other new discretionary development (not including development of one single-family dwelling on an existing lot of record) where such property is within 150 feet of 21 kv or greater transmission or distribution powerlines of the electric power delivery system. The measurements should delineate the area on the site where the magnetic field is above the level at which potential health effects may exist, based on the then current state of scientific knowledge.

**Policy 6.8.3, Development Mitigation Measures.** Utilize the following techniques to minimize exposure to potentially hazardous electric and magnetic fields from electric powerlines.

- (a) Site Planning – Locate and/or cluster habitable building envelopes away from the potentially hazardous electric and magnetic fields consistent with the current state of scientific knowledge.
- (b) Underground the Powerline – Reduce the electric and magnetic fields by undergrounding powerlines in a metallic pipe or other appropriate insulator.
- (c) Reconfigure the Powerline – Reconfigure lines and conductors in transmission or distribution lines to achieve significant cancellation of the electric and magnetic fields near the ground.

### City of Watsonville General Plan

The following policies in the 2005 *City of Watsonville General Plan* are applicable to hazards and hazardous materials at the project site.

**Goal 12.5, Hazardous Materials.** Reduce the potential danger related to the use, storage, transport, and disposal of hazardous materials to an acceptable level of risk for city residents.





**Goal 12.1, Land Use Safety.** Plan for and regulate the uses of land in order to provide a pattern of urban development which will minimize exposure to hazards from either natural or human-related causes.

**Policy 12.A, Environmental and Public Safety.** The City shall plan for and maintain development standards that minimize risks to human lives and property resulting from environmental and man-caused hazards.

The City shall protect neighboring residential development from the immediate threats of potentially hazardous materials and airport hazards through careful land use planning.

### 3.7.3 Relevant Project Characteristics

The proposed Specific Plan and PUD designate approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” and 10 net-acres for “Residential – Low Density. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; 3.5 acres of parks/recreational uses; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

The proposed project includes relocation or undergrounding of the existing 60-kilovolt powerline that extends from the current PG&E substation east along the southern boundary of the County Site and through the middle of the proposed project.

### 3.7.4 Impacts and Mitigation Measures

#### Methodology

This section is based on a *Preliminary Hazardous Materials Assessment* prepared by RBF Consulting in September 2008, as well as the *Watsonville Municipal Airport Master Plan* (City of Watsonville 2002) to address any potential airport-related hazards. *The Preliminary Hazardous Materials Assessment* is included in **Appendix E** of Volume II of the Draft EIR.

#### Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, agency and professional standards, a project impact would be considered significant if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;



- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area; and/or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

#### Transport, Use, Disposal, and Release of Hazardous Materials During Construction

**Impact 3.7-1 Development of the proposed project would involve the short-term use and disposal of hazardous materials. This would be considered a less than significant impact.**

Implementation of the proposed project may result in the routine transport of hazardous materials during construction. Handling measures of the City of Watsonville and County of Santa Cruz (Fire Department and Department of Environmental Health) are required through all phases of the proposed project. These measures include standards and regulations regarding the storage, handling, and use of these materials. In addition, in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements for construction of site storm water discharges, projects involving construction on sites that are one acre or more are required to prepare an implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies how the discharger will protect water quality during construction activities. Compliance with the appropriate hazardous materials handling measures and acquisition of the NPDES General Permit for construction activities would ensure that potential hazardous materials impacts during short-term construction activities associated with the proposed project would be **less than significant**.

#### Transport Use, Disposal and Release of Hazardous Materials

**Impact 3.7-2: Development of the proposed project would involve the use of hazardous materials including cleaning solvents, fertilizers, pesticides and other hazardous materials typical of residential, park, and open space uses. This would be considered a less than significant impact.**

The proposed project is not anticipated to result in significant hazards to the public or environment with occupancy of the residential, park, and open space uses associated with the proposed project. On-site use of hazardous materials may include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance of residential communities and park uses. With proper use and disposal, these chemicals are not expected to result in hazardous or unhealthful conditions for patrons of the park uses or on-site residential uses. Therefore, the proposed project would not result in the transport, disposal, and release of hazardous materials and would be considered a **less than significant impact**.



### Demolition of Structures

**Impact 3.7-3:** The proposed project may result in the demolition of four residential homes and associated structures at the project site, which may contain asbestos and/or lead. This would be considered a potentially significant impact.

Four single-family residences and various structures used for farming practices were identified on the project site. Two residential homes are located within APN 048-211-25 (Michelle and Corwyn Mosiman parcel) adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane. Property records obtained from the County of Santa Cruz Assessors Office stated that structures within the planning area were constructed between 1889 and 1947. Therefore, it is likely that ACMs may be associated with these structures. However, no visible ACMs or LBPs were being released into the environment, as observed on May 20, 2008 site inspection by RBF Consulting. However, the interior of the on-site residential structures was not observed or tested for the presence of ACMs or LBPs. The potential release of ACMs and/or LBPs during demolition activities is considered a **potentially significant impact**. Implementation of the following mitigation measures would ensure that this impact is reduced to a less than significant impact.

### Mitigation Measure

**MM 3.7-3a** Pursuant to Cal OSHA regulations, project applicants shall have each structure within the planning area within Assessor Parcel Numbers: 019-226-043, 019-226-044, 048-211-25, and 048-231-18 inspected by a qualified environmental specialist for the presence of ACMs and LBPs prior to obtaining a demolition permit from the County of Santa Cruz Planning Department and the City of Watsonville Community Development Department. If ACMs and LBPs are found during the investigations, project applicants within the planning area shall develop a remediation program to ensure that these materials are removed and disposed of by a licensed contractor in accordance with all federal, state and local laws and regulations, subject to approval by the MBUAPCD, City of Watsonville, and the Santa Cruz County Environmental Health Department, as applicable. Any hazardous materials that are removed from the structures shall be disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations.

**MM 3.7-3b** Project applicants within the planning area shall have the interior of all on-site structures within Assessor Parcel Numbers: 019-226-043, 019-226-044, 048-211-25, and 048-231-18 visually inspected by a qualified environmental specialist to determine the presence of hazardous materials prior to obtaining a demolition permit from the County of Santa Cruz Planning Department and the City of Watsonville Community Development Department. Should any hazardous materials be encountered within any of the structures, the material shall be tested and properly disposed of in accordance with federal, state, and local regulatory requirements. Any stained soils or surfaces underneath the removed materials shall be sampled. Subsequent testing shall indicate the appropriate level of remediation necessary and a work plan shall be prepared in order to remediate



the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

Implementation of the mitigation measures **MM 3.7-3a** and **MM 3.7-3b** would ensure that each residential home and associated structures are inspected by a qualified environmental specialist to determine the presence of ACMs, LBPs, and hazardous materials prior to demolition. Should any hazardous materials be encountered with any on-site structures, the materials shall be tested and properly disposed of in accordance with State and Federal regulatory requirements. Implementation of these measures would reduce this impact to a **less than significant level**.

#### Above Ground Storage Tanks, Burn Pit, and Agricultural Equipment

**Impact 3.7-4:** There is the potential presence of hazardous materials located within the boundaries of the planning area based on the site inspection which determined that there are above-ground storage tanks (ASTs) and a debris pile on APN 048-231-18, as well as evidence of a burn pit on Assessor's Parcel Number 048-251-09 within Phase 2 (City site) of the proposed project. This is considered a potentially significant impact.

Although located in secondary containment, there are two metal aboveground storage tanks and one 55-gallon drum located on APN 048-231-18 within the planning area. Although these ASTs have secondary metal containment, they may have released petroleum products into the soil. The two ASTs were labeled unleaded and dyed diesel. A dark liquid and odor was visible within the secondary containment and a minor drip-line was visible underneath the pumping device. Additionally, dark staining was noted on the 55-gallon drum and a dark fluid was noted within the metal secondary containment area.

Evidence of surficial staining was noted in the agricultural equipment storage area and the on-site storage structures (located on bare soil) within the planning area. In addition, there was evidence of burn pits located on APN 048-231-18. Based on an interview conducted with the current property owner, Mr. Israel Zapeda, on August 15, 2008, it was determined that on-site household trash is either burned on-site or taken to the local land fill. Mr. Zapeda stated that no hazardous materials are burned on-site. Since the ASTs may have resulted in the release of petroleum products in the soil, which would be considered a **potentially significant impact**. Implementation of the following mitigation measures including the removal of miscellaneous debris (i.e., stockpiled metal piping and 55-gallon drums, etc.) and ASTs prior to construction would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.7-4a** The City of Watsonville Community Development Department shall ensure that project applicants remove the miscellaneous debris (i.e., stockpiled metal piping and 55-gallon drums, etc.) on APN 048-231-18 and APN 048-251-09 within Phase 2 (City site) of the planning area prior to construction activities at the project site. Once removed, a visual inspection of the areas beneath the miscellaneous debris shall be performed. If any stained soils are observed beneath the debris piles, the soil shall be sampled. In the event that subsequent testing indicates the presence of any hazardous materials beyond acceptable thresholds, a work plan shall be prepared in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.



**MM 3.7-4b** The City of Watsonville Community Development Department shall ensure that project applicants remove and properly dispose of the aboveground storage tanks on APN 048-231-18 within Phase 2 (City site) of the proposed project at an approved landfill facility prior to construction activities within the planning area. Once the ASTs are removed, a visual inspection of the areas beneath and around the removed ASTs shall be performed. If any stained soils are observed beneath the ASTs, the soil shall be sampled. In the event that subsequent testing indicates the presence of any hazardous materials beyond acceptable thresholds, a work plan shall be prepared in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

**MM 3.7-4c** The City of Watsonville Community Development Department shall ensure that project applicants sample and excavate stained soils located within agricultural equipment storage areas on and within on-site storage structures (located on bare soil) on APN 048-231-18 within Phase 2 (City site) of the proposed project to determine the extent of contamination prior to construction activities. If during soil removal, evidence of petroleum products appears to continue below the ground surface, sampling would be performed to characterize the extent of contamination and identify appropriate remedial measures in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

With implementation of mitigation measures **MM 3.7-4a** through **MM 3.7-4c**, a visual inspection of the areas beneath the removed materials would be performed and if any soil staining is observed underneath the materials, the soil would be sampled. Results of the sampling (if necessary) would indicate the level of remediation efforts that may be required and a work plan would be prepared to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit by the City of Watsonville. There would be no impact to Phase 1 of the proposed project.

#### Powerline Hazards

**Impact 3.7-5:** Overhead powerlines with transformers traversing the planning area in a north/south direction are located within the planning area. This is considered a potentially significant impact.

Overhead power lines (with transformers) were noted within the planning area traversing in a north/south direction. On-site pole-mounted transformers appeared to be in good condition and no visible staining was noted. Additionally, one on-site substation was visible within the western portion of the planning area on the PG&E parcel (APN: 048-211-24). The substation appeared to be underlain by concrete and asphalt. Minor discoloration was noted on the concrete. The proposed project does not propose any development on the PG&E parcel, but is included in the planning area for annexation purposes only.

The proposed project includes undergrounding or relocation of the transmission lines with implementation of the proposed project in accordance with **Policy 6.8.3, Development Mitigation Measures** in the *Santa Cruz County General Plan*. If the transformers are relocated with implementation of the proposed project and it was not coordinated with a utility provider,





this would be considered a **potentially significant impact**. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.7-5** Prior to relocation of the transformers located within the planning area, the project applicants shall work with PG&E to identify the proper handling procedures regarding PCBs and relocate the power lines and transformers prior to development within the planning area in coordination with the City of Watsonville Community Development Department and the County of Santa Cruz Planning Department. The costs for relocation of the overhead power line shall be shared by project applicants within all phases of the proposed project.

Upon implementation of Mitigation Measure **MM 3.7-5**, any transformers to be relocated during site construction/demolitions would be required to be conducted under the purview of the local utility purveyor in order to identify proper handling procedures regarding potential PCBs. With implementation of this mitigation measure, impacts in this regard would be reduced to a **less than significant level**.

#### Abandoned Septic Systems

**Impact 3.7-6:** Implementation of the proposed project may expose people or property to hazardous materials associated with the abandonment of septic systems within the planning area. This would be considered a potentially significant impact.

Septic tank systems may be located at the residential uses not currently served by City services on APN 048-211-25 within Phase 1 (County site) of the planning area. Septic tanks could be considered a source of residual contamination at the project site. If septic tanks are not removed prior to development of the project site, they could leach contaminants into the soil, which may result in a **potentially significant impact** to safety and public health. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.7-6** Subject to review by the County of Santa Cruz Environmental Health Department, the project applicant shall map the specific location of all septic tanks located on APN 048-211-25 on a survey within Phase 1 (County site). Once located, the septic tanks shall be removed and properly disposed of at an approved landfill facility. Once the tanks are removed, a visual inspection of the areas beneath and around the removed tanks shall be performed. Any stained soils observed underneath the septic tanks shall be sampled. Results of the sampling (if necessary) shall indicate the level or remediation efforts that may be required. In the event that subsequent testing indicates the presence of any hazardous materials beyond acceptable thresholds, a work plan shall be prepared subject to review and approval by the County of Santa Cruz Environmental Health Department in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

Implementation of the above mitigation measure would ensure that prior to ground disturbance activities, the specific location of the septic tanks are located, removed, and property disposed of at an approved landfill facility. Once the septic tanks are removed, a visual inspection of the





areas observed underneath the septic tanks shall determine if any contamination is found, whether any remediation would be required and that any necessary remediation will occur in accordance with all applicable federal, state, and local regulations.

#### Agricultural Wells

**Impact 3.7-7: Implementation of the proposed project may expose people or property to hazardous materials associated with groundwater contamination due to abandonment of agricultural water wells within the planning area. This is considered a potentially significant impact.**

Multiple water wells are located within the planning area, which may serve as a conduit for groundwater contamination. Unless the existing wells are properly destroyed in accordance with all state, federal, and local regulations, the groundwater wells could be a source of contamination within the planning area. This would be considered a **potentially significant impact**. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.7-7** The City of Watsonville Community Development Department and the County of Santa Cruz Planning Department shall ensure that project applicants properly close and abandon all groundwater wells within both phases of the proposed project pursuant to applicable federal, state, and local regulations prior to grading activities. Soils located within the vicinity of the water wells shall be inspected. If any stained soils are observed surrounding the water wells shall be sampled and in the event that subsequent testing indicates the presence of pesticide residues beyond acceptable thresholds, the potential health risks shall be evaluated and a work plan shall be prepared in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

#### Off-Site Hazardous Materials and Discovery of Hazardous Materials During Construction Activities

**Impact 3.7-8: An off-site property located at 1488 Freedom Boulevard approximately 0.16 miles from the planning area released petroleum hydrocarbons into the soil and groundwater. Should the contamination migrate towards the planning area it may contaminate the groundwater. This is considered a potentially significant impact.**

The *Preliminary Hazardous Materials Assessment* evaluated three off-site locations which have reported contamination to groundwater and are anticipated to be located in proximity to and up-gradient of the planning area. Based on records reviewed, the reported address at 1488 Freedom Boulevard operated a Chevron Service Station from 1958 to 1984, which released petroleum hydrocarbons into the soil and groundwater. According to the Third Quarter 2007 Groundwater Monitoring and Sampling Results, hydrocarbons were not detected in groundwater wells during the July 24, 2007 monitoring event (RBF 2008). Depth to groundwater ranged from 3.06 feet below ground surface (bgs) in well MW-5 to 6.25 feet bgs in well MW-4. The groundwater flow direction was variable (to the north and east-southeast) with a groundwater gradient ranging from 0.002 to 0.005 foot/foot. Based on data obtained, the report stated that the contamination plume



is delineated in the historical downgradient direction to the south-southeast; however, the plume could not be fully delineated in the cross-gradient direction (west-southwest).

The planning area is approximately 0.16 mile northeast of this former gas station. The closest monitoring well to the planning area is MW-8, located approximately 0.16 mile southwest of the planning area. Sampling has indicated the presence of total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), and 1,2-dichloroethane (1,2-DCA) at MW-8. The highest concentrations of petroleum hydrocarbons in the groundwater have been noted in MW-8. The contamination plume appears to be limited to the adjoining properties and it is unlikely that the contamination plume has migrated onto the planning area. However, since this site is not currently considered closed, there is the possibility that the plume may move within the vicinity of the planning area. Since buildout of the proposed project would occur over many years, if the plume were to move in the direction of the proposed project resulting in groundwater contamination beneath the planning area, this would be considered a **potentially significant impact**. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measures

- MM 3.7-8a** The project applicants shall hire a qualified hazardous materials consultant with Phase I and/or Phase II experience to review files for the off-site property located at 1488 Freedom Boulevard prior to construction activities during all phases of the proposed project. Should files indicate that the property located at 1488 Freedom Boulevard may have impacted the planning area, Phase II testing shall occur to confirm or deny the presence of contaminated groundwater prior to construction activities. If unanticipated contaminated groundwater is found during construction activities, the project applicants shall ensure that proper safety/handling procedures are followed involving contaminated groundwater within the planning area during all phases of the proposed project subject to review and approval by the City of Watsonville and County of Santa Cruz.
- MM 3.7-8b** If unknown wastes of suspect materials are discovered during construction activities associated with each phase of the proposed project, the project applicants shall immediately stop work in the vicinity of the suspected contaminant; remove workers and the public from the area; notify the County of Santa Cruz Planning Department or the City of Watsonville Community Development Department; secure the area as directed by the Project Engineer; and notify the Hazardous Waste/Materials Coordinator. In the event that testing indicates the presence of hazardous materials beyond acceptable thresholds, a work plan shall be prepared in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

Mitigation measure **MM 3.7-8a** would require that a qualified hazardous materials consultant review files for the off-site property 1488 Freedom Boulevard to determine if the groundwater has been contaminated from this off-site location prior to construction and that if contaminated groundwater is discovered during construction activities that proper safety/handling procedures are followed. Mitigation measure **MM 3.7-8b** would require that if unknown wastes of suspect materials are discovered during construction activities that the contractor stop work immediately in the vicinity of the contamination.



### Historical Agricultural Pesticide Hazards

**Impact 3.7-9:** The planning area has historically been used for agricultural purposes for several decades and may contain pesticide residues on the soil. Pesticide residues within the planning area may pose a significant long-term chronic health threat to human health and the environment for proposed residential uses within the planning area. This is considered a potentially significant impact.

Based upon the site inspection, review of historical aerial photography, and interviews with property owners, the planning area has historically been used for agricultural production over the past century. Therefore, a combination of several commonly used pesticides (DDD, DDT, DDE), which are now banned may have been used throughout the planning area. The historical use of agricultural pesticides may have resulted in pesticide residues of certain persistence in the soil at concentrations that are considered hazardous according to established Federal regulatory levels. The primary concern with historical pesticide residues is human health risk from inadvertent ingestion of contaminated soil, particularly by children. The presence of moderately elevated pesticides residuals in the soil present potential health concerns.

A Phase I Environmental Site Assessment and a Phase II Limited Soil Investigation was prepared for 56 Atkinson Lane (APNs 048-211-25 and 019-226-42) to determine information pertaining to past investigations of the property. Based on the Phase II Limited Soil Investigation, there would not be a human health risk on APNs 048-211-25 and 019-226-25 from residual pesticides in the soil. The potential impact would be considered less than significant to these two parcels as it was determined not to pose a significant long-term chronic health threat to human health and the environment.

However, due to the historical agricultural use on the remainder of the planning area, development of the residential uses associated with the proposed project would be considered **potentially significant**. Implementation of the following mitigation measure would reduce this impact to a less than significant level by ensuring proper testing, evaluation and remediation of potential pesticide residues associated with historical agricultural use within the planning area.

### Mitigation Measure

**MM 3.7-9** Prior to issuance of a grading permit for future development within the planning area on APNs 019-226-43, 019-226-44, 019-236-01, 048-231-01, 048-221-09, 048-231-17, 048-231-18, and 048-251-09 during Phase 1 and Phase 2 of the proposed project, the project applicants shall retain a qualified hazardous materials professional to conduct a Phase II Soil Investigation in order to adequately test the surface soil and subsurface soil for pesticide residues in accordance with the Department of Toxic Substances and Control (DTSC) and *CalEPA Guidance Manual Interim Guidance for Sampling Agricultural Fields for School Sites, Second Revision* (DTSC and CalEPA 2004) to provide a uniform approach for evaluating former agricultural properties where pesticides have been applied. The soil sampling and testing program shall be subject to review and approval by the City of Watsonville and County of Santa Cruz. Soil sampling and testing shall include, but not be limited to the following in accordance with the DTSC and CalEPA guidance documents: sampling the freshwater marsh in the western portion of the planning area adjacent to the former agricultural areas of the planning area; sampling each area of a parcel



which historically produced different agricultural crops; sampling of one surface soil sample from zero to six inches and one sub-surface sample from two to three feet with the minimum number of samples based on the size of the parcel; and analytical testing for these samples for pesticide residues, including but not limited to include DDT and its derivatives DDD and DDE, toxaphene, dieldrin, and aldrin.

In the event that subsequent testing indicates the presence of pesticide residues beyond acceptable thresholds, the potential health risks shall be evaluated and a work plan prepared in order to remediate the soil in accordance with all applicable federal, state, and local regulations. All subsequent testing and remediation activities are subject to review and approval by the County of Santa Cruz Environmental Health Department and the City of Watsonville prior to issuance of a grading permit.

Implementation of mitigation measure **MM 3.7-9** would reduce potential impacts associated with residual pesticides to a **less than significant level** by requiring preparation of a Phase II ESA for former agricultural properties where pesticides have been applied, as well as sampling the freshwater marsh in the western portion of the planning area adjacent to the former agricultural areas of the planning area. In the event that subsequent testing indicates the presence of pesticide residues beyond acceptable thresholds, the potential health risks shall be evaluated and a work plan prepared in order to remediate the soil in accordance with all applicable federal, state, and local regulations.

#### [Located on a Hazardous Materials Site Compiled Pursuant to Government Code Section 65962.5](#)

No regulatory sites reported within the boundaries of the planning area and no corrective action, restoration, or remediation has been planned, is currently taking place, or has been completed within the planning area. The planning area has not been under investigation for violation of any environmental laws, regulations, or standards. Therefore, the planning area is not located on any hazardous materials sites compiled pursuant to Government Code Section 65962.5 and therefore would not create a significant hazard to the public or the environment.

#### [Safety and Noise Hazards from Airport Operations at Watsonville Municipal Airport](#)

**Impact 3.7-10:** The planning area is located in the airport approach zone for the Watsonville Municipal Airport. In addition, Assessors Parcel Number 019-226-43 and 019-226-44 and portions of Assessors Parcel Number 048-211-25 and 019-236-01 are located within the Zone 6 (Traffic Pattern Zone) Safety Compatibility Zones for the Watsonville Municipal Airport. This is considered a potentially significant impact.

The planning area is located in the airport approach zone and according to the *Watsonville Municipal Airport Master Plan*. Assessors Parcel Number 019-226-43 and 019-226-44 and portions of Assessors Parcel Number 048-211-25 and 019-236-01 are located within the Zone 6 (Traffic Pattern Zone) Safety Compatibility Zones as shown in **Figure 3.7-1: Safety Compatibility Zones**. There are no maximum densities for residential units within Zone 6. However, for other uses the density of people is restricted to an average of 150 people per acre. Large outdoor stadiums and other similar uses are prohibited and children's schools, day care centers, hospitals, and nursing homes are not allowed within this zone. As the planning area is located within an airport approach zone, the entire planning area would be subject to an overflight



easement over the planning area with the City of Watsonville (Personal Communication with Don French, Manager, Watsonville Municipal Airport, City of Watsonville, December 9, 2008). In addition, the proposed project would be subjected to the restrictions contained in the Federal Aviation Regulations (FAR), Part 77 “Objects Affecting Navigable Space” and would be required to prepare a “Notice of Proposed Construction or Alterations” if the proposed project includes, but is not limited to the following: development height of more than 200 feet above the ground level and exceeds the height greater than an imaginary surface extending outward and upward of prescribed slopes, etc. Planned structures and vegetation are not anticipated to exceed FAR Part 77 height requirements and the proposed project would not conflict with the requirements within Zone 6. However, as the planning area is located within an airport approach zone, the proposed project would be subject to the overflight of airplanes within the planning area, which would be considered a **potentially significant impact**. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.7-10** Project applicants within all phases of the planning area shall file an overflight easement with the City of Watsonville to run with the title of the property as disclosure and notice in deeds at the time of transfer or sale of all properties within the planning area. The disclosure shall inform future property owners that their property is located in an airport approach zone and that the City of Watsonville has the right to regulate or prohibit light emissions, either direct or indirect which may interfere with pilot vision; regulate or prohibit release into the air any substances that would impair the visibility or otherwise interfere with the operation of aircraft including steam, dust, and smoke; and regulate or prohibit electrical emissions which would interfere with aircraft communication systems or navigational equipment. The easement shall run with the land until such time the Watsonville Municipal Airport is no longer in use.

Implementation of mitigation measure **MM 3.7-10** would reduce potential impacts associated with the airport approach zone to a **less than significant level** by requiring that an overflight easement with the City of Watsonville to run with the title of the property as disclosure and notice in deeds at the time of transfer or sale of all properties within the planning area.

#### Emit Hazardous Emissions in Proximity to a School

**Impact 3.7-11:** MacQuidy Elementary School and a Head Start Pre-School are located within a quarter mile of the planning area. The proposed Specific Plan and PUD proposes residential and park uses, which would not emit hazardous materials. However, the proposed project may result in the routine transport of a minor amount of hazardous materials during construction. This is considered a less than significant impact.

MacQuidy Elementary School is located within one quarter mile of the planning area and Head Start pre-school is located approximately 0.18 mile south of the planning area. Although the proposed project may result in the routine transport of hazardous materials during construction (i.e., ACMs, LBPs, and/or contaminated soils, etc.), measures are required by the City of Watsonville, County of Santa Cruz (Fire Department and Department of Environmental Health), as well as the Monterey Bay Unified Air Quality Management District that would minimize these impacts to a less than significant level. These measures include standards and regulations regarding the handling and transport of these materials.



The project proposes to construct residential and park uses. These proposed uses would not emit hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or waste. Although the planning area includes a PG&E substation, no changes are proposed to the substation. Additionally, the PG&E substation does not emit hazardous or acutely hazardous materials, substances, or waste. Therefore, project operations would not emit or handle hazardous or acutely hazardous materials, substances, or waste. During construction, such impacts would be reduced with implementation of State and local standards and regulations. Therefore, this would be considered a **less than significant impact**.

#### Wildland Fire Hazards

Wildland fire occasionally breaks out in the grasslands and dry, chaparral-covered hills near the City of Watsonville. In May of 2008, the Summit fire, which was located approximately 15 miles north of the planning area, burned almost 5,000 acres. On June 20, 2008, the Trabling fire burned over a thousand acres when a fire was accidentally set from a vehicle's faulty exhaust system, approximately five miles north of the planning area.

According to the *City of Watsonville General Plan*, wildland fires are usually contained before they pose a threat to the urbanized area of the City. Agricultural land, which serves as a buffer between the urbanized area of the City and areas that are prone to wildland fires surrounds the majority of the City, which reduces the risk of wildland fires. As the proposed project is surrounded by existing urban development and agricultural land, the planning area is not subject to risks from wildland fires and would result in **no impact** to future development within the planning area.

#### Emergency Response Plan/Evacuation Plan

According to the *City of Watsonville General Plan* and the *Emergency Preparedness Plan*, East Lake Avenue and Green Valley Road, north of Freedom Boulevard are the primary emergency evacuations routes in the vicinity of the project site. The proposed project would result in an increase in traffic levels along these roadway segments. However, the proposed project is not anticipated to physically interfere with an adopted emergency response plan or emergency evacuation route and therefore **no impact** is anticipated.





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## 3.8 Hydrology and Water Quality

This section addresses impacts related to hydrology, storm drainage, and water quality associated with the proposed project. It includes a discussion of the existing hydrology in the project vicinity, an analysis of the potential impacts of the project on these resources, and mitigation measures, if feasible, to reduce any identified significant impacts. The analysis of surface water runoff is based on the drainage analysis prepared by RBF Consulting, which is included in **Appendix F** in Volume II of the Draft EIR.

### 3.8.1 Environmental Setting

#### Surface Water Hydrology

##### Regional Setting

The planning area is located within the Pajaro River drainage basin, which covers over 1,300 square miles and extends over portions of Santa Cruz, Monterey, Santa Clara, and San Benito counties.

##### Project Setting

##### *Soil Conditions*

As discussed in **Section 3.2, Agricultural Resources** and **Section 3.6, Geology and Soils**, the planning area is comprised of five soil series within the planning area and an additional soil series located within the right-of-way of the proposed Wagner Avenue extension. The eastern and southern portion of the planning area are comprised of approximately 19.2 acres of Baywood Loamy Sand, 0 to 2 percent slopes and 25.3 acres of Elder Sandy Loam soils, 0 to 2 percent slopes. The western and northern portions of the planning area are comprised of approximately 7.1 acres of Pinto Loam, 2 to 9 percent slopes and 14.2 acres of Watsonville Loam soils. The remaining 2.4 acres covers the wetland/riparian area and is classified as water (see **Figure 3.2-1: Soils in Section 3.2, Agricultural Resources**). Option A of the proposed Wagner Avenue extension is comprised of between 0.3 acres of Baywood Loamy Sand, 0 to 2 percent slopes; 1.06 acres of Conejo Loam, 0 to 2 percent slopes; and 0.15 acres of Elder Sandy Loam, 0 to 2 percent slopes. Option B of the proposed Wagner Avenue extension is comprised of approximately 0.21 acres of Baywood Loamy Sand, 0 to 2 percent slopes and 0.59 acres of Conejo Loam, 0 to 2 percent slopes. These options are based on the right-of-way acquisition that may be needed for the proposed extension of Wagner Avenue. The Pinto Loam soil series and the Watsonville Loam soil series have slow to very slow infiltration rates and result in high surface water runoff and erosion. The Baywood loamy sand and the Elder sandy loam soils have moderate to high infiltration rates, which results in slow surface water runoff and a slight erosion potential. The Conejo loam soil series has a slow runoff potential with a slight erosion hazard.

##### *Drainage Areas*

The planning area contains five major Drainage Areas (Drainage Area 1 through 5) and two storage areas including the existing freshwater marsh in the western portion of the planning area and the irrigation pond in the northern portion of the planning area. The five Drainage Areas are shown in **Figure 3.8-1: Existing Drainage Areas** and are described below.

- **Drainage Area 1.** Drainage Area 1 is comprised of approximately 1.7 acres and is located within the northeastern portion of the project site. The small irrigation pond



located within this drainage area acts as a water storage area. This drainage area is fairly small and no runoff is conveyed from off-site locations. Therefore, there is little potential for overtopping at this location. Instead, this storage area retains water until it infiltrates or evaporates.

- **Drainage Area 2.** Drainage Area 2 is comprised of 17.8 acres and is located within the southwestern portion of the project site. There is an existing 3.9 acre freshwater marsh/seasonal wetland located within the drainage area that acts as a runoff storage area. Runoff from approximately 23 acres is conveyed from the adjacent residential development north of the planning area and from adjacent undeveloped fields; and therefore this area tends to pond during heavy rainfall. In spillover occurrences, drainage spills east and south towards Crestview Park, along the surface release path as illustrated in the **Figure 3.8-1: Existing Drainage Areas**.
- **Drainage Area 3.** The majority of the site is located in Drainage Area 3, which is comprised of 34.9 acres and is located within the central portion of the project site. Drainage Area 3 drains toward Crestview Park, which contains a detention basin that is connected to the City's stormwater conveyance system.
- **Drainage Area 4.** Drainage Area 4 is located in the northeastern corner of the planning area and is comprised of approximately 5.8 acres. This drainage area drains north to Corralitos Creek and east of the planning area to the adjacent agriculture fields.
- **Drainage Area 5.** Drainage Area 5, which is approximately 4.2 acres, drains south and east of the planning area to the adjacent agriculture fields.

The portion of Drainage Area 4 directly adjacent to Corralitos Creek within the northern portion of the planning area drains into the creek and does not contribute to existing drainage conditions on the project site. Additionally, the eastern portion of Drainage Areas 4 and 5 drains to the east and south, away from the project site.

The record high rainfall in the City since 1874 was set in 1998, when approximately 46.26 inches of precipitation fell. If the planning area were to receive this amount of precipitation, it would generate up to 74 acre feet of runoff, much of which would be expected to flow overland into the detention basin Crestview Park.

#### *Existing Storm Drain System*

Runoff from approximately 23 acres of existing residential development located north of Atkinson Lane collects in a storm drain system and discharges through a 12-inch pipe directly into Drainage Area 2 on the project site. A 36-inch storm drain pipe is located under Brewington Avenue east of the second storage area. This storm drain pipe collects runoff from approximately 22 acres south and west of the planning area and vicinity. The storm drain pipe conveys the runoff south to Crestview Park, which acts as an off-channel detention basin. At the northwest side of Crestview Park, flow exits a 42-inch drain pipe into a short section of a concrete lined channel and then flows into an 18-inch drain pipe. During low flow conditions, all of the runoff is contained in the channel and bypasses Crestview Park. During high-flow events, runoff spills over the channel and into the detention basin at Crestview Park. A 12-inch outlet is located on the southwest corner of the Crestview Park. A three acre residential development east of Crestview Park and south of the planning area also drains into the storm drain conveyance system upstream of the detention basin.



### *100-Year Flood Zone*

Areas subject to periodic flooding are categorized as Zone A on the Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency (FEMA). A 3.3 acre area located in the riparian corridor of Corralitos Creek is designated by FEMA as Zone AE flood zone with a 100-year water surface elevation varying from approximately 90 feet at the western edge to 85 feet near the eastern edge of the planning area as shown in **Figure 3.8-2: Flood Zones**. Although not identified as a flood zone under FEMA, the runoff storage area within Drainage Area 2 is also a flooding risk at the project site.

According to the *City of Watsonville Storm Drainage Master Plan*, the average yearly precipitation for the City of Watsonville is 20.7 inches and the average annual evaporation for the region is 67.5 inches with the most evaporation occurring in the summer months. In an average year, it is assumed that Drainage Area 2 would receive approximately 33 acre feet of runoff, assuming 50 percent is lost to infiltration. The pond volume between 74 and 78 feet elevation is about 10 acre feet. Considering runoff from the freshwater marsh in Drainage Area 2, overflows would be a relatively common occurrence due to the amount of runoff, though overflows may not occur during dry years.

Based on historical precipitation data, Drainage Area 2 may have received up to approximately 74 acre feet of runoff in a year. It is expected that much of this volume would have spilled over from the freshwater marsh and flowed towards the Crestview Park detention basin.

## 3.8.2 Regulatory Setting

### Federal

#### Clean Water Act

Water quality objectives for all waters in the state are established under applicable provisions of Section 303 of the Federal Clean Water Act (CWA) and the State Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and the Central Coast Regional Water Quality Control Board (RWQCB) are responsible for assuring implementation and compliance with the provisions of the CWA and the Porter-Cologne Water Quality Control Act.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. Section 304(a) requires the U.S. Environmental Protection Agency (EPA) to publish water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in the water.

### State

#### Water Resources Control Board

The California State Water Resources Control Board (State Board) and the nine RWQCBs have the authority in California to protect and enhance water quality, both through their designation as the lead agencies in implementing the Section 319 non-point source program of the federal Clean Water Act, and through the state's primary water pollution control legislation, the Porter-Cologne Act. The Central Coast (Region 3) office of the RWQCB guides and regulates water quality in streams and aquifers throughout the central coast of California and the Monterey Bay region through designation of beneficial uses, establishment of water quality objectives, and



administration of the NPDES permit program for storm water and construction site runoff. The RWQCB is also responsible for providing permits under Section 401 of the CWA.

#### *Central Coast Water Quality Control Plan (Basin Plan)*

The Central Coast RWQCB regulates water quality in the Monterey Bay area in accordance with the Water Quality Control Plan or "Basin Plan" (Central Coast RWQCB 1994). The Basin Plan presents the beneficial uses that the RWQCB has designated for local aquifers, streams, marshes, rivers, and bays, as well as the water quality objectives and criteria that must be met to protect these uses. These include:

- Municipal and domestic supply
- Groundwater recharge
- Contact and non-contact aquatic recreation
- Wildlife habitat
- Coldwater fisheries habitat, migration and spawning
- Freshwater replenishment
- Sport and commercial fishing

#### NPDES Storm Water Permit Program

The 1987 amendments to the Clean Water Act (Section 402[p]) provided for the U.S. EPA regulation of several new categories of non-point pollution sources within the existing NPDES. In Phase 1, NPDES permits were issued for urban runoff discharges from municipalities of over 100,000 people, from plants in industries recognized by the EPA as being likely sources of stormwater pollutants, and from construction activities that disturbed more than five acres. Phase 2 implementation, effective March 10, 2003, extended NPDES urban runoff discharge permitting to cities of 50,000 to 100,000, and to construction sites that disturb between 1 and 5 acres.

The EPA has delegated management of California's NPDES storm water permit program to the State Board and the nine RWQCB offices. The State Board has developed several general permits for coverage under the Phase 2 NPDES storm water permit program.

Construction activity on projects that disturb one or more acres of soil, or less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Program (SWPPP). The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography (both before and after construction), and drainage patterns across the project. The SWPPP must list best management practices (BMPs) that the discharger will use to prevent storm water runoff and the placement of those BMPs.



Additionally, the SWPPP must contain a visual monitoring program, and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs.

## Local

### County of Santa Cruz General Plan and Local Coastal Program

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies in the Santa Cruz County General Plan are applicable to hydrology and water quality at the project site.

#### *Surface Water Hydrology*

**Policy 5.7.1, Impacts From New Development On Water Quality (LCP).** Prohibit new development adjacent to marshes, streams and bodies of water if such development would cause adverse impacts on water quality which cannot be fully mitigated.

**Policy 5.7.4, Coastal Surface Runoff (LCP).** New development shall minimize the discharge of pollutants into surface water drainage by providing the following improvements or similar methods which provide equal or greater runoff control:

- (a) include curbs and gutters on arterials, collectors and locals consistent with adopted urban street designs; and
- (b) oil, grease and silt traps for parking lots, land divisions or commercial and industrial development.

**Policy 5.7.5, Protecting Riparian Corridors and Coastal Lagoons (LCP).** Require drainage facilities, including curbs and gutters in urban areas, as needed to protect water quality for all new development within 1,000 feet of riparian corridors or coastal lagoons.

**Policy 5.7.7, Stormwater Discharge Permit Requirements (LCP).** Once the State and Regional Water Quality Control Boards promulgate new stormwater discharge permit requirements for municipal and industrial stormwater systems, obtain appropriate permits for all existing storm drainage systems and proposed drainage facilities and adhere to best management practices.

**Policy 6.3.4, Erosion Control Plan Approval Required for Development (LCP).** Require approval of an erosion control plan for all development, as specified in the Erosion Control ordinance. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.

**Policy 6.3.5, Installation of Erosion Control Measures.** Require the installation of erosion control measures consistent with the Erosion Control ordinance, by October 15, or the advent of significant rain, or project completion, whichever occurs first. Prior to October 15, require adequate erosion control to be provided to prevent erosion from early storms. For development activities, require protection of exposed soil from erosion between October 15 and April 15 and require vegetation and stabilization of disturbed areas prior to completion of the project. For agricultural activities, require that adequate measures are taken to prevent excessive sediment from leaving the property.





**Policy 6.3.7, Reuse of Topsoil and Native Vegetation Upon Grading Completion.** Require topsoil to be stockpiled and reapplied upon completion of grading to promote regrowth of vegetation; native vegetation should be used in replanting disturbed areas to enhance long-term stability.

**Policy 6.3.8, On-Site Sediment Containment (LCP).** Require containment of all sediment on the site during construction and require drainage improvements for the completed development that will provide runoff control, including onsite retention or detention where downstream drainage facilities have limited capacity. Runoff control systems or Best Management Practices shall be adequate to prevent any significant increase in site runoff over pre-existing volumes and velocities and to maximize on-site collection of non-point source pollutants.

**Policy 6.4.2, Development Proposals Protected from Flood Hazard (LCP).** Approve only those grading applications and development proposals that are adequately protected from flood hazard and which do not add to flooding damage potential. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures.

**Policy 7.23.1, New Development.** Require new discretionary development projects to provide both on and off-site improvements to alleviate drainage problems before considering on-site detention of storm water. Require runoff levels to be maintained as predevelopment rates for a minimum design storm as determined by Public Works Design Criteria to reduce downstream flood hazards and analyze potential flood overflow problems, where applicable. Require on-site retention and percolation of increased runoff from new development in Water Supply Watersheds and Primary Groundwater Recharge Areas, and in other areas as feasible.

**Policy 7.23.2, Minimizing Impervious Surfaces.** Require new development to limit coverage of lots by parking areas and other impervious surfaces, in order to minimize the amount of post-development surface runoff.

**Policy 7.23.4, Downstream Impact Assessments.** For any proposed development projects within the County Urban Services Line, require the applicant to conduct a downstream impact assessment and submit an engineered drainage plan. The assessment should require the design of any improvements needed to upgrade the storm drain system such that local flooding due to insufficient capacities would be eliminated for the appropriate design rainstorm.

**Policy 7.23.5, Control Surface Runoff (LCP).** Require new development to minimize the discharge of pollutants into surface water drainage by providing the following improvements or similar methods which provide equal or greater runoff control: (a) Construct curbs and gutters on arterials, collectors and locals consistent with adopted urban street designs; and (b) Construct oil, grease and silt traps for parking lots, land divisions or commercial and industrial development. Condition development project approvals to provide ongoing maintenance of oil, grease and silt traps.

**Policy 8.2.2, Designing for Environmental Protection.** Require new development to comply with all environmental ordinances, to be sited and designed to minimize grading, avoid or provide mitigation for geologic hazards and sensitive habitats, and conform to the physical constraints and topography of the site.



### City of Watsonville General Plan

The following policies in the 2005 *City of Watsonville General Plan* are applicable to hydrology and water quality at the project site.

**Goal 9.5, Water Quality.** Ensure that surface and groundwater resources are protected.

**Policy 9.D, Water Quality.** The City shall provide for the protection of water quality to meet all beneficial uses, including domestic, agricultural, industrial, recreational, and ecological uses.

**Implementation Measure 9.D.1, Recharge Protection.** The City shall direct urban development away from the groundwater recharge zones and surface water bodies. Projects with potential to jeopardize water quality shall be required to include mitigation measures prior to project approval.

**Implementation Measure 9.D.3, Erosion Control.** The City shall continue to enforce regulations over grading activities and other land use practices that expose bare soil and accelerate soil erosion and sediment.

**Implementation Measure 9.D.5, Wetland Protection.** Where drainage from developments involves discharge into sloughs or wetlands, grease, sediment traps, or other protection measures shall be required. Mitigation monitoring shall be required and enforced by the City to ensure performance as appropriate.

**Goal 12.3, Flood Hazard Reduction.** Reduce the potential for loss of life and property damage in areas known to be flood prone.

**Policy 12.D, Flood Hazard Reduction.** The City shall pursue the protection of new and existing development from the impacts of flooding up to the 100-year event.

### Erosion Control Ordinances

Future development within the County Site would require compliance with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), which requires preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. Once the planning area is annexed to the City of Watsonville, future development within the City portion of the proposed project would be required to comply with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code.

### City of Watsonville Floodplain Management Ordinance

Approximately 3.3 acres of the planning area is located adjacent to the Corralitos Creek is within a flood hazard area, as defined by the Watsonville Floodplain Management Ordinance. The purpose of the Ordinance is to minimize public and private losses due to flooding in specific areas of the City through the implementation of various provisions. The Ordinance requires a permit to be issued before any construction or other development begins within a flood hazard area. The Ordinance also sets construction standards for buildings within flood-prone areas, including standards to ensure that buildings are properly anchored, have first floors that are elevated above the base flood elevation, constructed with flood-resistant materials, and have openings that permit the entry and exit of floodwaters underneath the structure.



### City of Watsonville Stormwater Management Plan

The General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4s) (Water Quality Order No. 2003-0005-DWQ) requires small municipalities and urbanized areas to develop and implement Stormwater Management Plans (SWMPs) designed to reduce the discharge of pollutants from their MS4s to the maximum extent practicable and to protect water quality.

The City of Watsonville developed and submitted a SWMP to the Central Coast Regional Water Quality Control Board staff in November 2008. The public comment period for the City's SWMP ends on January 12, 2009. The SWMP addresses the following areas:

- Public Education,
- Public Participation Program,
- Illicit Discharge, Detection, and Elimination Program,
- Construction Site Stormwater Runoff Control
- Post-construction stormwater management in new development and redevelopment,
- Municipal operations pollution prevention program, and
- Total maximum daily load (TMDL) programs.

As part of the SWMP all building plans are evaluated to assess implementation of the City's standards, including stormwater best management practices (BMPs). The SWMP provides BMPs that address stormwater runoff during constructions related to erosion and sediment control. These BMPs require, among others, actions such as protecting exposed soil, controlling site runoff, maintenance of on-site erosion control measures, vegetation removal and replacement procedures, and construction procedures during rainy season.

The SWMP also provides for development of the post-construction stormwater management BMPs, which would include low impact design (LID), hydromodification management plan, and long-term watershed protection. These standards and BMPs will be developed by the City in coordination with the RWQCB.

### City of Watsonville Stormwater Land Development Standards

The Stormwater Land Development Standards were developed in order to reduce stormwater pollution from new development and redevelopment projects. Projects that fall within six categories defined by the City, require compliance with the criteria. These categories include:

- All developments greater than one acre in size;
- Commercial development;
- Restaurants;
- Retail gasoline outlets and vehicle repair shops;
- Parking lots with greater than 10,000 square feet or more of impervious surfaces; and
- Locations adjacent to or discharging directly to an environmentally sensitive area.



The design standards require that development of one acre or larger ensure that runoff rates from stormwater runoff do not exceed pre-development levels (Watsonville Municipal Code 6-3.530); that all developments incorporate structural or treatment control BMPs best suited to reducing the pollutant loadings in stormwater runoff to the maximum extent practicable; conserve natural areas; protect slopes and channels; provide storm drain system stenciling and signage that prohibit dumping; properly design outdoor material storage areas; and properly design trash storage areas; provide proof of ongoing BMP maintenance. In addition, provisions are provided to individual project categories including: commercial development, restaurants, retail gasoline outlets and vehicle repair shops, parking lots, and private streets.

The land development standards include BMPs that are approved for use in the City of Watsonville, including: use of permeable materials, biofilters, including swales and filter strips; bioretention, extended detention ponds, wet ponds, constructed wetlands, media filters, infiltration trenches and basins, and water quality inlets.

#### County of Santa Cruz Stormwater Management Program

The County of Santa Cruz, led by the Storm Water Management unit and Environmental Health Services watershed staff, and the City of Capitola submitted the proposed Stormwater Management Program (SWMP) and application for a Phase II permit to the SWRCB in October 2008. The SWMP builds on locally popular efforts to preserve and enhance Santa Cruz County watersheds and is the County and the City's response to the new statewide National Pollutant Discharge Elimination System (NPDES) General Permit requirements for agencies designated by the SWRCB. Under this General Permit, the County of Santa Cruz and the City of Capitola would implement specific types of urban runoff pollutant control measures and submit reports to the RWQCB.

The objectives of the SWMP are to:

- Reduce the discharge of pollutants to stormwater to the maximum extent practicable (MEP),
- Protect water quality,
- Long-term protection,
- Satisfy the appropriate water quality requirements of the Clean Water Act, and
- Educate residents and businesses about stormwater pollution and efforts being made to improve water quality.

The activities included in the SWMP are based on the USEPA stormwater regulations, the SWRCB General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer System (Small MS4) and the Model Urban Runoff Program (MURP).

#### Design Criteria for the Unincorporated Portion of Santa Cruz County

Design Criteria for the unincorporated portion of Santa Cruz County contain standards for construction of streets, stormwater systems, sanitary sewers, water systems, and driveways. These Design Criteria are the required standards for subdivision development and also apply to all other forms of development under the jurisdiction of the County's Department of Public Works.



Design Criteria include description of erosion control requirements, such as land clearing, grading, and or excavation timing restrictions, disturbance and removal of vegetation procedures, and runoff percolation/dispersal procedures. Requirements related to stormwater systems include descriptions of storm drainage facilities, such as pipe systems, culvert materials, and inlets; on-site detention of stormwater runoff; and on-site retention of stormwater runoff.

### [Santa Cruz County Geologic Hazards Ordinance](#)

Chapter 16.10 of the County Code describes procedures and requirements for development in areas with potential geologic hazards, including flood hazards. A geologic hazards assessment is required by the ordinance for all development activities in designated hazards areas such as: fault zones, one-hundred year floodplains and floodways, and coastal hazard areas. In regards to flood hazards, the ordinance implements the policies of the National Flood Insurance Program of the Federal Insurance Administration related to areas of special flood hazards and applicable flood regulations. This ordinance also includes density restrictions for parcels (or portion thereof) within the one-hundred year floodway and properties (or portion thereof) within the one-hundred year floodplain to be excluded from density calculations.

### **3.8.3 Relevant Project Characteristics**

The proposed Specific Plan and PUD designate approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density.” The proposed project would also include 3.5 acres of parks/recreation uses; 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which will remain as a public facility; and 14.1 acres for a 200 foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

### [Conceptual Drainage Plan](#)

Implementation of the proposed Specific Plan would require expansion of the City’s stormwater management system. A conceptual stormwater drainage plan prepared for the proposed Specific Plan provides for stormwater treatment for the two phases of the proposed project as described below and illustrated in **Figure 2-15: Conceptual Stormwater Plan – Phase 1** and **Figure 2-16: Conceptual Stormwater Plan – Phase 2**.

#### *Phase 1 Conceptual Drainage Plan*

The conceptual plan for Phase 1 (County site) of the proposed PUD utilizes the wetland and a temporary detention basin to accommodate the increased stormwater runoff from the proposed project. A temporary detention basin would be located within the temporary agricultural buffer to the east of the wetland and east of the extension of Brewington Avenue within the project site. The temporary detention basin would require a 0.7 acre-foot surface capacity and approximately 0.2 acres of surface area. A weir outlet structure would capture and convey the overflow from the wetland to a culvert that would continue conveyance under the Brewington Avenue extension and into the temporary detention basin. The weir outlet and culvert would be designed to



accommodate a 100-year peak spill rate and controlling the surcharge elevation in the wetlands. A spillway would be designed to allow overflow from the temporary detention basin to spill onto the historic overland drainage path to the south. Erosion control measures shall be provided near the spillway to ensure that flows and erosion potential on adjacent areas would not be significantly changed by the proposed project.

#### *Phase 2 Conceptual Drainage Plan*

The conceptual drainage plan for Phase 2 (City and County site) of the proposed Specific Plan and PUD would include the removal of the temporary detention basin and construction of a new, expanded detention basin at Crestview Park to handle the increased stormwater runoff with buildout of the project site. Storm drain pipes of varying sizes would convey stormwater from the planning area to the Crestview Park detention basin. Approximately three acre-feet of additional detention basin capacity would be required to provide sufficient storage to accommodate between the 15-year and the 25-year event as required by City policies. The Crestview Park detention basin design would incorporate an underdrain system, gravel trenches, and perforated pipes to accelerate infiltration and drying to increase the usability of the park during the wet season.

### 3.8.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, and agency and professional standards, a project impact would be considered significant if the project would:

- Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality;
- 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;
- 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 that would result in substantial erosion or siltation on- or off-site;
- 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 that would result in substantial flooding on- or off-site;
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- 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;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- 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; or
- Result in inundation by seiche, tsunami, or mudflow.





## Methodology

The following impact evaluation is based primarily on drainage analysis and a determination of the projected water demand by RBF Consulting.

### Long-term Increase in Stormwater Runoff and Alteration of the Existing Drainage Patterns

**Impact 3.8-1: Development of the proposed project would alter existing drainage patterns, increase impervious surfaces and increase surface water runoff, thus contributing to localized drainage, flooding and erosion problems within and/or in the vicinity of the planning area. This is considered a potentially significant impact.**

Implementation of the proposed project would result in the conversion of approximately 65.8 acres of agricultural land, fallow agricultural land and rural residential uses to urban uses for the construction of residential uses, infrastructure, and recreational uses. The conversion of land would increase the amount of surface area impervious to water, such as pavement and roofing, and would therefore, increase stormwater runoff from the project site, and alter the existing drainage patterns. Grading activities may also alter existing drainage patterns and lead to erosion and siltation on or in the vicinity of the project site. The proposed project includes two conceptual drainage plans for City and County Phases 1 and 2 of the proposed project.

### Phase 1

Implementation of Phase 1 of the proposed project would increase the amount of impervious surfaces within the planning area by approximately three acres, which would cause more frequent and higher runoff volumes from the planning area. The conceptual drainage plan for Phase 1 in the proposed Specific Plan/PUD utilizes the existing freshwater marsh and a temporary detention basin in order to accommodate the increased stormwater runoff from the proposed project. A temporary detention basin would be located within the temporary agricultural buffer to the east of the freshwater marsh and east of the extension of Brewington Avenue within Phase 1 (County site).

RBF Consulting performed a hydrologic and hydraulic analysis of the conditions under Phase 1 to determine the detention volume required for mitigation, which is included in **Appendix F** of Volume II of the Draft EIR. Based on the analysis, construction of a temporary detention basin with 0.7 AF of surface capacity and approximately 0.2 acre of surface area would be needed in order to accommodate development proposed under this phase. The conceptual drainage plan for Phase 1 includes a weir outlet structure that would capture and convey the overflow from the freshwater marsh to a culvert. The culvert would convey the runoff under the Brewington Avenue extension and into the temporary detention basin. The weir outlet and culvert would be designed to accommodate a 100-year peak spill rate and controlling the surcharge elevation in the wetlands. A spillway would be designed to allow overflow from the temporary detention basin to spill onto the historic overland drainage path to the south to the existing detention basin at Crestview Park. Erosion control measures shall be provided as part of the final design near the spillway to ensure that flows and erosion potential on adjacent areas would not be significantly changed by the proposed project.

For the hydrologic analysis, the outlet weir height for the new detention basin was set at an elevation of 77.75 feet, which is estimated to be the existing condition spill elevation from the



freshwater marsh/seasonal wetland. Two scenarios, one with a starting water surface elevation of 74 feet in the freshwater marsh, and one with a starting water surface elevation of 77 feet. **Table 3.8-1: Summary of Peak Spill Rate from the Freshwater Marsh and Peak Water Surface Elevation at the Existing Crestview Park Detention Basin for Existing and Phase 1 Conditions Assuming a Starting Elevation of 74 Feet**, presents the peak spill rates from the detention pond and the peak level of water in Crestview Park for existing and implementation of the conceptual drainage plan in Phase 1 of the proposed Specific Plan for the 74 foot starting elevation of the freshwater marsh.

Table 3.8-1: Summary of Peak Spill Rate from the Freshwater Marsh and Peak Water Surface Elevation at the Crestview Park Detention Basin for Existing and Phase 1 Condition Assuming a Starting Elevation of 74 feet.

Return Period	Existing Conditions		Phase 1 Conditions	
	Peak Spill Rate to Crestview Park (cfs)	Peak Level in Crestview (feet)	Peak Spill Rate to Crestview Park (cfs)	Peak Level in Crestview (feet)
RP 2	0	67.7	0	67.7
RP 5	0	69.0	0	69.0
RP 10	0.2	70.1	0	70.0
RP 15	2.4	70.7	0	70.6
RP 25	2.9	71.2	0	71.1
RP 50	3.0	71.3	0.8	71.3
RP 100	3.1	71.4	3.0	71.4

Note: The analysis assumes a starting elevation in the freshwater marsh of 74 feet.

Source: RBF Consulting 2008

As shown on **Table 3.8-1: Summary of Peak Spill Rate from the Freshwater Marsh and Peak Water Surface Elevation at the Crestview Park Detention Basin for Existing and Phase 1 Conditions Assuming a Starting Elevation of 74 Feet** the volume spilled from the freshwater marsh would be retained in the detention basin and infiltrated into the native soil similar to existing conditions. The analysis assumed that the detention basin started empty and the freshwater marsh started at a water surface elevation of 74 feet, 3.75 feet below the weir height. This corresponds to the elevations shown on aerial photography. In wet years, the water surface elevation may not recede quickly enough to recover the storage volume in the freshwater marsh. Therefore, the proposed project would result in no impact to the detention basin at Crestview Park.

Another analysis was performed by RBF Consulting assuming a starting elevation of 77 feet in the freshwater marsh as shown in **Table 3.8-2: Summary of Peak Spill Rate from the Freshwater Marsh and Peak Water Surface Elevation in Crestview Park Detention Basin for existing and Phase 1 Conditions Assuming a Starting Elevation of 77 Feet**, which is the approximate spill elevation of the freshwater marsh.



**Table 3.8-2: Summary of Peak Spill Rate from the Freshwater Marsh and Peak Water Surface Elevation in Crestview Park Detention Basin for Existing and Phase 1 Conditions Assuming a Starting Elevation of 77 Feet**

Return Period	Existing Conditions		Phase 1 Conditions	
	Peak Spill Rate to Crestview Park (cfs)	Peak Level in Crestview (feet)	Peak Spill Rate to Crestview Park (cfs)	Peak Level in Crestview (feet)
RP 2	1.9	67.7	0.0	67.7
RP 5	4.7	69.0	0.3	69.0
RP 10	8.0	71.1	2.0	70.0
RP 15	10.5	71.2	3.2	70.6
RP 25	14.4	71.3	4.4	71.1
RP 50	24.0	71.4	5.6	71.3
RP 100	37.4	72.0	6.7	71.4

Note: This analysis assumes a starting elevation in the freshwater marsh of 77 feet.

Source: RBF Consulting 2008

Under the 77-foot elevation, the volume spilled from the freshwater marsh would be retained in the detention basin and infiltrated into the native soil similar to existing conditions. Therefore, it would have no impact on the detention basin at Crestview Park.

Phase 2

With implementation of Phase 2, buildout of the proposed Specific Plan would add an additional 21 acres of impervious surfaces that would drain to Crestview Park. Currently, the stormwater runoff from the planning area flows overland to the Crestview Park detention basin, which has approximately four acres of detention volume. The detention basin at Crestview Park currently spills over during the 10-year and 15-year storm events. The freshwater marsh has approximately four acre-feet of storage between the assumed starting elevation of 74 feet and the spill elevation of approximately 77 feet. Phase 2 condition assumes that the freshwater marsh/seasonal wetland would continue to function under buildout of the proposed project.

The conceptual drainage plan for Phase 2 of the proposed Specific Plan would include removal of the temporary detention basin and construction of an expanded detention basin at Crestview Park, which has been designed in order to handle the increased stormwater runoff with buildout of the proposed project. Storm drain pipes of varying sizes would convey stormwater from within the planning area to the Crestview Park detention basin. An approximately three acre detention basin would be required to provide sufficient storage to accommodate between the 15-year and 25-year event as required by the City. The expanded Crestview Park detention basin design would incorporate an underdrain system, gravel trenches, and perforated pipes to accelerate infiltration and drying and increase the usability of the park during the wet season.

An increase in the volume of runoff from increased impervious surfaces within the planning area may result in the detention basin spilling more frequently and at a higher rate, which is considered a **potentially significant impact**. The analysis of storm water detention for the proposed Specific Plan is conceptual in nature, however the proposed design features would provide detention of surface water runoff in order to ensure that post-development runoff does not exceed pre-development runoff. However, implementation of the following mitigation measures would reduce the long-term surface water runoff flows associated with future development within



each phase by requiring that future development prepare a detailed comprehensive drainage study to reduce long-term surface water flows consistent with the conceptual drainage plans in the proposed Specific Plan and PUD.

### Mitigation Measures

**MM 3.8-1a** Future development within Phase 1 of the planning area shall identify, with Tentative Map submittals, a detailed final drainage plan designed to control the rate and volume of stormwater runoff to pre-development conditions for a variety of storm event recurrences up to the 10-year storm consistent with the conceptual stormwater plan in the proposed Specific Plan and PUD and the County of Santa Cruz performance standards or equivalent methods. The final drainage control plans shall include: detailed hydrologic modeling, existing facilities, soil and topographic data; erosion control and best management practices; descriptions of proposed flood control facilities; Low Impact Development (LID) techniques; compliance with waste discharge requirements; phasing and implementation; identification of the entity that is responsible for facility design and construction; Clean Water Program compliance; and facility maintenance to ensure for long-term vegetation maintenance and access. As part of the final drainage plan, the culvert connecting the freshwater marsh to the temporary detention basin shall be designed to reduce the potential for flooding of existing and future development by passing the 100-year peak spill rate and controlling the surcharge elevation in the freshwater marsh/seasonal wetland. All drainage improvements shall be subject to review and approval by the County of Santa Cruz Public Works Director and shall be consistent with the conceptual drainage plans in the proposed Specific Plan and PUD. Prior to final inspection, the project applicant(s) shall provide the County of Santa Cruz with certification from a registered Civil Engineer or licensed contractor that the stormwater detention facilities have been constructed in accordance with approved plans.

**MM 3.8-1b** Future development within Phase 2 of the planning area shall identify, with Tentative Map submittals, a detailed final drainage plan designed to control the rate and volume of stormwater runoff to pre-development conditions for a variety of storm event recurrences up to the 25-year storm consistent with the conceptual stormwater plan in the proposed Specific Plan and PUD and the City of Watsonville Stormwater Management Plan performance standards, or equivalent measures. The final drainage control plans shall include: detailed hydrologic modeling that takes into account the soil and topographic data; erosion control and best management practices; descriptions of proposed flood control facilities; Low Impact Development (LID) techniques; compliance with waste discharge requirements; phasing and implementation; identification of the entity that is responsible for facility design and construction; Clean Water Program compliance; and facility maintenance to ensure for long-term vegetation maintenance and access. All drainage improvements shall be subject to review and approval by the City of Watsonville Public Works Director. Prior to final inspection, the project applicant (s) shall provide the City of Watsonville with certification from a registered Civil Engineer or licensed contractor that the stormwater detention facilities have been constructed in accordance with approved plans.



Implementation of the above mitigation measures would reduce long-term surface water runoff impacts to a **less than significant level** by requiring that each phase prepare a detailed final drainage plan designed to contain stormwater runoff to pre-development conditions for a variety of storm event recurrences up to the 25-year storm consistent with the Conceptual Stormwater Plan and the Conceptual Water Quality Improvement Plan in the proposed Specific Plan and PUD and the City of Watsonville Stormwater Management Plan's performance standards.

#### Short-term Construction-Related Impacts to Water Quality

**Impact 3.8-2: Soil disturbance associated with site preparation, grading and construction activities resulting from the proposed project may cause soil erosion and sedimentation, and/or the release of other pollutants into adjacent waterways, including Corralitos Creek. This is considered a potentially significant impact.**

Delivery, handling and storage of construction materials and wastes, as well as use of construction equipment on-site during the construction phase of the project, would introduce a risk for stormwater contamination that could negatively impact water quality. Refueling and the parking of construction equipment and other vehicles on-site during construction may result in spills of oil, grease or related pollutants that may discharge into on-site drainages. Improper handling, storage or disposal of fuels and materials or improper cleaning of machinery could also cause water quality degradation. Gross pollutants such as trash, debris, and organic matter are additional potential pollutants associated with the construction phases of the proposed project. Potential impacts include health hazards and aquatic ecosystem damage associated with bacteria, viruses and vectors, which can be harbored by pollutants.

Development of the proposed project would involve construction activities on the entire 65.8 acre site, such as site clearing, mass grading, excavation and trenching, which can adversely affect water quality by increasing soil erosion rates in the area of the proposed project. The exposure of raw soil to the natural elements (e.g. wind, rain) during grading operations may affect surface runoff by increasing the amount of silt and debris carried by stormwater runoff. During the rainy season (October through March), grading operations may increase the amount of silt and debris carried by stormwater runoff. Areas with uncontrolled concentration flow would experience loss of material within the graded area and could potentially affect the downstream water quality of area waterways, including Corralitos Creek.

Future development within the Phase 1 (County site) would require compliance with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), which requires preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. Once the planning area is annexed to the City of Watsonville, future development within the City portion of the proposed Specific Plan would be required to comply with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code. In addition, in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements for construction of site storm water discharges, Phases 1 and 2 would be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies how the project applicants within the planning area would protect water quality during construction activities. These measures are to include but are not limited to the following: design and construction of cut and fill slopes in a manner that would minimize erosion, protection of exposed slope areas, control of surface water flows over exposed soils, use



of wetting or sealing agents or sedimentation ponds, limiting soil excavation in high winds, construction of beams and runoff diversion ditches, and use of sediment traps, such as hay bales. Implementation of the following mitigation measure would ensure that potential soil erosion impacts and water quality impacts during construction of all phases of the proposed project would be **less than significant**.

#### Mitigation Measure

**MM 3.8-2** In order to comply with the National Pollution Discharge Elimination System (NPDES), requirements for construction of site storm water discharges, project applicants shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) if construction exceeds one acre or more within the planning area. The SWPPP shall specify how the discharger will protect water quality during construction activities subject to review and approval by the County of Santa Cruz Planning Department or the City of Watsonville Community Development Department. These measures shall include but are not limited to the following:

- design and construction of cut and fill slopes in a manner that will minimize erosion;
- protection of exposed slope areas;
- control of surface water flows over exposed soils;
- use of wetting or sealing agents or sedimentation ponds;
- limiting soil excavation in high winds;
- construction of beams and runoff diversion ditches; and
- use of sediment traps, such as weed-free straw bales and/or straw waddles.

In addition, project applicants shall implement the following measures during construction activities within the planning area:

- Stabilize and revegetate all areas of disturbed soil with appropriate native species. Monitor revegetation success and take remedial measures as necessary;
- When hay or straw is used in erosion control, ensure that it is weed free;
- If possible, conduct work during low- or no-flow periods. Consult weather forecasts from the National Weather Service at least 72 hours prior to performing work that may result in sediment runoff, and
- Inspect and clean all equipment of soil containing noxious or invasive weeds or fungus before arriving on site. If any imported fill material is necessary to bring to the site, present evidence certifying the material is void of any noxious or invasive species or pollutants.

Compliance with the respective erosion control ordinances, acquisition of the NPDES General Permit for construction activities, and implementation of the additional measures above would ensure that these impacts are reduced to a **less than significant level**.





### Result in Long-term Urban Non-Point Source Pollution

**Impact 3.8-3:** The proposed project would generate urban non-point contaminants, which may be carried in stormwater runoff from paved surfaces to downstream water bodies. This is considered a potentially significant impact.

The proposed Specific Plan includes a Conceptual Water Quality Improvement Plan in order to reduce pollutant loads to receiving waters. A number of Low Impact Development (LID) techniques are included in the proposed Specific Plan including: bioretention/bioswales, soil amendments, rain barrels and cisterns, permeable pavers, and tree box filters. Incorporation of these LIDs into future development within the planning area would ensure that the proposed project meets the City of Watsonville Stormwater Management Plan's performance standards. Implementation of mitigation measures **MM 3.8-1a** and **MM 3.8-1b** would require that future development prepare a detailed final drainage plan designed to control the rate and volume of stormwater runoff to pre-development conditions for a variety of storm event recurrences up to the 10-year storm event for Phase 1 (County site) and the 25-year storm event consistent with the conceptual stormwater plan in the proposed Specific Plan. Implementation of these mitigation measures would ensure that both phases of the proposed project would have a **less than significant impact** on long-term urban non-point source pollution.

### Result in Flooding on or in the Vicinity of the Planning Area

**Impact 3.8-4:** Implementation of the proposed project would increase impervious surfaces and increase surface water runoff, which may contribute to localized flooding in the vicinity of the planning area. This is considered a potentially significant impact.

The area adjacent to Corralitos Creek, within the riparian buffer, is designated by FEMA as Zone AE flood zone with a 100-year water surface elevation varying from approximately 90 feet at the western edge to 85 feet near the eastern edge of the planning area as shown in **Figure 3.8-2: Flood Zones**. Although not identified as a flood zone under FEMA, the runoff storage area within Drainage Area 2 is also a flooding risk at the project site. According to the *City of Watsonville Storm Drainage Master Plan*, the average yearly precipitation for the City of Watsonville is 20.7 inches and the average annual evaporation for the region is 67.5 inches with the most evaporation occurring in the summer months. In an average year, it is assumed that Drainage Area 2 would receive approximately 33 acre feet of runoff, assuming 50 percent is lost to infiltration. The pond volume is between 74 and 78 acre feet with an elevation of 10 acre feet. Considering expected runoff in the storage area in Drainage Area 2, overflows would be a relatively common occurrence, although overflows may not occur during dry years. Based on precipitation data, the most extreme year for precipitation between 1874 and 2001 was 1998 when approximately 46.26 inches of precipitation fell on the City of Watsonville. For this amount of precipitation, the freshwater marsh/seasonal wetland in Drainage Area 2 would receive approximately 74 acre feet of runoff under existing conditions, much of which would be expected to spill over and flow towards the detention basin in Crestview Park.

RBF Consulting performed a hydrologic and hydraulic analysis of the conditions under Phase 1 and buildout of the proposed Specific Plan to determine the detention volume necessary in order to detain surface water runoff from the planning area with implementation of Phase 2 of the proposed Specific Plan. Based on the conceptual stormwater plan for the proposed Specific Plan as presented in **Figure 2-16: Conceptual Stormwater Plan – Phase 1** and **Figure 2-17: Conceptual Stormwater Plan – Project Buildout** and preparation of final drainage plans, which



are required for each phase of the proposed Specific Plan as mitigation measures (**MM 3.8-1a** and **MM 3.8-1b**) herein, the proposed Specific Plan and PUD are anticipated to contain stormwater runoff within the planning area, would not increase stormwater runoff over existing conditions, and would not result in flooding within the planning area or in the vicinity of the planning area. Implementation of these mitigation measures would ensure that both phases of the proposed project would have a **less than significant impact**. No additional mitigation measures are necessary.



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## 3.9 Land Use and Planning

This section of the EIR describes the existing land uses of the project site, characterizes surrounding land uses and discusses the proposed project within the context of policies of the City of Watsonville, Santa Cruz County and the Santa Cruz County Local Agency Formation Commission (LAFCO). Potential impacts focus on consistency with adopted environmental plans and policies as well as compatibility of the proposed project with existing and planned land uses in the vicinity of the project site. This analysis is based on information contained in the *City of Watsonville General Plan*, *Santa Cruz County General Plan*, and the Santa Cruz County LAFCO policies.

### 3.9.1 Environmental Setting

#### Regional Setting

The planning area is located in Santa Cruz County adjacent to the eastern edge of the Watsonville City limits. The City of Watsonville is located in southern Santa Cruz County approximately 47 miles south of the City of San José. Neighboring communities within 25 miles of the planning area include the cities of Santa Cruz, Scotts Valley, and Capitola, which are respectively located 20 miles, 23 miles, and 14 miles north of the planning area, and the community of Castroville and City of Salinas, which are each respectively located approximately 11 miles to the southwest and 23 miles to the southeast. The regional location is shown in **Figure 2-1: Regional Location**.

#### Project Vicinity

The planning area consists of eleven parcels (Assessors Parcel Numbers: 019-226-42 [52 Atkinson Lane], 019-226-43 [58 Atkinson Lane], 019-226-44 [72 Atkinson Lane], 019-236-01 [78 Atkinson Lane], 048-211-24, 048-211-25 [56 Atkinson Lane]; 048-221-09, 048-231-01, 048-231-17, 048-231-18 [127 Atkinson Lane], and 048-251-09), which total approximately 65.8 acres. The planning area is located south of Corralitos Creek and approximately 800 feet northeast of Freedom Boulevard. Atkinson Lane borders the to the northwest; Brookhaven Lane, Brewington Avenue and Paloma Way borders the planning area to the south and southwest. Atkinson Lane, Brewington Avenue, and Wagner Avenue provide various access points to the project site. Freedom Boulevard is a four lane major arterial running north-south and is located approximately ¼ mile west of the project site. Freedom Boulevard is the only major arterial in the vicinity of the project site.

The northwest corner of the planning area is located within the Watsonville City limits and the remainder of the planning area is located in unincorporated Santa Cruz County. Approximately one half of the planning area is located within the City's Sphere of Influence (SOI) and the entire planning area is located within the City's 25-Year Urban Limit Line (ULL), which defines where development can occur. The project vicinity is shown on **Figure 2-2: Project Vicinity** and an aerial of the planning area is shown in **Figure 2-3: City and County Site Project Site and Jurisdictional Boundaries**. The Assessor's Parcel Numbers are shown in **Figure 2-4: Assessors Parcel Numbers and Property Ownership**.

#### Planning Area Characteristics

Approximately two-thirds of the planning area are currently in agricultural production as strawberries and apple orchards. A seasonal wetland/riparian area is located in the western portion of the planning area on the south end of APN 048-221-09. Corralitos Creek and



associated riparian vegetation trends roughly west to east along the proposed project's northern boundary within APNs 048-231-17 and 048-231-18. On-site topography is approximately 70 to 110 feet above mean sea level (msl) and slopes to the west within the western portion of the site and to the east within the eastern portion of the site.

Four single-family residences and various structures used for farming practices are located within the project site. Two residential homes are located within APN 048-211-25 (Michelle and Corwyn Mosiman parcel) adjacent to the western boundary of the planning area and the northern boundary of the PG&E parcel. A private unimproved road extends south from Atkinson Lane providing access to these residences and the PG&E parcel. Two additional single family residential homes are located within APN 019-226-43 (58 Atkinson Lane) and APN 019-226-44 (72 Atkinson Lane) adjacent to the western boundary of the planning area on the south side of Atkinson Lane between Vic Rugh Lane and Kadderly Lane.

A series of unimproved dirt roads traverse the planning area in order to access the agricultural fields and the existing residential development. The PG&E property (APN: 048-211-24) contains an electrical plant/station at the west side of the project site. A large overhead electrical utility line, which originates from the PG&E parcel, bisects the planning area along APN 048-251-09 (Grimmer Orchard parcel) along the northern boundary and cuts north through APN 048-231-17 and APN 048-231-18 (Israel Zepeda parcels). **Figures 2-5 through Figure 2-7: Photographs of the Planning Area** presents photographs of existing conditions at the project site. **Figure 2-8: Existing Site Characteristics** presents an aerial view of existing site characteristics.

### Surrounding Land Uses

The planning area is bordered by residential development to the south, north and west, and private agricultural fields to the northeast and east. **Figure 2-12: Surrounding Land Uses** shows land uses surrounding the project site. The *City of Watsonville General Plan* designates the land uses surrounding the planning area as: "Specific Plan Area" to the north and northwest; "High Density Residential" to the southwest; and "Medium Density Residential" to the south. The agricultural land uses east of the planning area are located in unincorporated Santa Cruz County. The agricultural uses are designated as "Agriculture Commercial (CA)" in the County of Santa Cruz Zoning Code and as "Agriculture" in the *Santa Cruz County General Plan*.

### General Plan and Zoning Designations

#### Existing General Plan Land Use

As shown in **Figure 2-9: Watsonville General Plan Land Use**, the *City of Watsonville General Plan* designates the majority of the planning area as "Specific Plan Area" with a smaller portion designated as "Agricultural" and "Environmental Management" in the northeastern portion of the project site. The *County of Santa Cruz General Plan* designates the majority of the planning area as "Urban Residential-Low Density (R-1)" and "Agriculture," with the PG&E electrical substation parcel designated as "Public Facility" as shown in **Figure 2-10: Santa Cruz County General Plan Land Use**.

#### Existing Zoning

The portions of the planning area that are currently located within the City Limits are zoned "Single Family Residential-Low Density (R-1)." The remainder of the planning area is located in unincorporated Santa Cruz County is zoned "Agricultural Commercial (CA)" in the eastern



portion of the project site; “Residential Single Family (R-1)” in the central and western portion of the project site; and “Public Facility (PF)” in the southwestern portion of the project site. **Figure 2-11: Existing Zoning** presents the zoning designations at the project site.

### 3.9.2 Regulatory Setting

The purpose of this section is to evaluate the proposed project for land use consistency with relevant adopted plans and policies. These include policies of the City of Watsonville, Santa Cruz County as implemented through the Santa Cruz County General Plan, and the policies of Santa Cruz County LAFCO.

#### State

##### [Cortese-Knox-Hertzberg Local Government Reorganization Acts](#)

The Cortese-Knox-Hertzberg Local Government Reorganization Acts of 1985 and 2000 govern the incorporation of new cities and city boundaries. The 1985 Act gives authority to the Santa Cruz County LAFCO to consider proposals for incorporation and annexations.

#### Local

##### [County of Santa Cruz General Plan](#)

Consistency with the policies in the *County of Santa Cruz General Plan* are included in **Table 3.9-1a: Project Consistency with the County of Santa Cruz General Plan Policies**.

##### [Santa Cruz County Local Agency Formation \(LAFCO\)](#)

Santa Cruz County LAFCO is responsible for coordinating logical and timely changes in local governmental boundaries (reorganizations), including SOI amendments, annexations, incorporations of new cities and boundary changes in special districts such school, assessment, and utility and service districts. The objectives of LAFCO are: to encourage efficient service areas for services provided by cities, counties, and special districts; to guide urban development away from prime agricultural lands and open space resources; and to promote orderly growth and discourage urban sprawl.

The ultimate annexation of land within an approved SOI is based on standards of evaluation that may require that the proposal be consistent with appropriate city general and specific plans; a consideration of the agricultural significance of the proposal area; whether the site is adjacent to or surrounded by existing urban development; and the capacity of public facilities and adequacy of public services to serve the proposed area. Santa Cruz County LAFCO has adopted standards for the evaluation of proposals pursuant to Government Code Section 56375. The Santa Cruz County LAFCO Commission uses these standards when reviewing and acting upon proposals for annexations and other boundary changes.

Relevant LAFCO policies are below. In addition, see **Section 3.2: Agricultural Resources** for discussion of LAFCO agricultural policies.

**Policy 1.1, Consistency with Spheres.** All changes of organization shall be consistent with adopted spheres of influence of affected agencies.





**Policy 1.2, Need for Services.** Any proposal involving annexations, incorporations, and formations shall not be approved unless it demonstrates a need for the additional services to be provided to the area; while all proposals involving detachments, disincorporations, and dissolutions shall not be approved unless the proponent demonstrates that the subject services are not needed or can be provided as well by another agency or private organization.

**Policy 1.3, General Plans.** In cases of overlapping plans, LAFCO shall make a determination of which general plan best carries out the policies of the Local Government Reorganization Act.

**Policy 1.4, In-Fill Development.** In order to avoid further urban sprawl, LAFCO shall encourage in-fill development in urban areas and annexations of areas inside the city sphere of influence.

**Policy 1.5, Provision of Services.** In order for LAFCO to approve a change of organization, the proponent shall demonstrate that the subject services can be provided in a timely manner and at a reasonable cost.

**Policy 1.6, Staged Growth.** For large projects the Commission shall encourage plans for staged growth.

**Policy 2.1, Number of Agencies.** Proposals, where feasible, should minimize the number of local agencies and promote the use of multi-purpose agencies.

**Policy 2.2, Logical Boundaries.** LAFCO shall promote more logical agency boundaries.

**Policy 2.3, Financially Desirable Areas.** The sole inclusion of financially desirable areas in a jurisdiction shall be avoided.

**Policy 2.4, Overall Effects.** The Commission shall consider the effects of a proposed action on adjacent areas, mutual social and economic interests, and on local governmental structure.

**Policy 2.5, Rezoning.** The Commission shall require rezoning for all city annexations so that the potential effects of the proposals can be evaluated by the Commission and known to the affected citizens.

**Policy 3.1, Prime Agricultural Lands.** Urban growth shall be guided away from prime agricultural lands, unless such action would not promote planned, orderly, efficient development of an area.

**Policy 3.2, Infill.** LAFCO shall encourage the urbanization of vacant lands and non-prime agricultural lands within an agency's jurisdiction and within an agency's sphere of influence before the urbanization of lands outside the jurisdiction and outside the sphere of influence, and shall encourage detachments of prime agricultural lands and other open space lands from cities, water districts, and sewer districts if consistent with the adopted sphere of influence of the affected agency.



## City of Watsonville

### Measure U

On November 5, 2002, the voters of the City of Watsonville approved voter initiative Measure U, the “Watsonville Urban Limit Line and Development Timing Initiative,” formulated by Action Pajaro Valley. By defining a new ULL area, Measure U was designed to protect commercial agriculture lands and environmentally sensitive areas while providing the means for the City to address housing and jobs needs for the next 20 to 25 years.

- The Measure U-designated ULL allows the planning and development of Future Growth Areas, including the project site. Specifically, Measure U calls for:
- Annexation of the planning area to the City of Watsonville following adoption of a Specific Plan;
- No development to be allowed by the City of Watsonville within the planning area before January 1, 2010; and
- A minimum 50-percent of the units to be affordable work force housing.

### City of Watsonville Housing Element

The State of California Housing and Community Development (HCD) Department certified the City’s 2002-2007 Housing Element on September 26, 2003. Measure U Future Growth Areas were not included, but were reserved for the three future housing element cycles to be undertaken during the 20-25 year lifespan of Measure U.

### County of Santa Cruz Housing Element

On October 24, 2006, the County of Santa Cruz Board of Supervisors (BOS) held a public hearing to consider issues relating to certification of the County’s 2002-2007 Housing Element. Per HCD, the County of Santa Cruz was directed to identify additional acreage for high density zoning to provide more affordable housing opportunities to meet their fair share allocations.

On November 14, 2006, the BOS approved the list of potential development sites and directed their staff to submit the list along with the Housing Element to HCD. This list included an approximately 16-acre portion of the Atkinson Lane Future Growth Area, hereinafter referred to as the County Site. The County Site is highlighted in **Figure 2-3: City and County Site Project Site and Jurisdictional Boundaries**. The remainder of the Specific Plan area is referred to as the City Site.

In December of 2006, HCD conditionally certified the County of Santa Cruz 2002-2007 Housing Element. This conditional certification required that the acreage identified for affordable housing, including the County Site, be re-zoned to 20 dwelling units per acre by June 2009.

### Memorandum of Understanding

On June 12, 2007, the City of Watsonville and County of Santa Cruz (County) entered into a Memorandum of Understanding (MOU) to address a mutual interest in jointly planning for the development of the planning area and to fulfill the County’s requirement to rezone the 16-acre County Site to allow a residential density of 20-units per acre to achieve the housing allocation goal as required by the County of Santa Cruz General Plan Housing Element as well as the City’s



requirement to provide housing capacity to address its projected needs for the next three housing element cycles.

The MOU requires that the City and County create a development plan for the planning area that addresses roadway layout, housing types and affordability restrictions, parks and schools, infrastructure financing, neighborhood concerns, protection of environmental resources, and specific development guidelines. To fulfill the needs of both the City of Watsonville and the County of Santa Cruz, a joint Specific Plan was prepared. The Specific Plan would serve as an implementation tool for the City of Watsonville and the Master Plan/PUD for implementation by the County of Santa Cruz.

The MOU also sets forth the overall goals for the proposed Specific Plan, as reflected in the project objectives outlined above.

#### Technical Advisory Committee

In January 2008, upon initiation of the preparation of the proposed Specific Plan, the City Council and the BOS appointed a 17 member Technical Advisory Committee (TAC) to provide technical assistance in the formulation of the proposed Specific Plan. The TAC consisted of 12 voting members and five ex-officio members representing a variety of stakeholder groups and interests. The TAC met with City and County staff, Plan consultants, and members of the public to review the progress of the Plan and provide guidance at key stages of development.

#### City of Watsonville General Plan

Consistency with the policies in the City of Watsonville General Plan are included in **Table 3.9-1b: Project Consistency with the City of Watsonville General Plan Policies.**

### **3.9.3 Relevant Project Characteristics**

The proposed Specific Plan and PUD designates approximately 34.7 acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density” and 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density,” and 3.9 acres of parks for expansion of the adjacent Crestview Park. The proposed project would also include 3.1 acres of a designated riparian area and a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which will remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

The total amount of residential development within the planning area would not exceed 450 residential units. For the residential component, the proposed project would include a mix of housing types and densities that would meet a variety of the City’s future housing needs, including the City’s goal of making 50 percent of the units available as affordable housing.

Approximately 10.5 acres of the planning area is designated as Residential – High Density (R-HD). This land use designation allows development of up to 20-units per acre. Development



within the R-HD components of the proposed project would result in development of two- to three- story multi-family residential projects. The R-HD components of the planning area are expected to yield 210 units.

Approximately 14.2 net acres of the planning area is designated as Residential – Medium Density (R-MD). The R-MD designation would allow a mix of unit types and densities ranging from 10 to 12 dwelling units per acre. Buildout is expected to average 11-units per acre. Allowed unit types range from attached single-family residences on relatively small lots to three or four-unit clustered development. Given an average expected buildout density of 11 units per acre, the R-MD components of the planning area are expected to yield 156 units.

Approximately 10 net acres of the planning area is designated as Residential – Low Density (R-LD). The R-LD designation would allow a mix of densities ranging from 8 to 10 dwelling units per acre. Buildout is expected to average 9-units per acre. Allowed unit types include detached single-family residences. Given an average expected buildout density of 9 units per acre, the R-LD site is expected to yield 90 units.

### 3.9.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

The State CEQA Guidelines (Guidelines) identify potentially significant environmental effects on land use and planning if a project:

- Physically divides the physical arrangement of an established community;
- Conflicts 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;
- Conflicts with any applicable Habitat Conservation Plan or Natural Community Conservation Plan; and/or
- Conflicts with established residential, recreational, educational, religious, or scientific uses of the area; substantially increases ambient noise levels; or exposes substantial numbers of people to health or safety hazards.

#### Effects Upon an Established Community

**Impact 3.9-1: Implementation of Phases 1 and 2 of the proposed project would not disrupt or divide an established community. Therefore, this impact is considered less than significant.**

The planning area is located partially within and adjacent to the City's SOI. The planning area and surrounding area is not considered a cohesive, "established" community that would be divided by anticipated residential uses. Phases 1 and 2 of the proposed project would result in a continuation of the adjacent residential uses located to the north along Atkinson Lane and the residential land uses along Brewington Avenue, Paloma Way, and Brookhaven Lane located south of the planning area. Therefore, development of Phases 1 and 2 of the proposed project would not disrupt or divide an established community and the impact is considered less than significant. No mitigation is required.



Conflicts with County of Santa Cruz General Plan, City of Watsonville General Plan and Other Goals and Policies

**Impact 3.9-2:** The proposed project is not anticipated to result in a conflict with the County and/or City's existing General Plan land use strategy and specific policies adopted to avoid or mitigate environmental impacts. This is considered a less than significant impact.

The *City of Watsonville General Plan* designates the majority of the planning area as "Specific Plan Area" with a smaller portion designated as "Agricultural" and "Environmental Management" in the northeastern portion of the planning area. The *County of Santa Cruz General Plan* designates the majority of the planning area as "Urban Residential-Low Density (R-1)" and "Agriculture," with the PG&E electrical substation parcel designated as "Public Facility."

Portions of the planning area are located outside the existing Watsonville city limits and Sphere of Influence. In order to implement the proposed project, the City's SOI would be expanded to include the project site, subject to approval by LAFCO. LAFCO also has approval authority for subsequent or concurrent annexation of the planning area into the City of Watsonville. An amendment to a City's SOI and General Plan land uses are significant land use actions for any city to consider. However, if the action's environmental impacts can be addressed, if the amendments are logical from a planning perspective, if the amendments further (rather than detract from) the goals of the adopted General Plan and other planning documents, and if certain findings can be made by the City Council, then the proposal can be considered for approval.

Throughout the Draft EIR, the applicable *City of Watsonville General Plan* and *County of Santa Cruz General Plan* goals and policies are listed in each of the individual environmental topic areas. Consistency with these policies is addressed in **Table 3.9-1a: Project Consistency with County of Santa Cruz General Plan Policies** and **Table 3.9-1b: Project Consistency with City of Watsonville General Plan Policies**. As discussed in these tables, the proposed project would be generally consistent with policies in the *City of Watsonville General Plan* and *County of Santa Cruz General Plan* with implementation of the mitigation measures identified within this EIR. However, Phase 2 (City site) would result in a significant and unavoidable impact to agricultural resources, which may result in a partial inconsistency with Policies 3.3, 3.B and 3.F in the *City of Watsonville General Plan*. Although the proposed project would result in a significant and unavoidable impact due to the conversion of Important Farmland, the proposed Specific Plan is consistent with the voter-approved Measure U. Measure U established an urban limit line along the northern boundary, excludes land previously included east and west of East Lake Avenue, and directs growth into several unincorporated areas. The three primary areas of growth include the planning area (Atkinson Lane), as well as the Buena Vista, and the Manabe-Burgstrom (now Manabe-Ow) Specific Plan areas. The proposed project would include development of the planning area within the existing ULL and annexation of those areas within the planning area that are located outside of the City's existing Sphere of Influence (SOI).

The proposed Specific Plan includes 14.1 acres for preservation of a 200-foot agricultural buffer located on the eastern boundary of the planning area adjacent to the existing agricultural fields, which would provide a buffer between the planning area and adjacent agricultural uses for the continuity of long-term agricultural use beyond the ULL, which would ensure that the proposed project is consistent with Policy 3.F in the *City of Watsonville General Plan*. Therefore, this would be considered a **less than significant impact**.



### Conflicts with Applicable Habitat Conservation Plan and/or Natural Community Conservation Plan

There are no habitat conservation plans for the proposed project site. Therefore, the proposed project would not have an effect on a habitat conservation plan.

### Conflict with Surrounding Land Uses

**Impact 3.9-3:** Development of the proposed project could create land use compatibility conflicts with surrounding uses, which is considered a potentially significant impact. However, with implementation of mitigation measures incorporated herein would reduce this impact would be reduced to a less than significant level.

Land use impacts are primarily a function of a project's compatibility with surrounding land uses, which in this case are agricultural and residential land uses. Land use compatibility is measured in terms of specific environmental effects such as aesthetics, air quality (including dust and odor) and traffic. To the greatest extent possible, the EIR uses quantifiable data to measure such impacts, which can have an effect upon the quality of life in a defined area. For this reason, the land use analysis is supported by other specific discussions within the EIR, including **Section 3.1 Aesthetics and Visual Resources, Section 3.2: Agricultural Resources, Section 3.3: Air Quality, Section 3.10: Noise, and Section: 3.13 Transportation and Traffic.**

### Compatibility with Adjacent Agricultural Uses

The compatibility of proposed residential uses with surrounding agricultural land is dependent upon adequate separation between new residences and adjacent, active agriculture areas. The planning area is adjacent to existing agricultural uses that are located east of the planning area. Development of the proposed project in proximity to agricultural operations could result in compatibility impacts, encroachment and the disruption of farming operations. The proposed project incorporates a 200-foot buffer within Phase 2 (City site) in the eastern portion of the planning area adjacent to existing agricultural uses. In addition, the proposed project incorporates an interim agricultural buffer within Phase 2 (County site) as shown in **Figure 2-14, Phasing Plan**, which would provide a buffer entirely within Phase 2 (County site) prior to development of the City portion of the proposed Specific Plan.

Incorporation of this 200-foot buffer would reduce land use conflicts along the urban/agricultural boundary would ensure that the proposed project would have a **less than significant impact** to existing agricultural uses. To ensure that proposed buffers are consistent with City policies and the proposed Specific Plan and to notify future residents of potential agricultural/urban conflicts, the **Section 3.2: Agricultural Resources** includes mitigation measures **MM 3.2-1 and MM 3.2-2.**

### Compatibility with Adjacent Residential Uses

The proposed project would be located adjacent to existing residential uses. To address compatibility with these adjacent residential land uses, the proposed Specific Plan/PUD includes development standards and design guidelines for: allowed uses, density, setbacks, lot coverage, building height, parking, and open space. Design guidelines provided in the proposed Specific Plan/PUD are intended to provide consistent guidance for development of the planning area, which provides the vision for the planning area as defined in the MOU, the guiding principles, and the City's Livable Community Design Guidelines. The design guidelines relate to: site planning, architecture, materials and colors, landscaping, and lighting. Several design guidelines ensure a unified and consistent character in order to be responsive to adjacent neighborhoods;





provide for a variety of styles and high quality architecture; and include materials and colors that would provide an enduring quality and enhance the architectural and massing concepts for the buildings. In addition, the guidelines provide for limiting distinction between graded and adjacent natural landforms as well as a logical transition between existing neighborhoods and higher density development within the planning area.

With implementation of the development standards and design guidelines, as well as the mitigation measures to address buffering of adjacent agricultural uses, the proposed project would have a less than significant impact.



**Table 3.9-1a Project Consistency with the County of Santa Cruz General Plan Policies**

Element	Policy Number	Policy	Project Consistency
INTRODUCTION	1.2.3	<b>Growth in City Spheres</b> - Coordinate the allocation of County building permits in a city's sphere-of influence area with that city's growth plans.	CONSISTENT: The proposed project is one of three development areas identified in Measure U, which was designed to protect commercial agriculture lands and environmentally sensitive areas while providing the means for the City to address housing and jobs needs for the next 20 to 25 years. Measure U policies were added to the 2005 <i>City of Watsonville General Plan</i> by Resolution 199-02, adopted July 23, 2002. In accordance with Measure U, annexation of the planning area to the City of Watsonville would occur following adoption of a Specific Plan; no development would be allowed by the City of Watsonville within the planning area before January 1, 2010 and a minimum of 50 percent of the units to be affordable workforce housing. Phase 1 (County Site) would be the first phase of the proposed project.
	1.2.4	<b>Annexation</b> - Encourage the orderly annexation of urban areas to adjacent cities, giving consideration to balancing the annexation of revenue producing and residential lands, and taking into consideration the goals and objectives of the County General Plan.	
	1.2.4c	Work with the City of Watsonville to coordinate urban/rural boundaries in the Pajaro Valley. Begin a process to support appropriate areas to address housing and job needs in the Pajaro Valley through city-centered annexation and development.	
LAND USE	2.1.4	<b>Siting of New Development</b> – Locate new residential, commercial, or industrial development, within, next to, or in close proximity to existing developed areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on environmental and natural resources, including coastal resources.	CONSISTENT: The proposed County phases 1 and 2 are located adjacent to existing developed areas with adequate public services.
	2.1.5	<b>Urban Development in Watsonville Sphere of Influence</b> - Support extension of urban services adjacent to the City of Watsonville only in conjunction with annexation by the City. Prohibit subdivision of lands outside the Urban Services Line and in the Watsonville Sphere of Influence until annexation, unless the division would not adversely affect the City's General Plan affordable housing goals, and is determined to be of an overriding public benefit.	CONSISTENT: Phase 2 (City site) would not occur until City annexation of the planning area; City Phase 1 is within the City limits and County Phases 1 and 2 are located within the County's urban services line. The planning area is located adjacent to existing developed areas with adequate public services as addressed in Section 3.12: Public Services.



Element	Policy Number	Policy	Project Consistency
	2.1.6	<b>Public Services Adequacy</b> - Consider the adequacy of public service capacity (including without limitation sewer, water, roads), public school capacity, terrain, access, pattern of existing land use in the neighborhood, unique circumstances of public value, location with respect to regional or community shopping and other community facilities; access to transportation facilities including transit, rail, bicycle and pedestrian facilities; and parcel size in the surrounding area in determining the specific density to be permitted for individual projects within each residential density range, as appropriate.	CONSISTENT: Section 3.12: Public Services evaluates the adequacy of public services and facilities that would serve the planning area. No significant impacts to public services were identified with incorporation of mitigation herein.
	2.2.1	<b>Public Facilities Standards for New Development</b> - Maintain minimum standards for public facilities and services availability for development projects. Proposed General Plan and Local Coastal Program amendments shall comply with these standards without exception.	CONSISTENT: See consistency determination for Policy 2.1.6.



Element	Policy Number	Policy	Project Consistency
	2.2.2	<p>Public Infrastructure (Facility and Service) Standards for General Plan and Local Coastal Program Amendments and Re-zonings (LCP) - For all General Plan and LCP amendments and re-zonings that would result in an intensification of residential, commercial, or industrial land use, consider the adequacy of the following services, in addition to those services required by policy 2.2.1, when making findings for approval. Allow intensification of land use only in those areas where all service levels are adequate, or where adequate services will be provided concurrent with development.</p> <ul style="list-style-type: none"> <li>. Schools</li> <li>. Police Protection</li> <li>. Utilities, including electricity, gas, telephone and cable</li> <li>. Garbage service and recycling facilities</li> <li>. Parks</li> <li>. Drainage</li> <li>. Fire Protection</li> </ul> <p>In connection with any General Plan and/or LCP amendment or re-zoning, the following services shall also be considered in terms of adequacy and availability: library facilities, street lighting, and child care.</p>	CONSISTENT: See consistency determination for Policy 2.1.6.
	2.10.1	<p><b>Minimum Parcel Sizes</b> - Allow residential development at densities equivalent to 2,500 to 4,000 square feet of net developable parcel area per unit. Include increased density incentives for projects with a large percentage of very low or lower income housing and for senior housing projects in accordance with State law.</p>	CONSISTENT: The County Housing Element specifically requires that the County Site within the proposed Specific Plan be adequately zoned by June 2009 to allow the development of housing units at a density of 20 units per acre in order to meet the County's affordable housing allocation.



Element	Policy Number	Policy	Project Consistency
	2.10.3	<b>Specific Density Determination</b> - Consider terrain, adequacy of access, presence of significant environmental resources, the pattern of existing land use in the neighborhood, and unique circumstances of public value, for instance, the provision of very low or lower income housing in accordance with State law, in determining the specific density to be permitted within the Urban High Density Residential designation.	CONSISTENT: The proposed Specific Plan and PUD considered the opportunities and constraints of the planning area when developing the proposed land use plan, including compatibility of surrounding residential land uses. The County Housing Element specifically requires that the County site within the proposed planning area be adequately zoned by June 2009 to allow the development of housing units at a density of 20 units per acre in order to meet the County's affordable housing allocation.
CIRCULATION	3.1	<b>Vehicle Miles.</b> To limit the increase in Vehicle Miles Traveled (VMT) to achieve as a minimum, compliance with the current Air Quality Management Plan.	CONSISTENT: The proposed project is surrounded on three sides by existing urban development and is adjacent to the City of Watsonville, which would reduce urban sprawl in the City and surrounding area. The proposed project promotes alternative transportation in various ways. The PUD includes a circulation network that allows for alternatives to automobile travel, including public transportation, bicycle, and walking. The planning area would be served by the Santa Cruz Metropolitan Transit District. The closest route is located on Freedom Boulevard. However, should the Santa Cruz Metropolitan Transit District acquire additional funding to provide additional bus routes, routes along Crestview Drive, Atkinson Lane, and/or through the proposed project may be considered.
	3.1.1	<b>Land use Patterns (Jobs/Housing Balance).</b> Encourage concentrated commercial centers, mixed residential and commercial uses, and overall land use patterns which reduce urban sprawl and encourage the reduction of vehicle miles traveled per person.	
	3.1.3	<b>Neighborhood Facilities</b> - Support the development of neighborhood facilities such as parks, schools, and neighborhood commercial services.	CONSISTENT: The proposed Specific Plan and PUD includes approximately 3.5 acres of land dedicated to the City for use as an expansion to the existing two-acre Crestview Park. The park would provide opportunities for both passive and active recreation, including tennis, soccer, baseball, play equipment, and barbeque and picnic areas. The proposed project preserves and includes buffers along the freshwater marsh in the western portion of the planning area and the Corralitos Creek riparian corridor in the eastern portion of the planning area in order to provide opportunities for passive recreation and include pedestrian trails interspersed with benches and picnic tables.
	3.4.4	<b>On-Site Transit Facilities</b> - Require developers of major traffic generating activities to provide fixed transit facilities, such as bus shelters and pullouts, consistent with the anticipated demand. Locate these facilities in areas convenient to pedestrians' use.	CONSISTENT: The proposed Specific Plan and PUD includes transit supporting land uses, including medium and high density residential uses. The planning area would be served by the Santa Cruz Metropolitan Transit District. The closest route is located on Freedom Boulevard. However, should the Santa Cruz Metropolitan Transit District acquire additional funding to provide additional bus routes, routes along Crestview Drive, Atkinson Lane, and/or through the proposed project may be considered.
	3.5.2	<b>Wheelchair Ramps</b> - Require new development to include ramps at all intersections in new developments.	CONSISTENT: The proposed Specific Plan and PUD would require that all infrastructure (sidewalks) comply with ADA standards.



Element	Policy Number	Policy	Project Consistency
	3.9.2	<b>Construction</b> - Construct and mark bicycle routes in conformance with state standards. Limit the number of driveways where feasible in new developments to reduce the potential for automobile-bicycle conflicts.	CONSISTENT: The proposed Specific Plan and PUD requires that all new bicycle facilities associated with the planning area are adequately provided, including signage and/or striping where necessary.
	3.9.3	<b>Parking</b> - Limit on-street parking where the need for a clear bike lane exists. Stripe all arterials for bike lanes and strictly enforce parking limitations.	CONSISTENT: See consistency discussion under County Policy 3.9.2.
	3.10.1	<b>Pathways</b> - Require pathways for pedestrian and bicycle use through cul-de-sac and loop streets where such access will encourage those modes of travel as part of new development.	CONSISTENT: The proposed Specific Plan and PUD incorporates pedestrian and bicycle pathways within the proposed project.
	3.10.2	<b>Landscape</b> - Landscape and buffer pedestrian walkways wherever feasible.	CONSISTENT: See consistency discussion under County Policy 3.10.1.
	3.10.4	<b>Pedestrian Traffic</b> - Require dedication and construction of walkways for through pedestrian traffic and internal pedestrian circulation in new developments where appropriate.	CONSISTENT: See consistency discussion under County Policy 3.10.1.
	3.10.5	<b>Access</b> - Ensure safe and convenient pedestrian access to the transit system, where applicable in new developments.	CONSISTENT: The proposed Specific Plan and PUD addresses pedestrian access. All streets within the proposed project would include sidewalks connecting to adjacent existing development.
	3.10.7	<b>Parking Lot Design</b> - Provide for pedestrian movement in the design of parking areas.	CONSISTENT: The proposed Specific Plan includes traffic calming measures such as traffic circles, bulb-outs, and landscaping in order to facilitate pedestrian movement throughout the planning area, including parking areas.
	3.10.8	<b>Americans with Disabilities Act (ADA) Requirements</b> - Incorporate ADA standards in design of new projects and reconstruction where applicable. Prohibit landscaping and all other obstacles, such as telephone poles and fire hydrants, which would prevent pedestrian movement within this walkway. Require the use of materials which will provide an all-weather surface for walking.	CONSISTENT: Future development within the County site would comply with ADA design standards, where applicable.
	3.10.10	<b>Americans with Disabilities Act (ADA) New Development</b> - All new development shall incorporate ADA standards into the design, where applicable.	





Element	Policy Number	Policy	Project Consistency
	3.12.1	<p><b>Level of Service (LOS) Policy</b> - In reviewing the traffic impacts of proposed development projects or proposed roadway improvements, LOS C should be considered the objective, but LOS D as the minimum acceptable (where costs, right-of-way requirements, or environmental impacts of maintaining LOS under this policy are excessive, capacity enhancement may be considered infeasible). Review development projects or proposed roadway improvements to the Congestion Management Program network for consistency with Congestion Management Plan goals.</p> <p>Proposed development projects that would cause LOS at an intersection or on an uninterrupted highway segment to fall below D during the weekday peak hour will be required to mitigate their traffic impacts. Proposed development projects that would add traffic at intersections or on highway segments already at LOSE or R shall also be required to mitigate any traffic volume resulting in a 1% increase in the volume/capacity ratio of the sum of all critical movements. Projects shall be denied until additional capacity is provided or where overriding finding of public necessity and or benefit is provided.</p>	CONSISTENT: Section 3.13: Transportation and Traffic addresses the proposed Specific Plan and PUD's impacts on roadway segments and intersections and incorporates mitigation measures to improve the intersections to acceptable levels of service. Future development would be required to pay their proportional fair share of applicable traffic impact fees prior to occupancy of units within the planning area in order to improve the level of service to acceptable conditions.
	3.12.3	<p><b>Transportation Impact Fees as Mitigation Measures</b> - Payment of an approved Transportation Impact Fee proportional to the forecast trip generation will be required.</p>	
	3.13.1	<p><b>Limiting Traffic Volumes</b> - Seek to limit traffic volumes and speeds in residential neighborhoods through alignment and improvement of existing and proposed local streets.</p>	CONSISTENT: To ensure low traffic speeds and volumes, the proposed Specific Plan and PUD includes street designs that consider the use of traffic calming features such as traffic circles, bulb-outs, and landscaping where necessary.
	3.13.2	<p><b>Planning of New Residential Streets and Improving Existing Streets</b> - Plan roadway networks in residential areas and subdivisions to inter-connect adjacent residential areas while discouraging through traffic on local streets</p>	CONSISTENT: As shown in Figure 2-18: Planning Area Access and Internal Circulation, where feasible, the proposed project would extend the existing residential streets of the existing adjacent neighborhoods.
	3.13.4	<p><b>Design and Enforcement Measures</b> - Emphasize design and enforcement solutions to slow and discourage through traffic.</p>	CONSISTENT: See consistency discussion under County Policy 3.13.1.



Element	Policy Number	Policy	Project Consistency
	3.13.7	<b>Through Auto Traffic</b> - Discourage inter-neighborhood and through auto traffic movement on local streets through street alignment and intersection design.	CONSISTENT: Primary access through the planning area would be via a collector between Brewington Avenue to Atkinson Lane. However, to ensure pedestrian safety on the internal street network, the proposed Specific Plan includes traffic calming measures such as traffic circles, bulb-outs, and landscaping.
	3.20.3	<b>Dedication of Public Rights-of-Way</b> - Require dedication of public rights-of-way for public use and maintenance on all streets to ensure an integrated circulation system consistent with Government Code Sections 65909(a) and 66475.4(b). Dedication shall be consistent with the adopted street standards as in the County of Santa Cruz Design Criteria.	CONSISTENT: All internal roadways would be dedicated public right-of-ways for public use.
	3.21.4	<b>Mitigation Measures</b> - Require new development projects to mitigate their impacts on transportation facilities through system improvements and/or transportation impact fees.	CONSISTENT: Section 3.13: Transportation and Traffic addresses the impacts of the proposed Specific Plan and PUD on roadway segments and intersections and incorporates mitigation measures to improve the intersections to acceptable levels of service. Future development would be required to pay applicable traffic impact fees prior to occupancy of units within the planning area.
	3.21.5	<b>Distribution of the Cost of Road Construction</b> - Consider the distribution of the cost of road improvements equitably among benefiting property owners.	CONSISTENT: As addressed in Section 3.12: Public Services, Utilities, and Recreation, the City and the County shall establish a CFD or a JPA as part of the proposed Specific Plan and PUD to help fund infrastructure costs for the proposed project not covered by City or County impact fees and taxes, which would distribute the cost of road improvements within the planning area.
HOUSING	1.2	<b>Selection and Rezoning of Sites</b> - Following selection of the candidate sites, adoption of the necessary General Plan and/or Zoning Ordinance amendments to facilitate rezonings at 20 units per acre, rezone to minimum of 22 acres of land in accordance with the rezoning program. The site rezoning process will include an analysis of a number of factors, including: availability of services, proximity to transit corridors, and the feasibility and likelihood of development or redevelopment during the planning period. Each of the selected sites will be evaluated to determine the number of units that can be accommodated on that site at 20 units per acre of developable land. Once this number is determined; development under the combining district shall result in that number of units on site. The selected sites will be subject to CEQA Review prior to rezoning.	CONSISTENT: The County Housing Element specifically requires that the County site within the planning area be adequately zoned by June 2009 to allow the development of housing units at a density of 20 units per acre in order to meet the County's affordable housing allocation. Potential environmental impacts and mitigation measures addressing the proposed development are addressed within each environmental topic area in the EIR.



Element	Policy Number	Policy	Project Consistency
CONSERVATION & OPEN SPACE	5.1.6	<b>Development within Sensitive Habitats</b> - Sensitive habitats shall be protected against any significant disruption of habitat values; and any proposed development within or adjacent to these areas must maintain or enhance the functional capacity of the habitat. Reduce in scale, redesign, or, if no other alternative exists, deny any project which cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of a project is legally necessary to allow a reasonable use of the land.	CONSISTENT: Section 3.4: Biological Resources analyzes potential impacts to special status plant and animal species; migratory birds; etc. Mitigation measures are incorporated herein to address potential impacts to these special status plant and wildlife habitat within the planning area.
	5.1.10	<b>Species Protection</b> - Recognize that habitat protection is only one aspect of maintaining biodiversity and that certain wildlife species, such as migratory birds, may not utilize specific habitats. Require protection of these individual rare, endangered and threatened species and continue to update policies as new information becomes available.	
	5.1.12	<b>Habitat Restoration with Development Approval</b> - Require as a condition of development approval, restoration of any area of the subject property which is an identified degraded sensitive habitat, with the magnitude of restoration to be commensurate with the scope of the project. Such conditions may include erosion control measures, removal of non-native or invasive species, planting with characteristic native species, diversion of polluting run-off, water impoundment, and other appropriate means. The object of habitat restoration activities shall be to enhance the functional capacity and biological productivity of the habitat(s) and whenever feasible, to restore them to a condition which can be sustained by natural occurrences, such as tidal flushing of lagoons.	CONSISTENT: The proposed project includes removal of non-native species within the buffer of the freshwater marsh in the western portion of the planning area within Phase 1 (County Site). As discussed in Section 3.8: Hydrology and Water Quality, the proposed Specific Plan includes Low Impact Design (LID) techniques in various locations, including the use of pervious/permeable pavement and the minimization of impervious surfaces where feasible.
	5.1.14	<b>Removal of Invasive Plant Species</b> - Encourage the removal of invasive species and their replacement with characteristic native plants, except where such invasive species provide significant habitat value and where removal of such species would severely degrade the existing habitat. In such cases, develop long-term plans for gradual conversion to native species providing equal or better habitat values.	CONSISTENT: The proposed project includes removal of non-native species within the buffer of the freshwater marsh/seasonal wetland in the western portion of the planning area within Phase 1 (County site). The proposed Specific Plan and PUD requires the use of drought tolerant, native landscaping.
	5.2.1	<b>Designation of Riparian Corridors and Wetlands</b> - Designate and define the following areas as Riparian Corridors: (a) 50' from the top of a distinct channel or physical evidence of	CONSISTENT: The proposed Specific Plan includes a 50-foot wetland buffer from the edge of riparian vegetation of the freshwater marsh in the western portion of the planning area. The County of Santa Cruz determined that the proposed project would not be required to provide a 100-foot setback, as long as the proposed project was consistent with the Riparian Corridor and Wetlands Protection Ordinance, which requires a 50 foot buffer from



Element	Policy Number	Policy	Project Consistency
		<p>high water mark of a perennial stream;</p> <p>(b) 30' from the top of a distinct channel or physical evidence of high water mark of an intermittent stream as designated on the General Plan maps and through field inspection of undesignated intermittent and ephemeral streams;</p> <p>(c) 100' of the high water mark of a lake, wetland, estuary, lagoon, or natural body of standing water;</p> <p>(d) The landward limit of a riparian woodland plant community;</p> <p>(e) Wooded arroyos within urban areas.</p> <p>Designate and define the following areas as Wetlands:</p> <p>Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water periodically or permanently. Examples of wetlands are saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps mudflats, and fens. The US Army Corps of Engineers, and other federal agencies utilize a "unified methodology" which defines wetlands as "those areas meeting certain criteria for hydrology, vegetation, and soils."</p>	<p>the wetland. The exception is proposed since the area outside of the existing buffer zone has been intensively modified and operation of the freshwater marsh has not been compromised; the freshwater marsh is not under the Army Corps of Engineers jurisdiction, the freshwater marsh is man-made and is surrounded by existing development on three sides, and the freshwater marsh is isolated from local and regional wildlife corridors.</p>
	5.2.3	<p><b>Activities within Riparian Corridors and Wetlands</b> - Development activities, land alteration and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of riparian exception, require evidence of approval for development from the US Army Corps of Engineers, California Department of Fish and Game, and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.</p>	
	5.2.4	<p><b>Riparian Corridor Buffer Setback</b> - Require a buffer setback from riparian corridors in addition to the specified distances found in the definition of riparian corridor. This setback shall be identified in the Riparian Corridor and Wetland Protection ordinance and established based on stream characteristics, vegetation and slope. Allow reductions to the buffer setback only upon approval of a riparian exception. Require a 10 foot separation from the edge of the riparian corridor buffer to any structure.</p>	<p>CONSISTENT: See consistency discussion to Policy 5.2.1 and 5.2.3.</p>



Element	Policy Number	Policy	Project Consistency
	5.2.5	<b>Setbacks from Wetlands</b> - Prohibit development within the 100 foot riparian corridor of all wetlands. Allow exceptions to this setback only where consistent with the Riparian Corridor and Wetlands Protection ordinance, and in all cases, maximize distance between proposed structures and wetlands. Require measures to prevent water quality degradation from adjacent land uses, as outlined in the Water Resources section.	
	5.2.6	<b>Riparian Corridors and Development Density</b> - Exclude land within riparian corridors in the calculation of development density or net parcel size. Grant full density credit for the portion of the property outside the riparian corridor which is within the required buffer setback, excluding areas over 30% slope, up to a maximum of 50% of the total area of the property which is outside the riparian corridor.	CONSISTENT: The proposed Specific Plan and PUD excluded the land in the buffer to the freshwater marsh when calculating the density of the project.
	5.2.7	<b>Compatible Uses with Riparian Corridors</b> - Allow compatible uses in and adjacent to riparian corridors that do not impair or degrade the riparian plant and animal systems, or water supply values, such as non-motorized recreation and pedestrian trails, parks, interpretive facilities and fishing facilities. Allow development in these areas only in conjunction with approval of a riparian exception.	CONSISTENT: The Specific Plan and PUD preserves and includes buffers along the freshwater marsh in the western portion of the planning area and the Corralitos Creek riparian corridor in the eastern portion of the project site. The riparian buffers within the proposed project provide opportunities for passive recreation and include pedestrian trails interspersed with benches and picnic tables. No other uses would be located within these buffers.
	5.2.9	<b>Management Plans for Wetlands Protection</b> - Require development in or adjacent to wetlands to incorporate the recommendations of a management plan which evaluates: migratory waterfowl use December 1 to April 30; compatibility of agricultural use and biotic and water quality protection; maintenance of biologic productivity and diversity; and the permanent protection of adjoining uplands.	CONSISTENT: The proposed PUD includes removal of non-native species within the buffer of the freshwater marsh in the western portion of the planning area within Phase 1 (County Site) as part of a management plan/wetland protection program.
	5.2.10	<b>Development in Wetland Drainage Basins</b> - Require development projects in wetland drainage basins to include drainage facilities or Best Management Practices (BMPs) which will maintain surface runoff patterns and water quality, unless a wetland management plan specifies otherwise, and minimize erosion, sedimentation, and introduction of pollutants.	CONSISTENT: As discussed in Section 3.8: Hydrology and Water Quality, the proposed Specific Plan and PUD includes Low Impact Design (LID) techniques in various locations, including the potential for retention and detention facilities. Implementation of these LID techniques into the project design would ensure that the proposed project does not result in erosion, sedimentation, and introduction of pollutants into the freshwater marsh and riparian corridor. In addition, mitigation measures are incorporated herein to ensure that impacts from new development on water quality are reduced to a less than significant level.
	5.7.1	<b>Impacts from New Development on Water Quality</b> - Prohibit new development adjacent to marshes, streams and bodies of water	



Element	Policy Number	Policy	Project Consistency
		if such development would cause adverse impacts on water quality which cannot be fully mitigated.	
	5.7.4	<p><b>Coastal Surface Runoff</b> - New development shall minimize the discharge of pollutants into surface water drainage by providing the following improvements or similar methods which provide equal or greater runoff control:</p> <p>(a) include curbs and gutters on arterials, collectors and locals consistent with adopted urban street designs; and</p> <p>(b) oil, grease and silt traps for parking lots, land divisions or commercial and industrial development.</p>	
	5.7.5	<p><b>Protecting Riparian Corridors and Coastal Lagoons</b> - Require drainage facilities, including curbs and gutters in urban areas, as needed to protect water quality for all new development within 1000 feet of riparian corridors or coastal lagoons.</p>	CONSISTENT: See consistency with Policy 5.2.10, 5.7.1, and 5.7.4.
	5.7.7	<p><b>Stormwater Discharge Permit Requirements</b> - Once the State and Regional Water Quality Control Boards promulgate new stormwater discharge permit requirements for municipal and industrial stormwater systems, obtain appropriate permits for all existing storm drainage systems and proposed drainage facilities and adhere to best management practices.</p>	
	5.10.5	<p><b>Preserving Agricultural Vistas</b> - Continue to preserve the aesthetic value of agricultural vistas. Encourage development to be consistent with the agricultural character of the community. Structures appurtenant to agricultural uses on agriculturally designated parcels shall be considered to be compatible with the agricultural character of surrounding areas.</p>	CONSISTENT: Although future development within Phase 1 (County site) would be visible from surrounding residential uses, there is not an identifiable viewpoint or elevated vista on these adjacent properties from which the proposed PUD would ultimately detract in a significant way. In addition, the planning area was identified as a primary area of growth in Measure U, which was passed by a vote of the people in order to direct new growth to designated areas within and around the City of Watsonville in order to protect agricultural lands and environmentally sensitive areas in the surrounding area.
	5.11.1	<p><b>Designation of Urban Open Space Lands (O-U)</b> - Designate Urban Open Space (O-U) areas on the General Plan and LCP Land Use Maps to identify those lands within the Urban Services Line and Rural Services Line which are not appropriate for development due to the presence of one or more of the following resources or constraints:</p>	CONSISTENT: The proposed Specific Plan and PUD includes buffers in areas where development is not appropriate, including the freshwater marsh/seasonal wetland in the western portion of the planning area and the Corralitos Creek riparian corridor in the eastern portion of the planning area. The wetland area within Phase 1 (County site) would be designated as Urban Open Space (O-U) as proposed in the Specific Plan and PUD.





Element	Policy Number	Policy	Project Consistency
		(a) Coastal bluffs and beaches (b) Coastal lagoons, wetlands and marshes (c) Riparian corridors and buffer areas (d) Floodways and floodplains (e) Wooded ravines and gulches which separate and buffer areas of development (f) Slopes over 30 percent (g) Sensitive wildlife habitat areas and biotic resource areas.	
	5.11.2	<b>Density Credits for Urban Open Space Lands</b> - Allow development density credit for lands designated as Urban Open Space to the extent specifically provided for by the General Plan and LCP Land Use Plan policies governing natural resources and public health and safety.	
	5.11.3	<b>Development within Urban Open Space Areas</b> - Consider development within areas identified as Urban Open Space only when consistent with all applicable resource protection and hazard mitigation policies, and only in the following circumstances: (a) For one single-family dwelling or other limited-scale use consistent with the adjacent General Plan and LCP Land Use Plan designation on an existing parcel of record if the parcel does not contain other areas for development, and if it is not possible to relocate facilities elsewhere on the property. (b) For other activities when the use is consistent with the maintenance of the area as open space, such as recreational use, habitat restoration, or flood or drainage control facilities. (c) For the location of service infrastructure when it cannot be placed in other locations out of the protected use areas.	
	5.13.20	<b>Conversion of Commercial Agricultural Lands</b> - Consider development of commercial agricultural lands to non-agricultural uses only under the following circumstances: (a) It is determined that the land is not viable for agriculture and that it is not likely to become viable in the near future (See policy 5.13.21);	<b>CONSISTENT:</b> The portion of the planning area within the County Phases 1 and 2 is not in agricultural production and is designated in the General Plan for Urban Low Residential. Therefore, Phase 1 (County site) of the proposed project would not result in a significant and unavoidable impact related to the conversion of commercial agricultural land.



Element	Policy Number	Policy	Project Consistency
		<p>(b) Findings are made that new information has been presented to demonstrate that the conditions on the land in question do not meet the criteria for commercial agricultural land; and</p> <p>(c) The conversion of such land will not impair the viability of, or create potential conflicts with, other commercial agricultural lands in the area.</p>	
	5.13.21	<p><b>Determining Agricultural Viability</b> - Require a viability study conducted in response to an application which proposes to convert agricultural land to non-agricultural land to include, but not limited to, an economic feasibility evaluation which contains at least:</p> <p>(a) An analysis of the gross revenue from the agricultural products grown in the area for the five years immediately preceding the date of filing the application.</p> <p>(b) An analysis of the operational expenses, excluding the cost of land, associated with the production of the agricultural products grown in the area for the five years immediately preceding the date of filing the application.</p> <p>(c) An identification of the geographic area used in the analyses. The area shall be of sufficient size to provide an accurate evaluation of the economic feasibility of agricultural uses for the land stated in the application.</p> <p>Recommendations regarding viability shall be made by the Agricultural Policy Advisory Commission based on evaluation of the viability study and the following criteria: parcel size, sizes of adjacent parcels, degree of non-agricultural development in the area, inclusion of the parcel in utility assessment districts, soil capabilities and topography, water availability and quality, and proximity to other agricultural use.</p>	<p>CONSISTENT: The portion of the planning area within the County Phase 1 and 2 is not in agricultural production. Therefore, the proposed project would not require a viability study.</p>
	5.13.22	<p><b>Conversion to Non-Agricultural Uses near Urban Areas</b> - Prohibit the conversion of agricultural lands (changing the land use designation from Agriculture to non-agriculture uses) around the periphery of urban areas except where it can be demonstrated that the viability of existing agricultural use is already severely limited by conflicts with the urban uses, where the conversion of land would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development and where the conversion of such land would not impair the viability of</p>	<p>CONSISTENT: The planning area is surrounded on three sides by existing urban development and existing agricultural uses within the planning area have already had to adapt to the intrusion of urban uses. County Phase 1 and 2 of the proposed project would not result in the conversion of commercial agricultural land.</p>



Element	Policy Number	Policy	Project Consistency
		other agricultural lands in the area. Within the Sphere of Influence of the City of Watsonville, no conversion of agricultural land is allowed which would adversely affect the city's General Plan affordable housing goals, unless determined to be of an overriding public benefit.	
	5.13.23	<b>Agricultural Buffers Requires</b> - Require a 200 foot buffer area between commercial agricultural and non-agricultural land uses to prevent or minimize potential land use conflicts, between either existing or future commercial agricultural and non-agricultural land uses.	CONSISTENT: The proposed Specific Plan and PUD incorporates a 200-foot buffer on the eastern portion of the planning area adjacent to existing agricultural uses. In addition, the proposed Specific Plan and PUD incorporate an interim agricultural buffer within the County Phase 1 and 2 which would provide a buffer entirely within the County Site prior to development of the City phases. Incorporation of this 200-foot buffer would reduce land use conflicts along the urban/agricultural boundary would ensure that the proposed development would not result in land use conflicts with existing agricultural uses.
	5.13.24	<b>Agricultural Buffer Findings Required for Reduced Setbacks</b> - A 200 foot buffer setback is required between habitable development and commercial agricultural land (including residential development, farm labor housing, commercial or industrial establishments on commercial agricultural land), unless a lesser distance is established as set forth in the Agricultural Land Preservation and Protection ordinance. Any amendments to the language of the agricultural buffer ordinance shall require a finding demonstrating that agricultural lands shall be afforded equal or greater protection with the amended language.	
	5.13.25	<b>Agricultural Policy Advisory Commission Review</b> - Require the following projects to be reviewed by the Agricultural Policy Advisory Commission for the purpose of recommending an appropriate setback and/or buffer area of non-developable land adjacent to commercial agriculture lands, consistent with the Agriculture Preservation and Protection ordinance:  (a) Habitable structures within 200 feet of commercial agricultural lands.  (b) Land divisions within 200 feet of commercial agricultural lands.  Density Credit shall be given for the buffer area.	CONSISTENT: The proposed PUD would be reviewed by the Agricultural Policy Advisory Commission. The proposed PUD incorporates an interim agricultural buffer within County Phase 2 of the PUD, which would provide a buffer entirely within the County Site prior to development of the City phases of the proposed Specific Plan. Incorporation of this 200-foot buffer would reduce land use conflicts along the urban/agricultural boundary and would ensure that the PUD would not result in land use conflicts with existing agricultural uses.
	5.13.31	<b>Agricultural Notification Recordation for Land Divisions</b> - Continue to require an Agriculture Notification statement to be included on the Final Map or Parcel Map and in each parcel deed for land divisions within 200 feet of commercial agriculture land in accordance with the Subdivision Regulations ordinance. The	CONSISTENT: Consistent with this policy, mitigation is incorporated herein which would require future development within the planning area to file a Right-to-Farm Notification Statement to run with the Title as disclosure and notice in deeds at the time of transfer or sale of all properties within the planning area. The statement shall inform any future property owners of the continuation of agricultural activities, including agricultural



Element	Policy Number	Policy	Project Consistency
		purpose of the statement is to inform property owners about adjacent agricultural practices, and advise them to be prepared to accept such inconvenience or discomfort from normal operations.	processing, in the area and shall disclose the potential effects of agricultural activities on adjacent land uses to future residents.
	5.13.32	<b>Agricultural Statement of Acknowledgement</b> - In accordance with the Agricultural Land Preservation and Protection ordinance and the Subdivision Regulations ordinance, continue to require, prior to issuance of building permits, the Recordation of a Statement of Acknowledgement or evidence that the statement has already been made part of the parcel deed, for parcels within 200 feet of commercial agricultural land as identified on the Agricultural Resources Maps and General Plan and LCP Land Use Maps. The purpose of the statement is to inform property owners about adjacent agricultural practices, and advise them to be prepared to accept such inconvenience or discomfort from normal operations. Where a reduction of the 200 foot buffer is approved, such deed notice shall also contain a statement that the permanent provisions and maintenance of the specified buffer setback shall be required, and shall include a notice of any requirement for fencing, vegetative screening and/or other barrier that has been incorporated as part of the required buffer.	CONSISTENT: See consistency with Policy 5.13.31.
	5.17.2	<b>Design Structures for Solar Gain</b> - Require the incorporation of environmentally sound active and passive heating and cooling and/or natural daylighting design principles in the location and construction of all new buildings and in the renovation and remodeling of existing buildings.	CONSISTENT: Sustainable principles and strategies such as consideration of building orientation for solar access have been incorporated into the Land Use Plan and Design Guidelines of the proposed Specific Plan and PUD to help guide site development in an environmentally responsible manner.
	5.17.3	<b>Solar Access</b> - Encourage maximum solar access orientation in siting new development, and require protection of solar access in existing development.	
	5.17.7	<b>Street Lighting</b> - Require installation of energy-efficient street lighting.	CONSISTENT: The proposed project would require use of energy efficient lighting.
	5.18	<b>Air Resources.</b> To improve the air quality of Santa Cruz County by meeting or exceeding state and federal ambient air quality standards, protect County residents from the health hazards of air pollution, protect agriculture from air pollution induced crop losses and prevent degradation of the scenic character of the area.	CONSISTENT: As discussed in Section 3.3: Air Quality, the proposed project is consistent with the Air Quality Management Plan for the Monterey Bay Region as confirmed by AMBAG. Short-term and long-term air quality impacts are addressed herein and mitigation measures are incorporated to ensure that the proposed project maintains the air quality level in the air basin and in the Pajaro Valley.



Element	Policy Number	Policy	Project Consistency
	5.18.1	<b>New Development.</b> Ensure new development projects are consistent at a minimum with the Monterey Bay Unified Air Pollution Control District Air Quality Management Plan and review such projects for potential impact on air quality.	
	5.18.6	<b>Plan for Transit Use.</b> Encourage commercial development and higher density residential development to be located in designated centers or other areas that can be easily served by transit.	CONSISTENT: The proposed project promotes alternative transportation in various ways. The PUD includes a circulation network that allows for alternatives to automobile travel, including public transportation, bicycle, and walking. The planning area would be served by the Santa Cruz Metropolitan Transit District. The closest route is located on Freedom Boulevard. However, should the Santa Cruz Metropolitan Transit District acquire additional funding to provide additional bus routes, routes along Crestview Drive, Atkinson Lane, and/or through the proposed project may be considered.
	5.18.7	<b>Alternatives to the Automobile.</b> Emphasize transit, bicycles and pedestrian modes of transportation rather than automobiles.	
	5.18.8	<b>Encouraging Landscaping</b> - Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.	CONSISTENT: The proposed Specific Plan and PUD preserves the riparian corridor of Corralitos Creek and the freshwater marsh in the western portion of the planning area. In addition, landscaping standards would require that natural features and existing trees are incorporated into the landscape plan to the extent practical and feasible.
	5.19.2	<b>Site Surveys</b> - Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential as determined by the inventory of archaeological sites, within the Archaeological Sensitive Areas, as designated on the General Plan and LCP Resources and Constraints Maps filed in the Planning Department.	CONSISTENT: Section 3.5: Cultural Resources discusses the potential for archaeological and historic resources within the planning area. The planning area has been historically used for agricultural production and has not been heavily disturbed due to development and grading over many years. Field inspections and an archival search in the state records on file at the Northwestern Information Center of the California Archeological Site Inventory were performed by ARM in February 2005 and did not identify any unique archeological resources within or in the vicinity of the planning area. Mitigation measures incorporated within the EIR address the accidental discovery of archaeological resources during construction activities.
	5.19.3	<b>Development Around Archaeological Resources</b> - Protect archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the site through project design and/or use restrictions, such as covering the site with earthfill to a depth that ensures the site will not be disturbed by development, as determined by a professional archaeologist.	
	5.19.4	<b>Archaeological Evaluations</b> - Require the applicant for development proposals on any archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to achieve General Plan and LCP Land Use Plan objectives and policies.	



Element	Policy Number	Policy	Project Consistency
PUBLIC SAFETY & NOISE	6.1.4	<b>Site Investigation Regarding Liquefaction Hazard</b> - Require site-specific investigation by a certified engineering geologist and/or civil engineer of all development proposals of more than four residential units in areas designated as having a high or very high liquefaction potential. Proposals of four units and under and non-residential projects shall be reviewed for liquefaction hazard through environmental review and/or geologic hazards assessment, and when a significant potential hazard exists a site-specific investigation shall be required.	CONSISTENT: Section 3.6: Geology and Soils addresses the potential for earthquakes and other associated geologic hazards. A Feasibility Level Geotechnical Investigation and Engineering Evaluation was prepared for the planning area. Mitigation incorporated herein requires that future development within the planning area be designed in accordance with the CBC and that a design level geotechnical report is prepared that includes a quantitative evaluation of liquefaction and liquefaction-induced lateral spreading in order to ensure that future development minimizes the risk of ground failure within the planning area.
	6.3.4	<b>Erosion Control Plan Approval Required for Development</b> - Require approval of an erosion control plan for all development, as specified in the Erosion Control ordinance. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.	CONSISTENT: As discussed in Section 3.8: Hydrology and Water Quality, the proposed project is required to comply with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), which requires preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. Once the County site is annexed to the City of Watsonville, future development within the City portion of the proposed Specific Plan would be required to comply with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code.
	6.3.5	<b>Installation of Erosion Control Measures</b> - Require the installation of erosion control measures consistent with the Erosion Control ordinance, by October 15, or the advent of significant rain, or project completion, whichever occurs first. Prior to October 15, require adequate erosion control to be provided to prevent erosion from early storms. For development activities, require protection of exposed soil from erosion between October 15 and April 15 and require vegetation and stabilization of disturbed areas prior to completion of the project. For agricultural activities, require that adequate measures are taken to prevent excessive sediment from leaving the property.	CONSISTENT: See consistency discussion under County Policy 6.3.8.
	6.3.7	<b>Reuse of Topsoil and Native Vegetation Upon Grading Completion</b> - Require topsoil to be stockpiled and reapplied upon completion of grading to promote regrowth of vegetation; native vegetation should be used in replanting disturbed areas to enhance long-term stability.	CONSISTENT: Potential soil and erosion impacts as a result of the proposed Specific Plan are addressed in Section 3.4: Biological Resources, Section 3.8: Hydrology and Water Quality, and Section 3.6: Geology and Soils of the Draft EIR. Future development within the County Site would require compliance with Section 16.22 of the Santa Cruz County Code (Erosion Control Ordinance), which requires preparation of an erosion control plan that indicates the proposed methods for controlling runoff, erosion and sediment movement prior to approval of a building permit, development permit or land division within the County site. Reuse of topsoil would be required as part of this process.





Element	Policy Number	Policy	Project Consistency
	6.3.8	<b>On-Site Sediment Containment</b> - Require containment of all sediment on the site during construction and require drainage improvements for the completed development that will provide runoff control, including onsite retention or detention where downstream drainage facilities have limited capacity. Runoff control systems or Best Management Practices shall be adequate to prevent any significant increase in site runoff over pre-existing volumes and velocities and to maximize on-site collection of non-point source pollutants.	CONSISTENT: As discussed in Section 3.8: Hydrology and Water Quality, the proposed Specific Plan includes Low Impact Design (LID) techniques in various locations, including the potential for retention and detention facilities. Mitigation measures are incorporated within Section 3.8: Hydrology and Water Quality to address water quality and drainage improvements for runoff control.
	6.3.9	<b>Site Design to Minimize Grading</b> - Require site design in all areas to minimize grading activities and reduce vegetation removal based on the following guidelines: (a) Structures should be clustered; (b) Access roads and driveways shall not cross slopes greater than 30 percent; cuts and fills should not exceed 10 feet, unless they are wholly underneath the footprint and adequately retained; (c) Foundation designs should minimize excavation or fill; (d) Building and access envelopes should be designated on the basis of site inspection to avoid particularly erodable areas; (e) Require all fill and sidecast material to be recompacted to engineered standards, reseeded, and mulched and/or burlap covered.	CONSISTENT: Design strategies to limit disturbance to the natural environment have been incorporated into the Design Guidelines of the proposed Specific Plan to help guide site development in an environmentally responsible manner. These design strategies minimize site grading where feasible and encourage development to respect existing hillsides.
	6.3.11	<b>Sensitive Habitat Considerations for Land Clearing Permits</b> - Require a permit for any land clearing in a sensitive habitat area and for clearing more than one quarter acre in Water Supply Watershed, Least Disturbed Watershed, very high and high erosion hazard areas no matter what the parcel size. Require that any land clearing be consistent with all General Plan and LCP Land Use policies.	CONSISTENT: If land clearing is required in the riparian buffer zones, a permit would be required and restoration would be implemented. Construction of pedestrian pathways would be the only construction within the wetland buffer area.
	6.4.2	<b>Development Proposals Protected from Flood Hazard (LCP)</b> Approve only those grading applications and development proposals that are adequately protected from flood hazard and which do not add to flooding damage potential. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures.	CONSISTENT – Section 3.8, Hydrology and Water Quality addresses the potential for the proposed project to be located within a flood zone and/or to result in additional flooding. The area adjacent to Corralitos Creek, which is not proposed for development is the only portion of the planning area that is located within the 100-year flood zone. This area is located outside of the Phase 1 County site.



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	6.5.1	<p><b>Access Standards</b> - Require all new structures, including additions of more than 500 square feet, to single- family dwellings on existing parcels of record, to provide an adequate road for fire protection in conformance with the following standards:</p> <p>(a) Access roads shall be a minimum of 18 feet wide for all access roads or driveways serving more than two habitable structures, and 12 feet for an access road or driveway serving two or fewer habitable structures. Where it is environmentally inadvisable to meet these criteria (due to excessive grading, tree removal or other environmental impacts), a 12- foot wide all-weather surface access road with 12- foot wide by 35- foot long turnouts located approximately every 500 feet may be provided with the approval of the Fire Chief. Exceptions: Title 19 of the California Administrative Code, requires that access roads from every state governed building to a public street shall be all-weather hard-surface (suitable for use by fire apparatus) roadway not less than 20 feet in width. Such roadway shall be unobstructed and maintained only as access to the public street.</p> <p>(b) Obstruction of the road width, as required above, including the parking of vehicles, shall be prohibited, as required in the Uniform Fire Code.</p> <p>(c) The access road surface shall be “all weather”, which means a minimum of six inches of compacted aggregate base rock, Class 2 or equivalent, certified by a licensed engineer to 95 percent compaction and shall be maintained. Where the grade of the access road exceeds 15 percent, the base rock shall be overlain by 2 inches of asphaltic concrete, Type B or equivalent, and shall be maintained.</p> <p>(d) The maximum grade of the access road shall not exceed 20 percent, with grades greater than 15 percent not permitted for distances of more than 200 feet at a time.</p> <p>(e) The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts.</p> <p>(f) Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet vertical clearance.</p> <p>(g) An access road or driveway shall not end farther than 150 feet</p>	<p>CONSISTENT: The proposed project would require that all future development within the planning area is subject to applicable fire protection standards for access as required by the City and County.</p>



Element	Policy Number	Policy	Project Consistency
		<p>from any portion of a structure.</p> <p>(h) A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length.</p> <p>(i) No roadway shall have an inside turning radius of less than 50 feet. Roadways with a radius curvature of 50 to 100 feet shall require an additional 4 feet of road width. Roadways with radius curvatures of 100 to 200 feet shall require an additional 2 feet of road width.</p> <p>(j) Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures.</p> <p>(k) Bridges shall be as wide as the road being serviced, meet a minimum load bearing capacity of 25 tons, and have guard rails. Guard rails shall not reduce the required minimum road width. Width requirements may be modified only with written approval from the Fire Chief. Bridge capacity shall be posted and shall be certified every five years by a licensed engineer. For bridges served by 12 foot access roads, approved turnouts shall be provided at each bridge approach.</p> <p>(l) All private access roads, driveways, turnarounds and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times.</p> <p>(m) To ensure maintenance of private access roads, driveways, turnarounds and bridges, the owner(s) of parcels where new development is proposed shall participate in an existing road maintenance group. For those without existing maintenance agreements, the formation of such an agreement shall be required.</p> <p>(n) All access road and bridge improvements required under this section shall be made prior to permit approval, or as a condition of permit approval.</p> <p>(o) Access for any new dwelling unit or other structure used for human occupancy, including a single-family dwelling on an existing parcel of record, shall be in the duly recorded form of a deeded access or an access recognized by court order. Diagrammatic representations of access standards are available at the Santa Cruz County Planning Department and local fire</p>	



Element	Policy Number	Policy	Project Consistency
		agencies.	
	6.5.3	<p><b>Conditions for Project Approval</b> - Condition approval of all new structures and additions larger than 500 square feet, and to single-family dwellings on existing parcels of record to meet the following fire protection standards:</p> <p>(a) Address numbers shall be posted on the property so as to be clearly visible from the access road. Where visibility cannot be provided, a post or sign bearing the numbers shall be set adjacent to the driveway or access road to the property and shall have a contrasting background. Numbers shall be posted when construction begins.</p> <p>(b) Provide adequate water availability. This may be provided from an approved water system within 500 feet of a structure, or by an individual water storage facility (water tank, swimming pool, etc.) on the property itself. The fire department shall determine the adequacy and location of individual water storage to be provided. Built-in fire protection features (i.e., sprinkler systems) may allow for some exemptions of other fire protection standards when incorporated into the project.</p> <p>(c) Maintain all around structures a clearance of not less than 30 feet or to the property line (whichever is a shorter distance) of all flammable vegetation or other combustible materials; or for a greater distance as may be prescribed by the fire department.</p> <p>(d) Provide and maintain one-half inch wire mesh screens on all chimneys.</p> <p>(e) Automatic smoke detection devices shall be installed and maintained in accordance with the California Building Code and local Fire Department regulations. Sprinkler and fire alarm systems, when installed, shall meet the requirements of the local Fire Department.</p> <p>(f) Provide adequate disposal of refuse. All development outside refuse collection boundaries shall be required to include a suitable plan for the disposal of flammable refuse. Refuse disposal shall be in accordance with state, County or local plans or ordinances. Where practical, refuse disposal should be by methods other than open burning.</p> <p>(g) Require fire retardant roofs on all projects, as specified in the</p>	<p>CONSISTENT: The proposed Specific Plan and PUD provides language to address that all development would be subject to applicable fire protection standards and required by the City and County.</p>



Element	Policy Number	Policy	Project Consistency
		County Fire Code and the Uniform Fire Code. Exterior walls constructed of fire resistant materials are recommended, but are not necessarily required.	
	6.5.5	<b>Standards for New Dead End Roads</b> - Prohibit newly constructed dead-end roads without secondary access serving more than one parcel in new minor land divisions or subdivisions which exceed the following distances from an adequate through road unless approved by the applicable fire protection agency, the Department of Public Works, and by the Planning Commission; in no case shall a new dead-end road exceed ½ mile in length. Urban & Suburban General Plan and LCP Land Use Plan designation 500' Rural General Plan and LCP Land Use Plan designation 1000' Mountain General Plan and LCP Land Use Plan designation 1500' The standard for new subdivisions of 5 or more lots shall not exceed 500' unless recommended by the applicable fire protection agencies and the Department of Public Works, and approved by the Planning Commission.	CONSISTENT: As shown in Figure 2-18: Planning Area Access and Internal Circulation, Phase 1 and 2 of the County site does not include a dead-end public road exceeding 500 feet in length.
	6.5.11	<b>Fire Protection Standards for Land Divisions Inside the Urban Services Lin</b> - Require all new land divisions within the Urban Services Line to be consistent with the California Fire Code, California Building Code, and other adopted County and local fire agency ordinances.	CONSISTENT: Future development within the planning area would be subject to applicable fire protection standards and required by the City and County. In addition, mitigation is incorporated herein that requires that future development is compliant with the California Building Code.
	6.8.2	<b>Measuring Ambient Magnetic Fields</b> - Require the measurement of the ambient magnetic fields for all residential land divisions or other new discretionary development (not including development of one single- family dwelling on an existing lot of record) where such property is within 150 feet of 21 kv or greater transmission or distribution powerlines of the electric power delivery system. The measurements should delineate the area on the site where the magnetic field is above the level at which potential health effects may exist, based on the then current state of scientific knowledge.	CONSISTENT: See consistency discussion under County of Santa Cruz Policy 6.8.3.
	6.8.3	<b>Development Mitigation Measures</b> - Utilize the following techniques to minimize exposure to potentially hazardous electric and magnetic fields from electric powerlines.  (a) Site Planning – Locate and/or cluster habitable building envelopes away from the potentially hazardous electric and magnetic fields consistent with the current state of scientific	CONSISTENT: Section 3.12 Public Services, Utilities, and Recreation addresses electric utilities. An electrical and natural gas distribution system would be installed in a common joint trench along with telephone and cable television facilities. Additionally, a large overhead electrical utility line bisects the planning area. The line extends northeast along the northern property line of the Grimmer Orchards and north through both of the Zepeda Farms parcels. The length of the power line within the site is approximately 1,500 linear feet. The fifteen poles located within the planning area would be moved or relocated



Element	Policy Number	Policy	Project Consistency
		<p>knowledge.</p> <p>(b) Underground the Powerline – Reduce the electric and magnetic fields by undergrounding powerlines in a metallic pipe or other appropriate insulator.</p> <p>(c) Reconfigure the Powerline – Reconfigure lines and conductors in transmission or distribution lines to achieve significant cancellation of the electric and magnetic fields near the ground.</p>	<p>underground with implementation of the proposed project. This would occur with buildout of the proposed Specific Plan, but would not occur with implementation of the PUD.</p>
	6.9.1	<p><b>Land Use Compatibility Guidelines</b> - Require new development to conform with the Land Use Compatibility Guidelines (Figure 6-1). All new residential and noise sensitive land developments should conform to a noise exposure standard of 60dBLdn (day/night average noise level) for outdoor use and 45dBLdn for indoor use. New development of land which cannot be made to conform to this standard shall not be permitted. Assure a compatible noise environment for various land uses through site planning, building orientation and design, interior layout, and physical barriers, landscaping, and buffer areas where appropriate</p>	<p>CONSISTENT: Section 3.10: Noise addresses the existing noise environment in the project vicinity and noise impacts associated with the PUD. Implementation of the PUD would create new noise sources typical of a residential neighborhood. Noise typically associated with residential land uses does not produce noise levels greater than 60 dBA.</p>
	6.9.7	<p><b>Construction Noise</b> - Require mitigation of construction noise as a condition of future project approvals.</p>	<p>CONSISTENT: Section 3.10: Noise addresses the noise impacts associated with construction of the County site. To reduce the effects of construction noise, the County of Santa Cruz shall ensure that the project applicant/developers include various noise mitigation strategies on all construction contracts for future development within the Phase 1 (County site) as discussed herein.</p>
	6.10.2	<p><b>Evaluation and Mitigation</b> - Require the evaluation of mitigation measures for any project that would cause significant degradation of the noise environment by:</p> <p>(a) Causing the Ldn in existing residential areas to increase by 5 dB or more and remain below 60 dB;</p> <p>(b) Causing the Ldn in existing residential areas to increase by 3 dB or more and, thereby, exceed an Ldn of 60 dB;</p> <p>(c) Causing the Ldn in existing residential areas to increase by 3 dB or more if the Ldn currently exceeds 60 dB.</p>	<p>CONSISTENT: Section 3.10: Noise addresses the existing noise environment in the project vicinity and noise impacts associated with the proposed project. The proposed project would have a less than significant impact on long-term operational noise levels.</p>
	7.2.1	<p><b>Neighborhood Park Standards</b> - Locate neighborhood parks based on the general standard that most urban residences should be within one-half mile of a neighborhood park serving a population of 1500 to 2000 people. An area of 4-6 acres is considered</p>	<p>CONSISTENT: The proposed Specific Plan and PUD includes approximately 3.5 acres of land dedicated for use as an expansion to the existing two-acre Crestview Park. The park would provide opportunities for both passive and active recreation, including tennis, soccer, baseball, play equipment, and barbeque and picnic areas. The County site preserves and</p>





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		adequate for a neighborhood park; or when combined with school grounds, 2-3 acres would be sufficient. It should be recognized that park acreage standards are set as long-term goals rather than set objectives to be met. Facilities need not be elaborate and should include children's play equipment, play lots, paved game areas, free play fields, and areas for passive recreation and restroom facilities. Designate specific sites for neighborhood parks throughout the urban portion of the County on the General Plan and Local Coastal Program Land Use Maps.	includes buffers along the freshwater marsh/season wetland in the western portion of the planning area that would be designated Urban Open Space (O-U).  The open space requirements specified in County Code Section 13.10.323 e(6)F shall not apply to the County site. The project applicant would be required to provide a minimum of 50 square feet of private open space per unit, and a minimum of 150 square feet of common open space per unit. Common open space may consist of active or passive recreation space, designed with both children and adults in mind. The Design Review process shall determine the final configuration and location of open space on-site, with special consideration for the opportunity to incorporate passive open space adjacent to the wetland area and active areas that are safe and observable from adjacent housing units.
	7.2.2	<b>Mini-Park Sites</b> - Consider the development of mini-park sites as an alternative to meet minimum park acreage requirements in the event that designated neighborhood park sites cannot be acquired.	
	7.2.3	<b>Neighborhood Park Siting Criteria</b> - Provide neighborhood park and playground facilities developed, where possible, in conjunction with residential development or as improvements to school grounds. Criteria for selection should include available vacant land, degree of development pressures in the area, size, density of residential development (current and future), access, and potential for suitable park facilities. Other factors include attractive natural open space features (e.g., streams, natural arroyos), the relationship of sites to proposed trail corridors, and the proximity of other public parks and private recreation facilities open to the public which serve the same neighborhood park needs	
	7.12.1	<b>Mitigating Impacts From New Development</b> - Prior to issuance of any building permit, require a written statement confirming payment in full of all applicable developer fees and other requirements lawfully imposed by each school district in which the project is located. Prior to approval of any land division or other discretionary development permit application for a project which would authorize additional development, consider the impact of such action on each school district in which the project is located. Require feasible mitigation measures permitted by law to reduce any significant impacts on the school system or approve the project on the basis of a statement of overriding considerations. Prior to approval of any General Plan and/or LCP Amendment, Rezoning, or other legislative action which would authorize additional development to occur as a matter of land use policies, consider the impact of such action on each school district within which the land	CONSISTENT: The proposed project would be required to pay all applicable developer impact fees, including fees imposed by the Pajaro Unified School District, prior to occupancy of future development within the planning area.



Element	Policy Number	Policy	Project Consistency
		is located. Either require feasible mitigation measures to reduce any significant impacts on each school district to a level of insignificance, deny the project if such mitigation measures are infeasible, or approve the project on the basis of a statement of overriding conditions. Mitigation measures may include, by way of example only, the reduction of residential densities or the controlled phasing of residential development within attendance areas of the school district having inadequate facilities or services.	
	7.14.1	<b>Mitigating Impacts from New Development</b> - Review development proposals with respect to their impact on child care; require, where appropriate, that proposed developments provide for mitigation of the impact of the proposed development on the need for child care facilities or services, as a condition of project approval.	CONSISTENT: Future development within the County site would be required to pay the County's development impact fees for child care prior to occupancy of future development within the County site.
	7.18.1	<b>Linking Growth to Water Supplies</b> - Coordinate with all water purveyors and water management agencies to ensure that land use and growth management decisions are linked directly to the availability of adequate, sustainable public and private water supplies.	CONSISTENT: See discussion under County of Santa Cruz Policy 7.18.3
	7.18.2	<b>Written Commitments Confirming Water Service Required for Permits</b> - Concurrent with project application, require a written commitment from the water purveyor that verifies the capability of the system to serve the proposed development. Projects shall not be approved in areas that do not have a proven, adequate water supply. A written commitment is a letter from the purveyor guaranteeing that the required level of service for the project will be available prior to the issuance of building permits, or in the case of a subdivision, prior to filing the Final Map or Parcel Map. The County decision making body shall not approve any development project unless it determines that such project has adequate water supply available.	
	7.18.3	<b>Impacts of New Development on Water Purveyors</b> - Review all new development proposals to assess impacts on municipal water systems, County water districts, or small water systems. Require that either adequate service is available or that the proposed development provide for mitigation of its impacts as a condition of project approval.	CONSISTENT: Section 3.12: Public Services, Utilities, and Recreation addresses impacts of new development on the City of Watsonville, which is the water purveyor for the proposed project. Buildout of the proposed Specific Plan and PUD would generate a water demand of approximately 107.22 acre feet of potable water every year. This demand is approximately 57.58 AFY less than historic water demand of 164.8 AFY within the planning area. However, Phase I (County site) would result in a water demand of approximately 28 AFY which would result in a demand of approximately 27.35 AFY over



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			<p>the existing water use within this portion of the planning area. The City of Watsonville indicates they have adequate supplies to serve the proposed project. Future development on Phase 1 (County site) and the remainder of the planning area would be required to pay the City's groundwater impact fee, which is currently set at \$347.56 per bedroom and is used to retrofit water fixtures (e.g. toilets, showerheads, etc.) within the City. The water retrofit program, which is funded by the groundwater impact fees results in a savings of 748 gallons of water per month, would offset approximately 70 to 100 percent of the water consumption of new homes within the planning area, which would offset the water demand for Phase 1 (County site).</p>
	7.18.6	<p><b>Water Conservation Requirements</b> - Utilize the best available methods for water conservation in new developments. Work with all water purveyors to implement demand management programs and water conservation measures. In areas where shortage or groundwater overdraft has been substantiated by the water purveyor, require water conservation measures for new and existing uses. Require the use of water-saving devices such as ultra low-flow fixtures and native drought-resistant planting in new development projects to promote ongoing water conservation.</p>	<p>CONSISTENT: The proposed Specific Plan and PUD encourages sustainable and green design including the efficiency of buildings and the use of water.</p>
	7.19.1	<p><b>Sewer Service to New Development</b> - Concurrent with project application, require a written commitment from the service district. A written commitment is a letter, with appropriate conditions, from the service district guaranteeing that the required level of service for the project will be available prior to issuance of building permits, or in the case of a subdivision, prior to filing the Final Map or Parcel Map. The County decision making body shall not approve any development project unless it determines that such project has adequate sewage treatment plant capacity.</p>	<p>CONSISTENT: The Watsonville WWTP, which would serve the proposed project, has the capacity to Serve the proposed project. Future development within the planning area would be required to pay applicable development impact fees at the time of issuance of the building permits. The City and the County will establish CFD or JPA as part of the proposed Specific Plan and PUD to help fund infrastructure costs for the proposed project not covered by City or County impact fees and taxes. Funding of additional services would be handled through levies by the CFD in order to meet acceptable thresholds.</p>
	7.19.2	<p><b>Development Linkage to Downstream Sewer System Improvements</b> - Require new development to pay its full fair share of downstream sewer system improvements needed. In areas where cumulative sewer capacity is a problem, as indicated by the Department of Public Works, require all development to make required downstream improvements or be appropriately limited until downstream improvements are made.</p>	
	7.23.1	<p><b>New Development</b> - Require new discretionary development projects to provide both on and off-site improvements to alleviate drainage problems before considering on-site detention of storm water. Require runoff levels to be maintained as predevelopment</p>	<p>CONSISTENT: The proposed Specific Plan includes a conceptual stormwater detention plan, however the proposed design features would provide detention of surface water runoff in order to ensure that post-development runoff does not exceed pre-development runoff. Mitigation measures incorporated herein would reduce the long-term surface water runoff</p>



Element	Policy Number	Policy	Project Consistency
		rates for a minimum design storm as determined by Public Works Design Criteria to reduce downstream flood hazards and analyze potential flood overflow problems, where applicable. Require on-site retention and percolation of increased runoff from new development in Water Supply Watersheds and Primary Groundwater Recharge Areas, and in other areas as feasible.	flows associated with future development within each phase by requiring that future development prepare a detailed comprehensive drainage study to reduce long-term surface water flows consistent with the conceptual drainage plans in the proposed Specific Plan.
	7.23.2	<b>Minimizing Impervious Surfaces</b> - Require new development to limit coverage of lots by parking areas and other impervious surfaces, in order to minimize the amount of post-development surface runoff.	CONSISTENT: As discussed in Section 3.8: Hydrology and Water Quality, the proposed Specific Plan includes Low Impact Design (LID) techniques in various locations, including the use of pervious/permeable pavement and the minimization of impervious surfaces where feasible.
	7.23.4	<b>Downstream Impact Assessments</b> - For any proposed development projects within the County Urban Services Line, require the applicant to conduct a downstream impact assessment and submit an engineered drainage plan. The assessment should require the design of any improvements needed to upgrade the storm drain system such that local flooding due to insufficient capacities would be eliminated for the appropriate design rainstorm.	CONSISTENT: The proposed Specific Plan includes a conceptual stormwater detention plan, however the proposed design features would provide detention of surface water runoff in order to ensure that post-development runoff does not exceed pre-development runoff. Mitigation measures incorporated herein would reduce the long-term surface water runoff flows associated with future development within each phase by requiring that future development prepare a detailed comprehensive drainage study to reduce long-term surface water flows consistent with the conceptual drainage plans in the proposed Specific Plan.
	7.23.5	<b>Control Surface Runoff</b> - Require new development to minimize the discharge of pollutants into surface water drainage by providing the following improvements or similar methods which provide equal or greater runoff control:  (a) Construct curbs and gutters on arterials, collectors and locals consistent with adopted urban street designs; and  (b) Construct oil, grease and silt traps for parking lots, land divisions or commercial and industrial development. Condition development project approvals to provide ongoing maintenance of oil, grease and silt traps.	CONSISTENT: As discussed in Section 3.8: Hydrology and Water Quality, the proposed Specific Plan includes Low Impact Design (LID) techniques in various locations and at key stormwater runoff release locations. LID helps protect wetlands and recharge areas by integrating landscaping features or Integrated Management Practices (IMPs). IMPs include various stormwater filtration devices including stormwater detention areas, bio and grass swales, and pervious pavement. In addition to providing other environmental benefits, these techniques will help improve overall water quality.
	8.2.2	<b>Designing for Environmental Protection</b> - Require new development to comply with all environmental ordinances, to be sited and designed to minimize grading, avoid or provide mitigation for geologic hazards and sensitive habitats, and conform to the physical constraints and topography of the site.	CONSISTENT: Mitigation measures are incorporated herein to ensure that the proposed PUD mitigates potential impacts from geologic hazards and hazardous materials, as well as impacts to biological resources.
	8.2.3	<b>Design Criteria for Utilities</b> - Require new development to meet County adopted criteria and standards for the design of utilities,	CONSISTENT: Since future development of the County site would be eventually annexed to the City of Watsonville, the proposed project will be required to meet the adopted



Element	Policy Number	Policy	Project Consistency
		water service and sewage disposal requirements and drainage systems. All new power line distribution systems, where practical, and all services to new subdivisions shall be placed underground.	utilities criteria and standards of the City.
	8.2.5	<b>Circulation</b> - Encourage the design of pedestrian, bicycle, and vehicle circulation and parking to be safe, convenient, readily understandable, and coordinated with development on surrounding properties; and encourage design which minimizes the visual impact and reduces the scale of paving materials and parking.	CONSISTENT: The PUD includes a circulation network that allows for alternatives to automobile travel, including public transportation, bicycle, and walking that would be designed to coordinate with the surrounding development. To ensure pedestrian safety, the PUD includes traffic calming measures such as traffic circles, bulb-outs, and landscaping.
	8.2.6	<b>Circulation Systems for Persons With Disabilities</b> - Require new development to provide pedestrian, bicycle and vehicular circulation systems which include adequate facilities for persons with disabilities, to be consistent with the requirements of the Americans With Disabilities Act, Public Works Design Criteria, County Code, and the Circulation and Fire Hazards sections of the General Plan and LCP Land Use Plan.	CONSISTENT: The proposed project would be required to be designed to accommodate persons with disabilities.
	8.3.1	<b>Clustering for Environmental Protection</b> - Require development clustering where clustering of units is essential to meet the intent of the General Plan and LCP Land Use Plan to preserve protected use areas such as scenic areas, riparian corridors, coastal lagoons and marshes, or other natural features. (See Conservation and Open Space Element and sections regarding protection of Agriculture and Timber.)	CONSISTENT: The PUD standards ensure development clustering where feasible. The proposed project includes buffers along the freshwater marsh/seasonal wetland in the western portion of the planning area, which would be designated Urban Open Space (O-U).
	8.3.2	<b>Urban Development</b> - Encourage development clustering in urban areas to achieve maximum open space for recreational use, for the design of focal points, and to promote energy-efficient and cost-efficient site planning.	CONSISTENT: See discussion under County of Santa Cruz Policy 8.3.1.
	8.4.1	<b>Neighborhood Character</b> - Based on the Zoning ordinance, require new infill development on vacant land within established residential neighborhoods to be consistent with the existing residential character of the neighborhood, dwelling unit types, and where appropriate, architectural style, allowing for innovative design for clustering or solar design. Project density in established residential neighborhoods shall be compatible with existing neighborhood density, consistent with the land use designations, with incentives given to accommodate elderly and low and moderate income housing, but not to exceed densities designated in	CONSISTENT: The proposed project would be re-zoned to allow for up to 20 units per acre to accommodate affordable housing. The PUD would ensure that the proposed project promotes a positive visual appearance by providing quality architectural and site design techniques to minimize impacts to the surrounding neighborhood. Sustainable principles and strategies are included in the PUD to help guide site development in an environmentally responsible manner.



Element	Policy Number	Policy	Project Consistency
		the General Plan and LCP Land Use Plan.	
	8.6.1	<b>Maintaining a Relationship Between Structure and Parcel Sizes</b> - Recognize the potential for significant impacts to community character from residential structures which are not well-proportioned to the site; and require residential structures to have a direct relationship to the parcel size as per the Residential Site and Development Standards ordinance.	CONSISTENT: Development standards such as requirements for building heights, lot coverage, lot dimensions, and yard setbacks have been incorporated into the Land Use Plan of the proposed PUD that will ensure a positive relationship between structure and parcel sizes.
	8.6.5	<b>Designing With the Environment</b> - Development shall maintain a complementary relationship with the natural environment and shall be low-profile and stepped-down on hillsides.	CONSISTENT: Design strategies to limit disturbance to the natural environment have been incorporated into the proposed PUD to help guide site development in an environmentally responsible manner. These design strategies deter site grading where feasible and encourage development to respect existing hillsides.
	8.6.7	<b>Solar Access</b> - Sunlight and solar access shall be maintained wherever practicable and energy-efficient building design shall be fostered. Passive solar siting shall be encouraged for all new development in accordance with adopted building and energy codes.	CONSISTENT: Sustainable principles and strategies such as consideration of building orientation for solar access have been incorporated into the proposed PUD to help guide site development in an environmentally responsible manner.





**Table 3.9-1b Project Consistency with the City of Watsonville General Plan Policies**

Element	Policy Number	Policy	Project Consistency
<b>Consistency with the City of Watsonville General Plan Policies</b>			
GROWTH & CONSERVATION	3.3	<b>Agricultural Land Use</b> - Foster the continuation of agriculture in the Pajaro Valley.	PARTIALLY INCONSISTENT: Although Phase 2 (City site) would result in a significant and unavoidable impact due to the conversion of Important Farmland, the proposed Specific Plan and PUD is consistent with the voter-approved Measure U. Measure U established an urban limit line (ULL) along the northern boundary, excludes land previously included east and west of East Lake Avenue, and directs growth into several unincorporated areas. The three primary areas of growth include the planning area (Atkinson Lane), as well as the Buena Vista, and the Manabe-Burgstrom (now Manabe-Ow) Specific Plan areas. The proposed project would include development of the planning area within the existing ULL and annexation of those areas within the planning area that are located outside of the City's existing Sphere of Influence (SOI).  The proposed Specific Plan and PUD includes 14.1 acres for preservation of a 200-foot agricultural buffer located on the eastern boundary of the planning area adjacent to the existing agricultural fields, which would provide a buffer between the planning area and adjacent agricultural uses for the continuity of long-term agricultural use beyond the ULL, which would ensure consistency with Policy 3.F in the <i>City of Watsonville General Plan</i> .
	3.B	<b>Annexation</b> - The City shall pursue annexation of undeveloped and underdeveloped land between the City limit and the urban limit line.	
	3.F	<b>Agricultural Land Conservation</b> - The City shall plan for the preservation and enhancement of important agricultural soils by encouraging the County and LAFCO to prohibit continued urbanization of lands beyond the urban limit line and by encouraging the retention of land beyond the urban limit line for long-term agricultural purposes.	
LAND USE	4.1	<b>Population and Housing</b> - Plan intensification of existing development and expansion of the City limits appropriate to address the quality of life needs of a population of 51,600 within the City limit and Sphere of Influence by 2005.	CONSISTENT: According to AMBAG, there are approximately 14,073 existing, planned, or permitted housing units in the City of Watsonville for a total population of 52,492.3 people. The proposed project would add approximately 1,678.5 persons to the City of Watsonville. This population growth within the planning area would raise the total population in the City of Watsonville. According to the DOF population forecast for the City of Watsonville, by the year 2015 the population in the City would consist of 54,857 people and by the year 2020 would consist of 56,544 people. Therefore, buildout of the proposed project is accommodated for in the regional forecasts for the City of Watsonville.
	4.A	<b>Residential Land Use</b> - The City shall plan for housing production on a five year cycle consistent with the policies of the adopted Housing Element. The overall housing objectives for the General Plan time frame shall also be considered in long-range planning for housing.	CONSISTENT: The City's certified 2002-2007 Housing Element does not include the Measure U future growth areas. The planning area and other Measure U future growth areas are expected to accommodate future housing element cycles undertaken during the 20-25 year lifespan of Measure U.
	4.A.2	<b>Land Use Compatibility</b> - The city shall monitor housing production to ensure compatibility with surrounding land uses.	CONSISTENT: The proposed Specific Plan would be compatible with surrounding development and includes various residential densities ranging from 8 to 20 units per acre.



Element	Policy Number	Policy	Project Consistency
	4.A.4	<b>Housing Development Pacing</b> - The City shall monitor the creation of housing and jobs and review opportunities for pacing the development of housing with the creation of new jobs in the city. The monitoring program is intended to ensure a balance of jobs and housing units in the city so the city avoids becoming a bedroom community for other areas.	CONSISTENT: The proposed project is consistent with the voter-approved Measure U. Measure U established an urban limit line (ULL) along the northern boundary, excludes land previously included east and west of East Lake Avenue, and directs growth into several unincorporated areas. The three primary areas of growth include the planning area (Atkinson Lane), as well as the Buena Vista, and the Manabe-Burgstrom (now Manabe-Ow) Specific Plan areas. The proposed Manabe-Ow Specific Plan, which is included in Measure U would provide over a million square feet of business park development and 25,000 square feet of retail uses that would provide approximately 2,100 jobs. The City will continue to monitor the creation of housing and job opportunities as future development in the City is proposed.
	4.A.6	<b>Specific Plan at Atkinson Lane</b> - The City shall prepare a specific plan for the Atkinson Lane Area to identify and provide for the financing of neighborhood facility needs and location, location of various residential densities, and greenbelt, community park, circulation, parking, streetscape, and building design. Target 660 housing units.	CONSISTENT: The proposed project will be developed within the area identified as the Atkinson Lane Area. The proposed project includes various residential densities ranging from 8 to 20 units per acre and an expansion of the existing Crestview Park.
	4.7	<b>Land Use Suitability</b> - Ensure that the orderly development of land for the needs of the existing and projected population within the City limit and Sphere of Influence is based on the land's overall suitability, including: the accessibility of existing and proposed public facilities, services, and utilities; physical and financial constraints; and/or growth inducing impacts.	CONSISTENT: The proposed Specific Plan will be developed within the area identified as the Atkinson Lane Area in accordance with Measure U. The Plan designates land uses, development standards, and design guidelines which govern future development of the site. The Plan also includes various residential densities ranging from 8 to 20 units per acre, location of new roadways, and an expansion of the existing Crestview Park. The analysis herein analyzes the environmental impacts associated with future development within the planning area. The environmental impact report evaluates overall suitability of the planning area for the proposed project, evaluates public services and utilities and potential growth inducing impacts.
	4.8	<b>General Plan Implementation</b> - Ensure that future development is consistent with the General Plan through the city's zoning ordinance, Development Standards, Capital Improvement Program, and environmental review process.	
	4.A.6	<b>Specific Plan at Atkinson Lane</b> - The City shall prepare a specific plan for the Atkinson Lane Area to identify and provide for the financing of neighborhood facility needs and location, location of various residential densities, and greenbelt, community park, circulation, parking, streetscape, and building design. Target 660 housing units.	
	4.B	<b>Neighborhood Preservation</b> - The City shall plan for the protection of existing neighborhood qualities and the provision of adequate neighborhood facilities in developing areas.	



Element	Policy Number	Policy	Project Consistency
	4.B.2	<b>New Neighborhood Facilities</b> - The City shall utilize land use controls, such as, specific plans, LOS standards, and zoning development controls, to ensure balanced neighborhood development in a compact pattern, and to avoid premature extension of public facilities and services.	CONSISTENT: The <i>City of Watsonville General Plan</i> recognizes the Specific Plan as the Atkinson Lane Specific Plan area in accordance with Measure U. The proposed Specific Plan is consistent with the requirements of the California Planner's Guide to Specific Plans.
URBAN DESIGN	5.1	<b>Visual Resources</b> - Preserve and enhance the built and natural visual resources within Watsonville.	CONSISTENT: The proposed project respects the visual and scenic resources of the City of Watsonville and surrounding area through appropriate design techniques that include building height limitations and architectural solutions where appropriate. The Design Standards and Design Guidelines in the proposed Specific Plan would ensure that the proposed project promotes a positive visual appearance by providing quality architectural and site design techniques. To preserve Watsonville's scenic natural resources, the proposed project includes buffers along the freshwater marsh/seasonal wetland in the western portion of the planning area and the Corralitos Creek riparian corridor. The proposed Specific Plan also includes dedication of a 2.7 acre wetland buffer and 1.9 acre riparian buffer in accordance with City and County policies, which will include pedestrian trails, stormwater swales, and benches.
	5.2	<b>Community Appearance</b> - Blend new development and recognized values of community appearance and scenic qualities, and ensure that new development enhances, rather than detracts from its surroundings.	
	5.5	<b>Viewscape</b> - Preserve scenic rural qualities surrounding the urbanized portions of the Planning Area.	CONSISTENT: The proposed project is consistent with the voter-approved Measure U. Measure U established an urban limit line (ULL) along the northern boundary, excludes land previously included east and west of East Lake Avenue, and directs growth into several unincorporated areas, including the Atkinson Lane Specific Plan area.
	5.8	<b>Urban Beautification</b> - Support public and private urban beautification activities and promote pride in community appearance.	CONSISTENT: See discussion under Policy 5.1.
	5.9	<b>Scenic Corridors</b> - Protect and enhance views to and from the scenic streets and highways and the Planning Area.	CONSISTENT: Figure 5-2, Scenic Routes in the <i>City of Watsonville General Plan</i> , designates several scenic routes in the vicinity of the planning area include East Lake Avenue/Highway 152 from Main Street to Carlton Road and Holohan Road parallel to Corralitos Creek between Green Valley Road and East Lake Avenue. The existing riparian corridor located along Corralitos Creek substantially screens views of the planning area from Holohan Road in the vicinity of the planning area and therefore the proposed project would not result in a substantial alteration from this viewpoint along this designated scenic roadway in the <i>City of Watsonville General Plan</i> . Portions of the Wagner Road extension would be visible from East Lake Avenue/Highway 152. However, the Wagner Avenue extension would widen an existing roadway and therefore would not be considered a substantial alteration over existing conditions and result in a significant impact.



Element	Policy Number	Policy	Project Consistency
	5.10	<b>Natural Scenic Resources</b> - Conserve and enhance natural resources that contribute to the visual, recreational, and educational aesthetics of Watsonville. Such resources include wetlands, sloughs, rivers, lakes, hillsides, and stands of vegetation.	CONSISTENT: To preserve Watsonville's scenic natural resources, the proposed project preserves and includes buffers along the freshwater marsh in the western portion of the planning area and the Corralitos Creek riparian corridor in the eastern portion of the project site. The proposed Specific Plan also includes dedication of a 2.7 acre wetland buffer and 1.9 acre riparian buffer.
	5.A	<b>Project Design Review</b> - The preservation of visual resources shall be accomplished through the design review process.	CONSISTENT: Future development would be required to comply with the design standards and design guidelines in the proposed Specific Plan. Future development would be required to go through the design review process.
	5.B	<b>Design Consistency</b> - The City shall review new development proposals to encourage high standards or urban design and to ensure that elements of architectural design and site orientation do not degrade or conflict with the appearance of existing structures.	
	5.E	<b>Viewshed Protection</b> - The City shall use the General Plan Land Use chapter and the design review process to ensure that major new development projects do not impact scenic vistas now enjoyed throughout the City.	CONSISTENT: The planning area is not located in the vicinity of a scenic vista. See discussion regarding views of the planning area from designated scenic roadways in the vicinity under Policy 5.9, Scenic Corridors.
	5.I	<b>Scenic Streets and Highways</b> - The City shall identify scenic streets and highways in the planning area according to adopted criteria.	CONSISTENT: The City identifies scenic streets and corridors in the <i>City of Watsonville General Plan</i> . See discussion regarding views of the planning area from designated scenic roadways in the vicinity under Policy 5.9, Scenic Corridors.
	5.J	<b>Scenic Natural Resources</b> - The City shall conserve and enhance natural resources that contribute to visual, recreational, and educational aesthetics of Watsonville. Such resources include: wetlands, sloughs, rivers, lakes, hillsides, and stands of vegetation.	CONSISTENT – See consistency determination under Policy 5.10, Natural Scenic Resources.
	5.J.1	<b>Natural Heritage Preservation</b> - The City should conserve and enhance the natural resource areas of the community that give residents passive recreational and educational opportunities connected with the natural heritage of Watsonville.	CONSISTENT: See consistency determination under Policy 5.10, Natural Scenic Resources.



Element	Policy Number	Policy	Project Consistency
	5.J.2	<b>Compatibility</b> - Whenever a new development is proposed next to a scenic resource, the design review process will be used to maintain or create visual harmony between new and old structures and their natural setting.	CONSISTENT: See consistency determination under Policy 5.10, Natural Scenic Resources.
HOUSING	6.1	<b>Provisions of Housing</b> - Develop, improve, conserve, and preserve safe, affordable housing to meet the needs of all residents.	CONSISTENT - The proposed project includes affordable housing for ownership and rental units with a minimum of 20 percent affordable housing for projects with more than 50 new units for future development Within the City portion of the proposed Specific Plan.
	6.3	<b>Special Needs Housing</b> - Provide housing to meet the special needs of large families, single head-of-household families, farm workers, the homeless, and the handicapped and disabled.  Policy B: The City will provide housing opportunity for Watsonville's share of the regionwide housing need for all income groups, with priority given to very low- and low income households.  Policy C: the City will provide opportunity for, and encourage, the development of adequate housing for the city's special needs groups, including large families, female-headed families, farm workers, the elderly, the disabled, and those in need of emergency shelter and transitional housing.	
RECREATION & PARKS	8.2	<b>Facilities</b> - Provide a full range of park and recreation facilities including active recreation areas, passive natural open spaces, and a bicycle/pedestrian trail system.	CONSISTENT: Supporting the park and recreation goals of the City of Watsonville, the proposed project includes approximately 3.5 acres of land dedicated to the City for use as an expansion to the existing two-acre Crestview Park. The park would provide opportunities for both passive and active recreation, including tennis, soccer, baseball, play equipment, and barbeque and picnic areas. The proposed project preserves and includes buffers along the freshwater marsh/seasonal wetland in the western portion of the planning area and the Corralitos Creek riparian corridor in the eastern portion of the project site. The riparian buffer along Corralitos Creek provides opportunities for passive recreation and includes pedestrian trails interspersed with benches and picnic tables.
	8.A	<b>Recreation and Parks Planning</b> - The City shall plan for park and recreation needs in coordination with the Pajaro Valley Unified School District, Santa Cruz County, and other groups to meet the demand of the growing population.	CONSISTENT: See consistency under Policy 8.2.



Element	Policy Number	Policy	Project Consistency
	8.A.4	<b>Passive Open Space</b> - The Recreation and Parks Commission shall use the adopted policies for Environmental Resource Management to protect the passive open space provided by the riparian corridors along Corralitos Creek, Salsipuedes Creek, the Pajaro River, and the wetland areas to Watsonville, Struve, and West Branch Struve Sloughs.	CONSISTENT: See consistency under Policy 8.2.
	8.B	<b>Park Acquisition and Development</b> - The City shall designate sites for future parks and recreation facilities and shall continue to finance, acquire, and develop park facilities consistent with the Watsonville park standards and in proportion to population growth in Watsonville.	CONSISTENT: See consistency under Policy 8.2.
	8.B.3	<b>Land Dedication</b> - The City shall require that residential subdivisions dedicate land area to the City for open space and park and recreational use or pay proportional park in-lieu fees. The land area for parks shall serve the immediate and future needs of the residents of the subdivision. The amount of land shall be determined pursuant to the standards and formula specified in the municipal code.	CONSISTENT: See consistency under Policy 8.2.
	8.B.4	<b>Park In-Lieu Fees</b> - All residential, commercial, and industrial projects shall be subject to park in-lieu fees established by City Council resolution.	<b>CONSISTENT:</b> See consistency under Policy 8.2. The proposed project would be required to pay applicable recreation and parks facilities fees at the time of issuance of the building permits. As addressed in Section 3.12: Public Services, Utilities, and Recreation, the City and the County shall establish a Joint Powers Authority or a Community Facilities District (CFD) as part of the proposed Specific Plan and PUD to help fund additional park fees not covered by City or County impact fees and taxes, which would distribute the impact on City parks among future development within the planning area.
	8.B.7	<b>On-Site Private Recreation Facilities</b> - The City shall use the development review process to ensure that new residential, commercial, and industrial development projects provide on-site recreational facilities for the use of residents and employees.	CONSISTENT: See consistency under Policy 8.2.
	8.C	<b>Park Development Criteria</b> - While recognizing the need for all types of park facilities, the City shall focus park development at the neighborhood- and community-serving level.	CONSISTENT - The proposed Specific Plan includes approximately 3.5 acres of land dedicated to the City for use as an expansion to the existing two-acre Crestview Park. Expanding the size of Crestview Park will enable the park to provide additional recreation facilities to serve the surrounding neighborhood, including tennis, soccer, baseball, play equipment, and barbeque and picnic areas.





Element	Policy Number	Policy	Project Consistency
	8.C.1	<b>Park Criteria</b> - The City shall plan for and implement a network of parks and recreation facilities at the rate of 5.0 acres per 1,000 persons distributed as follows: 2.0 acres per 1,000 persons of neighborhood and vest pocket parks, and 3.0 acres per 1,000 persons of community parks and special use facilities.	CONSISTENT: See consistency under Policy 8.2.
	8.C.6	<b>Trails and Paths</b> - The City shall plan for, and coordinate, the development of a network of pedestrian and bicycle trails to connect city and county park and recreation sites.	CONSISTENT – The proposed Specific Plan promotes alternative transportation in various ways. The Plan’s Guiding Principles ensure that the proposed Specific Plan includes a circulation network that allows for alternatives to automobile travel, including public transportation, bicycle, and walking. To ensure pedestrian safety, the proposed Specific Plan includes traffic calming measures such as traffic circles, bulb-outs, and landscaping. The riparian buffers within the Specific Plan include pedestrian trails interspersed with benches and picnic tables.
	8.C.7	<b>Tot Lots</b> - The City shall use the development review process to ensure that new residential subdivisions of five or more units provide safe play areas for children of preschool age (one to five).	CONSISTENT: See consistency under Policy 8.2.
ENVIRONMENTAL RESOURCE MANAGEMENT	9.4	<b>Air Quality</b> - Maintain or improve the present air quality level in the Pajaro Valley.	CONSISTENT: As discussed in Section 3.3: Air Quality, the proposed project is consistent with the Air Quality Management Plan for the Monterey Bay Region as confirmed by AMBAG. Short-term and long-term air quality impacts are addressed herein and mitigation measures are incorporated to ensure that the proposed project maintains the air quality level in the air basin and in the Pajaro Valley.
	9.5	<b>Water Quality</b> - Ensure that surface and groundwater resources are protected.	CONSISTENT: The proposed Specific Plan would include installation of water quality devices such as LID techniques to remove pollutants from the stormwater runoff. Water quality impacts to surface water are addressed in Section 3.8, Hydrology and Water Quality herein and mitigation measures are included to prevent water quality degradation.



Element	Policy Number	Policy	Project Consistency
	9.6	<b>Soil Conservation</b> - Preserve and protect the soil resources throughout the community and minimize the environmental degradation caused by soil erosion, construction impact on soils, and deterioration if water quality caused by suspended solids.	CONSISTENT: Potential soil and erosion impacts as a result of the proposed Specific Plan are addressed in Section 3.4: Biological Resources, Section 3.8: Hydrology and Water Quality, and Section 3.6: Geology and Soils of the Draft EIR. Once the planning area is annexed to the City of Watsonville, future development within the City portion of the proposed project would be required to comply with Chapter 6 (Excavations, Grading, Filling, and Erosion Control) of the City of Watsonville Municipal Code. In addition, in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements for construction of site storm water discharges, projects involving construction on sites that are one acre or more are required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies how the discharger will protect water quality during construction activities. Compliance with the respective erosion control ordinances and acquisition of the NPDES General Permit, as required by mitigation incorporated herein, for construction activities would ensure that the proposed project would be consistent with this policy.
	9.7	<b>Agricultural Soils</b> - Limit the urbanization of productive agricultural soils to only those parcels contiguous with existing urban use, best suited for urban development, and within the urban limit line.	PARTIALLY CONSISTENT: The planning area is located entirely within the ULL and is surrounded on three sides by existing urban development. Although the proposed Specific Plan includes urbanization of existing agriculture land that is designated as Important Farmland, the proposed Specific Plan respects and is supported by Measure U. Measure U defined a new Urban Limit Line (ULL) area specifically designed to protect commercial agriculture lands. However, the Measure U-designated ULL allows the planning and development of some agriculture land, including the Atkinson Lane Specific Plan area.
	9.8	<b>Wildlife Habitat</b> - Preserve and protect the remaining areas of wildlife habitat for their scenic and scientific value.	CONSISTENT: Section 3.4: Biological Resources analyzes potential impacts to special status plant and animal species. Mitigation measures are incorporated herein to address potential impacts to these special status plant and wildlife habitat within the planning area. In addition, the land use plan for the proposed Specific Plan requires development setbacks along the freshwater marsh in the western portion of the planning area and the Corralitos Creek riparian corridor, which would be designated as Urban Open Space and Environmental Management, respectively.
	9.10	<b>Archaeological Resources</b> - Identify and protect prehistoric resources for their scientific, educational, and industrial development.	CONSISTENT: Section 3.5: Cultural Resources discusses the potential for archaeological and historic resources at the project site. The planning area has been historically used for agricultural production and has not been heavily disturbed due to development and grading over many years. Field inspections and an archival search in the state records on file at the Northwestern Information Center of the California Archeological Site Inventory were performed by ARM in February 2005 and did not identify any unique archeological resources within or in the vicinity of the planning area. Mitigation measures incorporated within the EIR address the accidental discovery of archaeological resources during construction activities.



Element	Policy Number	Policy	Project Consistency
	9.12	<b>Energy</b> - Promote the conservation of energy and the use of alternative energy resources in transportation and residential, commercial, and industrial development.	CONSISTENT: Sustainable principles and strategies have been incorporated into the Land Use Plan and Design Guidelines of the proposed Specific Plan to help guide site development in an environmentally responsible manner in order to conserve energy and promote alternative energy sources.
	9.C	<b>Air Quality</b> - The City shall cooperate with the Monterey Bay Unified Air Pollution Control District (MBUAPCD) to maintain and improve regional air quality.	CONSISTENT: See discussion under Policy 9.4.
	9.C.1	<b>Referral to MBUAPCD</b> - The City shall refer projects with identifiable air quality impacts to the MBUAPCD for recommendation on appropriate air quality mitigations.	
	9.C.2	<b>Alternate Travel Modes</b> - In order to reduce automobile related pollution, the city shall plan for and encourage the use of transit, ridesharing, bicycles, and walking as alternatives to automobile travel, and the use low-emission and electric vehicles.	<p>CONSISTENT: The proposed project promotes alternative transportation in various ways. The Plan's Guiding Principles ensure that the proposed Specific Plan includes a circulation network that allows for alternatives to automobile travel, including public transportation, bicycle, and walking. To ensure pedestrian safety, the proposed Specific Plan includes traffic calming measures such as traffic circles, bulb-outs, and landscaping.</p> <p>The planning area would be served by the Santa Cruz Metropolitan Transit District. The closest route is located on Freedom Boulevard. However, should the Santa Cruz Metropolitan Transit District acquire additional funding to provide additional bus routes, routes along Crestview Drive, Atkinson Lane, and/or through the proposed project may be considered.</p>
	9.C.3	<b>Housing Jobs Linkage</b> - The City shall encourage new residential development to include housing suitable to employees of workplaces in the city and its immediate environs in order to minimize commuting and the motor vehicle emissions thus generated. The City shall strive to locate housing and job land uses to enhance the use of carpooling and transit.	CONSISTENT: The proposed project would be located adjacent to the urban core of the City of Watsonville in proximity to local jobs in the City.
	9.C.4	<b>Design Review</b> - The City shall require new development to include consideration for transit, Transportation Demand Management (TDM), and alternative travel modes in project designs including but no limited to transit stops, car and van pool preferred parking, and bicycle access and storage facilities.	CONSISTENT: See discussion under Policy 9.C.2.
	9.E	<b>Soil Conservation</b> - The City shall prevent degradation of local soil resources through erosion control improvement and grading guidelines.	CONSISTENT: See discussion under Policy 9.6.



Element	Policy Number	Policy	Project Consistency
	9.E.6	<b>Agricultural Land Conservation</b> - The City shall encourage retention of agricultural land beyond its urban limit line.	CONSISTENT: See discussion under Policy 9.7. The planning area is located entirely within the ULL. As discussed in Section 3.2: Agricultural Resources, the proposed project incorporates mitigation measures herein which would require that future development incorporate a 200-foot buffer along the eastern boundary of the planning area in order to prevent conversion of agricultural land beyond the ULL.
	9.D	<b>Water Quality</b> - The City shall provide for the protection of water quality to meet all beneficial uses, including domestic, agricultural, industrial, recreational, and ecological uses.	CONSISTENT: As discussed in Section 3.8: Hydrology and Water Quality, the proposed Specific Plan includes Low Impact Design (LID) techniques in various locations and at key stormwater runoff release locations in prevent long-term operational water quality impacts. LID helps protect wetlands and recharge areas by integrating landscaping features or Integrated Management Practices (IMPs). IMPs include various stormwater filtration devices including stormwater detention areas, bio and grass swales, and pervious pavement. In addition to providing other environmental benefits, these techniques will help improve overall water quality. Mitigation measures incorporated herein would ensure that LID techniques are incorporated as part of preparation of a final drainage plan for each phase of the proposed project. Short-term water quality impacts from soil erosion are addressed under Policy 9.6.
	9.D.1	<b>Recharge Protection</b> - The City shall direct urban development away from the groundwater recharge zones and surface water bodies. Projects with potential to jeopardize water quality shall be required to include mitigation measures prior to project approval.	
	9.D.3	<b>Erosion Control</b> - The City shall continue to enforce regulations over grading activities and other land use practices that expose bare soil and accelerate soil erosion and sediment.	
	9.D.5	<b>Wetland Protection</b> - Where drainage from developments involves discharge into sloughs or wetlands, grease, sediment traps, or other protection measures shall be required. Mitigation monitoring shall be required and enforced by the City to ensure performance as appropriate.	
	9.F	<b>Wildlife Habitat Protection</b> - The City shall designate for open space and environmental management those areas rich in wildlife species and fragile in ecological make-up. These habitat zones shall be made part of the greenbelt where appropriate.	CONSISTENT: To protect Watsonville's scenic natural resources, the proposed Specific Plan requires development setbacks along the freshwater marsh in the western portion of the planning area and the Corralitos Creek riparian corridor in the northeastern portion of the planning area, which would be designated as Urban Open Space and Environmental Management, respectively.
	9.F.1	<b>Habitat Protection</b> - Impacts to important wildlife habitat areas shall be identified as part of the City's development review and environmental review processes, and appropriate mitigations shall be considered. Mitigation measures to be considered include: designation of sensitive areas as open space, restrictions of new development on lands that provide important wildlife habitat, setback requirements, habitat conservation plans, and habitat mitigation banking. Lands within the urban limit line that provide important wildlife habitat include, but are not limited to riparian corridors, fresh water marshes and sloughs, woodlands, and steep slopes.	CONSISTENT: See discussion under Policy 9.8.



Element	Policy Number	Policy	Project Consistency
	9.H	<b>Archaeological Resources</b> - The City shall foster and provide for the preservation of cultural resources and artifacts of historic and pre-historic human occupation within the Pajaro Valley.	CONSISTENT: Section 3.5, Cultural Resources discusses the potential for archaeological and historic resources at the project site. The planning area has been historically used for agricultural production and has not been heavily disturbed due to development and grading over many years. Field inspections and an archival search in the state records on file at the Northwestern Information Center of the California Archeological Site Inventory were performed by ARM in February 2005 and did not identify any unique archeological resources within or in the vicinity of the project site. Mitigation measures incorporated herein address the accidental discovery of archaeological resources during construction activities.
TRANSPORTATION & CIRCULATION	10.1	<b>Streets and Highway Facilities</b> - Plan and provide for a safe, efficient, and environmentally sensitive network of streets and highways for movement of people and goods.	CONSISTENT: To ensure pedestrian safety, the proposed project includes traffic calming measures such as traffic circles, bulb-outs, and landscaping. Section 3.13: Transportation and Traffic addresses potential safety hazards on study roadway segments and intersections and incorporates mitigation measures to improve the intersections and/or eliminate hazardous conditions.
	10.2	<b>Transit Facilities and Service</b> - Promote the use of transit as an alternative to the automobile for all types of travel.	CONSISTENT: The proposed Specific Plan and PUD incorporates facilities for automobile and alternative transportation. The proposed Specific Plan includes sidewalks and trails for pedestrians and bicycle friendly streets that connect to existing facilities and adhere to the City's design requirements. The Plan's Guiding Principles ensure that the proposed Specific Plan includes a circulation network that allows for alternatives to automobile travel, including public transportation, bicycle, and walking. To ensure pedestrian safety, the proposed Specific Plan includes traffic calming measures such as traffic circles, bulb-outs, and landscaping. The proposed Specific Plan would be served by the Santa Cruz Metropolitan Transit District and is located conveniently for transit users.
	10.4	<b>Bicycle Circulation</b> - Plan for and provide a safe, convenient network of bicycle facilities.	
	10.5	<b>Pedestrian Circulation</b> - Recognize the importance of pedestrian travel, alone, or in combination with other travel modes, and to encourage walking.	
	10.7	<b>Aesthetic Considerations</b> - Plan and provide for a circulation network that preserves and enhances scenic amenities.	CONSISTENT: Landscaping would be located within the public right-of-way areas along the circulation network within the proposed project and would include at least one shade tree per 40 feet of street frontage and native, drought tolerant shrub and groundcover species. Proposed landscaping would preserve and enhance scenic amenities within the planning area.
	10.A	<b>Street and Highway Improvements</b> - The City shall pursue a program of regularly scheduled maintenance and street improvements, accompanied by the planned extension of roadways to serve new development.	CONSISTENT: Section 3.13: Transportation and Traffic addresses the proposed project's impacts on roadway segments and intersections and incorporates mitigation measures to improve the intersections to acceptable levels of service or to mitigate traffic conditions in order to prevent further deterioration or improve the level of service.
	10.A.2	<b>Costs of Improvements</b> - The City shall use the development review process to ensure that new development projects creating a need for additional roadway improvements pay an appropriate share of the costs, based on traffic impact fees and assessment districts.	



Element	Policy Number	Policy	Project Consistency
	10.C	<b>Level of Service</b> - The City shall maintain a minimum Level of Service D (LOS D) on all arterial and collector streets serving the City except for those accepted to operate at less than an LOS D in the 1988-2005 Major Streets Master Plan as updated in 1992.	
	10.C.2	<b>Project Funding</b> - The City shall require as a condition of approval that all development or rezoning which would contribute to a deterioration of existing service levels below LOD D, provide the necessary improvements, contribute to their provisions through the payment of traffic impact fees, or otherwise mitigate impacts to maintain at least an LOS D. Where existing conditions are already below LOD D, any new development must mitigate traffic conditions to the extent of preventing further deterioration in level or service or, if possible, improving level of service.	
	10.F	<b>Planning for Transit</b> - The City shall use its land use planning authority to enhance the use of transit.	CONSISTENT: The proposed Specific Plan and PUD includes transit supporting land uses, including medium and high density residential uses. The planning area would be served by the Santa Cruz Metropolitan Transit District. The closest route is located on Freedom Boulevard. However, should the Santa Cruz Metropolitan Transit District acquire additional funding to provide additional bus routes, routes along Crestview Drive, Atkinson Lane, and/or through the proposed project may be considered.
	10.F.1	<b>Provision of Transit Facilities</b> - The use of transit to and from new development shall be promoted by requiring new development to include transit facilities such as bus shelters and turnouts where appropriate.	
	10.F.2	<b>Land Use Designation</b> - Medium- and high density residential designation shall be assigned to properties adjacent to existing or planned major arterials and transit corridors where the negative impacts of traffic on residential uses can be mitigated.	
	10.K	<b>Bicycle Facilities Development</b> - The City shall plan for, and implement a comprehensive network of bicycle facilities in order to promote the bicycle as an alternative to the private automobile.	CONSISTENT: The proposed Specific Plan and PUD incorporates facilities for alternative transportation options, including incorporation of Class III bicycle lanes. The proposed Specific Plan includes bicycle friendly streets that connect to existing facilities and adhere to the City's design requirements. To ensure pedestrian safety, the proposed Specific Plan includes traffic calming measures such as traffic circles, bulb-outs, and landscaping.
	10.K.1	<b>New Construction and Improvements</b> - New construction and improvements to designated streets shall include facilities for safe bicycle travel consistent with the City's Bicycle Plan.	
	10.K.3	<b>Design for Bicycle Lanes</b> - The City shall require new development projects to include bicycle lanes as part of the project proposal, consistent with the Bicycle Plan.	CONSISTENT: In place of bicycle designated lanes, the proposed Specific Plan includes low volume residential streets that carry both vehicular and bicycle travel safely as Class 3 bike lanes are included within each internal street. To ensure safety, the Plan includes





Element	Policy Number	Policy	Project Consistency
	10.M	<b>Bicycle Support Facilities</b> - The City shall encourage bicycle facilities in new developments, as a commute alternative.	traffic calming measures such as traffic circles, bulb-outs, and landscaping.
	10.N	<b>Pedestrian Travel</b> - The City shall plan for, and implement a comprehensive network of safe pedestrian facilities in order to promote pedestrian travel.	CONSISTENT: The proposed Specific Plan and PUD includes sidewalks and trails for pedestrian travel that connects to existing facilities and would connect within the planning area. Sidewalks and pedestrian trails would adhere to the City's design requirements. To ensure pedestrian safety, the proposed Specific Plan and PUD includes traffic calming measures such as traffic circles, bulb-outs, and landscaping. The proposed Specific Plan and PUD would require that future development include lighting along sidewalks to ensure pedestrian safety.
	10.N.1	<b>Construction/Improvement</b> - The City shall require facilities for safe pedestrian travel as part of new construction or improvement to existing streets.	
	10.N.2	<b>Design of Walkways</b> - The City shall require new development to include pedestrian walkways adjacent to new streets and/or connecting the development to existing streets.	
	10.N.3	<b>Sidewalk Standards</b> - Sidewalks on new or existing streets shall be designed and constructed according to minimum City standards, including curb cuts to facilitate use by persons with physical disabilities.	
	10.O	<b>Walkway Aesthetics and Safety</b> - Pedestrian walkways should be designed to promote walking by providing a safe and aesthetically pleasing path or travel.	
	10.O.1	<b>Walkway Lighting</b> - Walkways and parking areas shall be required to include lighting fixtures at regular intervals sufficient for public safety.	
	10.P	<b>Pedestrian Access</b> - Access for pedestrian travel shall be maintained where it already exists and provided where it does not, in order to prevent or eliminate barriers to pedestrian travel.	
	10.P.1	<b>Access to Adjoining Land Uses</b> - The City shall require pedestrian access between adjoining multiple family residential developments, and from such residential development to adjacent recreational or commercial areas.	



Element	Policy Number	Policy	Project Consistency
PUBLIC FACILITIES & SERVICES	11.2	<b>Public Services</b> - Assure new development can be served by adequate public services and facilities	CONSISTENT: Section 3.12: Public Services, Utilities, and Recreation evaluates the adequacy of public services and facilities that would serve the planning area. Future development within the planning area would be required to pay applicable development impact fees at the time of issuance of the building permits. The City and the County would establish a CFD or a JPA as part of the proposed Specific Plan and PUD to help fund infrastructure costs for the proposed project not covered by City or County impact fees and taxes. Funding of additional services would be handled through levies by the CFD in order to meet acceptable thresholds.
	11.3	<b>Water Supply</b> - Construct and maintain a water system and institute water management policy that will provide a sufficient quantity of appropriate-quality water to meet the needs of existing and planned community.	CONSISTENT: The proposed Specific Plan would convert the existing agricultural, fallow agricultural, and rural residential uses to urban uses. A water demand analysis was performed by RBF Consulting for buildout of the proposed Specific Plan and PUD and is incorporated within Section 3.12: Public Services, Utilities, and Recreation. Buildout of the proposed Specific Plan would generate a water demand that is less than historic water demand within the planning area. The City of Watsonville has indicated that it has a sufficient quantity to meet the needs of the existing and planned community. Future development within the planning area would be required to pay the City's groundwater impact fee, which is currently set at \$347.56 per bedroom and is used to retrofit water fixtures (e.g. toilets, showerheads, etc.) within the City. The water retrofit program, which is funded by the groundwater impact fees results in a savings of 748 gallons of water per month, would offset approximately 70 to 100 percent of the water consumption of new homes within the planning area.
	11.4	<b>Wastewater Management</b> - Continue the safe and efficient collection, treatment, and disposal of domestic and industrial wastewater to meet the needs of the service population, protect the environment, and comply with all applicable regulations.	<p>CONSISTENT: The Watsonville WWTP, which would serve the proposed project, has the capacity to treat 12.1 million gallons per day. However, the WWTP treats on average seven million gallons of wastewater from residential, commercial and industrial sources. The wastewater contribution of the proposed project to the WWTP would represent approximately 1.4 percent of the total daily wastewater treated at the wastewater treatment plant.</p> <p>Future development within the proposed Specific Plan planning area would be required to pay applicable development impact fees at the time of issuance of the building permits. Future development within the planning area would be required to pay applicable development impact fees at the time of issuance of the building permits. The City and the County would establish a JPA or a CFD as part of the proposed Specific Plan and PUD to help fund infrastructure costs for the proposed project not covered by City or County impact fees and taxes. Funding of additional services would be handled through levies by the CFD in order to meet acceptable thresholds.</p>



Element	Policy Number	Policy	Project Consistency
	11.A.3	<b>Development Fees</b> - The City shall maintain a schedule of development impact fees that is commensurate with the increased need for public services and facilities generated by new development.	CONSISTENT: Future development within the proposed Specific Plan planning area would be required to pay applicable development impact fees at the time of issuance of the building permits. The City and the County would establish a CFD or a JPA as part of the proposed Specific Plan and PUD to help fund infrastructure costs for the proposed project not covered by City or County impact fees and taxes. Funding of additional services would be handled through levies by the CFD in order to meet acceptable thresholds.
	11.B.1	<b>Growth Management</b> - Through the use of specific plans in new growth areas, the City shall regulate the timing and location of future urban development to be consistent with the service capacity and financial capability of current services and the five-year Capital Improvement Program schedule.	CONSISTENT: The Atkinson Lane Specific Plan is a future growth area identified in the voter-approved Measure U. The proposed project would include development of the planning area within the existing ULL and annexation of those areas within the planning area that are located outside of the City's existing Sphere of Influence (SOI). Given the time restrictions on the development of the City site by Measure U, the County Site will likely develop before the City site. Therefore, this proposed Specific Plan anticipates a two-phased approach to the buildout of the planning area that provides for the orderly construction of infrastructure and ensures that each phase provides an equitable financial contribution to off-site improvements and mitigation measures identified herein.
	11.C	<b>Water System Design</b> - The water system shall be designed, constructed and managed to provide a sufficient quantity of appropriate-quality water for the existing and planned community.	CONSISTENT: Section 3.12: Public Services, Utilities, and Recreation addresses the water demand and water infrastructure necessary to serve the proposed Specific Plan area. New facilities would have to be extended into the planning area in order to provide potable water for the proposed Specific Plan. See consistency under Policy 11.3 regarding water demand. The potable water distribution system is expected to consist of eight and ten inch water mains, six inch service laterals, and various valves and fittings. Water mains would be located in conjunction with the proposed roadway system and would tie into the existing infrastructure in four locations. These locations include the existing six-inch main along Atkinson Lane at two locations, the eight-inch main along Brewington Avenue, and the 16-inch main along Wagner Avenue.
	11.C.4	<b>Site Improvements</b> - New projects within the urbanized area shall be required to complete on-site water connection improvements consistent with water quality standards of the Water Department.	
	11.D	<b>Water Service Policy</b> - The City shall follow a water service policy to ensure that the priority water service needs of the City can be met.	
	11.D.2	<b>New Water Demand Mitigation</b> - New demand for water shall be mitigated to the greatest extent possible. The City shall continue its present policy of demand reduction requirements for the new development and the payment of groundwater impact fees for residential construction. The policies shall be extended to other types of development on an equitable basis.	



Element	Policy Number	Policy	Project Consistency
	11.I	<b>Joint Planning</b> - The City shall continue to work closely with the Pajaro Valley Unified School District in planning for all facets of school site acquisition and facilities development. The City shall encourage the development of advanced educational facilities in and near Watsonville.	CONSISTENT: The proposed Specific Plan creates would create additional school enrollment. Future development within the planning area would work closely with the Pajaro Valley Unified School District as the project is built out in order to ensure that the School District is not adversely affected by future development
	11.I.5	<b>Population Projections</b> - The City shall coordinate population growth and residential land use planning with planning for school site location and enrollment.	
	11.J	<b>Public Protection</b> - The City shall continue to provide sufficient funding, trained personnel, and all necessary equipment and facilities to maintain city standards for public safety and response time.	CONSISTENT: The proposed Specific Plan includes development standards and design guidelines to ensure public safety. These include incorporation of crime prevention or CPTED (Crime prevention though environmental design) design techniques such as ensuring that all public areas are observable.
	11.J.1	<b>Project Review</b> - The City shall continue to use Police and Fire Department project review to ensure that new development projects allow for built-in fire and police alarms and other public safety features, and to allow for review of potential traffic impacts on response time.	CONSISTENT: The proposed Specific Plan and PUD includes adequate facilities for fire and police access and emergency notification.
PUBLIC SAFETY	12.1	<b>Land Use Safety</b> - Plan for and regulate the uses of land in order to provide a pattern of urban development which will minimize exposure to hazards from either natural or human-related causes.	CONSISTENT: Section 3.6: Geology and Soils addresses the potential for earthquakes and other associated geologic hazards. Section 3.7: Hazards and Hazardous Materials addresses human-related caused hazards and airport hazards and includes mitigation measures herein to reduce potentially significant impacts to reduce potential hazards to a less than significant level. Potential airport hazards are also addressed under Policy 12.M.7.
	12.A	<b>Environmental and Public Safety</b> - The City shall plan for and maintain development standards that minimize risks to human lives and property resulting from environmental and man-caused hazards. The City shall protect neighboring residential development from the immediate threats of potentially hazardous materials and airport hazards through careful land use planning.	
	12.2	<b>Seismic and Other Geologic Hazards</b> - Reduce the potential for loss of life, injury, and economic damage resulting from earthquakes and associated geologic hazards such as landslides and liquefaction.	CONSISTENT: Section 3.6: Geology and Soils addresses the potential for earthquakes and other associated geologic hazards. A Feasibility Level Geotechnical Investigation and Engineering Evaluation was prepared for the planning area. Mitigation incorporated herein requires that future development within the planning area be designed in accordance with the CBC and that a design level geotechnical report is prepared that includes a quantitative evaluation of liquefaction and liquefaction-induced lateral spreading in order to ensure that future development minimizes the risk of ground failure within the planning area.
	12.B	<b>Seismic Hazards</b> - The City shall use the development review process to ensure that potential geologic hazards are evaluated and mitigated prior to construction.	



Element	Policy Number	Policy	Project Consistency
	12.C	<b>Soil Constraints</b> - The City shall take all appropriate actions to ensure that current land use activities and new developments are mitigated to prevent soil failure and other soil-related dangers.	CONSISTENT: See policy consistency under Policy 12.2 and 12.B.
	12.3	<b>Flood Hazard Reduction</b> - Reduce the potential for loss of life and property damage in areas known to be flood prone.	CONSISTENT: Section 3.8, Hydrology and Water Quality addresses the potential for the proposed project to be located within a flood zone and/or to result in additional flooding. The area adjacent to Corralitos Creek, which is not proposed for development is the only portion of the planning area that is located within the 100-year flood zone. This area is located outside of the Phase 1 County site.
	12.D	<b>Flood Hazard Reduction</b> - The City shall pursue the protection of new and existing development from the impacts of flooding up to the 100-year event.	
	12.5	<b>Hazardous Materials</b> - Reduce the potential danger related to the use, storage, transport, and disposal of hazardous materials to an acceptable level of risk for city residents.	CONSISTENT: discussed in Section 3.7, Hazards and Hazardous Materials, the proposed project is comprised of residential and park uses, which would not result in the storage, transport and disposal of hazardous materials.
	12.M	<b>Noise</b> - The City shall utilize land use regulations and enforcement to ensure that noise levels in developed areas are kept at acceptable levels, and that future noise-sensitive land uses are protected from noise that is harmful.	CONSISTENT: As discussed in Section 3.10: Noise, and based on the noise modeling conducted, the proposed project would result in an increase in ambient noise levels along the study roadway segments. Predicated increases in noise levels on study roadway segments would be below 3 dBA except on the following study roadway segments where predicted noise levels would increase by approximately: 3.4 dBA on Wagner Avenue, west of East Lake Drive to a predicted noise level of 47.4 dBA; 7.1 dBA on Brewington Avenue, north of Crestview Drive to a predicted noise level of 51.8 dBA; and 7.3 dBA west of the Southbound On/Off-Ramps at the Highway 129-Riverside Drive intersection to a predicted noise level of 50.6 dBA. Within the City of Watsonville, the maximum exterior noise levels acceptable for residential land uses and other noise sensitive areas is 60 dBA. Based on the noise modeling, noise levels on these study roadway segments would be within City standards. Based on predicted exterior noise levels, interior noise levels would be within 45 dBA.
	12.M.1	<b>Traffic Noise</b> - The City shall enforce provisions of the California Vehicle Code and local ordinances to reduce vehicular noise intrusion in residential areas and near other noise sensitive land uses such as schools and hospitals.	
	12.M.4	<b>Soundproofing</b> - The City shall use the development review process and provisions of the Uniform Building Code to ensure adequate levels of soundproofing in all new construction.	
	12.M.5	<b>Noise Ordinance</b> - The City shall prepare, adopt, and enforce a comprehensive noise ordinance.	
	12.M.6	<b>Site Planning</b> - The City shall evaluate site orientation and building design to decrease the potential for noise intrusion, using the noise contour map and compatibility guidelines.	



Element	Policy Number	Policy	Project Consistency
	12.M.7	Aircraft Noise - The City shall periodically review and update noise contour measurements as aircraft operations increase or change in nature. Recommendations for noise attenuation contained in the Watsonville Airport Master Plan shall be implemented on a project-by-project basis.	CONSISTENT: Section 3.10: Noise in the EIR addresses potential aircraft noise from the Watsonville Municipal Airport Master Plan. A portion of the planning area is located within the 55 dB CNEL 2020 Noise Contour for the <i>Watsonville Municipal Airport Master Plan</i> . Residential, commercial, manufacturing and production uses are allowed uses within the 55 dB CNEL contour for the <i>Watsonville Municipal Airport Master Plan</i> (City of Watsonville 2002). Therefore, the proposed Specific Plan would not result in an exposure to excessive noise levels from the airport, which would be considered a less than significant impact.





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## 3.10 Noise

This section of the EIR discusses the existing noise environment in the project vicinity, and identifies potential noise impacts and mitigation measures related to development of the proposed project. The analysis evaluates noise levels caused by project-generated traffic and on-site activities and evaluates the noise levels relative to applicable criteria and to the existing ambient noise environment. This section is based on a noise modeling completed by RBF Consulting, which is incorporated herein. The noise modeling is incorporated **Appendix H** in Volume II of the EIR.

### 3.10.1 Environmental Setting

#### Noise Scales and Definitions

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. Noise is typically described as any unwanted or objectionable sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against sound frequencies in a manner approximating the sensitivity of the human ear.

The decibel scale is logarithmic. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range similar to how the Richter scale measures earthquake magnitudes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud; 20 dBA higher, four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in **Figure 3.10-1: Sound Levels and Human Response**.

In most situations, a 3-dBA change in sound pressure level is considered a “just-detectable” difference. A 5-dBA change (either louder or quieter) is readily noticeable, and a 10-dBA change is a doubling (if louder) or a halving (if quieter) of the subjective loudness. Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of the distance (6 dBA/DD). This decrease, due to the geometric spreading of the energy over an ever-increasing area, is referred to as the inverse square law. However, highway traffic noise is not a single, stationary point source of sound. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. Since the change in surface area of a cylinder only increases by two times for each doubling of the radius instead of the four times associated with spheres, the change in sound level is 3 dBA per doubling of distance.

Numerous methods have been developed to measure sound over a period of time. These methods include (1) the community noise equivalent level (CNEL); (2) the equivalent sound level (Leq); and (3) the day/night average sound level (L<sub>dn</sub>). These methods are described below.

#### Community Noise Equivalent Level (CNEL)

The predominant community noise rating scale used in California for land use compatibility assessments is the community noise equivalent level (CNEL). The CNEL reading represents the average of 24 hourly readings of equivalent levels (Leq) based on an A-weighted decibel and



adjusted upward to account for increased noise sensitivity in the evening and at night. These adjustments are +5 dBA for the evening (7:00 PM to 10:00 PM) and +10 dBA for the night (10:00 PM to 7:00 AM) CNEL may be indicated by “dBA CNEL” or just “CNEL”.

#### [L<sub>eq</sub>](#)

The L<sub>eq</sub> is the sound level containing the same total energy over a given sampling time period. The L<sub>eq</sub> is the steady sound level that, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period. L<sub>eq</sub> is typically computed over sampling periods of 1, 8 and 24 hours.

#### [Day Night Average \(L<sub>dn</sub>\)](#)

Another commonly used method is the day/night average level (L<sub>dn</sub>). The L<sub>dn</sub> measures the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the L<sub>eq</sub> (the average noise level over a given time period). The L<sub>dn</sub> is calculated by averaging the L<sub>eq</sub> for each hour of the day at a given location after penalizing the “sleeping hours” (defined as 10:00 PM to 7:00 AM), by adding 10 dBA to account for the increased sensitivity of people to noises that occur at night.

#### [Other Noise Measures](#)

The maximum noise level recorded during a noise event is expressed as L<sub>max</sub>. The sound level exceeded over a specified time frame is expressed as L<sub>n</sub> (i.e., L<sub>90</sub>, L<sub>50</sub>, L<sub>10</sub>, etc.). L<sub>50</sub> is the level exceeded 50 percent of the time, L<sub>10</sub> ten percent of the time, etc.

### **Laws, Ordinances, Regulations and Standards**

Regulatory requirements related to environmental noise are typically promulgated at the local level. However, Federal and State agencies provide standards and guidelines to the local jurisdictions.

#### [State of California Guidelines](#)

The California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a potentially significant impact if it exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, a project has a potentially significant impact if the ambient noise levels in the project vicinity increase substantially above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures reduce the impact to less than significant level are not feasible because of economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code Section 65302 (f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services, as shown in **Table 3.10-3: Land Use Compatibility For Community Noise Environments.**



The guidelines rank noise-land use compatibility as normally acceptable, conditionally acceptable and clearly unacceptable noise levels for various land use types. Single-family homes are normally acceptable in exterior noise environments up to 60 CNEL and conditionally acceptable up to 70 CNEL. Multiple-family residential uses are normally acceptable up to 65 CNEL and conditionally acceptable up to 70 CNEL. Schools, libraries, and churches are normally acceptable up to 70 CNEL, as are office buildings and business, commercial and professional uses.

### Local Jurisdiction

Local agencies may regulate most noise level sources not regulated by the Federal government by providing standards for insulation of noise receivers, either within the structure or by placement of noise barriers, such as walls. Furthermore, a local agency may adopt land use decisions or project-related conditions that may reduce noise impacts by separating noise generators from noise sensitive uses.

Within the County of Santa Cruz, all new residential and noise sensitive land uses are required to conform with the Land Use Compatibility Guidelines and conform to a noise exposure standard of 60 dB  $L_{dn}$  for outdoor noise and 45 dB  $L_{dn}$  for indoor noise. Within the City of Watsonville, the maximum exterior sound level acceptable for residential land uses and other noise-sensitive areas is 60 dBA. The maximum allowable interior noise level for those uses is 45 dBA.

Certain land uses are considered particularly sensitive to noise. Schools, hospitals, rest homes, long-term medical and mental care facilities and parks and recreation areas are all considered sensitive receptors. Residential areas are also considered noise-sensitive, especially during the nighttime hours.

### Existing Noise Environment

#### Ambient Noise Levels

The planning area currently contains agricultural and rural residential land uses. The primary sources of stationary noise within the planning area are comprised of typical noise sources from residential activities (i.e., dogs barking, air conditioners, landscape maintenance, and conversations). Noise associated with these sources may represent a single event noise occurrence, short-term, or long-term/continuous noise. Agricultural noise sources in the project vicinity include the operation of farm equipment on adjacent agricultural fields.

To quantify existing ambient noise levels in the City, RBF Consulting conducted noise surveys on April 15, 2008 at several locations as noted in **Figure 3.10-2: Noise Measurement Locations**. The noise measurement sites were representative of existing noise exposure in a given time period (15 minutes) within the planning area and vicinity. According to these measurements (see **Table 3.10-1: Project and Vicinity Ambient Noise Measurements**), noise levels within the planning area range from 45 to 47.1 dBA in the AM and 42.1 to 43.4 dBA in the PM. Off-site noise levels in the vicinity of the planning area are highest along Freedom Boulevard at 66.4 dBA during the AM and 64.9 during the PM.



**Table 3.10-1: Project and Vicinity Ambient Noise Measurements (Short-Term)**

Site No.	Location	AM <sup>1</sup>		PM <sup>1</sup>	
		Leq (dBA)	Time	Leq (dBA)	Date and Time
1	Atkinson Lane at Vic Rugh Lane	50.8	9:40 AM	55.8	7:30 PM
2	Freedom Boulevard	66.4	10:00 AM	64.9	7:50 PM
3	Wagner Avenue and Bronson Street <sup>2</sup>	42.6	10:25 AM	46.2	3:25 PM
4	Crestview Drive and Crestview Court <sup>2</sup>	53.2	10:35 AM	56.2	3:40 PM
5	Brewington Avenue and Paloma Way <sup>2</sup>	53.7	10:50 AM	44.1	3:55 PM
6	Within the Planning Area <sup>2</sup>	45.0	11:10 AM	43.4	4:10 PM
7	Within the Planning Area <sup>2</sup>	46.5	11:20 AM	42.6	4:25 PM
8	Within the Planning Area <sup>2</sup>	47.1	11:55 AM	42.1	4:40 PM
Notes:					
Leq = equivalent sound level; dBA = A-weighted decibel					
<sup>1</sup> All measurements were taken on April 15, 2008.					
<sup>2</sup> Two measurements were taken at each location during the PM peak hour. However, the noise measurement in the table best represents the PM conditions within the planning area.					

Source: RBF Consulting 2008

Stationary Noise Sources

The primary sources of stationary noise within the planning area are from typical noise sources from residential uses (i.e., dogs barking, air conditioners, landscape maintenance, and conversations).

Mobile Noise Sources

The existing noise environment within the planning area and vicinity is influenced primarily by surface transportation noise emanating from vehicle traffic on area roadways. The planning area is surrounded by residential and agricultural land uses, which are accessed by two small two-lane roadways (e.g. Atkinson Lane, Brewington Avenue, etc.). The closest major roadway is Freedom Boulevard, which is a four-lane road located approximately 800 feet west of the western boundary of the planning area. The nearest truck route in the City is the Airport Boulevard/Holohan Road located north of the planning area.

The *City of Watsonville General Plan* identifies areas in the vicinity of Watsonville Municipal Airport and along Highway 1 as the areas in the City characterized by the greatest noise levels. The *City of Watsonville General Plan* states that where a direct line of site to Highway 1 is available, the 60 dBA noise contour extends more than 1,000 feet from Highway 1. Other areas of substantial noise are located along Route 129.

Existing roadway traffic noise levels for study roadway segments were calculated using the Federal Highway Administration Traffic Noise Prediction Model (RD-77-108). Traffic data used in the analysis was obtained from the traffic impact analysis prepared for the proposed project by RBF Consulting in December 2008. Input data included day/night percentage of autos, medium and heavy duty trucks, vehicle speeds, ground attenuation factors, and roadway widths. **Table 3.10-2: Summary of Existing Traffic Noise Levels** summarizes the existing CNEL at 100 feet



from roadway centerline and the distance from the existing centerline to the existing 60, 65, and 70 CNEL noise contours.

**Table 3.10-2: Summary of Existing Traffic Noise Levels along Study Roadway Segments**

Roadway Segment	Existing				
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
<b>Holohan Road</b>					
Between Green Valley Road and East Lake Ave.	14,010	60.8	119	55	26
<b>Airport Boulevard</b>					
Between Freedom Blvd. and Green Valley Road	16,250	64.2	280	89	28
Between Freedom Blvd. and Highway 1	19,240	64.6	332	105	33
<b>Green Valley Road</b>					
North of Holohan Road	16,590	61.2	133	62	29
Between Freedom Blvd. and Holohan Road	14,250	63.5	246	78	25
Between Main Street and Freedom Blvd.	21,020	65.1	362	115	36
South of Main Street	25,580	65.8	441	139	44
<b>Freedom Boulevard</b>					
Between Airport Blvd. and Green Valley Road	12,560	61.6	155	49	16
Between Green Valley Road and Gardner Ave.	19,510	63.3	241	76	24
Between Gardner Ave. and Atkinson Lane	25,810	64.7	319	101	32
Between Atkinson Lane and Crestview Drive	20,210	63.7	250	79	25
<b>East Lake Avenue (Highway 152)</b>					
Between Wagner Ave. and Holohan Road	12,580	64.9	229	107	49
North of Holohan Road	13,830	65.2	244	113	53
<b>Main Street</b>					
Between Green Valley Road and Highway 1	31,910	66.6	550	174	55
Between Green Valley Road and Ohlone Parkway	33,990	67.0	587	186	59
<b>Crestview Drive</b>					
Between Freedom Blvd. and Brewington Ave.	3,075	55.5	38	12	4
East of Brewington Avenue	380	46.4	5	1	0
<b>Wagner Avenue</b>					
West of East Lake Ave.	310	44.0	3	1	0
East of East Lake Ave.	2,520	53.0	22	7	2
<b>Martinelli Street</b>					
Between Freedom Blvd. and Brewington Ave.	6,200	57.0	53	17	5
East of Brewington Ave.	6,170	57.0	53	17	5
<b>Brewington Avenue</b>					
South of Martinelli St.	1,320	50.2	11	4	1
Between Martinelli St. and Crestview Dr.	1,160	49.7	10	3	1
North of Crestview Dr.	360	44.7	3	1	0
<b>Gardener Avenue</b>					
East of Freedom Blvd.	2,780	53.6	24	8	2
<b>Clifford Avenue</b>					
South of Freedom Blvd.	5,320	56.3	46	14	5
<b>Highway 129 – Riverside Drive</b>					
East of North Bound On/Off Ramps	9,390	58.3	91	42	20
West of South Bound On/Off Ramps	6,250	57.2	69	32	15
<b>Harkins Slough Road</b>					
East of North Bound Off Ramp (Highway 1)	10,040	61.9	173	55	17
West of South Bound On Ramp (Highway 1)	2,610	53.4	39	18	8

ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level

Source: RBF Consulting 2008



### Railroad Noise

Railroad noise is concentrated primarily in the industrial triangle formed by Highway 1, Harkins Slough Road, and Beach Street, located approximately two miles south of the planning area. Therefore, railroad-related noise is not currently experienced within the planning area.

### Airport Noise

The Watsonville Municipal Airport is located approximately two miles north of the proposed project and is the only public use airport in Santa Cruz County. It is located on the northwest boundary of the City of Watsonville, three miles from the City center. It is a well-constructed, general aviation facility occupying 291 acres with two runways serving single and twin-engine aircraft and helicopters, as well as turboprops and turbine-powered business jets. The airport has an additional 53 non-contiguous acres of land for clear-zone protection.

The Watsonville Municipal Airport is considered a reliever airport for general aviation from the San Francisco Bay Area. In 2000, approximately 330 corporate and private aircrafts were based at the airport. By 2020, the number of aircrafts based out of the airport is expected to increase to 381. On average, 335 daily aircraft operations occurred in 2000. Runway operations are estimated to increase to an average of approximately 356 by 2010 and 395 by 2020. Three non-precision instrument approaches serve the airport. A terminal building with offices and a restaurant is located in the terminal area. The airport has various services including fixed based operators and fueling.

Approximately 92 percent of all aircraft owners at the Watsonville Municipal Airport are from Santa Cruz County. The remaining 8 percent are primarily from Santa Clara County and other California locations. Presently, 326 aircraft are based at the airport. The total is expected to increase to 381 by the year 2020. Growth will occur in all categories of aircraft, especially turboprop and turbine-powered business jets. Runway operations (landings and takeoffs) will increase to 144,503 by the year 2020, most of which will be general aviation.

To meet aviation demand, additional facilities and reconstruction of existing facilities have been analyzed and are described in detail in the *Watsonville Municipal Airport Master Plan* (City of Watsonville 2002). The existing 4,501-foot runway handles light based and transient business jets. A runway extension to 5,300 feet total length will be needed to safely accommodate turbine powered business jet aircraft with increased fuel and cargo loads, and for safety of landing IFR (Instrument Flight Rules) aircraft in the often foggy conditions. This extended runway will allow for utilization of 75 percent of business jets with 60 percent useful load. Increases in aircraft parking facilities will be necessary; the development of covered parking for the storage of based aircraft will handle the increased need.

Portions of Assessors Parcel Number 019-226-43, 019-226-44, 048-211-25, and 019-236-01 are located within the Zone 6 (Traffic Pattern Zone) Safety Compatibility Zones. A portion of the planning area is also located within the 55 dB CNEL 2020 Noise Contour for the *Watsonville Municipal Airport Master Plan*.





### Sensitive Receptors

Certain land uses are considered particularly sensitive to noise. Sensitive noise receptors are generally defined as residential land uses and facilities where people congregate, such as schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Sensitive receptors adjacent to the planning area include Crestview Park located south of the planning area and the residential neighborhoods to the northwest, west, and south of the planning area.

### 3.10.2 Regulatory Setting

Regulatory requirements related to environmental noise are typically promulgated at the local level. However, federal and state agencies provide standards and guidelines to the local jurisdictions.

#### State of California Guidelines

The California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a potentially significant impact if it exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, a project has a potentially significant impact if the ambient noise levels in the project vicinity increase substantially above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures reduce the impact to less than significant level are not feasible because of economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code Section 65302 (f) mandates that the legislative body of each County and City adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services, as shown in **Table 3.10-3: Land Use Compatibility for Community Noise Environments**.

The guidelines rank noise-land use compatibility as normally acceptable, conditionally acceptable and clearly unacceptable noise levels for various land use types. Single-family homes are normally acceptable in exterior noise environments up to 60  $L_{dn}$  and conditionally acceptable up to 70  $L_{dn}$ . Multiple-family residential uses are normally acceptable up to 65  $L_{dn}$  and conditionally acceptable up to 70  $L_{dn}$ . Schools, libraries, and churches are normally acceptable up to 70  $L_{dn}$ , as are office buildings and business, commercial and professional uses. Industrial uses are acceptable up to 75  $L_{dn}$ .



Table 3.10-3: Land Use Compatibility For Community Noise Environments

Land Use Category	Community Noise Exposure (Ldn)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70-75	75-85
Residential - Multiple Family	50 – 65	60 – 70	70 - 75	70 – 85
Transient Lodging - Motel, Hotels	50 – 65	60 – 70	70 - 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 - 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 - 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 - 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	75 - 85	NA
Ldn = Day night average; NA = not applicable.				
Notes:				
<u>Normally Acceptable</u> : Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.				
<u>Conditionally Acceptable</u> : New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.				
<u>Normally Unacceptable</u> : New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise-insulation features must be included in the design.				
<u>Clearly Unacceptable</u> : New construction or development should generally not be undertaken.				
Source: City of Watsonville 2005				

**Local**

County of Santa Cruz General Plan

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies in the Santa Cruz County General Plan are applicable to noise.

**Policy 6.9.1, Land Use Compatibility Guidelines.** Require new development to conform with the Land Use Compatibility Guidelines. All new residential and noise sensitive land developments should conform to a noise exposure standard of 60 dB L<sub>dn</sub> (day/night average noise level) for outdoor use and 45dB L<sub>dn</sub> for indoor use. New development of land which cannot be made to conform to this standard shall not be permitted. Assure a compatible noise environment for various land uses through site planning, building orientation and design, interior layout, and physical barriers, landscaping, and buffer areas where appropriate.

**Policy 6.9.7, Construction Noise.** Require mitigation of construction noise as a condition of future project approvals.



**Policy 6.10.2 Evaluation and Mitigation.** Require the evaluation of mitigation measures for any project that would cause significant degradation of the noise environment by:

- (a) Causing the  $L_{dn}$  in existing residential areas to increase by 5 dB or more and remain below 60 dB;
- (b) Causing the  $L_{dn}$  in existing residential areas to increase by 3 dB or more and, thereby, exceed an  $L_{dn}$  of 60 dB;
- (c) Causing the  $L_{dn}$  in existing residential areas to increase by 3 dB or more if the  $L_{dn}$  currently exceeds 60 dB.

### Santa Cruz County Noise Ordinance

The County noise ordinance addresses curfews for offensive noise activities. The ordinance includes an exception for noise caused by farming operations carried out on any land designated within the Santa Cruz County General Plan for commercial agricultural use.

### City of Watsonville General Plan

The following policies in the 2005 *City of Watsonville General Plan* are applicable to the proposed Specific Plan.

**Policy 12.M, Noise.** The City shall utilize land use regulations and enforcement to ensure that noise levels in developed areas are kept at acceptable levels, and that future noise-sensitive land uses are protected from noise that is harmful.

**Implementation Measure 12.M.1, Traffic Noise.** The City shall enforce provisions of the California Vehicle Code and local ordinances to reduce vehicular noise intrusion in residential areas and near other noise sensitive land uses such as schools and hospitals.

**Implementation Measure 12.M.2, Truck Routes.** The City shall continue efforts to designate truck routes that bypass residential areas and other noise sensitive areas.

**Implementation Measure 12.M.3, Equipment Maintenance.** The City shall maintain all vehicles and mechanical equipment in peak operating conditions and correctly fitted with noise control devices.

**Implementation Measure 12.M.4, Soundproofing.** The City shall use the development review process and provisions of the Uniform Building Code to ensure adequate levels of soundproofing in all new construction.

**Implementation Measure 12.M.5, Noise Ordinance.** The City shall prepare, adopt, and enforce a comprehensive noise ordinance.

**Implementation Measure 12.M.6, Site Planning.** The City shall evaluate site orientation and building design to decrease the potential for noise intrusion, using the noise contour map and compatibility guidelines.



**Implementation Measure 12.M.7, Aircraft Noise.** The City shall periodically review and update noise contour measurements as aircraft operations increase or change in nature. Recommendations for noise attenuation contained in the Watsonville Airport Master Plan shall be implemented on a project-by-project basis.

### 3.10.3 Relevant Project Characteristics

The proposed Specific Plan and PUD includes approximately 34.7 net-acres designated for residential uses, including 10.5 net-acres for “Residential-High Density;” and 14.2 net-acres for “Residential-Medium Density;” 10.0 net-acres for “Residential Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management”; preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space”; a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within the Phase 1 (County site) that would be terminated once the Phase 2 (City site) is rezoned.

### 3.10.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with the CEQA, State CEQA Guidelines, agency and professional standards, a project impact would be considered significant if the project would:

- Expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to, or generate, excessive ground borne vibration or ground borne noise levels;
- Substantially permanently increase ambient noise levels in the project vicinity above levels existing without the project;
- Substantially temporarily or periodically increase ambient noise levels in the project vicinity above levels existing without the project;
- 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, expose people residing or working in the project area to excessive noise levels; and
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

#### Methodology

To quantify existing ambient noise levels in the City, RBF Consulting conducted noise surveys on April 15, 2008 within the planning area and vicinity. To evaluate traffic noise levels on study roadway segments, noise levels were calculated using the Federal Highway Administration Traffic Noise Prediction Model (RD-77-108). Traffic data used in the analysis was obtained from the traffic impact analysis prepared for the proposed project by RBF Consulting in December



2008. Input data included day/night percentage of autos, medium and heavy duty trucks, vehicle speeds, ground attenuation factors, and roadway widths.

#### Exposure to Short-term Construction Related Noise

**Impact 3.10-1: The proposed project could result in construction-related noise that would exceed applicable noise standards at nearby noise sensitive land uses. This is considered a potentially significant impact.**

During the construction phases of future development within the planning area (e.g. land clearing, grading, and excavation), noise from construction activities would add to the noise environment in the immediate project vicinity. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels for individual pieces of construction equipment are summarized in **Table 3.10-4: Typical Construction Equipment Noise Levels** below.

Table 3.10-4: Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Level (dBA at 50 feet)
Scrapers	88
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85
Scrapers	88

Notes: dBA = A-weighted decibel.

Source: Cyril M. Harris, *Handbook of Noise Control*, 1979.

Individual equipment noise levels typically range from approximately 75 to 91 dBA at 50 feet. Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower power settings. Depending on the activities performed and equipment usage requirements combined average-hourly noise levels at construction sites typically range from approximately 65 to 89 dBA  $L_{eq}$  at 50 feet. Assuming a maximum construction noise level of 89 dBA  $L_{eq}$  and an average attenuation rate of 6 dBA per doubling of distance from the source, construction activities located within approximately 1,500 feet of noise-sensitive receptors could reach levels of approximately 60 dBA  $L_{eq}$ . Sensitive receptors adjacent to the planning area include Crestview Park located south of the planning area and the residential neighborhoods to the northwest, west, and south of the planning area.

Construction activities occurring during the more noise-sensitive nighttime hours may also result in increased levels of annoyance and potential sleep disruption to occupants of nearby residential dwellings. Construction-generated noise is therefore, considered an adverse effect to nearby noise sensitive land uses, which is considered a **potentially significant impact**. Implementation of the following mitigation measure would reduce the effects to nearby noise sensitive land uses to a **less than significant level**.



### Mitigation Measures

**MM 3.10-1a** To minimize impacts associated with short-term construction noise, the County of Santa Cruz Planning Department shall ensure that project applicants incorporate the following noise control measures into construction contracts for future development within County Phases 1 and 2 of the proposed project in accordance with Policy 6.9.7 *County of Santa Cruz General Plan*:

- Limit construction that involves motorized equipment to Monday through Friday from 7:30 am to 4:30 pm to avoid the times of day and the days of the week when noise effects would cause the greatest annoyance to residents and to those using the area for recreation;
- Allow exceptions to the specified construction hours only for construction emergencies and when approved by the County of Santa Cruz Planning Department; and
- Post a sign that is clearly visible to adjacent land uses that provides the phone number for the public to call to register complaints about construction-related noise problems. A single disturbance coordinator shall be assigned to log in and respond to all calls. All verified problems shall be resolved within 24 hours of registering the complaint.

**MM 3.10-1b** To reduce the effects of construction noise, the City of Watsonville Community Development Department shall ensure that the project applicants include the following on all construction contracts for future development within City Phases 1 and 2 of the proposed project:

- Restrict construction activities within 1,500 feet of noise-sensitive receptors between the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday. No construction shall occur on legal holidays. Equipment maintenance and servicing shall be confined to the same restrictions;
- Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible;
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors;
- Operate earthmoving equipment on the construction site, as far away as practical from noise sensitive receptors;
- Operate earthmoving equipment on the construction site, as far away from vibration sensitive sites as possible; and
- Post construction hours, allowable workdays, and the phone number of the job superintendent at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receive a complaint during construction activities, the superintendent shall investigate, take appropriate corrective actions, and report the action taken to the reporting party.





Implementation of this mitigation measure would limit construction activities to the less noise sensitive periods of the day and would ensure that proper operating procedures are followed during construction to ensure that construction activities do not adversely affect nearby sensitive receptors. This would reduce this impact to a **less than significant level**.

#### Exposure to Increased Transportation-Related Noise

**Impact 3.10-2:** The proposed project would result in the exposure of the planning area and existing uses along study roadway segments to additional transportation noise. The predicted increase in noise levels would range between 0.1 dBA and 7.3 dBA. However, resulting noise levels at sensitive receptors along study roadway segments would be within City and County standards with implementation of the proposed project. Therefore, this is considered a less than significant impact.

Implementation of the proposed project would generate increased traffic volumes along study roadway segments. According to the traffic impact analysis prepared for the proposed project, the proposed project would result in a net total of 3,814 trips per day with implementation of the proposed project (RBF 2008). The traffic impact analysis was a conservative analysis, which analyzed construction of a maximum of 498 residential units within the planning area versus the proposed 450 residential units proposed within the Specific Plan. As the noise analysis was based on the traffic volumes in the traffic impact analysis, the noise analysis would therefore be considered conservative.

The proposed project would increased traffic volumes along study roadway segments, including the following: Holohan Road, Airport Boulevard, Green Valley Road, Freedom Boulevard, East Lake Boulevard (Highway 152), Main Street, Wagner Avenue, Crestview Drive, Martinelli Street, Brewington Avenue, Gardener Avenue, Highway 129-Riverside Drive, and Harkins Slough Road. To describe the existing noise levels due to traffic, the *Federal Highway Administration Traffic Noise Prediction Model* (RD-77-108) was used to evaluate resulting noise levels on these study roadway segments. The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to receiver, and the acoustical characteristics of the planning area. Predicted noise levels were calculated based on traffic data obtained from the traffic impact analysis. Predicted noise levels are summarized in **Table 3.10-5: Predicted Noise Levels**, which compares “Existing” conditions to “Existing Plus Background Plus Project” conditions.

Based on the modeling conducted, the proposed project would result in an increase in ambient noise levels along these study roadways. Predicted increases in noise levels on study roadway segments would be below 3 dBA except on the following study roadway segments where predicted noise levels would increase by approximately: 3.4 dBA on Wagner Avenue, west of East Lake Drive to a predicted noise level of 47.4 dBA; 7.1 dBA on Brewington Avenue, north of Crestview Drive to a predicted noise level of 51.8 dBA; and 7.3 dBA west of the Southbound On/Off-Ramps at the Highway 129-Riverside Drive intersection to a predicted noise level of 50.6 dBA. Within the City of Watsonville and the County of Santa Cruz, the maximum exterior noise levels acceptable for residential land uses and other noise sensitive areas is 60 dBA. Based on the resulting noise levels as shown in **Table 3.10-5: Predicted Noise Levels**, noise levels on these study roadway segments would be within City and County standards. Based on predicted exterior noise levels, interior noise levels would be within 45 dBA.





Although, the proposed project would result in an increase in noise levels, as predicted noise levels along these study roadway segments would be within the City and County noise standards, the increases in ambient noise levels with implementation of the proposed project at residential uses or other sensitive receptors located adjacent to these study roadway segments would be considered a **less than significant impact**.



Table 3.10-5: Noise Levels at Existing Plus Background and Existing Plus Background Plus Project Conditions

Roadway Segment	Existing + Background					Existing + Background + Project					Difference in dBA @ 100 feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
<b>Holohan Road</b>											
Between Green Valley Road and East Lake Ave.	14,090	60.8	119	55	26	14,090	60.8	119	55	26	0
<b>Airport Boulevard</b>											
Between Freedom Blvd. and Green Valley Road	16,670	64.3	287	91	29	16,670	64.3	287	91	29	0
Between Freedom Blvd. and Highway 1	19,750	64.7	341	108	34	20,500	64.9	354	112	35	.2
<b>Green Valley Road</b>											
North of Holohan Rd.						19,070	64.8	329	104	33	
Between Freedom Blvd. and Holohan Road	19,360	64.9	334	106	33	19,440	64.9	335	106	33	0
Between Main Street and Freedom Blvd.	21,790	65.2	376	119	38	22,230	65.3	383	121	38	.1
<b>Freedom Boulevard</b>											
Between Airport Blvd. and Green Valley Road	17,590	63.0	217	69	22	18,560	63.2	229	72	23	.2
Between Green Valley Road and Gardner Ave.	27,060	64.7	334	106	33	29,030	65.0	358	113	36	.3
Between Gardner Ave. and Atkinson Lane	24,735	64.5	305	96	31	26,590	64.7	329	104	33	.2
Between Atkinson Lane & Crestview Drive	26,330	64.8	325	103	33	26,970	64.8	333	105	33	0
<b>East Lake Avenue (Highway 152)</b>											
Between Wagner Ave. and Holohan Road	12,640	64.9	230	107	50	12,860	65.0	233	108	50	.1
North of Holohan Road	9,510	63.6	190	88	41	9,700	63.7	193	90	42	.1
<b>Main Street</b>											
Between Green Valley Road and Highway 1	33,090	66.7	570	180	57	33,310	66.8	574	182	57	.1
Between Green Valley Road and Ohlone Parkway	38,280	67.5	660	209	66	38,280	67.5	660	209	66	0



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Roadway Segment	Existing + Background					Existing + Background + Project					Difference in dBA @ 100 feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
<b>Crestview Drive</b>											
Between Freedom Blvd. & Brewington Ave.	3,075	55.5	38	12	4	4,125	56.8	51	16	5	1.3
East of Brewington Ave.	380	46.4	5	1	0	630	48.6	8	2	1	2.2
<b>Wagner Avenue</b>											
West of East Lake Ave.	310	44.0	3	1	0	680	47.4	6	2	1	3.4
East of East Lake Ave.	2,100	52.2	18	6	2	2,100	52.2	18	6	2	0
<b>Martinelli Street</b>											
Between Freedom Blvd. & Brewington Ave.	6,410	57.2	55	17	6	6,490	57.2	56	18	6	0
East of Brewington Ave.	6,340	57.1	54	17	5	6,340	57.1	54	17	5	0
<b>Brewington Avenue</b>											
South of Martinelli St.	1,360	50.4	12	4	1	1,470	50.7	13	4	1	.3
Between Martinelli St. & Crestview Dr.	1,285	50.1	11	3	1	1,500	50.8	13	4	1	.7
North of Crestview Dr.	360	44.7	3	1	0	1,850	51.8	16	5	2	7.1
<b>Gardener Avenue</b>											
East of Freedom Blvd.	2,780	53.6	24	8	2	4,360	55.5	37	12	4	1.9
Clifford Avenue											
South of Freedom Blvd.	5,710	56.6	49	15	5	5,900	56.7	51	16	5	.1
<b>Highway 129-Riverside Drive</b>											
East of North Bound On/Off Ramps	16,470	60.7	133	62	29	16,470	60.7	133	62	29	0
West of South Bound On/Off Ramps	7,340	57.9	77	36	17	1,370	50.6	25	12	5	7.3
<b>Harkins Slough Road</b>											
East of North Bound Off Ramp (Highway 1)	10,070	61.9	174	55	17	10,290	62.0	177	56	18	.1
West of South Bound On Ramp (Highway 1)	2,610	53.4	39	18	8	2,610	53.4	39	18	8	0
Source: RBF Consulting 2008											



### Long-term Exposure to Noise

**Impact 3.10-3:** The proposed project would result in an increase in on-site noise levels within the planning area. However, adherence to City and County noise standards for residential uses would ensure that potential increases in noise levels from future residential uses would be less than significant.

Implementation of the proposed project would create new noise sources typical of a residential neighborhood including such things as children playing, pet noise, amplified music, car repair, spa equipment, woodworking and home repair. Noise typically associated with residential land uses does not produce noise levels greater than 60 dBA. Noise from residential noise sources would primarily occur during the “daytime” activity hours of 7:00 AM to 10:00 PM. Furthermore, future residential uses would be required to comply with the noise standards set forth in the *County of Santa Cruz General Plan* for County Phases 1 and 2 of the proposed project and the *City of Watsonville General Plan* for City Phases 1 and Phase 2 of the proposed project. Therefore, increases in noise levels from future residential uses within the planning area are anticipated to be a **less than significant impact**.

### Exposure of the Proposed Project to Airport Noise

**Impact 3.10-4:** The proposed project would not be exposed to excessive noise levels from the Watsonville Municipal Airport. Therefore, this would be considered a less than significant impact.

A portion of the planning area is located within the 55 dB CNEL 2020 Noise Contour for the *Watsonville Municipal Airport Master Plan*. Residential, commercial, manufacturing and production uses are allowed uses within the 55 dB CNEL contour for the *Watsonville Municipal Airport Master Plan* (City of Watsonville 2002). Therefore, the proposed Specific Plan would not result in an exposure to excessive noise levels from the airport, which would be considered a **less than significant impact**.

### Exposure of the Proposed Project Railroad Noise

Railroad noise is concentrated primarily in the industrial triangle formed by Highway 1, Harkins Slough Road, and Beach Street, located approximately two miles south of the planning area. Therefore, railroad-related noise would not be experienced within the planning area. Railroad noise would therefore not be considered an impact within the planning area.



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## 3.11 Population and Housing

This section discusses the existing population and housing conditions in the County of Santa Cruz and City of Watsonville, and the proposed project's consistency with adopted regional or local projections. The environmental effects of increased population and housing (e.g., air quality, noise, utilities, etc.) are addressed in their respective sections of this EIR (refer to Sections 3.1 to 3.13 for additional information). Information in this section is based on the City of Watsonville Housing Element, Santa Cruz County Housing Element, and the population growth forecast issued in 2008 by the Association of Monterey Bay Area Governments (AMBAG).

### 3.11.1 Environmental Setting

#### Population

##### Unincorporated Santa Cruz County

The population of Santa Cruz County has grown by over one third since 1980. According to the U.S. Census Bureau, Santa Cruz County's population grew from 188,141 in 1980 to 255,602 in the year 2000. The unincorporated areas in the County have consistently represented over half of all the population in the County. For example, in 1960, the population in the unincorporated areas represented 51.4 percent of the County's total population. By 1990, that percentage had increased to a total of 56.7 percent of all the County wide population. The Census estimated population count for the unincorporated areas of Santa Cruz County at 130,809 persons in 1990 (Santa Cruz County 2006). The AMBAG's Monterey Bay Area 2008 Regional Forecast (the Forecast) estimates the unincorporated County's population to grow to 135,173 and 135,297 in 2010 and 2015, respectively (AMBAG 2008).

##### City of Watsonville

According to the 2000 Census, the City's population increased 42 percent during the 1990s and stands at 51,500 people due in part to annexations. The City's density of 7,129 persons per square mile is much higher compared to 315 in the unincorporated County, 2,919 in Scotts Valley, and 4,065 in the City of Santa Cruz (Watsonville 2003). The Forecast estimates the City's population to grow to 51,903 and 54,857 people in 2010 and 2015, respectively (AMBAG 2008).

#### Housing

##### Unincorporated Santa Cruz County

In Santa Cruz County, the number of households increased from 83,566 to 91,139, or by 8.3 percent, between 1990 and 2000 (Santa Cruz County 2006). Of the 91,139 households in 2000, the unincorporated county included 50,357 of households. The Department of Finance (DOF) estimated total County households for 2008 at 96,311, of which 51,283 were located in the unincorporated county. The Forecast estimates the County's housing units to grow to 105,509 units by 2010, of which 57,498 units to be located in the unincorporated portion of the County (AMBAG 2008).

As shown in **Table 3.11-1: Housing Units by Number in Structure**, the majority of housing units in Santa Cruz County are single family homes (63 percent of the housing stock in 2000). Overall, there was very little change in the proportion of multi-family and other types of homes in the housing stock between 1990 and 2000 (Santa Cruz County 2006).



Table 3.11-1: Housing Units by Number in Structure

Units in Structure	1990		2000	
	Number of Units	Percent	Number of Units	Percent
1-Unit, Detached	58,316	63.50%	62,706	63.40%
1-Unit, Attached	7,376	8.00%	8,750	8.80%
2 Units	3,050	3.30%	3,181	3.20%
3 or 4 Units	4,608	5.00%	5,187	5.20%
5 to 9 Units	3,181	3.50%	3,622	3.70%
10 to 19 Units	2,782	3.00%	2,560	2.60%
20 or More Units	3,933	4.30%	5,604	5.70%
Mobile Home	7,157	7.80%	6,916	7.00%
Boat, RV, Van, etc	1,475	1.60%	347	0.40%
Total	91,878	100%	98,873	100%

\*The categories for "Mobile Home" and "Boat, RV, Van, etc." do not correspond in the 1990 and 2000 Census data.

Source: Santa Cruz County 2006

The 2000 Census data indicates that there were 1,678 owner-occupied and 2,089 renter-occupied housing units in the unincorporated area which were overcrowded. According to the Census over 4 percent of the County's occupied housing units were overcrowded, and over 6 percent are extremely overcrowded (Santa Cruz County 2006). The U.S. Census Bureau defines an overcrowded unit as one occupied by 1.01 persons or more per room (excluding bathrooms, kitchen, hallway and closet space). Units with more than 1.5 persons per room are considered severely overcrowded.

As of the 2000 Census, the median value of homes for other Santa Cruz County communities was \$397,600 in Capitola, \$411,900 in Santa Cruz, and \$447,900 in Scotts Valley. Countywide, the median home value was \$377,500 in 2000. According to the California Association of Realtors, the median sale price for new homes in Santa Cruz County was \$525,000 in 2001, more than three times higher than the national median of \$174,100 (Watsonville 2003). However, due to the recent economic downturn the prices of homes fell significantly. According to Data Quick Real Estate News and Custom Data reports, the median home sale price for Santa Cruz County fell by almost 27 percent, from \$669,500 in August 2007 to \$490,000 in August 2008. Data for September 2008 indicates a further reduction of the median home sale price at \$432,000.

City of Watsonville

The City of Watsonville has grown in a compact fashion. As of the 2000 Census, the City of Watsonville had a total of 11,771 housing units, representing an increase of 19 percent since 1990. This increase is more than double the 8 percent increase Countywide and is due, primarily, to annexations of already developed areas rather than new housing production (Watsonville 2003). The DOF 2008 estimates state that there are 14,066 housing units in the City. The Forecast estimates the housing units to grow up to 14,093 units by 2010 and to up to 14,838 units total by 2015 (AMBAG 2008).





In 2000, single-family homes and multi-family dwelling units comprised approximately 64 percent and 29 percent of the housing stock, respectively. Mobile homes accounted for the remaining 7 percent. Housing stock composition has remained unchanged, particularly because much of the growth during the 1990s was attributed to annexations of existing built-out areas (Watsonville 2003).

Over the 1990s, the homeownership rate remained at 48 percent despite an increase in housing prices. Among rental units, the vacancy rate increased to 2.9 percent; ownership vacancies declined to 0.6 percent (Watsonville 2003). In 2008, the DOF estimates a 2.68 rate of vacancy for the City. A healthy vacancy rate ranges from three to six percent, depending on whether it is owner-occupied or rental units. However, due to the economic downturn, foreclosure rates have increased nation-wide resulting in an increased need for rental properties. Similar with nationwide trends, vacancy rates in the City of Watsonville have likely increased for housing stock and have decreased for rental properties.

According to the 2000 Census, a limited number of homes are considered substandard. In 2000, 221 units lacked complete plumbing in Watsonville, and 256 units were without full kitchens. However, the 2000 Census is acknowledged to have underestimated the number of substandard housing units and those in need of rehabilitation. Watsonville's oldest housing units are located in and around the Downtown as well as recently annexed areas. Much of the unsafe or unsanitary housing stock is rentals and/or occupied by owners with equity, but without sufficient resources to maintain their units. Older homes also may have lead-based paint hazards (Watsonville 2003).

Watsonville experienced significant changes in the housing market during the 1990s. According to the 2000 Census, the median home value was \$224,700, an increase of 23 percent over the median value in 1990. As mentioned above, other communities in Santa Cruz County experienced similar changes (Watsonville 2003). According to Data Quick Real Estate News and Custom Data reports, the median home sale price for the City fell by almost 48 percent, from \$640,000 in August 2007 to \$333,500 in August 2008. Data for September 2008 indicates a slight increase of the median home sale price at \$340,000.

### 3.11.2 Regulatory Setting

#### Regional

##### [Association of Monterey Bay Area Governments \(AMBAG\)](#)

AMBAG is a council of governments for the counties of Santa Cruz, Monterey, and San Benito. AMBAG was organized for the permanent establishment of a forum for planning, discussion and study of regional problems of mutual interest and concern to the counties and cities in Monterey, San Benito, and Santa Cruz Counties; and for the development of studies, plans, policies and action recommendations. AMBAG is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. AMBAG provides current population, employment, travel, and congestion projections for regional planning efforts. It is required to quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts. AMBAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, AMBAG reviews proposed projects to analyze their impacts on AMBAG's regional planning efforts.



## Local

### County of Santa Cruz

#### *County of Santa Cruz General Plan*

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies in the *Santa Cruz County General Plan* are applicable to population and housing.

**Policy 1.2.4, Annexation.** Encourage the orderly annexation of urban areas to adjacent cities, giving consideration to balancing the annexation of revenue producing and residential lands, and taking into consideration the goals and objectives of the County General Plan.

**Program c.** Work with the City of Watsonville to coordinate urban/rural boundaries in the Pajaro Valley. Begin a process to support appropriate areas to address housing and job needs in the Pajaro Valley through city-centered annexation and development. (Responsibility: Planning Department, Planning Commission Board of Supervisors).

#### *Santa Cruz County Affordable Housing Ordinance*

Santa Cruz County's Affordable Housing Ordinance (County Code Section 17.1 0) requires that market rate developers of projects with five or more units provide 15 percent of the units as affordable housing. Projects of three or four units are required to pay a small project fee in lieu of providing actual units.

#### *Santa Cruz County Housing Element*

The 2000-2007 Santa Cruz County Housing Element (County Housing Element) was certified by the State Department of Housing and Community Development in 2006. The County Housing Element is a comprehensive statement by the County of Santa Cruz of its current and future needs and proposed actions to facilitate providing housing to meet those needs at all income levels. The County Housing Element is based on:

- an assessment of prior housing policies and programs,
- an assessment of current and projected housing needs, especially as they relate to low income households and special needs populations,
- an inventory of sites available for housing construction,
- an analysis of market, environmental, governmental, and other factors which constrain housing production, and
- an assessment of new programs and policies that can enhance housing production in the County.

The County Housing Element specifically requires that the County site be adequately zoned to allow the development of housing units at a density of 20 units per acre.



## City of Watsonville

### *City Of Watsonville General Plan*

The following policies in the 2005 *City of Watsonville General Plan* are applicable to population and housing.

**Goal 4.1, Population and Housing.** Plan intensification of existing development and expansion of the City limits appropriate to address the quality of life needs of a population of 51,600 within the City limit and Sphere of Influence by 2005.

**Policy 4.A, Residential Land Use.** The City shall plan for housing production on a five year cycle consistent with the policies of the adopted Housing Element. The overall housing objectives for the General Plan time frame shall also be considered in long-range planning for housing.

**Implementation Measure 4.A.2, Land Use Compatibility.** The city shall monitor housing production to ensure compatibility with surrounding land uses.

**Implementation Measure 4.A.4, Housing Development Pacing.** The City shall monitor the creation of housing and jobs and review opportunities for pacing the development of housing with the creation of new jobs in the city. The monitoring program is intended to ensure a balance of jobs and housing units in the city so the city avoids becoming a bedroom community for other areas.

**Implementation Measure 4.A.5, Specific Plan at Atkinson Lane.** The City shall prepare a specific plan for the Atkinson Lane Area to identify and provide for the financing of neighborhood facility needs and location, location of various residential densities, and greenbelt, community park, circulation, parking, streetscape, and building design. Target 660 housing units.

**Goal 6.1, Provisions of Housing.** Develop, improve, conserve, and preserve safe, affordable housing to meet the needs of all residents.

**Goal 6.3, Special Needs Housing.** Provide housing to meet the special needs of large families, single head-of-household families, farm workers, the homeless, and the handicapped and disabled.

**Housing Policy B:** The City will provide housing opportunity for Watsonville's share of the region-wide housing need for all income groups, with priority given to very low- and low income households.

**Housing Policy C:** The City will provide opportunity for, and encourage, the development of adequate housing for the city's special needs groups, including large families, female-headed families, farm workers, the elderly, the disabled, and those in need of emergency shelter and transitional housing.

### *Watsonville Housing Element*

The Watsonville Housing Element (Housing Element) was certified by the State Department of Housing and Community Development in 2003. The Housing Element is a 5-year plan to fulfill the City's identified housing needs and the City's Regional Housing Needs Allocation (RHNA) of 2,283 units for the 2002-2007 planning period. The Housing Element identifies goals, policies, strategies, and programs that focus on neighborhood improvement, housing sites, affordable housing, government constraints on investment, and fair housing opportunities. The Housing



Element provides analysis on demographics, housing characteristics, and existing and future housing needs and evaluates the land, financial, and organizational resources available to address these needs.

*Watsonville Affordable Housing Ordinance*

The City’s Zoning Code contains an Affordable Housing Ordinance under Chapter 14-46. Under the requirements of this ordinance residential development projects of seven or more units or lots have to meet the requirements of providing 15 to 20 percent affordable housing, depending on total number and type of units. **Table 3.11-2: Watsonville Affordable Housing Ordinance Requirements** summarizes these requirements. The ordinance also sets a priority processing for projects providing affordable units equal to 50 percent or more of its total units.

**Table 3.11-2: Watsonville Affordable Housing Ordinance Requirements**

<b>Projects with 7-50 New Units or Lots</b>	
For-Sale, Ownership Projects	Rental Projects
15% Affordable Housing Requirement Required Components:	20% Affordable Housing Requirement Required Components:
5% Above Moderate	5% Median
5% Moderate	5% Low
5% Median	5% Very Low
	5% for Section 8 <sup>1</sup>
<b>Projects with more than 50 new units or lots</b>	
For-Sale, Ownership Projects	Rental Projects
20% Affordable Housing Requirement Required Components:	20% Affordable Housing Requirement Required Components:
10% Above Moderate	5% Median
5% Moderate	5% Low
5% Median	5% Very Low
	5% for Section 8 <sup>1</sup>
Notes:	
<sup>1</sup> The requirement to provide Section 8 units would depend upon the availability of households holding certificates and vouchers who are seeking housing at the time the unit is available for occupancy. The five (5%) percent set aside for Section 8 units must first be made available to the County of Santa Cruz Housing Authority for at least one-month period from the date of marketing for a new unit, or receipt by the owner of a notice of vacancy for an existing unit.	
Source: City of Watsonville Zoning Ordinance, Chapter 14-46.	

California Environmental Quality Act

CEQA requires the analysis of a project’s potential to induce growth. In accordance with CEQA, environmental documents must “discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment,” (Title 14 CCR § 15126.2(d)). Chapter 4 of this EIR includes an expanded discussion of growth issues associated with the proposed project.



### 3.11.3 Relevant Project Characteristics

The land use plan for the proposed Specific Plan and PUD is comprised of approximately 34.7 acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density” and 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density,” and 3.5 acres of parks for expansion of the adjacent Crestview Park. The proposed project would also include 3.1 acres of a designated riparian area and a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated as “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

The total amount of residential development within the planning area would not exceed 450 residential units. For the residential component, the proposed project would include a mix of housing types and densities that would meet a variety of the County’s and City’s future housing needs, including the City’s goal of making 50 percent of the units available as affordable housing.

Approximately 10.5 acres of the planning area is proposed to be designated as Residential – High Density (R-HD). This land use designation allows development of up to 20-units per acre. Development within the R-HD components of the proposed project would result in development of two- to three- story multi-family residential. The R-HD components of the planning area are expected to yield 210 units.

Approximately 14.2 net acres of the planning area would be designated as Residential – Mixed Density (R-MD). The R-MD designation would allow a mix of unit types and densities ranging from 10 to 12 dwelling units per acre. Buildout is expected to average 11-units per acre. Allowed unit types would range from attached single-family residences on relatively small lots to three or four-unit clustered development. Given an average expected buildout density of 11 units per acre, the R-MD components of the planning area are expected to yield 156 units.

Approximately 10 net acres of the planning area is designated as Residential – Low Density (R-LD). The R-LD designation would allow a mix of densities ranging from 8 to 10 dwelling units per acre. Buildout is expected to average 9-units per acre. Allowed unit types include detached single-family residences. Given an average expected buildout density of 9 units per acre, the R-LD site is expected to yield 90 units.

Based on the California Department of Finance (DOF) forecast of 3.73 persons per unit, the proposed project would generate approximately 1,679 people.

### 3.11.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with State CEQA Guidelines (including Appendix G), City of Watsonville and County of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:



- 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).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

## Methodology

The following impact evaluation is based on the City of Watsonville Housing Element, Santa Cruz County Housing Element, the population growth forecast issued in 2008 by the AMBAG, and the proposed Specific Plan.

## Impacts and Mitigation Measures

### Directly Contribute to Population Growth in the City and County

**Impact 3.11-1:** The proposed project would directly contribute to population growth in unincorporated Santa Cruz County and the City of Watsonville. However, the population growth is included in the regional population forecasts. Therefore, this is considered a less than significant impact.

The proposed project would include the construction of approximately 450 residential units, which would include a mix of housing types and densities that will meet a variety of the County's and City's future housing needs, including re-zoning the County site to 20 dwelling units per acre for affordable housing, and the City's goal of making 50 percent of the units available as affordable housing. The proposed project would generate approximately 1,679 persons, based on the California DOF 2008 forecast of 3.73 persons per unit.

According to the DOF 2008 forecasts, the County of Santa Cruz includes 104,479 housing units, of which 56,976 are located in the unincorporated County. The 2008 population in the County is estimated at 266,519 people, of which 134,979 people live in the unincorporated County. According to AMBAG, there are approximately 14,073 existing, planned, or permitted housing units in the City of Watsonville for a total population of 52,492 people. The proposed project would raise the population in Santa Cruz County to approximately 268,198 people and the population in the City of Watsonville to 52,518 people.

The population growth resulting from the proposed project would directly contribute to the population growth in the area. Due to the nature of the development of the City portion of the planning area by Measure U, the County site would likely develop before the City site develops. Upon adoption of the PUD by the County of Santa Cruz, the County site would be rezoned to "Regional Housing Needs Combining District" and development would proceed thereafter, generating approximately 520 persons and temporarily increasing the total population in unincorporated Santa Cruz County until the County site is annexed to the City. As defined by Measure U, the City may consider adoption of the proposed Specific Plan and certification of the EIR as a responsible agency. However, no tentative map can be approved until after January 1, 2010. The City's adoption of the proposed Specific Plan, however, would require an annexation and Sphere of Influence (SOI) amendment request to the Santa Cruz County Local Agency





Formation Commission (LAFCO) for those portions of the planning area located outside of the City limits and SOI. Therefore, buildout of the proposed project would occur over a period of years. Once annexed to the City, the proposed project would raise the population in the City of Watsonville to approximately 54,376 people.

According to the AMBAG population forecasts for the City of Watsonville, the population in the City would consist of 54,857 people by 2015 and would consist of 56,544 people by 2020. Therefore, buildout of the proposed project is accommodated for in the regional forecasts for the City of Watsonville. While the proposed project would directly contribute to population growth in the area, the growth is included in the regional population forecasts. Therefore, this would be considered a **less than significant impact**.

Displace a Substantial Number of Housing Units and People Necessitating the Construction of Replacement Housing

**Impact 3.11-2:** The proposed project would demolish four single-family residences, which would result in displacement of approximately 15 persons. However, the proposed project would include the construction of no more than 450 residential units. This is considered a less than significant impact.

As described above, the proposed project would result in demolition of four single-family residences currently located within the planning area: two within the County Site and two within the City Site. Based on the California DOF 2008 forecast of 3.73 persons per unit, the proposed project would displace approximately 15 people. The proposed project is a residential development and includes construction of no more than 450 new residential units, resulting in a significant net gain of residential units within the planning area. The proposed project would include a mix of housing types and densities that will meet a variety of the County's and City's future housing needs, including re-zoning the County Site to 20 dwelling units per acre for affordable housing, and the City's goal of making 50 percent of the units available as affordable housing.

As the proposed project consist of construction of 450 residential units, demolition of the four houses and the associated displacement would not necessitate the construction of replacement housing off-site. In addition, the displaced residents would be able to find replacement housing in the existing City and County housing pool. Therefore, this is considered a **less-than-significant impact**.





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## 3.12 Public Services, Utilities, and Recreation

This section of the Draft EIR analyzes the impacts associated with implementation of the proposed project on public facilities and services, including potable water distribution, wastewater treatment, stormwater drainage, solid waste, law enforcement, fire protection, schools, parks/recreation facilities, and other public utilities. Information in this section is derived primarily from the *County of Santa Cruz General Plan*, *City of Watsonville General Plan*, the proposed Atkinson Lane Specific Plan and PUD, the *Public Services and Public Facilities Financing Plan for the Atkinson Lane Specific Plan* (ADE 2009), as well as personal communication with service providers.

### 3.12.1 Environmental Setting

#### Fire Protection

##### County of Santa Cruz

Phase 1 (County site) would be served by the Pajaro Valley Fire Protection District (PVFPD) prior to annexation to the City. The PVFPD provides fire suppression services from two stations: the Pajaro Valley Station and the Mt. Madonna Station. The Pajaro Valley Station is located at 562 Casserly Road and is staffed with three career firefighter/Emergency Medical Technicians (EMT's) on a type one engine and the Mt. Madonna Station is located at 445 Summit Road and is staffed by volunteer firefighters/EMT's on a type two engine. The PVFPD currently employs ten firefighters, paramedics, and EMT's (Written and personal communication with Battalion Chief, Greg Estrada, PVFPD, February 19, 2009).

The PVFPD has a contract with the City of Watsonville Fire Department for services in the vicinity of the planning area that is based on a fee per call. The PVFPD also participates in auto/mutual aid with Watsonville Fire Department, Santa Cruz County Fire CSA #48 Corralitos Station and the Santa Cruz County Fire CSA # 4 Pajaro Dunes Station. Cal Fire provides cooperative fire protection services (Ibid.).

The PVFPD target response time is five minutes. The average response time currently is 6.75 minutes. The PVFPD responded to 744 service calls in 2008. The PVFPD Insurance Services Office (ISO) rating is six (Ibid.).

##### City of Watsonville

Phase 1 (City site) and buildout of the proposed project would be served by the Watsonville Fire Department (hereinafter "Fire Department") upon annexation to the City of Watsonville. The Fire Department provides fire suppression services from two stations: Fire Station #1 is located at 115 Second Street and Fire Station #2 is located at 372 Airport Boulevard adjacent to the Watsonville Municipal Airport. The quality of fire suppression capabilities is demonstrated by the ISO rating of 2, the highest in Santa Cruz County. The Fire Department's current goal is to provide a response time of four minutes or less from the nearest fire station to all portions of the City.

The Fire Department has mutual aid agreements with other fire departments in Santa Cruz County to assist the Fire Department when all of their resources are committed to incidents at the same time. In turn, the Fire Department is called upon to assist other communities during emergencies. In addition, the Fire Department also participates in the State Master Mutual Aid agreement, in



which the City receives support from the California Division of Forestry and Fire Protection and State Office of Emergency Services to respond to fire and disaster needs within Pajaro Valley as well as throughout the state.

In 2008, the Fire Department had an inventory of ten vehicles, including seven fire engines (two staffed, three reserve fire engines, and two command units), one aerial ladder truck, and two utility vehicles. Staffing in 2008 consisted of 39 allocated sworn positions and one administrative position. During 2007, the Fire Department responded to 4,233 calls for assistance, which is over 11 calls per day (Personal communication with Chief Mark Bisbee, Watsonville Fire Department on October 2008). The minimum daily staffing level is approximately ten personnel consisting of the Fire Chief, one Battalion Chief, three Captains, three Engineers and two Medics.

In addition to fire protection, the Fire Department has the responsibility of regulating, monitoring, and managing the clean-up hazardous materials, providing rescue and basic life support for medical emergencies, and managing the City's safety and disaster management programs. The Fire Department has also developed programs to prevent and mitigate the threats associated with fire, medical emergencies, hazardous materials, and accidental injury through prevention and public education activities.

## Law Enforcement

### County of Santa Cruz

Phase 1 (County site) would be served by the County of Santa Cruz Sherriff's office (Sheriff's office) prior to annexation to the City. The Sherriff's office headquarters is located at 701 Ocean Street in Santa Cruz in the County headquarters building. The Sheriff's office is composed of three Bureaus: the Operations Bureau, the Detention Bureau and the Administration Bureau. In addition to the headquarters four service centers are located in the San Lorenzo Valley, Live Oak/Soquel, Aptos, and South County, which provide enhanced accessibility to a wide variety of law enforcement services and facilitate citizen interaction with law enforcement. In 2008 the Sheriff's Office employed 150 sworn deputies<sup>1</sup>. The service centers also relies on volunteers (Personal communication with Sergeant Greg Lansdowne, Santa Cruz County Sheriff's Office – Professional Standards & Conduct Division, February 9, 2009). The Sheriff's office vehicle fleet includes approximately 38 patrol cars and 24 investigation cars. The Sheriff's office does not have traffic enforcement units (Ibid).

In 2008 the Sheriff's office responded to 94,330 service calls in the entire service area. In addition to the documented service calls, deputies are often flagged down for help or information while patrolling. These undocumented calls can amount to approximately ten to 15 calls per shift. The Sheriff's office strives to respond to service calls as promptly as possible, but due to the extensive service area and remote locations, typical response times vary greatly. The incoming calls are prioritized, with calls regarding life safety being responded to prior to calls related to property damage (Ibid).

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<sup>1</sup> The estimates of Sheriff's Office deputies and vehicle fleet do not include the corrections and court division personnel and equipment.



The Sheriff's office does not have a Mutual Aid agreement with adjoining jurisdictions. However, local law enforcement assists each other on priority calls for service when necessary (Ibid).

### City of Watsonville

Phase 1 (City site) and buildout of the proposed project would be served by the Watsonville Police Department (hereinafter "Police Department") upon annexation to the City of Watsonville. The City of Watsonville Police Department consists of a headquarters station located at 215 Union Street in Downtown Watsonville and two satellite neighborhood stations located at 936 East Lake Avenue and 2021 Freedom Boulevard. In 2008, the Police Department employed approximately 92 people, which included 33 officers in the Patrol Bureau, seven in the Investigation Bureau, ten supervisors, five traffic officers, two gang officers, three school officers, five in administration, and two administrative officers (Personal Communication with Deputy Chief Manny Solano and Linda Peters, Watsonville Police Department on November 5, 2008). The Police Department also includes an authorized staff of 25 civilian employees and support-staff. The *City of Watsonville General Plan* requires a police officer to population ratio of 1 officer to 600 people in order to maintain acceptable service levels and police response time. In addition, one civilian staff is required per three officers. Based on the City's population of 51,703 as of 2008, the City would require approximately 86 sworn officers and 29 civilian staff. This represents an existing shortage of 19 sworn officers and four civilian staff.

The Police Department has a fleet of 36 vehicles. The fleet includes the following: 18 police cars, seven investigations cars, five motorcycles for traffic, three parking enforcement vehicles, and three trucks for police service specialist (Ibid.).

Police activities include directed and self-initiated services, including dispatch calls for police service, foot patrol, area checks, warrants service, welfare safety checks, investigation of suspicious activities, and other law enforcement services. In the 2007 calendar year, the police department responded to approximately 61,000 service calls. The Police Department's response time goal for priority one calls is three to five minutes.

### Schools

The planning area is located within the Pajaro Valley Unified School District (PVUSD), which provides public education to the City of Watsonville and the surrounding area. PVUSD delivers educational programs to over 19,000 students at 16 elementary schools, six middle schools, and three high schools. Additionally, the PVUSD offers five charter schools, 17 children's centers, a continuation high school, Adult Education School, and two alternative schools. Out of that group, seven of the elementary schools, two of the middle schools and two of the high schools are located in the Watsonville-Freedom area. The balance is located in the Aptos area and rural areas beyond the City Limits, including northern Monterey County.

Between 1991 and 2008, the total enrollment of the PVUSD grew from approximately 16,000 to over 19,000 students. The 3,000-student enrollment increase in 16 years represents an average annual growth of about 230 new students per year. As shown in **Table 3.12-1: Pajaro Valley Unified School District Enrollment**, total student enrollment declined by 1,003 students between 2001 and 2005, and by 170 between 2006 and 2007.



**Table 3.12-1: Pajaro Valley Unified School District Enrolment**

Schools	97	98	99	00	01	02	03	04	05	06	07	08
Elementary	9,180	9,373	9,313	9,297	9,236	9,056	8,744	8,957	9,349	9,823	8,841	8,983
Middle	3,772	3,762	3,808	3,773	3,765	3,821	3,942	3,944	4,041	3,825	3,653	3,660
High	4,599	4,927	5,153	5,243	5,232	5,173	5,122	5,045	5,509	5,429	5,471	5,085
Other	1,263	1,341	1,520	1,589	1,649	1,638	1,760	1,591	--	252	1,194	1,659
Total	18,814	19,403	19,794	19,902	19,882	19,688	19,568	19,537	18,899	19,329	19,159	19,387
Change from previous year		589	391	108	-20	-194	-120	-31	-638	430	-170	228

Source: Terry McHenry, Pajaro Valley Unified School District, Office of the Associate Superintendent, June 24, 2005; the Pajaro Valley Unified School District, 2007, 2008

Seven elementary schools are located within one mile of the proposed project: MacQuidy Elementary School, Hyde Elementary School, Starlight Elementary School, Freedom Elementary School, Amesti Elementary School, Mintie White Elementary School, and Ann Soldo Elementary School. Middle schools located within one mile of the planning area include Lakeview Middle School and Cesar Chavez Middle School. Watsonville High School and Pajaro Valley High School are the closest located high schools to the planning area.

A discussion of each school location, proximity to the planning area, 2007-08 student enrollment, and average class size as provided by the PVUSD, is as follows (PVUSD 2008b):

Elementary Schools

The average class size schoolwide for elementary schools in the state is 23 students for the 2007-2008 school years (Ibid).

- **MacQuidy Elementary School (K-5)** is the only school site that is within one-quarter mile of the proposed project as shown in **Figure 3.12-1: Existing Parks and Schools**. MacQuidy Elementary School is located southeast of the planning area at the corner of Virginia and Martinelli Streets within the City of Watsonville. MacQuidy Elementary School had a student enrollment of 582 students with a school-wide average class size of 22 during the 2007-2008 schools year (Ibid).
- **Hyde Elementary School (K-5)** is less than one-half mile away, located southwest of the proposed project at the corner of Alta Vista Avenue and Santa Clara Street within the City of Watsonville. Hyde Elementary School had a student enrollment of 574 students with a school-wide average class size of 21 during the 2007-2008 school years (Ibid).
- **Ann Soldo Elementary School (K-5)** is approximately 0.7 miles away, located southeast of the proposed project at the corner of Menasco Drive and Vista Montana, within the City of Watsonville. Ann Soldo had a student enrollment of 614 students with a school-wide average class size of 21 during the 2007-2008 school year (Ibid).

Middle Schools

The average class size schoolwide for middle schools in the state is 28 students for the 2007-2008 school years (Ibid).

- **Lakeview Middle School (6-8)** is approximately one mile away, located northeast of the proposed project at the corner of East Lake Avenue and Holohan Road, within the



County. Lakeview had a student enrollment of 717 students with a school-wide average class size of 27 during the 2007-2008 school year (Ibid).

- **Cesar Chavez Middle School** (6-8) is approximately 0.7 miles away, located southwest of the proposed project at the corner of Hammer Road and Arthur Drive, within the City. Cesar Chavez had a student enrollment of 591 students with a school-wide average class size of 29 students during the 2007-2008 school year (Ibid).
- **E.A. Hall Middle School** (6-8) is located at 201 Brewington Avenue, approximately one mile south of the proposed project. E.A. Hall had a student enrollment of 648 students with a school-wide average class size of 26 students during the 2007-2008 school year (Ibid).

### High Schools

The average class size schoolwide for high schools in the state is 28 students for the 2007-2008 school years (Ibid).

- **Watsonville High School** (9-12) is the closest high school to the proposed project. Watsonville High is located at 250 East Beach Street, approximately 1.2 miles southeast of the site. According to the PVUSD, the student enrollment at Watsonville High during the 2007-2008 school year was 2,150 students with an average class size for all classes schoolwide of 29 (Ibid).
- **Pajaro Valley High School** (9-12) is located at 500 Harkins Slough Road, approximately two miles southwest of the planning area. According to the PVUSD, the student enrolment at the Pajaro Valley High School during the 2007-2008 school year was 1,639 students, with an average class size for all classes schoolwide of 29 students (Ibid).

In November 2008, PVUSD prepared a *School Facilities Needs Analysis* (Facility Master Plan), which outlined current capacity and projected capacity of the PVUSD's schools and a plan to address facilities needs for the next five years. The PVUSD concluded that in the next six years the PVUSD will conservatively need as much as 40 additional elementary classrooms, three middle school classrooms, and two charter school classrooms. The PVUSD Facility Master Plan outlined several options for increasing student capacity of facilities, such as new construction, acquiring or leasing portable classrooms, joint use or contracting for use of facilities with neighboring districts, inter-district agreements, and boundary changes and/or open enrolment. However, even with increased utilization of the campuses, the PVUSD recommends adding at least one elementary school within next six years to house anticipated enrollment growth.

As shown in **Table 3.12-2: Capacity of Schools Serving the Planning Area – 2008**, the middle and high schools within the PVUSD have a substantial, existing capacity. However, the elementary schools, which serve the planning area, currently operate at or over capacity.



Table 3.12-2: Capacity of Schools Serving the Planning Area – 2008

Grade Level and School Name	Enrollment in 2008	Maximum Capacity	Current Capacity
<b>Elementary</b>			
H.A. Hyde	607	616	9
Ann Soldo	614	556	-58
MacQuiddy	662	602	-60
Current Capacity Total			-109
<b>Middle School</b>			
Cesar Chavez	572	740	168
Lakeview	641	772	131
E.A. Hall	630	728	98
Current Capacity Total			397
<b>High</b>			
Pajaro Valley	1,610	2,200	590
Watsonville High	2,160	2,464	304
Current Capacity Total			930

Source: PVUSD Facility Master Plan 2008

In addition to increasing the capacity, the PVUSD is also obligated to upgrade permanent buildings that are 25 years or older and portable buildings 20 years or older based on the State School Facility Program for Modernization. The PVUSD is responsible for funding 50 percent of new construction projects and 40 percent of modernization projects. While the PVUSD faces funding shortfalls, the *Facility Master Plan* discusses several funding options considered by the PVUSD in addressing the shortfall. These funding options include:

- **General Obligation Bond** – This bond would provide funds for needed projects with taxes levied to service the bond debt. The District will consider placing a General Obligation Bond on the ballot at the earliest available election.
- **Parcel Tax** – The PVUSD would consider placing a parcel tax on a ballot if it coincided with a strong community support as it requires a higher percentage threshold for passage than a general obligation bond.
- **Specialized Funding Opportunities** – The PVUSD considers comparing projects identified in the *Facility Master Plan* with various federal, state, and other founding sources that address health and safety concerns, especially at poorly performing school sites. In addition, the *Facility Master Plan* programs might meet eligibility requirements for some of the recent legislation, which has created special funding programs for facilities supporting career technical instruction, providing seismic retrofit support, and reducing overcrowded campuses.
- **Developer Fees** – California school districts have 23 years of legal authorization to levy fees on residential and commercial/industrial development. The following are three levels of fees:
  - *Level 1* fees are limited by law to a maximum amount. This amount is currently \$2.97 per square foot for residential development.
  - *Level 2* and *Level 3* fees were enacted upon approval of Proposition 1A in November 1998 to mitigate the cost of impacts from new development in





districts were Level 1 fees were inadequate. Level 2 fees apply only to residential development and are purported to cover about one-half of the school cost impacts, in effect assuming that state funding is available to pay for the other half.

- Level 3 fees are based on the full costs without state aid levied only if the State Allocation Board determines that state funding for new construction is not available. The residential fee would be \$7.20 per square foot in the circumstances permitting Level 3 fees were to arise.
- The PVUSD has levied Level 2 development fees for six years, which are currently set at \$4.43 per square foot for residential developments. The amounts of the fees are determined through the Facilities Master Plan.

## Parks

### County of Santa Cruz

The County of Santa Cruz Parks, Open Space, and Cultural Services Department operates a total of 42 parks, which total approximately 1,246 acres of parkland in unincorporated Santa Cruz County. The closest County park to the planning area is the Pinto Lake Park, which is located approximately two miles north of the planning area, along Green Valley Road. The park is approximately 294 acres in size. The County manages a 216 acre portion in the northern portion of the park and the City of Watsonville manages a 78 acre portion of the park (see **Figure 3.12-1b: Existing City Parks**).

### City of Watsonville

The City of Watsonville Park and Community Services Department operates a total of 24 parks, which total 317 acres of parkland within the City of Watsonville. There are 16 vest pocket parks totaling 12 acres, six neighborhood parks totaling 27.7 acres, and two community parks totaling 104.3 acres within the City (see **Figure 3.12-1b: Existing City Parks**). Furthermore, there are six recreation centers located throughout the City. The *City of Watsonville General Plan* defines vest pocket parks as up to two acres in size and serving residents within a ¼ mile radius. Neighborhood parks are defined as two to 10 acres in size and serving residents up to one half mile away. Community parks are typically large in size (20 acres and more) and with a service, which encompasses the entire community.

In addition to City-owned facilities, the Watsonville Parks and Community Services Department utilizes some recreation facilities owned by the PVUSD, including jointly constructed recreation facilities at EA Hall Middle School and Starlight Elementary School, the Watsonville High School swimming pool, and various gymnasiums.

In the last decade, the City of Watsonville has significantly improved opportunities for recreation. Las Brisas and Sea View Ranch Parks were established along Watsonville's habitat-rich sloughs. However, even with these recent major improvements, which were developed to address new development, Watsonville continues to face a slight deficit of park acreage facilities. The *City of Watsonville General Plan* requires five acres of parkland per 1,000 residents. However, the City of Watsonville presently has less than 4.9 acres per 1,000 residents.



Arista Park is the only vest pocket park within ¼ mile of the site. Arista Park is 0.3 acres in size, located west of the planning area at 52 Arista Court. The park provides amenities for children's activities and generally serves the residents along Arista Lane and Arista Court.

Crestview Park is the only neighborhood park within one half mile of the planning area and borders the southern end of the planning area at the corner of Crestview Drive and Brewington Avenue. At 2.1 acres in size, the park is considered small for a neighborhood park. The park offers tennis courts and passive recreation. As the Crestview Park is considered small for a community park, the planning area is recognized as an underserved area, which is located more than one quarter mile from a community park of over 2 acres in size or a school.

The planning area is located just over a mile from both the Ramsey and Pinto Lake community parks. Ramsey Park is approximately 32 acres in size and is located west of the planning area, at 1301 Main Street. This community park offers two baseball diamonds and a picnic area. The Pinto Lake Park is approximately 78.5 acre in size and is located north of the planning area, at 451 Green Valley Road. This park offers a wide range of recreational facilities and activities such as, a softball diamond, a volleyball court, horseshoes, children's playground, pedal and row boats, and fishing.

## Libraries

### County of Santa Cruz

The Santa Cruz Public Libraries is a city-county library system (Library System), which serves over 200,000 people throughout the County of Santa Cruz, with the exception of the City of Watsonville, which maintains its own library. The Library System has ten Branches: Aptos, Boulder Creek, Branciforte (east Santa Cruz), Capitola, Central (downtown Santa Cruz), Felton, Garfield Park (west Santa Cruz), La Selva Beach, Live Oak, and Scotts Valley. The closest County libraries to the planning area is the La Selva Beach branch. Library System Administrative Offices, the Technical Services (cataloging) Division, and the Outreach Program are located in Headquarters offices in downtown Santa Cruz. The Outreach Program includes a book mobile, senior services, and substantial early literacy services for children. The book mobile service stops at 25 locations throughout the county, on a bi-weekly schedule. The Library System employs approximately 134 staff and has a team of on-call substitutes and student interns.

Library System plans are based upon facilities and service standards updated by the Board in 2005 and a Facilities Master Plan approved in September 2008. Capital projects that are proposed over the next five years include upgrading the library automation system, expanding the Aptos Branch parking lot, building a replacement branch in Felton, and constructing additional facilities within the cities of Capitola and Scotts Valley. Other plans include expanding the Aptos Branch and renovating the Central Branch in downtown Santa Cruz.

### City of Watsonville

The City of Watsonville Public Library system includes the Main Library, the Freedom Branch Library, and the Adult Literacy program located adjacent to the Main Library. These libraries serve the City residents with additional eight percent of library use estimated to be by residents of unincorporated Santa Cruz County. Until recently the main library was located at 310 Union Street. In 1997 efforts were made to expand the Union Street main library. In April 2008, after ten years of planning, the newly constructed two-story, 42,000 square foot Main Library opened



in the new multi-use Civic Center building in downtown Watsonville, at 275 Main Street. An additional 8,000 square feet is available on the second floor for future expansion.

The Watsonville Public Library employs approximately 50 staff, 14 of whom are full-time employees. There are seven librarians, including the Library Director, as well as some students that are employed part-time to assist staff. Staffing both floors of the new library requires a minimum of seven employees, more than double the number required at the single story former Main Library.

The first floor of the Main Library is dedicated to children's services, which includes a craft room and a theater. This floor also provides five self-checkout stations, a circulation desk, and a reference desk. The second floor includes two conference rooms; four study rooms, a large capacity community room with kitchenette, the California Agricultural Workers' History Center, a teen room ("Teen Space"), and a computer lab.

The Freedom Branch Library became a part of the Watsonville Public Library system in 1996, and in 2000 relocated to its present location at 2021 Freedom Blvd, at the corner of Freedom and Airport Boulevards. The Freedom Branch has the capacity to hold 15,000 books and other items.

### Wastewater

The City provides wastewater service to the Watsonville, Pajaro, Freedom, and Salsipuedes sanitary district, a 21 square mile service area. The City maintains 115 miles of collection pipelines and 18 pump stations to ensure that wastewater flows without interruption to the wastewater treatment plant (WWTP) located at 401 Panabaker Lane. While the WWTP has the capacity to treat 12.1 million gallons per day, this facility currently treats an average of seven million gallons of wastewater from residential, commercial and industrial sources. The wastewater is treated to a secondary treatment level, and undergoes extensive monitoring and testing to insure compliance with all regulatory pollution prevention laws before being discharged to the Monterey Bay via an outlet located over a mile offshore.

Existing wastewater infrastructure facilities adjacent to the proposed project include various gravity sanitary sewer mains that collect and convey wastewater flows to the City's WWTP. As shown on **Figure 3.12-2: Existing Sewer System**, sewer infrastructure is located along most streets servicing the development corridors and neighborhoods adjacent to the planning area. Eight-inch sewer mains run along Natalie Lane, Jasmine Lane, Brewington Avenue, and Paloma Way and terminate at locations along the southern and western boundaries of the planning area. Mains also run along streets north of the planning area, including ten-inch mains located along Atkinson Lane, Gardner Avenue, and parts of Blanca Lane. Crestview Drive and Wagner Avenue currently offer limited sewer connection locations.

### Water Supply

The planning area is located within the service area of the Watsonville Public Works and Utilities Department (WPWUD). WPWUD currently provides water to more than 13,500 metered accounts within a service area that extends beyond the Watsonville City limits. About 85 percent of the City's water supply is groundwater from the Aromas Red Sands Aquifer in the Pajaro Groundwater Basin, while the remaining 15 percent is collected from Corralitos and Browns Creeks. The City operates 12 wells and two surface water intakes. According to the *City of Watsonville General Plan*, the water basin is in overdraft condition and the City is committed to



pursuing a variety of options to limit the amount of impact on the groundwater basin, including the development of a recycled water source.

Surface Water

Of the total water used by City and County residents, approximately 15 percent is comprised of surface water collected from intakes located along Corralitos and Browns Creeks and treated at a filter plant in the community of Corralitos, located in unincorporated Santa Cruz County approximately ten miles from the City. The City maintains pre-1914 appropriative rights to 2,400 AFY of surface water from the Corralitos and Brown’s Valley Creeks. The City on average utilizes approximately 1,020 acre feet per year (AFY) of this appropriation. Surface water is diverted to the City-owned Corralitos Creek Filter Plant where slow sand filtration and disinfection treat the water. The water is then delivered to service area customers through a pressurized distribution system. The plant has a design capacity of 2,400 AFY, but has limited treatment capabilities and generally operates spring through the fall. During the rainy season, the plant is usually shut down due to the high turbidity of the intake water which cannot be treated at the plant. Therefore, the City’s surface water supply reliability is susceptible to variations of the influent water quality.

Groundwater

Groundwater is the City’s primary water supply source. There are currently twelve groundwater wells in the City with a combined total capacity of 21,600 AFY; however, pumps usually do not run at maximum capacity. Therefore, 10,800 AFY is utilized as a reliable “operating capacity” for groundwater supplies, which is 50 percent of the total capacity. **Table 3.12-3: Past and Projected Groundwater Pumping Volumes** shows the past and projected groundwater pumping rates for the City as shown in the City’s Urban Water Management Plan (UWMP). All groundwater is treated at each well site and meets or exceeds state and federal drinking water standards. The location of the City’s groundwater wells is included in the City’s Urban Water Management Plan. Groundwater extractions decreased in 2005 when the City implemented an aggressive water conservation program.

**Table 3.12-3: Past and Projected Groundwater Pumping Volumes**

	2000	2001	2002	2003	2005	2010	2015	2020	2025	2030
Groundwater (AFY)	6,331	6,527	6,617	6,758	6,023	6,070	6,141	6,236	6,693	7,179
Percent of Operating Capacity	59%	60%	61%	63%	56%	56%	57%	58%	62%	66%

Source: City of Watsonville 2006

Groundwater is pumped by the City from the Pajaro Valley Groundwater Basin (Basin). The Basin has been defined by Department of Water Resources in California’s Groundwater, Bulletin 118. The Basin is bounded to the west by the Monterey Bay and to the east by the San Andreas Fault, adjacent pre-Quaternary formations, and the Santa Cruz Mountains beyond. The basin’s northern boundary is the surface expression of the geologic contact between Quaternary alluvium of the Pajaro Valley and marine sedimentary deposits of the Pliocene Purisima Formation. The southern basin boundary is a drainage divide in the Carneros Hills between the Elkhorn Slough to the north and the Moro Cojo Slough and lower Salinas River Valley and the Salinas Valley-Langley groundwater sub-basin to the south.

From oldest to youngest, the water-bearing geologic units comprising the Basin include the Purisima Formation, the Aromas Red Sands, Terrace and Pleistocene Eolian Deposits, Quaternary



alluvium, and Dune Deposits. Despite increases in the amount of information available, the fundamental understanding of the basin geology has not changed significantly since 1953.

The alluvium is composed of Pleistocene terrace deposits, which is overlain by Holocene alluvium and then by Holocene dune sands; the dune sands are largely unsaturated. The average thickness of these deposits is 50 to 300 feet. Terrace deposits consist of unconsolidated basal gravel, sand, silt, and clay and alluvium consists of sand, gravel and clay deposited in the Pajaro River flood plain. The basal gravel has good hydraulic continuity with the underlying Aromas Red Sands Formation and is a major source of water for shallow wells in the Pajaro River floodplain.

The Aromas Red Sands Formation is composed of friable, quartzose, well-sorted brown to red sands that are generally medium-grained and weakly cemented with iron oxide. The thickness of this formation ranges from 100 feet in the foothills to nearly 900 feet below sea level near the mouth of the Pajaro River. The formation consists of upper eolian and lower fluvial sand units that are separated by confining layers of interbedded clays and silty clay. The Aromas sands are considered the primary water-bearing unit of the basin, although, the water producing zones within the Aromas Red Sands formation can vary greatly in their ability to transmit water.

Mostly marine in origin, the Purisima Formation is a thick sequence of highly variable sediments ranging from extensive shale beds near its base to continental deposits in its upper portion. The thickness of this formation varies from 1,000 to 2,000 feet in the central portion of the valley to approximately 4,000 feet in the down-dropped graben between the San Andreas and Zayante-Vergales faults. The sediments are chiefly poorly indurated, moderately permeable gravel, sands, silts, and silty clays. In the valley portion of the Basin, the Purisima has been developed to a minor degree. Hydrologically, the most important outcrops are north and east of Pajaro Valley where this unit acts as a source of recharge to the Basin.

The total storage capacity of the Basin is estimated to be 2,000,000 acre feet (AF) above the Purisima Formation. If the storage from the upper Purisima Formation is included, then the estimate of total storage capacity of the Basin is 7,770,000 AF. Between 1964 and 1997, there has been an estimated loss of 300,000 AF of freshwater storage from the Basin. Approximately 200,000 AF of this freshwater loss is due to seawater intrusion, while 100,000 AF is due to conditions of chronic overdraft and resultant falling groundwater levels.

### *Groundwater Management*

The Pajaro Valley Water Management Agency (PVWMA) manages the Basin to prevent further increase in long-term overdraft and ensure sufficient water supplies for present and future needs within its boundaries. The Basin is not adjudicated (pumping rights have not been set by a court or Board decision). However, the Basin is in an overdraft condition, which occurs when the amount of water withdrawn exceeds the amount of water replenishing the Basin. The Basin also is experiencing an increasing rate of seawater intrusion. The combination of overdraft and seawater intrusion limits the fresh groundwater supply needed to sustain the long-term economy of the Pajaro Valley. Currently, the pumping demand on the Basin is approximately 69,000 AFY. Under current conditions, the safe-yield of the Basin, the amount of water that can be taken from a source without depleting that source beyond its ability to be naturally replenished, is approximately 24,000 AFY. Eliminating groundwater pumping at the coast with 100 percent reliable supplemental supplies would create a hydrostatic barrier that would prevent seawater intrusion, resulting in a sustainable yield of approximately 48,000 AFY. The remaining





difference of 21,000 AFY would be derived from other water sources, such as recycled water and imported water.

The following projects have been proposed by PVWMA, as stated in their 2002 *Revised Basin Management Plan*, in order to remediate overdraft and seawater intrusion in the Basin and provide adequate water supplies to the projected demands within the PVWMA service area:

- ***Coastal Distribution System.*** A Coastal Distribution System (CDS) is necessary to optimize the Basin by eliminating coastal pumping without affecting current agricultural practices in the coastal areas. Eliminating coastal pumping with a dependable supplemental supply would create a hydrostatic barrier that would prevent seawater intrusion in the Basin and generate a Basin sustainable yield of 48,000 AFY as opposed to 24,000 AFY with coastal pumping. The CDS consists of approximately 26 to 30 miles of pipeline ranging in diameter from eight to 48 inches. To the extent possible, the distribution system will follow existing roadways to a service area roughly bordered by Elkhorn Slough, Highway 1, Buena Vista Road, and the Pacific Ocean. The system is currently under construction. The PVWMA is nearing completion of approximately 20 miles of the CDS pipeline.
- ***Water Conservation.*** PVWMA believes approximately 5,000 AFY of water can be conserved by implementing its Water Conservation 2000 Plan. Proposed agricultural conservation programs include correcting on-farm irrigation system deficiencies, improving irrigation scheduling techniques, and conducting mobile laboratory evaluations. Urban water savings can be achieved through water audits, a landscape water conservation ordinance, and toilet and washing machine rebate programs. The Basin Plan estimates that 4,500 AFY of agricultural water and 500 AFY of urban water can be conserved through voluntary actions. The City anticipates water conservation savings of 1,000 AFY by 2020.
- ***Harkins Slough Project with Harkins Slough Recharge Basin and Supplemental Wells and Connection.*** Harkins Slough is a partially channelized, ephemeral waterway that originates in an area of residential properties north of Watsonville. The Harkins Slough project consists of pumping and treatment facilities located at the confluence of Harkins and Watsonville Sloughs, a transmission pipeline from the treatment facility to the recharge basin located off Dairy Road, and extraction wells with a connection pipeline to the Coastal Distribution System. Flood control pumps minimize flooding that historically occurs by pumping water over a wall into Watsonville Slough. The Harkins Slough project utilizes the two existing slough flood pumps to divert water for irrigation supply. Diversion of the water will typically occur between December and May, when Slough water is available and of highest quality. Slough water will be filtered and pumped to the Harkins Slough recharge basin for storage in the shallow groundwater aquifer. Extraction wells are located around the recharge basin to supply water to the CDS during the irrigation season. The Harkins Slough project's first full year of operation was 2002.
- ***Recycled Water.*** The City recently completed a project to utilize recycled water from the City's Wastewater Treatment Plant. A tertiary treatment and water blending facility are used to reduce the salt level of the recycled water to below 500 mg/L. It is estimated that approximately 4,000 AFY is being utilized. The City and PVWMA have already allocated recycled water for agricultural irrigation and groundwater recharge projects.



### *Urban Water Management Plan Supply and Demand Projections*

The Urban Water Management Plan (UWMP) estimates the water supply and water demand during normal dry and multiple-dry years. A comparison of the normal year water supply and demand for the City is presented in **Table 3.12-4: Projected Supply and Demand Comparison for Normal Year (AFY)**, as stated in the UWMP.

**Table 3.12-4: Projected Supply and Demand Comparison for Normal Year (AFY)**

Water Source	2010	2015	2020	2025	2030
Groundwater	10,800	10,800	10,800	10,800	10,800
Surface Water	2,400	2,400	2,400	2,400	2,400
Recycled Water	429	455	482	497	512
Supply Total	13,629	13,655	13,682	13,697	13,712
Projected Demand	7,403	7,807	8,236	8,693	9,179
Projected Water Conservation Savings	333	666	1,000	1,000	1,000
Projected Demand with Conservation Savings	7,070	7,141	7,236	7,693	8,179

Source: City of Watsonville 2006

A comparison of the single dry year water supply and demand for the City is presented in **Table 3.12-5: Projected Supply and Demand Comparison for Single Dry Year (AFY)** based on the UWMP. It is assumed under single and multiple dry year conditions, the City will shut down the surface water treatment plant and rely solely on groundwater. Demand is assumed to be consistent with demands during normal years.

**Table 3.12-5: Projected Supply and Demand Comparison for Single Dry Year (AFY)**

Water Source	2010	2015	2020	2025	2030
Groundwater	10,800	10,800	10,800	10,800	10,800
Surface Water	0	0	0	0	0
Recycled Water	429	455	482	497	512
Supply Total	11,229	11,255	11,282	11,297	11,312
Projected Demand	7,403	7,807	8,236	8,693	9,179
Projected Water Conservation Savings	333	666	1,000	1,000	1,000
Projected Demand with Conservation Savings	7,070	7,141	7,236	7,693	8,179

Source: City of Watsonville 2006

A comparison of the multiple-dry year water supply and demand for the City is presented in **Table 3.12-6: Projected Supply and Demand Comparison for Multiple Dry Years (AFY)** based on the UWMP. It is assumed that the City will shut down the surface water treatment plant during dry year conditions. According to the UWMP, demands are assumed to be consistent with the demands projected during normal years as the impact of a single of multiple year drought is not especially significant.





**Table 3.12-6: Projected Supply and Demand Comparison for Multiple Dry Years (AFY)**

Water Source	2010	2015	2020	2025	2030
Groundwater	10,800	10,800	10,800	10,800	10,800
Surface Water	0	0	0	0	0
Recycled Water	429	455	482	497	512
Supply Total	11,229	11,255	11,282	11,297	11,312
Projected Demand	7,403	7,807	8,236	8,693	9,179
Projected Water Conservation Savings	333	666	1,000	1,000	1,000
Projected Demand with Conservation Savings	7,070	7,141	7,236	7,693	8,179

Source: City of Watsonville 2006

Based on the City’s UWMP future water supply and demand estimates, the City is able to meet its water demands through the use of surface water and groundwater. As discussed above, a number of projects are included in the 2002 *Revised Basin Management Plan* in order to remediate overdraft and seawater intrusion in the Basin and provide adequate water supplies to the projected demands within the PVWMA service area. The PVWMA has been forced to pay a lump sum amount for issuing unlawful fees in order to implement the Basin Management Plan. However, the PVWMD is continuing to implement the Basin Management Plan in order to address the long-term impact of the groundwater basin, including completion of several water supply and distribution projects, including 20 miles of a distribution pipeline and the Recycled Water Facility with the City of Watsonville, which will provide 4,000 acre feet of a reliable irrigation supply to the coast. In addition, the PVWMD is also currently beginning a rate reestablishment process so that the Basin Management Plan can continue to be implemented.

*Existing Water Use*

The majority of the City Phase 2 of the planning area is currently in agricultural production as strawberries and apple orchards on Assessor Parcel Number 048-251-09, which is owned by Grimmer Orchards and on Assessor Parcel Numbers 048-231-17 and 048-231-18, which are owned by Israel Zepeda Farms, Inc. The other parcels within the planning area, including the County and the City Phase 1 sites are not in agricultural production (e.g. and/or do not require water). Water demand for lands owned by Israel Zepeda Farms, Inc. are based on billing data provided by the owner. Water demands for lands owned by Grimmer Orchards were estimated using “Consumptive Use Program + (CUP+), a tool developed by the California Department of Water Resources (DWR), which helps growers and water agencies determine estimates of the irrigation requirements needed to produce a crop. The tool provides an estimated water demand for an agricultural area based on a range of criteria, such as climate, method of irrigation, size of agricultural area, type of crop, etc. The demand provided by this estimation would not take into account farming inefficiencies such as over-irrigation or water used for other purposes on a farm, which would be accounted for in the billing data. In addition to the agricultural uses, there are four single-family residences, which contribute to the water demand at the project site. As shown in **Table 3.12-7: Existing Water Use**, the total existing water use within the planning area is approximately 164.8 acre feet per year (AFY).



Table 3.12-7: Existing Water Use

<b>Phase 1 (County site)</b>				
<b>Type</b>	<b>Units</b>	<b>Area</b>	<b>Demand Factor</b>	<b>Demand</b>
Single Family Homes	2	--	0.322 AFY/unit <sup>1</sup>	.644 AFY
Fallow Agricultural Land <sup>2</sup>	--	--	0 AFY	0 AFY
<b>Phase 1 (City site)</b>				
<b>Type</b>	<b>Units</b>	<b>Area</b>	<b>Demand Factor</b>	<b>Demand</b>
Single Family Homes	2		0.322 AFY/unit <sup>1</sup>	.644 AFY
<b>Subtotal</b>				<b>1.29 AFY</b>
<b>Phase 2 (City site)</b>				
<b>Type</b>	<b>Units</b>	<b>Farmed Area</b>	<b>Irrigation Type</b>	<b>Demand</b>
Strawberries	--	19.9 acres	Drip Irrigation	109.9 AFY
Apples	--	17.6 acres	Sprinklers	53.6 AFY
<b>Phase 2 (County site)</b>				
<b>Type</b>	<b>Units</b>	<b>Farmed Area</b>	<b>Irrigation Type</b>	<b>Demand</b>
Fallow Agricultural Land <sup>2</sup>	--	0 acres	0 AFY	0 AFY
<b>Subtotal</b>				<b>163.5 AFY</b>
<b>Total Water Demand</b>				<b>164.8 AFY</b>
Notes:				
<sup>1</sup> Demand factor determined by dividing water deliveries to single family homes (3,868 AFY) by the number of single family accounts (11,920 accounts) for 2005 as shown in Table 11 of the <i>City of Watsonville UWMP</i> .				
2. Fallow agricultural land within the planning area is not irrigated.				

Source: RBF Consulting 2008

### Infrastructure

Potable water is currently delivered to development adjacent to the planning area by various transmission mains ranging in size from four to 18 inches in diameter. As shown on **Figure 3.12-3: Existing Water Delivery System**, water mains are located along all streets servicing the development corridors and neighborhoods adjacent to the planning area. Eight-inch water mains run along Natalie Lane, Jasmine Way, Brewington Avenue, and Paloma Way and terminate at locations along the southern and western boundaries of the planning area. A 14-inch main runs the length of Wagner Avenue between the planning area and the Franich residential development at East Lake Boulevard. Additionally, various six to ten inch water mains extend along Atkinson Lane, Gardner Avenue, and Blanca Lane to the north of the planning area.

### Storm Drain

Stormwater management in Santa Cruz County is provided by the Santa Cruz County Flood Control and Water Conservation Districts Zones 5, 6 and 8. Services and management include development and building permit review, design of storm drain flood control projects, public outreach on drainage issues, and coordination of the County's National Pollutant Discharge Elimination System (NPDES) Phase II Storm Water Management System.

The City of Watsonville is responsible for construction and maintenance of all stormwater facilities within its City Limits. Stormwater drainage infrastructure within the City's Urban Limit Line consists of natural streams, sloughs, subsurface stormwater drainage pipelines, pump stations (which discharge into Corralitos Creek and Pajaro River) and regional detention basin facilities.



The existing storm drain system around the proposed project is shown in **Figure 4.12-4: Existing Stormwater System**. Runoff from approximately 23 acres of residential development north of the planning area discharges through a 12-inch pipe directly into the freshwater marsh located within Assessors Parcel Number: 048-221-09 (Bruce Lamb parcel).

A 36-inch storm drainpipe under Brewington Avenue conveys runoff from the approximately 22 acres of residential development south and west of the proposed project to Crestview Park, which acts as an off-channel detention basin. At the northwest corner of the park, flows enter a short concrete lined channel, which connects to an 18-inch storm drainpipe. During low-flow conditions, all runoff is contained in the channel and bypasses Crestview Park. During high-flow storm events however, runoff spills over the channel and into the park. A 12-inch outlet conveys runoff from a three-acre residential development east of Crestview Park and south of the proposed project into the storm drain conveyance system upstream of the detention basin. See **Section 3.8: Hydrology and Water Quality** for additional information on surface water hydrology within the planning area.

### Solid Waste

The Santa Cruz County Recycling and Solid Waste Service (SCRSWS) is responsible for the operation and administration of solid waste diversion and disposal in the unincorporated area of the County of Santa Cruz and the City of Scotts Valley. SCRSWS operates the County's two solid waste facilities; the Buena Vista Landfill west of Watsonville and the Ben Lomond Transfer Station in the San Lorenzo Valley.

The City of Watsonville's Public Works and Utilities, Solid Waste Division, handles solid waste management, including waste disposal and curbside recycling for the City of Watsonville. Solid waste is taken to the City landfill located four miles outside of the City of Watsonville on San Andreas Road. The total capacity of the landfill is estimated to be almost 2.5 million cubic yards. As of 2000, the used capacity was estimated at approximately 0.5 million cubic yards, and remaining capacity at 2 million cubic yards. The landfill permitted maximum disposal is 275 tons per day and as of 2005 the actual disposal rate was approximately 113 tons per day (CIWMB 2008).

For processing recyclable materials, the City owns and operates a materials recovery facility (MRF) on Harvest Drive. The MRF also handles construction/demolition debris and other selected waste streams.

### Electricity, Gas, Telecommunications, and Cable

Pacific Gas and Electric (PG&E) provides electrical and natural gas services to the City and County. PG&E charges connection and user fees for all new development in addition to sliding rates for electrical and natural gas services based on use.

PG&E currently owns and operates a small electrical service station located within the planning area at the western boundary. Additionally, a 60 kV overhead electrical utility line bisects the planning area extending northeast along the northern property line of the Assessors Parcel Number 048-251-09 and north through Assessors Parcel Numbers 048-231-17 and 048-231-18.



SBC provides telephone service to the planning area. The California Public Utilities Commission regulates telephone service. SBC is compensated for its operations, maintenance, and capital improvement costs by connection and user fees, which it collects from all new development.

Charter Communications provides cable television service to the planning area. This company is privately owned and operated and recovers its operations, maintenance, and capital improvement costs by connection and user fees.

### 3.12.2 Regulatory Setting

#### State

##### Schools

##### *School Facilities Act of 1998*

The School Facilities Act of 1998 also known as SB 50, provides state funding for new school construction projects that can satisfy certain criteria for such funding, including eligibility due to growth, Division of State Architect plan approval. However, the Act also dramatically limits the maximum amount of impact fees, which can be charged by school districts as mitigation for new residential, commercial, and industrial construction. The Act also prohibits local agencies from denying a development application on the basis of a person's refusal to provide school facilities mitigation that exceeds the fee amount and refusing to approve any legislative or adjudicative act on the basis that school facilities are inadequate.

##### Water

##### *California Water Code*

California Water Code Section 231 requires the California Department of Water Resources (DWR) to develop well standards to protect California's groundwater quality. DWR Bulletin 74-90 (Supplement to Bulletin 74-81), California Well Standards, Water Wells, Monitoring Wells, Cathodic Protection Wells (1991) contains the minimum requirements for constructing, altering, maintaining and destroying these types of wells. The standards apply to all water well drillers in California and the local agencies that enforce them.

##### *Urban Water Management Plan*

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 - 10656). The California Urban Water Management Planning Act requires that each urban water supplier, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, shall prepare, update and adopt its urban water management plan at least once every five years on or before December 31, in years ending in five and zero.

##### Senate Bills 610 and 221

Senate Bill 610 (Chapter 643, Statutes of 2001) and Senate Bill 221 (Chapter 642, Statutes of 2001) amended state law, effective January 1, 2002, in order to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 Water Supply Assessments and SB 221 Written Verifications of Water Supply are companion measures, which seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water



availability to be provided to the city and county decision-makers prior to approval of specified large development projects and that the information is included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects.

A complete Urban Water Management Plan (described above) can be a foundational document and source of information for SB 610 Water Supply Assessments and SB 221 Written Verifications of Water Supply.

## Local

### County of Santa Cruz General Plan

The *County of Santa Cruz General Plan* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following policies in the *Santa Cruz County General Plan* are applicable to public services, utilities, and recreation.

#### *Public Services*

**Policy 2.1.4, Siting of New Development (LCP).** Locate new residential, commercial, or industrial development, within, next to, or in close proximity to existing developed areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on environmental and natural resources, including coastal resources.

**Policy 2.1.6, Public Services Adequacy (LCP).** Consider the adequacy of public service capacity (including without limitation sewer, water, roads), public school capacity, terrain, access, pattern of existing land use in the neighborhood, unique circumstances of public value, location with respect to regional or community shopping and other community facilities; access to transportation facilities including transit, rail, bicycle and pedestrian facilities; and parcel size in the surrounding area in determining the specific density to be permitted for individual projects within each residential density range, as appropriate.

**Policy 2.2.1, Public Facility Standards for New Development (LCP).** Maintain minimum standards for public facilities and services availability for development projects. Proposed General Plan and Local Coastal Program amendments shall comply with these standards without exception. (See Figure 2-1.)

**Policy 2.2.2, Public Infrastructure (Facility and Service) Standards for General Plan and Local Coastal Program Amendments and Re-zonings (LCP).** For all General Plan and LCP amendments and re-zonings that would result in an intensification of residential, commercial, or industrial land use, consider the adequacy of the following services, in addition to those services required by Policy 2.2.1, when making findings for approval. Allow intensification of land use only in those areas where all service levels are adequate, or where adequate services will be provided concurrent with development.

- Schools
- Police Protection
- Utilities, including electricity, gas, telephone and cable
- Garbage service and recycling facilities
- Parks



- Drainage
- Fire Protection

In connection with any General Plan and/or LCP amendment or re-zoning, the following services shall also be considered in terms of adequacy and availability: library facilities, street lighting, child care.

**Policy 3.1.3, Neighborhood Facilities.** Support the development of neighborhood facilities such as parks, schools, and neighborhood commercial services.

**Policy 6.5.11, Fire Protection Standards for Land Divisions Inside the Urban Services.** Require all new land divisions within the Urban Services Line to be consistent with the California Fire Code, California Building Code, and other adopted County and local fire agency ordinances.

**Policy 7.18.1, Linking Growth to Water Supplies (LCP).** Coordinate with all water purveyors and water management agencies to ensure that land use and growth management decisions are linked directly to the availability of adequate, sustainable public and private water supplies.

**Policy 7.18.2, Written Commitments Confirming Water Service Required for Permits (LCP).** Concurrent with project application, require a written commitment from the water purveyor that verifies the capability of the system to serve the proposed development. Projects shall not be approved in areas that do not have a proven, adequate water supply. A written commitment is a letter from the purveyor guaranteeing that the required level of service for the project will be available prior to the issuance of building permits, or in the case of a subdivision, prior to filing the Final Map or Parcel Map. The County decision making body shall not approve any development project unless it determines that such project has adequate water supply available.

**Policy 7.18.1, Linking Growth to Water Supplies (LCP).** Coordinate with all water purveyors and water management agencies to ensure that land use and growth management decisions are linked directly to the availability of adequate, sustainable public and private water supplies.

**Policy 7.18.2, Written Commitments Confirming Water Service Required for Permits (LCP).** Concurrent with project application, require a written commitment from the water purveyor that verifies the capability of the system to serve the proposed development. Projects shall not be approved in areas that do not have a proven, adequate water supply. A written commitment is a letter from the purveyor guaranteeing that the required level of service for the project will be available prior to the issuance of building permits, or in the case of a subdivision, prior to filing the Final Map or Parcel Map. The County decision making body shall not approve any development project unless it determines that such project has adequate water supply available.

**Policy 7.18.3, Impacts of New Development on Water Purveyors (LCP).** Review all new development proposals to assess impacts on municipal water systems, County water districts, or small water systems. Require that either adequate service is available or that the proposed development provide for mitigation of its impacts as a condition of project approval.

**Policy 7.18.6, Water Conservation Requirements (LCP).** Utilize the best available methods for water conservation in new developments. Work with all water purveyors to implement





demand management programs and water conservation measures. In areas where shortage or groundwater overdraft has been substantiated by the water purveyor, require water conservation measures for new and existing uses. Require the use of water-saving devices such as ultra low-flow fixtures and native drought-resistant planting in new development projects to promote ongoing water conservation.

**Policy 7.19.1, Sewer Service to New Development (LCP).** Concurrent with project application, require a written commitment from the service district. A written commitment is a letter, with appropriate conditions, from the service district guaranteeing that the required level of service for the project will be available prior to issuance of building permits, or in the case of a subdivision, prior to filing the Final Map or Parcel Map. The County decision making body shall not approve any development project unless it determines that such project has adequate sewage treatment plant capacity.

**Policy 7.19.2, Development Linkage to Downstream Sewer System Improvements.** Require new development to pay its full fair share of downstream sewer system improvements needed. In areas where cumulative sewer capacity is a problem, as indicated by the Department of Public Works, require all development to make required downstream improvements or be appropriately limited until downstream improvements are made.

**Policy 7.22.3, Use of Low Energy Gravity Transfer Systems.** Where feasible, encourage sewage disposal systems in new development to utilize gravity flows to the maximum extent, reducing the energy costs associated with pumping.

**Policy 7.23.1, New Development.** Require new discretionary development projects to provide both on and off-site improvement to alleviate drainage problems before considering on-site detention of storm water. Require runoff levels to be maintained at predevelopment rated for a minimum design storm as determined by Public Works Design Criteria to reduce downstream flood hazards and analyze potential flood overflow problems, where applicable. Require on-site retention and percolation of increased runoff from new development in Water Supply Watersheds and Primary Groundwater Recharge Areas, and in other areas as feasible.

**Policy 7.23.3, On-Site Stormwater Detention.** Where it is not possible to alleviate drainage problems through on and off-site improvements required by 7.23.1, require on-site stormwater detention sufficient to maintain, at a minimum, post-development peak flows at predevelopment levels for the selected design rainstorm for all development projects greater than once acre in area, and to alleviate current drainage problems, if feasible. When on-site detention is used, the development projects shall be conditioned to ensure ongoing operation and maintenance of the detention basins.

#### *Utilities*

**Policy 7.26.1, Undergrounding Lines.** Require all new power line distribution systems and all services to new development be placed underground.

**Policy 8.2.3, Design Criteria for Utilities.** Require new development to meet County adopted criteria and standards for the design of utilities, water service and sewage disposal requirements and drainage systems. All new power line distribution systems, where practical, and all services to new subdivisions shall be placed underground.





### *Parks and Recreation*

**Policy 7.1.5, Access to Recreation Facilities.** Provide physical access to all recreation facilities through provision of public transportation, trail system development, protection of prescriptive rights to beach access trails, and recreation programs.

**Policy 7.2.1, Neighborhood Park Standards (LCP).** Locate neighborhood parks based on the general standard that most urban residences should be within one-half mile of a neighborhood park serving a population of 1500 to 2000 people. An area of 4-6 acres is considered adequate for a neighborhood park; or when combined with school grounds, 2-3 acres would be sufficient. It should be recognized that park acreage standards are set as long-term goals rather than set objectives to be met. Facilities need not be elaborate and should include children's play equipment, play lots, paved game areas, free play fields, and areas for passive recreation and restroom facilities. Designate specific sites for neighborhood parks throughout the urban portion of the County on the General Plan and Local Coastal Program Land Use Maps.

**Policy 2.2, Mini-Park Sites.** Consider the development of mini-park sites as an alternative to meet minimum park acreage requirements in the event that designated neighborhood park sites cannot be acquired.

**Policy 7.2.3, Neighborhood Park Siting Criteria.** Provide neighborhood park and playground facilities developed, where possible, in conjunction with residential development or as improvements to school grounds. Criteria for selection should include available vacant land, degree of development pressures in the area, size, density of residential development (current and future), access, and potential for suitable park facilities. Other factors include attractive natural open space features (e.g., streams, natural arroyos), the relationship of sites to proposed trail corridors, and the proximity of other public parks and private recreation facilities open to the public which serve the same neighborhood park needs.

**Policy 7.3.1, Community Park Standards.** Locate community parks using a general distribution standard of one park for every 10,000 people located within 3-5 miles or fifteen minutes of most urban concentrations and consisting of 10-25 acres of land.

### *Schools*

**Policy 7.12.1, Mitigating Impacts From New Development.** Prior to issuance of any building permit, require a written statement confirming payment in full of all applicable developer fees and other requirements lawfully imposed by each school district in which the project is located. Prior to approval of any land division or other discretionary development permit application for a project which would authorize additional development, consider the impact of such action on each school district in which the project is located. Require feasible mitigation measures permitted by law to reduce any significant impacts on the school system or approve the project on the basis of a statement of overriding considerations.

Prior to approval of any General Plan and/or LCP Amendment, Rezoning, or other legislative action which would authorize additional development to occur as a matter of land use policies, consider the impact of such action on each school district within which the land is located. Either require feasible mitigation measures to reduce any significant impacts on each school district to a level of insignificance, deny the project if such mitigation measures are infeasible, or approve the project on the basis of a statement of overriding conditions. Mitigation measures may include, by



way of example only, the reduction of residential densities or the controlled phasing of residential development within attendance areas of the school district having inadequate facilities or services.

**Policy 7.14.1 Mitigating Impacts from New Development.** Review development proposals with respect to their impact on child care; require, where appropriate, that proposed developments provide for mitigation of the impact of the proposed development on the need for child care facilities or services, as a condition of project approval.

[City of Watsonville General Plan](#)

The following policies in the 2005 *City of Watsonville General Plan* are applicable to public services, utilities, and recreation at the planning area.

*Parks and Recreation*

**Goal 8.2, Facilities.** Provide a full range of park and recreation facilities including active recreation areas, passive natural open spaces, and a bicycle/pedestrian trail system.

**Policy 8.A, Recreation and Parks Planning.** The City shall plan for park and recreation needs in coordination with the Pajaro Valley Unified School District, Santa Cruz County, and other groups to meet the demand of the growing population.

**Implementation Measure 8.A.4, Passive Open Space.** The Recreation and Parks Commission shall use the adopted policies for Environmental Resource Management to protect the passive open space provided by the riparian corridors along Corralitos Creek, Salsipuedes Creek, the Pajaro River, and the wetland areas to Watsonville, Struve, and West Branch Struve Sloughs.

**Policy 8.B, Park Acquisition and Development.** The City shall designate sites for future parks and recreation facilities and shall continue to finance, acquire, and develop park facilities consistent with the Watsonville park standards and in proportion to population growth in Watsonville.

**Implementation Measure 8.B.3, Land Dedication.** The City shall require that residential subdivisions dedicate land area to the City for open space and park and recreational use or pay proportional park in-lieu fees. The land area for parks shall serve the immediate and future needs of the residents of the subdivision. The amount of land shall be determined pursuant to the standards and formula specified in the municipal code.

**Implementation Measure 8.B.4, Park In-Lieu Fees.** All residential, commercial, and industrial projects shall be subject to park in-lieu fees established by City Council resolution.

**Implementation Measure 8.B.7, On-Site Private Recreation Facilities.** The City shall use the development review process to ensure that new residential, commercial, and industrial development projects provide on-site recreational facilities for the use of residents and employees.



**Policy 8.C, Park Development Criteria.** While recognizing the need for all types of park facilities, the City shall focus park development at the neighborhood- and community-serving level.

**Implementation Measure 8.C.1, Park Criteria.** The City shall plan for and implement a network of parks and recreation facilities at the rate of 5.0 acres per 1000 persons distributed as follows: 2.0 acres per 1,000 persons of neighborhood and vest pocket parks, and 3.0 acres per 1,000 persons of community parks and special use facilities.

**Implementation Measure 8.C.6, Trails and Paths.** The City shall plan for, and coordinate, the development of a network of pedestrian and bicycle trails to connect city and county park and recreation sites.

**Implementation Measure 8.C.7, Tot Lots.** The City shall use the development review process to ensure that new residential subdivisions of five or more units provide safe play areas for children of preschool age (one to five).

#### [City of Watsonville Parks and Open Space Master Plan](#)

The City of Watsonville Parks and Open Space Master Plan provides minimum standards for various types of park and recreation facilities. The design policies within the Parks and Open Space Master Plan guide future park and recreation facility planning and design as follows:

- Every park should have unique design features to enhance the inherent character of each site.
- Provide disabled access to all park areas where feasible and pursuant to State Law.
- Involve the community, and particularly neighborhood residents, in park design through public workshops and at Commission and Council meetings.
- Provide children's play areas that meet the development needs of children of all ages, including the need for imaginative play.
- Where parks are adjacent to agriculture land, provide a buffer of native vegetation between the agriculture lands and active play areas.
- Where parks are adjacent to sloughs, rivers, or creeks, provide facilities for environmental education and appreciation, such as boardwalks, overlooks, kiosks, and interpretive signs.
- Design parks that are water conserving through appropriate selection of plant materials and design of efficient irrigation systems.
- Design parks to minimize maintenance requirements.

#### [Cortese-Knox-Hertzberg Local Government Reorganization Acts](#)

The Cortese-Knox-Hertzberg Local Government Reorganization Acts of 1985 and 2000 govern the incorporation of new cities and city boundaries. The 1985 Act gives authority to the Santa Cruz County Local Agency Formation Commission (LAFCO) to consider proposals for incorporation and annexations. The following policies and standards are applicable to the planning area.



**Policy 1.2, Need for Services.** Any proposal involving annexations, incorporations, and formations shall not be approved unless it demonstrates a need for the additional services to be provided to the area; while all proposals involving detachments, disincorporations, and dissolutions shall not be approved unless the proponent demonstrates that the subject services are not needed or can be provided as well by another agency or private organization.

**Standard 1.2.1.** For proposals concerning cities, need shall be established by (a) an adopted rezoning, consistent with the city general plan, that shows current or future development at a density that will require urban services such as sanitary sewer and water, and (b) a city growth rate and pattern that the subject area will be developed within 5 years.

**Standard 1.2.2.** For proposals concerning water and sewer district annexations, need shall be established by lack of services to existing urban land uses, or a building permit application or allocation for a single-family dwelling or, for a larger project, by (a) a tentative or final land use entitlement (tentative subdivision map use permit, etc.) conditioned on obtaining water or sewer service, and (b) a growth rate and pattern that the subject area will be developed within 5 years.

**Standard 1.2.3.** For proposals concerning the extension of other services by annexation, incorporation, or district formation, need shall be established by the applicable general plan land use designations and the service levels specified for the subject area in the applicable general plan.

**Standard 1.2.5.** In reviewing proposals, LAFCO shall consider: (1) the "population" in the proposal area to be the population recorded in the last biennial or special census unless the proponent or affected agency can present updated or more detailed information which LAFCO determines to be more accurate, (2) the "population density" to be the population divided by the acreage, and (3) the "per capita assessed valuation" to be the full cash value of all the property in a proposal area (as set by the last secured property tax roll) divided by the population.

**Policy 1.5, Provision of Services.** In order for LAFCO to approve a change of organization, the proponent shall demonstrate that the subject services can be provided in a timely manner and at a reasonable cost.

**Standard 1.5.1.** It is the general policy of the Commission to disapprove annexations to water and sewer agencies (including cities that provide either service) while there is a connection moratorium or other similar service limitation involving the subject water or sewer service. The Commission will consider exceptions to this general policy on a case-by-case basis. The Commission may approve an annexation that meets one or more of the following criteria:

- 1) To replace a private water source that has failed, such as a well that has gone dry. New service connections shall not be sized to accommodate more intensive development.
- 2) To replace a septic system that has failed. New service connections shall not be sized to accommodate more intensive development.



3) To implement a transfer of service between two existing agencies in a manner that is consistent with the adopted Spheres of Influence of those agencies.

4) To change a boundary, in a manner consistent with an adopted Sphere of Influence, so that an agency boundary does not divide a property that could only be conveyed under a single deed.

Between January 1, 1986 and the time the service limitation is totally lifted, the Commission shall limit the annexations so that the number of cumulative connections made under the above exemption criteria do not exceed 1% of the total agency's flow (as expressed in equivalent single family dwelling units) in service on January 1, 1986.

An additional criterion, not subject to the 1% cumulative impact limitation, is as follows:

5) To provide facilities or funding that will allow the agency to lift its service limitation.

**Policy 1.6, Staged Growth.** For large projects the Commission shall encourage plans for staged growth.

**Standard 1.6.1.** For proposals involving the extension of water, or general municipal services to proposal areas greater than 50 acres, the proponent shall either (a) plan staged growth beginning closest to an existing urban area or (b) demonstrate why such a plan does not promote urban sprawl and an inefficient pattern of services.

### 3.12.3 Relevant Project Characteristics

The proposed project designates approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would generate approximately 1,679 people. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer as part of Phase 1 (County site) that would be terminated once Phase 2 (City site) is annexed and rezoned.

#### Utilities

As part of the proposed project, water supply, wastewater, stormwater, and dry utilities infrastructure would be extended into the planning area. The potable water distribution system is anticipated to consist of eight and ten inch water mains, six inch service laterals, and various valves and fittings. Water mains are expected to be located in conjunction with the proposed roadway system and would tie into the existing infrastructure in four locations (see [Figure 2-14: Conceptual Water and Sewer Plan](#)). The proposed project is expected to include a gravity wastewater collection system consisting of six and eight inch service laterals and associated



manholes and clean-outs throughout the planning area as shown in **Figure 2-14: Conceptual Water and Sewer Plan**.

The proposed project includes undergrounding and/or relocating approximately 1,500 linear feet of power lines. An electrical and natural gas distribution system would be installed in a common joint trench along with telephone and cable television facilities. A fiber-optic telephone distribution system would be installed in a common joint trench along with gas, electric, and cable television facilities. In addition, expansion and/or upgrade of existing transmission facilities outside of the planning area may be required. The need for these improvements would be determined by AT&T or an alternative telephone provider

#### Drainage Plan

Implementation of the proposed project would require expansion of the City's stormwater management system. A conceptual storm drainage plan prepared for the proposed Specific Plan provides for stormwater treatment for the proposed project. See **Section 3.8: Hydrology and Water Quality** for additional information on the conceptual drainage plan for the proposed project.

#### Financing Plan

A Public Services and Public Facilities Financing Plan for the Specific Plan was prepared by ADE in March 2009 to assess the potential impacts from the proposed annexation and development of up to 450 residential units. The Financing Plan analyzes the costs of construction or enhancement of infrastructure and facilities and the costs of on-going municipal services and maintenance functions associated with the project. The Financing Plan also addresses potential funding sources, including regular tax revenues and funding arrangements that may be required for the proposed project.

#### *Infrastructure Improvements*

Implementation of the proposed project would entail considerable cost for infrastructure and facilities serving the proposed project. The costs for the facilities estimated \$19.7 million, which is a conservative cost estimate, which addresses on-site improvements, connections to existing utility systems, internal circulation, and off-site road improvements to Wagner Avenue. The economic analysis for the proposed project indicates that under current market conditions, the proposed project would be difficult to finance. However, there are a variety of potential outside funding sources that the City and County can pursue to help implement the proposed project. In addition to possible state and federal grant funds, the City and the County may consider on-site land-based financing mechanisms such as a Community Facilities District (CFD) or other form of assessment district, to help spread out the timing of the cost burden of the project.

#### *Development Impact Fees*

The proposed project would be subject to a number of development impact fees to pay for mostly off-site infrastructure and improvements needed to mitigate project impacts on public services and facilities. The proposed project would pay existing development impact fees totaling an estimated \$1.2 million to the County and \$2.1 million to the City of Watsonville (for a total of \$3.3 million). It is not clear what portion, if any, of the anticipated infrastructure costs would be covered by the estimated impact fees, however, the County has indicated that it would reserve all funds paid into its impact fee accounts by the project for offsite improvements needed to directly mitigate project impacts, except for childcare which is only funded on a countywide basis and the





park dedication fee for which there would be no project specific impact on County facilities. Thus, it is anticipated that the park impact fee would be transferred in its entirety to the City, while the childcare fee would remain with the County. The County has agreed in concept that upon annexation, any remaining impact fee funds would be transferred to the City to pay for City-related facilities.

### *Municipal Services*

Upon annexation, the City would provide municipal services to the planning area, including the portion that would be developed under County's jurisdiction. As such, the "County site" would be developed under the County's jurisdiction, it would subsequently be annexed to the City and would therefore generate tax revenues for the City over the long-term. Similarly, it is anticipated the remainder of the planning area would be annexed to the City by the time City services are needed for the completed development. The fiscal analysis assumed that the entire planning area would generate tax revenue for the City.

### *Project Revenues*

At project buildout, project revenues totaling \$990,326 per year would be generated by the proposed project for the City of Watsonville. This is comprised of property taxes, sales taxes, and other taxes and fees. In current (2009) dollars, the proposed project is projected to increase the total assessed values by about \$122 million at buildout. This would generate an estimated \$241,765 per year in property tax revenue for the City of Watsonville after annexation. In the case of the affordable units developed by non-profit agencies, they are often exempted under state law from paying property taxes. To address this deficiency and to ensure that the entire project pays its fair share to support municipal services such as fire and police protection, the City and the County would need to work with the property owners and/or developers to establish a payment in lieu of taxes (often referred to as PILOT) or similar agreement that would equal the City share of the normal property tax allocation for the affordable units.

Other sources of City revenue that would be generated by the proposed project include sales taxes (including Measure B and Measure L funds), utility users taxes, franchise fees, and other general fees and service charges, which total an estimated \$748,561 per year in revenues for the City of Watsonville.

### *Expenses*

The police and fire services needed for the development of Phase 1 (County site) while it remains in County jurisdiction would be provided by the County Sheriff and the Pajaro Valley Fire Protection District. At project buildout and following annexation, the City of Watsonville would provide all necessary municipal services including police and fire protection, library, public works, parks, and general government services, which would result in an increase of \$1,104,964 of additional expenses.

### *Fiscal Mitigation*

At project buildout, the proposed project is projected to generate \$990,326 per year in general fund revenues and require about \$1,104,964 in general fund service costs, resulting in an annual funding gap (deficit) of \$114,750. This funding gap can be mitigated through several financing mechanisms including increased PILOT payments on the affordable units, special taxes through a Community Facilities District (CFD), or other financing program, which would need to be





established between the City and the County. This funding gap would be paid by each unit of the project at an average rate of \$255 per year at project buildout.

### 3.12.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with the CEQA, State CEQA Guidelines, agency and professional standards, a project impact would be considered significant if the project would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
  - Fire protection,
  - Police protection,
  - Schools,
  - Parks, or
  - Other public facilities;
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment;
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state and local statutes and regulations related to solid waste.



## Methodology

Information in this section is derived primarily from the *County of Santa Cruz General Plan*, *City of Watsonville General Plan* and the Atkinson Specific Plan and PUD, as well as personal communication with service providers. The analysis is also based on the *Public Services and Public Facilities Financing Plan for the Atkinson Lane Specific Plan* prepared by Applied Development Economics (ADE), which was prepared in March 2009.

## Impacts and Mitigation Measure

### Increased Demand for Fire Protection Service

**Impact 3.12-1:** The proposed project would generate approximately 1,679 people, which would subsequently increase the demand for fire protection services within the planning area. Future development within the planning area would be required to pay applicable fire impact fees at the time of issuance of the building permits. If City and County impact fees do not adequately fund fire protection services to the planning area this would be considered a potentially significant impact.

Buildout of the proposed project would include construction of a maximum of 450 units, which would introduce approximately 1,679 people within the planning area. Prior to annexation by the City of Watsonville, the Phase 1 (County site) is estimated to generate approximately 90 residential units and an estimated population of approximately 336 people. The Phase 1 (County site) would be served by the PVFPD station located at 562 Casserly Road. The PVFPD currently has a contract with the City of Watsonville Fire Department for services into the Atkinson Lane area based on a fee per call. The PVFPD assumes continuation of this arrangement and anticipates that it has sufficient capacity to provide service to Phase 1 (County site) prior to annexation.

Phase 1 (City site) and buildout of the planning area (after annexation), would be served by Watsonville Fire Department and Fire Station #2, which is located at 372 Airport Boulevard. As of 2006, Fire Station #2 had a reliability factor of 81 percent with a volume of approximately 1,347 total calls. In 2007, the station received approximately 2,171 calls, reducing its reliability factor below the threshold of 80 percent. Based on the projected population growth at buildout of the proposed project, approximately 122 additional calls would be anticipated at Station #2, which would affect the unit's utilization, availability, and reliability of the station (Personal Communication with Chief Bisbee, Watsonville Fire Department on October 30, 2008). The City of Watsonville Fire Department is in the process of planning an additional fire station that would be located at 1509 Freedom Boulevard. Once constructed, this station would become the primary station to serve the planning area and surrounding area.

Future development within the planning area would be required to pay applicable fire impact fee at the time of issuance of the building permits. If City and County impact fees do not adequately fund fire protection services to the planning area, this would be considered a **potentially significant impact**. Implementation of the following mitigation measure would ensure that impacts to fire protection services are reduced to a **less than significant level**.



### Mitigation Measure

**MM 3.12-1** To fund a potential gap in funding for municipal services, the City of Watsonville and the County of Santa Cruz shall work cooperatively to define and implement the appropriate funding mechanism(s) (e.g. a payment-in-lieu of taxes [PILOT] agreement, establishment of a community facilities district [CFD], a Mello Roos, etc.) to ensure that the proposed project pays its fair share to support municipal services.

Implementation of this mitigation measure would ensure that funding of additional services would be handled by future development through a funding mechanism in order to meet acceptable thresholds, including the projects "fair share" of funding for construction, operation, and staffing of a new fire station for the City of Watsonville Fire Department, which would result in a **less than significant impact** on fire protection services.

### Increased Demand for Law Enforcement Service

**Impact 3.12-2:** The proposed project would generate approximately 1,679 people, which would increase demand for law enforcement services. Future development within the planning area would be required to pay applicable police impact fees at the time of issuance of the building permits. If City and County impact fees do not adequately fund law enforcement service to the planning area, this would be considered a **potentially significant impact**.

The proposed project would increase the population by approximately 1,679 people, which would likely result in an increased demand for law enforcement services. This demand on law enforcement services may result in an overall increase in response times.

Development within the Phase 1 (County site) would be served by the Pajaro Valley South Service Center of the County Sheriff's office until the site is annexed to the City of Watsonville. The Phase 1 (County site) is located within Beat 10 and Beat 11 of the Sheriff's office service area. The Pajaro Valley South Service Center is currently staffed with two deputies and volunteers. In 2008, the Pajaro Valley South Service Center responded to approximately 2,897 service calls, which represents approximately three percent of the total service calls received by the Sheriff's office. The Pajaro Valley South Service Center has the third lowest percentage of service calls in the County. According to the County Sheriff's office, Phase 1 (County site) is not anticipated to result in a short-term impact to the existing service in the area.

Once the planning area is annexed to the City of Watsonville, the proposed project would be served by the Watsonville Police Department. According to the Watsonville Police Department, the proposed project would be primarily served by the Watsonville Police Department headquarters located at 215 Union Street, which is located approximately 1.7 miles from the planning area. The anticipated response time to the planning area from the headquarters would be six to seven minutes, almost twice as long as the Police Department's response time goal. The slower response times to the planning area from the headquarters building are primarily due to traffic congestion on the primary routes to the planning area and vicinity. In addition to the headquarters, the Freedom Boulevard satellite station could serve the proposed project and would result in a reduced response time. In order to serve the planning area, this station would require upgrade of the computer equipment and connectivity to the headquarters (Personal



communication with Linda Peters, Administrative Service Manager, City of Watsonville Police Department. November 19, 2008).

The existing neighborhoods in the vicinity of the planning area currently experience a higher level of demand for law enforcement services. According to the Police Department, the number of crimes in the vicinity of the planning area are nearly twice as high as in comparable neighborhoods<sup>2</sup> than in other areas of the City. The number of police calls-for-service and self-initiated police activities are three times higher than the comparison neighborhoods. The proposed project would potentially double the amount of service calls in the area due to the density of the population within the planning area (Personal communication with Linda Peters, Administrative Service Manager and Manny Solano, Deputy, City of Watsonville Police Department. November 19, 2008).

The 2005 *City of Watsonville General Plan* requires a police officer to population ratio of one officer to 600 people in order to maintain acceptable service levels and police response time. In addition, one civilian staff is required per three officers. Based on those requirements, three sworn officers and one civilian staff would be required to serve the proposed project. Future development within the planning area would be required to pay applicable police impact fees at the time of issuance of the building permits. If City and County impact fees do not adequately fund police service to the planning area, this would be considered a **potentially significant impact**. However, implementation of mitigation measure **MM 3.12-1** would ensure that funding of additional law enforcement services would be handled through a funding mechanism established by the City and County in order to meet acceptable thresholds, including the projects “fair share” of funding of providing three additional sworn officers and one civilian staff member at the City of Watsonville Police Department in order to serve the planning area under project buildout. Therefore, implementation of this mitigation measure would ensure that the proposed project would result in a **less than significant impact** on law enforcement services.

#### Increased Demand for Educational Facilities

**Impact 3.12-3:** The proposed project would generate approximately 1,679 people, 873 of which would be school-aged children, increasing the demand on school services within the Pajaro Valley Unified School District (PVUSD). While there is sufficient existing capacity to meet the needs of middle and high school children, the elementary schools are currently over capacity. However, future development within the planning area would be required to pay development fees to the PVUSD. The project applicant’s fees would be determined at the time of the building permit issuance and would reflect the most current fee amount requested by the PVUSD. Payment of development impact fees would reduce the impact to the PVUSD to a less than significant level.

The proposed project would generate approximately 1,679 persons. As shown in **Table 3.12-8: Proposed Project Student Generation**, the proposed project would generate approximately 873 school-age children.

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<sup>2</sup> Comparable neighborhoods include areas with similar population and housing density.



**Table 3.12-8: Proposed Project Student Generation**

School Type	Generation Rate	Proposed Project Population <sup>2</sup>	Projected Students Generated by the Project
Elementary	0.321	1,679	539
Middle	0.085		143
High School	0.114		191
<b>Total</b>			<b>873</b>

Notes:  
<sup>1</sup> Population is based on the Department of Finance rate of 3.73 persons per housing unit multiplied by the 450 units proposed by the proposed project.

Source: PVUSD 2008

The planning area would be served by the following schools: elementary – Ann Soldo, H.A. Hyde, and Mac Quiddy; middle – Cesar E. Chavez, E.A. Hall, and Lake View; and high school – Pajaro Valley High and Watsonville High. As shown in **Table 3.12-9: Proposed Project School Impact**, the PVUSD middle and high schools have a sufficient existing capacity to meet the needs of school children generated by the proposed project. However, the elementary schools which would be serving the planning area currently operate at or over capacity. The proposed project would generate approximately 539 elementary school children. This would significantly increase demand for elementary level schools in the planning area, which currently operate over capacity (Personal communication with Richard Mullikin, PVUSD, December 2008).

**Table 3.12-9: Proposed Project School Impact**

Grade Level	2008 Capacity (Number of Students)	Proposed Project Need (Number of Students)	Capacity with Proposed Project
Elementary Schools <sup>1</sup>	-109	539	-648
Middle Schools <sup>2</sup>	397	143	254
High Schools <sup>3</sup>	930	191	739

Notes:  
 The enrollment data for 2007/2008 school year differ between the Master Plan and information posted on the District's website as part of the School Fact Sheets for the same year.  
<sup>1</sup> Elementary schools - H.A. Hyde, Ann Soldo, MacQuiddy  
<sup>2</sup> Middle Schools - Cesar Chavez, Lakeview, E.A. Hall  
<sup>3</sup> High Schools - Pajaro Valley, Watsonville High

Source: PVUSD Facility Master Plan 2008.

Upon initiation of the preparation of the Specific Plan and PUD, the City Council and the County of Santa Cruz Board of Supervisors appointed a 17 member Technical Advisory Committee (TAC) to provide technical assistance in the formulation of the Plan. One of the major issues addressed by the TAC was whether the planning area should accommodate a new elementary school. The PVUSD was represented on the TAC and formed a subcommittee the purpose of which was to address the impacts of the proposed project on the PVUSD and to provide a thorough level of analysis to determine whether the planning area is an appropriate location for a school.

The subcommittee concluded that the planning area is not large enough to accommodate a school and therefore a school was not proposed within the planning area. However, both the City of Watsonville and the County of Santa Cruz would continue to work cooperatively with the PVUSD to find suitable locations for future school facilities.



In addition, future development within the planning area would be required by law to pay development impact fees at the time of the building permit issuance. The PVUSD currently charges development fees in the amount of \$4.43 per square foot of residential development. These fees are used by the PVUSD to mitigate impacts associated with long-term operation and maintenance of school facilities. The project applicant's fees would be determined at the time of the building permit issuance and would reflect the most current fee amount requested by the PVUSD. Project applicants within the planning area would also be required to pay any additional applicable fees, if the PVUSD implements additional funding measures, including those described in the Facilities Master Plan (refer to the Environmental Setting section). Pursuant to Section 65996(3)(h) of the California Government Code, payment of these fees "is deemed to be full and complete mitigation of impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in government organization or reorganization." Any environmental impacts resulting from the construction of new schools would be analyzed by the PVUSD prior to construction. Therefore, the increased demand on the PVUSD is considered a **less than significant impact** on school services.

#### Increased Demand for Parks and Recreation Facilities

**Impact 3.12-4:** The proposed project would increase a demand for parks in the area that is currently considered underserved. However, the proposed project would provide an additional 3.5 acre park adjacent to Crestview Park, and payment of applicable fees for parks and recreational uses. If City and County impact fees do not adequately park and recreation services, this would be considered a potentially significant impact.

The planning area is located adjacent to an area of the City which is recognized as underserved and is located more than one-quarter mile from a park of over 5 acres in size or school. There are two parks in the proposed project's vicinity: Arista Park and Crestview Park. Arista Park is a 0.3 acre pocket park within a quarter mile of the planning area. Crestview Park is a 2.1 acre neighborhood park within one half mile of the planning area, which is considered small for a neighborhood park. The nearest County park to the planning area is the Pinto Lake Park, which is located approximately two miles north of the planning area, along Green Valley Road. The park is approximately 294 acres in size. The County manages a 216 acre portion in the northern portion of the park and the City of Watsonville manages a 78 acre portion of the park.

The projected population of 1,679 people generated by the proposed project would increase the use of these parks, which could accelerate physical deterioration of these facilities. However, the proposed project includes development of 3.5 acres of parkland adjacent to Crestview Park to allow the City of Watsonville to expand the existing park to a total of 5.5 acres. This expansion would have a positive benefit of providing an adequately sized neighborhood park in the area that is currently considered underserved.

The *City of Watsonville General Plan* standard is five acres of parks per 1,000 residents, which is comprised of two acres for neighborhood and pocket parks and three acres for community parks. Section 3-6.604 of the City's municipal code requires dedication of five acres of parkland per 1,000 residents. Based on this requirement, population generated by the proposed project would require approximately 5.57 acres of parks. In addition to dedicating 3.5 acres of parkland, the City of Watsonville has a recreation and parks facilities fee of \$667 per each three bedroom





dwelling unit and the County of Santa Cruz has a parks dedication fee of \$1,000 per single family dwelling unit and \$750 per multi-family dwelling unit. Future development within the planning area would be required to pay applicable recreation and parks facilities fees at the time of issuance of the building permits. Development within Phase 1 (County site) would be required to dedicate park fees to the City. If City and County impact fees do not adequately fund park and recreation uses, this would be considered a **potentially significant impact**. However, implementation of mitigation measure **MM 3.12-1** would ensure that funding of additional services would be handled through by a funding mechanism implemented by the City and County in order to meet acceptable thresholds, including the projects “fair share” of funding parks and recreation facilities with buildout of the proposed project. Therefore, implementation of this mitigation measure would ensure that the proposed project would result in a **less than significant impact** on parks and recreation.

#### Increased Demand for Library Services

**Impact 3.12-5:** The proposed project would generate approximately 1,679 people, which would increase demand for library services. The proposed project would result in an increase in expenditures as a result of increased service level demands. If City impact fees do not adequately fund library service, this would be considered a **potentially significant impact**.

The proposed project would generate approximately 1,679 people that would have to be served by library services provided by the City of Watsonville with buildout of the proposed project. The *City of Watsonville General Plan* stated that adequate library services is comprised of approximately 0.6 square feet of facilities per person and one library staff per 2,000 residents. The City’s population is projected to be 51,903 in 2010 and 54,857 in 2015. Based on these assumptions, approximately 31,141 to 32,914 square feet of library facilities and 26 to 27.5 staff members would be required to serve the proposed project and the City’s population upon buildout of the proposed project.

The Watsonville Public Library is currently located in a 42,000 square foot facility and has a staff of approximately 50 people. The library facility has excess capacity to serve the population of the City of Watsonville, including the proposed project. Therefore, the proposed project would not require a construction of new facilities. Watsonville property taxes fund the Santa Cruz County library system, however the City provides local funding for library and literacy services at the Watsonville libraries, which are independent of the County Library system.

The proposed project would result in increased service level demands with an increase in population. If City impact fees for library service do not adequately fund library services, this would be considered a **potentially significant impact**. However, implementation of mitigation measure **MM 3.12-1** would ensure that funding of additional services is handled through funding mechanism implemented by the City and County in order to meet acceptable thresholds, including the projects “fair share” of funding library facilities with buildout of the proposed project. Therefore, implementation of this mitigation measure would ensure that the proposed project would result in a **less than significant impact** on library facilities.





### Increased Wastewater Demand

**Impact 3.12-6:** The proposed project would generate approximately 180,000 gallons a day of wastewater, increasing the demand on the Watsonville Wastewater Treatment Plant (WWTP). However, the existing service provider has an adequate capacity to meet this demand. Therefore, this would be considered a less than significant impact.

The proposed project would generate up to 180,000 gallons per day of wastewater, which is based on 450 units x 400 gallons per unit per day). The Watsonville WWTP, which would serve the proposed project, has the capacity to treat 12.1 million gallons per day. However, the WWTP treats on average seven million gallons of wastewater from residential, commercial and industrial sources. The wastewater contribution of the proposed project to the WWTP would represent approximately 1.4 percent of the total daily wastewater treated at the wastewater treatment plant.

As the proposed project is located on mostly vacant or agricultural land, the City's wastewater collection system would require expansion into the planning area (**Figure 2-15: Conceptual Water and Sewer Plan**). The existing sewer infrastructure system that provides service to the development in the vicinity of the planning area is sized appropriately to extend into the planning area. The infrastructure and facilities constructed as part of the proposed project would operate through a gravity system and consist of six and eight-inch service laterals and associated manholes and clean-outs. As the WWTP has an adequate capacity to serve the proposed project, the proposed project would not have a significant impact on the existing wastewater treatment plant. Future development within the planning area would be required to pay the sanitary sewer connection fee per unit to the City of Watsonville in order for the City to serve the proposed project. Therefore, the proposed project would have a **less than significant impact** on wastewater infrastructure and services.

### Increased Water Demand

**Impact 3.12-7:** Implementation of the proposed project would result in construction of on-site infrastructure and potable water demand of approximately 107.22 acre feet of water per year. Implementation of the proposed project would convert land currently in agricultural production, rural residential uses, and fallow agricultural land to primarily residential uses. The proposed conversion would result in an overall reduction of water use within the planning area by approximately 57.88 AFY in comparison to the historical water use within the planning area. However Phase 1 (County site) would not convert existing agricultural fields to urban use and therefore would result in a short-term increase in water use over existing conditions prior to buildout of the planning area. Future development on Phase 1 (County site) and the remainder of the planning area would be required to pay the City's water connection fee, which is used in part to retrofit water fixtures (e.g. toilets, showerheads, etc.) within the City and would reduce the impact of future development on the groundwater basin, which would ensure that the proposed project would have a less than significant impact on water supply and the groundwater basin.

The majority of the planning area is currently in agricultural production as strawberries and apple orchards on Assessor Parcel Number 048-251-09, which is owned by Grimmer Orchards and on Assessor Parcel Numbers 048-231-17, and 048-231-18, which is owned by Israel Zepeda Farms, Inc. In addition to the agricultural uses within the planning area there are also four existing single



family homes, which consume water typical of similar residential uses in the City of Watsonville. The total existing water use within the planning area is approximately 164.8 acre feet per year as shown in **Table 3.12-7: Existing Water Demand**.

The proposed Specific Plan and PUD would convert the existing agricultural, fallow agricultural, and rural residential uses to urban uses. A water demand analysis was performed by RBF Consulting for the proposed Specific Plan and PUD. As shown in **Table 3.12-10: Projected Water Demand** below, the analysis estimates that buildout of the proposed Specific Plan would generate a water demand of approximately 107.22 acre feet of potable water every year. This demand is approximately 57.58 AFY less than historic water demand of 164.8 AFY within the planning area. However, Phase 1 (County site) would result in a water demand of approximately 22.90 AFY which would result in a demand of approximately 22.25 AFY over the existing water use within this portion of the planning area.



Table 3.8-10: Projected Water Demand

Land Use <sup>1,2</sup>	Net Acreage/ Units	Demand Factors	Ultimate Projected Water Demand
<b>Phase 1</b>			
Residential - High Density (County)	90 units 4.5 acres	0.2 AFY/unit <sup>3</sup>	18.0 AFY
Residential - High Density (City)	10 units 1.0 acres	0.2 AFY/unit <sup>3</sup>	2.00 AFY
Residential – Low Density (City)	9 units 1.0 acres	0.322 AFY/unit <sup>4</sup>	2.90 AFY
<b>Subtotal</b>			22.90 AFY
<b>Phase 2</b>			
Park	3.5 acres	1.300 AFY/acre <sup>5</sup>	4.55 AFY
Stormwater Swales	1.3 acres	1.300 AFY/acre <sup>5</sup>	1.69 AFY
Residential - High Density (County)	110 units 5.5 acres	0.2 AFY/unit <sup>3</sup>	22.0 AFY
Residential – Medium Density (City)	150 units 14.2 acres	0.2 AFY/unit <sup>3</sup>	30.00 AFY
Residential – Low Density (City)	81 units 9.0 acres	0.322 AFY/unit <sup>4</sup>	26.08 AFY
<b>Subtotal</b>			74.32 AFY
<b>Total Project</b>			107.22 AFY
Notes:			
<ol style="list-style-type: none"> <li>Landscaping within the Specific Plan is proposed to be drought tolerant and therefore was not included in the long-term water demand estimates.</li> <li>The PG&amp;E parcel, riparian area and buffer, freshwater marsh and buffer, and agricultural buffer were not included in the projected long-term water demand as they would not require a long-term water supply.</li> <li>Demand factors were provided by the City of Watsonville per the Atkinson Lane Water Supply Assessment Memorandum, dated December 16, 2008.</li> <li>Demand factors were determined by dividing water deliveries to single family homes (3,868 AFY) by the number of family accounts (11,920 accounts) for 2005 as shown in Table 11 in the UWMP. This demand factor should represent a conservative water demand estimate since single family homes (low density residential) typically have larger lots (higher landscaping demand) and higher occupancy compared to low, medium, and high density homes based on the <i>City of Watsonville General Plan</i>.</li> <li>Demand factors determined by dividing deliveries to landscaping/agricultural accounts in 2005 (405 AF, UWMP) by the developed landscaping/agriculture area in 200 (311 acres in the <i>City of Watsonville General Plan</i>).</li> </ol>			

As shown in **Table 3.12-6: Projected Supply and Demand Comparison for Multiple Dry Years (AFY)**, the City is able to meet its water demands through the use of surface water and groundwater. The existing water system has sufficient capacity to provide water to the proposed project and the necessary infrastructure to serve the project site. The City of Watsonville, as the water purveyor determined that the proposed project would not require preparation of a Water Supply Assessment (WSA) as the proposed project would not demand an amount of water equivalent to, or greater than, the amount of water required by a residential development of more than 500 units and would not result in an increase of ten percent or more in the number of public water systems existing service connections.

The PVWMD is continuing to implement the Basin Plan in order to address the long-term impact of the groundwater basin, including completion of several water supply and distribution projects, including 20 miles of a distribution pipeline and a Recycled Water Facility with the City of



Watsonville, which will provide 4,000 acre feet of new, drought proof, reliable irrigation supply to the coast. The PVWMD is also currently beginning a rate re-establishment process so that the Basin Plan can be implemented.

Implementation of the proposed project would result in an increase in the amount of impervious surfaces within the planning area. However, since the proposed project would result in a reduction in the overall amount of water use within the planning area over existing conditions, the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge to the extent that it would result in lowering of the groundwater table. In addition, future development on Phase 1 (County site) and the remainder of the planning area would be required to pay the City's groundwater impact fee, which is currently set at \$347.56 per bedroom and is used to retrofit water fixtures (e.g. toilets, showerheads, etc.) within the City. The water retrofit program, which is funded by the groundwater impact fees results in a savings of 748 gallons of water per month, would offset approximately 70 to 100 percent of the water consumption of new homes within the planning area. With implementation of the City's groundwater impact fee, the impact of the proposed project on water supply would be considered **less than significant** under buildout of the proposed Specific Plan and PUD and for implementation of the Phase 1 (County site). Cumulative impacts to the overdraft conditions in the Pajaro Valley groundwater basin are addressed in **Section 4: CEQA Considerations**.

#### Water Infrastructure

**Impact 3.12-8: Implementation of the proposed project would result in construction of on-site water infrastructure in order to serve the proposed project. If City and County impact fees do not adequately fund water infrastructure improvements, this is considered a potentially significant impact.**

New facilities would have to be extended into the planning area in order to provide potable water for the proposed Specific Plan and PUD. The potable water distribution system is expected to consist of eight and ten inch water mains, six inch service laterals, and various valves and fittings. As shown on **Figure 3.12-3: Conceptual Water and Sewer Plan**, water mains would be located in conjunction with the proposed roadway system and would tie into the existing infrastructure in four locations. These locations include the existing six-inch main along Atkinson Lane at two locations, the eight-inch main along Brewington Avenue, and the 16-inch main along Wagner Avenue.

Future development within the planning area would be required to pay applicable development impact fees at the time of issuance of the building permits. If deemed necessary to fund municipal services, the County and the City will enter into an agreement to fund infrastructure costs for the proposed project not covered by City or County impact fees and taxes. Funding of additional services would be handled through levies on future development in order to meet acceptable thresholds as required by mitigation measure **MM 3.12-1**. Therefore, implementation of this mitigation measure would ensure that the proposed project would result in a **less than significant impact** on water infrastructure costs.



### Stormwater Runoff

**Impact 3.12-9:** The proposed project would require expansion of stormwater facilities on-site, the construction of which could cause significant environmental effects. Future development within the planning area would be required to pay applicable impact fees at the time of issuance of the building permits. If City and County impact fees do not adequately fund stormwater infrastructure, this would be considered a potentially significant impact.

Proposed development of the planning area would require expansion of the City's stormwater management system. Currently, a 12-inch pipe discharges runoff from approximately 23 acres of residential development north of the proposed project into the freshwater marsh located in the western portion of the planning area. Stormwater runoff flows overland to the Crestview Park detention basin. The detention basin has approximately four acre-feet of detention volume.

The conceptual storm drainage plan for the proposed Specific Plan addresses stormwater treatment for phases 1 and 2 of the proposed project. The conceptual plan for Phase 1 would utilize the freshwater marsh and temporary detention basin to mitigate the increase of stormwater runoff from the planning area. The temporary detention basin would require a 0.7 acre-foot surface capacity and approximately 0.2 acres of surface area and would be located within the temporary agricultural buffer to the east of the wetland and east of the extension of Brewington Avenue (**Figure 2-15: Conceptual Stormwater Plan – Phase 1**). A weir outlet structure would capture and convey the overflow from the wetland to a culvert that would continue conveyance under the Brewington Avenue extension and into the temporary detention basin. The weir outlet and culvert would be designed to accommodate a 100-year peak spill rate.

The conceptual drainage plan for Phase 2 would include removal of the temporary detention basin and construction of a new, expanded detention basin at Crestview Park (**Figure 2-16: Conceptual Stormwater Plan – Project Buildout**). Storm drain pipes of varying sizes would convey stormwater from the proposed project to the Crestview Park detention basin. An approximately five-acre detention basin would be required to provide sufficient storage to contain a 100-year storm event. While some of the park may flood on a more regular basis, the entire park will be unusable during large, infrequent storm events when the park would function to attenuate the peak flow rate of the storm water runoff. The outlet controls would be sized to allow rapid recovery of the park space. The Crestview Park detention basin design would incorporate an underdrain system, gravel trenches, and perforated pipes to accelerate infiltration and drying to increase the usability of the park during the wet season. The analysis of storm water detention for the proposed Specific Plan is conceptual in nature, however the proposed design features would provide detention of surface water runoff in order to ensure that post-development runoff does not exceed pre-development runoff as required by mitigation measures incorporated herein.

Future development would be required to pay applicable impact fees at the time of development. The City of Watsonville currently charges a storm drainage impact fee based of \$6,045.16 per acre for high density residential uses and an impervious area impact of \$0.40 per square foot for both single family and multi-family dwelling units. If payment of impact fees do not adequately fund stormwater infrastructure, this would be considered a **potentially significant impact**. However, implementation of mitigation measure **MM 3.12-1** would ensure that funding of additional services would be handled through a funding mechanism established by the City and



County paid for by future development in order to meet acceptable thresholds, including the projects “fair share” of funding for stormwater infrastructure with buildout of future development within the planning area. Therefore, implementation of this mitigation measure would ensure that the proposed project would result in a **less than significant impact** on stormwater infrastructure and services.

Increased Generation of Solid Waste

**Impact 3.12-10:** The proposed project would result in an increase in population, which would generate approximately 6,090 pounds per day of solid waste. However, the existing landfill has the capacity to accommodate the proposed project. This would be considered a less-than-significant impact.

The proposed project consists of construction of 450 residential units. As shown in **Table 3.12-11: Projected Solid Waste Generation Rates**, the proposed project would generate approximately 2 million pounds or 1,004 tons per year based on a generation rate of 12.23 pounds per household per day.

**Table 3.12-11: Projected Project Solid Waste Generation Rates**

Land Use Type	Number of Units	Generation Rate (pounds/household/day)	Total per Day		Total Per Year	
			Pounds	Tons	Pounds	Tons
Residential	450	12.23	5,503.5	2.75	2,008,777	1,004

The Watsonville Landfill would serve the proposed project. The landfill has a remaining capacity of approximately 2 million cubic yards and a daily maximum disposal rate of 275 tons. The actual disposal rate was approximately 113 tons per day as of 2005 (CIWMB 2008). The proposed project would create approximately three tons of waste per day. This represents approximately 2.65 percent of the current daily disposal rate and slightly over one percent of the maximum daily disposal rate. The Watsonville Landfill has sufficient capacity to accommodate the waste disposal needs of the proposed project. Therefore, this impact is considered **less than significant**.

Electricity, Gas, Telecommunications and Cable Service

**Impact 3.12-11:** The proposed project would result in expansion of electricity, gas, telecommunications, and cable services on-site. This is considered a less than significant impact.

As the proposed project is located on mostly vacant or agricultural land, new facilities would be extended into the planning area in order to provide electricity, gas, telecommunications, and cable services. PG&E would provide electrical and natural gas services to the proposed project. PG&E currently owns and operates a small electrical service station located within the planning area at the western boundary. An electrical and natural gas distribution system would be installed in a common joint trench along with telephone and cable television facilities. Additionally, a large overhead electrical utility line bisects the planning area. The line extends northeast along the northern property line of the Grimmer Orchards and north through both of the Zepeda Farms parcels. The length of the power line within the site is approximately 1,500 linear feet. The





fifteen poles located within the planning area would be relocated or placed underground with implementation of the proposed Specific Plan.

AT&T would provide telephone service to the proposed project. A fiber-optic telephone distribution system would be installed in a common joint trench along with gas, electric, and cable television facilities. Charter Communications provides cable television service to the City and County. Because the planning area is located contiguous to existing services provided by the City of Watsonville, provision of new service would result in a **less than significant impact**.



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### 3.13 Transportation and Traffic

This section of the EIR analyzes the traffic generation and circulation issues associated with the proposed Specific Plan, and is based on the *Atkinson Lane Specific Plan Traffic Impact Analysis* (TIA) prepared by RBF Consulting in January 2009. The TIA was based on a buildout scenario of 498 units, which is 48 units greater than the number of units that would be allowed by the Specific Plan and PUD. The analysis considers issues identified through the Notice of Preparation (NOP) and has been prepared in coordination with County of Santa Cruz and City of Watsonville staff. The complete TIA is included in **Appendix G** in Volume II of the Draft EIR.

#### 3.13.1 Environmental Setting

##### Existing Roadway Network

Regional access to the planning area is provided from Highway 1, Highway 129, and Highway 152. The planning area is directly accessed via Atkinson Lane, north of the site, and Brewington Avenue, west of the site. Wagner Avenue, which would be extended to provide direct access to East Lake Avenue, would access the site at the southeast corner. Significant roadways in the vicinity of the planning area include Riverside Drive (Highway 129), Main Street/East Lake Avenue (Highway 152), Airport Boulevard, Freedom Boulevard, Green Valley Road, Holohan Road, Crestview Drive, and Wagner Avenue. These roadways and other major routes in the City of Watsonville are described below.

**Highway 1** is a state highway within Santa Cruz County, providing access to San Francisco to the north, and Monterey Bay to the south. The highway travels along the coast from south of Los Angeles to north of Fort Bragg. The segment of this highway in the project vicinity is a four-lane freeway traveling north-south, with a speed limit of 65 miles per hour.

**Highway 129 (Riverside Drive)** is a state highway providing Watsonville a connection with Highway 101 to the east and Highway 1 to the west. In the vicinity of the project, Highway 129 (Riverside Drive) is a four-lane divided facility and a two lane undivided facility. The speed limit varies between 30 and 40 miles per hour.

**Highway 152 (Main Street/East Lake Avenue)** is a state highway connecting Watsonville to the City of Gilroy. It terminates at an interchange with Highway 1 in Watsonville. The highway varies between a four-lane highway and reduces to two-lanes in the vicinity of the planning area and has varying speed limits through the City.

**Airport Boulevard** is a four-lane undivided arterial that runs from Highway 1 to Freedom Boulevard and a two-lane undivided roadway between Freedom Boulevard and Green Valley Road. Further east it continues as Holohan Road. It provides access to residential neighborhoods, businesses, and the Watsonville Municipal Airport. The speed limit along Airport Boulevard is 35 miles per hour.

**Freedom Boulevard** is a four-lane divided arterial that runs north-south and east-west through the City of Watsonville. It provides access to primary businesses and residential neighborhoods. The speed limit in the vicinity of the project is 30 miles per hour. Class III bike lanes are provided along Freedom Boulevard in various segments in the vicinity of the project site.



**Green Valley Road** is a four-lane undivided arterial that runs north-south through the City of Watsonville connecting Highway 1 to the south with areas of unincorporated Santa Cruz County to the north. It provides access to downtown businesses and residences from Highway 1. In the vicinity of the project the speed limit is 35 miles per hour. Bicycle facilities are provided along Green Valley Road stretching from south of Pennsylvania Drive to the north side of Holohan Road.

**Holohan Road** is a two-lane undivided arterial that runs east-west between Highway 152 (East Lake Avenue) and Green Valley Road. It provides access to businesses, residences, and agricultural land. The speed limit along Holohan Road varies from 25 to 45 miles per hour. Bicycle facilities are provided along the segment of Holohan Road stretching from Green Valley Road to East Lake Avenue (Highway 152).

**Wagner Avenue** consists of two distinct segments, an east and a west. The east segment is a local road that runs west from Highway 152 (East Lake Avenue) and turns into a dirt road a block past California Street and turns northward to access agricultural properties. It provides access to residential neighborhoods to the south and agricultural land to the north. The speed limit along this segment of Wagner Avenue is 25 miles per hour. The west segment connects Virginia Street to Bronson Street. This segment of Wagner Avenue provides access only to the residences on the south side of the roadway and includes a speed limit of 25 miles per hour.

**Atkinson Lane** is a local street with a 25 mile per hour speed limit. This roadway extends northeast from Freedom Boulevard and dead-ends at Corralitos Creek at the project site. It provides access to residential neighborhoods and community facilities northwest of the project site.

**Brewington Avenue** is a local collector with a 25 mile per hour speed limit. This roadway travels north-south from East Lake Avenue to the south and terminates at the border of the planning area to the north. Brewington Avenue provides access to the residential neighborhoods east of Freedom Boulevard.

**Crestview Drive** is a local road providing access to the residential neighborhoods east of Freedom Boulevard. This roadway travels east-west, extending from Freedom Boulevard to the west and Wagner Avenue to the east, and has a speed limit of 30 miles per hour. Crestview Drive does not currently connect to Wagner Avenue; however, the City of Watsonville General Plan identifies a connection between these roadways sometime in the future.

**Gardner Avenue** is a local street with a 25 mile per hour speed limit. Gardner Avenue runs between Freedom Boulevard to the west and Vic Rugh Lane to the east. Gardner Avenue continues southward west of Freedom Boulevard as Clifford Avenue.

### Traffic Impact Analysis Methodology

Quantitative Levels of Service (LOS) analyses were performed for the study intersections and street segments based on the *2000 Highway Capacity Manual* (HCM) methodologies, prepared by the Transportation Research Board. Intersection operations were evaluated using the "Synchro" analysis software program. LOS is used to identify the magnitude of traffic congestion and delay at intersections. Intersections are rated based on a grading scale of LOS "A" through LOS "F", with LOS A representing free flowing conditions and LOS F representing



forced flow conditions. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. The TIA also used the California Manual on Uniform Traffic Control Devices (MUTCD) as a basis for recommending signals to mitigate heavily impacted intersections. The TIA also uses the TIRE (Traffic Infusion on Residential Environments) Index to measure traffic impacts to the neighborhood streets. The TIRE Index is a numerical representation of the effect street traffic has on a residential community. The index values range from zero, representing the least effect of traffic, to five, representing the severest effect. When measuring changes in traffic volumes, an increase of 0.1 or more in the Traffic Index would be noticeable by street residents.

### Study Intersections and Street Segments

Eighteen intersections and eighteen street segments were evaluated in the TIA. The intersections were selected based on their existing conditions and potential usage associated with the proposed development.

The following intersection and roadways were included in the TIA.

#### *Intersections*

- Freedom Boulevard/Atkinson Lane
- Freedom Boulevard/Gardner Avenue
- Brewington Avenue/Crestview Drive
- Freedom Boulevard/Crestview Drive
- East Lake Avenue/Wagner Avenue
- East Lake Avenue/Holohan Road
- Green Valley Road/Holohan Road – Airport Boulevard
- Green Valley Road/Main Street
- Highway 1 NB Ramps/Harkins Slough Road
- Highway 1 SB Ramps/Harkins Slough Road
- Airport Boulevard/Freedom Boulevard
- Green Valley Boulevard/Freedom Boulevard
- Brewington Avenue/Martinelli Street
- Highway 1 NB Ramps/Riverside Drive
- Highway 1 SB Ramps/Riverside Drive
- Airport Boulevard/Ranport Road
- Highway 1 NB Ramps/Larkin Valley Road

#### *Street Segments*

- Holohan Road between Green Valley Road and East Lake Avenue
- Airport Boulevard between Freedom Boulevard and Green Valley Road
- Airport Boulevard between Freedom Boulevard and Highway 1
- Green Valley Road between Freedom Boulevard and Holohan Road
- Green Valley Road between Main Street and Freedom Boulevard
- Freedom Boulevard between Airport Boulevard and Green Valley Road



- Freedom Boulevard between Green Valley Road and Gardner Avenue
- Freedom Boulevard between Gardner Avenue and Crestview Drive
- Freedom Boulevard south of Crestview Drive
- Highway 1 between Airport Boulevard and Highway 152
- Highway 1 between Highway 152 and Harkins Slough Road
- Highway 1 between Harkins Slough Road and Riverside Drive
- Highway 1 between Airport Boulevard and Buena Vista Drive
- Highway 1 south of Highway 129
- East Lake Avenue (Highway 152) between Wagner Avenue and Holohan Road
- East Lake Avenue (Highway 152) north of Holohan Road
- Main Street between Green Valley Road and Highway 1
- Main Street between Green Valley Road and Ohlone Parkway

The study roadway segments and intersections and existing roadway geometry is shown in **Figure 3.13-1: Study Roadway Segments and Intersections**. The TIA analyzed traffic conditions under the following development scenarios:

- Existing Traffic Conditions
- Existing Plus Background Conditions<sup>1</sup>
- Existing Plus Background Plus Project Conditions
- Cumulative Conditions without the project
- Cumulative Conditions with the project

### Existing Traffic Operations and Levels of Service

To identify existing traffic flow conditions, intersection traffic counts were collected during the weekday AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak hours at the study intersections. The intersection counts were collected on April 2, April 22, April 29, and April 30 2008. To determine the average daily traffic volumes, 24-hour tube counts were performed over seven consecutive days during the week of April 2, 2008. One traffic count was performed on November 5, 2008 at the intersection of Larkin Valley Road/Highway 1 NB ramp terminus to update counts conducted for the Nordic Naturals project in the City of Watsonville by Hexagon Transportation Engineers in August 2008 at the ramp terminal.

#### Existing Traffic Conditions

**Table 3.13-1: Level of Service Summary Table** provides a summary of the existing level of service at the study intersections. Under existing conditions, all the intersections studied operate at LOS C or better during the weekday AM and PM peak hours except the following:

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<sup>1</sup> Existing plus Background conditions include existing traffic plus the traffic generated by approved projects within the vicinity of the project that have not yet been built.





- **East Lake Avenue/Wagner Avenue** currently operates at an overall LOS A in both the AM and PM peak hours. The worst approach is in the eastbound direction, which operates at LOS E and D in the AM and PM peak hours, respectively.
- **East Lake Avenue/Holohan Road** currently operates at LOS D and LOS E in the AM and PM peak hours, respectively. Field observations indicate that queues build up at the northbound, eastbound and southbound directions.
- **Green Valley Road/Holohan Road** currently operates at LOS D during both the AM and PM peak hours. Field observations concluded that the severely deteriorated pavement condition at this intersection lowers the operational condition from that indicated by the Synchro results.
- **Green Valley Road/Main Street** currently operates at LOS E and LOS F in the AM and PM peak hours, respectively.
- **Highway 1 NB/Harkins Slough Road** ramp terminal intersection currently operates at LOS F and LOS A in the AM and PM peak hours, respectively. The large difference between the AM and PM peak hours is due to the high northbound left turn volume and the conflicting high westbound through volume. The northbound approach is the worst, which currently operates at LOS F and LOS B in the AM and PM peak hours, respectively.
- **Airport Boulevard/Freedom Boulevard** currently operates at LOS E in both the AM and PM peak hours.
- **Highway 1 NB/Highway 129 (Riverside Drive)** ramp terminal intersection currently operates at an overall LOS A. The northbound approach is the worst, which currently operates at LOS E and LOS F during the AM and PM peak hours, respectively.
- **Highway 1 SB/Highway 129 (Riverside Drive)** ramp terminal intersection currently operates at an overall LOS C. The southbound approach is the worst, which currently operates at LOS E during both the AM and PM peak hours, due to queue build-up on the ramp.
- **Airport Boulevard/Ranport Road** currently operates at LOS B and LOS A in the AM and PM peak hours, respectively. The northbound approach is the worst (by less than 10 vehicles), which operates at LOS F in both the AM and PM peak hours.
- **Highway 1 NB Ramps/Larkin Valley Road** ramp terminal intersection currently operates at LOS E and LOS F in the AM and PM peak hours, respectively. The eastbound approach is the worst, which operates at LOS F in both the AM and PM peak hours.

Under existing conditions, all the street segments studied operate at LOS C or better except for Airport Road between Freedom Boulevard and Green Valley Road, which operates at LOS E. The City plans to improve this segment to a four lane facility.



**Table 3.13-1: Level of Service Summary Table**

	N-S Street	E-W Street	Existing Intersection Control	LOS Threshold	Existing Condition				Existing + Background				Existing + Background + Project			
					AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
					Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1	Freedom Boulevard	Atkinson Lane	Stop Sign (WB)	Watsonville LOS D	0.1	A	0.1	A	0.0	A	0.1	A	0.8	A	0.5	A
			(Worst Approach)		12.9	B	14.4	B	13.2	B	14.9	B	16.5	C	17.1	C
2	Freedom Boulevard	Gardner Avenue	Signal	Watsonville LOS D	17.5	B	19.5	B	18.6	B	21.9	C	20.9	C	27.3	C
3	Freedom Boulevard	Crestview Drive	Signal	Watsonville LOS D	9.2	A	11.0	B	9.1	A	11.4	B	10.1	B	12.6	B
					Southbound Left Queue Overflow Observed in Field											
4	Brewington Avenue	Crestview Drive	All-Way Stop	Watsonville LOS D	7.5	A	7.3	A	7.5	A	7.3	A	7.8	A	7.9	A
			(Worst Approach)		7.8	A	7.5	A	7.8	A	7.5	A	8.1	A	8.2	A
5	East Lake Avenue	Wagner Avenue	Stop Sign (EB & WB)	Caltrans LOS C/D	7.4	A	2.5	A	7.6	A	2.6	A	8.0	A	2.7	A
			(Worst Approach)		49.3	E	33.0	D	51.2	F	34.0	D	52.3	F	34.4	D
Signal Not Warranted for Existing and Project Conditions																
6	East Lake Avenue	Holohan Road	Signal	Caltrans LOS C/D	45.2	D	69.1	E	45.9	D	71.4	E	45.9	D	73.4	E
					Reconstruct EB to L, L/T,R											
					36	D	31.6	C								
7	Green Valley Road	Holohan Road	Signal	Santa Cruz County LOS C	54.3	D	64.3	E	52.5	D	62.1	E	52.7	D	62.2	E
8	Green Valley Road	Main Street	Signal	Caltrans LOS C/D	74.8	E	82.9	F	79.0	E	87.3	F	80.1	F	88.4	F



	N-S Street	E-W Street	Existing Intersection Control	LOS Threshold	Existing Condition				Existing + Background				Existing + Background + Project			
					AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
					Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
9	Hwy 1 NB Off Ramp	Harkins Slough Road	Stop Sign (EB & WB)	Caltrans LOS C/D	108.2	F	6.4	A	108.4	F	6.4	A	111.4	F	6.6	A
			(Worst Approach)		420.0	F	13.6	B	420.3	F	13.6	B	432.4	F	13.9	B
												Signalize and widen for LT				
												17.8	B	7.7	A	
10	Hwy 1 SB On Ramp	Harkins Slough Road	Stop Sign (WB)	Caltrans LOS C/D	5.2	A	5.4	A	5.2	A	5.4	A	5.6	A	5.5	A
			(Worst Approach)		7.8	A	7.2	A	7.9	A	7.2	A	8.5	A	7.2	A
11	Airport Boulevard	Freedom Boulevard	Signal	Watsonville LOS D	61.3	E	57.8	E	66.1	E	62.2	E	74.3	E	65.3	E
													Add WL, NT/R			
													47.5	D	43.8	D
12	Green Valley Road	Freedom Boulevard	Signal	Watsonville LOS D	34.4	C	45.0	D	36.0	D	47.8	D	40.8	D	53.7	D
					NBL Queue Overflows											
13	Brewington Avenue	Martinelli Street	Stop Sign (WB)	Watsonville LOS D	5.6	A	3.3	A	5.7	A	3.3	A	6.3	A	3.8	A
			(Worst Approach)		22.4	C	17.5	C	22.9	C	18.0	C	23.9	C	18.9	C
14	Hwy 1 NB Ramps	Riverside Drive	Stop Sign (EB & WB)	Caltrans LOS C/D	4.6	A	8.9	A	5.2	A	10.5	B	5.2	A	10.7	B
			(Worst Approach)		39.2	E	87.9	F	43.9	E	106.6	F	44.2	E	108.7	F
15	Hwy 1 SB Ramps	Riverside Drive	Stop Sign (WB)	Caltrans LOS C/D	21.9	C	21.0	C	26.0	D	22.0	C	26.2	D	22.2	C
			(Worst Approach)		38.9	E	43.8	E	46.2	E	46.0	E	46.4	E	46.5	E
16	Airport Boulevard	Ranport Road	Stop Sign (EB)	Watsonville LOS D	10.7	B	9.9	A	10.9	B	10.0	B	11.0	B	10.2	B
			(Worst Approach)		120.1	F	56.7	F	131.9	F	59.5	F	138.6	F	69.0	F
					See Note 7			See Note 7			See Note 7					



	N-S Street	E-W Street	Existing Intersection Control	LOS Threshold	Existing Condition				Existing + Background				Existing + Background + Project			
					AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
					Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
17	Hwy 1 NB Ramps	Larkin Valley Road	Stop Sign (EB & NB)	Caltrans LOS C/D	36.1	E	82.9	F	38.5	E	636.5	F	48.6	E	626.0	F
			(Worst Approach)		317.8	F	1093.2	F	350.4	F	*	F	484.8	F	*	F
									Roundabout				5.5	A	7.2	A
18	Airport Boulevard	Larkin Valley Road	Signal	Watsonville LOS D	12.9	B	12.2	B	13.4	B	12.4	B	14.2	B	12.9	B
										Roundabout				10.7	B	10.0

Notes:

1. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound
2. Analysis performed using 2000 Highway Capacity Manual methodologies.
3. Overall level of service standard for the City of Watsonville and Santa Cruz County is LOS D. Overall level of service standard for Caltrans is the LOS C/D threshold.
4. Intersection improvements are highlighted.
5. The overall delay for some intersections actually decreases with the addition of background and project trips. The reduction in delay occurs because the "intersection delay" is the weighted average of all approaches. When traffic volumes increase for an approach that has a free movement (zero delay), the "intersection delay" decreases. This can be seen at intersections 1 and 3 during the Existing and Existing plus Background conditions.
6. The asterisk (\*) indicates that the delay was beyond the capabilities of Synchro.
7. The eastbound approach has 10 or fewer vehicles in the peak hours and improvements would be infeasible.
8. Roundabout LOS performed using Traffix and SimTraffic used for simulation

Source: RBF Consulting 2009



### Existing plus Background Traffic Conditions

Existing Plus Background conditions include existing traffic plus the traffic that is calculated to be generated by approved projects within the vicinity of the project that have not yet been built. The Existing plus Background conditions provide a baseline from which to measure project-related traffic impacts.

As shown in **Table 3.13-1: Level of Service Summary Table**, under Existing plus Background conditions, all intersections studied would operate at LOS C or better during the weekday AM and PM peak hours except the following:

- **East Lake Avenue/Wagner Avenue** is anticipated to operate at an overall LOS A in both the AM and PM peak hours. The worst approach would operate at LOS F and LOS D in the AM and PM peak hours, respectively.
- **East Lake Avenue/Holohan Road** is anticipated to operate at LOS D and LOS E in the AM and PM peak hours, respectively.
- **Green Valley Road/Holohan Road** is anticipated to operate at LOS D during both the AM and PM peak hours.
- **Green Valley Road/Main Street** is anticipated to operate at LOS E and LOS F in the AM and PM peak hours, respectively.
- **Highway 1 NB/Harkins Slough Road** ramp terminal intersection is anticipated to operate at LOS F and LOS A in the AM and PM peak hours, respectively. The worst approach would operate at LOS F and LOS B in the AM and PM peak hours, respectively.
- **Airport Boulevard/Freedom Boulevard** is anticipated to operate at LOS E in both the AM and PM peak hours.
- **Highway 1 NB Ramp/Highway 129 (Riverside Drive)** ramp terminal intersection is anticipated to operate at an overall LOS A and LOS B in the AM and PM peak hours, respectively. The northbound off ramp would be the worst approach, which would operate at LOS E and LOS F in the AM and PM peak hours, respectively.
- **Highway 1 SB Ramp/Highway 129 (Riverside Drive)** ramp terminal intersection is anticipated to operate at an overall LOS D and LOS C in the AM and PM peak hours, respectively. The southbound off ramp would be the worst approach, which would operate at LOS E in both the AM and PM peak hours.
- **Airport Boulevard/Ranport Road** is anticipated to operate at overall LOS B in the AM and PM peak hours. The northbound direction is the worst approach by less than 10 vehicles, and would operate at LOS F in both the AM and PM peak hours.
- **Highway 1 NB Ramp/Larkin Valley Road** ramp terminal intersection is anticipated to operate at LOS E and LOS F in the AM and PM peak hours, respectively. The worst approach is forecast to operate at LOS F in both the AM and PM peak hours.

For Existing plus Background conditions, all the street segments would continue to operate at LOS C or better except for Airport Road between Freedom Boulevard and Green Valley Road, which would continue to operate at LOS E.



## Bicycle and Pedestrian Facilities

In the vicinity of the proposed project there are Class III Bikeways (signage along the roadway) located along Freedom Boulevard and Arthur Road. The Freedom Boulevard Bikeway travels from West Riverside Drive in the downtown area northward to Airport Road. The Arthur Road Bikeway (just east of Atkinson Lane) continues from Freedom Boulevard southward to Main Street where it connects to a Class I Bikeway eastward and westward along Main Street. Within the City of Watsonville, bikeways are also provided along Green Valley Road, Main Street, and Holohan Road. The City plans to implement bikeways along Brewington Avenue and Martinelli Avenue in the project vicinity, which would encourage biking to and from the planning area.

Sidewalks are provided on both Atkinson Lane and Brewington Avenue along the frontages of developed sites.

## Transit Service

The Watsonville Transit Center is part of the Santa Cruz Metropolitan Transit District (SCMTD), which provides mass transit for the County of Santa Cruz. The transit center is located in downtown Watsonville at the Rodriguez Street / West Lake Avenue intersection and provides local bus service along 5 routes (Route 72, 74, 75, 76, and 79) throughout the City. It also provides regional bus service to the City of Santa Cruz on Route 71 (SCMTD routes), to the City of Marina on Route 27 (Monterey Salinas Transit – MST routes), and to the City of Salinas on Routes 28 and 29 (MST routes).

Currently, Route 71 (Santa Cruz to Watsonville) is the only bus route that travels in the vicinity of the project. It travels north and south on Freedom Boulevard and the closest bus stops to the project are located at the Atkinson Lane / Freedom Boulevard intersection and the Crestview Drive/Freedom Boulevard intersection. These bus stops are located within a quarter mile of the proposed site access locations and approximately 0.7 miles from the center the project site.

### 3.13.2 Regulatory Background

#### County of Santa Cruz 1994 General Plan and Local Coastal Program

The *County of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County General Plan)* was adopted by the Board of Supervisors in May of 1994 and certified by the California Coastal Commission in December of 1994. The following circulation and transportation related policies are applicable to circulation and transportation within and in the vicinity of the project site.

**Policy 3.4.4, On-Site Transit Facilities.** Require developers of major traffic generating activities to provide fixed transit facilities, such as bus shelters and pullouts, consistent with the anticipated demand. Locate these facilities in areas convenient to pedestrians' use.

**Policy 3.4.5, Bus Pullouts.** Require developers of new large projects located on transit routes to dedicate the right-of-way and construct a bus pullout bay.

**Policy 3.5.2, Wheelchair Ramps.** Require new development to include ramps at all intersections in new developments.



**Program E.** Review subdivision applications for consistency with the MPCB and require that new developments dedicate necessary right-of-way for bikeway facilities according to the MPCB classification and design specifications. (Responsibility: Public Works, Planning Department)

**Policy 3.9.2, Construction.** Construct and mark bicycle routes in conformance with state standards. Limit the number of driveways where feasible in new developments to reduce the potential for automobile-bicycle conflicts.

**Policy 3.9.3, Parking.** Limit on-street parking where the need for a clear bike lane exists. Stripe all arterials for bike lanes and strictly enforce parking limitations.

**Policy 3.10.1, Pathways.** Require pathways for pedestrian and bicycle use through cul-de-sac and loop streets where such access will encourage those modes of travel as part of new development.

**Policy 3.10.2, Landscape.** Landscape and buffer pedestrian walkways wherever feasible.

**Policy 3.10.4, Pedestrian Traffic.** Require dedication and construction of walkways for through pedestrian traffic and internal pedestrian circulation in new developments where appropriate.

**Policy 3.10.5, Access.** Ensure safe and convenient pedestrian access to the transit system, where applicable in new developments.

**Policy 3.10.7, Parking Lot Design.** Provide for pedestrian movement in the design of parking areas.

**Policy 3.10.8, Americans With Disabilities Act (ADA) Requirements.** Incorporate ADA standards in design of new projects and reconstruction where applicable. Prohibit landscaping and all other obstacles, such as telephone poles and fire hydrants, which would prevent pedestrian movement within this walkway. Require the use of materials which will provide an all-weather surface for walking.

**Policy 3.10.10, Americans With Disabilities Act (ADA) New Development.** All new development shall incorporate ADA standards into the design, where applicable.

**Policy 3.12.1, Level of Service (LOS) Policy.** In reviewing the traffic impacts of proposed development projects or proposed roadway improvements, LOS C should be considered the objective, but LOS D as the minimum acceptable (where costs, right-of-way requirements, or environmental impacts of maintaining LOS under this policy are excessive, capacity enhancement may be considered infeasible). Review development projects or proposed roadway improvements to the Congestion Management Program network for consistency with Congestion Management Plan goals.

Proposed development projects that would cause LOS at an intersection or on a uninterrupted highway segment to fall below D during the weekday peak hour will be required to mitigate their traffic impacts. Proposed development projects that would add traffic at intersections or on highway segments already at LOS E or F shall also be required to mitigate any traffic volume resulting in a 1% increase in the volume/capacity ratio of the sum of all critical movements. Projects shall be denied until additional capacity is provided or where overriding finding of public necessity and or benefit is provided.





**Policy 3.12.3, Transportation Impact Fees as Mitigation Measures.** Payment of an approved Transportation Impact Fee proportional to the forecast trip generation will be required.

**Policy 3.13.1, Limiting Traffic Volumes.** Seek to limit traffic volumes and speeds in residential neighborhoods through alignment and improvement of existing and proposed local streets.

**Policy 3.13.2, Planning of New Residential Streets and Improving Existing Streets.** Plan roadway networks in residential areas and subdivisions to inter-connect adjacent residential areas while discouraging through traffic on local streets

**Policy 3.13.4, Design and Enforcement Measures.** Emphasize design and enforcement solutions to slow and discourage through traffic.

**Policy 3.13.7, Through Auto Traffic.** Discourage inter-neighborhood and through auto traffic movement on local streets through street alignment and intersection design.

**Policy 3.20.3, Dedication of Public Rights-Of-Way.** Require dedication of public rights-of-way for public use and maintenance on all streets to ensure an integrated circulation system consistent with Government Code Sections 65909(a) and 66475.4(b). Dedication shall be consistent with the adopted street standards as in the County of Santa Cruz Design Criteria.

**Policy 3.21.4, Mitigation Requirements.** Require new development projects to mitigate their impacts on transportation facilities through system improvements and/or transportation impact fees.

**Policy 3.21.5, Distribution of the Cost Of Road Construction.** Consider the distribution of the cost of road improvements equitably among benefiting property owners.

**Policy 6.5.1, Access Standards.** Require all new structures, including additions of more than 500 square feet, to single- family dwellings on existing parcels of record, to provide an adequate road for fire protection in conformance with the following standards:

(a) Access roads shall be a minimum of 18 feet wide for all access roads or driveways serving more than two habitable structures, and 12 feet for an access road or driveway serving two or fewer habitable structures. Where it is environmentally inadvisable to meet these criteria (due to excessive grading, tree removal or other environmental impacts), a 12- foot wide all-weather surface access road with 12- foot wide by 35- foot long turnouts located approximately every 500 feet may be provided with the approval of the Fire Chief. Exceptions: Title 19 of the California Administrative Code, requires that access roads from every state governed building to a public street shall be all-weather hard-surface (suitable for use by fire apparatus) roadway not less than 20 feet in width. Such roadway shall be unobstructed and maintained only as access to the public street.

(b) Obstruction of the road width, as required above, including the parking of vehicles, shall be prohibited, as required in the Uniform Fire Code.

(c) The access road surface shall be “all weather”, which means a minimum of six inches of compacted aggregate base rock, Class 2 or equivalent, certified by a licensed engineer to 95 percent compaction and shall be maintained. Where the grade of the access road



exceeds 15 percent, the base rock shall be overlain by 2 inches of asphaltic concrete, Type B or equivalent, and shall be maintained.

(d) The maximum grade of the access road shall not exceed 20 percent, with grades greater than 15 percent not permitted for distances of more than 200 feet at a time.

(e) The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts.

(f) Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet vertical clearance.

(g) An access road or driveway shall not end farther than 150 feet from any portion of a structure.

(h) A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length.

(i) No roadway shall have an inside turning radius of less than 50 feet. Roadways with a radius curvature of 50 to 100 feet shall require an additional 4 feet of road width. Roadways with radius curvatures of 100 to 200 feet shall require an additional 2 feet of road width.

(j) Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures.

(k) Bridges shall be as wide as the road being serviced, meet a minimum load bearing capacity of 25 tons, and have guard rails. Guard rails shall not reduce the required minimum road width. Width requirements may be modified only with written approval from the Fire Chief. Bridge capacity shall be posted and shall be certified every five years by a licensed engineer. For bridges served by 12 foot access roads, approved turnouts shall be provided at each bridge approach.

(l) All private access roads, driveways, turnarounds and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times.

(m) To ensure maintenance of private access roads, driveways, turnarounds and bridges, the owner(s) of parcels where new development is proposed shall participate in an existing road maintenance group. For those without existing maintenance agreements, the formation of such an agreement shall be required.

(n) All access road and bridge improvements required under this section shall be made prior to permit approval, or as a condition of permit approval.

(o) Access for any new dwelling unit or other structure used for human occupancy, including a single- family dwelling on an existing parcel of record, shall be in the duly recorded form of a deeded access or an access recognized by court order.



Diagrammatic representations of access standards are available at the Santa Cruz County Planning Department and local fire agencies.

#### [City of Watsonville General Plan](#)

The following policies in the 2005 *City of Watsonville General Plan* are applicable to circulation and traffic within and in the vicinity of the project site.

**Goal 10.1, Streets and Highway Facilities.** Plan and provide for a safe, efficient, and environmentally sensitive network of streets and highways for movement of people and goods.

**Goal 10.2, Transit Facilities and Service.** Promote the use of transit as an alternative to the automobile for all types of travel.

**Goal 10.4, Bicycle Circulation.** Plan for and provide a safe, convenient network of bicycle facilities.

**Goal 10.5, Pedestrian Circulation.** Recognize the importance of pedestrian travel, alone, or in combination with other travel modes, and to encourage walking.

**Goal 10.7, Aesthetic Considerations.** Plan and provide for a circulation network that preserved and enhances scenic amenities.

**Policy 10.A, Street and Highway Improvements.** The City shall pursue a program of regularly scheduled maintenance and street improvements, accompanied by the planned extension of roadways to serve new development.

**Implementation Measure 10.A.2, Costs of Improvements.** The City shall use the development review process to ensure that new development projects creating a need for additional roadway improvements pay an appropriate share of the costs, based on traffic impact fees and assessment districts.

**Policy 10.C, Level of Service.** The City shall maintain a minimum Level of Service D (LOS D) on all arterial and collector streets serving the City except for those accepted to operate at less than an LOS D in the *1988-2005 Major Streets Master Plan* as updated in 1992.

**Implementation measure 10.C.2, Project Funding.** The City shall require as a condition of approval that all development or rezoning which would contribute to a deterioration of existing service levels below LOS D, provide the necessary improvements, contribute to their provisions through the payment of traffic impact fees, or otherwise mitigate impacts to maintain at least an LOS D. Where existing conditions are already below LOS D, any new development must mitigate traffic conditions to the extent of preventing further deterioration in level or service or, if possible, improving level of service.

**Policy 10.F, Planning for Transit.** The City shall use its land use planning authority to enhance the use of transit.

**Implementation Measure 10.F.1, Provision of Transit Facilities.** The use of transit to and from new development shall be promoted by requiring new development to include transit facilities such as bus shelters and turnouts where appropriate.



**Implementation Measure 10.F.2, Land Use Designation.** Medium- and high density residential designation shall be assigned to properties adjacent to existing or planned major arterials and transit corridors where the negative impacts of traffic on residential uses can be mitigated.

**Policy 10.K, Bicycle Facilities Development.** The City shall plan for, and implement a comprehensive network of bicycle facilities in order to promote the bicycle as an alternative to the private automobile.

**Implementation Measures 10.K.1, New Construction and Improvements.** New construction and improvements to designated streets shall include facilities for safe bicycle travel consistent with the City's Bicycle Plan.

**Implementation Measure 10.K.3, Design for Bicycle Lanes.** The City shall require new development projects to include bicycle lanes as part of the project proposal, consistent with the Bicycle Plan.

**Policy 10.M, Bicycle Support Facilities.** The City shall encourage bicycle facilities in new developments, as a commute alternative.

**Policy 10.N, Pedestrian Travel.** The City shall plan for, and implement a comprehensive network of safe pedestrian facilities in order to promote pedestrian travel.

**Implementation measure 10.N.1, Construction/Improvement.** The City shall require facilities for safe pedestrian travel as part of new construction or improvement to existing streets.

**Implementation Measure 10.N.2, Design of Walkways.** The City shall require new development to include pedestrian walkways adjacent to new streets and/or connecting the development to existing streets.

**Implementation Measure 10.N.3, Sidewalk Standards.** Sidewalks on new or existing streets shall be designed and constructed according to minimum City standards, including curb cuts to facilitate use by persons with physical disabilities.

**Policy 10.O, Walkway Aesthetics and Safety.** Pedestrian walkways should be designed to promote walking by providing a safe and aesthetically pleasing path or travel.

**Implementation Measure 10.O.1, Walkway Lighting.** Walkways and parking areas shall be required to include lighting fixtures at regular intervals sufficient for public safety.

**Policy 10.P, Pedestrian Access.** Access for pedestrian travel shall be maintained where it already exists and provided where it does not, in order to prevent or eliminate barriers to pedestrian travel.

**Implementation Measure 10.P.1, Access to Adjoining Land Uses.** The City shall require pedestrian access between adjoining multiple family residential developments, and from such residential development to adjacent recreational or commercial areas.



**Implementation Measure 10.P.2, Retention of Existing Access.** Where alleyways, arcades, or similar pedestrian pathways already exist, new development or development associated with a change in land use shall be required to retain or replace the existing access.

### 3.13.3 Relevant Project Characteristics

The proposed project designates approximately 34.7 net-acres for residential uses for the construction of no more than 450 units, including 10.5 net-acres for “Residential-High Density;” 14.2 net-acres for “Residential-Medium Density;” 10 net-acres for “Residential – Low Density;” and 3.5 acres of parks/recreational uses. The proposed project would also include 3.1 acres of a designated riparian area with a 1.6 acre riparian buffer adjacent to Corralitos Creek, which would be designated “Environmental Management;” preservation of a 3.9 acre existing wetland and incorporation of a 2.7 acre wetland buffer, which would be designated “Urban Open Space;” a 2.2 acre PG&E substation, which would remain as a public facility; and 14.1 acres for a 200-foot agricultural buffer, which would be located on the eastern boundary of the planning area adjacent to the existing agricultural fields. The proposed project also includes an interim agricultural buffer within Phase 1 (County site) that would be terminated once Phase 2 (City site) is rezoned.

The proposed project includes two access points off Atkinson Lane, at least two access points off Brewington Avenue, and a connection to Wagner Avenue, which would be extended from Crestview Avenue to East Lake Avenue as an off-site improvement to the proposed project.

The internal circulation network of the proposed project would include public streets with a 52-foot right-of-way that would include vehicle travel lanes designated as Class III bicycle lanes, on-street parking, lighting and landscaping, and sidewalks and a 60-foot right-of-way that includes the same features plus a drainage swale that connects the wetlands to the proposed Crestview Park detention basin. The wetland and riparian buffer areas would include pedestrian pathways. Pedestrian connections would be provided between the existing and proposed residential land uses, and active and passive recreation areas. **Figure 2-18: Site Access and Internal Circulation** presents the conceptual internal circulation system.

### 3.13.4 Impacts and Mitigation Measures

#### Criteria for Determining Significance

In accordance with CEQA, State CEQA Guidelines, agency and professional standards, a project impact would be considered significant if the project would:

- Result in a traffic increase that is substantial in relation to the existing traffic load and capacity of the street system, which is defined as causing an existing acceptable intersection or roadway level of service to drop to unacceptable levels.
- Result in potentially unsafe conditions or inadequate internal circulation to accommodate project traffic;
- Result in a roadway design that would increase traffic hazards to motor vehicles, bicycles, or pedestrians or substantially impede pedestrian, bicycle or transit system operations;
- Provide an inadequate amount of parking; or
- Conflict with adopted policies, plans, programs that support supporting alternative transportation (for example, bus turnouts, bicycle racks).



## Methodology for Determining Significance

The TIA is based on a 498-unit buildout scenario for the project site, which includes 220 Apartments, 118 Condominium/Townhouses, and 160 Single-Family Detached Homes. The TIA also assumes construction of the Wagner Avenue extension that would connect Crestview Avenue and East Lake Avenue. The buildout scenario in the TIA is based on a prior site plan, which is 48 units greater than the number of units that would be allowed in the Specific Plan. Therefore, this analysis is considered conservative.

The TIA forecasts that the proposed project would generate approximately 3,814 daily trips; with 292 trips (62 in, 230 out) occurring during the AM peak hour and 372 trips (239 in, 133 out) occurring during the PM peak hour.

The 2030 Association of Monterey Bay Area Governments (AMBAG) model as well as engineering judgment based on the knowledge of the existing traffic distribution was used to determine the trip distribution along the road network in the vicinity of the proposed project. It is estimated that 60 percent of the project generated trips would use the Atkinson Lane access points and 40 percent would use Brewington Avenue and Wagner Avenue to access the project site. Approximately 5 percent of the project trips would distribute along Wagner Avenue to Eastlake Avenue. Approximately 21 percent of the trips would distribute north on Highway 1, and 5 percent would distribute south on Highway 1.

For the TIA, the estimated project trips were added to the Existing plus Background traffic volumes and traffic analyses were performed for the weekday AM and PM peak hours at each of the study intersections.

Since the majority of the planning area is located in the County of Santa Cruz and the County is serving as lead agency under CEQA, the analysis measured the resulting levels of service against the County thresholds of significance to determine the level of potential impact. The County of Santa Cruz General Plan and LCP Policy 3.12.1 (Level of Service (LOS) Policy) sets the level of service threshold to determine whether a project creates an unacceptable level of service on a street segment of intersection. Policy 3.12.1 states that LOS C is considered the objective, but sets LOS D as the minimum acceptable (where costs, right-of-way requirements, or environmental impacts of maintaining LOS under this policy are excessive, capacity enhancement may be considered infeasible). Proposed development projects that would cause LOS at an intersection or on an uninterrupted highway segment to fall below D during the weekday peak hour is required to mitigate their traffic impacts. Proposed development projects that would add traffic at intersections or on highway segments already at LOS E or F is also required to mitigate any traffic volume resulting in a one percent increase in the volume/capacity ratio of the sum of all critical movements. For unsignalized intersections significant impacts are defined to occur when: 1) the addition of project traffic causes intersection operations to degrade from LOS D or better to LOS E or F, and the peak hour signal warrant from the MUTCD is satisfied, or 2) project traffic is added to an intersection operating at LOS E or F, and the peak hour signal warrant from the MUTCD is satisfied.

Several of the intersections and roadway segments are State Highway facilities under the jurisdiction of Caltrans. The *Caltrans Guide for the Preparation of Traffic Impact Studies* states that if an existing State Highway facility is operating at less than the target LOS, the existing LOS





should be maintained, thus adding any trips to a facility operating at an adverse LOS would be considered significant. However, impacts are evaluated according to County criteria.

### Impacts and Mitigation Measures

#### Traffic Increase at Eight Study Intersections and 18 Street Segments Would Not Lower Level of Service to Below Acceptable Thresholds

**Impact 3.13-1:** The proposed project would result in an increase in traffic at eight study intersections, 18 street segments, and the Highway 1 freeway ramps, and Highway 1 Main Line from south of Riverside Drive to just north of Larkin Valley Road that would continue to operate at acceptable levels of service during the weekday AM and PM peak hours. This is considered a less than significant impact.

The proposed project would add 3,814 trips per day to the surrounding street and intersection network, including six percent of its trips to the proposed Wagner Avenue extension, once a connection is provided to the proposed project. Prior to the construction of the Wagner Avenue extension, the project trips would distribute onto Brewington Avenue and Martinelli Street. The LOS for these intersections would remain acceptable in terms of the County standards as shown in **Table 3.13-1: Level of Service Summary Table**. In addition, the following study intersections and street segments would continue to operate at acceptable levels (LOS C or better):

#### *Intersections*

- Freedom Boulevard/Atkinson Lane
- Freedom Boulevard/Gardner Avenue
- Brewington Avenue/Crestview Drive
- Freedom Boulevard/Crestview Drive
- Highway 1 SB Ramps/Harkins Slough Road
- Green Valley Boulevard/Freedom Boulevard
- Brewington Avenue/Martinelli Street
- Airport Boulevard/Larkin Valley Road

#### *Street Segments*

- Holohan Road between Green Valley Road and East Lake Avenue
- Airport Boulevard between Freedom Boulevard and Green Valley Road
- Airport Boulevard between Freedom Boulevard and Highway 1
- Green Valley Road between Freedom Boulevard and Holohan Road
- Green Valley Road between Main Street and Freedom Boulevard
- Freedom Boulevard between Airport Boulevard and Green Valley Road
- Freedom Boulevard between Green Valley Road and Gardner Avenue
- Freedom Boulevard between Gardner Avenue and Crestview Drive
- Freedom Boulevard south of Crestview Drive
- Highway 1 between Airport Boulevard and Highway 152
- Highway 1 between Highway 152 and Harkins Slough Road





- Highway 1 between Harkins Slough Road and Riverside Drive
- Highway 1 between Airport Boulevard and Buena Vista Drive
- Highway 1 south of Highway 129
- East Lake Avenue (Highway 152) between Wagner Avenue and Holohan Road
- East Lake Avenue (Highway 152) north of Holohan Road
- Main Street between Green Valley Road and Highway 1
- Main Street between Green Valley Road and Ohlone Parkway
- Highway 1 Freeway Ramps (Larkin Valley Road, Main Street, Harkin Slough Road, and Riverside Drive)
- Highway 1 Main Line from south of Riverside Drive to just north of Larkin Valley Road.

As the proposed project would not degrade the level of service below LOS C for these intersections and roadway segments, the impacts would be considered **less than significant**. Therefore, no mitigation measures are necessary.

Traffic Increase at Four Study Intersections Would Not Substantially Worsen (by More Than One percent) an Already Unacceptable Level of Service

**Impact 3.13-2:** The proposed project would result in an increase in traffic at the Highway 1 NB Ramp/Highway 129-Riverside Drive; Highway 1 SB Ramp/Highway 129 – Riverside Drive; Green Valley Road/Main Street Intersection; and Green Valley Road/Holohan Road-Airport Boulevard intersections which are operating at an unacceptable level of service at the worst approach. Peak hour signal warrants from the MUTCD are satisfied for all three intersections. However, the addition of project traffic would not substantially worsen the volume to capacity ratio by more than one percent at these intersections which are already operating at unacceptable level of service (LOS E or F) in accordance with the County of Santa Cruz significance criteria. Therefore, this is considered a less than significant impact.

The **Highway 1 NB Ramp/Highway 129 – Riverside Drive** ramp terminal intersection would continue to operate at an overall LOS A and LOS B during the AM and PM peak hours, respectively. The Highway 1 NB ramp would continue to be the worst approach and would continue to operate at LOS E and LOS F during the AM and PM peak hours, respectively. However, the addition of the project traffic does not increase the volume to capacity ratio by more than one percent during either the AM or PM peak hours.

The **Highway 1 SB Ramp/Highway 129 – Riverside Drive** ramp terminal intersection would continue to operate at an overall LOS D and LOS C during the AM and PM peak hours, respectively. The southbound off-ramp would continue to be the worst approach and would continue to operate at LOS E during both the AM and PM peak hours, respectively. However, the addition of the project traffic does not increase the volume to capacity ratio by more than one percent during either the AM or PM peak hours.

The **Green Valley Road/Main Street intersection** would continue to operate at LOS F during the PM peak hour and would decrease from LOS E to LOS F during the AM peak hour. However, the addition of the project traffic does not increase the volume to capacity ratio by more than one percent during either the AM or PM peak hours.



The **Green Valley Road/Holohan Road-Aiport Boulevard** intersection would continue to operate at LOS D during the AM peak hour and LOS E during the PM peak hour. However, the addition of the project traffic would not increase the volume to capacity ratio by more than one percent during either the AM or PM peak hours.

As the addition of project traffic would not increase the volume to capacity ratio by more one percent during the AM and PM peak hours for these five intersections operating at unacceptable levels of service, the impact would be considered **less than significant** in accordance with the County of Santa Cruz significance criteria.

Project Trips Would Increase At The Airport Boulevard/Ranport Road Intersection, Which Is Operating at an Unacceptable Level of Service

**Impact 3.13-3:** The Airport Boulevard/Ranport Road intersection would continue to operate at LOS B the during both the AM and PM peak hours. The eastbound approach would continue to be the worst approach and would operate at LOS F during both the AM and PM peak hours. However, this intersection does not meet MUTCD signal warrants and therefore no improvements are warranted at this intersection. In accordance with the County of Santa Cruz significance criteria, this would be considered a less than significant impact.

The delay at the Airport Boulevard/Ranport Road intersection is for a few vehicles (eight in the AM and two in PM peak hours). This intersection does not meet MUTCD signal warrants and therefore no improvements are warranted at this intersection. Therefore, in accordance with the County of Santa Cruz significance criteria, this would be considered a **less than significant impact**.

Project Trips Would Increase At The Airport Boulevard/Ranport Road Intersection, Which Is Operating at an Unacceptable Level of Service

**Impact 3.13-4:** The East Lake Avenue (Highway 152)/Wagner Avenue intersection would continue to operate at LOS A during both the AM and PM peak hours. The worst approach to the intersection would continue to operate at LOS F and D during the AM and PM peak hours, respectively. However, this intersection does not meet MUTCD signal warrants and therefore no improvements are warranted at this intersection. In accordance with the County of Santa Cruz significance criteria, this would be considered a less than significant impact.

The **East Lake Avenue (Highway 152)/Wagner Avenue** intersection would continue to operate at an overall LOS A during both the AM and PM peak hours. The worst approach to the intersection would continue to operate at LOS F and D during the AM and PM peak hours, respectively. However, this intersection does not meet MUTCD signal warrants and therefore no improvements are warranted at this intersection. In accordance with the County of Santa Cruz significance criteria, this would be considered a **less than significant impact**.



Project Trips Would Increase The Volume To Capacity Ratio by More Than One Percent At The East Lake Avenue (Highway 152)/Holohan Road Intersection, Which Is Operating At An Unacceptable Level of Service

**Impact 3.13-5:** The proposed project would result in an increase in traffic at the East Lake Avenue (Highway 152)/Holohan Road intersection that would increase the volume to capacity ratio by more than one percent at an intersection that is currently operating at an unacceptable level of service (LOS E or F). In accordance with the County of Santa Cruz significance criteria, this is considered a potentially significant impact.

The East Lake Avenue (Highway 152)/Holohan Road intersection would continue to operate at LOS D and LOS E during the AM and PM peak hours, respectively. The proposed project would increase the volume to capacity ratio for this intersection to 4.9 percent in the PM peak hour. Since the addition of the project traffic increases the volume to capacity ratio by more than one percent for the PM peak hour impacts to this intersection are considered **potentially significant** per the County of Santa Cruz significance criteria. The County of Santa Cruz and Caltrans are currently evaluating improvements at the intersection, which include the reconfiguration of the eastbound approach to include a dedicated eastbound left-turn lane, a shared eastbound left-turn lane, a shared eastbound left-turn/through lane and a dedicated right-turn lane. The northerly leg would be widened to include two receiving lanes. Implementation of the following mitigation measure would improve the level of service at this intersection to a **less than significant level**.

Mitigation Measure

**MM 3.13-5** Prior to occupancy of the proposed project, project applicants within the planning area shall pay their proportional fair share towards improving the eastbound approach on Holohan Road at the East Lake Avenue (Highway 152)/Holohan Road intersection to include a dedicated eastbound left-turn lane, a shared eastbound left-turn lane, a shared eastbound left-turn/through lane and a dedicated right-turn lane. The estimated cost of this improvement is \$1.5 million dollars. To fund this improvement, project applicants shall pay the Pajaro Valley Planning Area traffic impact fee to the County of Santa Cruz towards construction of this planned improvement in the County's Capital Improvement Program (CIP).

With the addition of the proposed improvements the intersection delay and operation would improve to LOS D during the AM peak period and LOS C during the PM peak period, which would be within County standards. Therefore, this is considered a **less than significant impact**.

Project Trips Would Increase The Volume to Capacity Ratio By More than One Percent at the Highway 1 NB Ramps/Harkins Slough Road, Which Is Operating at an Unacceptable Level of Service

**Impact 3.13-6:** The proposed project would result in an increase in traffic at the Highway 1 NB Ramps/Harkins Slough Road intersection that would increase the volume to capacity ratio by more than one percent, at an intersection that is currently operating at an unacceptable level of service (LOS E or F). In accordance with the County of Santa Cruz significance criteria, this is considered a potentially significant impact.

The Highway 1 NB Ramps/Harkins Slough Road ramp terminal intersection would continue to operate at LOS F and LOS A during the AM and PM peak hours, respectively. The worst



approach would continue to operate at LOS F and LOS B during the AM and PM peak hours, respectively. The addition of the project traffic would increase the volume to capacity ratio by 2.5 percent in the AM peak hour, which is more than one percent at the worst approach that is operating at LOS F. Therefore, impacts to this intersection are considered **potentially significant** under the County of Santa Cruz significance criteria. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.13-6** Prior to occupancy of the proposed project, project applicants within the planning area shall pay their proportional fair share towards installation of a traffic signal at the Highway 1 NB Ramps/Harkin Slough Road and the Highway 1 SB Ramps/Harkin Slough Road intersections. This signal shall be coordinated/interconnected with the intersection of Harkins Slough Road/Green Valley Road due to the close spacing of these intersections and the potential overflow of queues and the new signal at the southbound ramp terminal. The estimated cost of this improvement is approximately \$520,000 dollars. The proposed project shall pay a fair share contribution of 2.36 percent of the estimated improvement cost. The fair share contribution is calculated as the project portion of all future traffic that would be added to the intersection for both peak hours. To fund this improvement, project applicants shall pay applicable traffic impact fees to the City of Watsonville towards construction of this improvement prior to occupancy of the proposed project. The City of Watsonville is updating their fee program and will adopt the program prior to implementation of the first phase of the proposed project. The City of Watsonville shall coordinate with Caltrans on improvements to this intersection.

Installation of a signal at this intersection would improve the LOS to an acceptable level of service. Therefore, this impact would be considered **less than significant** with the implementation of this mitigation measure.

#### Project Trips Would Increase The Volume To Capacity Ratio By More Than One Percent At The Airport Boulevard/Freedom Boulevard Intersection, Which Is Operating At Unacceptable Level of Service

**Impact 3.13-7:** The proposed project would increase the volume/capacity ratio by more than one percent during both the AM and PM peak hours at the Airport Boulevard/Freedom Boulevard intersection, which is currently operating at unacceptable levels of service (LOS E of F). In accordance with the County of Santa Cruz significance criteria, this would be considered a **potentially significant impact**.

The Airport Boulevard/Freedom Boulevard intersection would continue to operate at LOS E in both the AM and PM peak hours. The addition of the project traffic increases the volume to capacity ratio to 9.4 percent in the AM peak hour and 6.1 percent in the PM peak hour, which is more than one percent during both the AM and PM peak hours. Therefore, impacts to this intersection are considered **potentially significant** in accordance with the County of Santa Cruz significance criteria. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.



### Mitigation Measure

**MM 3.13-7** Prior to occupancy of the proposed project, project applicants within the planning area shall pay their proportional fair share towards installation of a second through and right-turn lane on the Airport Boulevard approach from Highway 1 and a second left-turn lane on Freedom Boulevard at the Airport Boulevard/Freedom Boulevard intersection. The receiving leg on Airport Boulevard shall be widened in order to accommodate the additional through-lanes. The estimated cost of these improvements is approximately \$1,047,000 dollars. The project would pay a fair share contribution of 7.57 percent of the estimated improvement cost. The fair share contribution is calculated as the project portion of all future traffic that would be added to the intersection for both peak hours. The City of Watsonville is updating their fee program and will adopt the program prior to implementation of the first phase of the proposed project. To fund this improvement, project applicants shall pay applicable traffic impact fees to the City of Watsonville towards construction of this improvement prior to occupancy of the proposed project.

The receiving leg on Airport Boulevard would have to be widened in order to accommodate two-through lanes, which would likely require right-of-way acquisition and a loss of the Class 2 bike lanes. Implementation of these improvements would improve the level of service to LOS D during both the AM and PM peak hour, which would be considered a **less than significant impact**.

### Project Trips Would Substantially Degrade The Level of Service At The Highway 1 NB Ramps/Larkin Valley Road Intersection

**Impact 3.13-8:** The proposed project would result in an increase in traffic at the Highway 1 NB Ramps/Larkin Valley Road intersection that would increase the volume to capacity ratio by more than one percent, which is currently operating at an unacceptable level of service. In accordance with the County of Santa Cruz significance criteria, this is considered a **potentially significant impact**.

The Highway 1 NB Ramps/Larkin Valley Road ramp terminal intersection would continue to operate at overall LOS E and LOS F in the AM and PM peak hours, respectively. The worst approach would continue to operate at LOS F during both the AM and PM peak hours. The addition of the project traffic increases the volume/capacity ratio by 19.4 percent in the AM peak hour and 31.0 percent in the PM peak hour, which is more than a one percent increase to the volume to capacity ratio per the County of Santa Cruz significance criteria. Therefore, impacts to this intersection would be considered **potentially significant**. Implementation of the following mitigation measure would improve the level of service to this intersection to an acceptable level of service. The close spacing of this intersection to the Airport Boulevard/Larkin Valley Road intersection would require both intersections to be upgraded.

### Mitigation Measure

**MM 3.13-8** Prior to occupancy of the proposed project, project applicants within the planning area shall pay their proportional fair share towards installation of two roundabouts (one at the northbound hook ramp terminal and one at the Airport Boulevard/Larkin Valley Road intersection) at the Highway 1 NB Ramps/Larkin Valley Road Intersection. Since the ramp terminal and the intersection of Airport



Boulevard/Larkin Valley Road are closely spaced, improvements shall take both intersection operations into consideration when constructing the proposed improvements. The estimated cost of these improvements is \$1,260,000 dollars. The project would pay a fair share contribution of 8.70 percent of the estimated improvement cost. The fair share contribution is calculated as the project portion of all future traffic that would be added to the intersection for both peak hours. To fund this improvement, project applicants shall pay applicable traffic impact fees to the City of Watsonville towards construction of this improvement. The City of Watsonville is updating their fee program and will adopt the program prior to implementation of the first phase of the proposed project. The City of Watsonville shall coordinate with Caltrans and prepare a Project Study Report for improvements to this intersection.

Implementation of this mitigation measure would improve the level of service to LOS A. Therefore with implementation of this mitigation measure, this impact would be considered **less than significant**.

Project Trips Would Not Lower The Level Of Service At Study Roadway Segments

**Impact 3.13-9:** The proposed project would result in an increase in traffic at the study roadway segments. However all study roadway segments would operate at acceptable levels of service. Therefore, this is considered a less than significant impact.

The City of Watsonville and County of Santa Cruz criteria for roadway segment operations was used to evaluate the study street segments in the project vicinity. The criteria are consistent with the methodologies outlined in the HCM and based on thresholds of peak hour traffic volumes and roadway facility type. All of the study street segments would continue to operate at acceptable conditions. Therefore, the proposed project would have a less than significant impact on study roadway segments with the addition of with implementation of the proposed project.

Traffic Increases And Proposed Roadway Improvements May Increase Traffic Hazards To Motor Vehicles, Bicycles, Or Pedestrians Or Substantially Impede Pedestrian, Bicycle Or Transit System Operations:

**Impact 3.13-10:** The Wagner Avenue Extension would be a straight alignment that could allow speeding to occur. However, the Specific Plan requires the roadway to be constructed with traffic calming measures e.g. roundabouts and chicanes to slow traffic. Therefore, this is considered a less than significant impact.

The Wagner Avenue Extension would be constructed as part of the proposed project. Due to the straight alignment of the roadway, speeding could occur. However, the proposed Specific Plan requires that the roadway be constructed with traffic calming measures e.g. roundabouts and chicanes to slow traffic. Implementation of these improvements would ensure that the proposed project would have a **less than significant impact**.





### Operational Deficiency At The Crestview Avenue Left-Turn Pocket Cue At Freedom Boulevard

**Impact 3.13-11: The left-turn pocket from Freedom Boulevard onto Crestview Avenue would increase substantially with implementation of the proposed project and create an operational deficiency. Therefore, this is considered potentially significant impact.**

At the intersection of Freedom Boulevard/Crestview Drive field observations revealed that the southbound left-turn lane overflows during the PM peak hour, which creates an operational deficiency along Freedom Boulevard as it would cause additional backups or would disrupt free flow in the through lane. The southbound left-turn queue from Freedom onto Crestview would continue to overflow into the through lane and the addition of the project traffic would exacerbate adverse safety conditions. Implementation of the following mitigation measure would ensure that the proposed project has a **less than significant impact** at this intersection by eliminating hazardous conditions.

### Mitigation Measure

**MM 3.13-11** The first project applicant within the planning area shall design, fund and implement the southbound left-turn pocket from Freedom Boulevard to Crestview Drive by at least 50-feet. This improvement shall be installed prior to buildout of Phase 1 of the proposed project. The first applicant within the planning area shall fund and implement this improvement and shall be credited against the projects fair share contribution of traffic impact fees by implementing this improvement.

Implementation of this mitigation measure would improve the storage length to 200 feet, which would ensure that the proposed project does not create an operational deficiency along Freedom Boulevard during the PM peak hour. Therefore with implementation of this mitigation measure, this impact would be considered **less than significant**.

### The Proposed Project Does Not Create Unsafe Conditions And Provides Adequate Internal Circulation To Accommodate Project Traffic

As stated above, the proposed roadway layout connects to the existing surrounding street system and provides access to all proposed land uses internal to the project site, including residential and passive and active open space areas. Therefore, the proposed project would provide adequate internal circulation to accommodate project traffic and would not create unsafe conditions.

### The Proposed Project Provides An Adequate Amount Of Parking

The proposed Specific Plan and PUD requires off-street parking for each residential unit and provides on-street parking along the proposed new street segments. Therefore, the proposed project is anticipated to provide an adequate amount of parking.

### The Project Is Consistent With Adopted Policies, Plans, Programs That Support Supporting Alternative Transportation (for example, bus turnouts, bicycle racks).

City and County General Plan policies require that new projects provide adequate facilities for pedestrians, bicycles, and public transit. As stated above, the internal circulation network of the proposed Specific Plan would include public streets with a 52-foot right-of-way that would include vehicle travel lanes designated as Class 3 bicycle lanes, sidewalks, and landscaping between travel lanes and sidewalks, and a 60-foot right-of-way that includes the same features





plus a drainage swale that connects the wetlands to the new Crestview Park detention basin. In addition, the wetland and riparian buffer areas would include pedestrian pathways. Pedestrian connections would be provided between the existing and proposed residential land uses, and active and passive recreation areas. The planning area does not fall within a planned public transit route, but safe and adequate pedestrian passage will connect the planning area to existing public transit routes along Freedom Boulevard. Therefore, the proposed project will not conflict with adopted policies, plans, programs that support supporting alternative transportation.

Result In Increased Traffic Hazards Along Brewington Avenue North Of Crestview Drive; Gardner Avenue, East Of Freedom Boulevard, And Atkinson Lane, East Of Freedom Boulevard

**Impact 3.13-12:** The proposed project would result in an increase in traffic that would be experienced by the neighbors on Brewington Avenue north of Crestview Drive; Gardener Avenue, east of Freedom Boulevard; and Atkinson Lane, east of Freedom Boulevard. The addition of the project traffic could result in increased hazards on these neighborhood streets, which is considered a potentially significant impact.

A TIRE index analysis was performed to determine if the increase in traffic due to the addition of the project traffic to the local roadway network may affect the quality of life to the residents in the vicinity of the planning area. The TIRE index was developed by the Goodrich Group based on research by D. Appleyard in 1970. The criteria for the TIRE index is included in the TIA, which is included as Appendix G in Volume II of the Draft EIR.

The TIRE index is a measure of the impact of traffic on residents along a street. It is based on the theory that a given increase in traffic volume has a greater impact on a residential environment along a residential street with low traffic volumes than along a street with high pre-existing traffic volumes. These streets would include Brookhaven, Brewington, Jasmine, Atkinson and Gardner.

The TIRE index is not used to determine possible impacts in traffic operations but rather to give an indication of the experience local residents would have due to increased traffic on a local street. It represents the effect of traffic on the comfort of human activities such as walking, cycling, playing near a street and the freedom to maneuver personal autos in and out of residential driveways.

The TIRE index scale ranges from 0 to 5 depending on daily traffic volume. An index of 0 represents the least infusion of traffic and 5 the greatest and, thereby, the poorest residential environment. The table below shows the TIRE Index Chart.

**Table 3.13-2: TIRE Index Chart**

TIRE Index	Daily Traffic Volume	Residential Environment Typical of
0	1 to 8	A cul-de-sac street with one home
1	9 to 89	A cul-de-sac street with 2 to 15 homes
2	90 to 890	A 2-lane minor street
3	891 to 8900	A 2-lane collector or arterial street
4	8901 to 89,000	A 2- to 6-lane arterial
5	89,001 and up	A 2- to 6-lane arterial



A TIRE index analysis was performed on Brewington Avenue between Crestview Drive and Martinelli Street, Martinelli Street just east of Brewington Avenue, Brewington Avenue north of Crestview Drive, Gardener Avenue east of Freedom Boulevard and Atkinson Lane east of Freedom Boulevard. Typically an increase of more than 0.1 indicates that the residents will experience an increase in the traffic volumes. Streets with a TIRE of 3 or above are “traffic dominated”.

An increase in traffic would be experienced by the neighbors on Brewington Avenue north of Crestview Drive, Gardener Avenue, east of Freedom Boulevard, and Atkinson Lane, east of Freedom Boulevard. The TIRE index would increase by 0.7, 0.2 and 0.2 respectively on these street segments. The addition of the project traffic onto the neighborhood streets is a **potentially significant impact**. Implementation of the following mitigation measure would reduce this impact to a **less than significant level**.

#### Mitigation Measure

**MM 3.13-12** Prior to occupancy of the proposed project, project applicants shall develop and implement a traffic calming plan on: 1) Brewington Avenue north of Crestview Drive; 2) Gardner Avenue, east of Freedom Boulevard, and 3) Atkinson lane, east of Freedom Boulevard along the streets that are affected by the proposed project. The first applicant within the planning area shall fund and implement this improvement and shall be credited against the projects fair share contribution of traffic impact fees to the City of Watsonville for implementation of this improvement.

Implementation this mitigation measure would reduce potential traffic hazards impacts to these street segments to a **less than significant level**.



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