



**CITY OF ORANGE  
LOCAL IMPLEMENTATION PLAN (LIP)**

**SECTION A-7  
NEW DEVELOPMENT/  
SIGNIFICANT REDEVELOPMENT**



## SECTION A-7, NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT

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### A-7.0 New Development/Significant Redevelopment

#### A-7.1 Introduction

One of the most important responsibilities of the City is to provide a decision making and approval processing framework for new development and redevelopment that occurs within the City's boundaries. This ensures that both development and redevelopment occur in an organized and orderly fashion that reflects the vision and needs of the community encompassed in the City's General Plan; assesses the environmental issues associated with the proposed changes required by CEQA; and provides a regulatory framework to ensure that standards set by the City are implemented and water quality requirements in the latest permit are incorporated into the City's program.

In May 1997 the City certified to the Santa Ana Regional Board that it was implementing the new development and redevelopment water quality requirements developed with the Principal Permittee and other Permittees as Appendix G of the 1993 DAMP. The Permit has since been re-issued twice. The Third Term Permit required the City to initiate a comprehensive assessment of its planning and development processes with the intent of providing a greater focus on the protection of water bodies and a more rigorous application of BMPs in development and redevelopment projects. The Fourth Term Permit adopted in May 2009 requires the City and other Permittees to update their planning and development processes that places the highest priority on considering and incorporating Low Impact Development BMPs as close to the source as possible.

The City has supported the Principal Permittee in developing and updating a model program to guide compliance with these requirements (see **DAMP, Section 7**). The Model Water Quality Management Plan that provides the basis for project planning and design was updated in May, 2011 to be consistent with the requirements of the Fourth Term Permit, together with a new Technical Guidance Document.

The City has used this model program in developing the New Development/Significant Redevelopment plan contained in this section of the LIP. Subsequent sections describe:

- The organization structure for new development/redevelopment in the City
- The assessment of the City's General Plan and the need for amendment
- The assessment of the City's CEQA environmental review process
- The assessment of the City's development project review, approval and permitting process
- The City's requirement for Water Quality Management Plan (WQMP) preparation
- The City's program for post construction BMP inspection and verification
- Education and training programs
- Program assessment



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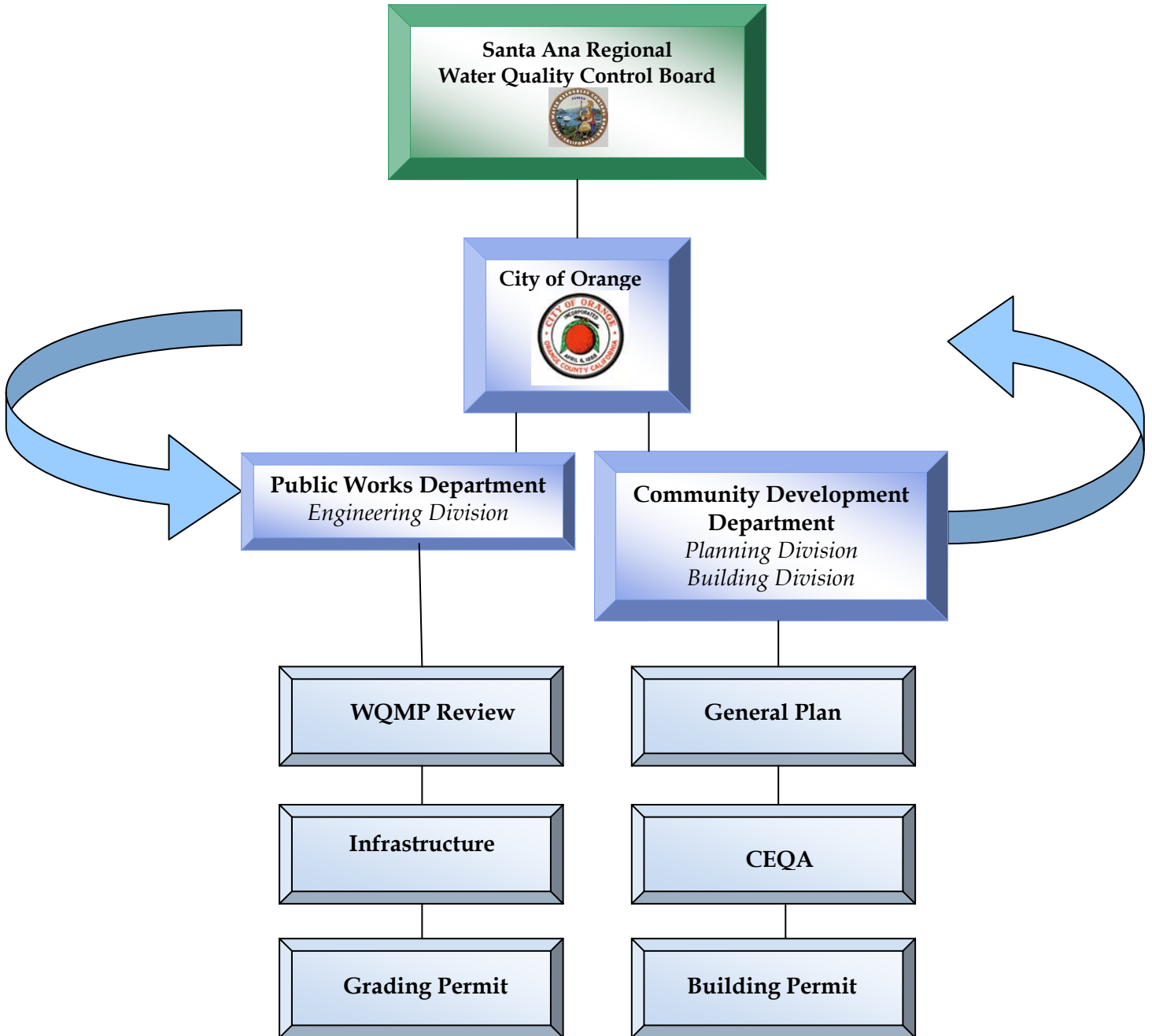
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### A-7.2 Organization Structure

The LIP is provided to assist City staff in complying with the municipal storm water permits. The key City departments responsible for overseeing, implementing, and enforcing the New Development/Significant Redevelopment Program are identified in **Figure A-7.1**. The responsibilities of the City departments for the implementation of the New Development / Significant Redevelopment Program element are summarized in **Table A-7.1**. Key staff names for the various Public Works, Planning and Building department individuals are listed in **Exhibit A-2.1**.



**Figure A-7.1**  
**New Development / Significant Redevelopment**  
**Program Management**







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**Table A-7.1  
New Development / Significant Redevelopment Program Implementation**

Department	Activity	Responsibility Under the DAMP
Community Development/ Planning	Manages General Plan Zoning Ordinance	Utilize in reviewing land use to achieve water quality protection
Community Development/ Planning	Manages environmental planning review	Utilize CEQA checklist to assess potential water quality impacts from proposed projects
Community Development/ Planning; Public Works/ Engineering		Reviews development for water quality issues
Community Development/ Building; Public Works/ Engineering	Processes building/grading permits	Advises applicants of water quality requirements
Community Development/ Building; Public Works/ Engineering	Review private development submittals	Verifies plan compliance with water quality requirements
Community Development/ Building; Public Works/ Engineering		Coordinates project tracking and inspection of water quality requirements
Community Development/ Planning & Building; Public Works/ Engineering	Interacts with public	Provides information to permit applicants on water quality requirements
Public Works/ Engineering	Manages public works projects	Verifies plan compliance with water quality requirements in public works projects
Public Works/ Engineering		Coordinates project tracking and inspection of water quality requirements in public works projects

**A-7.3 General Plan Assessment**

The General Plan specifies policies that guide new development. The City was required by the Third Term Permit to minimize short and long-term impacts on receiving water quality from new development and significant redevelopment to the maximum extent practicable. The Permit required that the City’s General Plan be reviewed and updated, as necessary, to ensure watershed and storm water quality and quantity management were considered as specified in Section XII of the Permit.

The Santa Ana Region Permit required:



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“Permittees shall review their watershed protection principles and policies in their General Plan or related documents (such as Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance) to ensure that these principals and policies are properly considered and are incorporated into these documents.”

As required by the Third Term Permit, the City undertook the following actions consistent with the guidance provided in the DAMP.

### 1. Review of City’s General Plan

The City initiated a thorough review of its 1989 General Plan with respect to the City’s water quality responsibilities during the Third Term and determined that certain sections should be modified to include specific policies and objectives that address water quality protection as described above. As a result, the City completed a comprehensive General Plan update in March 2010. During development of this comprehensive update, special attention was given to the relationship between the various General Plan Elements and the protection of water quality related to urban and storm water runoff. Specifically, the General Plan Elements addressing land development and water quality issues include:

- Land Use
- Natural Resources (i.e., Open Space and Conservation)
- Infrastructure

Goals and policies, along with discussion of watershed and runoff conditions and objective are included in the 2010 General Plan that greatly expand upon the content of the previous 1989 General Plan. The 2010 General Plan also includes an Implementation Plan containing various programs related to the management of the City’s urban and storm water runoff quality. In preparing the update to its General Plan and corresponding EIR, the City kept in mind the following questions and Permit objectives

- a) Are there sensitive water resources in the jurisdiction?
- b) Are there existing Total Maximum Daily Loads (TMDLs) or other such regulations pertaining to receiving waters in the jurisdiction?
- c) Is major new development or significant redevelopment expected?
- d) Are major new infrastructure projects anticipated (e.g. roads, sewer, flood control, storm drains)?
- e) Does storm water/urban runoff affect recreational use of water bodies within the jurisdiction?

The City considered the following objectives to the General Plan and Elements, as specified by the Santa Ana Region Permit:

- a) Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; and minimize impacts from storm water and



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urban runoff on the biological integrity of natural drainage systems and water bodies.

- b) Minimize changes in hydrology and pollutant loading; require incorporation of control, including structural and non-structural BMPs, to mitigate the projected increases in pollutant loads and flows; ensure that post-development runoff rates and velocities from a site have no significant adverse impact on downstream erosion and stream habitat; minimize the quantity of storm water directed to impermeable surfaces and the MS4s; and maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground;
- c) Preserve wetlands, riparian corridors, and buffer zones and establish reasonable limits on the clearing of vegetation from the project site;
- d) Encourage the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc., where such measures are likely to be effective and technically and economically feasible;
- e) Provide for appropriate permanent measures to reduce storm water pollutant loads in storm water from the development site; and,
- f) Establish development guidelines for areas particularly susceptible to erosion and sediment loss.

### 2. Updated General Plan

The March 2010 updated General Plan includes watershed protection and water quality principles and policies in the Land Use, Natural Resource, and Infrastructure elements. How these policies and principles are to be implemented is identified in the Implementation Plan in the General Plan Appendix.

The Land Use element contains policies such as reducing pollutant runoff to the maximum extent practicable, maximizing landscaping in streets and developments to enhance environmental benefits and a goal to advance development that is mutually beneficial to the environment and community.

A part of the vision of the Natural Resource element is to protect critical watersheds such as Santiago Creek. The element seeks to protect water quality by incorporating policies to maintain water quality objectives, comply with the NPDES requirements, minimizing impervious surfaces in development projects, and reducing the impact of urban development on important ecological and biological resources.

The Infrastructure element is similar to the Natural Resource element and seeks to protect critical watersheds and to prevent pollution of rivers and creeks.

How the various policies and goals identified in these elements are to be incorporated into City programs is outlined in the Implementation Plan in the General Plan Appendix. The Implementation Plan includes information on how the Zoning Code needs to be updated: what needs to be included in Plan Standards and Guidelines; how



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to achieve compliance with the NPDES program in new development; the use of Green Buildings and other programs. Copies of the Land Use, Natural Resource and Infrastructure Element as well as the Implementation Appendix are included in **Exhibit A-7.I**.

The Final Program EIR prepared for the General Plan includes an analysis of potential impacts to water quality associated with General Plan build out. Mitigation measures are included to address potential water quality impacts of General Plan build out. These measures are carried over as Implementation Programs in the Implementation Plan.

### 3. Assessment of Need to Amend City's General Plan for Fourth Term Permit

As noted above, the City undertook an extensive effort to update its General Plan Elements during the Third Term Permit to meet water quality objectives. The Fourth Term Permit had similar requirements which also included more onsite retention and low impact development BMPs. However, the General Plan contains sufficient policies and goals to accommodate the Fourth Term Permit land development goals and there was no need to update the recently adopted General Plan.

#### **A-7.4 CEQA Environmental Review Process**

The environmental review process examines impacts from proposed new development with respect to the General Plan policies and many environmental issues, including water quality, and includes consideration of mitigation measures to reduce any identified significant impacts. The City is required by the Fourth Term Permit to minimize short and long-term impacts on receiving water quality from new development and redevelopment to the maximum extent practicable. The Permit requires the City to review its CEQA document preparation process to ensure urban runoff-related issues are properly considered and addressed. If necessary, the City's processes may be revised to consider and mitigate impacts to storm water quality. The Permit lists the following potential impacts to be considered by the City during the CEQA review:

- a) Potential impact of project construction on storm water runoff;
- b) Potential impact of project's post-construction activity on storm water runoff;
- c) Potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas;
- d) Potential for discharge of storm water to affect the beneficial uses of the receiving waters;
- e) Potential for significant changes in the flow velocity or volume of storm water runoff to cause environmental harm; and
- f) Potential for significant increases in erosion of the project site or surrounding areas.



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- g) Potential decreases in quality and quantity of recharge to groundwater.
- h) Potential impact of pollutants in storm water runoff from the project site on any 303(d) listed "impaired" water bodies.

These environmental review issues have been considered in an evaluation of the City's:

- CEQA Initial Study process (project application forms and checklists) and
- EIR preparation and review process

The results of this evaluation are presented in the sub-sections below.

### A-7.4.1 Project Application Form

The current project application form contained in Appendix H of the CEQA Guidelines (State of California Office of Planning and Research, January 2010) contains many questions about the project to help environmental planners assess the potential for significant environmental impacts. However, there are no specific project description questions that help characterize the potential for urban runoff/storm water quality impacts. The City therefore reviewed its existing project application forms and revised the form to include the submittal of a preliminary Water Quality Management Plan (WQMP), if applicable, (along with required submittal of other development plans). A revised project application form is included as **Exhibit A-7.II**.

### A-7.4.2. Initial Study Checklist

The City updated its Initial Study Checklist to comply with the Third Term Permit requirements and now contains the following questions in its "Hydrology and Water Quality (Section IX) **Exhibit A-7.III**. Would the project:

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



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- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- j) Inundation by seiche, tsunami, or mudflow?
- k) Potentially impact storm water runoff from construction activities?
- l) Potentially impact storm water runoff from post-construction activities?
- m) Result in a potential discharge storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?
- n) Result in the potentially for discharge of storm water to affect the beneficial uses of the receiving waters?
- o) Create the potential for significant changes in the flow velocity or volume of storm water runoff to cause environmental harm?
- p) Create significant increases in erosion of the project site or surrounding areas?

In addition, the Fourth Permit requires the following impacts be considered:

- Potentially decrease the quality and quantity of recharge to groundwater?
- Potentially impact pollutants in storm water runoff from the project site on any 303(d) listed water bodies?

These two additional question can be covered by existing questions (b) and (a) and no additional questions are needed.

### A-7.4.3 Guidance for Preparing and Reviewing CEQA Initial Studies and Environmental Impact Reports (EIRs)

The guidance provided in the **DAMP, Section 7, Exhibit 7.I** will be used by the City in evaluating the CEQA Initial Study checklist questions. This guidance is also applicable to the review and preparation of CEQA documents including Negative Declarations, Mitigated Negative Declarations and EIRs.

The guidance will be reviewed annually in conjunction with the Principal Permittee and other Permittees, updated as needed, and its status/use will be discussed in the Annual Progress Report as needed.





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### A-7.5 Development Project Review, Approval and Permitting

The development planning and permit approval processes carry forward requirements in the form of CEQA commitments and mitigation measures, conditions of approval, design specifications, tracking, and inspection and enforcement actions. These “front-end” planning processes must be coordinated and linked to the later phases of BMP design, construction and operation for new development/significant redevelopment to help ensure storm water quality protection features are planned, evaluated and selected, and designed in accordance with goals for the protection of water quality and other environmental resources.

#### A-7.5.1 Project Review, Approval, and Permitting Process Overview

During project review, approval, and permitting, the City will require Priority new development and significant redevelopment projects to address the quality and quantity of storm water runoff through the incorporation of post-construction BMPs in project design. The City will require project-specific Water Quality Management Plans (Project WQMPs) for all private and public projects that:

- Qualify as one of the Priority Project Categories listed in **Table A-7.2**, regardless of project size.
- Do not qualify as one of the Priority Project Categories but meet one of the following criteria:
  - Require discretionary action that will include a precise plan of development, except for: a) a project that the Director of Public Works/City Engineer determines will have a de minimus or no impact on the quality of storm water runoff such as projects where the building face or building interior is being remodeled with no change to the building footprint that would trigger the Significant Redevelopment clause; lot line adjustments, variances with no or minimal work is planned; seasonal projects such as temporary Christmas tree and Halloween pumpkin retail lots; mechanical permit work; electrical permit work; sign permit work and other similar projects where there will not be impacts to water quality.
  - Require issuance of a non-residential plumbing permit for hazardous pipelines. (Non-residential plumbing projects that do not pose a potential threat to public safety do not require a WQMP).



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**Table A-7.2**  
**Checklist for Categorizing Development and Significant Redevelopment<sup>1</sup> Projects**  
**as Priority or Non-Priority**

<p>If <u>any</u> question is answered "Yes," your project is a <b>Priority Project</b>.                      If <u>all</u> questions are answered "No," your project is a <b>Non-Priority Project</b>.</p>		
Does your proposed project include:	Yes	No
1. New developments that create 10,000 square feet or more of impervious surface that include commercial, industrial, residential development (single family homes, subdivisions, multifamily homes, apartments, condominiums, etc.)		
2. Automotive repair shop (SIC codes 5013, 5014, 5541, 7532-7534, and 7536-7539).		
3. Restaurant where the land area of development is 5,000 or more square feet including parking areas (SIC code 5812).		
4. Hillside development on 5,000 square feet or more, which is located on areas with known erosive soil conditions or where the natural slope is 25 percent or more.		
5 <sup>1</sup> . Impervious surface of 2,500 square feet or more located within, directly adjacent to (within 200 feet), or discharging directly to receiving waters within an Environmentally Sensitive Area.		
6. Parking lot area of 5,000 or more square feet exposed to storm water.		
7. Streets, roads, highways and freeways of 5,000 square feet or more of paved surface.		
8. Retail gasoline outlets of 5,000 or more square feet with projected average daily traffic of 100 or more vehicles per day.		
9. All Significant Redevelopment projects, where Significant Redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Significant Redevelopment includes, but is not limited to: <ul style="list-style-type: none"> <li>• Expansion of a building footprint.</li> <li>• Addition of a building and/or structure.</li> <li>• Addition of an impervious surface, such as construction of a new parking lot that is not part of a routine maintenance activity.</li> <li>• Replacement of impervious surfaces, buildings and/or structures when 5,000 or more square feet of soil is exposed during replacement construction.</li> </ul> Redevelopment does not include routine maintenance activities conducted to maintain original line and grade, hydraulic capacity or, original purpose of facility. If the redevelopment results in the addition or replacement of less than 50 percent of the impervious area on-site and the existing development was not subject to WQMP requirement, the numeric sizing criteria discussed in <b>Section 7.II-2.0</b> only applies to the addition or replacement area. If the addition or replacement accounts for 50 percent or more of the impervious area, the Project WQMP requirements apply to the entire development.		
10. If Public Works Director or City Engineer determines project will have adverse impact on water quality		

<sup>1</sup>. There are no Environmentally Sensitive Areas, as defined in the DAMP, in the City.





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Because the threshold for Priority Projects has been lowered under the Fourth Term Permit, more categories of discretionary projects, which the City retains the right to either approve or disapprove, are likely to be categorized as Priority Projects. Non-Priority Projects are limited to projects subject to a discretionary action that do not fall into one of the Priority Project categories except for projects deemed to have no or a de minimus impact. All other projects and activities that only require a ministerial grading or building permit for which the Permittee has no discretion to approve do not fall under the requirements of the new development program.

The primary difference between a Priority Project and a Non-Priority Project is that Priority Projects are required to fully evaluate and incorporate LID BMPs to meet the quantitative requirements of the Permit and/or demonstrate infeasibility and participate in alternative compliance options, whereas Non-Priority Projects must incorporate all applicable source control BMPs and incorporate to the extent possible site design BMPs. LID BMPs do not need to be considered for Non-Priority Projects. To ensure that Priority Projects, which require the incorporation of LID BMPs, are identified as early in the planning process as possible, the City will include Table A-7.2 in the Planning Application.

The City will require applicants to submit a Preliminary Project WQMP for Priority Projects prior to receiving discretionary project approval during the planning approval process and a Final Project WQMP prior to the issuance of grading or building permits.

### A-7.5.2 Public Agency Projects

Although the City does not plan or construct projects listed as Priority Projects in **Table A-7.2**, some public agency projects may have similar functions or characteristics or may conduct similar activities after construction is completed. For example, a new corporation yard may include a vehicle and equipment maintenance facility, which is similar to an automotive repair shop. A new civic center or library may be considered a Priority Project since it is similar in its characteristics to a commercial office building. A new senior citizens center or a jail may have a cafeteria, which is similar to a restaurant and may be categorized as a Priority Project.

Therefore, the City has incorporated the requirement for a Project WQMP into the process of planning, design, approval, and construction oversight of its public agency projects that qualify as Priority Projects. Depending upon the type of public agency project being planned or designed, the City's Public Works Engineering Division or the design architect/engineering contractor will prepare the Project WQMP for a public facility project.

The types of public agency projects for which the City will require a Project WQMP include, but are not limited to those listed below, to the extent that these projects meet the WQMP requirement criteria:

- Parks and recreation facilities
- Public Buildings
- Streets and roadways
- Linear drainage facilities



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However, there are unique issues associated with certain Public Agency Projects that are either specifically recognized in the Permits, or for which particular approaches can be considered.

- Streets, roads, highways and freeways of 5,000 square feet or more of paved surface will incorporate United States Environmental Protection Agency (USEPA) guidance, “Managing Wet Weather with Green Infrastructure: Green Streets” in a manner consistent with the maximum extent practicable (MEP) standard. A copy of the guidance is included in Appendix B of the Model WQMP.
- Above ground linear lined drainage projects typically consist of lined vertical or trapezoidal channels. These projects which may result in the creation of more than 10,000 square feet of impervious surface have BMP implementation constraints similar to streets, roads, highways and freeways and must implement similar practices, as described in Appendix B of the Model WQMP.
- Below ground linear drainage and utility construction projects may result in the replacement of more than 5,000 square feet of impervious surface within a developed public street, road or highway such as storm drains, sewers and water lines. However such projects would not qualify as a Priority Project if they maintain original line and grade, hydraulic capacity, original purpose of the facility, or occur in response to an emergency to protect public health and safety. Consequently, these projects would not require the preparation of a project WQMP but would require a Non-Priority Project Plan. Due to the circumstances, projects done in response to an emergency may have their Non-Priority Project Plan prepared after-the-fact, but within three business days of the project’s completion. Projects involving extending, relocating, or replacing storm drain lines may involve replacing more than 5,000 square feet of impervious surface and maintain original line and grade at the surface. However, these projects may alter the original line and grade or hydraulic capacity of storm drain facilities below ground. Such projects are Priority Projects and will require project WQMPs.

The City will not require a WQMP for public agency projects consisting of routine maintenance or emergency construction activities required to protect public health and safety and similar projects exempted in Section A-7.5.1.

### A-7.5.3 Conditions of Approval

The City has reviewed its standard conditions of approval to ensure that the existing standard conditions are not in conflict with any provisions of the Permit, the DAMP, California’s General Permit for Storm water Discharges Associated with Construction Activity, and California’s General Permit for Storm water Discharges Associated with Industrial Activity. The City uses the following standard conditions of approval for Priority Projects and applicable conditions for Nonpriority Projects to protect receiving water quality from the short-term and long-term impacts of new development and redevelopment:



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1. Prior to the issuance of any grading permits the applicant shall submit a Project WQMP for review and approval to the Public Works Department that:
  - Prioritizes the use of Low Impact Development principles as follows: preserves natural features, minimizes runoff and reduces impervious surfaces; and utilizes infiltration as the primary method of pollutant treatment. Infiltration BMPs to be considered include the use of permeable materials such as concrete and concrete pavers, infiltration trenches and planters and other infiltration BMPs as applicable.
  - Incorporates the applicable Routine Source and Structural Control BMPs as defined in the Drainage Area Management Plan (DAMP)
  - Maintains the hydrologic characteristics of the site by matching time of concentration, runoff, velocity, volume and hydrograph for a 2-year storm event.
  - Minimizes the potential increase in downstream erosion and avoids downstream impacts to physical structures, aquatic and riparian habitat.
  - Generally describes the long-term operation and maintenance requirements for structural and Treatment Control BMPs
  - Identifies the entity or employees that will be responsible for long-term operation, maintenance, repair and or replacement of the structural and Treatment Control BMPs and the training that qualifies them to operate and maintain the BMPs
  - Describes the mechanism for funding the long-term operation and maintenance of all structural and Treatment Control BMPs.
  - A copy of the forms to be used in conducting maintenance and inspection activities
  - Recordkeeping requirements (forms to be kept for 5 years)
  - A copy of the form to be submitted annually by the project owner to the Public Works Department that certifies that the project's structural and treatment BMPs are being inspected and maintained in accordance with the project's WQMP.
  
2. Prior to the issuance of certificates for use of occupancy, the applicant shall demonstrate the following to the Public Works Department:
  - That all structural and treatment control best management practices (BMPs) described in the Project WQMP have been constructed and installed in conformance with the approved plans and specifications,
  - That applicant is prepared to implement all non-structural BMPs described in the Project WQMP,
  - That an adequate number of copies of the project's approved final Project WQMP are available for the future occupiers.
  
3. Prior to the issuance of certificates for use of occupancy or final signoff by the Public Works Department, the applicant shall demonstrate to the satisfaction of Public Works, that the preparer of the WQMP has reviewed the BMP maintenance requirements in



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Section V of the WQMP with the responsible person and that a copy of the WQMP has been provided to that person. A certification letter from the WQMP preparer may be used to satisfy this condition.

### *Projects in Hilly Areas*

4. Drainage facilities discharging onto adjacent property shall be designed to imitate the manner in which runoff is currently produced from the project site. Alternatively, the project applicant may obtain a drainage acceptance and maintenance agreement, suitable for recordation, from the owner of said adjacent property.

*For projects that will result in soil disturbance of one or more acres of land that will require coverage under the State's General Construction Permit.*

5. Prior to the issuance of a grading permit (include *grubbing, clearing, surface mining or paving permits as appropriate*) the applicant shall demonstrate that coverage has been obtained under California's General Permit for Stormwater Discharges Associated with Construction Activity (General Permit) by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing. A copy of the current SWPPP required by the General Permit shall be kept at the project site and be available for review by City representatives upon request.

*For projects subject to coverage by the State's General Industrial Permit as defined by the business' Standard Industrial Classification (SIC) code.*

6. Prior to the issuance of certificates for use and occupancy, the applicant shall demonstrate that coverage under the State's General Permit for Stormwater Discharges Associated with Industrial Activity has been obtained by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing.

### *Special Tank and Pipeline Projects*

7. Prior to issuance of certificates of use and occupancy or building permits for individual tenant improvements or construction permits for a tank or pipeline, uses shall be identified and, for specified uses, the applicant shall propose plans and measures for chemical management (including, but not limited to, storage, emergency response, employee training, spill contingencies and disposal). The chemical management measures shall be incorporated as an element of a Project WQMP and shall be subject to the approval of the Public Works Department and other specified agencies such as the City of Orange Fire Department, the Orange County Health Care Agency and sewerage agencies (as appropriate) to ensure implementation of each agency's respective requirements. Certificates or permits may be ministerially withheld if features needed to



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properly manage chemicals cannot be incorporated into a previously completed building, center or complex.

### *Condominiums and other projects with CC&Rs*

8. Prior to recordation of the final map, a copy of the project's Covenants, Conditions and Restrictions shall be provided to the Public Works Department for review and approval that includes requirements for maintenance and funding of the project's structural and treatment water quality best management practices as approved by the City in the project's WQMP.

### *Landscape Plans*

9. Prior to City approval of the landscape plans, the applicant shall review the approved Water Quality Management Plan and ensure the proposed landscape plans are consistent with the project grading plans and show applicable Best Management Practices such infiltration BMPs, retention basins, permeable pavers, etc. Copies of the landscape plans shall be submitted to the Public Works Departments for review.

### *Building Permits for projects with WQMPs*

10. Prior to issuance of building permits, the applicant shall review the approved Water Quality Management Plan (WQMP) and grading plan to ensure the structure's downspouts or drainage outlet locations are consistent with those documents. Copies of the building or architectural plans showing the downspouts and drainage outlets shall be submitted to the Public Works Departments for review and approval.

Conditions of approval will be reviewed and modified as needed to meet the requirements of the Permits. The latest conditions of approval will be provided in the City's annual progress report.

### A-7.5.4 Review and Approval of WQMPs

Preliminary Project and Final Project WQMPs (Preliminary and Final WQMPs) will use the Model WQMP and Technical Guidance Documents (**DAMP Exhibit 7.II & 7-III**) as guidance and the City WQMP Template (**Exhibit A-7.V**) in preparing project WQMPs. The Technical Guidance Document contains a number of BMP fact sheets that contain design parameters and hydraulic sizing criteria that can be used for most LID BMPs and there are a number of resources listed in the Model WQMP for Site Design, Source Control, and Treatment Control BMPs.

For all projects requiring discretionary or land use entitlement actions, a Preliminary WQMP will be required to be submitted for Priority Projects as part of the project application process prior to approval of entitlements and Planning Commission approval or other public hearing and during the preparation of environmental documentation for project specific sites in compliance with CEQA.





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The level of detail in a Preliminary Project WQMP can vary somewhat depending upon what is known at the time discretionary project approval is sought, but the minimum requirements listed in the Model WQMP must be satisfied. The Preliminary should identify the potential project impacts on receiving waters and include BMPs to address all pollutants and conditions of concern. LID and hydromodification control BMPs should be considered and incorporated at the earliest conceptual planning stages of a project for early review to avoid unnecessary project changes and delays during the review and approval process. While it is recognized that the Project WQMP is a project planning level document and as such is not expected to contain final BMP design drawings and details (these will be in the construction plans), the City may request additional information to ensure the project design meets the LID permit requirements and provides a sufficient level of detail.

A Preliminary WQMP supports the CEQA process and provides documentation to support a checklist for an initial Study and Negative Declaration or Mitigated Negative Declaration, or serves as the basis for the water quality section of an EIR. The Preliminary WQMP also serves as the basis for the City or Responsible Agency to conclude that the MEP standard is being met by serving as the basis that selected BMPs will not have the potential to cause significant effects and/or that the effects have been mitigated, and “are not significant with mitigation”.

The City recognizes the importance of understanding the physical, chemical and biological conditions of the receiving waters at a watershed scale and the impact of incremental projects and will consider potential cumulative impacts of build-out within the watershed based upon available watershed chapters of the DAMP (**DAMP Appendix D**), and the City’s knowledge of watershed-wide and jurisdictional problems and programs. This information will assist in providing a strong linkage between the planning process and the development review and permitting process as required by the Permits. The Preliminary WQMP will be circulated or summarized within the CEQA document.

The review and approval of a Final Project WQMP is one of the last critical points at which the City can impose conditions or standards that will minimize the impacts of urban runoff and storm water pollution on local water bodies. The City will assure that a Final WQMP is submitted for review and approval prior to issuance of grading or building permits and that the Final WQMP is consistent with the City approved project. If the Final WQMP deviates significantly from the Preliminary WQMP included in the circulated environmental documents, the City will make a determination that the differences do not diminish the effectiveness of the BMPs to mitigate or address the project’s potential impacts to water quality. Furthermore, any changes must not result in any new environmental impacts not previously disclosed in the City’s circulated environmental document(s). If the changes diminish the project’s ability to mitigate or address its water quality impacts, or result in previously undisclosed environmental impacts, the City will require that the project be subject to further environmental review.

Each Project WQMP will be stored within the City’s Public Works Library files and will continue with the property after the completion of the construction phase. To ensure a new property owner is aware of the commitments made to the City during approval of the project, the City will require the Final WQMP to include a Notice of Transfer Responsibility Form, which serves to notify the City that a change in ownership has occurred and notify the new owner of its responsibility to continue implementing the Project WQMP.



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To assure thorough and consistent reviews of Project WQMPs, the City will utilize the WQMP Checklist provided in **Exhibit A-7.IV** and approve in writing appropriately completed Project WQMPs.

### A-7.5.5 Review and Approval of Non-Priority Project Plans

A Non-Priority Project Water Quality Plan is required to be completed for private new development and significant redevelopment projects, and equivalent public agency capital projects that qualify as Non-Priority Projects as noted in Section A-7.5.1. The review and approval of a Non-Priority Project Plan follows similar considerations as review of Project WQMPs. The Non-Priority Project Plan is included as **Exhibit A-7.VI**.

### A-7.5.6 Plan Check: Issuance of Grading or Building Permits

The construction plans submitted by the applicant for plan check must incorporate all of the structural and treatment BMPs identified in the Final WQMP. Therefore, the City will encourage applicants to obtain approval of the Final WQMP prior to submitting construction plans for plan check.

Calculations to support the structural integrity of the selected LID or treatment BMPs in the final Project WQMP must be prepared by or under the direction of a California Registered Civil Engineer and affixed with their stamp unless specifically exempted from this requirement by the City.

### *General or Special Notes for Plan Sheets*

Prior to the issuance of a grading or building permit, the City shall require the permit applicant to include the following as general or special notes on the plan sheets for new development or significant redevelopment projects:

- Sediment from areas disturbed by construction shall be retained on site using structural controls to the maximum extent practicable.
- Stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
- Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.
- Runoff from equipment and vehicle washing shall be contained at construction sites unless treated to remove sediment and other pollutants.
- All construction contractor and subcontractor personnel are to be made aware of the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.



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- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.
- Construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Discharges of material other than storm water are allowed only when necessary for performance and completion of construction practices and where they do not: cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination or nuisance; or contain a hazardous substance in a quantity reportable under Federal Regulations 40 CFR Parts 117 and 302.

Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, glues, lime, pesticides, herbicides, wood preservatives and solvents, asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing; and superchlorinated potable water line flushings.

During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separated from potential storm water runoff, with ultimate disposal in accordance with local, state and federal requirements.

- Dewatering of contaminated groundwater, or discharging contaminated soils via surface erosion is prohibited. Dewatering of non-contaminated groundwater requires a National Pollutant Discharge Elimination System (NPDES) permit from the respective State Regional Water Quality Control Board.

### *Plan Check for Private Projects with Land Use Permits*

For projects with land use permits, the City shall review the environmental (CEQA) documentation (including the Mitigation Monitoring and Reporting Program), the conditions of approval and the Final WQMP to ensure the construction plans are consistent with these documents. The City will require the applicant to submit detailed construction plans showing locations and design details of all approved BMPs. BMP design details will be reviewed for consistency with the criteria and guidance provided in the Technical Guidance Document.

### *Plan Check for Projects with By-Right Zoning (Ministerial Projects)*

For qualifying projects with by-right zoning or projects that do not involve discretionary authority and review, applicants will typically submit a grading or building permit application only. These projects do not require Project WQMPs.

### *Plan Check for Public Agency Projects*

Prior to initiating grading or construction activities, the City shall ensure that the construction plans for its public works projects reflect the structural BMPs described in the Final WQMP. In conducting the design review process for its public agency projects, the City shall review the construction plans and specifications for conformity with the approved Final WQMP and for





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consistency with the BMP design criteria and guidance provided in the Technical Guidance Document.

*Plan Check for Projects with Alternative Treatment Control BMPs (See DAMP Section 7, Exhibit 7.II Section 3.3.3.)*

If an applicant elects to utilize Alternative Treatment Control BMPs in a project's construction plans, the City will require the project's engineer of record to certify that the Alternative Treatment Control BMPs are equally or more effective in pollutant reduction than comparable BMPs found in the Model WQMP.

### A-7.5.7 Permit Closeout, Certificates of Use, and Certificates of Occupancy

The end of the construction phase represents a transition from the New Development/Significant Redevelopment Program to the Existing Development Program. Accompanying this is a close out of permits and issuance of certificates of use and occupancy. The City will use this juncture to assure satisfactory completion of all requirements in the Project WQMP by requiring the applicant to:

- Demonstrate that all structural BMPs described in the Project WQMP have been constructed and installed in conformance with approved plans and specifications,
- Demonstrate that an adequate number of copies of the Project WQMP are available onsite, and
- Demonstrate that the applicant is prepared to implement all nonstructural BMPs described in the Project WQMP.
- For industrial facilities subject to California's General Permit for Storm water Discharges Associated with Industrial Activity as defined by Standard Industrial Classification (SIC) code, demonstrate that coverage has been obtained by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number.

Section V of the project WQMP shall contain the equivalent of an O&M Plan for structural BMPs to ensure they are properly maintained. Section V shall describe and/or include:

- Structural BMPs
- Employee responsibilities and training for BMP operation and maintenance
- Maintenance frequency and schedule
- Specific maintenance activities
- Required permits from resource agencies, if any
- Forms to be used in documenting maintenance activities



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- Notification to Orange County Vector Control District of the structural BMPs in place
- Recordkeeping requirements (at least 5 years)

At a minimum, the City shall require the annual inspection and maintenance of all structural BMPs.

Following satisfactory inspection, those structural BMPs agreed during the planning process to be within City right-of-ways, or on land to be dedicated to City ownership will be accepted. Upon acceptance, responsibility for operation and maintenance will transfer from the developer or contractor to the appropriate City department, including the funding mechanism identified in the approved Final WQMP.

If a property owner or a private entity, such as a homeowners association (HOA), retains or assumes responsibility for operation and maintenance of structural BMPs, the City shall require access for inspection through an agreement or equivalent means. The HOA shall be required to maintain the BMPs in operating condition. If they do not meet the requirements contained in the approved Final WQMP, the City will take necessary enforcement activities as allowed by its Water Quality Ordinance (**Exhibit 4.I**).

If the City will be responsible for operating and maintaining structural BMPs on private property, an easement will be established and recorded to allow for entry and proper management of the BMPs. Such access easements shall be binding throughout the life of the project, or until the BMPs requiring access are acceptably replaced with a BMP not requiring access. Funding for the long-term operation and maintenance of structural BMPs will be front-funded, or otherwise guaranteed via mechanisms such as approved assessment districts, or other funding mechanisms.

### *Public Agency Projects*

For the City's public facility projects, upon completion of construction when contract close-out occurs the responsibility for operation and maintenance of the structural BMPs will transfer from the contractor to the appropriate City department. The City has the authority to approve the transfer of structural BMPs to any other public entity within its jurisdiction and shall negotiate satisfactory operation and maintenance standards with the public agencies accepting the operation and maintenance responsibilities. Alternatively, the responsibility for the operation and maintenance of structural BMPs may be transferred to a private entity through contracts or lease agreements. In any such transfer agreement, the City shall be identified as a third-party beneficiary empowered to enforce maintenance agreements.

### **A-7.6 Water Quality Management Plan (WQMP) Preparation**

In accordance with the requirements in the Development Project Review, Approval and Permitting process stated previously, the City will require Project WQMPs to be prepared using the guidelines set forth in the Model WQMP and the WQMP templates provided as **Exhibit A-7.V** (Priority Projects) and **Exhibit A-7.VI** (Nonpriority Projects).



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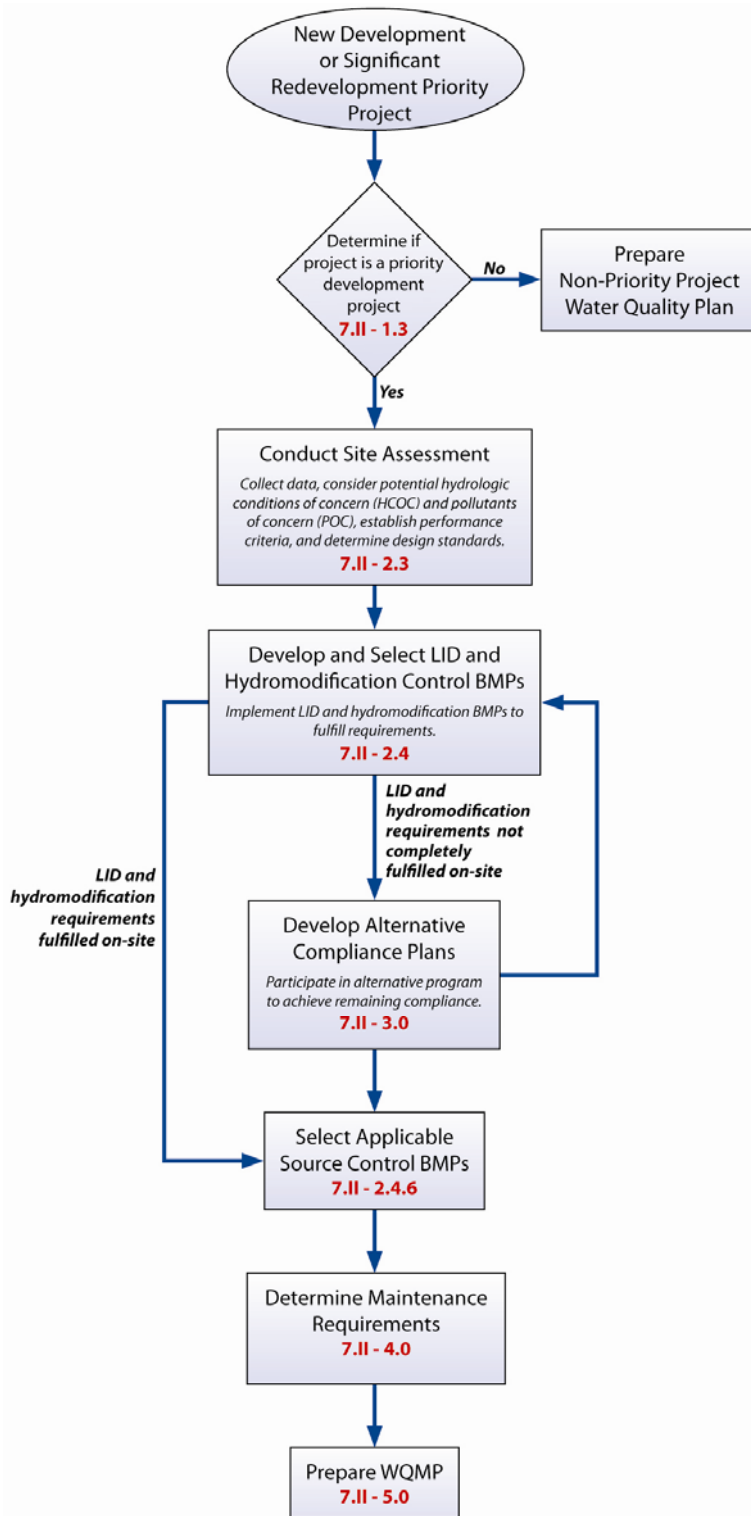
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Information regarding Priority Projects can be found in the Model WQMP and information regarding Non-Priority Projects can be found in Section 1.3 of the Model WQMP.

Preliminary WQMPs and Final WQMPs will to be prepared using the guidelines set forth in the Model WQMP and the City WQMP templates. Elements of WQMP development are illustrated in the following figure:



**Figure A-7.3**  
**Development Planning and WQMP Preparation Steps**





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### **A-7.7 Post Construction BMP Inspection and Verification**

The City will conduct BMP inspections to assure that implementation and appropriate maintenance described in the approved WQMP are taking place during the post construction phase. The goal is to perform inspections of all public treatment BMPs annually that are constructed and operational after May 22, 2009 and 25% of all private development BMPs constructed after May 22, 2009 so that all private development treatment BMPs are inspected within 4 years.

Verification of BMP implementation and ongoing maintenance will be conducted by City inspectors or by a registered professional civil engineer if owner self certification is provided for private development projects.

### **A-7.8 Education and Training**

To assist responsible municipal staff and contract staff in understanding the DAMP's Model New Development/Redevelopment Program, initial training sessions will be conducted by the Principal Permittee within 90 days of May 19, 2011 (date of Executive Officer approval of Model WQMP and Technical Guidance Document. Thereafter, training sessions will be conducted at least annually and/or on-line training will be available. In addition, the City may sponsor its own training or staff may attend training seminars or workshops related to general water quality and storm water management conducted by other organizations.

#### A-7.8.1 Training Modules

The Principal Permittee has developed two training modules that cover different aspects of the Model New Development/Significant Redevelopment Program.

##### *New Development/Significant Redevelopment Program Management*

This training module is for the City Storm Water Program manager and the managers of the City's planning and building departments. It provides an overview of the Storm Water Program as it pertains to the Fourth Term Permit requirements and includes general information on the General Plan; preparation and review of environmental documents (Initial Studies, EIRs, EISs, Negative Declarations, Mitigated Negative Declarations, etc.); conditions of approval for projects; the review of Project WQMPs; and plan check and permit closeout.

##### *Plan Checkers, Project Planning and Design, Environmental Review, Planning and Permitting and WQMP Development*

This training module is targeted to plan checkers, planners and engineers and will address: the requirements applicable to new development/significant redevelopment; how to review and prepare CEQA compliance documents with regard to storm water/urban runoff effects; how to develop and review a Project WQMP; and how to design and incorporate LID, Source Control, Site Design and Treatment Control BMPs into a project to minimize impacts to receiving waters.



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### A-7.8.2 Record Keeping

Records of training provided to City staff will be maintained to allow a determination of:

- Which staff require which training
- When training sessions were conducted
- Compliance with the permit requirements

### **A-7.9 Program Effectiveness Assessment**

The City will submit an annual progress report each year to the Principal Permittee (**see DAMP Appendix C, Section C-7**). This report will provide the basis for evaluating the City's efforts towards the reduction of pollutants from new development and significant redevelopment. The annual progress report will demonstrate a commitment to pollution prevention and source reduction processes in new development/redevelopment projects in the City. Future annual progress reports will include:

- Information on WQMPs approved and verified by the City;
- Documentation of training received by the City staff.

Exhibit A-7.I

Land Use Element

Natural Resource Element

Infrastructure Element

Implementation Plan

# **LAND USE ELEMENT**



## INTRODUCTION AND VISION FOR THE FUTURE

The Land Use Element describes the desired future physical and economic composition of Orange's planning area and the planned relationship of uses. The primary objectives of the Element are to determine the future location, type, and intensity of new development and redevelopment projects, and to establish the desired mix and relationship between such projects to maximize the long-term livability of the community.



The City also seeks to achieve a number of additional objectives, consistent with Orange's *Vision for the Future*, described in the General Plan Introduction. These objectives include:

- Providing policy guidance for Orange's future based on innovative land use planning techniques, unifying the developed portion of the City with east Orange, and expressing community values.
- Encouraging a variety of semi-rural, suburban, and urban neighborhood living environments.
- Protecting and enhancing the City's historic core, and expanding historic preservation efforts to other neighborhoods within the City.
- Encouraging new residential, commercial, industrial, and public uses within established focus areas.
- Supporting a multi-modal circulation network that accommodates vehicles, pedestrians, cyclists, hikers, and equestrians.
- Managing future development in a manner that ensures adequate and timely public services and infrastructure.
- Improving the appearance and variety of the City's commercial, retail, industrial, and employment centers.
- Enabling development of high quality entertainment-oriented mixed-use projects strategically located near regional tourist draws.
- Expanding open space areas and promoting completion of a trail system.
- Protecting critical watersheds and other natural and open space resources.



The Land Use Element provides a key policy foundation for the entire General Plan. Through the use of text and diagrams, the Land Use Element establishes clear and logical patterns of land use as well as standards for new development. The goals and policies contained in this Element establish a constitutional framework for future land use planning and decision-making in the City.

Another important feature of this Element is the Land Use Policy Map, which indicates the location, density, and intensity of development for all land uses citywide. The proposed land use designations identify the types and nature of development permitted throughout the planning area. The goals and policies contained in this Element are designed to ensure land use diversity and balanced development; encourage mixed-use development; promote commercial enterprise in Orange; encourage high quality industrial development; maintain and enhance the role of Old Towne within the community; encourage an efficient and responsible relationship between land use, transit, open space, and areas of environmental sensitivity; ensure City interests are achieved through inter-jurisdictional and regional planning; and encourage public involvement in land use planning decisions.

## **Purpose of the Land Use Element**

The Land Use Element is one of seven elements required by the State to be included in Orange's General Plan. The Land Use Element directs and defines development patterns by designating allowable uses, requirements, and locations for both existing and future development. This Element has the most wide-ranging scope in the General Plan, and affects all of the others. Although the interpretation of the Land Use Element is the responsibility of the community's policymakers, this vision of long-term land use will influence short-term plans such as infill development, Specific Plans, and public works investments.

## **Scope and Content of the Land Use Element**

The Land Use Element is divided into three sections:

- (1) Introduction
- (2) Issues, Goals, and Policies
- (3) Land Use Plan

The *Introduction* defines the purpose, scope, and content of the Land Use Element, and its relationship to other General Plan Elements. The *Issues, Goals, and Policies* section describes the City's intent to encourage diverse land uses that foster a vibrant and sustainable community, and to coordinate planning and public participation activities in determining future land uses. The *Land Use Plan* section communicates how these goals and policies will be implemented through land use diagrams and maps depicting assigned land uses, locations, and the extent of future use envisioned by the community.

The Land Use Plan complies with the requirements of the Land Use Element as stated in Section 65302 of California's Government Code. Land uses requiring future planning include "housing, business, industry, open space, forest/timber, agriculture, natural resources, recreation, scenic beauty, education, public buildings and land, solid and liquid waste disposal facilities, and other public and private uses of land." The Land Use Plan also establishes standards for residential



density and non-residential building intensity for designated land uses citywide, and it expresses the community's vision for revitalization of eight focus areas located throughout the City.

## **Relationship to Other General Plan Elements**

The Land Use Element serves as a guide for future development in the City and determines many key issues examined in the remaining Elements. For example, different land uses generate various trip demands, which influence the capacity and service levels of Orange's transportation systems. The Circulation & Mobility Element lays out future transportation services and routes designed to meet the demands of both existing and future development.

Future residential development described in the Land Use Element affects the City's housing goals, programs and objectives, which are discussed in the Housing Element. Land use decisions and the City's long-range economic development strategy are also directly inter-related. This Element proposes new development strategies for a number of the City's most important commercial corridors, and advocates intensification of certain areas as mixed-use corridors and urban office and employment centers. These Land Use Element policies are directly related to the long-range policies of the Economic Development Element.

The Land Use Element also designates areas to be used as open spaces, areas for parks and recreation, and areas for conservation and preservation of natural resources. Goals and policies regarding the preservation and maintenance of these areas are also addressed in the Natural Resources Element.

Land uses defined in the Land Use Element are also affected by the Urban Design Element. The goals and policies of the Urban Design Element address physical characteristics of the community, such as building massing, concentration, setbacks, and landscaping features that affect land use requirements. The Cultural Resources & Historic Preservation Element expresses the City's strategy for requiring preservation of structures and areas that carry historic significance.

Growth and development patterns in Orange are to be managed in a way that does not overwhelm or reduce the quality of services provided by the City's infrastructure system. The goals and policies of the Growth Management and Infrastructure Elements are related to the contents of the Land Use Element because they affect land use designations and requirements.

Safety and noise abatement issues also relate to land uses. To comply with noise level requirements, land use designations are determined in tandem with noise contour maps in the Noise Element. Provisions are made within the Noise Element to allow higher noise levels within the mixed-use environments promoted within the Land Use Element. To mitigate or avoid damage and injury from natural and human-caused hazards, hazards maps in the Safety Element must also be consistent with the Land Use Element.

## **ISSUES, GOALS, AND POLICIES**

The goals, policies, and implementation programs of the Land Use Element address eight citywide issues, as well as issues pertaining to eight focus areas identified within the City.



Citywide land use issues represent opportunities to improve the way land is currently used and the way future land use is planned. These opportunities capitalize on existing community assets, such as hospitals, universities and colleges, transportation networks, and natural features. Land use issues include: (1) ensuring land use diversity and balanced development; (2) encouraging mixed-use development for purposes of promoting convenient and efficient relationships between housing, employment, services, and transit; (3) promoting commercial enterprise in Orange; (4) encouraging high quality industrial development; (5) maintaining and enhancing the role of Old Towne within the community; (6) considering and promoting the contextual and environmental compatibility of various land uses; (7) ensuring City interests are achieved through inter-jurisdictional and regional planning; and (8) encouraging public involvement in land use planning decisions.

### Land Use Diversity and Balanced Development

A well-balanced community provides a broad range of housing and business opportunities as well as recreational, institutional, and cultural activities that serve Orange’s diverse population and enhance the overall living environment. By encouraging a mix of land uses, the City can create an active and diverse environment that complements all lifestyles and supports neighborhoods. The City will continue to work toward creating a balanced inventory of land uses that meets the housing needs of all income groups and household types, creates a stable employment and tax base, maintains logical relationships between land uses and community assets, and provides residents with a diverse range of recreational opportunities.

**GOAL 1.0: Meet the present and future needs of all residential and business sectors with a diverse and balanced mix of land uses.**

- Policy 1.1: Maintain a land use structure that balances jobs and housing with available infrastructure and public and human services.
- Policy 1.2: Balance economic gains from new development while preserving the character and densities of residential neighborhoods.
- Policy 1.3: Provide a range of housing densities and types to meet the diverse needs and lifestyles of residents.
- Policy 1.4: Ensure that new development reflects existing design standards, qualities, and features that are in context with nearby development.
- Policy 1.5: Prioritize recreation and open space uses at Irvine Lake and protect historic visual resources in east Orange.
- Policy 1.6: Minimize effects of new development on the privacy and character of surrounding neighborhoods.
- Policy 1.7: Provide a range of open space and park amenities to meet the diverse needs of current and new residents.

### Encouraging Mixed-use

Development opportunities for creative commercial, residential, office, or mixed-use centers are emerging within older commercial corridors throughout the City. Three different styles of mixed-use are defined in the Land Use Plan and are implemented through five land use designations. The



three mixed-use styles are Neighborhood, Old Towne, and Urban. Future development options for these mixed-use areas rely on high quality, pedestrian-oriented design, incorporation of community open spaces, and full integration of alternative transportation modes. Successful completion of high quality mixed-use projects in Orange will assist the City in accomplishing multiple objectives concerned with housing, circulation, land use, economic vitality, recreation, and the environment.

**GOAL 2.0: Create successful, high quality mixed-use districts consisting of a mix of residential, commercial, office, civic, and common open space land uses, supported by alternative modes of transportation.**

Policy 2.1: Encourage development of mixed-use projects to revitalize older commercial areas throughout the City and industrial areas surrounding the historic Santa Fe Depot.

Policy 2.2: Encourage transfers of development rights within areas designated Urban Mixed-use on the Land Use Policy Map to promote development of high-rise office and residential structures at compatible locations.

Policy 2.3: Encourage transfers of development rights within areas designated Neighborhood Mixed-use and Old Towne Mixed-use on the Land Use Policy Map to promote historic preservation and creation of open spaces accessible to the community.

Policy 2.4: Encourage mixed-use projects that contain a variety of compatible uses, and provide necessary supporting public and community facilities.

Policy 2.5: Minimize traffic and parking impacts of proposed mixed-use projects.

Policy 2.6: Encourage linkage in and around mixed-use areas using a multi-modal circulation network, particularly transit, pedestrian sidewalks, paths and paseos, and bicycle and trail systems.

Policy 2.7: Ensure that the architecture, landscape design, and site planning of mixed-use projects are of the highest quality, and that they emphasize a pedestrian orientation and safe, convenient access between uses.

Policy 2.8: Ensure that adequate gathering areas or plazas are incorporated within mixed-use projects and areas to allow for social interaction and community activities.

Policy 2.9: Encourage mixed-use development to include ground floor retail.

## **Vibrant Commercial Districts**

Commercial activities continue to play an important role in shaping the City. Business activities provide jobs and revenue that support important community services. Much of the City's revenue comes from sales tax generated by commercial establishments. The City will continue to revitalize and improve the appearance of aging commercial districts. The City will encourage land use patterns and development standards that promote vibrant commercial activities, take advantage of existing land use assets, assist existing businesses that want to expand, promote the local economy and existing establishments, and reinforce the relationship between neighborhoods and adjacent business districts with respect to goods, services, and employment.



- GOAL 3.0:** Create commercial uses that provide a solid economic base and employment opportunities and identify Orange as an attractive and diverse shopping destination.
- Policy 3.1: Promote development of revenue-generating land uses that help defray the costs of high quality public services.
- Policy 3.2: Actively promote the City as a place to shop and conduct business, and encourage local patronage of Orange businesses.
- Policy 3.3: Improve vehicular, pedestrian, and visual connections between commercial areas and the rest of the community.
- Policy 3.4: Discourage commercial and industrial enterprises that have significant adverse soil, air, water, or noise impacts.

### **Sustainable Industrial and Office Uses**

Providing options for industrial development and office uses within the City is important, because these uses contribute to the economic wellbeing and the employment base of the community. Industrial development in Orange and throughout the region has changed significantly in recent years. Although traditional manufacturing activities continue to be a key component of Orange's industrial areas, many such businesses have been replaced by warehousing uses and modern office uses that are more attractive in appearance and more compatible with adjacent neighborhoods. In some instances, large buildings and warehouses that once housed manufacturing or agriculture-oriented activities are now available for adapting to future residential, office, or commercial uses. In addition, Orange has experienced increased demand for larger, multi-story professional office complexes at locations such as South Main Street, Town and Country Road, La Veta Avenue, and The City Drive. Demand has also increased for medical office space surrounding local hospitals. The City will emphasize the important role industry continues to play in the community's future, will encourage continued development of professional offices, and will ensure that the quality of the environment is not compromised by industrial uses.

- GOAL 4.0:** Encourage high quality, sustainable, industrial and office uses that provide jobs and revenue; support environmental quality; and promote options for adaptive re-use.
- Policy 4.1: Maximize use of limited land resources for industrial and office uses within areas designated Light Industrial or Industrial on the Land Use Policy Map.
- Policy 4.2: Encourage development of professional office space located near medical institutions and County facilities.
- Policy 4.3: Protect residents and the environment from potential adverse soil, air, water, and noise impacts of industrial operations.
- Policy 4.4: Encourage development of mixed office, industrial, and support commercial uses in areas designated Light Industrial on the Land Use Policy Map.
- Policy 4.5: Accommodate a wide variety of industrial uses that contribute to a healthy and diverse economic base.





## Old Towne Orange

When people think of Orange, they often think of the historic downtown district and adjoining residential neighborhoods. Old Towne Orange is an active, vibrant area that supports a variety of commercial, office, civic, and residential uses. In recent years, the City has taken steps to enable long-term preservation of many historic properties in the Old Towne area. This has created one of California's most viable and recognized historic districts. The historic Santa Fe Depot, associated Metrolink station, and Orange County Transportation Authority (OCTA) Transportation Center provide valuable commuting options. Land use policies for Old Towne call for targeted growth in the area near the Santa Fe Depot, to be achieved through increased density and more walkable and transit-oriented development. This area also provides opportunities for adaptive reuse of historic industrial buildings.

**GOAL 5.0: Maintain and enhance the vibrant, transit-accessible, pedestrian-friendly, and livable character of Old Towne's neighborhoods and commercial core.**

Policy 5.1: Promote targeted development of mixed-use, transit-oriented development surrounding the Santa Fe Depot to achieve development intensities compatible with the fabric of Old Towne.

Policy 5.2: Promote adaptive re-use of previously industrial and agricultural historic structures for residential, office, or commercial purposes.

Policy 5.3: Continue to promote institutional and civic uses located throughout Old Towne.

Policy 5.4: Develop additional sensitively designed public parking throughout Old Towne.

Policy 5.5: Continue to require consistent, high quality, historically-referenced design within Old Towne.

Policy 5.6: Continue to upgrade infrastructure throughout Old Towne.

Policy 5.7: Ensure that roadway improvements within Old Towne are designed to promote walkability and a safe pedestrian environment.

Policy 5.8: Maintain balance between Old Towne and Chapman University's growth, so that the University complements Old Towne.

Policy 5.9: Promote attractive and safe pedestrian access between the Santa Fe Depot and the Plaza.

## Contextual and Environmental Compatibility

The quality of the physical environment, built or natural, plays a large part in defining Orange's quality of life. Land use conflicts often occur when newer developments are insensitive to the use, scale or character of existing development and/or the surrounding natural environment. In other cases, older, obsolete nonconforming uses remain interspersed among newer development, as when old service stations or repair shops survive in the midst of residential development. Such conflicts can lead to degradation of the built and natural environments. The following goals and policies are designed to ensure contextual and environmental compatibility of development within the City, and to achieve compliance with local, regional, state, and federal environmental requirements.



These policies also represent an overview of the City’s strategy to consider the contextual and environmental effects of new development and reuse projects. Additional related policies addressing this topic may be found in the Natural Resources, Cultural Resources & Historic Preservation, Infrastructure, Urban Design, Public Safety, and Noise Elements.

**GOAL 6.0: Advance development activity that is mutually beneficial to both the environment and the community.**

- Policy 6.1: Ensure that new development is compatible with the style and design of established structures and the surrounding environment.
- Policy 6.2: In areas where residential uses abut commercial or industrial land uses, use buffering techniques to improve compatibility. Such techniques include the use of setbacks, screening, soundwalls with pedestrian access, and appearance standards.
- Policy 6.3: Establish and maintain greenways, and pedestrian and bicycle connections that complement the residential, commercial and open space areas they connect.
- Policy 6.4: Create and maintain open space resources that provide recreational opportunities, protect hillside vistas and ridgelines, and conserve natural resources.
- Policy 6.5: Reduce pollutant runoff from new development and urban runoff to the maximum extent practicable.
- Policy 6.6: Enhance the walkability of both new and current development.
- Policy 6.7: Integrate natural amenities and connections, including waterways and wildlife corridors, within the design of urban and suburban spaces.
- Policy 6.8: Maximize landscaping along streetscapes and within development projects to enhance public health and environmental benefits.
- Policy 6.9: Restrict development in areas where exposure to hazards such as flood, erosion, liquefaction, dam failure, hazardous materials, and toxic gases cannot be mitigated to reduce risk to residents and liability to the City.
- Policy 6.10: Mitigate adverse air, noise, circulation, and other environmental impacts caused by new development adjacent to existing neighborhoods through use of sound walls, landscaping buffers, speed limits, and other traffic control measures.
- Policy 6.11: Recognize the value of natural and cultural resources in the undeveloped portions of the planning area.
- Policy 6.12: Maximize the land use opportunities for the Irvine Lake area by providing a mix of uses, such as lodging, housing, and recreational uses.

**Coordinated Planning**

Future planning considers ongoing planning efforts of other City departments, agencies, surrounding jurisdictions, and special districts. In addition, ongoing planning efforts undertaken by regional agencies such as the County of Orange, the Southern California Association of Governments, the Southern California Air Quality Management District, the Orange County Transportation Authority, the Santa Ana Regional Water Quality Control Board, and others will be examined for consistency with the City’s long-range objectives.





- GOAL 7.0:** Promote coordinated planning among City departments and agencies, property owners, residents, special districts, and other jurisdictions in the region.
- Policy 7.1: Coordinate with the Orange Unified School District and Community College District regarding future plans for their facilities.
- Policy 7.2: Work with institutions within the City to ensure that implementation of their future plans is compatible with the City's goals for surrounding areas.
- Policy 7.3: Coordinate planning efforts with adjacent cities, special purpose agencies, utilities, and community service providers.
- Policy 7.4: Ensure positive benefits for Orange from regional transportation, land use, air quality, waste management and disposal, and habitat conservation plans.
- Policy 7.5: Work with and encourage other agencies and service providers to minimize potential visual and environmental impacts of their facilities on Orange.
- Policy 7.6: Explore joint use agreements with other agencies to share existing and future public facilities among institutions in Orange.

## **Public Participation**

The City recognizes that the single most important component of any future planning effort is public participation. The following goal and policies emphasize the need for continued public involvement in all parts of the planning process.

- GOAL 8.0:** Encourage active involvement of residents, businesses, and agencies in the planning and decision making process.
- Policy 8.1: Continue to provide opportunities for public education and involvement in land use planning decisions through public hearings, community meetings, study sessions, electronic media, and any other appropriate and available means.
- Policy 8.2: Emphasize public-private cooperation in implementing the General Plan and future planning activities.
- Policy 8.3: Foster meaningful involvement and interaction among diverse groups within the City regarding land use planning efforts and decision making.

## **LAND USE PLAN**

The Land Use Plan discusses how the City will grow and change over the next 20 years, and describes those aspects of the community that will be enhanced and maintained. Current and future land uses are categorized and mapped to identify where residential, commercial, industrial, and community facilities are anticipated to be located. The Land Use Plan describes the planned distribution and development intensities of all land uses in the City, and describes how the City's land use goals will be achieved both citywide and within eight identified focus areas.



## Land Use Distribution

The predominantly residential land use pattern in Orange reflects the City’s history of transition from a citrus-growing center clustered near the railroad to a town core surrounded by residential neighborhoods and supporting businesses and services. Based on a land use inventory completed in 2004, residential development represented the predominant land use within Orange’s city limits, with housing covering 46 percent of the City’s land area. Commercial and industrial uses represented about 14 percent of the City’s land area, while natural hillsides, parks, and open space represented 32 percent. Figure LU-1 identifies the division of on-the-ground land uses within the City in 2004.

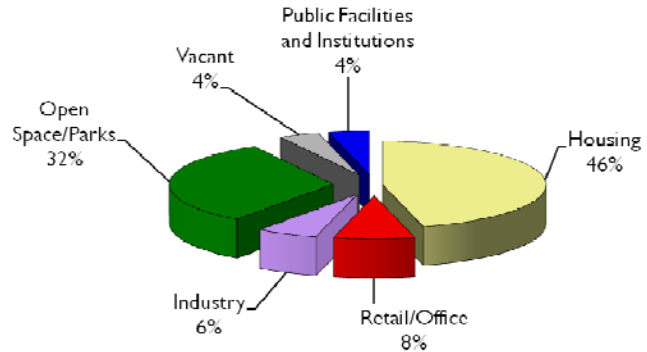


Figure LU-1  
Land Use Distribution (2004)

## Land Use Density and Intensity

Planners describe the extent to which properties can be or are developed using the terms *density* and *intensity*. Density is used for residential uses and refers to the population and development capacity of a given parcel or group of parcels. Density within the General Plan is described in terms of dwelling units per net acre of land (du/ac), exclusive of existing or proposed streets and rights-of-way. Typical residential densities found within Orange are illustrated in Figure LU-2.

Development intensity, which applies to non-residential uses, refers to the extent of development on a parcel of land or lot (that is, the total building square footage, building height, the floor-area ratio, and/or the percent of lot coverage). While intensity is often used to describe non-residential development levels, in a broader sense, intensity also can describe overall levels of mixed residential and non-residential development. Throughout this Element, floor-area ratio (FAR) and building floor area square footage are used as measures of non-residential development intensity.

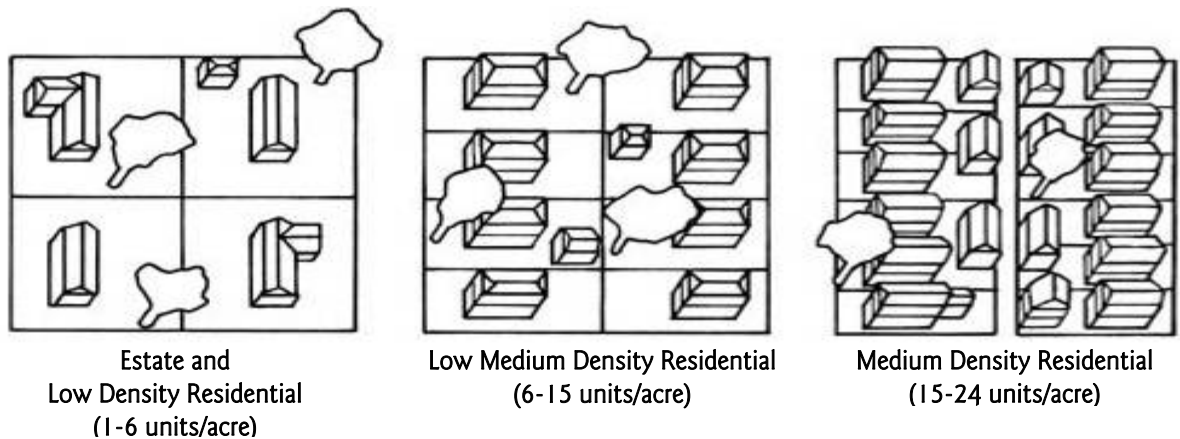
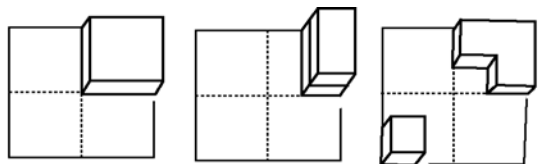


Figure LU-2  
Typical Residential Densities in Orange

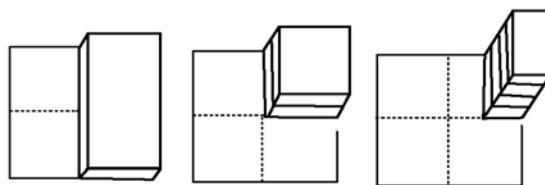


Floor-area ratio (FAR) expresses the intensity of use on a lot (see Figure LU-3). The FAR represents the ratio between the total gross floor area of all buildings on a lot and the total land area of that lot. For example, a 20,000-square-foot building on a 40,000-square-foot lot yields an FAR of 0.50. A 0.50 FAR describes a single-story building that covers half of the lot, a two-story building covering approximately one-quarter of the lot, or a four-story building covering one-eighth of the lot.

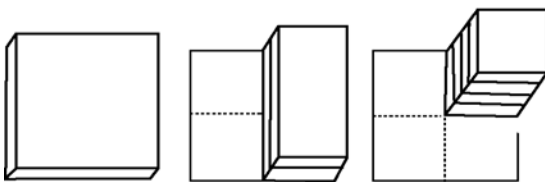
For purposes of illustration, the diagrams in Figure LU-4 provide examples of FAR for commercial retail and office sites drawn from throughout the City. The middle example illustrates buildings within two square blocks of Old Towne Orange along Glassell Street north and south of Chapman Avenue. The lot area is approximately 549,800 square feet and the gross floor area of the buildings is approximately 549,900 square feet (most of the buildings have two stories). As shown in the diagram, when the



0.25 FAR



0.5 FAR



1.0 FAR

Floor Area Ratio (FAR):  $\frac{\text{Gross Building Area}}{\text{Lot Area}}$

Figure LU-3  
Floor Area Ratios Defined

### Glassell Street Industrial Properties



**FAR: 0.33** Building Floor Area: 238,000 sq. ft.  
Parcel/Lot Area: 720,300 sq. ft.

### Old Towne Orange



**FAR: 1.0** Building Floor Area: 549,900 sq. ft.  
Parcel/Lot Area: 549,800 sq. ft.

### Town and Country Road Office Properties



**FAR: 0.49** Building Floor Area: 449,200 sq. ft.  
Parcel/Lot Area: 918,900 sq. ft.

Figure LU-4  
Floor Area Ratio Examples in Orange



gross building floor area is divided by the lot area, an FAR of approximately 1.0 results. The same process is illustrated for office properties located along Town and Country Road, and industrial areas located on Glassell Street, north of Taft Avenue.

## **Land Use Designations**

The Land Use Element establishes 19 land use designations. The land use designations have been established to reflect: (1) development trends affecting the City's near and long-term futures; (2) opportunity areas associated with major institutional uses, shopping and employment centers, and access to transportation facilities; and (3) community interests and desires expressed during the General Plan update process. Four designations are established for residential development that allow for a range of housing types and densities. Three mixed-use activity center designations encourage creative mixes of commercial retail, office, housing, civic, and entertainment uses at key locations throughout the City. Five commercial and office designations and two industrial designations provide for a range of revenue- and employment-generating businesses. Five public and semi-public use categories provide locations for important public and private facilities and institutions, including parks, open space areas, resource lands, civic facilities, hospitals, and educational institutions.

Table LU-1 presents descriptions of each General Plan land use designation and the corresponding range of density or intensity of development permitted for each. The maximum allowable development on any individual parcel is governed by these measures of density or intensity, with the anticipated yield influenced by the physical characteristics of a parcel, by access and infrastructure issues, and by compatibility considerations. The land use designations are described here in terms of general land uses and maximum densities or intensities permitted. Corresponding zoning districts specify the permitted uses for each category as well as the applicable development standards. The density or intensity maximums outlined in Table LU-1 serve as development caps. Actual development intensities are expected to be lower than the caps, based on market factors and past development trends. In order to estimate future build-out of the City and resulting impacts on the circulation system, expected levels of density and intensity have also been assumed, and are shown in Table LU-1. The City anticipates most development will occur at or below these expected levels, although on any single property, development up to the cap is allowed. However, any development proposed in excess of the expected levels indicated in Table LU-1 may be required to perform special studies to show the development's ability to mitigate adverse impacts on adjacent properties and the citywide circulation system.

Density ranges are provided in Table LU-1 for each of the residential land use designations and the Urban Mixed Use designation, whereas only maximum densities are established for the Neighborhood Mixed Use and Old Towne Mixed Use designations. Similarly, FAR ranges are provided in Table LU-1 for several commercial, industrial, office, and mixed commercial/residential land uses, while others feature a maximum FAR value. In cases where a range is listed, the minimum value represents the least intense land use permitted within the area, while the maximum value represents the most intense land use permitted. For designations where only a maximum value is listed, no minimum is implied.



For mixed-use designations listed in Table LU-1, both densities (du/ac) and intensities (FAR) are established. The permitted dwelling units per acre should be interpreted to be contained within the maximum FAR expressed for each category.

<b>Table LU-1 Land Use Designations</b>				
<b>Land Use Designation</b>		<b>Density or Intensity</b>		<b>Description</b>
		<b>Range</b>	<b>Expected</b>	
<b>Residential Designations</b>				
ESTR	Estate Low Density Residential	0-2.0 du/ac	1.8 du/ac	Large lot, single-family residential development in a rural or semi-rural setting. Private, noncommercial equestrian and agricultural uses may be allowed if associated with residential uses.
LDR	Low Density Residential	2.1-6.0 du/ac	5.0 du/ac	Conventional single-family residential development characterized by individual single-family homes constructed in subdivisions, or by custom units built on individual lots.
LMDR	Low Medium Density Residential	6.1-15.0 du/ac	8.0 du/ac	Includes small lot or zero lot line single-family subdivisions, duplexes and mobile home parks, as well as lower intensity apartment and condominium complexes.
MDR	Medium Density Residential	15.1-24.0 du/ac	16.3 du/ac	Apartment and condominium or townhouse units in areas with ready access to major circulation routes, business districts and public open space areas. Typical developments may consist of two- or three-story buildings that house multiple dwelling units and provide some form of open space.
<b>Mixed-Use Activity Center Designations</b>				
NMIX	Neighborhood Mixed-use	Max. 24.0 du/ac; 1.0 - 1.5 FAR	16.3 du/ac; 1.0 FAR	Local- and neighborhood-supporting mixed-use activity centers and corridors. Commercial retail is encouraged to be the primary use on the ground floor. Professional office and housing uses are also encouraged, either integrated with a commercial use, or as separate, free-standing uses. Walkability and pedestrian access are key considerations. The lower end of the FAR range supports retail development, while the higher end supports a combination of uses including both commercial and office.
OTMIX	Old Towne Mixed-use			Local- and neighborhood-supporting mixed-use activity centers designed to be contextually appropriate within a historic area. Commercial retail is encouraged to be the primary use on the ground floor. Professional office and housing uses are also encouraged, particularly as adaptive reuse opportunities within existing structures. Transit-orientation, walkability, and pedestrian access are key considerations. The lower end of the FAR range supports retail development, while the higher end of the range supports a combination of uses including commercial and office.
	Old Towne Mixed Use 15	Max. 15.0 du/ac; 0.5-1.0 FAR	8.0 du/ac; 1.0 FAR	
	Old Towne Mixed Use 24	Max. 24.0 du/ac; 1.0-1.5 FAR	16.3 du/ac; 1.5 FAR	





**Table LU-1  
Land Use Designations**

Land Use Designation		Density or Intensity		Description
		Range	Expected	
Old Towne Mixed Use Spoke		6.0 – 15.0 du/ac; Max. 0.6 FAR	10.0 du/ac; 0.6 FAR	Local- and neighborhood-supporting mixed-use activity centers designed to be contextually appropriate within a historic area. Commercial retail is encouraged to be the primary use on the ground floor. Professional office and housing uses are also encouraged, particularly as adaptive reuse opportunities within existing structures. Transit-orientation, walkability, and pedestrian access are key considerations, as well as protection of the existing historic, residential-scale, and building character of the spoke streets outside of the downtown core. The lower end of the FAR range supports retail development, while the higher end of the range supports a combination of uses including commercial and office.
UMIX	Urban Mixed-use	30.0 – 60.0 du/ac; 1.5 - 3.0 FAR	48.0 du/ac; 1.7 FAR	Urban, high-intensity, regionally-oriented activity centers that define the character of surrounding areas and serve as gateways to the City. This designation provides for integrated commercial retail, high-rise office, housing, and civic uses. Commercial retail is intended to be the primary use on the ground floor. Convenient, high-frequency transit access, innovative housing options, and pedestrian-oriented design are key considerations.
<b>Commercial and Office Designations</b>				
GC	General Commercial	Max. 1.0 FAR	0.35 FAR	A wide range of retail and service commercial uses and professional offices. Regional shopping centers, mid-rise office projects, corridor shopping districts, and neighborhood corner stores are permitted uses.
RC	Recreation Commercial	Max. 0.35 FAR	0.18 FAR	Outdoor commercial recreational uses which include, but not limited to: golf courses, marinas, boat rental buildings, staging areas, fishing facilities, and other commercial sports facilities.
NOP	Neighborhood Office Professional	Max. 0.5 FAR	0.36 FAR	Low-rise office and professional office park development. Professional office is intended as the primary use. However, support retail and service commercial uses are also permitted as necessary to serve adjacent professional offices.
UOP	Urban Office Professional	1.5-3.0 FAR	1.5 FAR	Urban, high-intensity, mid- and high-rise office centers. Professional office is intended as the primary use. However, support retail and service commercial uses are also permitted as necessary to serve adjacent professional offices. Hospitals and supporting uses are also permitted.
YNCO	Yorba North Commercial Overlay	Max. 1.0 FAR	0.35 FAR	Allows for mixed uses compatible with a public facility or institutional use, such as a civic, college, or health care campus, including integrated retail, housing, office, and civic uses where a specific plan is approved for a public facility or institutional activity center. Innovative housing and pedestrian-oriented design are key considerations.



**Table LU-1  
Land Use Designations**

Land Use Designation		Density or Intensity		Description
		Range	Expected	
YSCO	Yorba South Commercial Overlay	Max. 1.0 FAR	0.35 FAR	A wide range of potential retail and service commercial uses, in conjunction with on-site parkland improvements, off-site parkland, and/or park improvements. Commercial use may only be activated through a Development Agreement with the City that identifies specific parkland obligations.
<b>Industrial Designations</b>				
LI	Light Industrial	Max. 1.0 FAR 3-story height limit	0.50 FAR	Allows for manufacturing, processing, and distribution of goods. Wholesale activities associated with industrial operations, as well as small-scale, support retail, service commercial and office uses may also be established in areas with ready access to major circulation routes. A 3-story building height limit applies within Light Industrial designated areas.
I	Industrial	Max. 0.75 FAR	0.65 FAR	
<b>Public Facilities and Open Space Designations</b>				
PFI	Public Facilities and Institutions			Provides for several types of public, quasi-public and institutional land uses, including schools, colleges and universities, City and County facilities, hospitals, and major utility easements and properties. Includes service organizations and housing related to an institutional use, such as dormitories, employee housing, assisted living, convalescent homes, and skilled nursing facilities.
Civic uses/Schools		Max. 0.50 FAR		
Cemeteries, Corporate yard, Water towers, Southern California Electric facilities			.05 FAR	
Schools, Water Department facilities			.15 FAR	
Civic Center, Libraries, Police and Fire Department facilities			.25 FAR	
Institutions		Max. 2.0 FAR		
Colleges and Universities			.35 FAR	
Hospitals			1.0 FAR	
OS	Open Space	NA	NA	Steep hillsides, creeks, or environmentally sensitive areas that should not be developed. Although designated as permanent open space, most areas will not be developed as public parks with the exception of river and creekside areas that promote connectivity of the City's trails system. Lands in this category include both privately held open spaces and public lands.
OS-P	Open Space–Park	NA	NA	Public lands used for passive and active recreation. Includes all parklands owned and maintained by the City of Orange, as well as parks operated by the County.
OS-R	Open Space–Ridgeline	NA	NA	Areas designated open space to preserve visually significant ridgelines identified on the Land Use Policy Map. No development or grading is permitted.
RA	Resource Area	NA	NA	Allows for agricultural uses and continued use of stream and river channels for aggregate mining. Passive and active recreational uses are also permitted. May serve as a holding zone for future uses compatible with established and planned land uses in surrounding areas.





## Residential Uses

Four residential categories allow for a variety of housing types representing the diverse residential character of Orange. The City will continue to preserve and enhance existing single-family residential neighborhoods. Older neighborhoods, characterized by higher densities, are located throughout the western part of the City. Lower density housing, typical of newer residential development, is located principally on the City's eastern side.

### *Estate Low Density Residential*

*Density Range: 0-2.0 du/ac*

The Estate Low Density Residential designation provides for single-family detached, estate-style homes on large lots, featuring a custom character of development. Estate Low Density Residential development is primarily found in Orange Park Acres and other similar parts of east Orange. Private, noncommercial equestrian and agricultural uses may be allowed if they are associated with the residential uses.



### *Low Density Residential*

*Density Range: 2.1-6.0 du/ac*

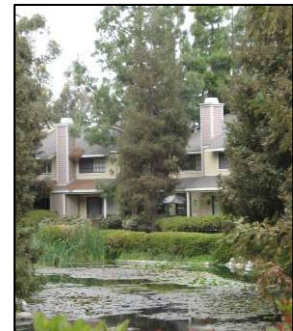
The Low Density Residential designation provides for typical single-family residential neighborhoods. Low Density Residential uses make up the majority of land uses in Orange, and are found throughout the City in both older, established areas, such as Old Towne, and newer development areas, including east Orange.



### *Low Medium Density Residential*

*Density Range: 6.1-15.0 du/ac*

The Low Medium Density Residential designation provides for both detached and attached single-family homes on smaller lots, as well as duplexes and some mobile homes, multi-family townhouses, condominiums, and apartments. Low Medium Density residential uses are typically found adjacent to commercial or mixed-use activity centers, such as near South Main Street, Tustin Avenue, or El Modena. Low Medium Density residential uses are also found within newer development areas, such as Serrano Heights.





**Medium Density Residential**

*Density Range: 15.1-24.0 du/ac*

The Medium Density Residential designation provides for multi-family townhouses, condominiums, and apartments featuring some form of internal open space in areas with good access to major circulation routes, business districts, and public open space areas. Medium Density residential uses are typically found adjacent to commercial districts, such as near Lincoln Avenue, Katella Avenue, or La Veta Avenue. Medium Density residential uses are also found near major transportation corridors, such as the Santa Fe Depot or freeway interchanges along Chapman Avenue, Tustin Street, or Glassell Street.



**Mixed-Use Activity Centers**

In response to the Vision and recent development trends, the General Plan provides three designations for mixed-use activity centers. All of these designations promote creative mixes of commercial retail, office, housing, civic, and entertainment uses that vary in composition and intensity based upon location, accessibility, and the surrounding development context.

**Old Towne Mixed-use**

*Maximum Density: Old Towne Mixed Use Spoke: 15.0 du/ ac  
Old Towne Mixed Use 15: 15.0 du/ ac  
Old Towne Mixed Use 24: 24.0 du/ac*

*Intensity Range: Old Towne Mixed Use Spoke: 0.6 FAR  
Old Towne Mixed Use 15: 0.5-1.0 FAR  
Old Towne Mixed Use 24: 1.0-1.5 FAR*

The Old Towne mixed-use designations provide for integrated commercial retail, professional office, housing, and civic uses designed to be contextually appropriate within a historic area. These areas are intended to be local- and neighborhood-supporting activity centers and corridors. Commercial retail is encouraged to be the primary use on the ground floor. Professional office and housing uses are also encouraged, particularly as adaptive reuse opportunities within historic structures. Transit-orientation, walkability, and pedestrian access are key considerations, as well as protection of the existing historic, residential-scale, and building character of the Spoke Streets outside of the downtown core. The lower end of the FAR range





supports retail development, while the higher end of the range supports a combination of uses including commercial and office. Uses within this area are additionally subject to provisions of the *Old Towne Design Standards* and *Santa Fe Depot Specific Plan*, as applicable.

***Neighborhood Mixed-use***

*Maximum Density: South Main Street: 24.0 du/ac*

*Intensity Range: 1.0-1.5 FAR*

This land use designation provides for integrated commercial retail, professional office, housing, and civic uses along the South Main Street corridor. This area is intended to be a local- and neighborhood-supporting activity center and corridor. Commercial retail is encouraged to be the primary use on the ground floor. Professional office and housing uses are also encouraged, either integrated with a commercial use, or as separate, free-standing uses. Walkability and pedestrian access are key considerations. The lower end of the FAR range supports retail development, while the higher end of the range supports a combination of commercial and office uses.

***Urban Mixed-use***

*Density Range: 30.0-60.0 du/ac*

*Intensity Range: 1.5-3.0 FAR*

This designation provides for integrated commercial retail, professional office, housing, and civic uses along West Katella Avenue, Town and Country Road, and within Uptown Orange. These areas are intended to provide for urban, high-intensity, regionally-oriented activity centers that define the character of surrounding areas. Commercial retail is intended to be the primary use on the ground floor. Convenient transit access, innovative housing options, and pedestrian-oriented design are key considerations.







## Commercial and Office Designations

The commercial and office categories consist of four designations that provide for a range of revenue- and employment-generating businesses.

### ***General Commercial***

*Maximum Intensity: 1.0 FAR*

The General Commercial designation provides for a wide range of retail and service commercial uses and professional offices. This designation is found along many of the City's most highly-traveled roadway corridors, including Katella Avenue, Chapman Avenue, and Tustin Street. Regional shopping centers, mid- and high-rise office projects, corridor shopping districts, and neighborhood corner stores are all permitted uses.



### ***Recreation Commercial***

*Maximum Intensity: 0.35 FAR*

Recreation commercial uses provide for the operation and development of resort or amusement oriented commercial and recreational uses. The designation refers to recreational uses of regional interest that will draw visitors from throughout the City, Orange County, and Southern California. The areas adjacent to the east and south sides of Irvine Lake in east Orange are proposed for this land use. Permitted uses include, but are not limited to, marinas, boat rental buildings, staging areas, conference centers, golf courses, clubhouses, hotels, resorts, restaurants, and other commercial sports facilities.



### ***Neighborhood Office Professional***

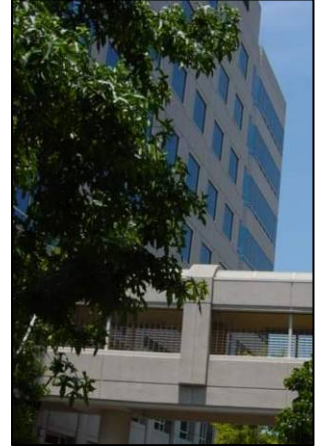
*Maximum Intensity: 0.5 FAR*

This land use designation provides for low-rise office and professional office park development in appropriate areas throughout the City, including portions of Chapman Avenue east of Old Towne and portions of the La Veta Avenue corridor. The principal use in this designation is intended to be professional offices; however, support retail and service commercial uses are permitted as necessary to serve adjacent professional office needs.



***Urban Office Professional****Intensity Range: 1.5 – 3.0 FAR*

The Urban Office Professional designation encourages urban, high-intensity, mid- and high-rise office centers located at the City's edges, away from established single-family residential areas. Urban Office Professional uses are located primarily north of the SR-22 Freeway and south of La Veta Avenue, concentrated around the hospital node at the southern end of Main Street. Professional office is intended as the primary use. However, support retail and service commercial uses are also permitted as necessary to serve adjacent professional offices. Hospitals and supporting uses are also permitted.

***Yorba North Commercial Overlay****Maximum Intensity: 1.0 FAR*

The Yorba North Commercial Overlay designation applies to the Chapman Hospital site. This designation allows for mixed uses compatible with a public facility or institutional use, such as a civic, college, or health care campus, including integrated retail, housing, office, and civic uses where a specific plan is approved for a public facility or institutional activity center. Innovative housing and pedestrian-oriented design are key considerations.

***Yorba South Commercial Overlay****Maximum Intensity: 1.0 FAR*

The Yorba South Commercial Overlay designation applies to the current Yorba Park site near Chapman Hospital, SR-55, and Chapman Avenue. This designation provides for a wide range of potential retail and service commercial uses, in conjunction with on-site parkland improvements, off-site parkland, and/or park improvements. Commercial use may only be activated through a Development Agreement with the City that identifies specific parkland obligations.



## Industrial Designations

Two industrial land use designations provide locations for offices, manufacturing, warehousing, and distribution uses within the City. The principal difference between the designations is the permitted maximum intensity of development allowed within each area. Permitted uses within industrial areas will continue to be primarily determined using the City's Zoning Ordinance.

### ***Light Industrial***

*Maximum Intensity: 1.0 FAR*

*Height Limit: 3 stories*

The Light Industrial designation is intended for uses that are compatible with nearby commercial and residential districts and that do not produce substantial environmental nuisances (noise, odor, dust, smoke, glare, etc.). This designation allows for manufacturing, processing, and distribution of goods. Light industrial uses are located primarily within areas west of Glassell Street and north of Walnut Avenue. Wholesale activities associated with industrial operations, as well as small-scale support retail, service commercial, and office uses may also be established in areas with ready access to major circulation routes. The maximum intensity permitted within the Light Industrial designation is 1.0 FAR, which is higher than that permitted within the Industrial designation. This distinction recognizes that ancillary office uses will be more prevalent in Light Industrial areas than within Industrial areas. A three-story height limit applies within the Light Industrial designation to maintain compatibility of scale with nearby commercial and residential districts.



### ***Industrial***

*Maximum Intensity: 0.75 FAR*

Industrial uses include manufacturing and industrial activities that may lead to some environmental nuisances that would be incompatible with residential or commercial uses. Industrial uses are located primarily in areas west of Glassell Street and north of Walnut Avenue. This designation allows for manufacturing, processing, and distribution of goods. Wholesale activities associated with industrial operations, as well as small-scale support retail, service commercial, and office uses may also be established in areas with ready access to major circulation routes. The maximum intensity permitted within the Industrial designation is 0.75 FAR.





**Public Facilities and Open Space**

Five designations for public facilities and open space areas allow for important public and private facilities and institutions, including parks, open space areas, resource lands, civic facilities, hospitals, and educational institutions.

***Public Facilities and Institutions***

*Maximum Intensity: Civic uses, schools, and public facilities: 0.5 FAR*

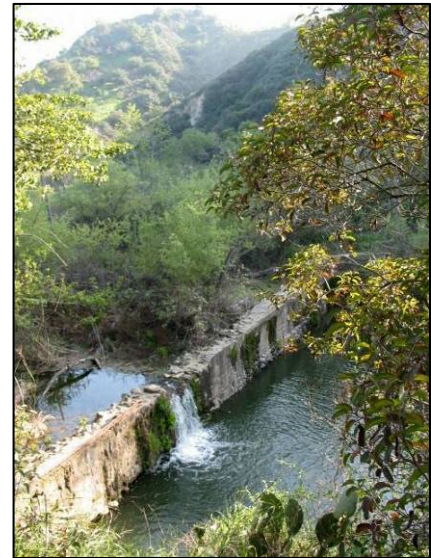
*Institutions: 2.0 FAR*

The Public Facilities and Institutions designation provides for several types of public, quasi-public, and institutional land uses, including schools, colleges and universities, City and County government facilities, hospitals, and major utility easements and properties. This designation also includes service organizations and housing related to an institutional use, such as dormitories, employee housing, assisted living, convalescent homes, and skilled nursing facilities. The maximum permitted intensity for civic uses, schools, and public facilities is 0.5 FAR, whereas the maximum for institutions, such as universities and hospitals, is 2.0 FAR.



***Open Space***

The Open Space designation includes a substantial part of the eastern portion of Orange’s planning area. Much of this area includes steep hillsides or environmentally sensitive areas that should be preserved. Although these areas may be designated as permanent open space, it is not intended that they be developed as public parks. Lands within this designation include both privately held open space lands and public lands.







***Open Space Park***

The Open Space Park designation refers to public lands used for passive and active recreation. This includes all parklands owned and maintained by the City of Orange, as well as parks operated by the County.



***Open Space Ridgeline***

The Open Space Ridgeline designation is designed to preserve visually significant ridgelines and steep hillsides. The City has adopted a hillside grading policy that prohibits development or grading on ridgelines with this designated land use.

***Resource Area***

The Resource Area designation provides for the continued use of areas for mining and agriculture. Passive and active recreational uses are also permitted in areas with this designation. Resource Areas also serve as a holding zone for areas that are currently used for mining and agriculture, but may not have these uses in the future.

**Land Use Policy Map**

The Land Use Policy Map (Figure LU-5) graphically represents the planned distribution and intensity of land use citywide. The colors shown on the map correspond to the land use designations described above.

**General Plan Development Capacity**

Table LU-2 identifies the development capacity associated with the planned distribution of land uses. Over time, as properties transition from one use to another or property owners rebuild, land uses and intensities will gradually shift to align with the intent of this Land Use Element. Table LU-2 summarizes the land use distribution, and the resultant residential and nonresidential levels of development that can be expected from full implementation of land use policies established by this General Plan. Given the largely built-out character of Orange and the good condition of most buildings, significant redevelopment activities may not occur over the life of this General Plan. However, within focus areas described in this Element, future land use changes are anticipated.



## General Plan and Zoning Consistency

The Land Use Element is primarily implemented by the City's Zoning Code, which specifies districts and performance standards for various types of land uses described in the General Plan. Table LU-3 indicates the corresponding zone district that applies to each General Plan land use designation. The zone districts specify the permitted uses for each category as well as applicable development standards. Zone districts specified in Table LU-3 for Mixed-use General Plan designations are new districts, and will be developed as part of the Zoning Code update implementing the General Plan.

## Specific Plans and Neighborhood Plans in Orange

A specific plan is a detailed plan for the development of a particular area. Specific plans are intended to provide finite specification of the types of uses to be permitted, development standards (setbacks, heights, landscape, architecture, etc.), and circulation and infrastructure improvements that are only broadly defined by the General Plan. Specific plans are often used to ensure that multiple property owners and developers adhere to a single common development plan. Specific plans are also used as a means of achieving superior design by providing flexibility in development standards beyond those contained in the Zoning Ordinance.

The City has used Specific Plans and Neighborhood Plans as tools to achieve the coordinated development of individual parcels. Specific Plans and Neighborhood Plans currently in effect include:

- Archstone Gateway
- Chapman University
- East Orange Plan (1975)
- Immanuel Lutheran Church
- Orange Park Acres
- Pinnacle at Uptown Orange
- St. John's Lutheran Church
- Santa Fe Depot Area
- Serrano Heights
- Upper Peters Canyon

Each of these plans and any future specific plans adopted by the City must be consistent with the policies expressed in this Element. The City will continue to utilize specific plans to achieve development objectives consistent with the General Plan.



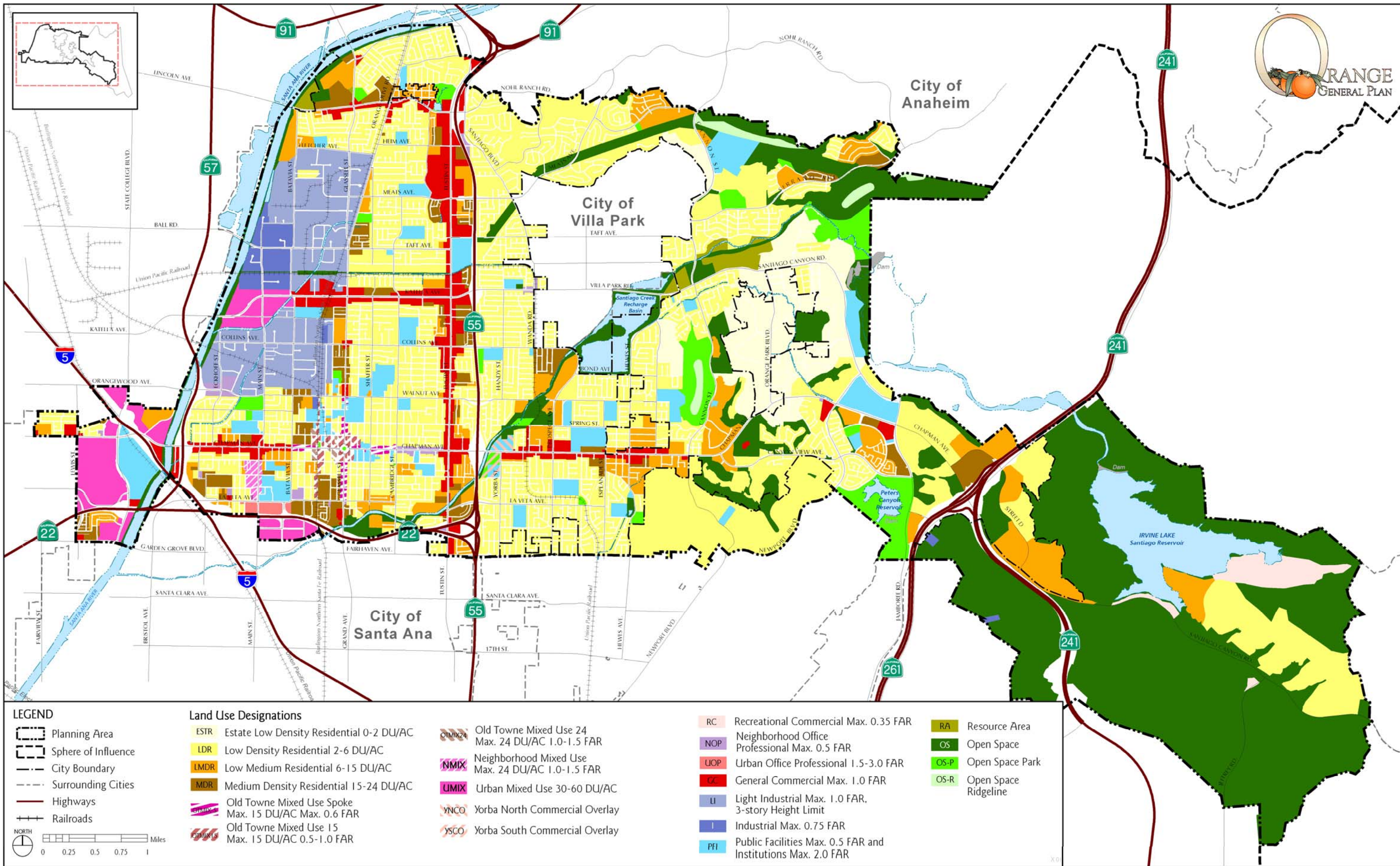


Figure LU-5 Land Use Policy Map





**Table LU-2  
General Plan Development Capacity**

Land Use Designation	Acres			Sphere of Influence	Dwelling Units			Non-Residential Square Feet (1,000s)			Population		
	Planning Area		Total		Planning Area		Total	Planning Area		Total	Planning Area		Total
	City	Unincorporated			City	Unincorporated		City	Unincorporated		City	Unincorporated	
Estate Low Density Residential	656	355	1,011	--	1,181	639	1,819	--	--	--	3,678	1,989	5,667
Low-Density Residential	5,599	814	6,413	--	27,994	4,069	32,063	--	--	--	87,203	12,674	99,877
Low-Medium Density Residential	1,302	54	1,356	--	10,414	435	10,849	--	--	--	32,439	1,357	33,796
Medium Density Residential	605	2	607	--	9,863	29	9,892	--	--	--	24,658	73	24,731
Old Towne Mixed Use													
Old Towne Mixed Use Spoke	31	--	31	--	123	--	123	403	--	403	308	--	308
Old Towne Mixed Use 15	49	1	50	--	274	5	280	640	13	652	685	17	702
Old Towne Mixed Use 24	11	--	11	--	130	--	130	224	--	224	326	--	326
Neighborhood Mixed Use	26	--	26	--	300	--	300	343	--	343	749	--	749
Urban Mixed Use	426	--	426	--	10,223	--	10,223	15,772	--	15,772	25,558	--	25,558
General Commercial	686	1	687	--	--	--	--	10,465	11	10,476	--	--	--
Recreational Commercial	218	--	218	--	--	--	--	1,659	--	1,659	--	--	--
Neighborhood Office Professional	58	--	58	--	--	--	--	897	--	897	--	--	--
Urban Office Professional	28	--	28	--	--	--	--	1,823	--	1,823	--	--	--
Light Industrial	936	--	936	--	--	--	--	20,381	--	20,381	--	--	--
Industrial	184	--	184	--	--	--	--	5,220	--	5,220	--	--	--
Public Facilities and Institutions													
Public and Civic Facilities	568	9	577	--	--	--	--	3,056	59	3,115	--	--	--
Institutions	325	--	325	--	--	--	--	9,035	--	9,035	--	--	--
Open Space	6,646	--	6,646	--	--	--	--	--	--	--	--	--	--
Open Space-Park	573	1	574	--	--	--	--	--	--	--	--	--	--
Open Space-Ridgeline	98	--	98	--	--	--	--	--	--	--	--	--	--
Resource Area	93	27	120	--	--	--	--	--	--	--	--	--	--
Streets and Rights of Way	3,268	312	3,579	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>22,387</b>	<b>1,575</b>	<b>23,962</b>	<b>15,800</b>	<b>60,503</b>	<b>5,177</b>	<b>65,680</b>	<b>69,919</b>	<b>82</b>	<b>70,001</b>	<b>175,605</b>	<b>16,110</b>	<b>191,715</b>

Note: Population estimates are based on average of 3.16 persons per single-family dwelling unit and 2.5 persons per multiple-family unit.



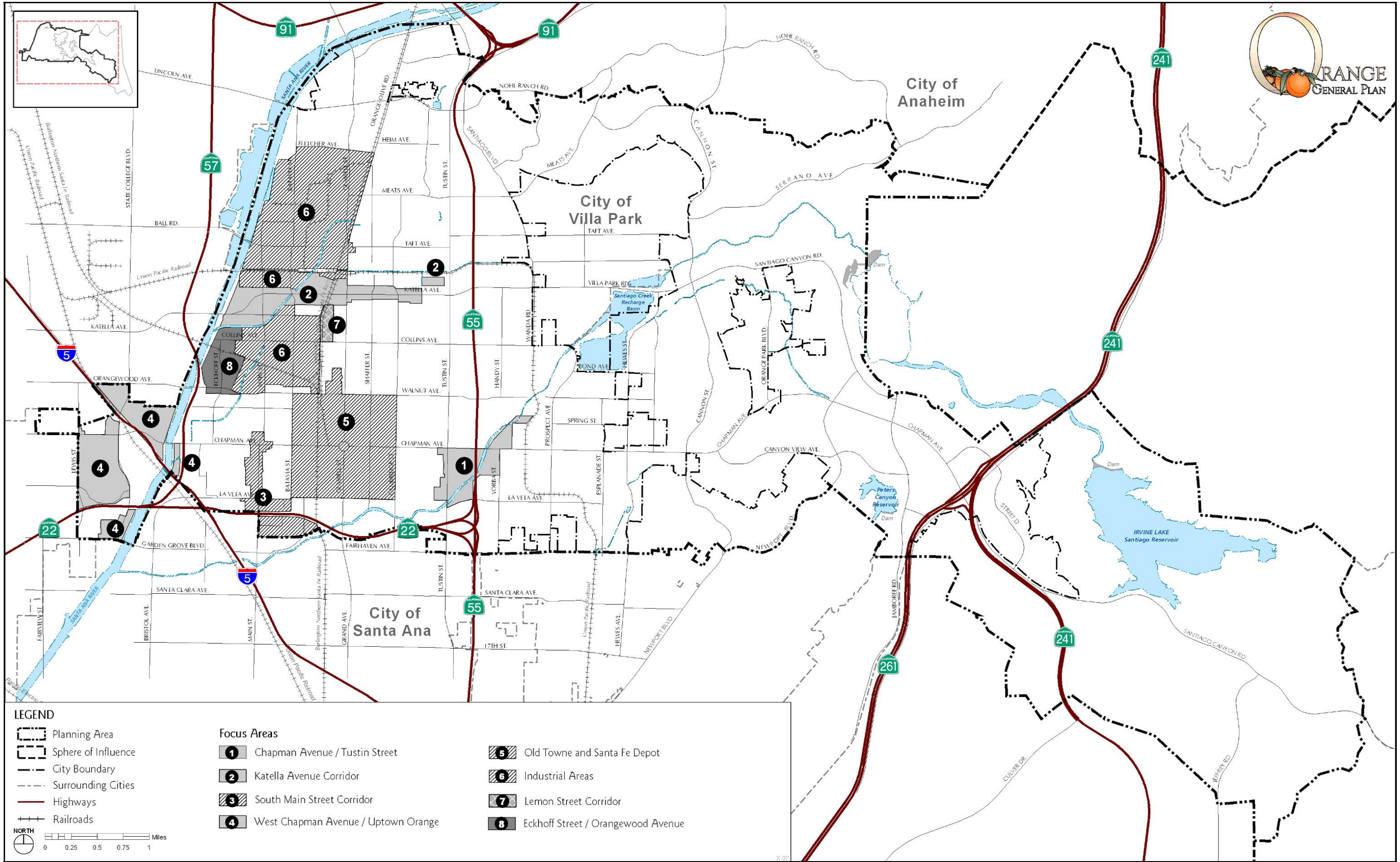
**Table LU-3  
Land Use / Zoning Consistency**

Zoning	RI-5	RI-6	RI-7	RI-8	RI-10	RI-12	RI-15	RI-20	RI-40	RI-R	R2-6	R2-7	R2-8	R3	R4	MH	OP	CP	C-TR	C1	C2	C3**	CR**	M1	M2	A1	RO	SH	PI	SG	PC	FP-1	FP-2	A	E	P		
<b>Residential Designations</b>																																						
Estate Low Density Residential								•	•	•																									•			
Low-Density Residential		•	•	•	•	•	•																												•	•	•	
Low-Medium Density Residential	•										•	•	•	•		•																		•		•		
Medium Density Residential														•	•	•																	•		•			
<b>Mixed Use Activity Center Designations*</b>																																						
Old Towne Mixed Use Spoke*																	•	•		•	•															•		
Old Towne Mixed Use 15*																	•	•		•	•															•		
Old Towne Mixed Use 24*																																						
Neighborhood Mixed Use*																																						
Urban Mixed Use*																						•	•															
<b>Commercial Designations</b>																																						
General Commercial																	•	•	•	•	•														•			
Recreation Commercial																																				•		
Neighborhood Office Professional																	•	•	•																			
Urban Office Professional																	•																					
<b>Industrial Designations</b>																																						
Light Industrial																									•													
Industrial																										•												
<b>Public Facilities and Open Space Designations</b>																																						
Public Facilities and Institutions																									•										•		•	
Open Space																											•	•							•	•	•	
Open Space – Park																											•								•			
Open Space – Ridgeline																											•	•										
Resource Area																											•							•	•			
<b>Overlay Districts</b>																																						
Yorba North Commercial***																												•						•				
Yorba South Commercial****																												•							•			

\* Zoning districts for these new land use designations will be developed in accordance with the General Plan Implementation Program. This table will be updated at the time the zoning is adopted.  
 \*\*The C3 and CR zones were previously associated with the 1989 General Plan's Commercial Recreation land use designation. The portion of the City with this land use designation has been re-designated Urban Mixed-use. This table will be updated upon adoption of the mixed-use zoning standards developed in accordance with the General Plan Implementation Program.  
 \*\*\* Overlay applies only to area generally north of Chapman Avenue, east and west of Yorba Street, south of Santiago Creek, and abutting the rear property line of parcels fronting Wheeler Street.  
 \*\*\*\* Overlay applies only to area south of Chapman Avenue, west of Yorba Street, north of Palmyra Avenue, and east of Santiago Creek.







**LEGEND**

- Planning Area
- Sphere of Influence
- City Boundary
- Surrounding Cities
- Highways
- Railroads

**Focus Areas**

- 1 Chapman Avenue / Tustin Street
- 2 Katella Avenue Corridor
- 3 South Main Street Corridor
- 4 West Chapman Avenue / Uptown Orange
- 5 Old Towne and Santa Fe Depot
- 6 Industrial Areas
- 7 Lemon Street Corridor
- 8 Eckhoff Street / Orangewood Avenue

**Scale:** 0 0.25 0.5 0.75 1 Miles

**North Arrow:** NORTH

Figure LU-6 Land Use Focus Areas





## Land Use Focus Areas

Figure LU-6 identifies the following eight land use focus areas, which represent locations in the City where future land use change may occur.

- (1) Chapman Avenue/Tustin Street
- (2) Katella Avenue Corridor
- (3) South Main Street Corridor
- (4) West Chapman Avenue/Uptown Orange
- (5) Old Towne and Santa Fe Depot
- (6) Industrial Areas
- (7) Lemon Street Corridor
- (8) Eckhoff Street/Orangewood Avenue

Within portions of the City that do not lie within one of the identified focus areas, no significant land use changes are anticipated. For properties within the focus areas where uses established prior to adoption of this General Plan become non-conforming, the City recognizes these pre-existing conditions as legal. It is the City's desire to allow these uses and the facilities in which they are located to continue until a change to the property is initiated by the property owner.

Each focus area has unique future development objectives, responding to priorities established in the Vision and input from the community. Providing additional community open space and facilitating use of transit and other alternative transportation modes are encouraged as a component of future development within many focus areas. Others focus areas maintain and enhance job growth, economic development, and affordable housing options within the City. For each area, the sections that follow provide a brief discussion of the recent planning context, a summary of each area's market potential, and a description of the land use plan and future development objectives.

### **Chapman Avenue/Tustin Street**

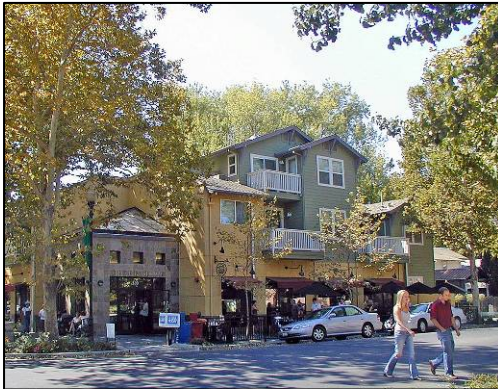
This focus area consists of residential, commercial, institutional, open space, and park uses surrounding the intersection of Chapman Avenue and Tustin Street. The focus area includes Chapman Hospital, Yorba Park, and Santiago Creek. SR-55 passes through this focus area in a north-south direction, with an interchange at Chapman Avenue. Key considerations within this area include the continued viability of commercial and institutional uses at the intersection of Chapman Avenue and Tustin Street, potential for more productive use of properties on both sides of Tustin Avenue from Chapman Avenue to La Veta Avenue, maintaining public access to Santiago Creek throughout the focus area, and the future use of the Yorba Park site east of the SR-55. Although the Open Space-Park designation has not been changed on the Yorba Park site, the Yorba South Commercial Overlay has been applied to the park and the adjacent Orange Unified School District (OUSD) Education Center. The Yorba South Commercial Overlay designation provides for the future potential of the Yorba Park site to be used for commercial purposes that take advantage of its proximity to the SR-55 interchange. Any future commercial use of the Yorba Park site would require the City and potential developer to identify commensurate parkland and/or facilities per the terms of a Development Agreement.



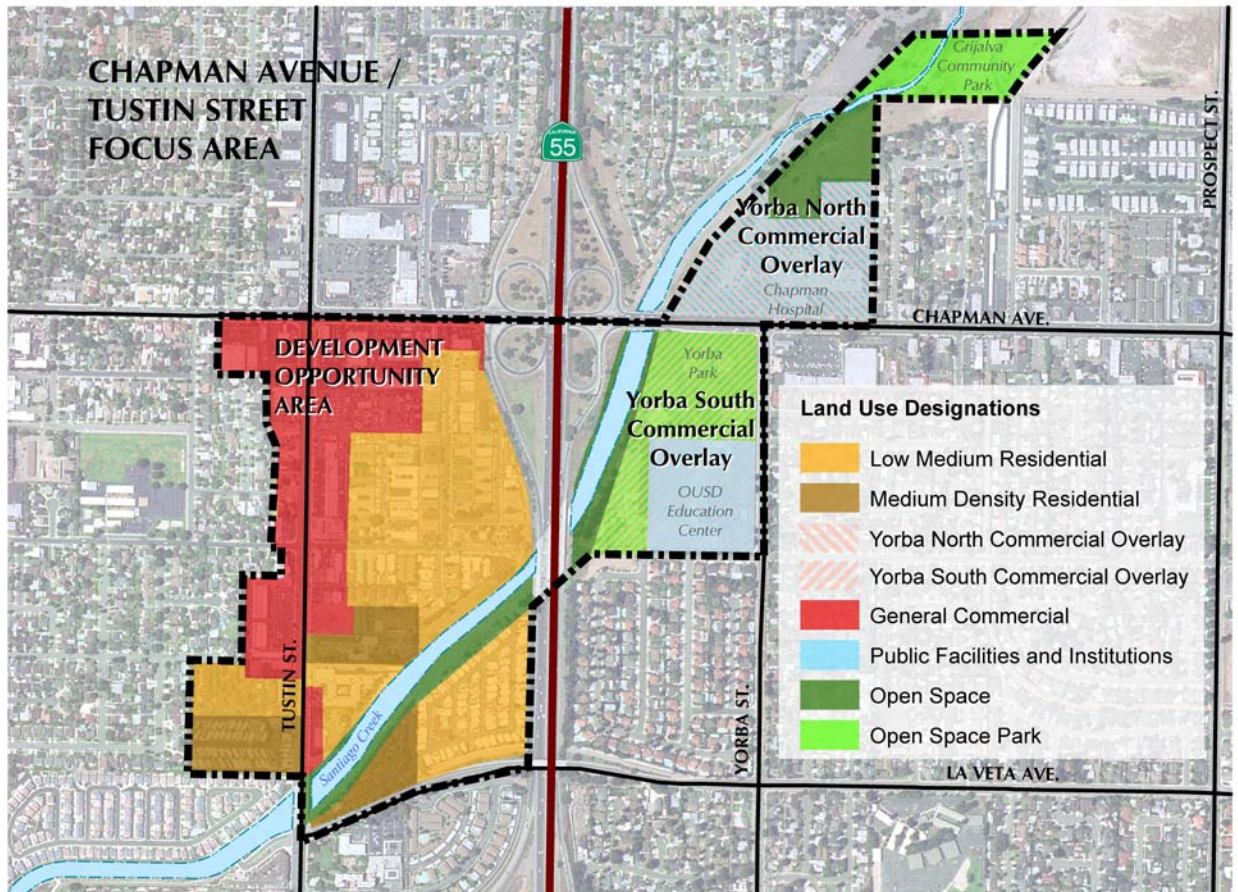


This area is well-served by the SR-55 freeway, but is not a regional destination. Market studies completed for the General Plan update have concluded that this area is likely to develop as an office and professional service center. The Chapman Hospital site includes continued hospital and medical office use. This focus area is located completely within the City's Redevelopment Project Area, which can allow for ongoing revitalization and/or intensification of existing commercial uses. The Yorba North Commercial Overlay has been applied to the Chapman Hospital site. This Overlay designation provides for mixed uses compatible with a public facility or institutional use subject to approval of a specific plan. The integration of housing, small-scale commercial uses and pedestrian-orientated features in this area desirable given its relationship to existing neighborhood-serving commercial uses, the Santiago Creek Trail corridor, and Grijalva Park.

The land use plan for this focus area is based upon the following future development objectives, which are consistent with citywide Land Use Element policies and the Vision:



- Emphasize continued commercial and multiple-family residential designations west of SR-55.
- Promote viable open space recreation uses of Grijalva Park, and Santiago Creek.
- Allow potential future commercial uses on the Yorba Park and OUSD Education Center sites in conjunction with on- or off-site parkland improvements.
- Maintain hospital and medical office uses near Chapman Hospital.



The plan maintains the Public Facilities and Institutions designation on the Chapman Hospital site east of SR-55, allowing continued hospital and medical office uses. Most currently commercial areas along Tustin Street are designated General Commercial to provide for retail and service uses that support surrounding residential areas. Areas along Tustin Street approaching Santiago Creek are designated Low Medium and Medium Density Residential, allowing a combination of duplexes, mobile home parks, and apartments and condominiums. East of SR-55, an Open Space-Park designation is applied to Yorba Park and to Grijalva Park, located northeast of the Chapman Hospital site. An Open Space designation surrounds much of Santiago Creek throughout the focus area. An additional Open Space area is located between Grijalva Community Park and Chapman Hospital.

### **Katella Avenue Corridor**

The Katella Avenue Corridor consists of properties located north and south of Katella Avenue between the Santa Ana River on the west and California Street on the east. The focus area also includes portions of Main Street between the Collins Channel and Katella Avenue, and portions of Struck Avenue between Katella Avenue and the Collins Channel. West Katella serves as a gateway into the City from Anaheim and interfaces with the highly active area surrounding The Pond and Angel Stadium, the Santa Ana River, and the Platinum Triangle. While the West Katella corridor functions as a solid commercial district for the City, the westernmost portion of Katella Avenue has untapped potential due to its strategic location and under-utilized properties.

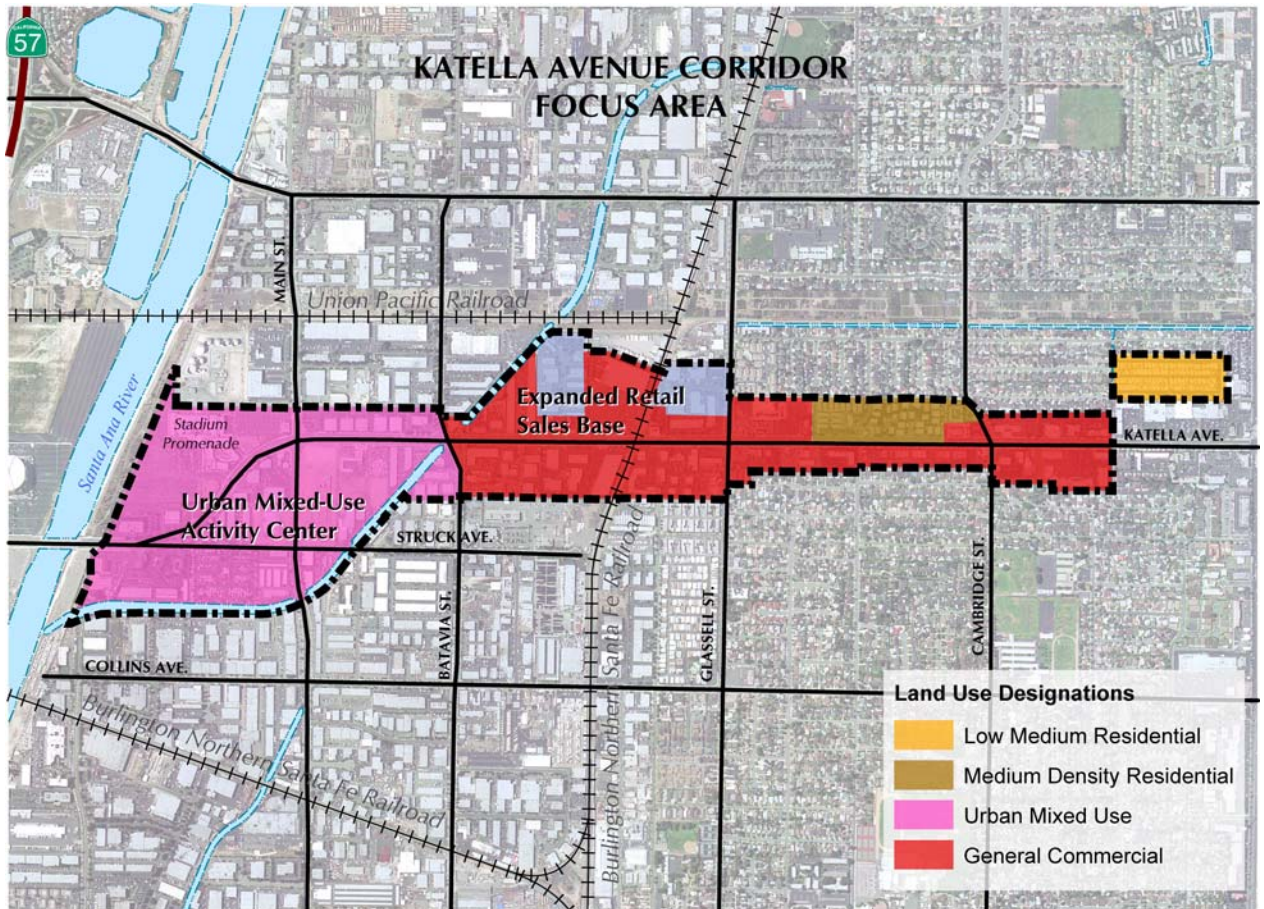




This western portion of this focus area is located within the City's Redevelopment Project Area. The Katella Avenue Corridor includes a good variety of both retail and small office uses. Its location at the midpoint of the City's industrial area provides service and support functions for these uses. The current Stadium Promenade site could maximize development potential to include mixed housing and retail uses that complement the current uses on the site.

Market studies completed for the General Plan update concluded that the western-most portion of this focus area could support mixed-use development, including housing at high densities. By employing this land use strategy, the City could encourage design of a signature development project on West Katella Avenue, serving as a gateway from the Platinum Triangle in Anaheim into the City of Orange.

West Katella Avenue, serving as a gateway from the Platinum Triangle in Anaheim into the City of Orange.



The land use plan for this focus area is based upon the following future development objectives, which are consistent with citywide Land Use Element policies and the Vision statement:





- Establish an active, vibrant urban mixed-use residential gateway to the City featuring high-density residential uses.
- Capitalize on development of expanded entertainment uses and housing across the Santa Ana River in Anaheim.
- Enhance retail options and convenience throughout west Orange.

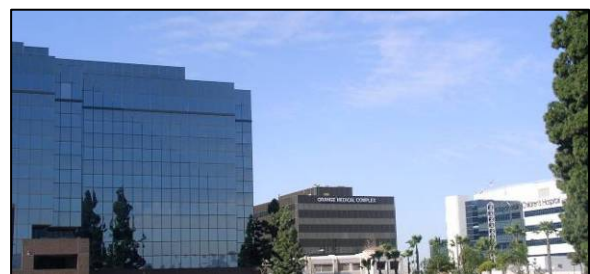
The land use plan features an Urban Mixed-use designation within the portion of the area between the Santa Ana River and Batavia Street, General Commercial and Industrial between Batavia Street and Glassell Street, and General Commercial and Medium Density Residential uses between Glassell Street and California Street. The Urban Mixed-use area is intended to be a regionally-oriented activity center, characterized by mid- to high-rise structures with uses that could include housing (30.0 to 60.0 du/ac), commercial retail uses, restaurants, offices, and civic uses. The General Commercial designation recognizes the contributions of the Katella Avenue corridor to the City's overall retail sales base, and encourages some expansion and intensification of these uses, up to a maximum FAR of 1.0. Additionally, public input regarding this area emphasizes the need to incorporate youth and teen activities within the uses; to improve the appearance of Katella Avenue in the



context of new development, conveying the identity of a grand boulevard; and to gradually phase out strip commercial uses along certain segments of the corridor. The Neighborhood Mixed-use designation allows local- and neighborhood-supporting mixed-use activity centers and corridors, which could include housing (at up to 15.0 du/ac). This designation maintains the commercial nature of the corridor with housing uses that help to transition into adjacent Low Density Residential designations.

### **South Main Street Corridor**

The South Main Street Corridor includes the Children's Hospital of Orange County (CHOC) and St. Joseph Hospital medical centers on La Veta Avenue, as well as various commercial and office uses on Main Street between La Veta Avenue and Chapman Avenue. Multiple-family residential apartments located west of Main Street and south of Chapman Avenue form a buffer between the Main Street corridor and single-family neighborhoods to the west. The South Main Street corridor also includes areas south of SR-22 along Town and Country Road, characterized by mid-rise office, senior housing, and commercial retail uses.



Most of this focus area is located within the City's Redevelopment Project Area. South Main Street serves as a key approach to the major medical hub created by CHOC and St. Joseph Hospital medical centers. These medical facilities have generated a spin-off demand for medical office space

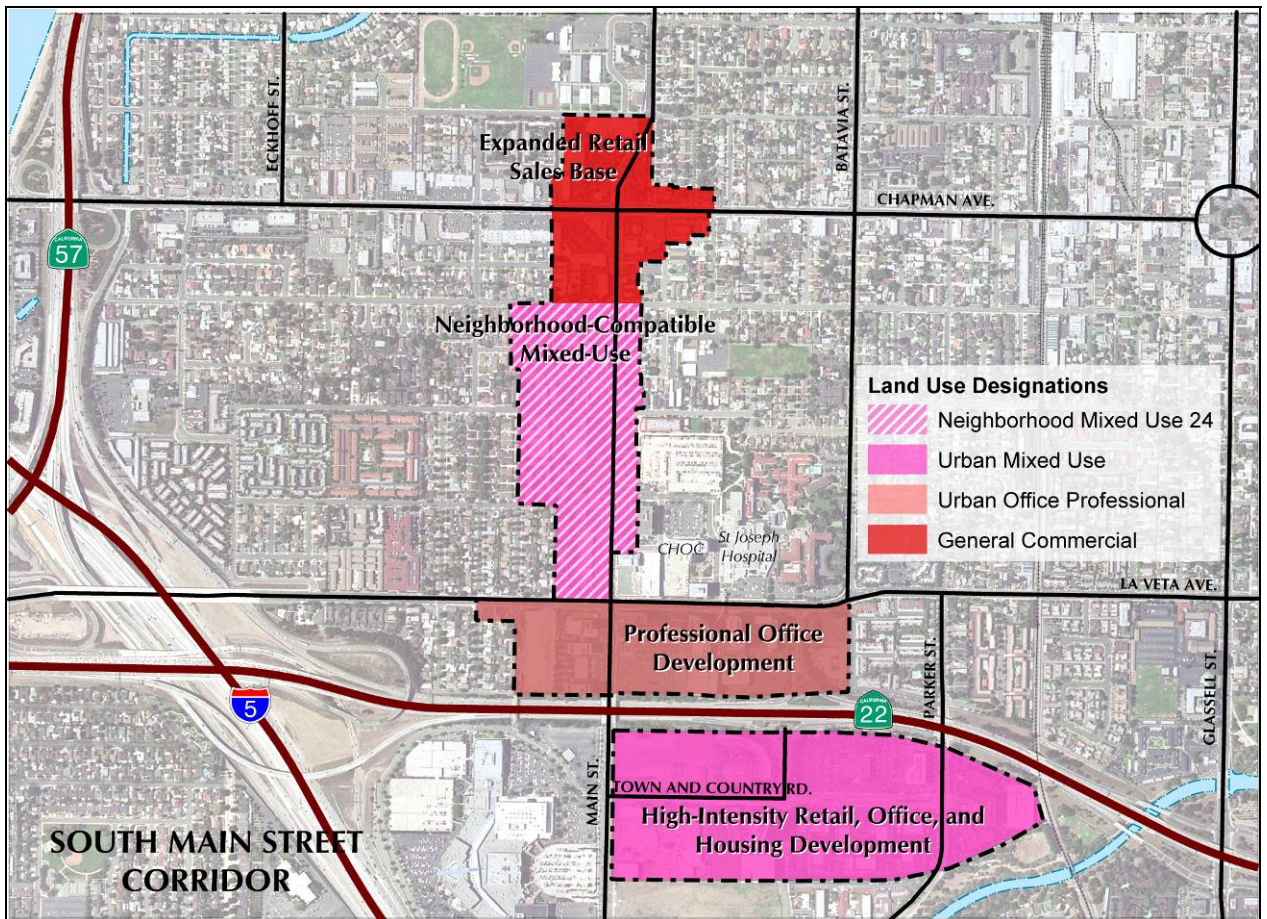


and other complementary uses that existing land use policies and parcel sizes do not easily accommodate. In recent years, new medical office buildings have been constructed on redeveloped sites, but many commercial properties remain that are incompatible with desired medical uses. The corridor also abuts established single- and multi-family neighborhoods, making expansion and intensification a challenge. Market studies completed for the General Plan update concluded that this area has good potential to provide for relatively high density housing and mixed-use development that supports current and future medical facilities in the area, while the Town and Country shopping center and Main Place regional mall in Santa Ana continue to provide nearby retail amenities.



The land use plan for this focus area is based upon the following future development objective, which is consistent with citywide Land Use Element policies and the Community Vision:

- Encourage compatible and integrated residential, commercial, and office uses.
- Promote development of a medical corridor that capitalizes on existing hospital and medical uses.







The plan encourages mid- to high-rise office, medical, housing, and retail uses south of La Veta Avenue. It applies the Urban Mixed-use and Urban Office Professional designations to properties along La Veta Avenue, Town and Country Road, and Parker Street. Urban Mixed-use areas south of SR-22 are intended to provide for integrated commercial retail, professional office, housing, and civic uses. Commercial retail uses are intended to be the primary use on the

ground floor within these areas. Urban Office Professional areas north of SR-22 are intended to provide for urban, high-intensity, mid- and high-rise office centers. Professional office is intended as the primary use. Both designations allow for a maximum allowable intensity of 3.0 FAR within this area. A limited number of high-rise office and residential projects may also be permitted within this focus area through the use of transferable development rights.

The plan also features Neighborhood Mixed-use designations for portions of Main Street south of Almond Avenue. This designation encourages compatible and integrated residential, commercial, office, and medical uses, either as multiple-story projects with ground-floor retail, or as stand-alone projects with pedestrian connections to the arterial corridors. Neighborhood-scale mixed-use at this location is intended to support the ongoing transformation of south Main Street into a medical corridor in a manner sensitive to surrounding single-family residential areas. On south Main Street, Neighborhood Mixed-use areas are permitted at a maximum density of 24.0 du/ac, and a maximum FAR of 1.5. In the Town and Country Road area south of SR-22, high intensity retail, office and housing development is encouraged within the Urban Mixed-use designation, which allows a maximum density of 60.0 du/ac, and a maximum FAR of 3.0. The General Commercial designation present at the intersection of Main Street and Chapman Avenue allows for a maximum development intensity of 1.0 FAR, to enable more productive use of retail properties near the intersection.

### **West Chapman Avenue/Uptown Orange**

The West Chapman/Uptown Orange focus area consists of mostly commercial and industrial properties located west of SR-57, as well as commercial areas located along Anita Drive, just east of the Santa Ana River. In recent years, the City has experienced a high level of interest in sites available for redevelopment in Uptown Orange (generally bounded by SR-57 and State College Boulevard). Large multi-family developments have recently been constructed and property owners and developers remain interested in increased office, retail, and housing opportunities. Factors influencing redevelopment interest in this area include expansion of the University of California Irvine (UCI) Medical Center, freeway accessibility, improvements at The Block at Orange, County government facilities located in the area, and the City of Anaheim's Platinum Triangle Plan.



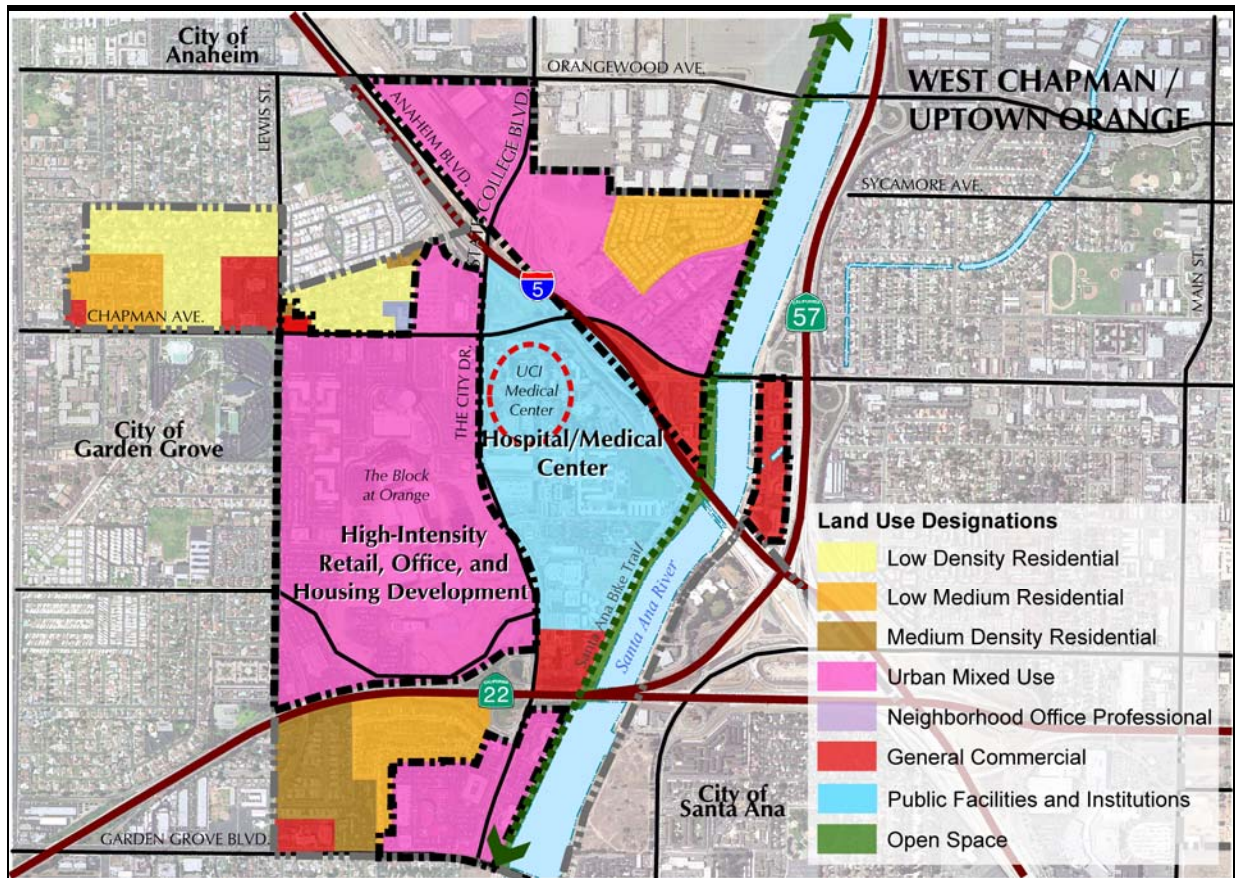
Uptown Orange is the most urban of the eight focus areas. It adjoins Anaheim, Garden Grove, and Santa Ana, where substantial higher-density development is already underway. Uptown is well-served by freeways and contains a mix of major destination uses, including shopping, entertainment, offices, hotels, and a hospital. As a regional mixed-use node, Uptown should accommodate additional development intensity, including high-density multifamily residential development.

Market studies completed for the General Plan update concluded that Uptown Orange has the potential to complement similar residential/mixed-use development in surrounding cities. Existing and proposed retail/entertainment facilities at The Block provide the atmosphere to create a live, work, and play destination once higher-density residential units are introduced. This mixed-use development strategy and increased residential densities will require improved transit access. Additionally, the presence of the Santa Ana River and associated regional bike trail along the eastern edge of the focus area provides great opportunity to improve the community's access to and relationship with the river, and to integrate access to and views of the river corridor in the design of mixed-use projects.



The land use plan for this focus area is based upon the following future development objectives, which are consistent with citywide Land Use Element policies and the Vision Statement:

- Encourage integrated commercial retail, professional office, housing, and civic uses.
- Provide convenient transit access, innovative housing options, and pedestrian-oriented design.
- Require new development projects to provide community open space areas and retain or improve access to the Santa Ana River Trail.



The plan features an Urban Mixed-use designation for most of the focus area, which provides for integrated commercial retail, professional office, housing and civic uses. Convenient transit access, innovative housing options, and pedestrian-oriented design will be encouraged. High intensity retail, office and housing development is encouraged within the Urban Mixed-use designation, which allows a maximum density of 60.0 du/ac, and a maximum FAR of 3.0. A limited number of high-rise office and residential projects that exceed the maximum density or intensity may also be permitted within this focus area through the use of transferable development rights. New development projects in this area will be required to demonstrate provision of community open space areas, and, for projects adjacent to the Santa Ana River, to provide access to the River Trail when possible.

### Old Towne and Santa Fe Depot

The Old Towne and Santa Fe Depot focus area is generally bounded by Walnut Avenue to the north, La Veta Avenue to the south, Cambridge Street to the east, and Batavia Street to the west. Uses within Old Towne consist of a variety of commercial retail, service, restaurant, and office uses lining the Chapman Avenue and Glassell Street corridors; Hart, Plaza, and Depot Parks; industrial and warehouse buildings lining the Burlington Northern/Santa Fe







(BNSF) Railway west of Glassell Street; several churches; Orange City Hall; the Orange Public Library & History Center; the Senior Center; much of the Chapman University campus; and numerous single-family and multiple-family residential units at varying densities.

Over the past several years, the City has taken steps to enable long-term preservation of historic properties in Old Towne, and in the process, has created one of California's most intact and recognized historic districts. Today, strong interest exists among segments of the community to reduce overall residential densities in the Old Towne residential quadrants, and to make the areas surrounding the Santa Fe Depot more pedestrian friendly and transit-oriented.



The Santa Fe Depot and associated Metrolink station and OCTA Transportation Center provide commuting options to people living and working in Orange. Opportunities for land use changes in this area arise because of its proximity to The Plaza and Chapman University, and due to the presence of Depot Park, under-utilized industrial properties, and surface parking lots. Land use changes could better integrate this area with its surroundings and could lead to more transit-oriented housing and creative re-use of historic industrial and commercial buildings.

Old Towne is the heart of the City, and the General Plan seeks to protect the small-scale fabric of the area, as well as the existing predominantly single-family neighborhoods that surround the Plaza. Residents in this "small town" district enjoy proximity to key quality-of-life amenities, such as restaurants, shopping, commuter rail services, and other public facilities. The area provides amenities that are compatible with and supportive of new mixed-use development, which may include small-scale office development, additional storefront retail, and new housing. Market studies completed for the General Plan update concluded that mixed-use designations in this area are more likely to build out as residential use than as non-residential use. Residential uses will in turn drive support for additional non-residential development.

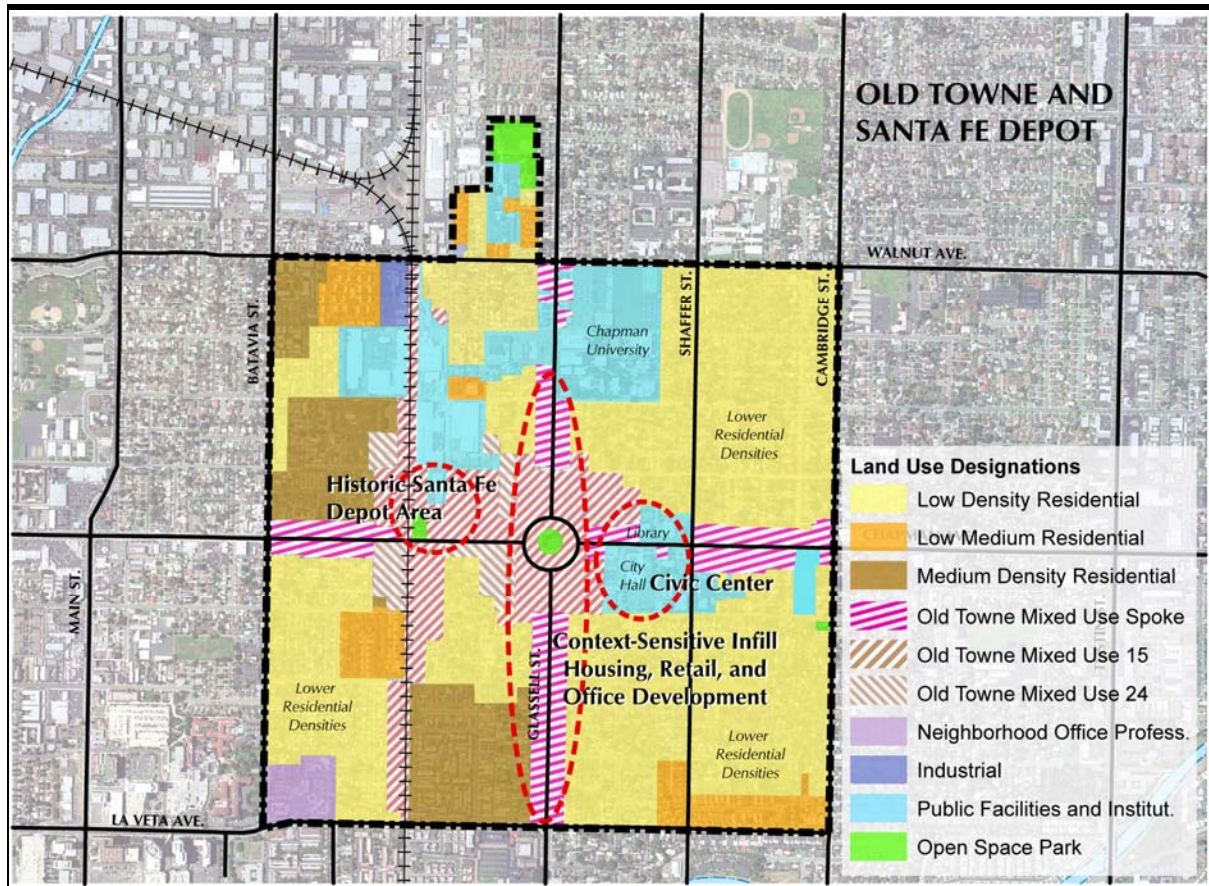
The land use plan for this focus area is based upon the following future development objectives, which are consistent with citywide Land Use Element policies and the Vision statement:

- Reduce residential densities in many Old Towne neighborhoods.
- Continue to protect and enhance Old Towne's historic character.
- Introduce neighborhood-scale mixed-use along Chapman Avenue and Glassell Street, and adjacent to the BNSF railroad.
- Encourage the adaptive re-use of existing industrial areas and the creation of transit-oriented developments around the historic Santa Fe Depot.
- Maintain and enhance Old Towne's walkability.
- Provide for continued use and enhancement of the civic center.





The plan features lower residential densities within the northeast, southwest and southeast quadrants of Old Towne, and introduces mixed-use within the historically industrial areas adjacent to the BNSF railroad. Low Density (maximum 6.0 du/ac) residential designations are applied to most current residential areas located east of Glassell Street. West of Glassell Street, a combination of Low, Low Medium, and Medium Density Residential designations are found, consistent with current development patterns. The intent of these designations is to ensure that infill development within Old Towne over time is consistent with the style, density, character, and intensity of the historic residential neighborhood character.



Two Old Towne Mixed-use designations with a maximum density of 15.0 du/ac surround the Plaza and line much of Chapman Avenue, Glassell Street, and the BNSF railroad corridor. One of these is designed with a lower floor area ratio to maintain the historic residential character associated with the Spoke Streets. A higher-density Old Towne Mixed Use designation that allows up to 24.0 du/ac generally occurs along Olive Street, north and south of Chapman Avenue, and around Pixley Street. The higher-density designation supports future plans for transit-oriented development near the Metrolink station outlined within the *Santa Fe Depot Specific Plan*. The Old Towne Mixed Use designations encourage and support development up to the property lines in the downtown core and Santa Fe Depot Specific Plan area in order to maintain the historic streetscape and building pattern that characterizes these portions of the Old Towne area. Ground floor retail uses are encouraged for most infill development projects, which could be supported by residential or office uses on subsequent stories. Stand alone commercial, residential, or office projects may also be appropriate, provided they do not interrupt the historic streetscape. The Old



Towne Mixed-use designations also encourage the adaptive re-use of the existing industrial areas, and support improved walkability within the area.

Chapman University and the Orange Civic Center are contained within the Public Facilities and Institutions designation. The civic center includes City Hall, the Orange Public Library & History Center, the Chamber of Commerce, Fire Department Station 1, St. John’s Lutheran School, Emanuel Lutheran School, the Women’s Club, and the Ainsworth House.

**Industrial Areas**

This focus area generally consists of properties located north of Orangewood Avenue/Walnut



Avenue and west of the BNSF Railway. Portions of the area, including the Katella Avenue Corridor and the Orangewood/Eckhoff area, are also addressed in more detail in other focus areas. Orange’s industrial area is characterized by a broad mix of business park, office, manufacturing, warehousing and commercial uses. A limited number of single-family homes are located in the industrial area, mostly concentrated along Cully Drive.



The entirety of this focus area is located within the City’s Redevelopment Project Area. Over time, market forces may create demand for more office space or for more intense business park or warehouse uses than currently exist. Considering ways to increase the intensity of uses throughout the City’s industrial areas will encourage more productive use of limited land resources. Care must also be exercised to ensure adequate buffering between higher intensity industrial uses and surrounding residential areas to the north and east. Market studies completed for the General Plan update concluded

that demand for industrial and office use in this area is strong, particularly among those who want to own their buildings. Therefore, the City seeks to preserve the primary industrial land use found in this area and to encourage intensification and/or redevelopment of underutilized parcels.

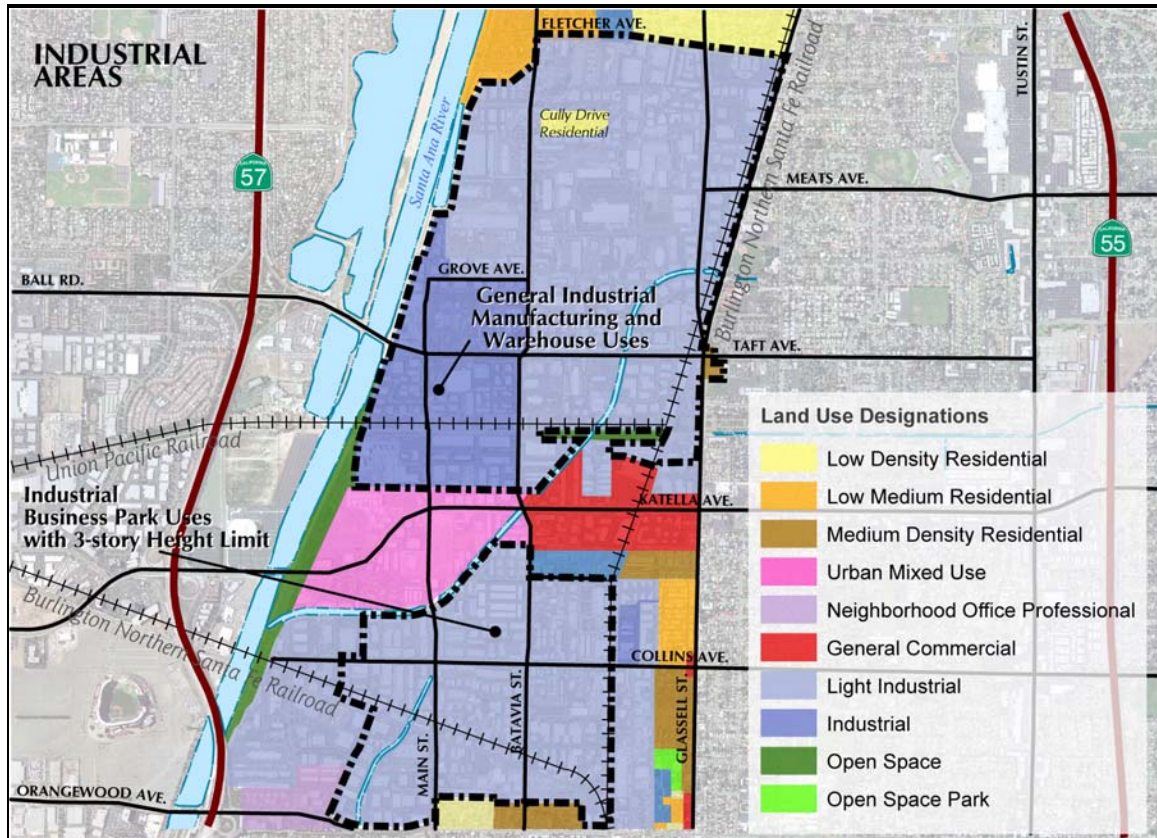
The land use plan for this focus area is based on the following future development objectives, which are consistent with citywide Land Use Element policies and the Vision statement:

- Decrease the maximum allowed intensity within areas located west of Batavia Street and generally south of Grove Avenue to discourage professional office uses within this area in favor of true industrial uses.
- Provide room for expansion of current businesses and infill of vacant properties in remaining portions of this area by increasing the maximum allowed development intensity.
- Preserve the single-family residential character of the Cully Drive neighborhood.





The plan features Industrial land use designations west of Batavia Street and generally south of Grove Avenue. At these locations, the maximum allowed intensity is 0.75 FAR. The remaining portions of the industrial area are designated Light Industrial. In these areas, the maximum allowed intensity is 1.0 FAR with a three-story height limit to ensure a sensitive interface with nearby residential areas. These changes provide capacity for current businesses to expand, and enable more intensive uses to provide infill of currently vacant properties.

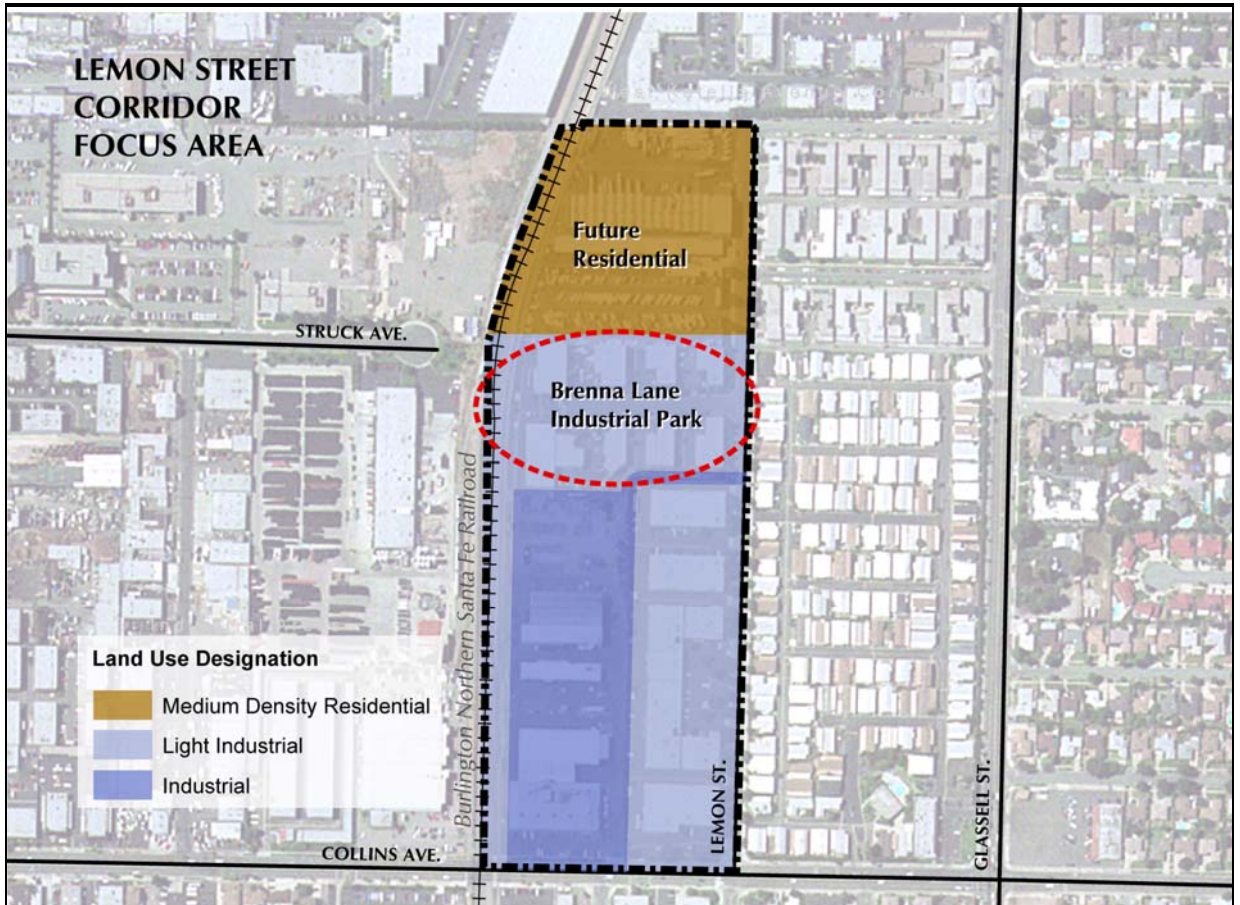


Properties on the east side of the Taft Avenue/Orange-Olive Road intersection are designated Medium Density Residential (permitting up to 24.0 du/ac). Additionally, to protect the integrity and character of the Cully Drive neighborhood, currently residential lots located on Cully Drive, east of Batavia Street, are designated for Low Density Residential use, permitting up to 6.0 du/ac.

### Lemon Street Corridor

The Lemon Street corridor is bounded by Lemon Street on the east, the BNSF Railway on the west, Hoover Avenue on the north, and Collins Avenue on the south. The corridor includes predominately industrial and office uses and vacant lots. This corridor represents an opportunity to redefine and improve the industrial interface with single- and multi-family residential uses to the east.





Market studies completed for the General Plan update indicate that developers have shown interest in providing residential uses within the Lemon Street corridor. This focus area is located in the City’s Redevelopment Project Area, and it is likely that the Redevelopment Agency will need to provide financial and lot assembly assistance in order to successfully transition this area to desirable residential development.

The land use plan for this focus area is based upon the following future development objective, which is consistent with citywide Land Use Element policies and the Vision statement:

- Establish a corridor of well-insulated, higher density residential uses, gradually transitioning, from west to east, into a single-family residential area.

The plan features a Medium Density Residential designation to the north of the focus area, allowing a maximum density of 24.0 du/ac and industrial in the southern two-thirds of the area. Future development in this area should also incorporate accessible open spaces for residents and workers and take advantage of opportunities for future trails parallel to the railroad tracks.





## Eckhoff Street/Orangewood Avenue

This focus area encompasses the area generally east of the Santa Ana River, north of Orangewood Avenue, west of Bitterbush Channel, and south of Collins Channel. The focus area largely consists of professional offices, commercial uses, warehouses, and distribution centers. It has historically been planned and zoned for industrial use; however, over the years, properties have been allowed to develop as offices, and areas adjacent to the offices have been allowed to develop as industrial parks.



This focus area is located within the City's Redevelopment Project Area. As in the City's industrial area as a whole, demand for industrial and office use in the Eckhoff Street/Orangewood Avenue area has been strong, particularly among those who want to own their buildings. The City seeks to encourage intensification and/or redevelopment of underutilized parcels.

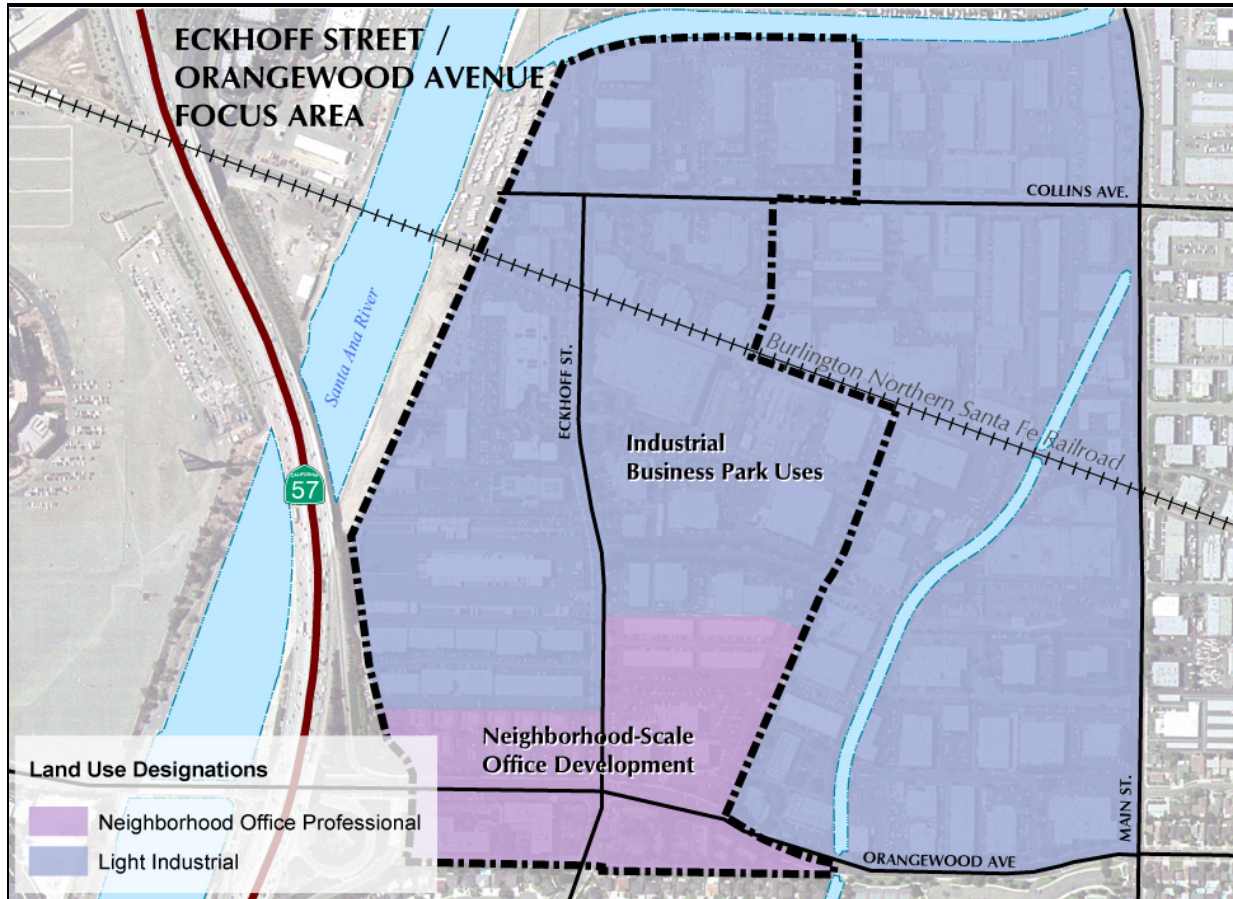


The land use plan for this focus area is based on the following objectives for future development, which are consistent with citywide Land Use Element policies and the Community Vision:

- Recognize the potential of areas north of Orangewood Avenue to continue to provide options for lower-scale office uses and business-park oriented light industrial uses, as well as warehouse and distribution uses.
- Expand current neighborhood-scale office activities along Orangewood Avenue.

The plan supports an expansion of current neighborhood office uses along Orangewood Avenue and north of the Eckhoff Street intersection. All areas designated Light Industrial have a maximum allowable building intensity of 1.0 FAR and a 3-story height limit. Properties designated for Neighborhood Office Professional use have a maximum allowable building intensity of 0.5 FAR.





## Land Use Diversity and Balanced Development

A well-balanced community provides a broad range of housing and business opportunities as well as recreational, institutional, and cultural activities that enhance the overall living environment. By encouraging a mix of land uses, the City can create an active and diverse environment that complements all lifestyles and supports neighborhoods. A balanced inventory of land uses is needed to meet the housing needs of all income groups and lifestyles, to create a stable employment and tax base, to maintain logical relationships between land uses and community assets, and to provide residents with a range of recreational opportunities. Maintaining a variety of complementary land uses will continue to be a high priority for the City.

A key challenge that the City will face when reviewing future development is that newer areas of Orange (mostly located in the eastern portion of the City) and long-established areas of the City (mostly located in the western portion) have very different development and community service needs. Priorities in the City’s western area tend to be more established, focusing on reinvention of older commercial and industrial areas and on new opportunities to provide open space as part of infill development. This contrasts with priorities for east Orange, which is characterized by more recent suburban residential development. Here, providing adequate levels of roadway, utility infrastructure, and community services that are in step with new development and do not degrade service levels in other parts of the City is a key priority.



## Mixed-use Development

As this Element has discussed, mixed-use refers to the mixing of compatible uses such as residential, commercial, and office, which increases the diversity of land uses within a given area. Mixed-use developments create vital urban areas that accommodate residents, employment, retail, and amenities within walking distance. Mixed-use will also activate neighborhoods throughout the day, unlike single-use office districts, for instance, that are often deserted at night. Mixed-use buildings are often vertically mixed, with commercial space on the first floor and residential or office space above. Horizontal mixed-use is also desirable at some locations, allowing commercial to be adjacent to an office or residential use.



The Land Use Policy Map identifies multiple types of mixed-use within the City. All of the mixed-use designations encourage a creative blend of commercial retail, office, housing, civic, and entertainment uses that may vary in composition and intensity based upon location, accessibility, and the surrounding development context. Figure LU-7 identifies potential configurations of mixed-use, in both plan and elevation, which may be found in Orange pursuant to the policies outlined in this Element. As shown in the figure, the style and intensity of mixed-use in Orange varies by location. For example, in areas designated for Urban Mixed-use, vertical mixed-use is encouraged, and mid-to-high rise buildings reaching upwards of 10 or more stories may be allowed. By contrast, in Neighborhood and Old Towne Mixed-use areas, either horizontal or vertical mixed-use is encouraged. Buildings tend not to exceed three stories, and they are designed to blend in with their surroundings. The City encourages this diversity of mixed-use development as a way of establishing vibrant activity centers, providing diverse housing opportunities, and encouraging walkable districts with convenient access to goods and services.

### Transfer of Development Rights for Residential Development or Open Space

The City seeks to promote flexibility in future development of urban mixed-use environments, to encourage and support historic preservation within Old Towne, and to encourage expansion of open space opportunities in neighborhood scale mixed-use areas. Transfers of development rights are encouraged for these four future development conditions, which are summarized in Table LU-4 and discussed below.



Table LU-4 Transfer of Development Rights Conditions				
Purpose	Site Characteristics		Maximum Transferable Unused FAR (Receiver Site)	Other Requirements
	Receiver Site Land Use Designation(s)	Donor Site Land Use Designation(s)		
Provide for increased levels of residential use at appropriate sites.	Urban Mixed-use	Urban Mixed-use	0.25 FAR	Development Agreement
Encourage development of well-designed high rise development consisting of buildings 10 stories or higher at identified locations.	Urban Mixed-use	Urban Mixed-use	1.0 FAR	Development Agreement  20 percent of receiver site must be developed as permanent improved open space
Expand and preserve open space in Neighborhood mixed-use environments	Neighborhood Mixed-use	Neighborhood Mixed-use  Old Towne Mixed-use	Variable (determined by Development Agreement)	Development Agreement
Encourage and support historic preservation in Old Towne mixed-use environments.	Old Towne Mixed-use  Neighborhood Mixed-use	Old Towne Mixed-use	Variable (determined by Development Agreement)	Development Agreement

For properties within the Urban Mixed-use designation, (see Figure LU-8) allowable land uses include residential (at 30.0 to 60.0 du/ac) or commercial retail or office, or any combination of those uses that does not exceed a maximum FAR of 3.0. For properties with proposed commercial retail and/or office development that do not exceed the maximum FAR, any unused FAR on that donor site, up to a maximum 0.25 FAR of an identified receiver site, may be transferred to other Urban Mixed-use designated properties for the purpose of developing additional residential units on the property that receives the unused FAR. This approach to development is known as a transfer of development rights (TDR) and must be completed under a development agreement in accordance with City ordinances. This TDR technique is allowed in addition to density bonus provisions of State law (section 65915 of the California Government Code). Transfers of development rights from a donor site under this strategy may be limited to one receiver site, or may involve multiple receiver sites.



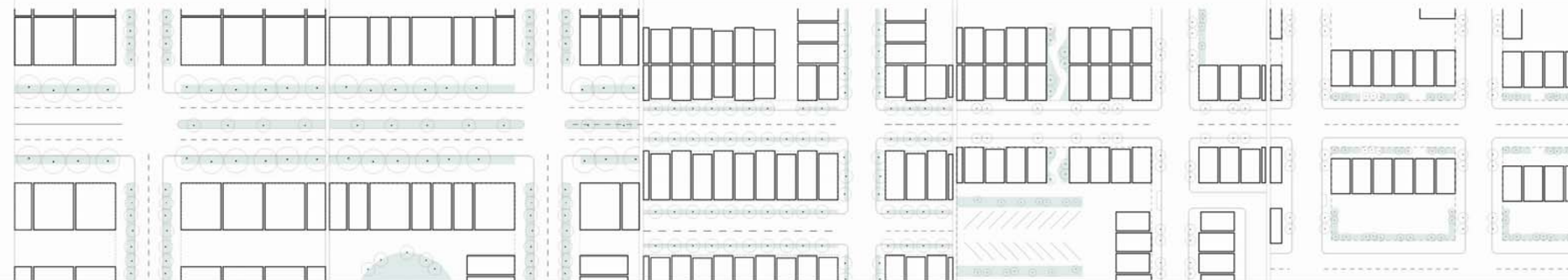
**Legend**

- Residential
- Commercial

**ELEVATION**



**PLAN**



**General Plan Land Use Designation**

Vertical Very High-Density

Vertical High-Density

Vertical Medium-Density

Horizontal Medium-Density

Horizontal Low-Density

Old Towne Mixed Use Spoke



Old Towne Mixed Use 15



Old Towne Mixed Use 24



Neighborhood Mixed Use



Urban Mixed-use  
Uptown Orange, West Katella Avenue, and Town and Country Road



*(With Transfer of Development Rights)*



N.T.S.





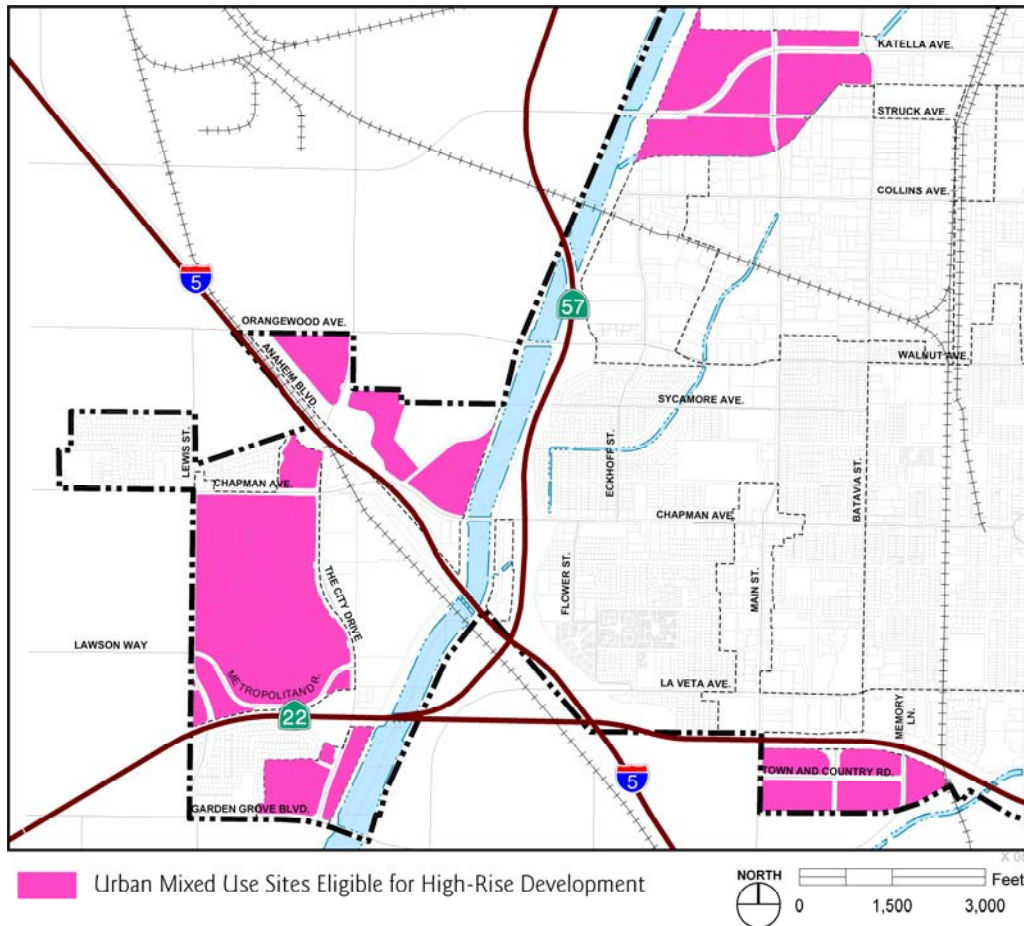


Figure LU-8  
Urban Mixed-use Sites Eligible for High Rise Development

To determine the number of residential units that can be added to the receiver property, unused FAR is converted to building floor area square footage; for example, 0.25 FAR for a receiver property of 10 acres in size is 108,900 square feet. The resulting square feet of building floor area is then divided by 1,000 square feet (the average size of a residential unit) to determine the number of additional residential units that can be added to the receiver property above and beyond the allowed 30.0-60.0 du/ac already allowed on that property. In this example, dividing 108,900 by 1,000 equals a maximum of 109 dwelling units that can be added to the receiver property, above and beyond the 300-600 dwelling units already allowed.

For some properties within the Urban Mixed-use designation, the City desires well-designed high-rise development consisting of buildings 10 stories or higher. For any unused FAR, up to a maximum of 1.0 FAR of the receiving property may be transferred from other Urban Mixed-use designated properties, if proposed development on the receiving property results in the construction of a well designed high-rise building, and at least 20 percent of the property is developed as permanent improved, publicly accessible open space.



For properties in the Neighborhood Mixed-use designation, transfers of unused FAR are permitted and encouraged for the purpose of creating open space. Similarly, in the Old Towne Mixed-use designation, transfers of unused FAR are permitted to support historic preservation within the Old Towne neighborhood.

## **Industrial and Office Uses**

Providing options for industrial development and office uses within the City contributes to the economic and employment base of the community. A variety of industrial and warehouse facilities are located in the area north and south of the western end of Katella Avenue. Uses range from large beverage and grocery distributors, to masonry and foam manufacturers, down to small one-person printing operations. Office spaces that support industrial practices can also be found in this area.

Industrial development in Orange and throughout the region has undergone some transitions in recent years. Even though traditional manufacturing activities dominate these areas, in some cases warehousing uses and a few modern office parks are starting to replace manufacturing. In addition, Orange has experienced increased demand for larger, multi-story professional office complexes at locations such as South Main Street, Town and Country Road, La Veta Avenue, and The City Drive. Demand has also grown for medical office space surrounding local hospitals.

The Land Use Policy Map indicates a change in proposed land use designations directly west of the core of Old Towne, from Industrial to Old Towne Mixed-use. By changing the land use designation, the City is encouraging the adaptive reuse of several industrial sites to support walkability and transit presence in the area. The City continues to support industrial and office uses in areas currently characterized by these uses, and encourages a mixture of office, commercial, and residential uses in the area near the Old Towne core.



## **Contextual and Environmental Compatibility**

The quality of the built and natural environments plays a large part in defining Orange's quality of life. Land use conflicts often occur when newer development is allowed to occur that is insensitive to the use, scale, or character of current development and the surrounding environment. In other cases, older, obsolete and nonconforming uses remain, interspersed among newer developments,



as when old service stations or repair shops are located in the midst of residential development. Such conflicts can lead to degradation of the built environment. The City has ensured that all proposed land use designations in this Element are designed to complement and enhance adjacent and surrounding land uses and the natural environment.

## **Coordinated Planning**

Future planning considers ongoing planning efforts of all City departments, agencies, surrounding jurisdictions and special districts. In addition, ongoing planning efforts undertaken by regional agencies such as the County of Orange, the Southern California Association of Governments, the South Coast Air Quality Management District, the Santa Ana Regional Water Quality Control Board, and others need to be examined for consistency with the City's long-range objectives.

The following plans and programs, which are administered by federal, state, county, and special purpose agencies, will help achieve the goals of the Land Use Element. The City will continue to coordinate with the agencies responsible for administering these plans to ensure that City interests are considered and met.

### **National Pollutant Discharge and Elimination System**

The City of Orange is under the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB), which implements the National Pollutant Discharge and Elimination System (NPDES) permit for the northern and central portions of Orange County. The NPDES permit, a requirement under the Clean Water Act, addresses pollution from urban runoff that threatens water quality of receiving waters (such as streams and lakes). Under the NPDES permit, Orange must implement measures to reduce urban runoff during all phases of development: planning, construction, and existing use. Requirements include incorporating Best Management Practices to reduce runoff from construction and current uses, reporting any violations to the RWQCB, and education regarding the negative water quality impacts of urban runoff.

### **California Environmental Quality Act and Guidelines**

The California Environmental Quality Act (CEQA) was adopted by the state legislature in response to a public mandate for more thorough environmental analysis of projects that might affect the environment. Provisions of the law and environmental review procedures are described in the CEQA Statutes, State CEQA Guidelines, and the City's guidelines implementing CEQA. Implementation of CEQA ensures that during the decision making stage of development, City officials and the general public will be able to assess the environmental impacts associated with private and public development projects.

### **Southern California Association of Governments Growth Management Plan**

The Southern California Association of Governments (SCAG) Growth Management Plan recommends methods to redirect regional growth to minimize traffic congestion and better protect environmental quality. The goals of the Growth Management Plan include balancing jobs and housing. While SCAG has no authority to mandate implementation of the Growth Management Plan, principal goals have implications for the land use composition of Orange.



## **LAND USE IMPLEMENTATION**

The goals, policies and plans identified in this Element are implemented through a variety of City plans, ordinances, development requirements, capital improvements, and ongoing collaboration with regional agencies and neighboring jurisdictions. Specific implementation measures for this Element are contained in the General Plan Appendix.



# **NATURAL RESOURCES ELEMENT**





# NATURAL RESOURCES

## INTRODUCTION AND VISION FOR THE FUTURE



Orange benefits from and relies upon its natural resources, which include a variety of landforms that provide the setting for the City, as well as the open spaces and parks that define many of the community's neighborhoods. These amenities provide visual relief from the intensity of urban areas. Open spaces offer areas for passive and active recreation, and for horticulture. They provide habitat for plant and animal life. Used as parks, they house facilities for recreational and civic activities that are accessed by residents and

visitors of all ages. Striking a balance between the built environment and Orange's natural resources is vital to the long-term sustainability of the community. Such sustainability requires that growth occur in a responsible manner that allows natural resources to be preserved and enhanced for future generations.

Orange's *Vision for the Future* is described in the General Plan Introduction. The Vision recognizes that the City's quality of life will be judged by how well we connect with our surroundings. Therefore, this Element focuses on how Orange can maintain and create special places that bring us together, and how the City can reinforce connections between open spaces and the community, so that all of our residents and visitors can share and enjoy the outdoors and other activities. The Vision includes the following objectives related to Orange's natural resources:

- Define neighborhoods through the use of open space areas and a trail system that provides a source of aesthetic beauty and recreational opportunities. These open space areas support a healthy and active community.
- Continue to protect our critical watersheds, such as Santiago Creek, and other significant natural and open space resources.
- Strive to build a comprehensive system of parks, open space, equestrian areas, scenic resources, and undeveloped natural areas, as well as a full array of recreational, educational, and cultural offerings such as sports, entertainment areas, and play facilities.
- Develop a connected multi-modal network for traveling from one end of town to the other that provides the option for residents from different neighborhoods to access parks, open spaces, and scenic areas by vehicle, transit, foot, bicycle or, where appropriate, by horse.

The natural resources, open space, and parks and recreational facilities described throughout this Element are key physical components that are essential to the quality of life in Orange. These facilities provide a variety of benefits. For example, open space provides recreational areas and



wilderness areas. Urban parks provide relief and offer a soothing contrast to office, commercial, and residential areas. They provide for both active and passive recreational activities, and are key contributors to neighborhood identity and interaction. Trails and bicycle paths offer non-motorized alternatives for getting around the City. In addition, modern day recreational and visual connections to the Santa Ana River and Santiago Creek are reminders of our Native American and agricultural heritage.

Orange's General Plan combines two state-required General Plan elements – Open Space and Conservation – into a single Natural Resources Element. In addition to meeting other open space and conservation requirements, the Natural Resources Element also provides guidance regarding strategies for reducing urban runoff, maintaining water quality, preserving air quality and combating climate change within the City.

### **Purpose of the Natural Resources Element**

The Natural Resources Element satisfies State requirements for the Open Space and Conservation Elements as stated in the Government Code Section 65302(d) and Section 65301(e). The goals and policies regarding nature conservation must adhere to the underlying intent of the Natural Communities Conservation Plan (NCCP). The Natural Resources Element also includes an optional Parks and Recreation Element, under provisions of General Plan law, which includes designation of parks and recreation facilities to meet the requirements of the state's Quimby Act imposed on cities and counties. The Quimby Act allows the City to collect exactions, in the form of impact fees, conservation easements, or park improvement fees from developers by demonstrating a close relationship between the park demands of a project and the need for additional parkland or recreational facilities.

The purpose of the Natural Resources Element is to establish programs and policies for: (1) preservation and use of open space; (2) renewable and non-renewable nature conservation; and, (3) parks and recreation. The scope of the Natural Resources Element spans areas of land and water used for open-space uses such as:

- preservation of renewable and non-renewable natural resources;
- managed production of resources, such as energy and groundwater supply;
- outdoor recreation; and
- trail-oriented recreational use.

### **Scope and Content of the Natural Resources Element**

The Natural Resources Element contains goals and policies that reflect the community's intent to preserve and efficiently operate programs associated with open spaces, natural resources, and recreational spaces. The Element is divided into three sections:

- (1) Introduction
- (2) Issues, Goals, and Policies
- (3) Natural Resource Plans

The *Issues, Goals, and Policies* section identifies community open space, resource management, and recreational needs. This section also identifies goals and policies related to various natural resource *issues*. *Goals* are broad statements that reflect the City's desires and guide the City regarding these issues. The *policies* provide directions for preserving open space, improving parks



and recreation, and conserving natural resources. Implementation measures designed to promote achievement of goals and policies are provided in an Appendix to the General Plan.

### **Relationship to Other General Plan Elements**

Successful achievement of the goals and policies within the Natural Resources Element depends, in part, upon their consistency with those of the other Elements in the General Plan. The Natural Resources Element most closely relates to the Land Use, Circulation & Mobility, Housing, Public Safety, and Cultural Resources & Historic Preservation Elements.

The Land Use Element identifies desired future uses for all lands within the City. Such uses include parks, recreational facilities, and public and privately owned open spaces to meet the needs of existing and future generations. The goals and policies of the Land Use Element assign location, intensity of use, and unit densities to properties that influence the contents of the Natural Resources Element. In addition, the Land Use Element provides for Transfer of Development Rights strategies that may increase the availability of future open space resources described in the Natural Resources Element.

The goals and policies of the Circulation & Mobility Element identify, and ensure access to, open spaces and recreational areas requiring access. The Circulation & Mobility Element assigns the location of streets and trail systems for pedestrians, bicyclists, and equestrians in open spaces. The Public Safety Element provides goals and policies addressing public health and safety within the City, including open space lands such as parks, trails, lakes, and wildland areas. Public health issues include natural and man-made hazards in open space. The Cultural Resources & Historic Preservation Element is a companion element to the Natural Resources Element, and provides policies and programs related to conservation of historic and cultural resources within Orange's planning area.

### **ISSUES, GOALS AND POLICIES**

The goals, policies, and implementation programs of the Natural Resources Element address seven issues: (1) preserving and expanding open space resources; (2) protecting air, water, energy, and land resources; (3) reducing greenhouse gas emissions and adapting to effects of climate change; (4) preserving significant ecological, biological, and mineral resources; (5) providing and expanding recreational facilities and programs; (6) creating a comprehensive trails network; and (7) preserving visual and aesthetic resources.

### **Open Space Resources**

Open space areas are important biological, aesthetic, and recreational resources. They become increasingly valuable as the City develops and the landscape becomes more urbanized. Open spaces create buffers to development and provide both wildlife habitat and recreational opportunities.

## NATURAL RESOURCES



- GOAL 1.0:** Provide recreational use, scenic enjoyment, and the protection of natural resources and features in open space areas.
- Policy 1.1: Conserve open space through various public-private funding mechanisms and management strategies including, but not limited to, conservation easements.
- Policy 1.2: Actively seek out new public open space opportunities through land recycling.
- Policy 1.3: Promote development of additional open spaces and access points adjacent to waterways and planned trails.

## Air, Water, and Energy Resources

Orange lies within the heart of north-central Orange County, where the best qualities of Southern California living continue to attract new residents every year. Clean water and air, carefully managed land resources, and an efficient circulation network are critical elements of a healthy, sustainable City and watersheds. Orange will maintain and protect these resources through a range of measures to protect public health and quality of life.

- GOAL 2.0:** Protect air, water, and energy resources from pollution and overuse.
- Policy 2.1: Cooperate with the South Coast Air Quality Management District (SCAQMD) and other regional agencies to implement and enforce regional air quality management plans.
- Policy 2.2: Support alternative transportation modes, alternative technologies, and bicycle- and pedestrian-friendly neighborhoods to reduce emissions related to vehicular travel.
- Policy 2.3: Reduce the amount of water used for landscaping through the use of native and drought-tolerant plants, proper soil preparation, and efficient irrigation systems as parks are built or renovated.
- Policy 2.4: Encourage the production, distribution, and use of recycled and reclaimed water for landscaping projects, while maintaining urban runoff water quality objectives.
- Policy 2.5: Continue to work toward local and regional waste-reduction and diversion goals.
- Policy 2.6: Encourage sustainable building and site designs for new construction and renovation projects.
- Policy 2.7: Coordinate with energy suppliers to ensure adequate energy supplies to meet community needs, and to promote energy conservation and public education programs for that purpose.
- Policy 2.8: Encourage development that incorporates pedestrian- and transit-oriented design and landscape elements.
- Policy 2.9: Promote City operations as a model for energy efficiency and green building.
- Policy 2.10: Work toward replacing existing City vehicles with ultra low or zero emission vehicles. At a minimum, new City vehicles shall be low emission vehicles as defined by the California Air Resources Board, except if certain vehicle types are not available in the marketplace. Public safety vehicles are exempted from this requirement.





- Policy 2.11: Protect the ecological integrity and overall health of Orange’s watersheds.
- Policy 2.12: Cooperate with water supply agencies to protect the quantity and quality of local groundwater supplies.
- Policy 2.13: Control surface runoff water discharges into the stormwater conveyance system to comply with the City’s National Pollutant Discharge Elimination System (NPDES) Municipal Permit and other regional permits issued by the Santa Ana Regional Water Quality Control Board.
- Policy 2.14: Reduce pollutant runoff from new development by requiring use of the most effective Best Management Practices (BMPs) currently available.
- Policy 2.15: Minimize the amount of impervious surfaces and associated urban runoff pollutants in new development and significant redevelopment throughout the community.
- Policy 2.16: Protect in-stream habitat and natural stream and channel features.
- Policy 2.17: Educate City residents and businesses on the effects of urban runoff.

### Climate Change

The scientific community believes that increasing levels of greenhouse gases (GHGs) in the earth’s atmosphere are contributing to rising global average temperatures. The most abundant GHG is carbon dioxide (CO<sub>2</sub>), which is a byproduct of fossil fuel combustion. CO<sub>2</sub> is removed from the atmosphere through sequestration by vegetation and dissolution into the ocean. Carbon sequestration is the absorption or removal from the air of carbon dioxide by plants or natural processes. These sequestration processes happen naturally, but human-generated emissions may be outpacing these removal processes, resulting in excessive GHG concentrations accumulating in the atmosphere, and leading to a subsequent trend of unnatural global warming.

**GOAL 3.0: Prepare for and adapt to the effects of climate change and promote practices that decrease the City’s contribution to climate change.**

- Policy 3.1: Evaluate the potential effects of climate change on the City’s human and natural systems and prepare strategies that allow the City to appropriately respond and adapt.
- Policy 3.2: Develop and adopt a comprehensive strategy to reduce greenhouse gasses (GHGs) within Orange by at least 15 percent from current levels by 2020.

### Ecological, Biological and Mineral Resources

Wildlife habitat is crucial for the survival of native animal and plant species, and for maintaining the biodiversity of the City and larger Orange County region. Significant wildlife habitat can be found in the City’s parks and open spaces (particularly near Santiago Creek, Santiago Oaks Regional Park, Irvine Regional Park, and Peters Canyon Regional Park). Human-created landscaping is also an important environmental element, particularly in urban areas. Landscaping elements such as street trees contribute to an improved aesthetic and biological environment while providing a natural means of cleansing the air and minimizing urban heat. Sand and gravel resources in the planning area provide valuable sources of aggregate material for new

## NATURAL RESOURCES



construction. These resources benefit the region as a whole. In accordance with guidelines established by the State Mining and Geology Board, City policy recognizes the need to protect these resources from premature urbanization.

The following goals and policies reflect the City's desire to maintain and support prudent management of these important environmental resources.

**GOAL 4.0: Conserve and protect wildlife habitat, plant and animal species of concern, and general biodiversity.**

Policy 4.1: Preserve and protect native and habitat-supporting plant resources throughout the City.

Policy 4.2: Work with agencies, including the Orange County Flood Control District, to identify opportunities to enhance the natural qualities of Santiago Creek to protect habitat and reintroduce native plants and animals.

Policy 4.3: Reduce the impact of urban development on important ecological and biological resources.

Policy 4.4: Repair or improve ecological and biological conditions in the urban and natural environments when reviewing proposals for site development and redevelopment, as well as public improvements.

Policy 4.5: Protect the Santiago Creek and Santa Ana River corridors from premature urbanization to ensure the continued availability of important sand and gravel resources.

## Recreational Facilities and Programs

The City's active and passive recreational resources consist of designated parks, trails, and open space areas. Continued provision of recreational opportunities through preservation of open space, park maintenance and development, and the creation of new facilities will ensure improved quality of life for residents.

**GOAL 5.0: Provide recreational facilities and programs that adequately serve the needs of residents.**

Policy 5.1: Maintain existing City parks at levels that provide maximum recreational benefit to City residents.

Policy 5.2: Provide a range of high quality recreational facilities and programming to serve a broad cross section of residents, including youth, seniors, young adults, mature adults, and people with disabilities.

Policy 5.3: Establish joint recreational use of open space land and facilities owned by school districts and/or the City.

Policy 5.4: Develop new public parks and open space resources by establishing incentives to use creative techniques available to property owners and developers that support public-private open space partnerships.



- Policy 5.5: Explore and pursue new approaches to new park development and to providing a balanced mix of amenities and facilities.
- Policy 5.6: Identify areas within the City that are currently underserved by existing open space, and develop programs to purchase land and build park amenities at a minimum level of 3 acres per 1,000 persons and the goal of 5 acres per 1,000 persons. Support provision of a total of 10 acres of parkland per 1,000 persons, inclusive of County regional parks within the planning area.
- Policy 5.7: Consider the use of Transfer of Development Rights (TDR) as a means to acquire and develop more publicly accessible open space.

### Comprehensive Trails Network

Trails within the City serve important recreational and transportation needs, but are currently disconnected and in some areas incomplete. The Santiago Creek corridor has been recognized as a potential spine for a City-wide network of multi-use trails that connect parks, open spaces, recreational facilities, and other City amenities. Other opportunities to improve trail networks may include the conversion of active and inactive railroad rights-of-way to trails, and joint use of utility easements and flood control rights-of-way for trail purposes. While providing for pedestrian, bicycle, and equestrian circulation, a trails network would also create a valuable greenway system throughout the City and would support the physical health and active lifestyle of Orange residents.

**GOAL 6.0: Provide for alternative modes of transportation and access to recreational resources through a multi-use trail system that links the City's parks and regional open space amenities.**

- Policy 6.1: Complete multi-use trail links throughout the City that serve recreational and circulation purposes as funding is available.
- Policy 6.2: Ensure consistent, safe, and efficient maintenance of trails, and minimal impacts to the environment.
- Policy 6.3: Work with the Rails-to-Trails Conservancy, surrounding residents, utility providers, flood control and water agencies, and community organizations to pursue the joint use of local rights-of-way and easements for multi-use trails.
- Policy 6.4: Link existing equestrian trails and provide outlets to open space areas, particularly in the northeast region of the City, to reach regional parks such as Santiago Oaks, Irvine, Peters Canyon, and the Cleveland National Forest.
- Policy 6.5: Ensure that the trail system has a safe interface with existing development.
- Policy 6.6: Encourage an integrated relationship between trails and developed areas.

### Visual and Aesthetic Resources

Portions of Orange are characterized by scenic vistas that include hillsides, ridgelines, or open space areas that provide a unifying visual backdrop to the urban environment. These "viewsheds" contribute to the City's identity and quality of life. The City will preserve open space areas and

## NATURAL RESOURCES



view corridors where possible and will encourage landscaping in urban areas to improve boulevards, neighborhoods, and commercial and industrial districts.

**GOAL 7.0:** Protect significant view corridors, open space, and ridgelines within the urban environment.

Policy 7.1: Preserve the scenic nature of significant ridgelines visible throughout the community.

Policy 7.2: Designate Santiago Canyon Road east of Jamboree Road as a City Scenic Highway to preserve the scenic nature of the open space adjacent to the road.

Policy 7.3: Encourage the development of landscaped medians and parkway landscaping along arterial streets in public and private projects, and encourage the state to provide freeway landscaping.

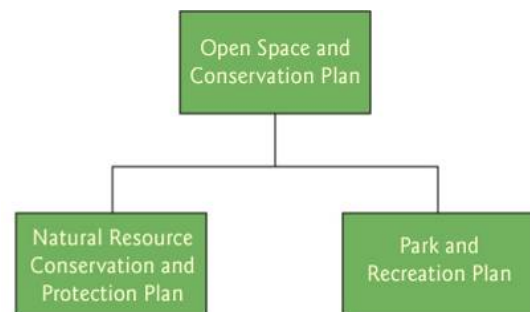
Policy 7.4: Coordinate with Southern California Edison and other utilities to place utility lines underground wherever possible.

Policy 7.5: Encourage the retention and enhancement of scenic corridors and visual focal points within the community.

## NATURAL RESOURCE PLANS

The Natural Resources Element establishes the City’s approach to protecting and enhancing its natural, open space, and recreation resources. The City has established goals and policies to preserve these resources. The following Natural Resource Plans provide an outline for future actions to conserve and improve the natural resources in Orange’s planning area. Implementation programs, which describe and detail the City’s specific actions, are included in an Appendix to the General Plan.

The Natural Resources Element covers a wide range of diverse issues, from the protection of water resources to the establishment of recreational trails. In order to focus policy and implementation programs on each specific issue, the Natural Resource Plan is divided into two “mini-plans”—a Natural Resource Conservation and Protection Plan, and a Park and Recreation Plan.



## NATURAL RESOURCE CONSERVATION AND PROTECTION PLAN

Before Orange was an incorporated city, people were attracted to the area by its wealth of natural resources—the temperate climate, clean air, abundance of water, variety of plants and animals, and vast acres of open space, from the alluvial plains below the Santa Ana Mountains to the rolling hills and shaded canyons. People found Orange to be a desirable place to farm, raise a family, and pursue a high quality lifestyle.





Population growth in the 20th century transformed Orange from a quiet farming community into a sizable urban city. The sand and gravel resources of the Santa Ana River and Santiago Creek were used to support urban development, first on the flatlands, and then into the hills of east Orange.

Growth has been accompanied by a gradual reduction in the quality and quantity of the natural resources which first attracted people to the area. Growth in Orange, as well as throughout the region, has contributed to a decline in air and surface water quality, reduction in local groundwater supplies, and elimination of some open space areas suitable for agricultural production and wildlife habitat.

Despite the reduction and loss of some resources, Orange residents have not lost sight of the benefits natural resources provide the community. Clean air and water are vital to ensure the protection of public health and to support wildlife. Plant and wildlife resources enrich the urban setting by providing changes in scenery and environment. They contribute to the biodiversity and ecology of the region. Also, preservation of some open space areas (floodplains, steep hillsides) is necessary to protect public safety. Finally, aggregate resources (sand and gravel) provide the community with a source of income and a source of readily available building materials to support new construction and growth in appropriate areas of the community.

### Open Space Resources

Open space lands may be set aside for many purposes, including the provision or preservation of: (1) parks for recreation or wildlife habitat preservation; (2) water resources for groundwater recharge and support of plant and animal habitat; (3) environmental hazard zones for the protection of public safety; and, (4) prominent geologic features and scenic resources for the visual enhancement of the urban environment.

As shown in Figure NR-1, Orange's planning area includes approximately 7,400 acres of open space, which is about one-third of the planning area's total land area. Open spaces include lands used as City or County parks, ridgelines, and areas designated as Open Space on the Land Use Policy Map. The greatest concentration of open space within the planning area is in the Cleveland National Forest, a portion of which is located within the City's Sphere of Influence. This open space includes several hundred acres in the Peralta Hills area and several hundred acres in the hills south and east of Orange Park Acres, consisting of Santiago Oaks Regional Park, Irvine Regional Park, and Peters Canyon Regional Park. An additional 15,800 acres of open space lies within the City's Sphere of Influence, east of the planning area.

The open space areas also include a portion of the 37,000-acre reserve area established by the *Central and Coastal Orange County Natural Communities Conservation Plan/Habitat Conservation Plan* (NCCP/HCP). This area encompasses portions of Santiago Hills II and east Orange. Additionally, the Irvine Ranch Land Reserve affects the pattern of developable and undevelopable land in the eastern portion of the planning area. The reserve stretches from Weir Canyon near State Route (SR) 91 at the north end of Irvine Ranch, connects with the Cleveland National Forest along the northeast border of the ranch, continues south to include large regional open space systems in the northern and southern hillsides of the City of Irvine, and extends to the Laguna Coast Wilderness Park and Crystal Cove State Park near Laguna Beach.

## NATURAL RESOURCES



Conserving current open spaces and creating new open spaces are important concerns. As development pressure increases in the hillside areas east of the City, one key to preserving the quality of life for Orange residents lies in providing open spaces that preserve scenic vistas, provide habitat for wildlife, and maintain the ecological balance of the area. Additionally, because most of Orange's open spaces are located adjacent to the many reservoirs and creeks located within the City, opportunity exists to improve water quality in the region by enhancing and adding open spaces around these reservoirs and creeks.

To increase the amount of open space within the City, Orange will work with large landowners to secure open space dedications where feasible. The City will also work with land trusts and non-profit agencies to secure grant funds for acquisition and conservation of open space areas. Where appropriate, this process may include the use of conservation easements, which are voluntary agreements that allow landowners to limit the type or amount of development on their property while retaining private ownership of the land. The easement is signed by the landowner, who is the easement donor, and by a government agency or non-profit organization, which is the party receiving the easement. The landowner continues to privately own and manage the land, and may receive tax advantages for having donated the conservation easement. The government or non-profit accepts the easement with the understanding that it must enforce the terms of the easement in perpetuity. After the easement is signed, it is recorded with the County Clerk and applies to all future owners of the land.

### **Air, Water, and Energy Resources**

The quality of air, water, energy, and land resources must be preserved, not only for public health, environmental, and economic reasons, but also to improve and maintain the quality of life for Orange residents. All of these resources generate regional issues. Therefore, resolving issues related to air, water, energy and land resources requires the coordinated efforts of many jurisdictions. Collectively, smaller local actions can have wide-reaching impacts.

#### **Air Resources**

Orange has seen steady growth in both population and development over the past decades, which has urbanized a once rural town. The population growth in Orange and surrounding jurisdictions has led to declining air quality in the regional air basin. Orange is located within the South Coast Air Basin, and is a participating member of the South Coast Air Quality Management District (SCAQMD), which is the regional agency responsible for regulating pollutant emissions in the air basin.

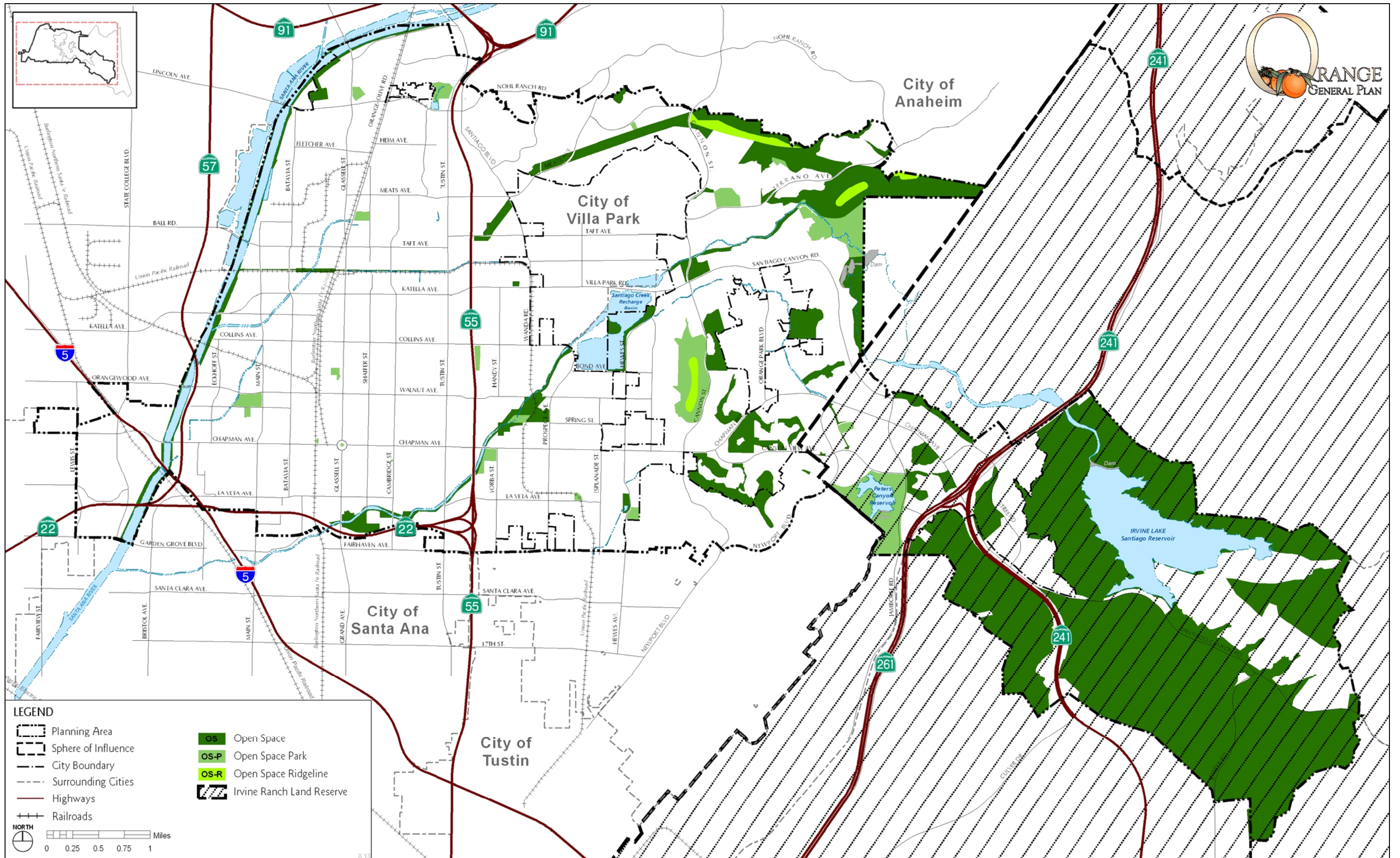


Figure NR-1 Open Space Resources







In order to protect and improve air quality at a regional level, the City will continue to cooperate with SCAQMD to implement the *Air Quality Management Plan*. At a local level, the City will carry out the following programs to help improve regional air quality:

- Enforce City ordinances that regulate industrial emission levels, and assess project impacts on air quality as part of the environmental review process. Whenever appropriate, environmental review and mitigation measures will be coordinated with SCAQMD.
- Support efforts to provide public transit, and routes that are user-friendly for bicyclists and pedestrians throughout the City.
- Support the development of pedestrian-friendly neighborhoods. As described in the Land Use Element, more intensely used commercial and mixed-use areas will be concentrated in identified opportunity areas located throughout the western portion of the City. Centralizing these uses may encourage mass transit to better serve core employment areas. Also, increased business opportunities within the City may reduce the number of area residents commuting greater distances to work (e.g. to downtown Los Angeles or Irvine).
- Require major employers to institute Transportation Demand Management (TDM) Plans. Such plans establish incentives to encourage employees to carpool, take public transportation, bicycle, walk, or use some means other than private automobiles to get to and from work.

### **Water Resources**

Water is a resource that must be preserved, not only for public health, environmental, and economic reasons, but also to improve and maintain quality of life. Water quality is most definitely a regional issue. Pollutants entering the hydrologic system are dispersed outward, with the potential to affect all who use the water within the system.

Water sources are considered most vulnerable to contamination from industrial activities and/or environments such as chemical processing, petroleum pipelines and storage, gas stations, and sewer collection systems. The local issue of household chemicals entering water sources is also a challenge to water safety. Pollution of urban runoff and stormwater, and threats to the City's water supply arise from improper use of household hazardous materials, such as solvents, fuels, paints, swimming pool chemicals, miscellaneous flammable and corrosive substances, and from improper disposal of household hazardous wastes, including used motor oil. Reliable water supplies are essential to public health, safety, and welfare, and the City tests all water supply sources to assure safety and compliance with all drinking water standards.

### ***Ground Water Quality and Supplies***

Protection of water supply and ground and surface water quality is imperative for the health and quality of life of Orange residents, businesses, and visitors. Over 75 percent of the water supply to the City is drawn from municipal wells drilled into the Santa Ana River Aquifer from the Lower Santa Ana River groundwater basin. Other water sources include surface water bodies, two major drainage courses, and one minor course. The Lower Santa Ana River basin, which extends from San Bernardino County southwest to the Pacific Ocean, underlies the entire western portion of the planning area. The Santa Ana Mountains and foothills form the basin's eastern boundary. The



## NATURAL RESOURCES



water supply is supplemented by water from the Orange County Water District. The City is a member of this District, which manages the Orange County Groundwater Basin and monitors and maintains water quality in the region.

Figure NR-2 identifies major surface water bodies, waterways, and watershed areas in the planning area. A watershed is the geographic area draining into a river system, ocean, or other body of water through a single outlet and includes receiving waters. Watersheds are usually bordered and separated from other watersheds by mountain ridges or other naturally elevated areas. Three watersheds are located within Orange's corporate boundaries: the Santa Ana River Watershed (Lower Santa Ana River drainage basin), the San Diego Creek Watershed, and the Westminster Watershed (Los Alamitos/East Garden Grove/Bolsa Chica drainage basin). Most of Orange falls within the Santa Ana River Watershed. The southeastern portion of the planning area falls within the San Diego Creek Watershed, and consists primarily of residential communities with scattered neighborhood-serving commercial areas. A small southwestern portion of the planning area falls within the Westminster Watershed. These watersheds are based on the hydrologic areas delineated by the Orange County Flood Control District.

Irvine Lake, Villa Park Reservoir, and Peters Canyon Reservoir are artificial lakes constructed to provide water storage and flood control capabilities. All three lakes lie within areas designated for open space uses on the Land Use Policy Map. Villa Park Reservoir and Peters Canyon Reservoir lie within areas designated for public park uses. Therefore, land use policy ensures the preservation of these water resources for both resource conservation and recreation uses.

Irvine Lake is planned for continued use as a water reservoir, and such use includes related recreational uses such as fishing, sailing, and boating. Resort and commercial recreation uses on adjacent lands enhance the lake's recreation function. In determining the mix of recreation uses for the lake, the Irvine Ranch Water District and the Serrano Irrigation District recognize the primary use of the lake as an agricultural and domestic water supply reservoir. Desilting activities may continue as a part of the lake's management program to assure sufficient capacity for water storage.

The Santa Ana River, which forms the City's western boundary, is the major drainage course for the Santa Ana River basin. The river performs valuable flood control and groundwater recharge functions along its entire route. In recognition of the important role the river plays in providing groundwater recharge areas and adequate flood protection for Orange County, land use policy calls for open space uses along the river.

Santiago Creek flows from the Santa Ana Mountains through Orange and empties into the Santa Ana River in the City of Santa Ana. In addition to controlling floodwaters and recharging the groundwater basin, Santiago Creek has become a defining feature of the community, characterized by trails and recreational open space throughout portions of its length within Orange. Community members identify with the creek, and the City seeks to incorporate natural characteristics of Santiago Creek in the design of adjacent future projects. The upper portions of Santiago Creek are characterized by large, abandoned mining pits. In particular, the pits near Bond Street serve valuable groundwater recharge purposes. Land use policy recognizes these uses by designating the creek and several surrounding properties as Open Space or Open Space-Park.

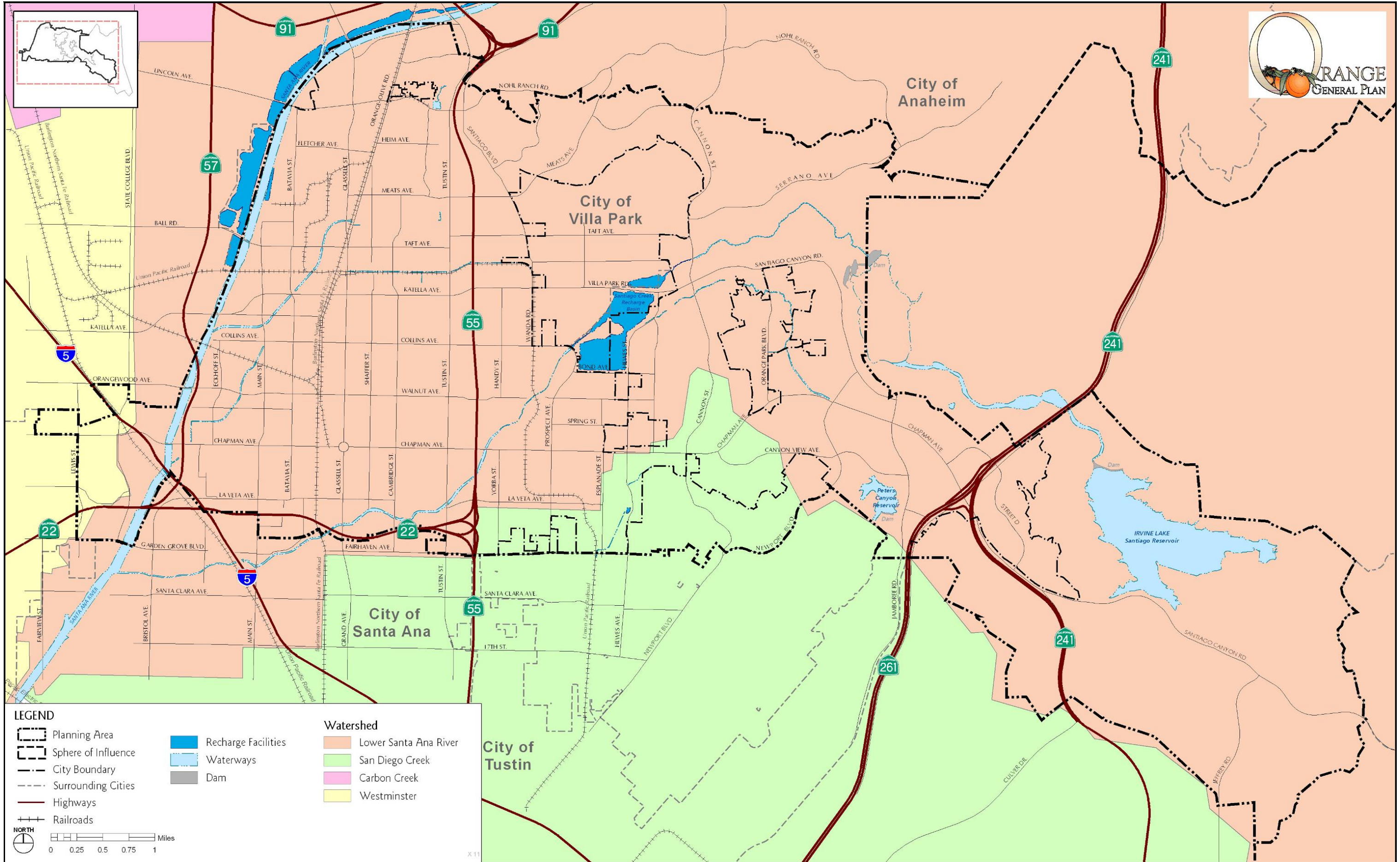


Figure NR-2 Drainage Areas and Water Recharge Facilities







Handy Creek is a minor drainage course flowing from Peters Canyon Reservoir to Santiago Creek. Water flows from Peters Canyon Reservoir are channeled through Handy Creek to the recharge basin system at Santiago Creek near Bond Street, where it replaces water pumped from wells and helps maintain levels of groundwater supply for the area.

To promote water conservation, the City will encourage all developments to utilize water conservation measures in accordance with the City's Municipal Code, and will encourage sustainability in project site planning and building design. The City will use native and drought-tolerant plants for landscaping, and will use recycled and reclaimed water for irrigating landscape projects whenever feasible. Reclaimed water is the reuse of treated wastewater, and is usually used for non-drinking purposes. Using recycled or reclaimed water instead of expensive and increasingly scarce potable water helps to ensure the long-term availability of drinking water to Orange residents.

### **Urban Runoff**

Urban stormwater runoff occurs when rainfall that in a nonurban environment would have been absorbed by groundcover or soil is instead collected by storm drains. In urbanized areas such as Orange, vegetation and top soil have been largely replaced by impervious surfaces such as buildings, roads, sidewalks, and parking lots. When it rains, trash, litter, silt, automotive chemicals, fertilizers, animal wastes and other contaminants are washed into the storm drain system. Since storm drains are designed to carry only stormwater, these drains typically are not equipped with filters or cleaning systems. Consequently, they can carry contaminants found in urban runoff directly into local flood control channels, lakes and the ocean. Many of the contaminants found in this runoff affect water quality and can, at elevated concentration levels, be toxic to aquatic and marine life.

### ***National Pollutant Discharge Elimination System***

Local stormwater pollution control measures are implemented in accordance with the 1972 Federal Water Pollution Control Act (Clean Water Act) and the National Pollutant Discharge Elimination System (NPDES). The Clean Water Act prohibits any person from discharging pollutants through a "point source" into a "water of the United States" unless they have a NPDES permit. The NPDES Program, mandated by Congress under the Clean Water Act, is a comprehensive program for addressing the nonagricultural sources of stormwater discharges that adversely affect the quality of the nation's waters. The Program uses the NPDES permitting mechanism to require the implementation of control and monitoring measures designed to prevent harmful pollutants from being washed into local water bodies by stormwater runoff. The NPDES program requires the owner or operator of any facility, including publicly owned facilities, or any person responsible for any activity that discharges waste into the surface waters of the U.S., to obtain an NPDES permit. The Clean Water Act amendments of 1987 established a framework for regulating stormwater discharges from municipal, industrial, and construction activities under the NPDES program.

The Clean Water Act provides that states are authorized to operate their own NPDES programs, provided that such programs meet minimum federal requirements. In California, the NPDES Program is administered by the State Water Resources Control Board and its nine Regional Water Quality Control Boards. The NPDES Municipal Storm Water Permit for northern and central





Orange County, including the City of Orange, is issued by the Santa Ana Regional Water Quality Control Board (Region 8). The City of Orange, along with other northern and central Orange County cities, currently operates under Santa Ana Regional Board Order No. R8-2002-0010 (NPDES Permit No. CAS618030). The Permit, issued in January 2002, requires the City of Orange to minimize short- and long-term impacts on receiving water quality from stormwater and non-stormwater discharges associated with new development and significant redevelopment to the maximum extent practicable. As part of the NPDES permit program, Orange adopted a *Local Implementation Plan* in 2003 that aims to mitigate illegal discharges into the stormwater conveyance facilities.

The City will continue to require all new development and modifications to existing development to use Best Management Practices (BMPs) to reduce stormwater runoff and increase on-site retention. BMPs are effective methods that prevent and control the amount of pollutants entering the storm drain system, where pollutants eventually enter the surface water system. These practices closely follow federal stormwater requirements and regulations. Orange County's 2003 *Drainage Area Management Plan* provides BMPs for source, structural and treatment control. Source control BMPs include such techniques as site planning and landscaping, and use of pervious pavements. Structural BMPs include providing protection from rain, secondary containment, and other construction BMPs. Treatment control BMPs include natural treatment options such as constructed wetlands and vegetated swales. The City will continue to support implementation of both the *Drainage Area Management Plan* and *Local Implementation Plan* for new development and will continue to require the use of the most effective BMPs available.

### **Energy Resources**

The City will continue to promote energy conservation, both by encouraging conservation measures on the part of homeowners, the business community, and institutions, as well as by encouraging green building techniques for new construction and renovation projects.

#### ***Green Building***

Green building concepts can be incorporated into site and building design to reduce energy use within the City as a whole, to improve aesthetics and comfort, and to provide a more cost-effective means of living. According to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED), six concepts of green building can help conserve energy and preserve the environment:

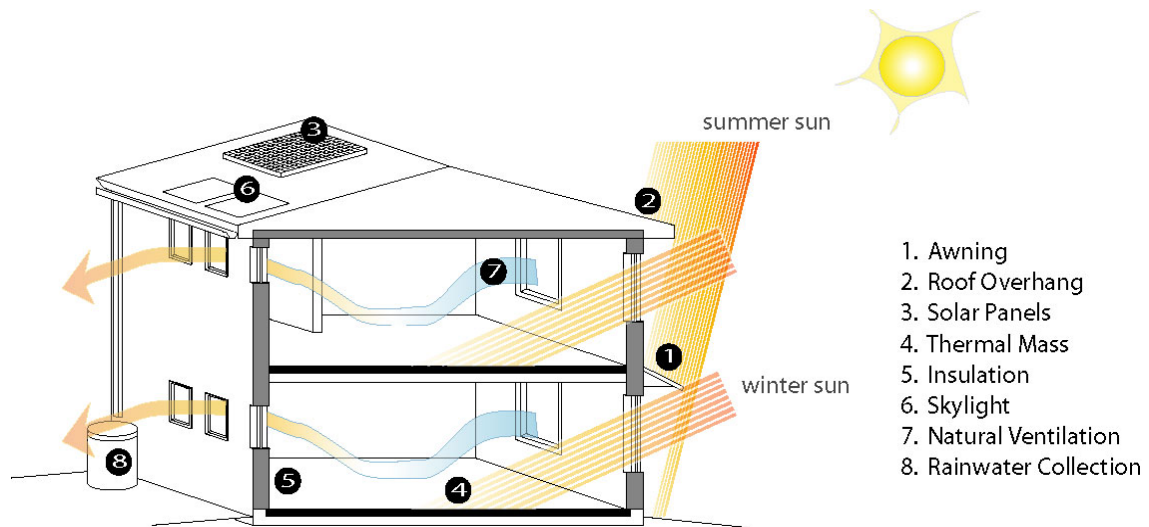
- Sustainable sites
- Water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality
- Innovation and design process

Sustainable sites require development designs that work with existing topography, building on previously developed sites, integrating natural surroundings, using existing infrastructure, building on brownfields (sites previously used for industry) through site remediation, and selecting sites



near public transportation. These measures will ultimately help preserve natural habitats, reduce negative effects on water and air quality, and minimize automobile use.

Incorporating water efficiency at the time of construction will maximize water conservation through a building's lifetime. Using non-potable water or gray water to irrigate landscaping or using xeriscape (landscaping requiring minimal water usage) to conserve water, installing water-efficient fixtures, and incorporating innovative wastewater technologies and plans will reduce water demand and limit extraction and pollution of groundwater supply.



Green building incorporates site orientation, window placements, skylights, solar panels, and high insulation to improve indoor comfort and to conserve valuable natural resources.

Providing natural ventilation and effective insulation in buildings can reduce energy demand and utility bills. Natural ventilation will allow residents to cool living spaces without relying on air conditioners, and increased building insulation will sustain moderate variations to indoor temperature. Orienting buildings to invite natural light or using solar panels will reduce electricity demand. These measures will not only reduce demand for natural resources and minimize effects on climate change, but they will also increase comfort for residents and should encourage street-fronting design using more windows and detailing.

Judicious selection of materials and maximizing landscaping in parking lots, rights-of-way, and overall building sites can further provide natural indoor cooling and reduce heat island effects and glare in our urban environment. Choosing natural materials will improve indoor environmental quality by limiting toxic emissions associated with components such as adhesives and formaldehyde often found in building materials. Constant monitoring and innovation in sustainable building design will enhance the aesthetics of the built environment while improving the comfort and health of residents.

The City already practices building material waste reduction through its protection of historic building resources. These efforts, combined with construction waste management and efforts to incorporate recycled content and natural materials into new construction, will reduce the amount of waste destined for landfills and conserve non-renewable resources.



**Climate Change**

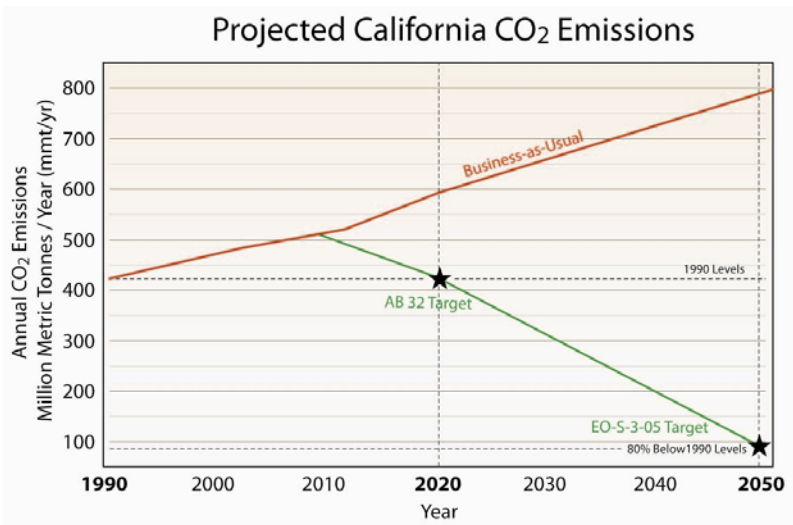
Climate change refers to a change in the state of the climate that persists for an extended period, due to natural processes, human-caused changes in the composition of the atmosphere, or land use changes that lead to atmospheric changes. According to the United Nations Intergovernmental Panel on Climate Change (IPCC)<sup>1</sup>, the scientific authority on the subject of climate change, certain findings are widely accepted by the scientific community:

- Greenhouse gases (GHGs) such as carbon dioxide (CO<sub>2</sub>), when introduced into the atmosphere, have a warming effect on the earth;
- Human activities have increased the levels of GHGs in the atmosphere since pre-industrial times; and
- The global climate has warmed by an average of 1.0-1.7 degrees Fahrenheit from 1906-2005.

Greenhouse gases are gases that trap heat in the atmosphere. GHGs include CO<sub>2</sub>, methane, nitrous oxide, and fluorinated gases. The human activities during which these gases are emitted include burning, manufacturing, and transportation-related combustion of fossil fuels. Livestock and solid waste emissions also contribute to the buildup of GHGs.

The effects of climate change include increased global average temperature, subsequent altered precipitation patterns, thermal expansion of the ocean, and loss of polar and global sea ice extent. In Orange, these changes would translate to water and energy supply issues, increased risk of wildfire, and possible health complications.

Responding to climate change requires a two-pronged approach. On one hand, the City must adapt to change and prepare for the already-foreseeable effects of global warming that have already occurred and, on the other hand, the City must coordinate with agencies, residents, and businesses to modify behavior to decrease the citywide contribution to GHG emissions and associated effects on the climate.



**Greenhouse Gas Emissions**

The California Global Warming Solutions Act of 2006 (AB 32) was created by the state legislature to address the threat global warming poses to the state’s “economic well-being, public health,

<sup>1</sup> IPCC 2007; *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. Cambridge University Press. Cambridge, UK.



natural resources, and the environment”. The Act directs the California Air Resources Board (ARB) to “adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990 to be achieved by 2020.” California Executive Order 03-05 (EO-S-3-05, June 2007) requires statewide GHG emissions to be reduced to a level 80 percent below 1990 levels by 2050. These laws require maintenance of an inventory of emission levels as well as taking action to decrease emission levels.

Senate Bill 375 (2008) requires metropolitan planning organizations to include sustainable communities strategies in regional transportation plans for the purpose of reducing GHG emissions. However, all jurisdictions in California have a responsibility to contribute to this effort with changes in operations, technology, and policies that enable residents and businesses to follow suit. This General Plan provides a comprehensive framework for Orange’s approach to climate change and GHG emission reduction. The types of policies that deal with climate change and GHG emission are far ranging. The City has located policies and programs throughout the General Plan that have multiple outcomes. They help the City to achieve a high quality of life for its current and future residents and businesses, reduce the City’s contributions to climate change, and help residents and businesses adapt to changing circumstances.

State and local governments will play a critical role in addressing this important issue. California’s climate change legislation has generally been interpreted to apply to stationary sources of GHG emissions. However, the City believes that in order to achieve the emission reductions mandated in AB 32 and EO-S-3-05, each sector must do its fair share to reduce total emissions, and local action is needed to manage and measure activity within each sector as it relates to land use planning. For this reason the City is establishing a GHG emissions reduction goal of at least 15 percent of current levels by 2020.

To achieve this goal, the General Plan advocates primarily compact “infill” future development, focusing on introducing urban-scale mixed-use projects at locations near transportation corridors and transit, and creating additional retail and employment opportunities within the City that increase the range of goods and services available to residents and improve the community’s jobs-housing balance. Future “greenfield” development is limited to previously-approved entitlements in east Orange. The General Plan includes a broad spectrum of policies related to climate change. These policies have been integrated throughout the relevant General Plan elements, as detailed in Table NR-1.





Table NR-1  
Climate Change Related Policies

Issues	Topic	Policies'
Community form	Compact development	<p><b>Land Use Element</b>                      1.1: Jobs and housing balance                      2.1: Mixed-use projects in older commercial and industrial areas                      2.4: Mixed-use projects with compatible uses and supporting public and community facilities                      2.2: Transfers of development rights for high-rise office and residential structures                      2.9: Mixed-use development to include ground floor retail</p> <p><b>Cultural Resources &amp; Historic Preservation Element</b>                      1.4 and 1.5: Alternatives to building demolition</p> <p><b>Urban Design Element</b>                      1.4: Pedestrian-oriented places and connections                      1.6: Street-oriented development, parking and commercial activities                      2.1: Commercial corridors as pedestrian-friendly streets that balance mobility and accommodate compact development                      2.4: Building design and orientation to promote active street life</p> <p><b>Economic Development Element</b>                      4.3: Lot consolidation for integrated development with improved pedestrian and vehicular circulation                      5.4: Redevelop and rehabilitate underutilized and vacant lands and public rights-of-way</p>
	Commercial use locations	<p><b>Land Use Element</b>                      3.2: City business promotion and local patronage                      3.4: Clean commerce and industry</p> <p><b>Urban Design Element</b>                      2.1: Pedestrian-friendly commercial corridors that balance mobility and accommodate compact development                      2.2: Pedestrian and transit access through commercial and mixed-use corridors                      2.5: Design standards for urban parks and open spaces within mixed-use corridors                      4.6: Pedestrian linkages between commercial districts and neighborhoods                      6.1: Development standards for high quality building and site design integrated with infrastructure and circulation                      6.2: Infill development to benefit surrounding corridors/neighborhoods and provide additional park space</p> <p><b>Economic Development Element</b>                      4.2: Reduce land, infrastructure and environmental deficiencies within commercial corridors</p>



Table NR-1  
Climate Change Related Policies

Issues	Topic	Policies'
	Industrial use locations	<p><b>Land Use Element</b></p> <ul style="list-style-type: none"> <li>4.1: Maximize industrial land resources for industrial and office uses</li> <li>4.3: Protect residents and the environment from impacts of industrial operations</li> <li>4.4: Mixed office, industrial, and support commercial uses in light industrial areas</li> <li>4.5: Environmentally friendly business atmosphere</li> </ul>
	Live-work uses	<p><b>Land Use Element</b></p> <ul style="list-style-type: none"> <li>5.1: Targeted development of mixed-use, transit-oriented development surrounding the Santa Fe Depot</li> <li>5.2: Adaptive re-use of industrial and agricultural historic structures</li> </ul>
	Access to employment centers	<p><b>Land Use Element</b></p> <ul style="list-style-type: none"> <li>2.2: Transfers of development rights for high-rise office and residential structures</li> </ul> <p><b>Circulation &amp; Mobility Element</b></p> <ul style="list-style-type: none"> <li>3.3: Transit-oriented design within commercial, employment, medium density residential, and mixed-use areas</li> </ul>
		<p><b>Growth Management Element</b></p> <ul style="list-style-type: none"> <li>1.8: Housing within close proximity to jobs and services</li> <li>2.3: Match residents with local jobs to reduce long commutes and improve community fiscal and public health</li> </ul>
		<p><b>Economic Development Element</b></p> <ul style="list-style-type: none"> <li>2.1: Public-private partnerships to support business and employment growth</li> <li>2.5: Retention of existing retail businesses</li> <li>3.4: Higher density residential and mixed-use projects to provide community-based workforce and market</li> <li>7.1: Sites appropriate for housing development for all income groups that support commercial development</li> <li>7.2: Mixed-use developments providing housing close to employment hubs</li> </ul>
	Open space management	<p><b>Land Use Element</b></p> <ul style="list-style-type: none"> <li>1.5: Recreation, open space and visual resources in east Orange</li> <li>1.7: Range of open space and park amenities to meet diverse needs</li> <li>2.3: Transfers of development rights to promote creation of accessible open spaces</li> <li>6.4: Open space to provide recreational opportunities, protect vistas and ridgelines, and conserve natural resources</li> </ul> <p><b>Natural Resources Element</b></p> <ul style="list-style-type: none"> <li>1.1: Public-private funding mechanisms and management strategies to conserve open space</li> <li>1.2: Land recycling opportunities for new public open space</li> <li>1.3: Additional open spaces and access points adjacent to waterways and planned trails</li> </ul>



**Table NR-1  
Climate Change Related Policies**

Issues	Topic	Policies'
		5.3: Joint recreational use of open space land and facilities 5.4: New public parks and open space resources through incentives and creative techniques 5.6: Identify areas currently underserved by open space, and develop programs to purchase land and build park amenities 5.7: Transfer of development rights to acquire and develop more publicly accessible open space  <b>Public Safety Element</b> 2.2: Protecting critical public and private facilities located within floodplain and inundation areas 2.4: Reduce impervious surface area within new development  <b>Urban Design Element</b> 4.5: Incentives to create neighborhood parks and green spaces, particularly within commercial and mixed-use corridors
	Wildfire safety	<b>Public Safety Element</b> 3.1: Identification and evaluation of new potential fire hazards and fire hazard areas 3.2: Non-traditional methods of controlling vegetation in undeveloped areas 3.3: Planting and maintenance of fire-resistant slope cover, stringent site design and maintenance standards, and use of native, non-invasive plant materials
	Economic adaptation to climate change	<b>Infrastructure Element</b> 5.4: Disaster mitigation strategies incorporated into City infrastructure master plans
City Operations	City of Orange as model	<b>Natural Resources Element</b> 2.9: City operations as model for energy efficiency and green building
	Low emission City vehicles	<b>Natural Resources Element</b> 2.10: Replace existing City vehicles with ultra low or zero emission vehicles and purchase new low emission vehicles
	Other	<b>Land Use Element</b> 7.4: Benefits from regional transportation, land use, air quality, waste management and disposal, and habitat conservation plans 7.5: Other agencies and service providers to minimize impacts of their facilities 7.6: Joint use agreements with other agencies to share existing and future public facilities among institutions
		<b>Growth Management Element</b> 2.1: Address regional issues and opportunities related to growth, transportation, and infrastructure
Ecosystems	Wildlife migration	<b>Land Use Element</b> 6.8: Integrate natural amenities and connections within design of urban and suburban spaces



Table NR-1  
Climate Change Related Policies

Issues	Topic	Policies'
	Habitat management	<p><b>Land Use Element</b> 6.1.2: Recognize value of natural and cultural resources in undeveloped areas</p> <p><b>Natural Resources Element</b> 2.1.6: Protect in-stream habitat and natural stream and channel features 4.1: Preserve and protect native and habitat-supporting plant resources 4.2: Enhance the natural qualities of Santiago Creek to protect habitat and reintroduce native plants and animals 4.3: Reduce impacts of urban development on important ecological and biological resources 4.4: Repair or improve ecological and biological conditions in site development, redevelopment, and public improvements 4.5: Protect the Santiago Creek and the Santa Ana River corridors from premature urbanization</p>
	Tree protection and planting	<p><b>Land Use Element</b> 6.9: Maximize landscaping along streetscapes and within development projects</p>
Energy Efficiency	Energy efficient technology	<p><b>Infrastructure Element</b> 3.4: Use energy-efficient street lights 4.4: Integrated and cost-effective design and technology features within new development</p>
Green Building	Public education	<p><b>Natural Resources Element</b> 2.7: Ensure adequate energy supplies to meet community needs, and promote energy conservation and public education programs</p>
	Efficient infrastructure systems	<p><b>Natural Resources Element</b> 2.6: Sustainable building and site designs for new construction and renovation projects 4.4: Integrated and cost-effective design and technology features within new development</p>
Renewable Energy	Reduced fossil fuel reliance	<p><b>Natural Resources Element</b> 2.2: Alternative transportation modes, alternative technologies, and bicycle- and pedestrian-friendly neighborhoods</p>
Transit	Adequate transit to employment centers	<p><b>Circulation &amp; Mobility Element</b> 3.3: Incorporate transit-oriented design within commercial, employment, medium density residential, and mixed-use areas</p>
	Systems along major corridors	<p><b>Circulation &amp; Mobility Element</b> 1.1: Integrated, hierarchical, and multi-modal system of roadways, pedestrian walkways, and bicycle paths <b>Urban Design Element</b> 2.1: Active, pedestrian-friendly streets and corridors that balance auto, transit and pedestrian mobility</p>
	Expanded passenger rail service	<p><b>Circulation &amp; Mobility</b> 3.1: Assess City public transportation needs and ensure delivery of services when and where they are needed 3.2: Convenient and attractive transit amenities and streetscapes to encourage use of public transportation</p>





Table NR-1  
Climate Change Related Policies

Issues	Topic	Policies <sup>1</sup>
	Non-motorized transportation	<p><b>Land Use Element</b>                      2.6: Transit, bicycle, and pedestrian sidewalks, paths, paseos, and trail systems in and around mixed-use areas                      2.7: High-quality architecture, landscape design, and site planning of mixed-use projects, emphasizing pedestrian orientation and safe and convenient access</p> <p><b>Circulation &amp; Mobility Element</b>                      1.4: Prohibit on-street parking to reduce bicycle/automobile conflicts in appropriate target areas                      4.1: Comprehensive bicycle network integrated with other transportation systems, including Santiago Creek, the Santa Ana River, and the proposed Tustin Branch Trail                      4.2: Racks and safe storage facilities at parking areas for City facilities                      4.4: Provide adequate bikeway system signage, trail markings, and other amenities                      4.5: Defensive trail design features, lighting, emergency access, and links to the roadway signal system                      4.6: Abandoned rail corridors as segments of bikeway and pedestrian trail system                      4.7: Accessible sidewalks and pedestrian amenities</p> <p><b>Natural Resources Element</b>                      6.1: Multi-use trail links that serve recreational and circulation purposes                      6.2: Consistent, safe, and efficient maintenance of trails, and minimal trail impacts to the environment                      6.3: Pursue joint use of local rights-of-way and easements for multi-use trails                      6.5: Safe trail system interface with existing development                      6.6: Integrated relationship between trails and developed areas</p> <p><b>Public Safety Element</b>                      9.1: Traffic control devices, crosswalks, and pedestrian-oriented lighting, within design of streets, sidewalks, trails, and school routes                      9.2: Safe routes that encourage children to walk or bike to schools and recreational facilities                      9.3: Remove barriers to pedestrian and bicycle access</p> <p><b>Noise Element</b>                      2.3: Alternative transportation modes to minimize traffic noise</p> <p><b>Growth Management Element</b>                      1.7: Expansion and development of alternative methods of transportation</p> <p><b>Infrastructure Element</b>                      3.5: Preserve and improve existing on-street bike paths within rights-of-way</p>



Table NR-1  
Climate Change Related Policies

Issues	Topic	Policies'
	Transit-supporting facilities	<p><b>Circulation &amp; Mobility Element</b> 2.7: Use of rail corridors for the movement of freight and goods</p> <p><b>Growth Management Element</b> 1.9: New development incorporates non-motorized and alternative transit amenities 2.5: Provide bus shelters, shade, and other special streetscape treatments at transit stations that encourage use of regional bus and train services</p>
Transportation	Shorten travel distances	<p><b>Growth Management Element</b> 2.4: Infill development and mixed-use opportunities wherever possible as developable space becomes more limited</p>
	Technical solutions	<p><b>Growth Management Element</b> 1.12: Traffic reduction strategies within the City's Transportation Demand Management Ordinance</p>
	Roadway maintenance and design	<p><b>Land Use Element</b> 5.7: Roadway improvements within Old Towne designed to promote walkability and a safe pedestrian environment 5.9: Promote attractive and safe pedestrian access between the Santa Fe Depot and the Plaza</p> <p><b>Circulation &amp; Mobility Element</b> 1.3: Improve street capacity and increase safety on City arterials and neighborhood streets</p> <p><b>Growth Management Element</b> 1.4: Transportation impact fees for improvements within the City and within established County Growth Management Areas 2.2: Maintain and expand roadway and bikeway systems</p>
Air quality	Reduce vehicle emissions	<p><b>Infrastructure Element</b> 3.6: New developments funds fair-share costs associated with City provision of right-of-way maintenance services</p> <p><b>Natural Resources Element</b> 2.1: Implement and enforce regional air quality management plans 2.2: Support alternative transportation modes, alternative technologies, and bicycle- and pedestrian-friendly neighborhoods</p> <p><b>Natural Resources Element</b> 3.1: Evaluate the potential effects of climate change on the City's human and natural systems and prepare strategies that allow the City to appropriately respond and adapt 3.2: Develop and adopt a comprehensive strategy to reduce greenhouse gasses within Orange to at least 1990 levels by 2020</p>



Table NR-1  
Climate Change Related Policies

Issues	Topic	Policies <sup>1</sup>
Water management	Water use efficiency and reduced consumption	<p><b>Natural Resources Element</b></p> <ul style="list-style-type: none"> <li>2.3: Native and drought-tolerant plants, proper soil preparation, and efficient irrigation systems for landscaping</li> <li>2.4: Recycled and reclaimed water for landscaping projects</li> <li>2.1.1: Ecological integrity and health of watersheds</li> <li>2.1.2: Protect the quantity and quality of local groundwater supplies</li> <li>2.1.3: Control surface runoff water discharges into the stormwater conveyance system</li> <li>2.1.4: Reduce pollutant runoff from new development through use of Best Management Practices</li> <li>2.1.5: Minimize impervious surfaces and associated urban runoff pollutants in new development and redevelopment</li> </ul> <p><b>Infrastructure Element</b></p> <ul style="list-style-type: none"> <li>1.2: Correct deficiencies in the City’s infrastructure systems and work toward environmentally sustainable systems</li> <li>1.3: Water conservation programs aimed at reducing demands</li> <li>1.4: Environmentally efficient infrastructure improvements</li> <li>1.5: Cost-effective methods to reduce storm water infiltration into the sewer system</li> <li>1.6: New development to fund fair-share costs associated with water, sewer, and storm drain service</li> </ul>
Waste reduction	Waste management and recycling	<p><b>Natural Resources Element</b></p> <ul style="list-style-type: none"> <li>2.5: Local and regional waste-reduction and diversion goals</li> </ul> <p><b>Infrastructure Element</b></p> <ul style="list-style-type: none"> <li>2.3: Programs for residents to donate or recycle surplus furniture, old electronics, clothing, and other household items</li> <li>2.4: Outreach and education to all City customers regarding residential collection of household hazardous wastes</li> </ul>
	Solid waste reuse	<p><b>Infrastructure Element</b></p> <ul style="list-style-type: none"> <li>2.2: Expand outreach and education regarding recycling opportunities</li> </ul>

Note:  
1 – Policies are abbreviated for presentation in this table. Please refer to the text of each policy in the identified General Plan element and corresponding Implementation Programs in the General Plan Appendix.



### *Adaptation Strategies*

Climate change has been recognized as a threat that could alter social, economic, and ecological conditions in the City. Concentrations of GHGs have dramatically increased in the atmosphere due to the use of fossil fuel-based energy sources. Additionally, the earth's capacity to capture and store GHGs has been reduced due to extensive deforestation and the conversion of grasslands and other carbon rich natural communities, as well as saturation of the ocean with dissolved CO<sub>2</sub>. Rigorous scientific analysis conducted by the IPCC, the National Research Council of the National Academies, and other agencies indicates that increased concentrations of GHGs have already begun to result in significant warming, and will lead to changes in precipitation patterns, sea level rise, and more frequent extreme weather events. Other effects could include constrained water and energy availability, more frequent flooding, health impacts related to increases in vector borne diseases, air pollution, and habitat loss.

### *Wildfire Hazards*

Research conducted at the U.S. Department of Energy's Lawrence Berkeley National Laboratory indicates that climate change will increase the frequency and size of wildfires in California. Hotter, drier climates, aided by prolonged drought, will promote increased accumulation of fire-prone vegetation. When fires occur, stronger winds will continue to fan the flames, spreading fires faster and farther than previously experienced. This will expand the size of the urban-wildland interface, because more residential communities will be within reach of wildfire activity. An expanded urban-wildland interface will require increased resources, planning, and funding to maintain and defend.

Adaptability is important in considering how the City can protect its citizens from the negative effects of climate change. In terms of fire protection, The City will continue to adapt by regularly updating fire protection requirements, especially in transition areas between developed and undeveloped land, and by enforcing the strongest construction and design standards. Additionally, the City will work to preserve open space where significant hazards exist.

### *Flooding*

The California Climate Change Center, a research arm of the California Energy Commission, has found that climate change will result in new flooding concerns throughout California. Climate change will result in increased severity of winter storms, particularly in El Niño years. Such weather events will result in higher levels of seasonal flooding than those currently experienced. This will strain dam capacity and increase floodplain areas. Policies regarding flood protection under Goal PS-2 (in the Public Safety Element) will help the City deal with existing and increased potential for flooding. The City will continue to work with the Orange County Hazard Mitigation Task Force in its planning and implementation of the Hazard Mitigation Plan, and will update its Emergency Operations Plan to identify and fund flood control improvements regularly. Public facilities must be flood-proofed, and buildings in floodplains must adhere to construction standards.

The City will continue to require flood/storm control facilities for proposed development and redevelopment projects, and will upgrade street storm drains to deal with potential dam inundation. These programs not only take into account the potential flood events now, but are adaptable enough to account for a potential increase.



### *Water Supply*

Several recent studies have shown that existing water supply systems are sensitive to climate change; however, experts are uncertain about what the overall effects will be on water supply. Some models indicate that drier conditions will cause decreased reservoir supplies and river flows. Other models predict wetter conditions with increased reservoir inflows and storage, and increased river flows. Although there is some uncertainty, it is widely accepted that changes in water supply will occur and that water yields from reservoirs are expected to be unreliable. Whether or not climate change is responsible, Orange must prepare for a future where competition for water resources is even greater than at the present time.

Many of the policies and programs governing water resources under Goal NR-2 will serve to prepare the City for the possible consequences of climate change on water supply. Such policies include using native or drought-tolerant plants in landscaping, using recycled water in irrigation, and promoting other water conservation efforts.

### *Climate Action Plan*

Primary among the City's climate change planning efforts is the development and adoption of the City of Orange Climate Action Plan (CAP), as outlined in the General Plan Implementation Program Appendix. The City will develop and adopt the CAP by December 31, 2012. The CAP will address both GHG emissions from activity within Orange (residential, commercial, industrial, and transportation sectors) and the emissions specifically from City government operations. The plan will first create a GHG emissions inventory for the base year and forecast GHG emissions for the year 2020. The Plan will determine the quantity of emissions to be reduced to meet the GHG reduction target of 15 percent below current levels by 2020.

Together, the policies contained in the General Plan and additional GHG reduction measures to be developed as part of the CAP will allow Orange to respond to this critical issue. Achieving the targeted GHG reductions and successful adaptation to the effects of climate change will demand genuine and significant effort from civic leaders, residents, and businesses.

## **Ecological, Biological and Mineral Resources**

In order to ensure preservation of plant and wildlife resources, some land must be protected from development to provide areas for native plants and wildlife to thrive. Additionally, many significant mineral resources are present within the City. The following sections describe the City's approaches to conservation of ecological, biological, and mineral resources.

### **Ecological and Biological Resources**

Though a large part of Orange consists of urbanized areas that generally have low habitat value for wildlife, a significant amount of land in east Orange, Santiago Oaks Regional Park, and Peters Canyon Regional Park is set aside as open space, which includes the Irvine Ranch Land Reserve (IRLR) and the Nature Reserve of Orange County (NROC) established by the Central/Coastal Orange County NCCP. These areas contain valuable ecological and biological resources.

Important vegetation communities located in these areas include coastal sage scrub, woodlands, grasslands, chaparral, and riparian habitat. Characteristic vegetation species associated with scrub





habitat include coastal sage brush and various species of sage and buckwheat. Woodland communities are multilayered, non-riparian, with tree canopies that have 20 to 80 percent tree cover. Local grassland communities consist of native bunchgrasses and non-native annual grasses. Chaparral communities are characterized by sclerophyllus shrubs. Species found in riparian habitats are associated with and dependent upon bodies of water, such as streambeds.

Sensitive wildlife, fish, amphibian, and reptile species in these Orange habitats include Santa Ana speckled dace, Western spadefoot toad, Southern pacific pond turtle, banded gecko, horned lizard, orange-throated whiptail, silvery legless lizard, coast patch-nosed snake, mountain kingsnake, two-striped garter snake, and the northern red-diamond rattlesnake. Sensitive bird species include the double-crested cormorant, osprey, white-tailed kite, northern harrier, sharp-shinned hawk, cooper's hawk, Swainson's hawk, Ferruginous hawk, golden eagle, Merlin, American peregrine falcon, prairie falcon, Western burrowing owl, long-eared owl, southwestern willow flycatcher, loggerhead shrike, least Bell's vireo, California horned lark, coastal cactus wren, gnatcatcher, California yellow warbler, yellow-breasted chat, rufous-crowned sparrow, Bell's sage sparrow, grasshopper sparrow, tricolored blackbird, and the black-chinned sparrow. Sensitive mammal species include the pallid bat, pale big-eared bat, California mastiff bat, pocketed free-tailed bat, small-footed myotis, yuma myotis, San Diego black-tailed jackrabbit, dulzura pocket mouse, northwestern San Diego pocket mouse, southern grasshopper mouse, San Diego desert woodrat, American badger, and mountain lion.

The City's main approach to conserving the many ecological and biological resources in the planning area is participation in the Orange County NCCP. Orange lies within the Coastal subregion of the Orange County NCCP. In 1996, the County of Orange and participating jurisdictions approved the Central and Coastal Subregion NCCP and an associated Implementation Agreement. Both the City of Orange and The Irvine Company are signatories to this agreement. Three species were designated as "target species" by the NCCP to be used as umbrella species to guide the design of a permanent habitat system within the Central and Coastal Subregion. The three species are the coastal California gnatcatcher, coastal cactus wren, and the orange-throated whiptail lizard, all of which are currently on the federal list of threatened or endangered species. By providing long-term protection for habitat required by the three target species, sufficient coastal sage scrub (CSS) and other habitat would be protected to benefit a much broader range of CSS-related species.

The 37,000-acre NCCP Habitat Reserve area borders the eastern portion of the planning area on the north and south, and includes portions of Santiago Hills II and east Orange. As shown in Figure NR-3, areas designated as NCCP Habitat Reserve include areas surrounding Irvine Lake, Santiago Reservoir, Peters Canyon Reservoir, and along Cannon Street. Within the Habitat Reserve area, the NCCP restricts the kinds of permitted uses to protect long-term habitat values. Residential, commercial and industrial uses are prohibited, as are new active recreational uses outside already disturbed areas. However, the NCCP recognizes that some new non-habitat uses, particularly involving public infrastructure, will need to be sited in the Reserve area, and that some current uses will be maintained. New recreational facilities will be sited in locations compatible with habitat protection based on the understanding that recreational use is subordinate to habitat protection within the reserve. The Reserve area is administered by the NROC, which includes representatives of the U.S. Fish and Wildlife Service, California Department of Fish and Game, participating landowners, and three public members. Implementation of the Reserve policies will protect sensitive plant and wildlife species in accordance with the NCCP.



Substantial area is also designated as Non-Reserve Open Space. This includes areas along the Santa Ana River, Serrano Avenue, an open space corridor close to the City's northern boundary with Villa Park, and a large area near the Santiago Creek Dam. Non-Reserve Open Spaces designate regional open spaces that were in public ownership prior to adoption of the NCCP. These open spaces are not subject to the development requirements associated with the Reserve system, but they are recognized as integral components of the overall subregional conservation strategy.

The City's General Plan land use designations in these areas conform to the NCCP in that all areas currently proposed for urban development are areas identified as permitted for development and "take" by the Central/Coastal NCCP. All remaining areas are designated Open Space. Landowners in Orange who have properties within the boundaries of the NCCP Reserve area are classified as either "participating landowners" or "non-participating landowners." Participating landowners have the option to develop their properties without preparing a Habitat Conservation Plan (HCP). The Irvine Company is the City's only participating landowner. The Irvine Company donated the 50,000-acre Irvine Ranch Land Reserve to the NCCP, and pays for the management of the area as part of the mitigation plan for new development in the easternmost portion of the planning area. Lands located within the Reserve must be "reserved in perpetuity as open space and for recreational purposes." As a participating jurisdiction, the City is responsible for project review for participating landowners. The City is responsible for ensuring that non-participating landowners have paid "in-lieu" fees to the NROC for the native areas that will be removed due to development. In this case, the City is also responsible for coordinating with the NROC to make sure that the development is not in a restricted native open space area. The City will continue to ensure that all development proposals conserve the greatest amount of open space possible.

The City is committed to the protection and preservation of plant and wildlife resources, and will ensure the preservation of such resources wherever possible. The City will also encourage the use of native landscape materials in new and renovated project sites.

### **Mineral Resources**

Mineral resource deposits in Orange are primarily limited to the sand and gravel resources contained in and along the Santa Ana River and Santiago Creek. Sand and gravel resources are referred to collectively as "aggregate." Aggregate is the primary component of Portland cement concrete, a material widely used in the construction industry. The state requires general plan land use policy to recognize the importance of these deposits to the region's economy. As these resource deposits are important to the region's economy, the City will evaluate development proposals within these areas, and ensure adequate mitigation or preservation of the areas for future aggregate mining activity.

The Land Use Element provides a means to protect the aggregate resource areas from premature urbanization. Historically, Orange contributed to the gravel industry, but the City's mineral resources have been mostly exhausted. Over the years, Orange has been characterized by numerous state-designated Mineral Resource Zones (MRZs), which identify the locations of regionally significant aggregate deposits. The MRZs have since been declassified, either as a result of completed mining activity, or as a result of urban development.

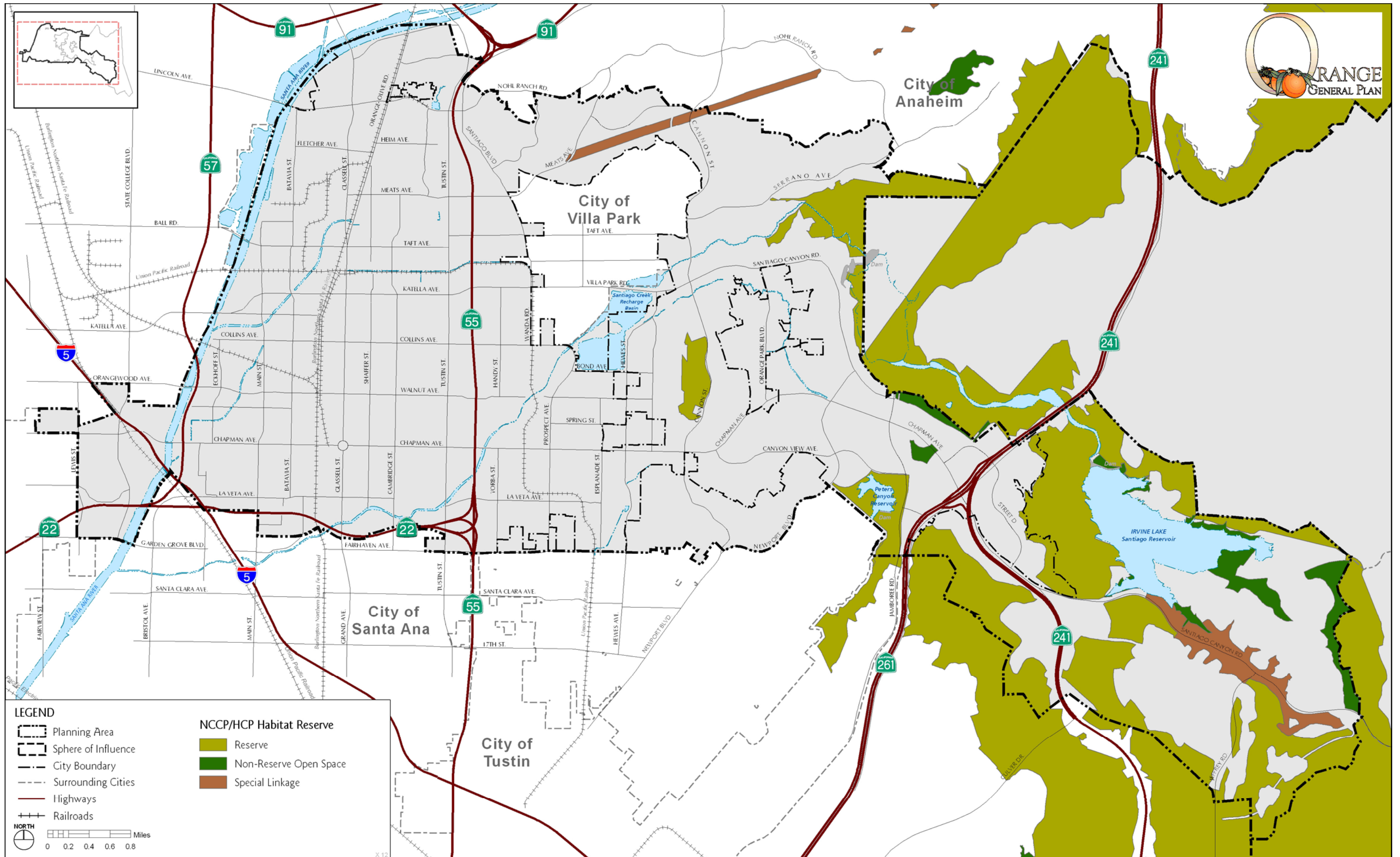


Figure NR-3 NCCP Habitat Reserve Area







However, the Land Use Policy Map (in the Land Use Element) designates an area comprising and surrounding the two groundwater recharge pits (Bond Pits) on Santiago Canyon Road within the northeastern portion of the City as a Resource Area for the purpose of conserving mineral resources and allowing mining activities. Additionally, the approximately 18-acre site of the R.J. Noble Company, which lies within the northwestern unincorporated portion of the planning area, is another Resource Area currently used for aggregate extraction and crushing operations. Portions of Irvine Lake in east Orange that are currently designated as Open Space may be used in the future for desilting activities, with the possibility of aggregate extraction.

The Resource Area land use designation allows for only aggregate extraction or recreation uses. Although the Open Space designation does not permit mining, it will protect areas from urbanization, making it possible to mine the areas at some future date if necessary. Areas containing mineral resources protected in this manner include the resource zones at the west end of Lincoln Avenue, areas adjacent to Santiago Creek, and the north, east, and west sides of Irvine Lake in east Orange. The mineral resource areas in east Orange would also require amendment to the NCCP before extraction could occur.

### Visual and Aesthetic Resources

Preservation of ridgelines and steep hillsides is an important objective for the City, for both aesthetic and public safety reasons. To that end, Orange has adopted a hillside grading policy that prohibits grading on ridgelines designated Open Space Ridgeline on the Land Use Policy Map. Wherever hillside grading occurs, the policy requires that graded slopes must be contoured and extensively landscaped with native vegetation or other compatible plant materials.

The largely undeveloped Santiago Hills II and east Orange portions of the planning area have many scenic resources that include Irvine Lake, grassy valleys, rugged hillsides, rock outcroppings, and winding canyons. People traveling along Santiago Canyon Road have spectacular views of these abundant scenic resources. These views should be protected while still allowing development to occur. As identified on Figure NR-4, the City will work to designate Santiago Canyon Road as a City Scenic Highway, and will develop standards for appropriate treatment of the roadway and its surroundings.

In the more urbanized areas of the City, boulevard landscaping can effectively provide a sense of visual open space. The City will review and strengthen landscaping standards as necessary to provide green areas within commercial and industrial districts, consistent with strategies outlined in the Urban Design Element.

The City will also promote provision of street trees on City streets, in accordance with the *Street Tree Master Plan*. The City of Orange currently has over 22,000 public street trees along residential and arterial streets. The *Street Tree Master Plan* was adopted in 1999 in an effort to provide guidelines for all future street tree planting projects, as well as for the removal and replacement of trees and shrubs on public rights-of-way or streets. An update to the *Street Tree Master Plan* will be completed to emphasize aesthetics, theme, and maintenance of both trees and sidewalks. The Master Plan update will also consider safety issues posed by street tree debris and roots.

The City will also continue to enforce its Street Tree Ordinance and Tree Preservation Ordinance as part of the City of Orange Municipal Code. The Street Tree Ordinance has clear specifications and requirements for the planting, removal and maintenance of trees and shrubs. The Tree Preservation Ordinance provides protection for healthy, mature trees on private property and provides criteria



## NATURAL RESOURCES



under which trees may be removed. The *Street Tree Master Plan*, Street Tree Ordinance, and Tree Preservation Ordinance will help preserve and manage the City's urban forest, and maintain the City's Tree City U.S.A. status.

To reduce visual clutter along commercial corridors, the City will work with utility providers to identify existing arterial corridors that would benefit from moving overhead utilities underground and improving the placement of utility service boxes, consistent with the City's *Utility Undergrounding Master Plan*. Undergrounding minimizes unsightly views of utility lines, which are currently prominent in areas such as the Lincoln Avenue corridor. The City will also encourage developers of all new infill projects to include underground utilities. Where placing utilities underground is not feasible, the City will work with utility providers and developers to relocate utilities away from arterial roadways. The City will also update and implement the sign provisions of the Zoning Ordinance to reduce visual clutter caused by signage and improper setbacks.

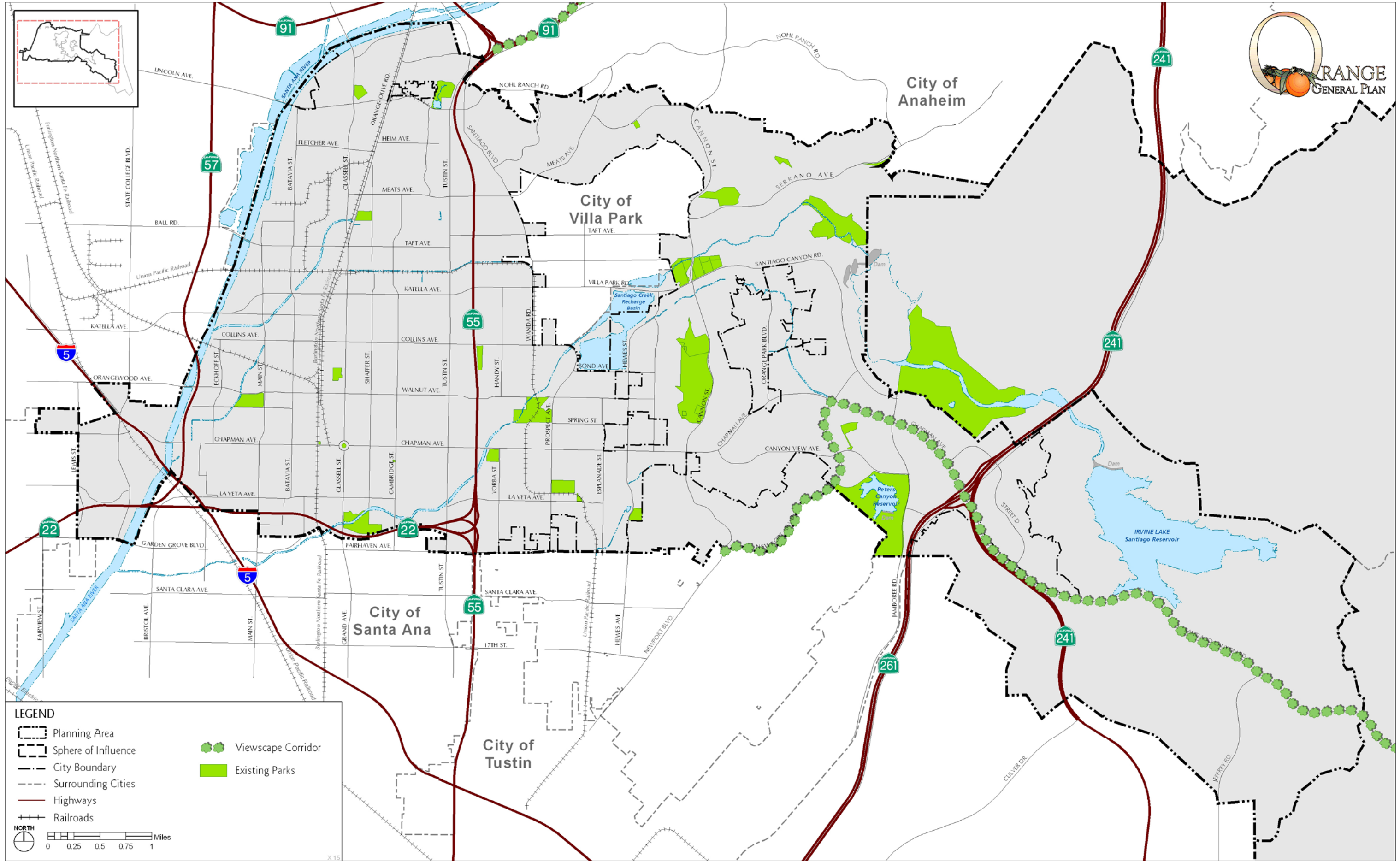
## Parks and Recreation Plan



Parks and recreation facilities are vital resources for the City. They provide residents with a broad range of health benefits, and the quality of these resources helps attract new residents and businesses to Orange. The City currently lacks adequate lands designated for public parks and open space to meet the recreational needs of its residents. Park facilities and recreation programs are essential to the health and economic well-being of Orange residents. The City has made improving its park system and recreational programs a high priority so that all residents can enjoy close access to a playground, a park, or a natural area. The City offers a full range of recreational programs and facilities that are heavily used by people of all ages.

This section of the Natural Resources Element establishes long-range strategies and standards for the maintenance of existing park facilities and the development of new parks and recreational programs in Orange. This plan will serve as a basis for future park facilities planning. In addition, the Element identifies standards that apply not only to the development of future parks and facilities, but also to the type and nature of sites and facilities obtained through purchase or dedication, as well as their intended role in the community.

A number of key issues will continue to affect the City's ability to maintain and expand recreation facilities and services in coming years. First, the easternmost portion of the City will continue to experience a substantial amount of residential development. The increased population will require a full range of services, including those related to parks and recreation. These needs are addressed by the parklands provided in the development plan for east Orange. The recreation needs of the older, well established neighborhoods in Orange will also have to be monitored, particularly in light of the combined public desire for more parkland and the expanded opportunities for mixed-use residential and commercial development advocated by the Land Use Element



**LEGEND**

- Planning Area
- City Boundary
- Surrounding Cities
- Highways
- Railroads
- Viewscapes Corridor
- Existing Parks

NORTH

0 0.25 0.5 0.75 1 Miles

X 15

Source: City of Orange 2008

Figure NR-4 Viewscapes Corridors





Additional issues and concerns that will have a bearing on the future maintenance and development of parks and recreation facilities include the following:

- Orange will find it increasingly difficult to finance major capital improvements for parks. In addition, obtaining land for new park sites in the western portion of the city is challenging because the amount of undeveloped land is limited, and costs and competing priorities for this land have increased.
- Orange is presently deficient in improved recreational open space, according to standards established by the National Recreation and Parks Association (NRPA). A number of park sites have been acquired that, when developed, will reduce the gap between the standards and available parkland. Also, school grounds, through joint use agreements with the City, will help to meet parkland needs.
- Orange maintains and provides a wide range of specialized facilities such as game courts, athletic fields, and community buildings in existing parks. However, additional facilities are needed to meet future demands.
- A number of easements, including those for flood control, rail lines, and utilities, are located in Orange and present the City with unique opportunities to expand the existing system of trails and bikeways.
- Recent trends in land use law will make it increasingly difficult for the City to reserve private open space lands for future recreational use.

### Park Types

A Master Plan for the City's park facilities and recreation and community services was completed in November 1999. The *Master Plan for Parks Facilities* establishes an organized and structured process for the development of new recreation facilities and the renovation of existing City parks and facilities. The Plan also discusses the preservation of open space and the development of new recreational programs.

The City maintains three types of park facilities: neighborhood parks, community parks, and special use recreational facilities.

*Neighborhood Parks* (4 to 10 acres) provide for the daily recreation needs of residents in the immediate area. Typical facilities may include landscaped picnic areas, tot lots, hard court areas, multipurpose ball fields, and limited parking.

*Community Parks* (15 to 40 acres) are larger in scale and provide a greater variety of recreational opportunities and facilities. Six of the community parks (Hart, Grijalva, El Camino Real, El Modena, Handy, and Shaffer) host active organized sports leagues and have lighted sports fields. Special use recreational facilities provide a wide range of activities to serve the community. These facilities include joint-use properties and historic community assets such as Plaza Park, Pitcher Park, and Depot Park and Veterans Memorial.



Orange's parks also provide passive recreation opportunities that include walking, hiking, and biking. Most of the parks have picnic sites, many with barbeques. Programs for seniors are available at the Orange Senior Center. The senior program is largely funded by the City and administered by a non-profit organization. Orange also provides a wide variety of recreational programs for all ages. Many of the programs are joint ventures with local nonprofits, commercial vendors or volunteer groups. The most popular activities include swimming and sports.

### **Parks Inventory and Acreage Standards**

Figure NR-5 shows the locations of City parks and recreation facilities, and Table NR-2 provides a summary of the City's existing parks, recreation and joint-use facilities, future planned City parks, and County regional parks.

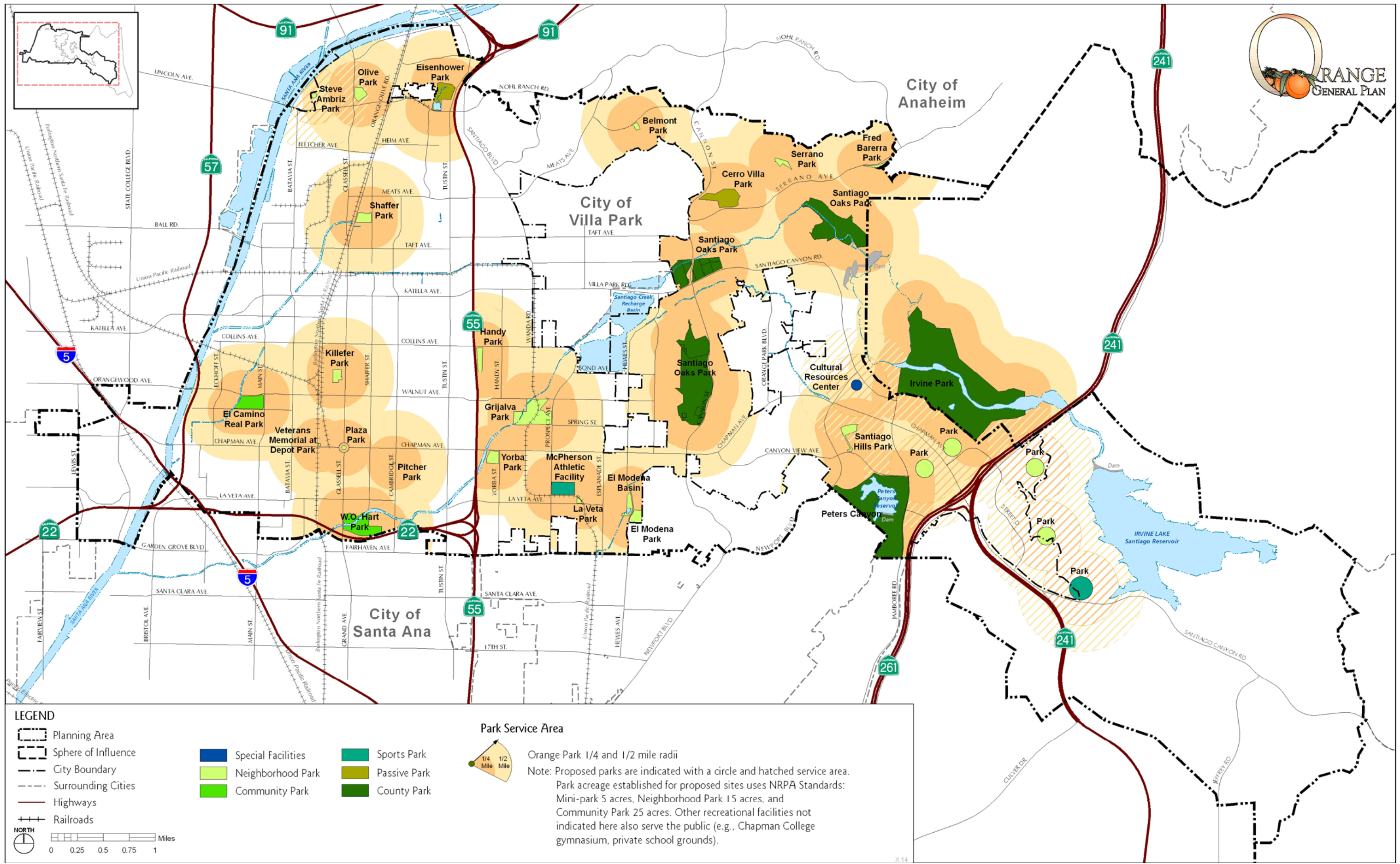
The City owns and has developed 24 parks, which consist of about 251 acres of parkland, including about 19 acres of joint-use school/City recreation facilities. Additional parkland is planned in the eastern portion of the planning area. A combination of active and passive neighborhood parks, as well as a sports park, will be developed to serve the new population in east Orange. The City may also consider the use of joint school/park facilities if the option presents itself.

The precise location and size of future parks will be defined in conjunction with the approval of specific development plans and as further elaborated on in the future preparation of planned communities or specific plans. Because of proximity in east Orange to the existing or proposed natural and/or active regional parks, along with the extent of scenic open space preserved in the immediate area, the emphasis on park planning should be on active neighborhood or sport park facilities.

Table NR-3 presents estimates of the City's current and future ratios of parkland per 1,000 persons. Separate ratios are presented for facilities provided or planned for by the City and those provided or planned for by the County.

To calculate the parkland ratio per 1,000 residents, the acreage of currently developed City parks, City open space areas, and joint-use recreation facilities listed in Table NR-2 are combined for a total of about 251 acres. Given the City's estimated 2007 population of 138,640, this equates to a current ratio of 1.81 acres of current parkland per 1,000 persons, which is notably lower than the National Recreation and Park Association's recommendation of 3 acres per 1,000 population. According to this recommendation, the City has a current park shortage of approximately 165 acres. However, City residents also enjoy access to approximately 1,187 acres of County regional parks. If regional parks are factored into the parkland ratio, the ratio improves to approximately 10.37 acres of parkland per 1,000 population.





**LEGEND**

- Planning Area
- Sphere of Influence
- City Boundary
- Surrounding Cities
- Highways
- Railroads
- NORTH
- 0 0.25 0.5 0.75 1 Miles

**Park Service Area**

- Special Facilities
- Neighborhood Park
- Community Park
- Sports Park
- Passive Park
- County Park

Orange Park 1/4 and 1/2 mile radii

Note: Proposed parks are indicated with a circle and hatched service area. Park acreage established for proposed sites uses NRPA Standards: Mini-park 5 acres, Neighborhood Park 15 acres, and Community Park 25 acres. Other recreational facilities not indicated here also serve the public (e.g., Chapman College gymnasium, private school grounds).

Source: City of Orange 2008

Figure NR-5 Parks Master Plan





**Table NR-2  
Orange Park System Inventory**

	Location	Date Acquired (for City parks)	Acres	Function
Belmont Park	4536 E. Via Escola Ave.	1994	2.50	Neighborhood
Cerro Villa Park	5850 Crest de Ville	1971	26.70	Open space
Eisenhower Park	2864 N. Tustin Ave.	1969	16.46	Community
El Camino Real Park	400 N. Main St.	1978	18.67	Community
El Modena Basin	Hewes St. & Jordan Ave.	1973	7.37	Neighborhood
El Modena Park	555 S. Hewes St.	1974	9.32	Neighborhood
Fred Barrera Park	8380 East Serrano Ave.	2006	3.00	Neighborhood
Fred Kelly Stadium	3920 Spring St.		2.00	Joint-use (OUSD)
Grijalva Park at Santiago Creek	368 N. Prospect Ave.	2003	42.00	Community
Handy Park	2143 E. Oakmont Ave.	1978	7.31	Neighborhood
Hart Park	701 S. Glassell St.	1934	41.76	Community
			12.00	Open space
Killefer Park	615 N. Lemon St.	1956	4.95	Neighborhood
La Veta Park	3705 E. La Veta Ave.	1956	1.62	Neighborhood
			1.00	Open space
McPherson Athletic Facility*	333 S. Prospect Ave.	1997	9.00	Joint-use (OUSD)
Olive Park	2841 N. Glassell St.	1975	8.02	Neighborhood
Pitcher Park	204 S. Cambridge Ave.	1992	0.50	Special use
Plaza Park	Plaza Circle	1886	0.72	Special use
Santiago Hills Park	8040 E. White Oak Ridge	1990	7.95	Neighborhood
Santiago Middle School	515 N. Rancho Santiago Blvd.		5.10	Joint-use (OUSD)
Santiago Canyon College	8045 E. Chapman Ave.		2.58	Joint-use (RSCCD)
Serrano Park	2349 Apache Creek Dr.	2004	4.00	Neighborhood
Shaffer Park	1930 Shaffer St.	1964	7.32	Neighborhood
Veterans Memorial at Depot Park	100 N. Atchison St.	1887	0.44	Special use
Yorba Park	190 S. Yorba St.	1962	8.54	Neighborhood
<i>Subtotal Current City Parks and Joint-use Facilities</i>			250.83	
Steve Ambriz Memorial Park	610 Riverbend Parkway	2008	10.50	Neighborhood
Irvine Company I	East Orange	N/A**	6.00	Neighborhood
Irvine Company II	East Orange	N/A**	3.00	Neighborhood
Irvine Company III	East Orange	N/A**	4.00	Neighborhood
Irvine Company IV	East Orange	N/A**	20.00	Community
<i>Subtotal Planned Future Parks</i>			43.50	
<b><i>Subtotal City Current and Planned Future Parks and Joint-use Facilities</i></b>			<b>294.33</b>	
Irvine Regional Park	East Orange	N/A***	477	Regional Park
Santiago Oaks Regional Park	Northeast Orange	N/A***	356	Regional Park
Peters Canyon Regional Park	East Orange	N/A***	354	Regional Park
<i>Subtotal County Regional Parks</i>			1,187	
<b><i>Total Park Acreage</i></b>			<b>1,481</b>	

Sources: Orange Master Plan for Park Facilities, 1999; Community Services Department staff interview, 2005; Orange County Parks Department, 2007.

Notes:

\* Although the McPherson Athletic Facility encompasses 18 acres, the City of Orange only uses the facility half of the time. This results in the designation of 9 acres of joint-use acreage allocation.

\*\* Planned future parks scheduled for construction.

\*\*\* Regional parks not owned by the City.



**Table NR-3  
Park Ratio Calculations**

	Current (2007) Population: 138,640		Future (post-2030) Population: 178,471	
	Acres	Ratio (Acres/ 1,000 Population)	Acres	Ratio (Acres/ 1,000 Population)
City parks, open spaces and joint-use facilities	250.83	1.81	294.33	1.65
County regional parks	1,187	8.56	1,187	6.65
Total	1,437.83	10.37	1,481.33	8.30
Note: Population totals, City park acreages, and resulting ratios are based on the 2007 incorporated City limits. They do not include the City's sphere of influence, where parks are provided and maintained by the County of Orange.				

If further growth occurs in accordance with policies described in the Land Use Element, Orange's population may increase to approximately 178,471 at some point in time after 2030. Assuming that the planned park improvements in east Orange and at Riverbend Parkway (described in Table NR-1) are completed prior to 2030, this would result in a future ratio of 1.65 acres of parkland per 1,000 residents. Approximately 241 acres of additional parkland beyond the planned parks in east Orange and Riverbend Parkway is required to achieve the recommended ratio of 3 acres per 1,000 population. An additional 598 acres would be required to achieve the *desired* ratio of 5 acres per 1,000 persons, as stated in General Plan policy. If County regional parks are factored into the ratio, the future ratio would be approximately 8.3 acres of parkland per 1,000 population.



Strong demand and immediate need exist for more parks, accessible open spaces, active recreational areas, and well-lit multi-use facilities in Orange. The current shortage of parkland in Orange has caused the City to develop joint-use facilities agreements, specifically with the Orange Unified School District (OUSD) and Rancho Santiago Community College District. Although joint-use arrangements have been successful, they are sometimes difficult to implement, and result in the City being able to claim only 50 percent of the use or effectiveness of a facility toward its objectives.

### **New Parks and Recreation Facilities**

Because City residents will benefit from additional parkland and recreation programming, Orange will work actively to acquire, build, and maintain additional parkland and park facilities. Specifically, the City will pursue adding approximately 241 acres of additional parkland beyond the inventory of current and planned facilities listed in Table NR-2, in order to achieve a minimum parkland ratio of 3 acres per 1,000 persons by 2030, working toward a desired ratio of 5 acres per 1,000 persons by 2050. The City will evaluate progress toward achieving this goal in a report to the City Council and community every five years.

As a separate, but compatible, objective, the City will work with the County to facilitate the provision of overall parkland, inclusive of both City facilities and County regional parks, at a ratio of 10 acres per 1,000 population. Achieving this objective by 2030 would require acquisition of an





additional 303 acres of parkland beyond the inventory listed in Table NR-1, and this additional acreage could be provided by either the City or the County.

To support these objectives, the City will require dedication of parkland at a rate of 3 acres per 1,000 anticipated residents or payment of in-lieu fees for new residential projects. Payment of in-lieu fees constitutes sufficient mitigation for parks impacts under California law, and new development projects cannot be required to directly mitigate existing parkland deficiencies. However, the City will utilize fees collected to the fullest extent possible to improve current park facilities and to acquire additional lands for the construction of new parks.

To increase incentives for new projects to provide viable, active park space, and to help compensate for current parkland deficiencies, the City will offer a variety of development incentives, including transfer of development rights (TDR) strategies, to developers of residential or mixed-use projects who are willing to provide community open space in excess of the standard 3 acres per 1,000 persons requirement. TDR refers to a method of transferring development rights from one property to another or from one part of a property to another part of the same property. In this context, a TDR would allow for conservation of open space or creation of a new community park at one location, in exchange for increased density or larger building sizes at another location. Furthermore, the City will continue to pursue all available joint-use opportunities with school districts, community college districts, and institutions, including Chapman University, in an effort to increase the utility of spaces throughout the City that are already functioning as open space. In its reviews of mixed-use developments within the focus areas established in the Land Use Element, the City will encourage such developments to include not only required park space but also common open spaces, portions of which may be required to be accessible to the public.



Meeting the stated needs for additional recreational open space will also require the City to pursue new types of parks and open spaces, such as pocket parks, linear parks, public plazas and paseos. Provision of these spaces is strongly encouraged by land use policy supporting the development of mixed-use residential and commercial areas in the Land Use Element.

The City will also acquire land for, build, and maintain parks currently identified in the *Master Plan for Parks Facilities*, and will amend the Master Plan on a periodic basis to reflect current conditions. The City's Park, Planning and Development Commission is currently working through the planning stages of several new parks throughout the City, which are identified within the *Master Plan for Parks Facilities*.

## **Site Selection Standards for New Parks**

The City of Orange and areas within the City's sphere of influence have grown considerably in recent decades. While the rate of growth in the future is difficult to predict, thousands of new housing units will be constructed during the next several decades, both in east Orange and within





the focus areas established in the Land Use Element. This in turn will require the development of new parks and facilities, and of convenient ways to access them.

A major goal of the City's Community Services Department is to make sure that all future park sites obtained through dedications or purchases are adequate in terms of meeting the recreational needs of the City. A "park" that is inaccessible, lacks usable open space, or is otherwise constrained has limited utility to the residents it is designated to serve. To ensure that this does not happen, the following standards are established to apply to the acquisition of new parkland:

- The service area should not be divided by natural or man-made barriers such as arterial highways, railroads, freeways, and commercial or industrial areas that would render the site inaccessible or undesirable as a park.
- Neighborhood parks should be located adjacent to elementary schools whenever possible. The primary consideration should be whether the existing school has adequate play space to serve both its educational needs and the needs of the neighborhood for playground space.
- The site for a community park should be of sufficient size to include a recreation building unless adjacent school facilities can be designated to serve public uses when school is not in session.
- The site for a neighborhood park should have street frontage. If it is located where adjacent streets are not sufficient for parking, the site should have a parking lot. Community park sites should have direct access to an arterial street.
- All neighborhood and community park sites should be accessible by foot, by bicycle, or within a short drive.

### **Santiago Creek and the Santa Ana River**

Santiago Creek is one of a limited number of natural creeks in southern California, and provides recreational, ecological, flood control and cultural benefits to the City. Orange residents strongly identify with the Creek, and are unified in their desire to preserve the natural characteristics of the Creek, and to use it as a link that connects City parks and other gathering places. Residents also seek long-term preservation of the hydrologic and ecologic functions of the creek.

In 1999, the City applied for, and was granted, technical assistance from the National Park Service Rivers, Trails, and Conservation Assistance Program to prepare a conceptual master plan for Santiago Creek. The plan, which is under preparation, will address three major components: recreation trails, open space, and flood control. The City will continue to work toward completion of the *Vision Plan for Santiago Creek*, and will implement its recommendations, consistent with General Plan policies concerning the Creek.

The Santa Ana River also provides important flood control benefits and recreational opportunities for City residents. Current and planned land uses located along the Santa Ana River are among the City's highest intensity uses, providing great opportunities to improve access to the recreational trails that follow the River. The City supports future development of highly-visible access points to the River, particularly at Chapman Avenue, Katella Avenue, and Lincoln Avenue. Also, the City



seeks to partner with the City of Anaheim, resource agencies, water districts, the Orange County Flood Control District, and community organizations to complete a vision plan for the Santa Ana River, similar to efforts currently underway for Santiago Creek. A key objective of the vision plan should be achieving more flexible use of the Santa Ana River corridor as a recreational amenity.

For both Santiago Creek and the Santa Ana River, the City supports preserving undeveloped portions of the waterways to support riparian habitat areas and improve surface water quality. Such preservation would be accomplished through the use of Open Space land use designations. For portions of Santiago Creek that abut developed areas, the City desires that future commercial and residential projects respond to the presence of the creek as a community and ecological amenity to be incorporated in their site plans, building design and orientation, and landscaping.

## **Recreational Programs and Services**

The City will also establish an ordinance to provide opportunities for funding for recreational services and facilities. Additionally, Orange will off-set and minimize impacts to the existing system caused by increased population associated with new residential development.

## **Comprehensive Trails Network**

Trails serve important transportation and recreational needs for both City residents and visitors. They also help link the community through greater accessibility between neighborhoods, employment and retail centers, civic and cultural areas, nature areas, and schools. Pedestrian trails and bikeways enhance Orange's community mobility, provide opportunities for recreation and exercise, and also reduce dependence on the automobile. Orange's warm, dry climate and generally flat landscape make it perfect for walking and bicycling amenities such as trails, walkways and bike paths.

The City experienced tremendous growth in the 1980s. During the 1989 General Plan update, the City Council identified a need for additional recreational opportunities and recognized that construction on previously undeveloped areas rendered many "open spaces" no longer usable or accessible to the public. Recognition of this need was the motivation for development of the *Recreational Trails Master Plan* in 1993. Master Plan objectives include: goals for development of the trails system, a set of design standards, and an implementation and management maintenance program. Implementation of the Master Plan relies on the combination of City efforts and the efforts of a dedicated, well-informed and highly organized group of trail activists who devote their time and economic resources to preserving and enhancing current trails and to developing and maintaining new trail opportunities.

The City is pursuing strategies for the maintenance and enhancement of the following community trail assets:

- Over 66 miles of existing trails
- Numerous City and County administered parks and open spaces located throughout the City that provide natural destination points, staging areas, and rest areas

## NATURAL RESOURCES



- Santiago Creek, which provides potential for a trail traversing the City from east to west, with connections to regional trails on each end
- The Santa Ana River, which provides multiple benefits, including a multi-purpose recreational trail that connects the San Bernardino Mountains to the Pacific Ocean

Additionally, 108 miles of proposed future trails are planned throughout the City on land currently used for a variety of purposes, including flood control, railroad rights-of-way, and roadways.

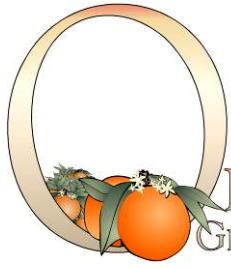
Although the City's trails are heavily used by residents, often trails are located in areas that are disconnected and not readily accessible from neighborhoods. For example, horse trails are located in single-family neighborhoods, and pedestrian trails are located in equestrian areas. The City will work in the future to refine the definition, purpose and use of trails, as well as appropriate links and access from neighborhoods.

The City has also put a high priority on creating a trail network that links the City's open spaces, featuring the Santiago Creek Trail as the spine of the network. Orange recently completed a paved bike trail along Santiago Creek from Tustin Street to the Santa Ana City limit, at which point the trail continues on to Main Place Mall and the Discovery Science Center. Three additional segments of this bike trail are planned; they will connect Tustin Street to Grijalva Park, as well as Collins Avenue along Santiago Creek, and then travel north from Walnut Avenue to Collins Avenue along the City-owned portion of the Santiago Creek Bike Trail Right-of-Way. The Santiago Creek Trail is planned to extend through the City along the creek, and connect the regional Santa Ana River trail to Santiago Oaks Regional Park and wilderness areas east of Orange. The City will continue to work toward designing a comprehensive trail system that is highly accessible and safe for those who wish to use it. Additional information, maps and policies related to Orange's comprehensive trails system are provided in the Circulation & Mobility Element.

## NATURAL RESOURCE IMPLEMENTATION

The goals, policies and plans identified in this Element are implemented through a variety of City plans, ordinances, development requirements, capital improvements, and ongoing collaborations with regional agencies and neighboring jurisdictions. Specific implementation measures for this Element are contained in the General Plan Appendix.

# **INFRASTRUCTURE ELEMENT**



ORANGE  
GENERAL PLAN

# INFRASTRUCTURE

## INTRODUCTION AND VISION FOR THE FUTURE

Orange residents, businesses and visitors rely on public infrastructure to carry out their daily duties. Population growth and new development continues to increase demand for infrastructure services. The Infrastructure Element includes guidelines and policies that address this demand for the community's existing and future needs for public utilities and infrastructure. Infrastructure services discussed in this Element include water, sewer, and storm drain systems, and solid waste services. The Element also addresses "dry" utilities such as natural gas, electrical, telephone, data, and cable television services. Further, the Element discusses lifeline infrastructures, which connect Orange to outside services during an emergency.

Availability of infrastructure determines growth patterns, density, and intensity of land use. Roadways are a critical part of the City's infrastructure system, providing for the movement of goods and services that support the local economy. The City maintains the local roadway system and supports efforts of the County, the California Department of Transportation (Caltrans), and the Transportation Corridor Agencies (TCA) to maintain regional roadways serving the City. The Circulation & Mobility Element provides policies and plans for future maintenance and enhancement of the roadway circulation system. Infrastructure also provides water and roadways that support emergency fire, police, and medical response. The Public Safety Element provides policies and plans addressing these topics.

Water, and access to water, has always been integral to the development of Orange. It is not by accident that the City is located at the intersection of the Santa Ana River and Santiago Creek. The City was incorporated in 1888 and the water system was privately owned until 1904, when it was purchased by the City. At that time, the domestic water supply came exclusively from wells or canals leading from the Santa Ana River. The water was used to irrigate the surrounding citrus groves and various agricultural crops.

After World War II, growing residential, commercial, and industrial development forced the City to look elsewhere for an adequate water supply. In 1951, the City joined with five other water agencies to form the Municipal Water District of Orange County (MWDOC), which led to annexation to the Metropolitan Water District of Southern California (Metropolitan). The first pipeline of imported water was activated in 1954.

The City's Water Division, a part of the Department of Public Works (DPW), is responsible for providing clean, safe water to the City of Orange and for designing and constructing the system that supplies City residents and businesses with water. The City is a member agency of MWDOC, which in turn is a member agency of Metropolitan. This entitles the City to receive water from available Metropolitan sources. The City has a number of service connection agreements with





MWDOC whereby MWDOC will deliver water to the City as it receives water from Metropolitan in the amount requested by the City, subject to Metropolitan water availability.

To meet its infrastructure needs, the Water Division collaborates with other jurisdictions, agencies, and service providers, including MWDOC, Metropolitan, Irvine Ranch Water District, Golden State Water Company, Serrano Water District, and East Orange County Water District. Water delivery requires a large number of sources and substantial coordination between agencies. The Lower Santa Ana River groundwater basin provides the main source of water for Orange.

The Infrastructure Element also addresses wastewater systems. Cities throughout Orange County, including the City of Orange, rely on the Orange County Sanitation District (OCSD) for the regional collection and treatment of domestic, commercial, and industrial sewage. Although OCSD operates a comprehensive regional system of collection mains and treatment plants, individual cities are responsible for installing and maintaining local collection facilities.

The City also collaborates with other agencies in the development and maintenance of infrastructure facilities, including working with the Resources & Development Management Department (RDMD) of the County of Orange to maintain the Santa Ana River, Santiago Creek, and other flood control facilities not owned by the City.

The City's DPW collaborates with private contractors for some services, such as the collection of solid waste, recyclable, and green waste materials and the disposal of household hazardous waste. "Dry" utilities, such as natural gas, telephone and data services, electricity, and cable television are serviced by contracted private agencies, including Southern California Edison Company, Southern California Gas Company, AT&T, Time Warner Cable and Cox Communications Orange County.

Orange's *Vision for the Future*, described in the General Plan Introduction, recognizes the City's infrastructure as a key component, and includes the following objectives:

- Orange recognizes the importance of managing development in a manner that ensures adequate and timely public services and infrastructure and limits impacts on the natural environment.
- We will continue to protect our critical watersheds, such as Santiago Creek, and other significant natural and open space resources.

## Purpose of the Infrastructure Element

Although the State does not require preparation of an Infrastructure Element, the City places high importance on its ability to meet infrastructure demands. The Infrastructure Element identifies and assesses existing and future needs of the City's growing population and of future proposed development within Orange. The intent of the Infrastructure Element is to consider the various infrastructure resources provided by public agencies and private purveyors, and to provide guidelines for current and future development to best utilize and improve infrastructure.



## **Scope and Content of the Infrastructure Element**

The Infrastructure Element is comprised of three sections:

- 1) Introduction;
- 2) Issues, Goals, and Policies; and
- 3) Infrastructure Plan.

The Issues, Goals, and Policies section provides guidance for the City to address current and future infrastructure needs of the community. The goals express general and broad statements describing the community's desires regarding infrastructure. The policies provide guidelines for local agencies to provide efficient, affordable, and adequate infrastructure to serve Orange. The Plan explains how the goals and policies will be achieved and implemented.

## **Relationship to Other General Plan Elements**

Proposed infrastructure goals, policies and plans must be consistent with all other elements of the General Plan. The issues addressed in the Infrastructure Element relate most closely to the contents of the Land Use, Growth Management, and Housing Elements.

The Land Use Element directs the location of current and future development that relies on available infrastructure. Furthermore, the Land Use Element establishes standards for use intensity, population density, and types of land uses that influence the design, layout, and funding sources for infrastructure.

The Growth Management Element contains policies to ensure that growth is accompanied by needed capital facilities to properly address infrastructure needs concurrently with development. Growth Management Element policies ensure that new growth is managed in a way that does not overwhelm current infrastructure, or diminish the level and quality of services provided to current residents. The growth patterns and level of growth included in the Growth Management Element must be consistent with those of the Infrastructure Element. Similarly, the Housing Element relies on available infrastructure to guide new housing to suitable sites.

## **ISSUES, GOALS, AND POLICIES**

The goals and policies of the Infrastructure Element address five key issues: (1) maintenance of the City's aging water, sewer, and storm drain infrastructure in the face of increased growth pressures; (2) provision of high-quality solid waste collection services and encouragement of recycling; (3) maintenance of right-of-way areas; (4) provision of adequate electricity, natural gas, telephone and data services, and other "dry" utilities; and (5) protection of lifeline infrastructure systems that meet the public health and safety needs of the City.

## **Water, Sewer, and Storm Drain Systems**

Protection and proper management of the storm drain infrastructure system is essential to prevent pollution of rivers, lakes, and the ocean by contaminants from urban runoff. A detailed discussion of water resource issues is provided in the Natural Resources Element. Infrastructure (including



sewer, storm drain, and water lines, and solid waste collection and disposal services) must be sufficient to accommodate the present and future needs of the community. As infrastructure ages, or growth outpaces capacity, isolated failures represent a real problem. One of the most critical issues facing the City is how to improve and maintain infrastructure to protect water quality and supplies, ensuring that residents fully enjoy the health, economic, and social benefits that sound infrastructure systems provide.

**GOAL 1.0: Ensure water, sewer, and storm drain systems that meet the needs of residents and businesses.**

Policy 1.1: Provide sufficient levels of water, sewer, and storm drain service throughout the community.

Policy 1.2: Correct known deficiencies in the City's sewer, storm drain, and water systems and work toward environmentally sustainable systems.

Policy 1.3: Promote water conservation programs aimed at reducing demands.

Policy 1.4: Explore environmentally efficient infrastructure improvements such as the use of reclaimed water, maximizing percolation, and similar technologies.

Policy 1.5: Investigate and carry out cost-effective methods to reduce storm water infiltration into the sewer system.

Policy 1.6: Require that new developments fund fair-share costs associated with City provision of water, sewer, and storm drain service and are consistent with City and service provider plans to complete needed improvements and funding capacity for such improvements.

## **Solid Waste**

Nearly everything we do leaves behind some kind of waste. Households create ordinary garbage, industrial and manufacturing processes create solid and hazardous waste, and construction activities create large chunks of debris and inorganic materials.

Orange contracts with a private sector provider to collect solid waste, green waste, and recyclables. By actively recycling, reducing, and reusing waste, residents and businesses reduce the need for new landfills and incinerators, prevent the emission of many greenhouse gases and water pollutants, supply valuable raw materials to industry, and conserve land and natural resources.

**GOAL 2.0: Reduce the amount of waste material entering regional landfills with an efficient and innovative waste management program.**

Policy 2.1: Provide sufficient levels of solid waste service throughout the community.

Policy 2.2: Expand outreach and education regarding recycling opportunities to all City customers.



- Policy 2.3: Develop programs that encourage residents to donate or recycle surplus furniture, old electronics, clothing, and other household items rather than disposing of such materials in landfills.
- Policy 2.4: Expand outreach and education to all City customers regarding residential collection of household hazardous wastes including paint containers, electronics, household chemicals, motor oils, and pesticides.

## **Public Rights-of-Way**

Maintaining safe, clean rights-of-way is important for promoting circulation and the public health and safety of Orange’s residents. Through the DPW, the City provides street sweeping, tree trimming, graffiti removal, and installation and maintenance of street lights on public rights-of-way. The DPW also provides maintenance of and repair services for all public rights-of-way, including roadways, sidewalks, alleys, and other public property within Orange.

**GOAL 3.0: Ensure adequate maintenance of public rights-of-way to enhance public safety and improve circulation.**

- Policy 3.1: Continue to maintain and repair sidewalks and pavement surfaces on public rights-of-way.
- Policy 3.2: Provide sufficient levels of street sweeping, landscaping, graffiti abatement, shopping cart and bulk item removal from streets, sidewalks alleys, and other public rights-of-way.
- Policy 3.3: Continue to design, install, and maintain signals, signage, street lights, and traffic control devices within rights-of-way.
- Policy 3.4: Investigate the feasibility of using energy-efficient street lights to conserve energy.
- Policy 3.5: Preserve and improve existing on-street bike paths within rights-of-way.
- Policy 3.6: Require that new developments fund fair-share costs associated with City provision of right-of-way maintenance services and are consistent with City and service provider plans to complete needed improvements and funding capacity for such improvements.

## **Dry Utilities**

Dry utility services, such as electricity, natural gas, telephone and data services, and cable television both meet basic needs and enhance quality of life for Orange residents. These services are provided by independent entities that set their own service standards and facility improvement strategies. Demand for services and ability to serve new developments are generally determined on a case-by-case basis. The City works with service providers to ensure that City goals and service expectations are met for both current and future development.



- GOAL 4.0:** Ensure adequate provision of electricity, natural gas, telephone and data services and cable television.
- Policy 4.1: Continue to work with dry utility service providers to ensure that the community's current and future needs are met.
- Policy 4.2: Continue to require utilities to be placed underground for new development.
- Policy 4.3: Promote the use of new and emerging communication technologies.
- Policy 4.4: Encourage integrated and cost-effective design and technology features within new development to minimize demands on dry utility networks.

### Lifeline Infrastructure

Lifeline infrastructures, such as electric, water, gas, and telecommunications utilities and transportation systems, connect Orange to outside services during an emergency. Maintaining and protecting the City's lifeline infrastructure systems against damage from disasters is essential to ensuring the public health and safety of residents. Loss of electric, water, gas, and telecommunications services and transportation systems can not only severely impair police and fire agencies' efforts to respond to emergencies, it can also displace residents and economically impact businesses. The City works with regional agencies and utility service providers to ensure the system of lifeline infrastructures is maintained and retrofitted against disaster and against deterioration from increasing demands and long-term use.

- GOAL 5.0:** Ensure lifeline infrastructure systems that meet the City's public health and safety needs.
- Policy 5.1: Continue to work with regional and federal agencies to ensure that infrastructure for transportation systems, water, gas, electricity, and telecommunications meet regional emergency preparedness standards.
- Policy 5.2: Work with utility service providers to create resiliency performance standards for water, gas, electricity, and telecommunications infrastructure.
- Policy 5.3: Identify engineering vulnerabilities in lifeline utilities exposed to human-caused and natural hazards, including seismic activity, wildland fire, and flooding.
- Policy 5.4: Incorporate disaster mitigation strategies into the City's infrastructure master plans for retrofitting water, gas, electricity, telecommunications utilities, and transportation infrastructure.
- Policy 5.5: Review and limit the location and intensity of development and placement of lifeline infrastructure in identified earthquake fault zones.





## **INFRASTRUCTURE PLAN**

The Infrastructure Plan documents current infrastructure conditions in the City, and assesses the projected future capacity of the infrastructure system. This includes the water systems, wastewater systems, storm drain systems, public rights-of-way, such dry utilities as electricity, gas service, and telephone and cable facilities, and lifeline infrastructure.

### **Water, Sewer and Storm Drain Systems**

Orange's water, sewer, storm drain and solid waste management systems represent the City's hidden support network. Managing infrastructure can be a challenge because these services are often taken for granted. They are "forgotten" services in the sense that in Orange, when we turn on the faucet, direct our downspouts and yard drains away from the house, or place garbage out at the curb, it seems that clean water simply appears, rainwater drains, and garbage is taken away. These systems must be maintained to ensure that our infrastructure systems will not fail and public facilities will be available when we need them.

The City's role and preferred future strategies for providing these services are outlined in infrastructure master plan documents prepared by the City and updated on an ongoing basis. These master plans provide detailed descriptions of each infrastructure system and prioritize future system improvements in response to projected future growth.

The General Plan defers to the City's infrastructure master plans to establish service standards, prioritize future system improvements, and secure financing for needed improvements. Goals and policies of this Element focus on broad strategies to guide future infrastructure development. Each of the master plans will be updated in future years to be consistent with the policies and growth projections established in this General Plan.

#### **Water Systems**

The City's water supply comes from several sources: local groundwater basins, Northern California waters via the State Water Project, the Colorado River, local watersheds, reclamation, and water reuse projects. The City is a member agency of MWDOC, and MWDOC is a member agency of Metropolitan. Metropolitan supplies imported water to six Southern California counties, including Orange County. As a Metropolitan member, MWDOC represents the interests of its 29 member-agencies at the Metropolitan Water District of Southern California.

The City of Orange is also a member of the Orange County Water District (OCWD). OCWD's primary responsibility is managing the vast groundwater basin under north and central Orange County. The Orange County Groundwater Basin is the main source of water supply for the City. The City obtains approximately 64 to 75 percent of its water from City-owned wells. The City purchases approximately 25 to 36 percent from Metropolitan through the MWDOC. In addition, the City purchases approximately 3 to 5 percent from the Serrano Water District. The OCWD, along with MWDOC and Metropolitan, carry out long-term water management planning, and provide public awareness, education, and water conservation activities on behalf of their member agencies. The following four water districts serve the City of Orange:



- Irvine Ranch Water District
- Golden State Water Company
- Serrano Water District
- East Orange County Water District (EOCWD)

Figure INF-1 shows the location of each District's service area within Orange's planning area.

The Orange County Groundwater Basin is actively managed by OCWD and has a history of supporting between 64 percent and 75 percent of the City's water demand. The basin's management plan allows for drawdown during dry periods and for replenishment during normal or wet periods. The City does not anticipate current, short-term, or long term supply deficiencies in its ability to pump groundwater into the water system. The greatest challenge for water supply in the near future will be to meet the water needs of a growing population, particularly with projected population growth in not only the focus areas identified in the Land Use Element, but also in east Orange.

The City of Orange completed an Urban Water Management Plan Update in 2006. In order to improve the reliability and efficiency of the ground water producing facilities and ultimately the water supply system, the City plans to replace older wells with more efficient wells. The new wells will provide the City with increased pumping capacity, though the amount of water produced from the wells will continue to be regulated by the Basin Production Percentage as set by OCWD in April of each year. The City will continue to analyze storage capacity needs and add additional storage as recommended in the Water Master Plan. The City will continue to implement the Water Master Plan and the Urban Water Management Plan and will update each Plan on an ongoing basis throughout the planning horizon of this General Plan.

In Orange, runoff from local rainfall is the main source of recharge for the smaller basins, and accounts for some of the recharge of the groundwater basin. The amount of runoff recharge can only be estimated because it is highly variable. Most of the recharge of the basin is from Santa Ana River flows percolated instream or diverted to off-stream spreading basins operated by OCWD. OCWD will continue to develop new replenishment methods and supplies, as well as improve recharge capacity and implement basin protection programs to meet the projected demand from the basin during both normal and drought periods.

### **Sewer Systems**

OCSD is responsible for the collection and treatment of residential, commercial and industrial sewage in Orange. Collected effluent is treated at Reclamation Plant No. 1 in Fountain Valley or Treatment Plant No. 2 in Huntington Beach. Though OCSD operates the regional collection mains and treatment plants, the City is responsible for all installation and maintenance of local collection facilities. The City's DPW is in charge of the daily operation and maintenance of the sewer collection system in the City.

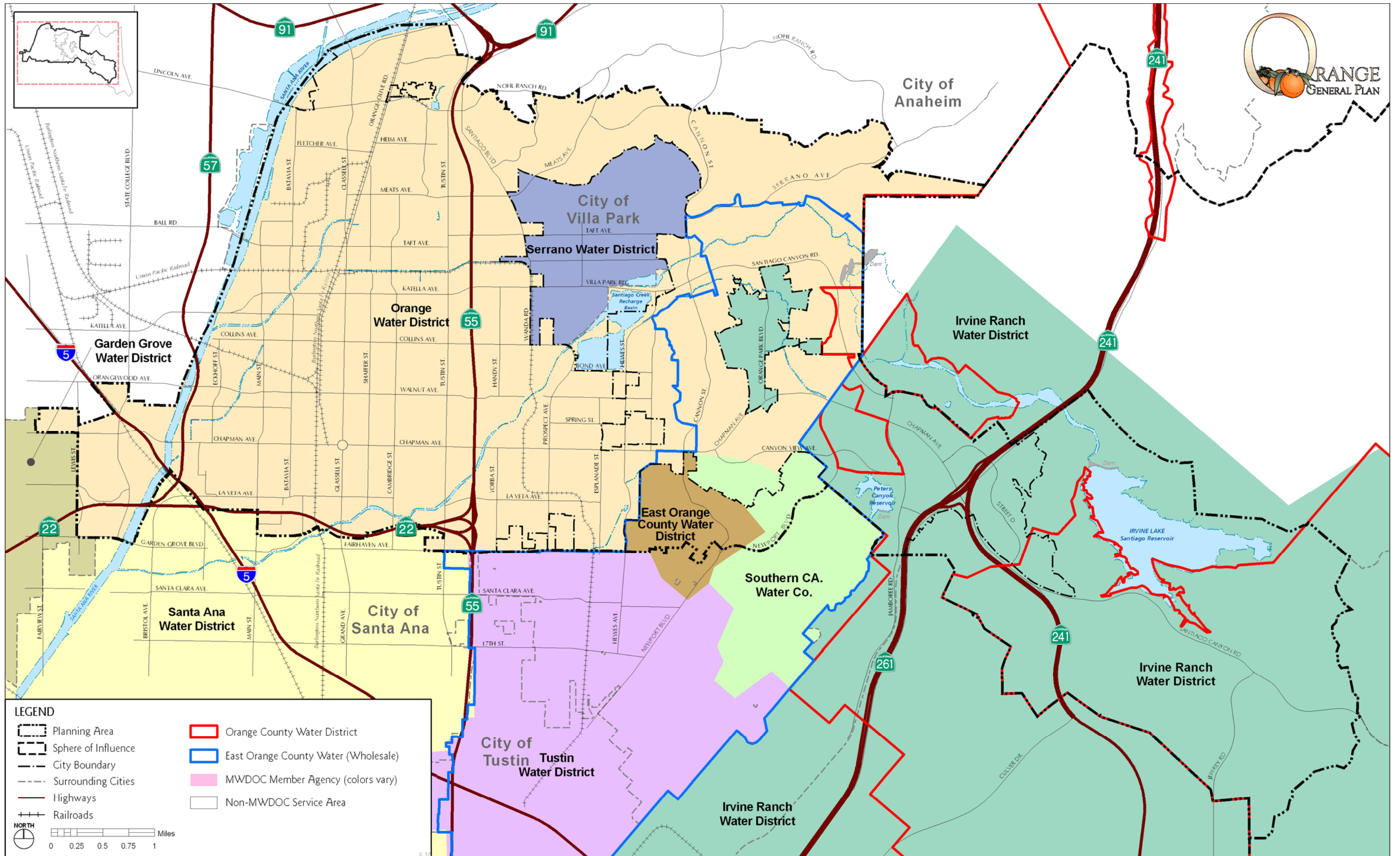


Figure INF-I Municipal Water District of Orange County Service Areas







To respond to the increased need for sewage treatment in Orange County, OCS D needs to replace aging regional collection and treatment infrastructure and build additional secondary treatment facilities. A portion of the sewage fee charged to developers in the City of Orange will be paid to the OCS D for improvements of regional facilities, which are currently strained by the County's rapidly growing population. A Capital Facilities Capacity Charge, designed to fund improvements in the efficiency and effectiveness of OCS D operations, is applied to cities and developers for new residential, commercial, or industrial development and/or expansion of existing facilities.

The City of Orange completed a Sewer Master Plan Update in 2003. In order to improve the reliability and efficiency of the sewer system, the City plans to replace older sewer lines. The new lines will maintain, and in some cases increase, the City's sewer line capacity, and provide adequate sewer collection for the future. The City has designated a 100-year life cycle for its sewer pipes, and hopes to replace systems that are nearly 100 years old. The City will continue to implement the Sewer Master Plan and will update the plan on an ongoing basis throughout the planning horizon of this General Plan.

### **Storm Drain Systems**

Important issues to focus on regarding storm drains include ensuring adequate capacity necessary to collect and carry stormwater to avoid flooding, and reducing pollutant loads in stormwater as part of regional efforts to improve water quality in surface waters.

Both the City and the County are responsible for managing the storm drain and flood control facilities in the City. The Resources and Development Management Department (RDMD) provides for the planning, development, operation and maintenance of major flood control facilities on behalf of the Orange County Flood Control District on a County-wide basis. The City provides drainage for developments and ensures that storm drains properly feed into the regional drainage system. The City is also responsible for the operation and maintenance of stormwater facilities throughout Orange. In addition, the City is served by several existing stormwater facilities that are operated by other jurisdictions. The Santa Ana River, which generally marks the western boundary of the City, is the location of the largest regional facility in Orange County, maintained by RDMD. Twelve flood control channels located throughout the City are maintained by RDMD on behalf of the Orange County Flood Control District and County of Orange. Within the City, DPW is responsible for developing and implementing the Master Plan of Drainage (MPD) which identifies the City's storm drain facilities and deficiencies.

The City of Orange last completed an update to the MPD in 1997. The biggest challenge facing the storm drain system in the future will occur as hillsides in relatively undeveloped east Orange are developed, causing storm water volumes to increase. As it is, existing development has led to current deficiencies in the drainage system. For this reason, a fair share allocation method has been devised to spread the entire cost of the system across the future development area. The City will continue to implement the MPD and will update it on an ongoing basis throughout the planning horizon of this General Plan.





## **Solid Waste**

Within the City, solid waste collection is contracted to a private service provider. The City's contractor collects both solid and green waste (grass clippings, tree and shrub clippings), and items for recycling. Most waste is taken to one of the three landfills in Orange County: Olinda Alpha in Brea, the Frank R. Bowerman Landfill in Irvine, and the Prima Deshecha Landfill in San Juan Capistrano. The Orange County Integrated Waste Management Department (IWMD) owns and operates the landfills.

The amount of hazardous household waste has increased in recent years with the widespread use of new technologies. Orange residents are responsible for disposing of hazardous household materials at any of the four Household Hazardous Waste Collection Centers in Orange County. As the definition of household hazardous waste continues to evolve as a result of rapidly changing technology, the City will endeavor to provide convenient opportunities for the proper disposal of such waste.

The City's Solid Waste and Industrial Waste Ordinances regulate where solid and liquid wastes (including hazardous and industrial wastes) may and may not be deposited or discharged. Orange operates a curbside recycling program, and the City encourages residents and businesses to reduce the amount of solid wastes that enter the regional landfills.

## **Public Rights-of-Way**

The maintenance of public rights-of-way affects circulation, public safety, and pedestrian walkability. Broken sidewalks impede pedestrian mobility and deny access for disabled users. Uneven surface pavement slows vehicular mobility. Untended trees and shrubs can cause branches and tree limbs to fall onto the public right-of-way, potentially causing accidents and impairing nighttime visibility for pedestrians. Future maintenance of right-of-way infrastructure is closely tied to the City's projected mobility needs as discussed in the Circulation & Mobility Element. The City coordinates with the County through the Orange County Transportation Authority (OCTA) to accomplish its circulation and roadway infrastructure maintenance goals, and the City assumes responsibility for maintenance services of public rights-of-way within Orange.

Through DPW, the City maintains all public rights-of-way, including streets, sidewalks, alleys, and on-street bicycle lanes. DPW installs street lights, provides tree trimming and street sweeping services, and responds to graffiti abatement requests. The Street Division maintains and repairs roadways and sidewalks, and performs weekly street sweeping services. The Traffic Engineering Division responds to street light repair requests, in addition to conducting weekly street light checks to identify and repair broken and malfunctioning street lights. DPW also responds to graffiti and tagging removal requests on public property, including public rights-of-way, and on private property adjacent to public rights-of-way. This department is also responsible for providing such landscaping services as tree trimming to prevent and minimize debris and obstacles within rights-of-way. DPW follows the adopted Street Tree Master Plan that details City-approved species and sets the maintenance schedule and appropriate size of street trees. Through these services, the City will continue to ensure that public rights-of-way are safe, clean, and well maintained to provide improved mobility within Orange.



## **Dry Utilities**

Dry utilities, such as electricity, natural gas, telephone, and cable enhance quality of life for Orange residents. These services are provided by independent entities that set their own service standards and facility improvement strategies. The City works with service providers to ensure that City goals and service expectations are met for both current and future development.

### **Electricity**

Southern California Edison (SCE), an independently owned utility, provides electrical power service to the Orange planning area. SCE distributes electricity purchased through the California Power Exchange, which is the electricity marketplace for about 80 percent of California's electricity customers. The California Independent System Operator coordinates the scheduling and dispatch of electricity bought and sold through the power exchange, which is essentially a statewide grid of electricity generation and distribution.

The rate of electricity consumption, generally referred to as demand or load, is what power grid operators are most concerned with when deciding whether electricity generation and transmission resources are adequate to serve consumers. Peak electricity demand is a measure of the largest electricity usage rate during the day, measured in megawatts. A single megawatt is generally enough power to meet the expected electricity needs of 1,000 typical California homes. Orange's peak demand typically occurs in August between 3 p.m. and 5 p.m. High temperatures during the summer months lead to increased use of air conditioning, which, in combination with industrial loads, commercial lighting, office equipment, and residential refrigeration, compose the major consumers of electricity during the peak demand period. Because electricity is not a storable commodity, the ability of electricity-generating and transmitting resources to provide electricity becomes an issue of the generation rate instead of total amount that may be consumed within a given time period.

Recent summertime energy crises are an indication that peak energy demand will be an important future planning issue, particularly in Southern California. In order to meet future energy needs, SCE has developed several energy-efficiency programs for residential, non-residential, new construction, and low-income subscribers. These include rebate and cash incentive programs for completion of energy-efficiency projects in residences and businesses, providing energy-efficient solutions for new developments as well as programs that aid low-income customers to purchase energy-efficient refrigerators and outdoor lighting. SCE will continue to promote the resourceful use of energy, and in turn, a reduction in electricity bills. The City will fully support these strategies by SCE to encourage energy conservation, including adoption of a green building program. Refer to the Natural Resources Element for policies and discussion concerning green building techniques and other related energy conservation measures.

### **Natural Gas**

California's gas supply is regionally diverse and includes supplies from both onshore and offshore sources, including the southwestern United States, the Rocky Mountains, and Canada. Gas pipelines serving the Orange planning area include the El Paso Natural Gas Company, Kern River Transmission Company, and Pacific Gas and Electric Company facilities. The Southern California



Gas Company (The Gas Company) supplies natural gas to both businesses and residents within the Orange planning area. The Gas Company is a division of Sempra Energy, and is the largest natural gas utility in the nation.

Southern California relies on a consistent supply of natural gas to meet residential, business, and industrial energy demand. Natural gas is also needed to produce electricity. Projected population growth in the region is expected to increase demand for natural gas. The Gas Company participates in the California Energy Star® New Homes Program, a performance-based program that provides builders with incentives for developments that use at least 15 percent less energy than standards set forth in the 2001 California Energy Efficiency Standards. The City will continue to support The Gas Company in these and other efforts to improve energy efficiency.

### **Telephone**

The Orange planning area is within the service area of AT&T. AT&T has existing telephone facilities within or adjacent to each of the land use focus areas described in the Land Use Element, and fiber optic lines in Santiago Canyon Road and Jamboree Road to help serve future development in east Orange. The City will continue to work with AT&T and other telephone service providers to ensure high quality telephone and data services are provided to current and future residents.

A variety of wireless service providers offer telephone and internet service within the City, and operate an established and growing network of wireless facilities. The City will continue to work with wireless providers to ensure provision of a high quality system while minimizing impacts of wireless facilities on the character of established areas.

### **Cable Services**

The Orange planning area is within the service area of Time Warner Cable and Cox Communications Orange County (Cox). Time Warner is the major cable provider in the City. Cox serves portions of east Orange. Both Time Warner Cable and Cox are full-service providers of telecommunication products, including digital television programming, local and long-distance telephone services, high-speed Internet, and commercial voice and data services. The City will continue to work with Time Warner, Cox, and other service providers to ensure that high quality television and data services are provided to current and future residents.

## **Lifeline Infrastructure**

Roadway systems and water, gas, electrical, and telecommunications services, make up the City's system of lifeline infrastructure. These utilities provide critical services to the community, and disruption or loss of service can create delays for police and fire agencies in responding to emergencies, place residents at risk of harm, and hurt the regional economy. Seismic activity, flooding, and wildland fire are particular risks for the City's lifeline infrastructure. Ground shaking, amplification, landslides, and liquefaction from seismic activity can cause water and gas pipes to break, dams to fail, and power lines to come down. Disruption of telephone and radio service impedes communication and dissemination of critical information, and road closures can create delays in providing supplies or services after an emergency. A detailed discussion of the City's risk for natural hazards and plans for emergency response is presented in the Public Safety Element.



As part of its efforts to prevent, mitigate, and plan for hazards, Orange works with regional agencies to prepare infrastructure mitigation plans. In accordance with the Disaster Mitigation Act of 2000, which establishes state and local government infrastructure mitigation planning requirements for federal damage assistance, Orange coordinates with regional public agencies and private utility service providers to prepare hazard mitigation plans and ensure proper maintenance and retrofitting of lifeline infrastructures. The City participates in the Orange County Hazard Mitigation Task Force, which is responsible for preparing a countywide Hazard Mitigation Plan (HMP). The HMP identifies and profiles hazard risks, assesses vulnerabilities in countywide infrastructure, and analyzes development trends to identify future maintenance needs of critical infrastructure and services. The City also works with MWDOC in its planning and implementation of the Regional Water and Wastewater Multi-Hazard Mitigation Plan, which formulates mitigation plans for regional water facilities in the County, including those found within the City.

In addition to preparing for and implementing rapid repair plans to go into effect after an emergency, the City addresses non-emergency threats to lifeline infrastructure. Changes over time can cause vulnerabilities to lifelines. The City of Orange prepares a municipal Emergency Operations Plan in coordination with the City's infrastructure master plans to establish service standards, prioritize future system improvements, and secure financing for needed improvements for infrastructure. DPW provides maintenance and repairs for roadway facilities, sewer and storm drain systems, and water systems including wells, pumps, water lines and reservoirs. Private dry utility service providers are responsible for following state and federal safety guidelines and for maintaining and repairing dry utilities during an emergency. The City will continue to work with regional planning agencies and private utility service providers to ensure that lifeline infrastructure systems meet the highest public health and safety standards for hazard prevention and mitigation.

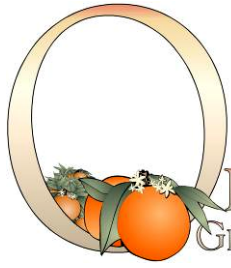
### **INFRASTRUCTURE IMPLEMENTATION**

The goals, policies, and plans identified in this Element are implemented through a variety of City plans, ordinances, development requirements, capital improvements, and ongoing collaboration with regional agencies and neighboring jurisdictions. Specific implementation measures for this Element are contained in the General Plan Appendix.





# **IMPLEMENTATION PLAN**



ORANGE  
GENERAL PLAN

# APPENDIX

# IMPLEMENTATION

## INTRODUCTION

This Implementation Plan will guide City elected officials, commission and committee members, staff, and the public in the overall effort to put into practice the adopted General Plan goals and policies. The purpose of the implementation programs is to ensure that the overall direction set forth in the General Plan is translated from general ideas to actions.

Each implementation program is a procedure, program, or technique that requires City action, either alone or in collaboration with non-City organizations or with federal and state agencies. Some of the implementation programs are processes or procedures the City currently administers on a day-to-day basis (such as review of development projects). Other implementation programs require new programs or projects. Completion of each of the identified programs is subject to funding availability.

## CITY DEPARTMENTS AND DIVISIONS IMPLEMENTING THE GENERAL PLAN

Implementing and maintaining the overall General Plan is the primary responsibility of the Planning Division of the Community Development Department. However, because General Plan policies affect nearly every aspect of City government and of City services provided in Orange, other departments also play key roles in ensuring that General Plan policies and programs are carried out to achieve the community's vision. Each of the City's departments has taken part in the preparation of the General Plan, and many have implementation responsibilities described in this section. In some cases, elements of the implementation programs may carry through to individual departments' work plans or the City's Capital Improvement Program. The implementation programs are also intended to be consistent with, and supportive of, the City's Strategic Plan.

The following section summarizes the Mission Statements of the departments most responsible for implementing the General Plan. These statements provide a broad overview of the types of programs each department is likely to be responsible for implementing.

### City Council

The City of Orange is committed to excellent service for our residents, businesses, and visitors.



## **City Manager**

To manage the City's resources with leadership and vision.

## **Community Development**

To work with the community in achieving and maintaining a better quality of life by providing professional guidance and coordination of all land planning and development activities, and by fairly and consistently implementing the City's regulations and policies.

## **Community Services**

To enhance the quality of life and a safe community by providing lifelong learning opportunities, leisure activities, and recreational experiences.

## **Economic Development**

To promote economic growth and housing opportunities to enhance the quality of life throughout the community.

## **Fire**

To prevent or minimize the loss of life, damage to the environment, and property from the adverse effects of fire, medical emergencies, and hazardous conditions.

## **Library Services**

To welcome and support all people in their enjoyment of reading and pursuit of lifelong learning, to preserve local history, and to provide equal access to information, ideas, and knowledge through books, programs, and technology.

## **Police**

To perform law enforcement duties with innovative leadership; accountable to the people we serve, in order to ensure their safety and improve the quality of life in our diverse community.

## **Public Works**

To provide and preserve our City's infrastructure, facilities, and programs, and to promote public health, safety, and welfare through courteous and timely customer service and efficient use of available resources.



## **CITY OF ORANGE STRATEGIC PLAN**

The *City of Orange Strategic Plan* establishes a vision for how the City as an organization delivers services to its residents, businesses, and visitors. The intent of the plan is to define the purpose of the organization, establish realistic goals and objectives, present a vision of success that will guide the ongoing direction of the organization, and help to ensure the most effective use of City resources by focusing the resources on key priorities. The 2008-2013 Strategic Plan establishes the following goals:

- (1) Provide for a safe community.
- (2) Be a fiscally healthy community.
- (3) Enhance and promote the quality of life in the community.
- (4) Provide outstanding customer service.
- (5) Recognize, promote, and preserve Orange's rich heritage.

These Strategic Plan goals are integrated throughout the General Plan policies, and are reflected in the Implementation Plan programs and specifications. Therefore, the Strategic Plan goals are also reflected in the individual department work plans and the City Budget.

## **IMPLEMENTATION PROGRAMS**

General Plan implementation programs are organized into the following five subsections corresponding to various areas and levels of City responsibility:

- I. Plans, Permits, Procedures, Agreements, and Ordinances Administered by the City
- II. Physical Improvements and Capital Projects
- III. Conditions or Requirements Placed Upon Applicants during Development Review
- IV. Planning and Outreach Initiatives
- V. Coordination with Other Agencies and Organizations

Each implementation program relates directly to one or more of the General Plan policies, drawn from various elements. For each program, the related General Plan policies are listed, along with the responsible agencies or City departments, the recommended time frame, and the likely funding source.

The implementation programs are intended for use as the basis for preparing the *Annual Report to the City Council* on the status of the City's progress in implementing the General Plan, as described in Section 65400 of the Government Code. Because many of the individual actions and programs also act as mitigation for environmental impacts resulting from planned development in accordance with the General Plan, the Annual Report can also provide a means of monitoring application of the mitigation measures as required by Public Resources Code Section 21081.6. To ensure continued consistency and usefulness, the programs should be updated concurrent with the City's annual budget process and whenever the General Plan is amended or updated.

Implementation programs corresponding to the goals and policies set forth in the Housing Element are listed within the Housing Element, rather than within this Appendix.



## I. Plans, Permits, Procedures, Agreements, and Ordinances Administered by the City

### Program I-1 Zoning Code Update

Upon adoption of the General Plan, the City will initiate an update to the Zoning Code. The update will revise and/or establish new zoning standards to implement policies in the Land Use, Noise, Urban Design, and Cultural Resources & Historic Preservation Elements. This and all future updates to the Zoning Code will include an active public participation process. Until such time as the City adopts the Zoning Ordinance, all new development shall comply with the lighting, design, viewshed, and related standards set forth in the current Zoning Code, or the standards established through a development agreement or specific plan for a particular development project.

The City is currently working on creating mixed-use zoning standards. Upon completion of these standards, the City will update Table LU-3 in the Land Use Element to identify corresponding land use designations for each mixed-use zone district. Specific Zoning Code revisions related to mixed-use land use designations will be covered in updated design standards, new streetscape standards, and the *Old Towne Design Standards* update. The zoning code revisions will designate buffer zones and transitional areas to minimize land use incompatibilities between single-family residential areas and intensified commercial operations and mixed-use development. The Zoning Code revisions do not specify changes regarding noise in mixed-use areas; however, Implementation Program I-31, “Noise Ordinance,” seeks to minimize the effect of noise generated from industrial land uses on adjacent land uses.

Specific revisions to the Zoning Code will be completed to address:

- Maximizing the amount of pervious surfaces in new and infill developments;
- Integration of crime prevention through environmental design (cpted) principles into site plan and building design, including adequate safety lighting;
- Integration of complementary uses in support of a safe community environment;
- A designation process for cultural resources to be listed on the city’s local register, to include a broad range of historic resources including separate or individual buildings, structures, objects, and sites, as well as districts and archaeological resources;
- Adaptive reuse of potential and listed historic resources—the city will consider provisions for including neighborhood character areas (ncas) as a zoning overlay, and the following planning areas may be considered for this zoning revision: el modena, cypress street barrio, and the railroad/packinghouse corridor;
- Development interface with santiago creek, the santa ana river, and other open space areas;





- Incorporation of sustainable development principles, such as the adoption of resource conservation measures for building codes and standards, and specifications for multi-modal transportation;
- Maintenance of the building security ordinance and addition of a cpted element to those standards; and
- Preparation of development standards that address national pollutant discharge elimination system (npdes) requirements.

Agency/Department: Community Development Department, Police Department, Public Works Department

Funding Source: General Fund, redevelopment funds

Time Frame: Updated by December 2013

Related Policies:

Land Use:	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8, 2.9, 4.1, 4.2, 4.4, 4.5, 5.1, 5.2, 5.3, 6.1, 6.2, 6.4, 6.7, 6.8, 6.9, 8.1
Cultural Resources & Historic Preservation:	1.3, 1.4, 1.5, 2.1, 2.3, 3.2, 4.5
Public Safety:	2.3, 2.4, 3.3, 7.2, 7.5, 7.6, 9.1
Noise:	1.1, 1.2, 1.3, 2.1, 2.2, 3.1, 4.3, 5.1, 5.2, 5.3, 6.1, 6.2, 7.3
Urban Design:	1.1, 1.4, 1.7, 4.1, 5.1, 5.2, 5.3, 6.1, 6.3, 6.6
Economic Development:	1.1, 1.3, 1.4, 4.5, 5.3, 5.5

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**Program I-2      Land Use Policy Map and Focus Area Development Objectives**

Ensure that City land use decisions are consistent with the policies of the Land Use Element and the land uses shown on the Land Use Policy Map. Using the development review process and other tools outlined throughout the General Plan, ensure that the development objectives specified for each of the eight focus areas described in the Land Use Element are achieved for new development and infill projects located in the focus areas.

Agency/Department: Community Development Department

Funding Source: General Fund

Time Frame: Ongoing

Related Policies:

Land Use:	All
Economic Development:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 3.1, 3.2, 3.3, 3.4, 7.1, 7.2



**Program I-3 Specific Plans and Neighborhood Plans**

Prepare, adopt, and implement specific plans and neighborhood plans consistent with state law to establish permitted densities, intensities, and uses within Orange for the systematic implementation of the General Plan.

Continue to implement and update, as needed, the following adopted specific plans and neighborhood plans:

- Archstone Gateway
- Chapman University
- East Orange General Plan (1975)
- Immanuel Lutheran Church
- Orange Park Acres
- Pinnacle at Uptown Orange
- St. John’s Lutheran Church and School
- Santa Fe Depot Area
- Serrano Heights
- Upper Peters Canyon

New specific plans may be permitted elsewhere within the planning area in the future. Through the specific plan process, encourage developers to include or provide:

- Context sensitivity and connectivity to surroundings,
- Complementary mix of uses,
- Pedestrian-oriented places,
- Transit-oriented design,
- Public spaces,
- Green spaces, and
- CPTED design features.

Agency/Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds, private property owners
Time Frame:	As needed
Related Policies:	
Land Use:	2.1, 2.4, 3.4, 5.1, 5.2, 5.3, 5.5, 5.8, 5.9, 6.7, 6.10, 6.11, 7.1, 7.2
Circulation & Mobility:	3.2, 3.3
Public Safety:	7.2
Urban Design:	1.1, 5.1, 5.3, 6.1, 6.2, 6.4

**Program I-4 Plans, Standards, and Guidelines**

Adopt, review, implement, and update as necessary the following master plans, standards, and guidelines:





	Department, Fire Department, Library Services Department, Economic Development Department
Funding Source:	General Fund, redevelopment funds, development fees, private contributions
Time Frame:	Ongoing
Related Policies:	
Land Use:	1.5, 1.7, 2.6, 2.7, 5.5, 5.6, 6.3, 6.4, 6.5, 7.1, 7.2
Circulation & Mobility:	1.4, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 6.1, 6.2
Natural Resources:	1.1, 1.2, 2.13, 2.14, 2.15, 2.16, 5.1, 5.3, 5.5, 5.6, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 7.1
Cultural Resources & Historic Preservation:	1.1, 1.3, 1.6, 5.1, 5.2, 5.3, 5.4, 5.5
Public Safety:	6.6, 6.7, 8.4
Urban Design:	1.1, 1.2, 2.5, 5.3, 6.1, 6.2, 6.3, 6.6
Economic Development:	2.4, 5.1, 5.2, 5.3, 6.1, 6.2
Infrastructure:	1.1, 1.2, 4.2

**Program I-5      Transfer of Development Rights Ordinance**

Adopt a Transfer of Development Rights (TDR) ordinance to allow TDRs for the following purposes:

- To increase levels of residential densities at appropriate sites in areas designated Urban Mixed-Use, as described in Table LU-3 in the Land Use Element;
- To encourage well-designed high-rise development consisting of buildings 10 stories or higher at identified locations, as described in Table LU-4 and shown on Figure LU-8 in the Land Use Element;
- To expand and preserve open space in the Urban, Old Towne, and Neighborhood mixed-use land use designations, as described in Table LU-4 in the Land Use Element; and
- To provide incentives for preservation of listed historic resources or contributors to listed historic districts.

In each case, a Development Agreement between the property owner and City of Orange will be required.

Agency/Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Complete by 2013
Related Policies:	
Land Use:	2.2, 2.3, 2.8, 5.5
Natural Resources:	4.7
Cultural Resources & Historic Preservation:	3.2



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## **Program I-6      Prepare Design Guidelines**

Prepare new design criteria for public gathering spaces, commercial areas, rural development character, viewshed protection and preservation, and additional policies for mixed-use development and transit-oriented development as needed. New design criteria should also include landscape standards that provide open space buffers and other appropriate transitions between lower density, single-family neighborhoods and higher density development. Design criteria should also address standards for the provision of community gathering spaces within private development, incentives to provide accessible open spaces in commercial and mixed-use corridors, and guidelines for the preservation of visual points of interest throughout the community.

Agency/ Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Update complete by 2013
Related Policies:	
Land Use:	2.7, 2.8, 2.10, 8.1
Natural Resources:	1.3, 2.8, 7.5
Urban Design:	2.1, 2.4, 2.6, 2.7, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.5, 6.1, 6.2, 6.6

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## **Program I-7      Redevelopment**

Continue to implement and update the Redevelopment Agency's Five-Year Implementation Plan in accordance with the requirements of the Health and Safety Code.

Use redevelopment resources to attract desired businesses and land uses to the designated focus areas consistent with the recommendations of the Land Use and Economic Development Elements. Pursue lot consolidation of irregular or small lots to assemble development sites to accommodate desired uses as needed.

Evaluate the potential for adding new areas to the Redevelopment Project Area, and update and/or amend the Redevelopment Plan(s) accordingly.

Agency/Department:	Economic Development Department
Funding Source:	Redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.1, 3.2, 4.1, 4.4, 4.5, 5.2, 5.3, 8.2
Economic Development:	1.7, 3.1, 3.2, 4.3, 5.1, 5.4, 7.1





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### **Program I-8      Code Enforcement**

Continue to enforce property maintenance standards, adopted City Building Code, the Zoning Ordinance, the Noise Ordinance, and other provisions of the Orange Municipal Code.

Agency/Department:	Community Development Department, Police Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	5.5, 6.1, 7.5
Urban Design:	5.2, 6.2
Noise:	1.2, 1.4, 7.2, 7.3
Public Safety:	3.3, 9.1
Economic Development:	4.1, 4.2

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### **Program I-9      Building and Fire Codes**

Continually update building and fire codes to:

- Ensure that new development and retrofitted development reduce potential damage from earthquakes, floods, fire, wind, liquefaction, and other natural hazards; and
- Incorporate increased energy efficiency and green building and sustainable development strategies.

Agency/Department:	Community Development Department, Fire Department, Economic Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Public Safety:	1.1
Noise:	5.1, 6.1

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### **Program I-10      City Master Plan of Streets and Highways**

Use the established Capital Improvement Program process to implement the circulation system shown on the City Master Plan of Streets and Highways (Figure CM-2), the City will secure funding for roadway improvements, will design and build new roadways, and will complete roadway repairs and improvements. Future roadways must meet roadway classification design specifications and performance criteria. To reduce the impacts of traffic on residential areas,



encourage through traffic to use higher classification arterials as designated within the City's Master Plan of Streets and Highways.

Agency/Department: Public Works Department  
 Funding Source: General Fund, redevelopment funds, development fees, and Measure M funds  
 Time Frame: Ongoing  
 Related Policies:  
     Circulation & Mobility: 1.1, 1.3, 2.1, 2.2, 2.5  
     Growth Management: 1.2, 1.11, 2.2  
     Economic Development: 2.4, 6.1, 6.2

**Program I-11 Critical Intersection Program**

To ensure that traffic flows meet the level of service (LOS) standards established in the Circulation & Mobility Element, roadway capacity in areas with excess traffic will be improved by restricting on-street parking, improving signal timing, widening intersections, adding through and turn lanes, and using other transportation systems management measures. Monitor the performance of Critical Intersections identified on Figure CM-2 in the Circulation & Mobility Element on an ongoing basis. Ensure that Critical Intersections approaching LOS D are prioritized for improvement within the City's Capital Improvement Plan.

Agency/Department: Public Works Department  
 Funding Source: General Fund, redevelopment funds  
 Time Frame: Ongoing  
 Related Policies:  
     Circulation & Mobility: 1.2, 1.3  
     Growth Management: 1.1, 1.11  
     Economic Development: 2.4, 6.1, 6.2

**Program I-12 Old Towne Parking District**

Study the benefits of creating a parking district and the feasibility of expanding available public parking in areas surrounding the Plaza. Shared parking, consolidated parking facilities, parking structures, or underground parking should all be considered as potential strategies to provide additional off-street parking to meet future demands related to adaptive re-use and infill development in Old Towne.

Agency/Department: Public Works Department, Community Development Department, Economic Development Department  
 Funding Source: General Fund, redevelopment funds  
 Time Frame: Feasibility study completed by 2013  
 Related Policies:  
     Land Use: 2.5, 5.4  
     Circulation & Mobility: 5.1, 5.2, 5.3, 5.4



Urban Design: 6.2  
Economic Development: 4.1, 4.2, 6.2

**Program I-13 Pedestrian-Oriented Streetscape Master Plan**

Prepare, adopt, and implement a pedestrian-oriented streetscape master plan as part of the City’s decision to enhance the walkability of public spaces, with the goal of promoting multi-modal transportation options. This plan will include the City’s key commercial corridors, such as Tustin Street, Chapman Avenue, Main Street, and Katella Avenue. The master plan should integrate concepts discussed for these corridors throughout the General Plan related to pedestrian facilities, streetscapes, urban green zones, façade improvements, and signage, including:

- Identifying pedestrian links that need improvement and strengthening;
- Determining new pedestrian links to underserved areas;
- Ensuring adequate sidewalk widths to accommodate lighting, street trees, benches, and trash cans;
- Establishing design character, standards, and guidelines for proposed outdoor spaces, paseos, and pedestrian paths;
- Incorporating more functional and appealing outdoor spaces, paseos, and pedestrian paths within retrofits of current streetscapes as well as within new development;
- Integrating public open space (e.g., plazas, neighborhood parks, pocket parks) in commercial and mixed-use corridors;
- Providing transit amenities such as bus stops, shelters, and lighting;
- Helping to reduce conflicts between land uses;
- Determining entry or gateway street design elements and standards;
- Minimizing barriers to pedestrian and bicycle access; and
- Incorporating CPTED concepts.

The Plan should include sidewalk, transit, open space, and landscape design and standards. The planning process will include an active public participation component.

Agency/Department:	Community Development Department, Public Works Department, Economic Development Department
Funding Source:	General Fund, development fees, redevelopment funds
Time Frame:	Adopt by 2015
Related Policies:	
Land Use:	2.6, 2.7, 2.8, 3.3, 5.7, 5.9, 6.3, 6.6, 6.8, 8.1, 8.3
Circulation & Mobility:	1.1, 4.7, 6.1, 6.2, 6.3
Natural Resources:	2.2, 7.3
Urban Design:	1.1, 1.2, 1.3, 3.4, 3.5, 4.7, 6.6



Public Safety: 7.4, 9.1, 9.2, 9.3

**Program I-14 Streetscape Improvement Program and City Scenic Highways**

Develop a Streetscape Improvement Program for major and minor streetscapes, bikeways, and trails that includes standard plans and design criteria for unified lighting, paving materials, and patterns, and landscaping such as street trees, median and slope planting, and landscaped parkways.

The Streetscape Improvement Program also includes development of specific standards to define and designate the following City Scenic Highways:

- Jamboree Road
- Santiago Canyon Road
- Newport Boulevard

Agency/Department: Community Development Department, Public Works Department, Community Services Department

Funding Source: General Fund, redevelopment funds

Time Frame: Ongoing

Related Policies:

- Circulation & Mobility: 6.1, 6.2, 6.3
- Natural Resources: 7.2, 7.3, 7.4, 7.5
- Urban Design: 1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 3.4
- Economic Development: 5.2

**Program I-15 Operating Budget**

Continue to adopt and update the City’s Operating Budget to maintain current levels of City services, public facilities and infrastructure, and coordinate development of community facilities and amenities and capital projects.

Agency/Department: City Manager

Funding Source: General Fund. Secondary sources include special revenue funds (such as Proposition 172, Measure M funds), gas tax funds, enterprise funds, capital improvement funds, and redevelopment funds

Time Frame: Ongoing

Related Policies:

- Land Use: 1.2, 1.7
- Natural Resources: 5.1, 5.2
- Cultural Resources & Historic Preservation: 3.3, 3.4, 3.5, 5.2



Public Safety: 2.4  
Economic Development: 2.2, 2.3

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**Program I-16 Certified Local Government Status**

Apply to the Office of Historic Preservation (OHP) for inclusion in the Certified Local Government (CLG) program. Successful application includes meeting several requirements:

- Enact appropriate historic preservation regulations through an adopted historic preservation ordinance.
- Establish an adequate and qualified historic preservation review commission.
- Maintain a system for the survey and inventory of historic properties.
- Provide for adequate public participation in the historic preservation program.
- Satisfactorily perform the responsibilities delegated to the Certified Local Government.

Agency/Department: Community Development Department  
Funding Source: General Fund  
Time Frame: Application completed by 2012  
Related Policies:  
Cultural Resources &  
Historic Preservation: 1.1, 1.2, 1.3, 2.2, 3.1, 3.3, 3.4

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**Program I-17 Local Historic Register**

Create the City of Orange Register of Historic Resources (Historic Register), which will serve as the local register of historical resources under the California Environmental Quality Act (CEQA). Automatically include all resources previously designated, listed, or determined eligible for listing within the National Register of Historic Places or California Register.

- Establish a process for handling voluntary requests for listing in the Historic Register. Support coordination with property owners of potential historic resources identified on the Orange Inventory, so that such potential historic resources can more readily be listed in the Historic Register.
- Establish a process for listing in the Historic Register those buildings, structures, objects, sites, or districts that meet the criteria.
- Establish procedures to remove historic resources from the Historic Register.
- Establish procedures for listing archaeological resources in the Historic Register. Employ appropriate criteria for evaluating potential significance of such archaeological resources as





historical resources or unique archaeological resources under CEQA. Encourage voluntary listing of eligible archaeological resources.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Register established by 2012, maintenance ongoing
Related Policies:	
Land Use:	5.5
Cultural Resources &	
Historic Preservation:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 3.1, 3.2, 3.3, 3.4, 3.5

**Program I-18 Eichler Homes Landmark Districts**

Pursue historic landmark district designation for three Eichler Homes tracts. Notify property owners in three Eichler tracts—Fairhaven, Fairhills, and Fairmeadow—of the intent to list each of the three tracts separately as local historic districts. Follow established procedures for Historic Register listing of each.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Landmark Districts established by 2014
Related Policies:	
Cultural Resources &	
Historic Preservation:	1.4

**Program I-19 Historic, Cultural, and Archaeological Resources Survey**

Continue to maintain an accessible and periodically updated inventory of potential historic resources. All surveyed properties will be included in the City’s Inventory of Historic Resources (Orange Inventory), and the Orange Inventory will be a valuable planning tool to be used in evaluating possible impacts a proposed project might have on previously evaluated potential and identified historic resources. Surveys and survey updates may be conducted by qualified preservation professionals in accordance with Secretary of Interior Standards criteria.

Properties that have attained 45 years of age and are located within a designated historic district or Neighborhood Character Area (NCA) shall be subject to survey prior to issuance of any permit for alteration or demolition.

Survey other areas where potential for historic resources may exist.

Identify smaller character areas that contain concentrations of potential or listed historic resources that reflect a unique sense of time and place.

Use the Orange Inventory to identify potential historic resources for purposes of CEQA, National Historic Preservation Act (NHPA), and National Environmental Protection Act (NEPA) review of proposed projects. Only if potential historic resources in the Orange Inventory are listed in or

## IMPLEMENTATION



eligible for listing in the California Register for CEQA or the National Register for the NHPA and NEPA shall they have a presumption of significance pursuant to CEQA Section 21084.1 and be treated as historical resources under CEQA.

Potential historic resources identified in the Orange Inventory may be listed in the Historic Register if they meet criteria for listing in the California Register. The City's Historic Resources Inventory may be regularly updated by the Planning Division to reflect corrections and modifications to the associated database and survey forms without the need to bring those changes to the Planning Commission for adoption.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Cultural Resources &	
Historic Preservation:	1.1, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 4.1, 4.6
Urban Design:	5.4

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### **Program I-20      Historic Preservation Incentives**

Actively pursue grants, loans, and other incentives to encourage historic preservation. Consider implementing conservation easements.

Develop a revolving loan program for maintenance and rehabilitation work, consistent with design standards, on listed historic resources and on resources that are contributors to listed historic districts.

Develop a voluntary conservation easement program to preserve listed historic resources and contributors to listed historic districts. Provide a potential tax benefit to property owners. Establish a partnership with local preservation organizations to accept, hold, and manage conservation easements on historic resources.

Agency/Department:	Community Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Cultural Resources &	
Historic Preservation:	1.4, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5
Urban Design:	5.4
Economic Development:	1.2, 5.3



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**Program I-21 Commemorative Plaque Program**

Explore establishing a commemorative plaque program to allow public recognition of properties listed on the Historic Register. Develop and administer standards and guidelines for properties eligible for the commemorative plaque program.

Agency/Department: Community organizations in coordination with the Community Development Department  
Funding Source: Private contributions  
Time Frame: Ongoing  
Related Policies:  
Cultural Resources &  
Historic Preservation: 2.2, 3.1

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**Program I-22 Historic Context Statement and Survey**

Officially recognize the Historic Context Statement prepared in tandem with the General Plan Update. Periodically update the Statement to add recent historical events.

Officially recognize the recently completed historical and archaeological resources survey prepared in tandem with the updated General Plan. Update and maintain the inventory using the City's Geographic Information System (GIS).

Agency/Department: Community Development Department  
Funding Source: General Fund  
Time Frame: Ongoing  
Related Policies:  
Cultural Resources &  
Historic Preservation: 1.1, 1.3, 1.6, 3.1

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**Program I-23 Neighborhood Character Areas**

Designate El Modena, Cypress Street Barrio, the Railroad/Packinghouse Corridor, and Orange Park Acres as Neighborhood Character Areas (NCAs) by establishing an NCA overlay zone and appropriate standards and regulations in the Zoning Code.

Develop and administer design guidelines appropriate to each designated NCA.

Agency/Department: Community Development Department, City Council  
Funding Source: General Fund  
Time Frame: Complete by 2016  
Related Policies:  
Cultural Resources &  
Historic Preservation: 1.1, 2.1, 2.2, 2.3



**Program I-24      Community Character Design Elements**

Update design guidelines to incorporate the elements of community design character that reflect Orange’s historic and cultural background. Require new development to incorporate the elements of the community’s character and design into its projects. Determine how to retrofit the existing commercial, industrial, institutional, and mixed-use areas to include the community character elements. Community character elements can include but are not limited to architectural style, landscape style, streetscape, and signage.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Urban Design:	3.2, 3.3, 4.5, 5.1, 5.2, 5.3, 6.6

**Program I-25      Green Space Incentives**

Seek and develop appropriate incentives for project applicants and developers that provide public access to private green spaces in new, infill, and existing development projects. Work to establish neighborhood identity through the use of green spaces.

Establish a program to transfer to the City, through land exchanges, purchases, or long-term no-fee leases, land that is not currently in productive use, such as derelict land, tax delinquent land, surplus road and highway rights-of-way, and other land located adjacent to existing open spaces, waterways, or trails.

Agency/Department:	Community Development Department, Community Services Department
Funding Source:	General Fund, grants, bond funding
Time Frame:	Complete by 2016
Related Policies:	
Land Use:	2.3, 2.8, 6.3, 6.4
Natural Resources:	1.1, 1.2, 1.3, 6.6, 7.1, 7.5
Urban Design:	3.5, 4.5

**Program I-26      Joint-Use Agreements for Parks and Open Space**

Continue to implement and expand the use of joint-use agreements to increase the parks and open space resources available to Orange residents. Specifically, seek to expand joint-use agreements with the Orange Unified School District, Chapman University, Southern California Edison, and the Orange County Flood Control District. Investigate conversion or joint use of surplus or otherwise underutilized lands, including railroad and public utility rights-of-way, for open space use.



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Agency/Department:	City Manager’s Office, Community Services Department, Public Works Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.6
Natural Resources:	1.2, 5.3

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**Program I-27      Fire Hazard Information and Suppression**

Continue to evaluate and update information available to the City regarding potential fire hazards and hazard areas. Provide public information regarding defensible space surrounding residences and businesses. Use Wildland Fuel Modification guidelines for controlling vegetation in undeveloped areas, and Wildland Urban Interface Code and weed abatement standards.

Agency/Department:	Fire Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Public Safety:	3.1, 3.2, 3.3, 3.4

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**Program I-28      Quiet Zones**

Establish train horn “quiet zones” consistent with the federal Train Horn Rule along the Burlington Northern Santa Fe rail line. Coordinate with rail agencies and operators including the Orange County Transportation Authority (OCTA), Southern California Regional Railway Authority (SCRRA), and Federal Railroad Administration (FRA) in the planning of noise abatement along rail corridors.

Agency/Department:	Public Works Department
Funding Source:	General Fund, redevelopment funds, Measure M funds
Time Frame:	Complete by 2012
Related Policies:	
Circulation & Mobility:	1.5
Noise:	3.2
Economic Development:	6.1, 6.2

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**Program I-29      Hazardous Materials Monitoring**

Continue to assess risks associated with hazardous materials and develop mitigation measures accordingly. Identify hazardous material release sites and ensure that the sites are appropriately remediated.

Agency/Department:	Fire Department, Public Works Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Public Safety:	4.1, 4.2, 4.3

**Program I-30      Noise Ordinance**

Continue to enforce the City’s Noise Ordinance limits for industrial uses to limit the effect of noise on adjacent land uses. Update the Noise Ordinance to incorporate the new noise standards presented in the Noise Element and to ensure effectiveness in controlling noise sources. Revise the Noise Ordinance to achieve the following:

- Limit the hours of deliveries to commercial, mixed use, and industrial uses adjacent to residential and other noise sensitive land uses;
- Limit the hours of operation for commercial/retail/entertainment uses to limit noise intrusion into nearby residential and other noise sensitive land uses;
- Limit noise levels generated by commercial and industrial uses;
- Limit outdoor industrial activities or operations to control excessive noise at adjacent residential properties;
- Limit the hours of operation of high noise-generating industrial equipment;
- Limit the hours of operation for refuse vehicles and parking lot sweepers if their activity results in an excessive noise level that adversely affects adjacent residential uses;
- Require the placement of loading and unloading areas so that commercial buildings shield nearby residential land uses from noise generated by loading dock and delivery activities. If necessary, additional sound barriers shall be constructed on the commercial sites to protect nearby noise sensitive uses;
- Require the placement of all commercial HVAC machinery to be placed within mechanical equipment rooms wherever possible. (Equipment manufacturer’s specifications for venting and access to outside air shall be maintained); and
- Require the provision of localized noise barriers or rooftop parapets around HVAC, cooling towers, and mechanical equipment so that line-of-sight to the noise source from the property line of the noise sensitive receptors is blocked. (Equipment manufacturer’s specifications for venting and access to outside air shall be maintained).



Agency/Department: Community Development Department, Police Department  
 Funding Source: General Fund  
 Time Frame: Ordinance revisions complete by 2013  
 Related Policies:  
     Noise: 1.4, 1.5, 5.1, 5.2, 5.3, 6.2, 7.2, 7.3, 7.4

**Program I-31      Orange Public Library Programs**

Continue to implement the City’s *Public Library Facilities Master Plan (2002-2020)*. Continue to work to ensure that the California State Library–recommended standard of four volumes and 0.7 square foot per capita is maintained and that the City’s library services needs are met as future development occurs.

Continue to promote and provide additional resources for the Orange Public Library Local History Collection.

Maintain and enhance the Preservation Resource Center within the Orange Public Library & Local History Center that provides access to information about historic preservation regulations and benefits, technical assistance materials, and information about research methods and collections.

Agency/Department: Library Services Department  
 Funding Source: General Fund, private contributions  
 Time Frame: Ongoing  
 Related Policies:  
     Cultural Resources &  
     Historic Preservation: 2.2, 3.1, 4.5, 4.6, 5.1, 5.2, 5.3, 5.4, 5.5

**Program I-32      Flood Control and Storm Drain Facilities**

Continue to inspect storm drains, remove debris from catch basins as needed, and evaluate and monitor water storage facilities to determine if they pose a water inundation hazard.

Agency/Department: Public Works Department  
 Funding Source: General Fund  
 Time Frame: Ongoing  
 Related Policies:  
     Natural Resources: 2.13, 2.14, 2.15, 2.17  
     Public Safety: 2.3  
     Infrastructure: 1.3, 1.6



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**Program I-33      Solid Waste and Recycling Services**

Continue to contract for provision of solid waste and recycling services. Ensure that community needs for solid waste disposal and recycling are being met. Expand community outreach and education regarding residential recycling opportunities and household hazardous wastes.

Agency/Department:	Public Works Department
Funding Source:	General Fund, user fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.4
Infrastructure:	2.1, 2.2, 2.3

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**Program I-34      Noise Standards and Acoustical Studies**

Review development proposals to ensure that the noise standards and compatibility criteria set forth in the Noise Element are met. Consult Noise Element guidelines and standards for noise compatible land uses to determine the suitability of proposed developments relative to existing and forecasted noise levels. Enforce the California Noise Insulation Standards to ensure an acceptable interior noise level of 45 A-weighted decibels (dBA) community noise equivalent level (CNEL) in habitable rooms. Amend the Noise Ordinance to implement the noise standards presented in the Noise Element.

Develop noise impact analysis guidelines that describe the City’s desired procedure and format for acoustical studies. Acoustical studies will be required for all discretionary projects where any of the following apply:

- The project includes a noise-sensitive land use that is located within the existing or future 65 dBA CNEL contour for transportation noise sources.
- The project will cause future traffic volumes to increase by 25 percent or more on any roadway that fronts residential, institutional, or open space land uses.
- The project will expose a noise-sensitive land use to a stationary noise source or vibration source exceeding the standards outlined in the Noise Element. Such stationary sources may include mechanical equipment operations, entertainment venues, industrial facilities, and property maintenance.
- The project includes a noise-sensitive land use in the vicinity of existing or proposed commercial and industrial areas.
- The project is a mixed-use development that includes a residential component. The focus of this type of acoustical study is to determine likely interior and exterior noise levels and to recommend appropriate design features to reduce noise.



An acoustical analysis prepared in accordance with the Noise Element shall:

- Be the financial responsibility of the applicant seeking City approval of a project;
- Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
- Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and predominant noise sources;
- Estimate existing and projected cumulative (20 years) noise in terms of CNEL or  $L_{eq}$ , and compare those noise levels to the adopted standards and policies of the Noise Element;
- Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance;
- Estimate noise exposure after the prescribed mitigation measures have been implemented; and
- Describe a post-project assessment program that could be used to evaluate the effectiveness of the proposed mitigation measures.

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.4, 6.10
Noise:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.5, 3.1, 5.1, 6.1

**Program I-35      Climate Action Plan**

The City of Orange shall develop and adopt a Climate Action Plan (CAP). The CAP will have two primary objectives: (1) reduce total greenhouse gas (GHG) emissions in the City by at least 15 percent from current levels by 2020, and (2) create adaptation strategies to address the likely impacts of climate change on the City, such as increased risk of flooding, diminished water supplies, increased risks of wildfire, and risks to public health. The CAP will contain the following chapters:

*Climate Change and Orange*—The first chapter of the CAP will outline the City’s rationale and motivation for addressing climate change by developing and implementing the CAP. The chapter will provide a brief overview of the science behind climate change, will describe the potential impacts that climate change may create in Orange, and will outline state policy mandates to reduce GHG emissions.

*Baseline GHG Emissions Inventory and Forecast*— In this chapter, the City will calculate GHG emissions for the base year, forecast emissions in 2020 under a business-as-usual scenario, and



describe the GHG reductions necessary to achieve the City’s adopted target. The City will make best efforts to evaluate all reasonable sources of GHG emissions. The chapter will identify GHG emissions and target levels per sector. Sectors to be described in the inventory will include municipal operations, residential, commercial, industrial buildings, motor vehicles, and waste. This inventory and forecast shall provide a benchmark for planning and monitoring progress in government operations and the community. The GHG inventory shall be conducted using a methodology consistent with that used by other local governments and will be completed within 1 year after the effective date of adoption of the General Plan.

*GHG Emissions Policies and Measures*— This chapter will describe the policies and measures that are necessary to reduce GHG emissions in the City and achieve the reduction target. Policies and measures will be created with public input from all stakeholders. Each measure will be enforceable, include a timeline, describe financing mechanisms, and assign responsibility to relevant agencies and departments. In addition to direct GHG reduction measures, the chapter will incorporate public education efforts to raise awareness on the importance of minimizing GHG emissions and methods for reducing emissions from individual lifestyles. These policies and measures will be developed within two years after the effective date of adoption of the General Plan. The effectiveness of policies and measures will be evaluated annually and will be modified as necessary to achieve the City’s reduction goals.

Because the CAP is to be implemented over a period of several years, it is likely that the scientific, federal, and state policy frameworks surrounding climate change measures will evolve. The CAP will adapt its policies, measures, and programs to ensure successful reduction of GHG emissions, protection of the City, and compliance with regulations.

*Protection and Adaptation Strategies*—The fourth chapter of the CAP will describe strategies that will be used to protect the City from and facilitate adaptation to the potential effects of climate change. Potential effects to be evaluated include but are not limited to sea level rise, increased frequency and magnitude of flooding, diminished water supply, habitat loss, and possible effects on public health and the local economy. Each measure will include a timeline, describe financing mechanisms, and assign responsibility to relevant agencies and departments.

*Benchmarks and Next Steps*—In conclusion, the CAP will identify benchmarks, monitoring procedures, and other steps needed to ensure the City achieves its GHG reduction, protection, and adaptation goals. Monitoring and verifying progress on the GHG emissions reduction measures will be conducted on an annual basis. Monitoring will provide important feedback that can be used to demonstrate overall progress toward emissions reduction targets and improve measures over time. Benchmarks will be established to serve as intermediate goals and to motivate compliance with City and private-sector reduction targets. Benchmarks for strategic responses to climate change impacts should be based on the expected time scale of the specific impact and will be established during the development of individual strategic plans.

*CAP Relationship to the General Plan*—Implementation strategies identified in the CAP will be incorporated as implementation measures of the General Plan through amendment within one year of completion. Revisions to CAP policies and measures and subordinate strategic programs may require further General Plan amendments.

Agency/Department:

Community Development Department





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Funding Source:	General Fund, grants and state assistance (if available)
Time Frame:	To be developed and adopted by December 31, 2012
Related Policies:	See those policies identified in Table NR-1

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**Program I-36      Park Dedication Ordinance**

Adopt a parkland dedication ordinance that requires dedication of parkland at a ratio of 3.0 acres per 1,000 population or payment of in-lieu fees, pursuant to Quimby Act requirements.

Agency/Department:	Community Development Department, Community Services Department
Funding Source:	General Fund
Time Frame:	Complete by 2013
Related Policies:	
Natural Resources:	5.6, 5.7

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**Program I-37      Vehicle Noise Reduction**

Implement the following strategies to reduce vehicular traffic noise throughout the City:

- Review and designate local truck routes to reduce truck traffic in noise sensitive land uses areas.
- Consider the use of traffic calming devices, to reduce traffic speed in residential zones.
- Consider the use of alternative paving materials, such as open graded asphalt, to reduce traffic noise where determined feasible and cost efficient.

Agency/Department:	Public Works Department, Community Services Department
Funding Source:	State and federal grants, Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	2.1, 2.2, 2.3, 2.4, 2.5



## II. Physical Improvements and Capital Projects

### Program II-1 Capital Improvement Program

Continue to implement and update the City’s *Capital Improvement Program* (CIP) to:

- Address phasing, construction, and maintenance of improvements to roadways, infrastructure, streetscapes, signage, and City-owned parks throughout the City;
- Acquire and expend funds from available transportation financing and other programs to assist in financing new roadways and trails;
- Manage construction of new parks and improvements to current parklands and park facilities;
- Facilitate construction of a network of multi-use trails that connects the City’s parks and open spaces;
- Improve and expand Orange Public Library facilities;
- Ensure timely completion of required roadway infrastructure associated with new and infill development;
- Maintain City-owned and operated facilities; and
- Maintain publicly owned potential and listed historic resources.

Use the 7-year CIP process to prioritize, finance, and complete roadway, infrastructure, and parks projects identified in the CIP. Update the CIP on an annual basis to respond to changes in local priorities and available funding sources. Require future CIP update processes to include a public outreach component.

Agency/Department:	All departments
Funding Source:	General Fund, redevelopment funds, transportation funds, and grants, as identified in the CIP. Secondary sources include special revenue funds (such as Proposition 172, Measure “M” Funds), gas tax funds, enterprise funds, capital improvement funds, and redevelopment funds.
Time Frame:	Ongoing, with annual updates in-cycle with City budget process
Related Policies:	
Land Use:	1.7, 2.5, 2.6, 5.4, 5.6, 5.7, 5.9, 6.3, 6.7, 6.8, 8.1, 8.3
Circulation and Mobility:	1.1, 1.6, 2.2, 2.3, 2.4, 4.1, 4.6, 4.8, 5.1
Natural Resources:	6.1, 6.6
Cultural Resources &	
Historic Preservation:	1.6, 3.5, 5.1, 5.2
Urban Design:	4.3, 4.4
Economic Development:	2.4, 6.1, 6.2
Infrastructure:	1.1
Growth Management:	1.2, 1.11, 2.2



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## **Program II-2 Metropolitan Drive Extension**

To further improve circulation near The Block at Orange shopping area and to improve access to Interstate 5, extend Metropolitan Drive from The City Drive/State College Boulevard to the Metropolitan Drive/Rampart Street connection.

Agency/Department: Public Works Department  
Funding Source: Determined by CIP  
Time Frame: Determined by CIP  
Related Policies:  
Circulation & Mobility: 1.1, 2.1, 2.2

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## **Program II-3 Santiago Creek Bike Trail**

Complete additional segments of a bike trail adjacent to Santiago Creek to connect Tustin Street to Grijalva Park, as well as Collins Avenue along Santiago Creek, and then travel north from Walnut Avenue to Collins Avenue along the City-owned portion of the Santiago Creek Bike Trail Right-of-Way. The Santiago Creek Trail is planned to extend through the City along the creek, and connect the regional Santa Ana River trail to Santiago Oaks Regional Park and wilderness areas east of Orange.

Agency/Department: Community Services Department  
Funding Source: Determined by Recreational Trails Master Plan  
Time Frame: Determined by Recreational Trails Master Plan  
Related Policies:  
Circulation & Mobility: 4.1, 4.4, 4.5  
Natural Resources: 6.1, 6.2

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## **Program II-4 Pedestrian and Bicycle Amenities**

Provide appropriate bicycle and pedestrian amenities along City bikeways, trails, and sidewalks. Specific amenities may include bicycle racks, bicycle storage, water fountains, benches, trash cans, and emergency call boxes. Encourage private development projects to provide these amenities as well, especially within mixed-use areas and along the City's commercial corridors.

Identify a range of funding opportunities to enable extension of existing trails and development of new trails.

Agency/Department: Community Services Department, Community Development Department, Public Works Department  
Funding Source: General Fund, grants  
Time Frame: Ongoing  
Related Policies:

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## IMPLEMENTATION



Circulation & Mobility:	4.2, 4.4
Natural Resources:	2.8, 6.1, 6.6
Public Safety:	9.1, 9.3
Growth Management:	1.9

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### **Program II-5      Emergency Operations Center**

Maintain, equip, and update the Emergency Operations Center on an ongoing basis to improve public safety and response by agencies.

Agency/Department:	City Manager's Office, Fire Department, Police Department
Funding Source:	General Fund, state and federal funds, grants
Time Frame:	Ongoing
Related Policies:	
Public Safety:	1.2, 3.4, 3.6, 5.1, 6.1, 6.2, 6.3, 6.5, 6.6, 8.2, 8.3, 8.4

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### **Program II-6      Correct Sewer System Deficiencies**

Repair and improve all areas that were identified in the 2003 Sewer Master Plan Update as having system deficiencies based on available resources and continue to identify anticipated deficiencies in the system. The City will make improvements to areas with frequent blockages or "hot-spots." Developers shall also be required to pay the cost of providing new and improved wastewater services to project sites.

Agency/Department:	Public Works Department
Funding Source:	State and federal grant funds, Development fees
Time Frame:	Ongoing
Related Policies:	
Infrastructure:	1.1, 1.2, 1.6



### III. Conditions or Requirements Placed upon Applicants during Development Review

#### Program III-1 California Environmental Quality Act

Comply with all provisions of CEQA. In addition to thresholds that may be established or adopted by the City in the future, use the following thresholds and procedures for CEQA analysis of proposed projects, consistent with policies adopted within the General Plan:

- **Circulation & Mobility**
  - Level of service (LOS) D (volume-to-capacity [V/C] ratio less than or equal to 0.90) shall be the lowest acceptable level of service for both roadway segments and peak-hour intersection movements.
  - Orange County's Congestion Management Plan (CMP) specifies LOS E (V/C ratio less than or equal to 1.00) as the operating standard for roadways on the CMP highway system.
  - Projects that increase V/C by .01 or more on affected roadway segments or intersections experiencing LOS E or LOS F conditions without the proposed project are considered to create significant impacts, and mitigation is required.
- **Parks and Recreation**
  - The City shall require dedication of parkland at a rate of 3.0 acres per 1,000 anticipated residents or payment of in-lieu fees for new residential projects.
- **Noise**
  - The City shall apply the noise standards specified in Tables N-3 and N-4 of the Noise Element to proposed projects analyzed under CEQA.
  - In addition to the foregoing, an increase in ambient noise levels is assumed to be a significant noise impact if a proposed project causes ambient noise levels to exceed the following:
    - Where the existing ambient noise level is less than 65 dBA, a project related permanent increase in ambient noise levels of 5 dBA CNEL or greater.
    - Where the existing ambient noise level is greater than 65 dBA, a project related permanent increase in ambient noise levels of 3 dBA CNEL or greater.
- **Historic and Cultural Resources**
  - "Historical resource" for the purposes of CEQA shall mean "historic district" in the case of a contributor to a historic district.
  - Historic resources listed in the Historic Register shall have a presumption of significance pursuant to CEQA Section 21084.1 and shall be treated as historical resources under CEQA.
  - The historical significance of an archaeological historic resource is evaluated using the criteria of Public Resources Code Section 5024.1 and Section 15064.5 et seq. of the state CEQA Guidelines.



## IMPLEMENTATION



All future development proposals shall be reviewed by the City for potential regional and local air quality impacts per CEQA. If potential impacts are identified, mitigation will be required to reduce the impact to a level less than significant, where technically and economically feasible.

Agency/Department:	Community Development Department, Public Works Department, Community Services Department
Funding Source:	General Fund, development fees
Time Frame:	Ongoing
Related Policies:	
Circulation & Mobility:	1.2, 2.3
Natural Resources:	5.6
Cultural Resources & Historic Preservation:	1.1, 1.3
Noise:	1.4
Growth Management:	1.1, 2.1

### Program III-2 Site Development Review

Comply with all City procedures in the review of proposed development projects, and use the site plan review process to ensure that applicable General Plan policies and City standards and regulations are applied to proposals for specific development projects.

Agency/Department:	Community Development Department, Public Works Department, Police Department, Fire Department, Community Services Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	1.6, 1.7, 2.5, 2.7, 2.8, 3.1, 3.4, 4.3, 4.5, 6.1, 6.2, 6.9, 6.10, 6.12
Circulation & Mobility:	1.1, 1.7, 5.1, 5.2
Natural Resources	1.3, 2.3, 2.6, 2.13, 2.14, 2.15, 2.16, 4.3, 4.4, 4.5, 5.4, 5.6, 5.7, 6.6, 7.5
Cultural Resources & Historic Preservation:	1.3, 1.4, 1.5, 1.6, 4.1, 4.2, 4.3, 4.4, 4.5
Public Safety:	1.1, 2.5, 3.3, 3.5, 4.2, 4.3, 6.2, 7.2, 7.3, 7.4, 9.1
Noise:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 5.1, 5.2, 5.3, 6.1, 6.2
Urban Design:	2.4, 2.5, 2.6, 3.4, 3.5, 6.1
Infrastructure:	1.4, 1.5

### Program III-3 Commission/Committee Review

Orange has several commissions and one committee whose purpose is to advise and assist the City Council in dealing with issues related to each commission's or committee's area of concern.



The commissions and committee gather pertinent information, hear arguments, weigh values, and make recommendations to the Council. Several of the commissions also have some administrative powers.

The City will continue to use the commission/committee structure to inform the public decision-making process.

The City will also consider expanding the authority of the Design Review Committee and Community Development Department’s staff to administer the Orange Historic Resources Inventory, Historic Register listings, and design review procedures for projects involving architectural and archaeological resources.

Agency/Department:	City Council, Community Development Department, Community Services Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	2.5, 2.6, 2.7, 2.8, 3.1, 3.2, 4.5, 5.5, 5.8, 5.9, 6.1, 6.2, 6.3, 6.4, 6.7, 6.11, 8.1, 8.2, 8.3
Circulation & Mobility:	1.3, 2.3, 3.2, 4.1, 6.1
Cultural Resources & Historic Preservation:	1.1, 1.3, 1.4, 4.5, 4.6
Urban Design:	1.1, 6.1
Public Safety:	1.1, 3.5, 4.3, 7.4
Economic Development:	1.2, 2.5, 3.3, 4.5, 5.1, 5.2, 5.3, 5.4, 5.5

**Program III-4      Traffic Impact Analyses**

Require preparation of traffic impact analyses for new discretionary development projects. For projects that increase V/C by .01 or more on affected roadway segments or intersections experiencing LOS E or LOS F conditions without the proposed project, traffic impact analyses must propose binding mitigation strategies to be incorporated within the project.

Prepare and publish guidelines for the preparation of traffic impact analyses.

Agency/Department:	Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	2.5, 6.10
Circulation & Mobility:	1.1
Growth Management:	1.2, 1.6



**Program III-5 Transportation Demand Management Plans**

Require major employers of 100 persons or more to institute transportation demand management (TDM) plans. Such plans establish incentives to encourage employees to carpool, take public transportation, bicycle, or use some means other than private automobiles to get to and from work.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Circulation & Mobility:	2.6
Natural Resources:	2.1, 2.2
Growth Management:	1.12

**Program III-6 National Pollutant Discharge Elimination System Compliance**

Before making land use decisions, the City will utilize available methods to estimate increases in pollutant loads and flows resulting from projected future development.

The City will follow the most current NPDES permit and countywide *Drainage Area Management Plan* and the City *Local Implementation Plan* to ensure that the City complies with applicable federal and state regulations. Applicants for new development and redevelopment projects shall prepare and submit plans to the City, as well as implement plans demonstrating accomplishment of the following:

- Use structural and nonstructural best management practices (BMPs) to mitigate projected increases in pollutant loads and flows;
- Control the velocity of pollutant loading flows during and after construction;
- Limit areas of impervious surfaces and preserve natural areas;
- Limit directly connected areas of impervious surfaces;
- Use natural treatment systems such as wetlands and bioswales to treat storm runoff where technically and economically feasible;
- Provide on-site infiltration and runoff and temporary on-site retention areas;
- Limit disturbance of natural water bodies, natural drainage systems, and highly erodable areas;
- Use pollution prevention methods, source controls, and treatment with small collection strategies located at or as close as possible to the source; and
- Implement erosion protection during construction.



In addition, applicants for large development projects are required to prepare and implement plans that meet site predevelopment hydrologic conditions and to control runoff on-site where technically feasible.

Agency/Department:	Public Works Department, Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	4.3, 6.5
Natural Resources:	2.12, 2.13, 2.14, 2.15, 2.16, 2.17
Public Safety:	2.3

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### **Program III-7      Water Services and Supplies**

As needed, require studies to determine water infrastructure requirements for future development projects, and require that any recommendations be incorporated into the design of projects. Require the dedication of necessary right-of-way and construction of water infrastructure improvements for development projects as needed. Developers shall also be required to pay the cost of providing new and improved water services to project sites.

For projects that satisfy the criteria set forth in Sections 10910–10915 of the California Water Code and Section 66473.7 of the Government Code, a water supply assessment or water supply verification demonstrating available water supplies exist to support development shall also be prepared.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees, General Fund
Time Frame:	Ongoing
Related Policies:	
Infrastructure:	1.1, 1.4, 1.6

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### **Program III-8      Adequate Public Safety and Emergency Response**

During the development application process, consult with Fire and Police Departments to evaluate the need for additional fire and police facilities or resources to serve new development projects and infill development areas. During updates to the Capital Improvement Program process, coordinate with service providers to evaluate the level of fire and police service provided to the community. Require adequate street widths and clearance for emergency access. Provide all appropriate safety features. Continue to use state-of-the-art techniques and technology to enhance public safety.

Adhere to requirements in the Municipal Code for adequate street widths and clearance for emergency access. Integrate CPTED techniques into development projects and practice active surveillance measures in high-risk areas such as parking lots.

## IMPLEMENTATION



The City shall use open space easements and other regulatory techniques to prohibit development and avoid public safety hazards where the threat from seismic hazards cannot be mitigated.

Agency/Department:	Community Development Department, Public Works Department, Police Department, Fire Department
Funding Source:	Development fees, General Fund
Time Frame:	Ongoing
Related Policies:	
Public Safety:	3.4, 4.4, 6.1, 6.2, 6.3, 6.4

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### Program III-9 Geologic Hazard Assessments

Pursuant to state law, geologic and/or geotechnical studies are required for proposed new development projects located in areas identified as susceptible to landslides and liquefaction and binding mitigation strategies must be adopted. Compliance with the recommendations set forth in site-specific geologic and/or geotechnical studies will be made a condition of approval for new development. In addition, the City may require applicants to incorporate measures to stabilize and maintain slopes on a site-by-site basis, such as proper planting, irrigation, retaining walls, and benching.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.9, 6.10
Public Safety:	1.1

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### Program III-10 Cultural Resources Inventories

Require cultural resources inventories of all new development projects in areas identified with medium or high potential for archeological or cultural resources.

Where a preliminary site survey finds medium to high potential for substantial archaeological remains, the City shall require a mitigation plan to protect the resource before issuance of permits. Mitigation may include:

- Ensuring that a qualified archaeologist is present during initial grading or trenching (monitoring),
- Redesigning the project to avoid archaeological resources (this is considered the strongest tool for preserving archaeological resources),
- Capping the site with a layer of fill, and/or
- Excavating and removing the archaeological resources (recovery) and implementing curation in an appropriate facility under the direction of a qualified archaeologist (interpretation).





Alert applicants for permits within early settlement areas to the potential sensitivity. If significant archaeological resources are discovered during construction or grading activities, such activities shall cease in the immediate area of the find until a qualified archaeologist can determine the significance of the resource and recommend alternative mitigation.

If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the Community Development Department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure. The final written report should be submitted to the appropriate regional archaeological Information Center within three months after work has been completed. The City shall ensure that project applicants contact the Native American Heritage Commission for a Sacred Lands File Check and a list of appropriate Native American contacts for consultation concerning the project site and to assist in crafting the mitigation measures.

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.11
Cultural Resources & Historic Preservation:	4.1, 4.5

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### **Program III-11   Green Building, Energy Conservation, and Sustainable Development**

The City strongly encourages new development and major renovation projects to employ green building techniques and materials. Encourage proposed development projects throughout the City to use Leadership in Energy and Environmental Design (LEED) standards developed by the U.S. Green Building Council or a similar third-party verified program. Encourage building orientations and landscaping that enhance natural lighting and sun exposure. Prepare guidelines for sustainable development to encourage incorporation of these practices in new development. These guidelines will include measures to maximize soil permeability to address related stormwater and surface-water runoff issues.

Require compliance with state Title 24 building construction standards and Energy Star conservation standards for all development projects.

Prepare and adopt an ordinance that requires and/or provides incentives for: (1) specified new residential development to comply with a specified green building program or show that its development provides comparable effectiveness to such a program; and (2) specified non-residential development of a specified size comply with a specified green building program or show that its development provides comparable effectiveness to such a program.

## IMPLEMENTATION



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Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing; December 31, 2012
Related Policies:	
Natural Resources:	2.6, 2.7

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### **Program III-12 Mixed-Use Noise Property Notification**

When the City exercises discretionary review, provides financial assistance, or otherwise facilitates residential development within a mixed-use area, make providing written warnings to potential residents about noise intrusion a condition of that approval, assistance, or facilitation. The following language is provided as an example:

*“All potential buyers and/or renters of residential property within mixed-use districts in the City of Orange are hereby notified that they may be subject to audible noise levels generated by business and entertainment related operations common to such areas, including amplified sound, music, delivery and passenger vehicles, mechanical noise, pedestrians, and other urban noise sources.”*

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	5.1, 5.3
Urban Design:	2.5

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### **Program III-13 Ecological and Biological Resource Assessments**

Analyze development proposals for potential impacts on significant ecological and biological resources. Require appropriate mitigation for all significant impacts if impact avoidance is not possible. Mitigation measures for habitat and species may include but are not limited to avoidance, enhancement, restoration, or a combination of any of the three.

Agency/Department:	Community Development Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.4, 6.11
Natural Resources:	4.1, 4.3, 4.4, 4.5

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**Program III-14    Archaeological Resources Management Report  
(ARMR Preservation Bulletin)**

Establish the Archaeological Resources Management Report (ARMR Preservation Bulletin) as the standard report format for all documentation and accept reports only from registered professional archaeologists knowledgeable in Native American cultures and/or historical archaeology (qualified archaeologists).

Agency/Department:                    Community Development Department  
Funding Source:                         Development fees  
Time Frame:                                Ongoing  
Related Policies:  
    Cultural Resources &  
    Historic Preservation:                4.1

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**Program III-15    Historic Resources Design Review**

Continue to use the Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings as a basis for design review and incorporate them by reference into the *Old Town Design Standards*. Any approved demolition permit for listed historic resources will be automatically subject to a delay of 180 days before the permit for demolition may be issued. The property owner will strive to develop alternatives to demolition that will preserve the historic resources.

The Community Development Director will appoint a City of Orange Preservation Officer. In lieu of such appointment, the Director shall serve as Preservation Officer.

Agency/Department:                    Community Development Department, City Council  
Funding Source:                         General Fund  
Time Frame:                                Ongoing  
Related Policies:  
    Cultural Resources &  
    Historic Preservation:                1.1, 1.2, 1.3, 1.4, 1.5, 2.3, 3.2

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**Program III-16:    Public Access to Santiago Creek and Santa Ana River Public  
Interface**

Ensure that new development does not preclude access to Santiago Creek and the Santa Ana River and associated trails. Development review should ensure that commercial and retail development in these areas support public access.

Agency/Department:                    Community Development Department  
Funding Source:                         Development fees  
Time Frame:                                Ongoing  
Related Policies:  
    Land Use:                                6.4, 6.6  
    Circulation & Mobility:                4.1



Natural Resources: 1.3, 5.5, 7.1, 7.2, 7.3, 7.4, 7.5  
Urban Design: 2.6

**Program III-17: Office Condominium Conversions**

Evaluate applications for conversion of industrial properties to office condominiums to determine the impact on the available balance of larger and smaller properties available for industrial use.

Agency/Department: Community Development Department, Economic  
Development Department  
Funding Source: Development fees  
Time Frame: Ongoing  
Related Policies:  
Land Use: 4.1, 4.2, 4.3, 4.4, 4.5  
Economic Development: 3.1, 6.1, 6.2

**Program III-18: Noise Reduction in New Construction**

Require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- Construction equipment shall be properly maintained per manufacturers’ specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc).
- Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.
- Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the City of Orange Municipal Code Noise Ordinance, or mitigate noise at sensitive land uses to below Orange Municipal Code standards.
- Construction equipment should not be idled for extended periods of time in the vicinity of noise sensitive receptors.
- Locate fixed and/or stationary equipment as far as possible from noise sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.
- Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by American Society for



Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.

Agency/Department:	Community Development Department, Public Works Department, Community Services Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	1.1, 1.2, 1.4, 1.5, 7.2

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### **Program III-19: Groundborne Noise and Vibration**

Implement the following measures to reduce the potential for human annoyance and architectural/structural damage resulting from elevated groundborne noise and vibration levels.

- Construction-Induced Vibration. The City shall implement or require implementation of the following measures through contract provisions and/or conditions of approval as appropriate:
  - Pile driving required within a 50-foot radius of historic structures shall utilize alternative installation methods where possible (e.g., pile cushioning, jetting, pre-drilling, cast-in-place systems, resonance-free vibratory pile drivers). Specifically, geo pier style cast-in-place systems or equivalent shall be used where feasible as an alternative to pile driving to reduce the number and amplitude of impacts required for seating the pile.
  - The preexisting condition of all buildings within a 50-foot radius and of historic buildings within the immediate vicinity of proposed construction activities shall be recorded in the form of a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage shall be documented (photographically and in writing) prior to construction. All damage will be repaired back to its preexisting condition.
  - Vibration monitoring shall be conducted prior to and during pile driving operations occurring within 100 feet of the historic structures. Every attempt shall be made to limit construction-generated vibration levels in accordance with Caltrans recommendations during pile driving and impact activities in the vicinity of the historic structures.
  - Provide protective coverings or temporary shoring of on-site or adjacent historic features as necessary, in consultation with the Community Development Director or designee.





- Railroad-Induced Vibration:
  - Vibration sensitive uses shall be located a minimum of 100 feet from the railroad centerline, where feasible. To ensure compliance with FTA and Caltrans recommended guidelines, a site-specific groundborne noise and vibration assesment should be conducted. For sensitive uses located within 100 feet of the railroad centerline, the acoustical noise and vibration assessment shall demonstrate that potential impacts will be below the level of significance. If specific project-level impacts are identified, mitigation measures reducing the impacts to below the level of significance will be required.
  - A groundborne vibration assessment shall be conducted at proposed building pad locations within 200 feet of railroad right-of-ways, prior to project approval. Vibration monitoring and assessment shall be conducted by a qualified acoustical consultant. The assessment will demonstrate that rail-associated groundborne vibration and noise levels comply with recommended FTA and Caltrans guidance of 80 VdB and 0.2 in/sec PPV, respectively, or propose project-specific mitigation measures such as site design, building isolation, etc. to achieve that standard.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	General Fund, Development fees
Time Frame:	Ongoing
Related Policies:	
Noise:	1.1, 3.1, 3.2, 6.1, 7.2

**Program III-20: Toxic Air Contaminant Exposure**

Require each project applicant to implement the following measures to reduce the exposure of sensitive receptors to TACs from mobile sources, as a condition of project approval:

- Activities involving idling trucks shall be oriented as far away from and downwind of existing or proposed sensitive receptors as feasible.
- Strategies shall be incorporated to reduce the idling time of main propulsion engines through alternative technologies such as IdleAire, electrification of truck parking, and alternative energy sources for TRUs to allow diesel engines to be completely turned off.
- Proposed developments shall incorporate site plans that move sensitive receptors as far as feasibly possible from major roadways (100,000+ average daily trips).
- Projects containing sensitive receptors (such as residences, schools, day care centers, and medical facilities) on sites within 500 feet of a freeway must demonstrate that health risks relating to diesel particulates would not exceed acceptable health risk standards prior to project approval.



Agency/Department:	Community Development Department, Public Works Department
Funding Source:	Development fees
Time Frame:	Ongoing
Related Policies:	
Natural Resources:	2.1

#### **IV. Planning and Outreach Initiatives**

##### **Program IV-1 Annual Review of General Plan and Land Use Policy Map**

Annually review implementation of the General Plan and Land Use Policy Map to identify the effect of land development and use on City revenues and costs of providing and maintaining public facilities and services.

Report annually to the City Council regarding progress toward established objectives.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing, with annual reports to City Council
Related Policies:	All

##### **Program IV-2 Park Acquisition, Construction, and Maintenance Report**

Work actively to acquire, build, and maintain approximately 241 acres of additional parkland to achieve a minimum parkland ratio of 3 acres per 1,000 persons by 2030, and work toward a desired ratio of 5 acres per 1,000 persons by 2050. Evaluate progress toward achieving this goal by preparing a status report for the City Council and community every five years.

As a separate but compatible objective, support efforts by the County of Orange or private landowners to provide an additional 303 acres of regional parkland to support an overall objective of 10 acres of parkland per 1,000 persons, inclusive of County regional parks.

Work with the private sector to encourage use of vacant commercial or industrial properties for recreational purposes.

Agency/Department:	Community Services Department
Funding Source:	General Fund
Time Frame:	Baseline status report completed by 2013 Ongoing 5-year reporting beginning in 2016
Related Policies:	
Land Use:	1.7, 8.1, 8.3
Natural Resources:	5.1, 5.3, 5.4, 5.6, 5.7



**Program IV-3 Public Education Programs**

Use public education activities to accomplish the following objectives:

- Improve citizen participation in land use and economic development planning processes. Promote awareness of Orange’s historical and architectural resources and potential strategies for adaptive reuse of historic structures.
- Educate residents regarding air and water quality, including the effects of urban runoff.
- Raise public awareness of public safety issues—fire safety, flood hazards, homeland security, and other programs.
- Raise public awareness about the importance of green building techniques.
- Educate the public regarding the benefits of recycling and waste reduction.
- Promote traffic safety awareness programs.
- Promote the application of CPTED to new development projects.
- Support neighborhood meetings and community programs on crime prevention and education.
- Continue to support existing Neighborhood Watch programs, and support the efforts of the City of Orange Police Department to expand these programs.

Coordinate education activities and make materials available to residents. Utilize all available media—forums, flyers, brochures, e-mail, videos, interpretive displays, workshops, and the City’s website and cable television channel—to accomplish these objectives. Fully utilize the resources of the Orange Public Library to disseminate this information. Explore partnerships with local schools and educators to develop various educational programs related to historic preservation, personal and community safety, and environmental awareness.

Agency/Department:	Community Development Department, Public Works Department, Fire Department, Police Department, Library Services Department, Community Services Department
Funding Source:	General Fund; Federal, state, and private grants; redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	5.2, 6.11, 8.1, 8.2, 8.3
Natural Resources:	2.17
Cultural Resources & Historic Preservation:	1.2, 1.3, 1.6, 2.2, 2.3, 3.1, 3.2, 4.4, 4.6, 5.1, 5.5
Public Safety:	1.2, 3.6, 6.5, 7.1, 8.1
Economic Development:	3.3, 4.4



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**Program IV-4      Santiago Creek and Santa Ana River Vision Plans**

Continue efforts to prepare and adopt a vision plan for Santiago Creek addressing recreational trails, open space, and flood control.

Support future development of highly visible access points to the Santa Ana River, particularly at Lincoln Avenue, Katella Avenue, and Chapman Avenue. Partner with the City of Anaheim, resource agencies, and community organizations to complete a vision plan for the Santa Ana River, similar to the plan for Santiago Creek.

Agency/Department:	Community Development Department, Community Services Department, Public Works Department
Funding Source:	Grants, General Fund
Time Frame:	Santiago Creek Plan completed by 2011 Santa Ana River plan completed by 2020
Related Policies:	
Land Use:	6.3, 7.3
Circulation & Mobility:	1.1
Natural Resources:	1.2, 4.2, 6.1
Cultural Resources & Historic Preservation:	4.2

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**Program IV-5      Solid Waste Source Reduction and Recycling**

Continue to implement waste diversion programs as well as public education programs as outlined in the City’s Source Reduction and Recycling Element required by Assembly Bill 939 (1989). Work to expand recycling pickup to all residential addresses in the City. Conduct a waste characterization study to identify the major constituents in the City’s solid waste stream. The results of the study will be used to guide development of the recycling and outreach program, and possible revisions to waste handler contracts. The City will also consider anticipated waste associated with the land use types of future development.

Agency/Department:	Public Works Department
Funding Source:	General Fund, user fees
Time Frame:	Ongoing
Related Policies:	
Natural Resources:	2.5
Infrastructure:	2.1, 2.2, 2.3, 2.4

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**Program IV-6      Transportation Demand and System Management**

Participate in regional efforts to implement TDM requirements and support implementation of the employer TDM provisions of the South Coast Air Quality Management District’s Air Quality Management Plan by working with the SCAQMD to identify employers within Orange most suitable for participation in the TDM programs to achieve major reduction of VMT. Complete



intersection capacity improvements and coordinate traffic signals as necessary to improve traffic flow.

Agency/Department: Community Development Department, Public Works Department  
Funding Source: General Fund  
Time Frame: Ongoing  
Related Policies:  
Land Use: 7.4  
Circulation & Mobility: 2.2, 2.5, 2.6  
Natural Resources: 2.1, 2.2  
Growth Management: 1.12, 2.1

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**Program IV-7 Growth Management Performance Monitoring Program**

As required by Measure M, the City’s annual Performance Monitoring Program is intended to provide an annual evaluation of its development phasing plans. This program reviews and evaluates the implementation of phasing plans that reflect conditions of approval for traffic improvements required as mitigation measures for development projects. The monitoring program is intended to ensure that road improvements or funding are actually provided as required, to determine whether development may continue. If the improvements or funding specified in project conditions have not been provided, the City shall defer development until compliance with the provision of this program is achieved.

The monitoring program includes an annual review of new development projects until all required improvements have been constructed. Traffic-related mitigation requirements, such as TDM programs, will be continued in conformance with the provisions of the project-approved programs.

Agency/Department: Community Development Department, Public Works Department  
Funding Source: Development fees  
Time Frame: Ongoing  
Related Policies:  
Circulation & Mobility: 1.1  
Growth Management: 1.2, 1.5, 1.12





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## V. Coordination with Other Agencies and Organizations

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### Program V-1 Utility Companies

As part of the development application and review process, coordinate with Southern California Edison (SCE), Time Warner Cable, Cox Communications Orange County, the Gas Company, AT&T, cellular telephone service providers, and other local utilities to assess capacity and infrastructure needs to support new development or development activities. Ensure through such coordination that Orange remains on the cutting edge of new infrastructure technology. Require that utilities be moved underground consistent with the City's *Master Utility Undergrounding Plan*.

Agency/Department:	City Manager's Office, Community Development Department, Public Works Department
Funding Source:	SCE utility undergrounding fund, private funding sources, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.3, 7.4, 7.5, 7.6
Urban Design:	2.8
Infrastructure:	4.1, 4.2, 4.3
Economic Development:	5.2, 6.2

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### Program V-2 Orange Unified School District and Santiago Canyon Community College District

Coordinate with the Orange Unified School District and Santiago Canyon Community College District to address the following issues, as applicable:

- Preparation of facilities master plans;
- Continued development of safe pedestrian and bicycle routes to all schools and ensuring that physical improvements (such as crosswalks and bike racks) are in place to support walking and bicycling to schools;
- Exploration of nonstructural solutions that may encourage people to walk or bus to school, rather than drive (e.g., staggered start times, walking groups);
- Continued joint use of school sites for community recreation;
- Exploration of joint use of school site(s) for public library service;
- Continued youth and family services to serve families of children living within the school district's boundaries;
- Continued joint-use agreements to make additional recreational facilities available to the community during non-school hours;

## IMPLEMENTATION



- Requiring new or remodeling existing schools to install appropriate student pick-up/drop-off areas; and
- Preparation of an elementary school curriculum, including suggested supplemental activities, for teaching children about cultural and historical resources, personal and community safety, sustainable lifestyles, and environmental awareness in the City.

Agency/Department:	Community Development Department, Community Services Department, Library Services Department
Funding Source:	Development fees, user fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.1, 7.6
Natural Resources:	5.3
Cultural Resources & Historic Preservation:	2.2, 3.1

### **Program V-3      Adjacent Jurisdictions and Special-Purpose Agencies and Organizations**

Continue to coordinate with adjacent jurisdictions and special-purpose agencies and organizations for the following purposes:

- Land use planning efforts;
- Growth and facility planning, management, and maintenance;
- Planning and developing major east/west and north/south arterials and rapid transit;
- Ensuring that Orange benefits from the planned Anaheim Regional Transportation Intermodal Center (ARTIC);
- Connecting City trails to trails in adjacent jurisdictions and regional trails networks, including Santiago Creek, the Santa Ana River, and the proposed Tustin Branch Trail;
- Completing vision plans for Santiago Creek and the Santa Ana River;
- Maintaining an appropriate level of transportation impact fees and other public service fees;
- Continuing and adopting mutual-aid agreements;
- Maintaining flood control facilities and implementing a capacity analysis;
- Developing trails along service roads for flood control channels;
- Aircraft corridor planning, minimizing aircraft overflights in the City, and coordinating approval of heliport/helistop operations;
- Disaster preparedness and emergency response for earthquakes and wildland fires;
- Participating in interjurisdictional planning forums through the established Growth Management Areas (GMAs) adopted by the Regional Advisory Planning Council as well as the City's Joint Powers Agreements with adjacent cities to address cumulative traffic impacts and to coordinate improvements in transportation facilities; and



- Monitoring and compiling information on faults within the planning area.

Agency/Department:	Community Development Department, Public Works Department, Fire Department, Police Department
Funding Source:	General Fund, development fees, gas tax revenues
Time Frame:	Ongoing
Related Policies:	
Land Use:	7.3, 7.4, 7.5, 7.6
Circulation & Mobility:	2.2, 2.3, 2.4, 3.1, 4.1
Natural Resources:	6.1, 6.3, 6.4
Public Safety:	1.3, 2.1, 3.7, 5.1, 5.2, 6.3, 8.2, 8.3
Noise:	4.1, 4.2, 4.3
Growth Management:	1.4, 2.1, 2.2, 2.5, 2.6

**Program V-4 Railroad Operators**

Continue to coordinate with the SCRRRA in providing a regional rail system (Metrolink) that links Orange to other employment and activity centers in Southern California. Coordinate with rail operators to address possible effects of increased railway volumes on grade crossings throughout the City, to reduce delays associated with freight trains, and to implement a Quiet Zone. Coordinate with operators to achieve appropriate mitigation to ensure continued safety for motorists and pedestrians.

Agency/Department:	Public Works Department, City Manager’s Office
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	2.6
Circulation & Mobility:	1.5, 2.4, 2.6, 2.7
Natural Resources:	2.2
Noise:	3.2
Growth Management:	1.7, 2.5

**Program V-5 Orange County Transportation Authority**

Work closely with the OCTA to achieve the following objectives:

- Maintain consistency with the County Master Plan of Arterial Highways, including the reclassification of roadways described in the Circulation & Mobility Element, such as Glassell Street between La Veta and Walnut Avenues and Glassell Street and Chapman Avenue through the Plaza.
- Implement provisions of Measure M<sup>2</sup>.
- Implement the OCTA Congestion Management Plan (CMP).
- Expand and improve the efficiency of bus service within the City.

## IMPLEMENTATION



- Encourage the expansion of alternative local transportation options such as a community circulator bus service between transit centers and major commercial, employment, and residential areas.
- Improve paratransit or other public transportation systems that enhance the mobility of Orange's senior and youth populations, and the disabled.
- Encourage provision of attractive and appropriate transit amenities.
- Support and implement the OCTA Commuter Bikeways Strategic Plan and participate in future updates and revisions to the Plan.
- Reduce noise impacts of OCTA operations and facilities.

Agency/Department: Public Works Department, Community Development Department

Funding Source: General Fund, State Transit Assistance funds

Time Frame: Ongoing, with the exception of the roadway reclassification effort, which shall begin upon General Plan adoption.

Related Policies:

Land Use: 2.4, 7.4

Circulation & Mobility: 1.1, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 4.1

Natural Resources: 2.2

Noise: 2.4

Growth Management: 1.1, 1.3, 1.6, 1.9, 2.1, 2.2, 2.5, 2.6

## Program V-6 California Department of Transportation and Transportation Corridor Agency

Work closely and coordinate with the California Department of Transportation (Caltrans) and the Transportation Corridor Agency (TCA) on all plans, activities, and projects that may affect state roadway facilities or transportation corridors passing through Orange. Additionally, work with these agencies to achieve the following objectives:

- Provide appropriate screening to control the visual impacts of transportation facilities.
- Provide landscaping within transportation facilities.
- Study the potential for a future interchange at State Route 55 and Meats Avenue.
- Determine the feasibility of conversion or joint use of surplus or otherwise underutilized lands under Caltrans or TCA control for open space.
- Plan for noise abatement along freeways and highways.
- Install, maintain, and update freeway and highway right-of-way buffers and soundwalls.
- Provide adequate visual buffers such as berms or landscaping between freeways and railways and adjacent land uses.

Agency/Department: Public Works Department, Community Development Department



Funding Source:	General Fund, gas tax revenues
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.10, 7.5
Circulation & Mobility:	2.3, 2.4, 2.5, 2.6
Natural Resources:	7.3
Noise:	2.4
Growth Management:	2.1

**Program V-7      Local Water Districts**

Coordinate with the Irvine Ranch Water District, Santiago County Water District, Serrano Water District, Municipal Water District of Orange County, Metropolitan Water District of Southern California, Golden State Water Company, Serrano Water District, Orange County Sanitation District, and East Orange County Water District to achieve the following water supply, distribution, and conservation objectives:

- Maintain groundwater recharge areas to protect water quality and ensure continued recharge of local groundwater basins.
- Reduce the amount of water used for landscaping and increase use of native and drought-tolerant plants.
- Encourage the production, distribution, and use of recycled and reclaimed water for landscaping projects.
- Maintain water quality objectives for urban runoff.

Agency/Department:	City Council, City Manager, Public Works Department
Funding Source:	User fees, development fees, General Fund, grants
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.10, 7.3
Natural Resources:	2.3, 2.4
Infrastructure:	1.3, 1.4

**Program V-8      Santa Ana Regional Water Quality Control Board**

Comply with all provisions of the NPDES permit, and support regional efforts by the Santa Ana Regional Water Quality Control Board to improve and protect surface water quality.

Agency/Department:	Community Development Department, Public Works Department
Funding Source:	User fees
Time Frame:	Ongoing





## Related Policies:

Land Use:	3.4, 4.3, 6.5
Natural Resources:	2.4, 2.11, 2.12
Infrastructure:	1.4, 1.5

### **Program V-9 South Coast Air Quality Management District**

Work with the South Coast Air Quality Management District and the Southern California Association of Governments to implement the Air Quality Management Plan and meet all federal and state air quality standards for pollutants. Participate in any future amendments and updates to the Plan. Implement and interpret the General Plan in a manner consistent with the Air Quality Management Plan.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.4, 4.3, 6.10, 7.4
Circulation & Mobility:	2.5, 2.6, 3.1, 4.1
Natural Resources:	2.1, 2.2, 2.8
Growth Management:	1.7, 1.8, 1.12, 2.2, 2.3, 2.4, 2.6

### **Program V-10 Orange County Flood Control District**

Support efforts by the Orange County Flood Control District (OCFCD) to regularly maintain flood control channels and structures owned by the OCFCD, and to complete necessary repairs in a timely manner. Work with the OCFCD and U.S. Army Corps of Engineers to identify new flood control improvements, and establish installation programs for improvements as needed. Work with the OCFCD to identify opportunities to enhance the natural qualities of Santiago Creek to protect habitat and reintroduce native plants, animals, and fish.

Agency/Department:	Public Works Department, Community Development Department, Community Services Department
Funding Source:	Orange County Flood Control District
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.7, 6.9, 7.3
Natural Resources:	4.2
Public Safety:	2.1
Infrastructure:	1.5



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**Program V-11 U.S. Fish and Wildlife Service and California Department of Fish and Game**

Continue to coordinate with federal and state wildlife agencies in an effort to protect rare or endangered species of plants and animals. Require that all development activities adhere to federal and state legislation that protects all sensitive plants and animals. Coordinate with these agencies for City efforts to restore portions of Santiago Creek and the Santa Ana River, to develop bike trails and pathways adjacent to Santiago Creek, to recognize the archeological significance of Santiago Creek, and to integrate natural landscape components within the design of projects adjacent to waterways.

Agency/Department: Community Development Department, Community Services Department, Public Works Department  
Funding Source: General Fund, development fees, grants, federal and state funds  
Time Frame: Ongoing  
Related Policies:  
    Land Use: 6.4, 6.7, 6.11, 7.3  
    Natural Resources: 4.1, 4.2, 4.3, 4.4, 4.5, 6.1  
    Cultural Resources &  
    Historic Preservation: 4.2

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**Program V-12 Central Orange County NCCP/HCP**

Support compliance with the Central Orange County Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP). Participate in any future update to the Plan. Coordinate with the Fire Department and related agencies to ensure consideration of NCCP habitat areas when planning fuel modification zones.

Agency/Department: Community Development Department, Fire Department  
Funding Source: General Fund, development fees  
Time Frame: Ongoing  
Related Policies:  
    Land Use: 6.4, 6.11, 7.3  
    Natural Resources: 4.1, 4.2, 4.3, 4.4, 4.5

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**Program V-13 Open Space Preservation Organizations and Agencies**

Continue to work with local and regional open space preservation organizations and with federal and state agencies to identify and conserve urban open space and protect lands accessible for public use. Pursue grants and other resources to plan for open space preservation and, as appropriate, purchase properties to be included in the open space system. Use conservation easements where feasible as part of the City’s open space acquisition program.

## IMPLEMENTATION



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Agency/Department:	City Manager's Office, Community Development Department, Community Services Department
Funding Source:	Grants
Time Frame:	Ongoing
Related Policies:	
Land Use:	6.4, 6.11
Natural Resources:	1.1, 1.2, 1.3, 5.7

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### **Program V-14    Orange Chamber of Commerce**

Continue to work with the Orange Chamber of Commerce in promoting the local economy. The Chamber provides a variety of programs promoting economic development in Orange.

Agency/Department:	Economic Development Department
Funding Source:	General Fund, redevelopment funds
Time Frame:	Ongoing
Related Policies:	
Land Use:	3.2, 5.3, 8.2
Economic Development:	3.2, 3.3, 5.2

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### **Program V-15    Federal and State Historic Preservation Programs**

The City will continue to support efforts by California's OHP to administer federal and state-mandated historic preservation programs in California, including the following:

- California Historical Landmarks
- California Points of Historical Interest
- California Register of Historical Resources
- National Register of Historic Places
- Secretary of the Interior's Standards
- CEQA

The Mills Act is another preservation tool created by the California Legislature, enabling cities to enter into historical property agreements with owners of qualifying properties that result in reductions to the owners' property taxes. The agreements provide a benefit that ensures preservation and guarantees authentic rehabilitations and a high level of maintenance of historic resources. The City will continue to offer the Mills Act program to private property owners and publicize its availability.

Agency/Department:	Community Development Department
Funding Source:	General Fund, development fees
Time Frame:	Ongoing
Related Policies:	
Land Use:	1.5, 6.11
Cultural Resources & Historic Preservation:	1.2, 1.3, 1.4, 1.5, 2.2, 4.1, 4.2, 4.3, 4.4

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**Program V-16 Community History and Preservation Organizations**

Develop partnerships with local history and preservation organizations to prepare Historic Context Statement updates, undertake new surveys, and update surveys. Partner with local history and preservation organizations to develop a citywide interpretive program, including signs, plaques, exhibits, and other similar elements, to increase awareness of the City’s history and its historic resources

Agency/Department:	Community Development Department, Library Services Department
Funding Source:	General Fund, grants
Time Frame:	Ongoing
Related Policies:	
Cultural Resources &	
Historic Preservation:	1.1, 1.2, 1.3, 2.2, 3.1, 3.4, 5.5

**Program V-17 Orange County Airport Land Use Commission**

Continue to work with the Orange County Airport Land Use Commission to increase safety and reduce noise associated with aircraft overflights and helicopter operations within the City by achieving the following objectives:

- Work with the Federal Aviation Administration and local airports (John Wayne Airport, Long Beach Airport, Los Alamitos Army Air Base) to determine appropriate aircraft altitude standards for aircraft flying over the City, taking into account public health and safety.
- Continue to regulate the siting and operation of heliports/helistops through the Conditional Use Permit process in conjunction with the Orange County Airport Land Use Commission and Caltrans Division of Aeronautics.
- Work with the heliport/helistop operators (police, fire, hospital, and private) to implement flight profiles, tracks, and operating parameters for noise control.

Agency/Department:	Community Development Department
Funding Source:	General Fund
Time Frame:	Ongoing
Related Policies:	
Noise:	4.1, 4.2, 4.3





Exhibit A-7.II

Planning Application

# LAND USE PROJECT APPLICATION INFORMATION PACKET



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**COMMUNITY DEVELOPMENT DEPARTMENT  
MISSION STATEMENT**

*To work with the community in achieving and maintaining a better quality of life by providing professional guidance and coordination of all land planning and development activities, and by fairly and consistently implementing the City's regulations and policies.*

## CITY OF ORANGE

**Community Development Department – Planning Division  
300 East Chapman Avenue, Orange CA 92866  
(714) 744-7220  
fax (714) 744-7222**

*This application form is available online at:*

[www.cityoforange.org](http://www.cityoforange.org)

Click on: City Departments/Community Development/Forms  
The file is named: Land Use Project Application Aug 2010



# Land Use Project Application Submittal Checklist

The checklist below is intended to assist you in putting together a complete application packet so that your project can be processed in the most expeditious manner possible. If you have any questions about which items are required, please contact City planning staff at (714) 744-7220. Once your submittal is made, your Project Planner will review it for completeness and notify you in writing within 30 days as to whether the application is complete (OMC Section 17.08.030.E).

## Submittal Items Required With Every Application:

- A. **Application – Completed City “Land Use Project Application.”** (Pages 15 - 16 attached)  
The application must be complete, typed or handwritten legibly, and signed. Additional sheets may be attached if necessary.
- B. **Application processing fee(s) and/or deposit.** Please note: The cost of processing your project is charged according to the hours spent by staff in checking plans; discussing the project with you, your architect, members of the public, and other staff members; writing a staff report; preparing/reviewing an environmental analysis; field surveys; public notices; and attending public hearings. You will also be billed separately for project related costs such as public notice advertising, postage, and City Attorney fees if these are required for your project. Total cost may vary widely according to the size of the project and the complexity of the issues. Submittal of your initial application deposit establishes an account to which project costs are charged. At the close of your case, any remaining funds will be returned to you. In some cases, depending on the complexity of the project, additional funds may be requested to replenish the deposit. At the City’s sole discretion, a planning consultant may process your application.
- C. **Checklist.** Please submit this checklist with your application information.
- D. **Letter of explanation/justification.** Explain in detail what is proposed and the reason(s) why the City should approve the project. On a separate sheet(s) of paper include a detailed description of your proposal including the following items:
  1. For non-residential projects, company name, type of business, use(s), hours of operation, company owned vehicles, number of employees, type of materials handled, history of the business, and any other information necessary to describe the proposed use.
  2. Describe physical characteristics of the property including any existing structures on the site, the use, architecture, materials, colors, topography, scenic vistas, soils, mature landscaping/trees, and any other information necessary to describe the proposed use.
  3. Describe the surrounding properties, including the type of land use (such as residential, commercial, industrial, etc.), intensity of land use (such as single-family, apartment houses, retail stores, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.).
  4. Explain any unique conditions of the site such as location, shape, and/or topography.
  5. Explain any phasing of the project.
  6. For Alcohol Beverage Control (ABC) applications, provide: hours of operation, number of employees (total & per shift), how alcohol will be displayed on the premises, 12 copies of

the menu if serving food, number of seats broken down by table and/or bar, design of outdoor seating barrier/gate, and name of ABC investigator if known.

- E. **Landowner's Affidavit.** (Page 16 within the Land Use Project Application attached). The authorization confirms the property owner's authorization that a specific agent(s) may act on his/her behalf. The affidavit *must be notarized*, unless the Applicant and the Property Owner is the same person. If the property owner is a corporation or LLC, please provide documentation that the individual signing the affidavit is authorized to do so.
- F. **Preliminary title report** and **legal description of the property.** Staff will review the title report to ensure no easements or other restrictions exist on the property which may hamper approval of your project.
- G. **Proof of property ownership.** A copy of the grant deed (also available through a title company) may be submitted.

### **Submittal Items Required Specific To This Application:**

- H. **Alcohol Management Plan (AMP).** The City of Orange requires an AMP for any establishment requesting a Conditional Use Permit for the *on-site sales of beer, wine, or distilled spirits*. The City of Orange Police Department will supply you with the necessary paperwork for the AMP. You will submit your completed AMP to the Police Department for review. The Police Department will evaluate the crime statistics and number of alcohol licenses existing in the area surrounding your location and make a recommendation of approval or denial. This determination is required prior to Planning Commission review. The Police Department requires a separate flat processing fee of \$1,600. You may contact the Police Department at (714)744-7551 to discuss your project.
- I. **Color and Materials Board.** A color and materials board is required for each project requiring Design Review. The Board should be no larger than 8 ½" x 11" including:
  - 1. Paint colors
  - 2. Roof material
  - 3. Stucco or other finish material
- J. **Fire Master Plan.** A Fire Master Plan may be required for your project. Please contact Fire Prevention at 714-288-2541 for further information and determination.
- K. **Grading Plan.** A preliminary grading plan may be required at the discretion of the Planning Division. The applicant must disclose whether any import or export fill material is required as part of the development.
- L. **Landscape Plan.** A landscape plan for all projects that involve new construction or building additions must be submitted for Design Review Committee review and approval (except for individual single-family residential projects). The landscape plan should show and label all plant material (including existing trees to be retained or removed, and the location, quantity, percent of landscape/hardscape, size, spacing, species and plan symbol of all new trees and plant material). City inspection notes should be included on planting and irrigation plans. The Project Planner can provide the City inspection notes. If your project requires a WQMP (see Page 11), please ensure the landscape architect and civil engineer coordinate plans.

- M. Notification Map, Mailing List, and Labels.** The City of Orange requires for all applications **except** Administrative Adjustments (AA), Design Review Committee (DRC), or Minor Site Plans Review (MNSP) as follows:
  1. Obtain copies of assessor parcel maps and ownership lots for the subject parcel and surrounding properties within a radius of 300’ from all property lines, unless a larger area is required by City planning staff.
  2. On map, draw radius/circle line (to scale) 300’ from and around the exterior of the parcel.
  3. Obtain **three (3)** sets of **self-adhesive labels** that identify names and addresses of:
    - a. **All owners** of real property located within 300 feet of the subject parcel as identified by the assessor’s parcel maps.
    - b. **All tenants and/or occupants** located within 300’ of the subject parcel as identified by the assessor’s parcel maps. For example, if rental properties are located within the notification area, provide a list of the names and addresses of each tenant or occupant. If the name of the tenant is unknown, “tenant” or “occupant” will suffice.
    - c. Project applicant, if different than property owner.
    - d. Homeowners Association
    - e. **Parcel numbers must be identified on each label.**
  4. A title company or ownership listing service must furnish maps and labels, with evidence of preparation provided by the company or service, and a declaration that the information is based upon the most recent equalized assessment or up-to-date records of the Orange County tax assessor.
  
- N. Old Towne Context Assessment Form.** For residential projects within Old Towne an additional form is required in order to evaluate your project’s compatibility with the surrounding neighborhood. Staff needs information about the architectural style, bulk and mass, roof form and height, number of stories, building alignment and streetscape pattern of properties in the immediate vicinity of the project site. Staff will provide you with the form.
  
- O. Orange Park Acres Community Review.** Per City Council Resolution 10081, certain project types within the Orange Park Acres (OPA) Plan Area are subject to review by the OPA Board prior to consideration by other City determining bodies. The project types include: Tract Map, Major Site Plan Review, Conditional Use Permit, Zone Change, Specific Plan Amendment, and/or General Plan Amendment. Please contact the OPA Board at “Orange Park Association; P.O. Box 2293; Orange, CA 92859” or “www.orangeparkacres.org”. Staff will provide you with an additional hand-out regarding OPA’s Procedure for Review of Development Proposals.
  
- P. Photos of site and surrounding properties.**
  1. 3” x 5” or 4” x 6” mounted on 8 ½” x 11” cardstock (digital reproductions acceptable).
  2. Label each photo with address.
  
- Q. Plans – Five (5) sets of detailed plans – Zoning Administrator consideration only.** Site plan, elevation(s), landscape plan(s), and floor plan(s) per the requirements beginning on Page 6. “Half size” plans are recommended for your individual proposal, provided plans are to scale and text is legible. The Project Planner may require large scale (full size) plans for your project depending on the complexity of the project. ***All plans must be folded to approximately 8½” x 11”.*** Projects requiring only Zoning Administrator action require only five (5) sets of plans (i.e. Administrative Adjustments and certain Conditional Use Permits/Variations).
  
- R. Plans – Nine (9) sets of detailed plans – Design Review Committee consideration only.** Site plan, elevation(s), landscape plan(s), and floor plan(s) per the requirements beginning on Page 6. “Half size” plans are recommended for your proposal, provided plans are to scale and text is



legible. The Project Planner may require large scale (full size) plans for your project depending on the complexity of the project. *All plans must be stapled into sets, then folded to approximately 8½” x 11”.*

- S. **Plans – Sixteen (16) sets of detailed plans – All other applications.** Site plan, elevation(s), landscape plan(s), and floor plan(s) per the requirements beginning on Page 6. “Half size” plans are recommended for your proposal provided plans are to scale and text is legible. The Project Planner may require large scale (full size) plans for your project depending on the complexity of the project. *All plans must be stapled into sets, then folded to approximately 8½” x 11”.*
- T. **Roof Plan.** A plan depicting the placement and dimensions of all roof mounted equipment. The plan should show the roof pitch, direction, and any proposed screening.
- U. **Environmental and Technical Studies.** Staff may determine, based on your description of your project, that specific technical studies will be required. Additional studies may be required once staff reviews your project more in-depth.
  - Noise
  - Parking
  - View Simulations
  - Traffic
  - Cultural Resources
  - Other \_\_\_\_\_
- V. **Water Quality Management Plan (WQMP).** A WQMP is required for most projects with few exceptions. The WQMP is a plan for managing the quality of stormwater or urban runoff that flows from a developed site after construction is completed and the facilities or structures are occupied. Please contact the Water Quality Engineer in the Public Works Department at 714-744-5547. See Page 11, “Water Quality Management Plans”.
- W. **Wireless Facilities.** In addition to the application requirements identified in OMC Sections 17.08.030 and 17.12.025, Wireless Communication applicants shall also submit the following:
  1. A statement, map, and list identifying the addresses of all their wireless communication facilities within in the City of Orange. The statement shall include a declaration regarding:
    - a. The facility’s capacity for future co-location.
    - b. Information stating why the proposed wireless facility location is required.
    - c. Why the site was not co-located, located within the public right-of-way, or on a publicly owned or controlled property or utility if a nearby facility was available.
    - d. An assessment of the potential for co-location opportunities shall be provided, including a statement and evidence of any refusal by other wireless telecommunications service providers regarding co-location.
    - e. In the case of non-stealth, non-co-located ground-mounted facilities the declaration shall include a list of alternative sites considered in the site selection process along with an indication as to why such alternative sites were rejected (the applicant shall demonstrate a good faith effort to co-locate on existing facilities, within the public right-of-way, or on a publicly owned or controlled property or utility).
  2. A visual impact demonstration using photo-simulations, elevations, and/or other visual or graphic illustrations from adjacent properties and/or public rights-of-way as coordinated with Planning Staff depicting the potential visual impact(s) of the wireless communication facility in its proposed setting.
  3. A report detailing operational and capacity needs of the applicant’s system within the vicinity of the proposed wireless telecommunications facility. The report shall detail in laymen’s terms how the proposed site or facility is necessary to address the current demand for service and limitations of the applicant’s current system.



# Land Use Project Application Plan Submittal Requirements

Typical plans submittal with an application consists of elevations, floor plans, grading plan, landscape plan, and site plan. Please take note of the requirements. Omission of the requirements will delay the processing of your application.

**A. Elevations:** The elevations shall be accurately prepared according to a standard architectural or engineering scale. All portions of the elevations should be adequately detailed and dimensioned. A checklist of the required project information follows for your convenience:

- Architectural detailing
- Building:
  - Height
  - Width
  - Finished floor elevations
- Colored rendering of all four sides of proposed building(s)
- Colors
- Delineation of existing versus proposed area for additions
- Depth of architectural transition
- Exterior finish materials (i.e. stucco, wood siding, etc.)
  - Buildings
  - Fences and walls
  - Roof
- Roof mounted mechanical equipment and screening

**B. Elevations for sign(s) and/or sign programs:** Elevations shall be accurately prepared according to a standard architectural or engineering scale. All portions of the elevations should be adequately detailed and dimensioned. A checklist of the requirements follows for your use and convenience:

- Color rendering – provide rendering or indicate colors on elevations
- Colors
- Dimensions
  - Height
  - Width
  - Depth
- Illumination – indicate method of illumination, if applicable. Contact the Police Department at (714)744-7327 to inquire about address illumination.
- Letter type style
- Materials
- Site Plan shall include:
  - Building and tenant frontage
  - Setbacks
  - Sign locations
  - Vehicular sight distances if located near street intersections and/or driveways

C. **Floor Plan:** The floor plan must include:

- Interior layout and dimensions (show all existing and proposed floor plans) as well as square footage on each floor.

1. **Floor area calculations – non-residential:** Non-residential structures are calculated according to Gross Floor Area and use the exterior wall dimensions.
2. **Floor area calculations – residential primary units:** Primary residential structures are calculated according to Gross Floor Area and use the exterior wall dimensions. The interior walls shall NOT be used to calculate the square footage. All floor spaces within the structure are included in the wall-to-wall calculation. Exterior porches, decks, and balconies, which are open on at least two sides, are not counted towards the square footage. Attached and detached garages and other accessory structures shall count towards the overall FAR and lot coverage of the primary residential structure. Garages shall not be counted as habitable space.

If the primary structure has multiple stories, the square footage of the stairs, or horizontal floor area of the stairwell shall be counted on each floor. For example, on a two-story house, the square footage of the stairs shall be counted towards the first floor. The horizontal floor area of the stairwell shall be counted towards the second floor. If there are more than two stories in the primary structure, the square footage of the stairs shall count on each floor, with the top floor counting the stairwell only. Any floor space surrounding the stairwell would be counted towards the square footage calculation and the FAR.

3. **Floor area calculations – accessory second housing units:** Accessory Second Housing Units are calculated according to Gross Floor Area and uses the exterior wall dimensions. The interior walls shall NOT be used to calculate the square footage. All floor spaces within the unit are included in the wall-to-wall calculation. Exterior porches, decks, and balconies, which are open on at least two sides, are not counted towards the 450 SF to 640 SF restriction.

If the proposed Accessory Second Housing Unit has multiple stories, the square footage of the stairs shall be counted on the first floor only. The stairwell on the second and subsequent floors of stairs would not be counted in the square footage calculation. Any floor space surrounding the stairwell would be counted towards the square footage calculation.

This policy is applicable to Accessory Second Housing Units only because of the size restriction and the State's support of the additional units.

- Finished floor elevations (show adjacent finish grade and floor elevations).
- ADA compliance (handicapped accessibility) when required.

D. **Site Plans (Existing and Proposed):** **Separate existing and proposed site plans are required for all projects.** The site plans shall be accurately prepared according to a standard architectural or engineering scale no smaller than 40:1 scale and include a north arrow and legend. All portions of the site should be adequately detailed and dimensioned. Checklists of the required project information and dimensions follow; however, additional information may be required:

## 1. ***Project Information:***

- Building Code information for existing and proposed buildings:
  - Construction type (Type I-V; A or B)
  - Occupancy Type
  - Type of construction (steel, wood, masonry, etc)
- Contact Information:
  - Company Name/Contact Person
  - Mailing address
  - Telephone number
  - E-mail address
- Density:
  - Existing
  - Proposed
- Easements
  - Existing
  - Proposed including all property to be dedicated to the City for streets, corner cutoffs, or other purposes
- Fences and walls:
  - Indicate location of all existing and proposed fences and walls
  - Identify height(s) of all existing and proposed fences and walls
  - Indicate materials of all existing and proposed fences and walls.
- Fire Requirement:
  - Identify sprinklered buildings
  - Identify non-sprinklered buildings
  - All on and off site fire hydrants within 500 feet of project site
  - All existing and proposed Fire Department access lanes.
- Floor Area:
  - Existing
  - Proposed
- General Plan Land Use designation:
  - Existing
  - Proposed
- Label type of construction, size, use, height, and roof if existing building size changes or new building proposed.
- Landscape areas including hardscape and paved areas.
- Land Use (such as residential, retail, or industrial):
  - Existing
  - Proposed
- Lot size:
  - Existing
  - Proposed
- Old Towne projects exceeding one-story in height (refer to Old Towne Context Assessment Form):
  - Architectural style
  - Building alignment

- Bulk and mass
- Number of stories
- Roof form and height
- Streetscape pattern of properties in immediate vicinity
- Parking Area:
  - Accessible access routes
  - Drive aisles
  - Driveways
  - Driveways across the street from the site
  - Driveways adjacent to site
  - Drop off areas
  - Loading zones
  - Location and dimension of all driveways, streets, and alleys intersecting into abutting streets and alleys
  - Parking spaces
  - Pedestrian walkways
  - Streets and alleyways – centerline to curb, centerline to property line, curb to property line
  - Utility meters/transformers – existing and proposed
- Parking Information:
  - Total existing
  - Total proposed
  - Number of accessible spaces per building
- Property Lines – indicate which lines will be removed or created and by what process (lot line adjustment, parcel map, etc):
  - Interior
  - Perimeter
- Proposed Density
- Public Right-of-Way Improvements – All existing improvement within the public right-of-way abutting the project including:
  - Driveways
  - Sidewalks
  - Street trees
  - Water meters
  - Utility boxes
  - Fire hydrants
  - Street lights
  - Traffic control devices
  - Public transportation stops
- Residential Projects:
  - Unit type
  - Mix of type
  - Number of bedrooms per unit



- Site Information:
  - Address
  - Assessor's parcel number
  - Existing entitlements
  - Lot Number
  - Tract number
- Trash Enclosures
- Zoning Designation:
  - Existing
  - Proposed

2. **Required Dimensions:** All portions of the site plan and elevations should be adequately detailed and dimensioned so no measurement is left blank. The following lists each item that must include an accurate dimension:

- Buildings – depict footprints and indicate square footages:
  - Existing
  - Proposed
  - Setbacks – front, side, rear, building-to-building
- Distance between proposed project and buildings within 100 feet of site
- Easements:
  - Existing
  - Proposed including all property to be dedicated to the City for streets, corner cutoffs, or other purposes
- Landscape areas
- Parking area:
  - Accessible access routes
  - Drive aisles
  - Driveways
  - Driveways across the street from the site
  - Driveways adjacent to site
  - Drop off areas
  - Loading zones
  - Location and dimension of all driveways, streets, and alleys intersecting into abutting streets and alleys
  - Parking spaces
  - Pedestrian walkways
  - Streets and alleyways – centerline to curb, centerline to property line, curb to property line
  - Typical parking space detail
  - Utility meters/transformers – existing and proposed



## Notice to Applicants

# Water Quality Management Plans

### *Your Project and a WQMP – What is a WQMP and who needs one?*

WQMP is the acronym for Water Quality Management Plan. A Project WQMP is a plan for managing the quality of storm water or urban runoff that flows from a developed site after construction is completed and the facilities or structures are occupied and/or operational. A Project WQMP describes the Best Management Practices (BMPs) that will be implemented and maintained throughout the life of a project and is used by property owners, facility operators, tenants, facility employees, maintenance contractors, etc. to prevent and minimize water pollution that can be caused by storm water or urban runoff. The City of Orange requires all development projects to prepare and implement Project WQMPs as part of the NPDES program to reduce and eliminate water pollution caused by runoff flowing from developed sites into nearby receiving waters. A preliminary Project WQMP must be submitted as part of the project application for City discretionary project approval. Final Project WQMPs must be approved prior to issuance of building or grading permits. A Project WQMP and the post construction BMPs associated with the project must be based on the Orange County Model WQMP, which can be found at [www.ocwatersheds.com/StormWater/documents\\_damp\\_section7.asp](http://www.ocwatersheds.com/StormWater/documents_damp_section7.asp) and the City's internet website under the Public Works Department/Stormwater/NPDES/WQMP.

#### **A. What are Best Management Practices (BMPs)?**

For purposes of a Project WQMP, there are three types of BMPs:

1. Low Impact BMPs – Project features that are designed to mimic predevelopment site hydrology and include infiltration (permeable pavers, porous concrete and asphalt, infiltration beds, etc), harvest and reuse (cisterns and rain barrels), evapotranspiration.
2. Site Design BMPs – Project features that include LID and features such as conserving natural areas, minimizing impermeable surfaces, minimizing directly connected surfaces, into a project to minimize and creating zero discharge areas. Examples include infiltration such as the use of porous asphalt or pavers, minimizing the use of decorative concrete, and directing roof drains to landscaped areas.
3. Source Control BMPs – Activities or structures aimed at eliminating or minimizing contact between pollutant sources and rainfall or runoff. Examples include education, sweeping, litter collection, canopies over fueling islands, awnings or tarps to cover materials stored outdoors.

More information about BMPs can be found at: [www.cabmphandbooks.com](http://www.cabmphandbooks.com).

#### **B. What is a Receiving Water?**

Generally, a receiving water is a surface water body or watercourse such as a canyon drainage, spring, flood control channel or creek, river, lake, estuary, lagoon, bay, surface reservoir, or ocean. A receiving water body can be ephemeral, perennial, or intermittent in nature.

**C. What projects require a Project WQMP?**

As noted above, all projects require the preparation of a WQMP. However, there are two types of projects – Priority Projects and Non-Priority Projects – which have different BMP requirements.

Project Type	Low Impact Development BMPs	Site Design BMPs	Source Control BMPs
Priority Projects	●	●	●
Non-Priority Projects		●	●

**D. How do I know if my project is a Priority Project or a Non-Priority Project?**

If <u>any</u> question is answered “Yes,” your project is a <b>Priority Project</b> . If <u>all</u> questions are answered “No,” your project is a <b>Non-Priority Project</b> .		
Does your proposed project include:	Yes	No
1. New developments that create 10,000 square feet or more of impervious surface that include commercial, industrial, residential development (single family homes, subdivisions, multifamily homes, apartments, condominiums, etc.).		
2. Automotive repair shop (SIC codes 5013, 5014, 5541, 7532-7534, and 7536-7539).		
3. Restaurant where the land area of development is 5,000 or more square feet including parking areas (SIC code 5812).		
3. Hillside development on 5,000 square feet or more, which is located on areas with known erosive soil conditions or where the natural slope is 25 percent or more.		
5. Impervious surface of 2,500 square feet or more located within, directly adjacent to (within 200 feet), or discharging directly to receiving waters within an Environmentally Sensitive Area.		
6. Parking lot area of 5,000 or more square feet exposed to storm water.		
7. Streets, roads, highways and freeways of 5,000 square feet or more of paved surface.		
8. Retail gasoline outlets of 5,000 or more square feet, with projected average daily traffic of 100 or more vehicles per day.		
9. All Significant Redevelopment projects, where Significant Redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Significant Redevelopment includes, but is not limited to: <ul style="list-style-type: none"> <li>● Expansion of a building footprint.</li> <li>● Addition of a building and/or structure.</li> <li>● Addition of an impervious surface, such as construction of a new parking lot that is not part of a routine maintenance activity.</li> <li>● Replacement of impervious surfaces, buildings and/or structures when 5,000 or more square feet of soil is exposed during replacement construction.</li> </ul> Redevelopment does not include routine maintenance activities conducted to maintain original line and grade, hydraulic capacity, or original purpose of facility.		
10. If Public Works Director or City Engineer determines project will have adverse impact on water quality.		

**E. What is an Environmentally Sensitive Area?**

Generally, these are areas “in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would easily be disturbed or degraded by human activities and developments” (California Public Resources Code §30107.5). Examples are Areas of Special Biological Significance as designated by the State Water Resources Control Board, areas identified in Habitat Conservation Plans as supporting endangered or threatened species, and receiving waters that are designated as being impaired. These areas are shown on maps that are available upon request or can be found at: [www.ocwatersheds.com/StormWater/documents\\_damp\\_section7.asp](http://www.ocwatersheds.com/StormWater/documents_damp_section7.asp).

**F. When should I prepare and submit my Project WQMP?**

Since the Project WQMP may affect site layout and drainage design, the Project WQMP should be prepared early in the conceptual design phase prior to project submittal to the City. The Preliminary WQMP should be included with the project submittal to the Planning Division and the proposed BMPs shown in your project plans. The Preliminary WQMP and associated BMPs are reviewed to assure compliance with the City’s LIP and countywide DAMP. Failure to submit a Preliminary WQMP may result in delays to project approval. The Final WQMP will be conditioned for submittal prior to the issuance of development permits.

**G. Where can I find additional information on preparing my Project WQMP?**

Guidance documents and templates can be found at the City’s internet website under: [http://www.cityoforange.org/depts/publicworks/storm\\_water\\_npdes/water\\_quality\\_management\\_plans\\_\(wqmps\).asp](http://www.cityoforange.org/depts/publicworks/storm_water_npdes/water_quality_management_plans_(wqmps).asp).

Useful information about the Orange County Stormwater Program can be found at: <http://ocwatersheds.com/stormwaterprogram/default.aspx>.

**H. Where can I find Educational Materials for my specific Project WQMP?**

The following brochures are available for use as training materials and all *applicable* material should be listed in the Public Education section of Water Quality Management Plans and copies of the *applicable* material should be included within the Appendix. Please remember to only include those brochures that are *applicable* to the post-construction use of the site. All brochures are available for printing by visiting the City’s website site: [http://www.cityoforange.org/depts/publicworks/storm\\_water\\_npdes/public\\_education.asp](http://www.cityoforange.org/depts/publicworks/storm_water_npdes/public_education.asp)

There have been several posters developed that are applicable to specific businesses:

[http://www.ocwatersheds.com/PublicEducation/pe\\_other\\_materials.asp](http://www.ocwatersheds.com/PublicEducation/pe_other_materials.asp)

- Food/ Restaurant Industry
- Auto Repair Industry
- Gas Station Good Standard Operating Practices

Additionally there have been several posters developed for general use:

[http://www.ocwatersheds.com/PublicEducation/pe\\_other\\_materials.asp](http://www.ocwatersheds.com/PublicEducation/pe_other_materials.asp)

- Ocean Begins at Your Front Door
- Get Your [Cigarette] Butts Out of the Water
- Overwatering



## Notice to Applicants

# Department of Fish and Game Environmental Processing Fees

Effective January 1, 2007, State law (AB 1535) mandated that the California Department of Fish and Game (DFG) collect user fees in association with the filing of a Notice of Determination. A Notice of Determination is the final environmental documentation that is prepared by City staff when a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report has been approved or certified.

The fees required are intended to defray the costs of managing and protecting fish and wildlife resources including the costs expended by the DFG in the review of environmental documents under the California Environmental Quality Act (CEQA). The bill also eliminated the fee exemption for projects determined to have a “de minimis” effect on fish and wildlife. For those projects determined to have a potential for any adverse effect to fish and wildlife resources, either individually or cumulatively, the fees are as follows:

<i>Environmental Document</i>	<i>Fee*</i>
Negative Declaration	\$2010.25
Mitigated Negative Declaration	\$2010.25
Environmental Impact Report	\$2,792.25
<i>County Clerk Filing Fee (additional fee required with every filing)</i>	<i>\$50.00</i>

\*Check for fee updates at: [http://www.dfg.ca.gov/habcon/ceqa/ceqa\\_changes.html](http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html)

The City can no longer exempt a project from the filing fee requirement by determining that the project will have a “de minimis” effect on fish and wildlife. Instead, a filing fee will have to be paid unless the project will have *no effect* on fish and wildlife as determined by the DFG. It is the applicant’s responsibility to contact the DFG at (916) 651-0603 or [www.dfg.ca.gov](http://www.dfg.ca.gov) to determine if the project will have no effect on fish and wildlife. If the DFG concurs the project will have no such effect, they will provide you with a form that will exempt the project from the filing fee requirement; however the County fee is still required.

If the required filing fee is not paid, the project will not be operative, vested, or final, and any local permits issued for the project will be invalid. The City thereby requires payment of these environmental fees by the applicant, submitted to the Community Development Department **within 48 hours of project approval**, and shall be in the form of a cashier’s check made payable to **Orange County Clerk**.

City planning staff will deliver the fees to the County Clerk at the time the Notice of Determination is filed. The Notice of Determination and the cashier’s check will be filed within **five working days** after project approval. The filing of the Notice of Determination starts a 30-day statute of limitations on court challenges to the approval (CEQA Section 15075). If the required fees are not delivered to the City within two working days of the approval, the Notice of Determination cannot be filed within the time limits established, and the statute of limitations will be extended from 30-days to 180-days per Section 15112 of the CEQA Guidelines.



# Land Use Project Application

## City of Orange

Community Development Department  
Planning Division  
300 East Chapman Avenue  
Orange, CA 92866-1591  
(714)744-7220 (714)744-7222 FAX  
www.cityoforange.org

This section to be completed by Staff

APP. TYPE	NUMBER	FEE/DEPOSIT
<b>TOTAL:</b>		

Old Towne/Other Contrib. Bldg:      Yes       No   
Redevelopment Area:                      Yes       No   
Orange Park Acres                          Yes       No   
General Plan: \_\_\_\_\_ Zoning: \_\_\_\_\_  
Billing No: \_\_\_\_\_ Check No. \_\_\_\_\_  
Date Filed: \_\_\_\_\_ Received By: \_\_\_\_\_

### SECTION 1 – Site Information

Project Title/Name: \_\_\_\_\_

Project Address/Location: \_\_\_\_\_

Assessor Parcel Number: \_\_\_\_\_ Tract/Lot Number: \_\_\_\_\_

**REQUIRED:** Briefly describe your proposed project: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

### SECTION 2 – Applicant Information

Name of Applicant and Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Cell: \_\_\_\_\_ E-mail: \_\_\_\_\_

### SECTION 3 – Contact Information

Name of Contact Person and Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Cell: \_\_\_\_\_ E-mail: \_\_\_\_\_

### SECTION 4 – Property Owner Information

Name of Property Owner: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Cell: \_\_\_\_\_ E-mail: \_\_\_\_\_

### SECTION 5 – Billing Information *(Person below is responsible for paying invoices & receiving refunds; must be filled in.)*

Name of Person Responsible for Paying Bills: \_\_\_\_\_

Name of Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_



**SECTION 6 – Project Information** *(If no construction is proposed, fill in Existing column only)*

<b>PROJECT DESCRIPTION/REQUEST:</b>	<b>EXISTING</b>	<b>PROPOSED</b>
Land use <i>(commercial, residential, industrial)</i>		
Lot size		
Number of Structures on Lot		
Square Footage of Entire Building		
Square Footage of Subject Unit <i>(if applicable)</i>		
Number of Floors of Construction <i>(if applicable)</i>		
Number of Parking spaces on Property		

**SECTION 7 – Land Owner Affidavit** *(If Property Owner and Applicant are the same, then notary is not required.)*

\_\_\_\_\_ declares that I am the owner of the property addressed or otherwise located as follows:  
*(print name above)*

I hereby certify that I am the owner of the real property described in this application. I hereby authorize this application to be processed for my property, and grant authority to the applicant to represent me and to bind me in all matters concerning this application. I certify that all of the information contained in this application, including the information contained in all plans and other materials submitted with this application, are, to the best of my knowledge and belief, true and correct. Should any of the information submitted be false or incorrect, I hereby agree to defend, indemnify, and hold harmless, the City of Orange, its officers, agents, and employees, from any and all liability and loss by reason of its reliance on any such information. I grant authority to the City to place a public hearing notice on the subject property if one is required.

Property Owner Signature: \_\_\_\_\_ Date: \_\_\_\_\_

<b>ACKNOWLEDGMENT</b>	
State of California County of Orange	
On _____ before me, _____, a Notary Public, personally appeared _____	
_____	
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.	
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.	
WITNESS my hand and official seal.	
Signature _____	(Seal)

**SECTION 8 – Certification** *(Every application must be signed below by the Applicant.)*

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Telephone No: \_\_\_\_\_

Exhibit A-7.III

CEQA Initial Study Checklist

**PROJECT TITLE**

**NEGATIVE DECLARATION NO.**



**Lead Agency:**

City of Orange

Community Development Department • Planning Division

300 East Chapman Avenue

Orange, CA 92866-1591

(714) 744 7220

(714) 744 7222 (Fax)

[www.cityoforange.org](http://www.cityoforange.org)

**Prepared by:**

**Date:**

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## **NEGATIVE DECLARATION NO.**

**Project Title:**

**Reference Application Numbers:**

**Lead Agency:**

**Contact Person and Telephone No.:**

**Project Proponent and Address:**

**Contact Person and Telephone No.:**

**Project Location:**

**Existing General Plan Designation:**

**Existing Zoning Classification:**

### **EXISTING SETTING**

**Regional Setting:**

**Existing Site Conditions:**

(Describe the project site)

**Surrounding Land Uses:**

(Describe the land uses and characteristics of the surrounding area)

### **PROJECT DESCRIPTION**

(Describe the components of the project including proposed physical improvements, construction, operations, phasing, and City approvals required to accommodate the project).

**Other Public Agencies Whose Approval is Required (Responsible or Trustee Agencies):**

(Identify other public agencies whose approval is required for project implementation and agencies with jurisdiction over affected natural resources)

**Scheduled Public Meetings or Hearings:**

(Describe the date, time and location for all scheduled public meetings and hearings)

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

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

- Aesthetics
- Agriculture & Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance

**DETERMINATION. On the basis of this initial evaluation:**

1. I find that the project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
2. I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
3. I find the proposed project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
4. I find that the proposed project **may have a “potentially significant impact” or “potentially significant unless mitigated impact”** on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
5. I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

\_\_\_\_\_  
Project Planner

\_\_\_\_\_  
Date

\_\_\_\_\_  
Planning Manager

\_\_\_\_\_  
Date



## **EVALUATION OF ENVIRONMENTAL IMPACTS:**

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact”. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced, as discussed below).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated”, describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
  - a. the significance criteria or threshold, if any, used to evaluate each question; and
  - b. the mitigation measure identified, if any, to reduce the impact to less than significance.

**CHECKLIST OF ENVIRONMENTAL IMPACT ISSUES:**

1. <b>AESTHETICS.</b> <i>Would the project:</i>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

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

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

3. <b>AIR QUALITY.</b> (Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.) <i>Would the project:</i>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**4. BIOLOGICAL RESOURCES.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**



**Mitigation Measures:**  
**Significance Determination After Mitigation:**

e)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

f)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

**5. CULTURAL RESOURCES.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**6. GEOLOGY AND SOILS.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**7. GREENHOUSE GAS EMISSIONS.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**8. HAZARDS AND HAZARDOUS MATERIALS.**

*Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**



d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

f)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

g)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

h)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**9. HYDROLOGY AND WATER QUALITY.**

*Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(k) Potentially impact stormwater runoff from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(l) Potentially impact stormwater runoff from post-construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(m) Result in a potential for discharge of stormwater pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(n) Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(o) Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(p) Create significant increases in erosion of the project site or surrounding areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

f)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

g)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

h)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

i)

**Significance Determination:**

**Mitigation Measures:**  
**Significance Determination After Mitigation:**

j)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

k)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

l)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

m)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

n)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

o)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

p)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

**10. LAND USE/PLANNING.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**11. MINERAL RESOURCES.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**



12. NOISE. <i>Would the project result in:</i>		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

f)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

<b>13. POPULATION AND HOUSING.</b> <i>Would the project:</i>		<b>Potentially Significant Impact</b>	<b>Less than Significant With Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
(a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**14. PUBLIC SERVICES.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Would the project 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, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

(a) i)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

ii)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

iii)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

iv)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

v)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**15. RECREATION.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

16. TRANSPORTATION/TRAFFIC. <i>Would the project:</i>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Substantially increase hazards due to a design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**



**Mitigation Measures:**  
**Significance Determination After Mitigation:**

e)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

f)

**Significance Determination:**  
**Mitigation Measures:**  
**Significance Determination After Mitigation:**

**17. UTILITIES/SERVICE SYSTEMS.** *Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Require or result in the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Comply with federal, state, and local statutes and regulations related to solid wastes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

d)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

e)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

f)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

g)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**18. MANDATORY FINDINGS OF SIGNIFICANCE.**

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Impact Analysis:**

a)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

b)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

c)

**Significance Determination:**

**Mitigation Measures:**

**Significance Determination After Mitigation:**

**19. REFERENCES**

**20. TECHNICAL APPENDICES**

Exhibit A-7.IV

WQMP Checklist

# FINAL DRAFT

## Preparer's Water Quality Management Plan Checklist

The purpose of this checklist is to provide a format for uniform and comprehensive preparation of WQMPs. This checklist provides a comprehensive list of issues a WQMP preparer must consider during the preparation of the document. *The completed checklist must be submitted with the Project WQMP.*

City Planning/Permitting Project Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

WQMP REQUIREMENT	Included
<b>Title Page</b>	
Name of project	
Application and/or Tract Number	
Lot number(s) if site is a portion of a Tract	
GIS Coordinates	
Site address (or addresses) and planning area number	
Owner/Developer name	
Owner/Developer address & telephone number	
Consulting/Engineering firm that prepared WQMP	
Consulting/Engineering firm address & phone number	
Date Project WQMP was prepared/revised	
<b>Owner's Certification</b>	
A signed certification statement, in which the project owner acknowledges and accepts the provisions of the Project WQMP, follows the title page.	
<b>Table of Contents</b>	
A Table of Contents, including a list of all tables and appendices is included.	
<b>All sections of the Project WQMP are tabbed and labeled.</b>	



WQMP Requirement	Page Number <sup>1</sup>	N/A
<b>Section I, Permit Numbers and Conditions of Approval</b>		
Lists the Discretionary Permit(s).		
The lot & tract/parcel map number describing the subject property.		
Lists, verbatim, the Water Quality Conditions, including the condition requiring preparation of a Project WQMP, if applicable.		
<b>Section II, Project Description</b>		
<b><i>For All Projects:</i></b>		
Identifies planning area or community name.		
Includes Project size to the nearest tenth acre, including buildings and any related improvements and landscaping.		
Describes all paved areas, including the type and location of parking and portion of the site on which parking is located.		
Describes all landscaped areas.		
Clearly describes each of the types of facilities included in the project and the activities that will be conducted once the project is completed.		
Identifies what kinds of materials will be used and/or stored and where.		
Describes how and where materials will be delivered.		
Identifies what kinds of wastes will be generated.		
Identifies the potential stormwater or urban runoff pollutants reasonably anticipated to be associated with the project.		
Identifies the activities (including materials/waste storage and/or handling) that will occur or be conducted outdoors and the associated areas that will be exposed to precipitation, storm water runoff, or authorized non-storm water discharges.		
Describes activities or equipment that may generate dust and particulates as well as the area that would be impacted by the dust or particulates.		
Describes ownership of all portions of project and site. Will any infrastructure transfer to public agencies (City, County, Caltrans, etc.)? Will a homeowners or property owners association be formed? Will the association be involved in long-term maintenance?		
If the Project will rely on a homeowner's or property owner's association to implement or maintain BMPs, provides the legal name of the association and specifically describes the conditions or circumstances that will ensure the establishment of the association.		

<sup>1</sup> Indicate the page number where the information is located in the WQMP. If the information is not applicable to the site, check the N/A box.

WQMP Requirement	Page Number <sup>2</sup>	N/A
<b><i>For Commercial and Industrial Projects:</i></b>		
Provides Standard Industrial Classification (SIC) Code which best describes the facilities operations?		
Describes the type of use (or uses) for each building or tenant space		
Specifies the location(s) for each type of food preparation, cooking, and eating areas.		
Describes delivery areas and loading docks (specify location and design and if below grade and types of materials expected to be stored).		
Specifies type(s) of materials expected to be delivered.		
Describes outdoor materials storage areas (describe and depict location(s), specify type(s) of materials expected to be stored).		
Describes activities that will be routinely conducted outdoors		
Describes any activities associated with equipment or vehicle maintenance and repair, including washing or cleaning. Indicates number of service bays or number of fueling islands/fuel pumps, if applicable.		
<b><i>For Residential Projects</i></b>		
Range of lot and home sizes, number of attached versus detached units, etc.		
Describes all community facilities such as, laundry, car wash, swimming pools, Jacuzzi, parks, open spaces, tot lots, etc and any maintenance issues related to them.		
<b>Section III, Site Description</b>		
Describes project area and surrounding planning areas in sufficient detail to allow project location to be plotted on a base map.		
Provides site address and site size to nearest tenth acre.		
Identifies the zoning or land use designation.		
Identifies soil types and the quantity and percentage of pervious and impervious surface for pre-project and project conditions.		
Describes pre-project site drainage and how it ties into drainage of surrounding or adjacent areas and describes how planned project drainage and how it will tie into drainage of surrounding or adjacent areas.		
Identifies the watershed in which the project is located.		
Identifies the downstream receiving waters.		
Identifies known water quality impairments (e.g., 303(d) List).		
Identifies applicable Total Maximum Daily Loads (TMDLs).		
Identifies hydrologic conditions of concern, if any.		
Identifies known Environmentally Sensitive Areas (ESAs) and Areas of Special Biological Significance (ASBSs) within the vicinity and their proximity to the Project.		

<sup>2</sup> Indicate the page number where the information is located in the WQMP. If the information is not applicable to the site, check the N/A box.

WQMP Requirement	Page Number <sup>3</sup>	N/A
<b>Section IV, Best Management Practices</b>		
Includes narrative describing how Site Design concepts were considered and incorporated into project plans.		
Lists and describes all Routine Source Control BMPs (Non-structural and Structural).		
Describes the implementation frequency and identifies the entity or party responsible for implementation of each Non-Structural BMP.		
Describes the operations, inspection and maintenance frequency, inspection criteria and the entity or party responsible for operations, inspections and maintenance of each Structural BMP.		
If applicable Routine Source Control BMPs were not included, was a reasonable explanation provided?		
Lists and describes appropriate Treatment Control BMPs including location, design criteria (SQDF or SQDV), maintenance procedures and frequency, and the responsible entity or party.		
<b>Section V, Implementation, Maintenance, and Inspection Responsibility for BMPs</b>		
Describes the long-term implementation, maintenance, and inspection of all source control BMPs and all Treatment Control BMPs, including frequency and/or schedule, in an O & M Plan.		
Has an appropriate method of funding long term implementation, maintenance, and inspection been identified?		
If ownership of the Treatment Control BMPs will be transferred to a public agency, does the WQMP include an attachment indicating the public agency's intent to accept the Treatment Control BMPs as designed?		

<sup>3</sup> Indicate the page number where the information is located in the WQMP. If the information is not applicable to the site, check the N/A box.

<b>WQMP REQUIREMENT</b>	<b>Included</b>
<b>Section VI, Location Map and Site Map</b>	
A location map (8½" x 11" or 11" x 17").	
An 11" by 17" Site Map.	
All maps have a complete legend, including a north arrow and scale.	
All structures, facilities, and project feature areas are labeled for the intended function (e.g., parking areas, areas of outdoor storage, trash dumpster enclosures, loading docks, receiving areas, etc.)	
Landscaped areas are identified.	
All storm drain facilities are identified.	
Drainage flow information, (i.e., general surface flow lines including runoff that is directed offsite or to landscaped areas, concrete or other surface ditches or channels are included and/or labeled.	
Drainage facilities to be transferred to a public entity for ownership and maintenance have been identified.	
Depicts where and how on-site drainage ties into the off-site drainage system	
Receiving water(s) have been identified.	
Routine structural source control BMPs have been identified.	
Treatment control BMPs have been identified, if applicable.	

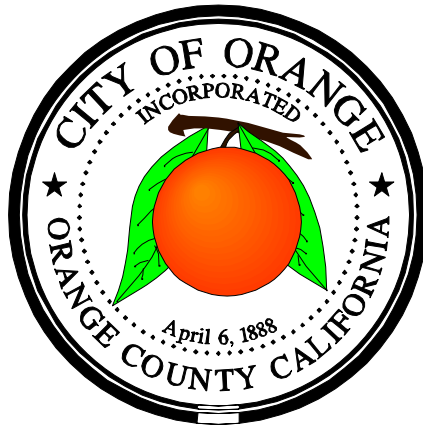
<b>WQMP Requirement</b>	<b>Page Number<sup>4</sup></b>
<b>Section VII, Educational Materials</b>	
A summary page describing the concepts that will be addressed by the education and training is included.	
A list of educational materials with associated page number is included.	
Legible copies of the educational materials are included.	

<b>WQMP REQUIREMENT</b>	<b>Included</b>
<b>Appendices</b>	
Planning Commission Resolution and Associated Conditions of Approval	

<sup>4</sup> Indicate the page number where the information is located in the WQMP. If the information is not applicable to the site, check the N/A box.

Exhibit A-7.V

Priority Project WQMP Template



**PRIORITY  
WATER QUALITY MANAGEMENT PLAN  
(WQMP)**

**For:**

**(Insert Project Name)  
(Site address or tract/lot number)**

**Prepared for:**

**(Insert Owner/Developer Name)  
(Insert Address)  
(Insert City, State, ZIP)  
(Insert Telephone)**

**Prepared by:**

**(Insert Consulting/Engineering Firm Name)  
(Engineer Name and Registration Number)  
(Insert Address)  
(Insert City, State, ZIP)  
(Insert Telephone)**

**(Insert Date Prepared/Revised)**

\_\_\_\_\_  
**Public Works Director**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**City Engineer**

\_\_\_\_\_  
**Date**



**OWNER'S CERTIFICATION**  
**WATER QUALITY MANAGEMENT PLAN**  
**FOR**  
**(Insert Project Name)**

This Water Quality Management Plan (WQMP) for the [insert project name] has been prepared for [insert name of owner/developer]. This WQMP is intended to comply with the requirements of the City of Orange's [Tract/Parcel Map #\_\_, Conditional Use Permit #\_\_, and/or Site Development Permit/Application #\_\_] requiring preparation of a Water Quality Management Plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the City of Orange Local Implementation Plan (LIP), and the intent of NPDES Permit and Waste Discharge Requirements for the City of Orange, County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region.

This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party having responsibility for implementing portions of this WQMP. Maintenance requirements within Section V, Table V and Appendix D will be adhered to with particular emphasis on maintaining the BMPs described within Table IV and V. The Owner's Annual Self Certification Statement along with a BMP maintenance implementation table will be submitted by June 30<sup>th</sup> every year following project completion. At least one copy of the approved WQMP shall be available on the subject property in perpetuity.

Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. The City of Orange will be notified of the change of ownership and the new owner will submit a new certification.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

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### Appendices

- A. Conditions of Approval, City Council Resolution [redacted] dated [redacted]
- B. Educational Material
- C. BMP Details
- D. BMP Maintenance Information

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**I. Discretionary Permit Number(s), Water Quality Condition Number(s) and Conditions of Approval**

Tract No\_\_\_\_\_

Lot No.\_\_\_\_\_

**Water Quality Conditions (WQMP conditions listed below)**

A complete copy of the signed Conditions of Approval, City Council Resolution \_\_\_\_\_ dated \_\_\_\_\_ are included as Appendix A

**Conditions of Approval:**

Insert text providing the discretionary permit numbers and the conditions of approval related to water quality (stated verbatim).

## II. Project Description

Refer to Section 2.2 of the Technical Guidance Document for completion of this section.

**Planning Area:** \_\_\_\_\_

**Project Size (ac):** \_\_\_\_\_

**Percent Change in Impermeable Surfaces:** \_\_\_\_\_

**SIC Code** (if applicable)

### Project Description

Describe general characteristics including land cover, land use, project areas, landscaping, paved areas, material or wastes stored on site and other project features

### Project Purpose and Activities

Identify purpose of project and proposed activities

### Potential Storm Water Pollutants

List expected pollutants. See Section 2.2.2.2 and Table 2.1 of the Technical Guidance Document for information on expected project pollutants

### **Hydrologic Conditions of Concern**

Describe applicable hydrologic conditions of concern. Post Development conditions must meet pre-development conditions, including time of concentration, volume, velocity and matching 2-year hydrographs. See Section 2.2.3 of Technical Guidance Document for additional information.

### **Post Development Drainage Characteristics**

Describe onsite and affected offsite post development drainage characteristics.

### **Commercial Projects**

Describe food preparation and eating areas, where materials will be stored or delivered, outdoor storage areas, materials exposed to rain, any onsite vehicle washing and other information not included in Project Description. (Delete if not used or note as NA).

### **Residential Projects**

Describe lots and lot size, home size and note whether attached or detached and their number, total number of buildings or units. Describe any pools, tot lots, open space, etc. (Delete if not used or note as NA)

### **Site Ownership and any Easements**

Describe any easements and ownership of Project by others and identify in Site Plan Section VI. Identify entity and contact information.

### III. Site Description

Refer to Section 2.3 of the Technical Guidance Document for completion of this section

**Reference Location Map:**

**Site Address:**

**Zoning:**

**Predominant Soil type:**

**Pre-project percent pervious: \_\_\_\_\_ Post-project percent pervious: \_\_\_\_\_**

**Pre-project percent impervious: \_\_\_\_\_ Post-project percent impervious: \_\_\_\_\_**

#### **Site Characteristics**

Describe the existing site, whether developed, undeveloped, vacant, built upon, existing buildings, topography, soils, geology, geotechnical conditions, depth to groundwater and its condition (polluted), infiltration capacity, existing utilities, other features and existing site drainage conditions.

#### **Watershed Characteristics**

Watershed:

Downstream Receiving Waters:

Water Quality Impairments (if applicable):

Identify hydromodification susceptibility:

Identify watershed management priorities:



## IV. Best Management Practices

This section describes the selection of BMPs for the project and how they are able to treat the pollutants targeted. Refer to Section 2.4 of the Technical Guidance Document for additional information.

For any selected BMP with the potential to have nuisance water (standing water) within the BMP please discuss the process to address this potential problem in the vector control paragraph IV.6

### IV.1 Site Design and Drainage Characteristics

Complete Table 1.

**Table 1  
Site Design BMPs**

Technique	Included?		If no, state justification.
	Yes	No	
Minimize Directly Connected Impervious Areas (DCIAs) (C-Factor Reduction)			
Create Reduced or "Zero Discharge" Areas (Runoff Volume Reduction) <sup>1</sup>			
Minimize Impervious Area/Maximize Permeability (C-Factor Reduction) <sup>2</sup>			
Conserve Natural Areas (C-Factor Reduction)			

1 Detention and retention areas incorporated into landscape design provide areas for retaining and detaining stormwater flows, resulting in lower runoff rates and reductions in volume due to limited infiltration and evaporation. Such Site Design BMPs may reduce the size of Treatment Control BMPs.

2 The "C Factor" is a representation of the ability of a surface to produce runoff. Surfaces that produce higher volumes of runoff are represented by higher C Factors. By incorporating more pervious, lower C Factor surfaces into a development, lower volumes of runoff will be produced. Lower volumes and rates of runoff translate directly to lowering treatment requirements.

Insert narrative discussion of each Site Design BMP selected and how its implementation will reduce runoff and the pollutants affected.

**IV.2 Source Control BMPs**

**IV.2.1 Routine Non-Structural BMPs**

Complete Table 2.

**Table 2**

**Routine Non-Structural BMPs**

BMP No.	Name	Check One		If not applicable, state brief reason.
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants			
N2	Activity Restriction			
N3	Common Area Landscape Management			
N4	BMP Maintenance			
N5	Title 22 CCR Compliance			
N6	Local Water Quality Permit Compliance		<b>X</b>	This BMP is not applicable. The City of Orange does not issue water quality permits.
N7	Spill Contingency Plan			
N8	Underground Storage Tank Compliance			
N9	Hazardous Materials Disclosure Compliance			
N10	Uniform Fire Code Implementation			
N11	Common Area Litter Control			
N12	Employee Training			
N13	Housekeeping of Loading Docks			
N14	Common Area Catch Basin Inspection			
N15	Street Sweeping Private Streets and Parking Lots			

Insert narrative discussion of how each Routine Nonstructural BMP selected is to be implemented to reduce runoff and minimize pollutants in the project.

**IV.2.2 Routine Structural BMPs**

Complete Table 3.

**Table 3**

**Routine Structural BMPs**

Name	Check One		If not applicable, state brief reason
	Included	Not Applicable	
Provide storm drain system stenciling and signage- "No Dumping – Drains to Ocean"			
Design and construct outdoor material storage areas to reduce pollution introduction			
Design and construct trash and waste storage areas to reduce pollution introduction			
Use efficient irrigation systems & landscape design			
Protect slopes and channels and provide energy dissipation			
Incorporate requirements applicable to individual project features			
a. Dock areas			
b. Maintenance bays			
c. Vehicle or community wash areas			
d. Outdoor processing areas			
e. Equipment wash areas			
f. Fueling areas			
g. Hillside landscaping			
h. Wash water control for food preparation areas			

Insert narrative discussion of how each Routine Structural BMP selected is to be implemented to reduce runoff and minimize pollutants in the project.

**IV.3 Low Impact Development BMP Selection**

Refer to Section 2.4.2.3 and 4.1 in the TGD for selecting LID BMPs.

**IV.3.1 Hydrologic Source Controls**

Select from the following table all hydrologic source control BMPs that are used by the project and identify in Site Plan. See Section 4.2 of Technical Guidance Document for additional information.

**Table 4**  
**Hydrologic Source Control BMPs**

Name	Check If Used
Localized on-lot infiltration	<input type="checkbox"/>
Impervious area dispersion (e.g. roof top disconnection)	<input type="checkbox"/>
Street trees (canopy interception)	<input type="checkbox"/>
Residential rain barrels (not actively managed)	<input type="checkbox"/>
Green roofs/Brown roofs	<input type="checkbox"/>
Blue roofs	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Describe how each of the BMPs checked above is used in the project and how it will reduce project runoff.

**IV.3.2 Infiltration BMPs**

Identify infiltration BMPs to be used in project. See Section 2.4.2.4 of the Technical Guidance Document for infiltration infeasibility criteria and 4.3 for information of BMP selection.

**Table 5**  
**Infiltration BMPs**

Name	Check If Used
Bioretention without underdrains	<input type="checkbox"/>
Rain gardens	<input type="checkbox"/>
Porous landscaping	<input type="checkbox"/>
Infiltration planters	<input type="checkbox"/>
Retention swales	<input type="checkbox"/>
Infiltration trenches	<input type="checkbox"/>
Infiltration basins	<input type="checkbox"/>
Drywells	<input type="checkbox"/>
Subsurface infiltration galleries	<input type="checkbox"/>
French drains	<input type="checkbox"/>
Permeable asphalt	<input type="checkbox"/>
Permeable concrete	<input type="checkbox"/>
Permeable concrete pavers	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Describe how each BMP checked above is used in the project. Identify if the LID Design Storm Capture Volume is fully met.

\*Infiltration BMP(s), i.e. infiltration trenches and basins, etc., require pre-treatment prior to infiltration

**IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs**

Identify any evapotranspiration and/or, rainwater harvesting BMPs used by the project. See Section 4.4 and 4.4 of the Technical Guidance Document for additional information. (Delete if not used).

**Table 6**  
**Evapotranspiration, Rainwater Harvesting BMP**

Name	Check If Used
All HSCs; <i>See Section IV.3.1</i>	<input type="checkbox"/>
Surface-based infiltration BMPs	<input type="checkbox"/>
Biotreatment BMPs	<input type="checkbox"/>
Above-ground cisterns and basins	<input type="checkbox"/>
Underground detention	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Describe how each BMP checked above is used in the project. Identify the LID Design Storm Volume captured.

**IV.3.4 Biotreatment BMPs**

Describe any biotreatment BMPs used in the project and include separate sections for selection, suitability, sizing, and infeasibility, as applicable. See Section 4.6 of the Technical Guidance Document for additional information. (Delete if not used).

**Table 7  
Biotreatment BMPs**

Bioretention with underdrains	<input type="checkbox"/>
Storm water planter boxes with underdrains	<input type="checkbox"/>
Rain gardens with underdrains	<input type="checkbox"/>
Constructed wetlands	<input type="checkbox"/>
Vegetated swales	<input type="checkbox"/>
Vegetated filter strips	<input type="checkbox"/>
Proprietary vegetated biotreatment systems	<input type="checkbox"/>
Wet extended detention basin	<input type="checkbox"/>
Dry extended detention basins	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Describe how each BMP checked above is used in the project. Identify the portion of the LID Design Storm Volume captured. Identify the infeasibility constraints that do not allow the use of infiltration BMPs, evaporation, rainwater harvesting or a combination and document in narrative form below and the information required in Appendix XI of the Technical Guidance Document.



#### **IV.3.5 Hydromodification Control BMPs**

Describe any hydromodification control BMPs used in project. Refer to Section 5 of the Technical Guidance Document for additional information. Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Conditions of Approval (if applicable). (Delete if not used or note NA).

#### **IV.3.6 Regional/Sub-Regional LID BMPs**

Describe regional/sub-regional LID BMPs in which the project will participate. Refer to Section 7.II-2.4.3.2 of the Model WQMP for assistance in completing section. (Delete if not used or note NA).

#### **IV.3.7 Treatment Control BMPs**

Describe any Treatment control BMPs used in project. Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Include sections for selection, sizing, and infeasibility, as applicable. (Delete if not used or note NA).

#### **IV. 4 Water Quality Credits**

Describe any water quality credits applicable to project (credits can only be taken if proposed LID BMPs cannot capture entire Design Storm Volume). Refer to Section 7.II-3.1 of the Model WQMP. (Delete if not used or note NA).

#### **IV.5 Alternative Compliance Plan**

Describe the alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. Refer to Section 7.II 3.0 in the Model WQMP. (Delete if not used or note NA).

#### **IV.6 Vector Control**

For each BMP with the potential for standing nuisance water describe how vector control issues will be addressed.

**IV.7 Drainage Management Area (DMA)**

Describe each DMA used in project, the BMPs in each DMA and the area treated.

<b>DMA Number</b>	<b>BMPs</b>	<b>Area Treated</b>
1		
2		
3		
4		
5		
6		
<b>Total Area</b>		

**Total Project Area=**

(Note if all project design storm volume is captured by these BMPs).

#### **IV.8 Calculations**

Provide calculations for all LID, Structural and Treatment BMPs selected. All calculations must be signed by a registered civil engineer. Individual or worksheets provided in Technical Guidance Document (if applicable) may be used.



### **Regulatory Permits**

Identify any regulatory permits required.

### **Funding**

Identify how the installation and on-going maintenance for all BMPs will be funded.

**OWNER SELF CERTIFICATION STATEMENT**

As the owner of **insert project name** for which a Water Quality Management Plan (WQMP) was approved by the City, I hereby certify under penalty of law that all Best Management Practices contained within the approved Project WQMP have been maintained and inspected in accordance with the schedule and frequency outlined in the approved WQMP Table 5.

The maintenance activities and inspections conducted are shown in the attached table and have been performed by qualified and knowledgeable individuals.

To the best of my knowledge, the information submitted is true and accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and citations for violating water quality regulations.

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Date: \_\_\_\_\_



BMP Implementation Tracking Table

BMP	Activity	Activity Completion Dates or Frequency
Source Control BMPs (Structural and Nonstructural)		
Low Impact Development and Treatment BMPs		

## **VI. Location Map, Site Plan, and BMP Details**

Include a location map that identifies project location and proximity to nearby water bodies. In an 11X17 sheet Identify land use, cover, feasibility constraints, structures, buildings, number of units, landscape areas, storm drain inlets, storm drain facilities, drainage flow direction, structural and treatment BMP locations, dumpsters, trash enclosures, wash areas, etc.

Delineate drainage management areas showing limits (acreage) of each drainage area for all structural, treatment and Low Impact Development BMPs used and provide BMP details on plan or in Appendix C

**VII. Educational Materials**

Refer to the City’s website or the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. Attach only the educational materials specifically applicable to the project.

<b>Education Materials</b>			
<b>Residential Material</b> ( <a href="http://www.ocwatersheds.com">http://www.ocwatersheds.com</a> )	<b>Check If</b> <b>Applicable</b>	<b>Business Material</b> ( <a href="http://www.ocwatersheds.com">http://www.ocwatersheds.com</a> )	<b>Check If</b> <b>Applicable</b>
The Ocean Begins at Your Front Door	<input type="checkbox"/>	Tips for the Automotive Industry	<input type="checkbox"/>
Tips for Car Wash Fund-raisers	<input type="checkbox"/>	Tips for Using Concrete and Mortar	<input type="checkbox"/>
Tips for the Home Mechanic	<input type="checkbox"/>	Tips for the Food Service Industry	<input type="checkbox"/>
Homeowners Guide for Sustainable Water Use	<input type="checkbox"/>	Proper Maintenance Practices for Your Business	<input type="checkbox"/>
Household Tips	<input type="checkbox"/>	<b>Other Material</b>	<b>Check If</b> <b>Attached</b>
Proper Disposal of Household Hazardous Waste	<input type="checkbox"/>		
Recycle at Your Local Used Oil Collection Center (North County)	<input type="checkbox"/>		<input type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (Central County)	<input type="checkbox"/>		<input type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (South County)	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Maintaining a Septic Tank System	<input type="checkbox"/>		<input type="checkbox"/>
Responsible Pest Control	<input type="checkbox"/>		<input type="checkbox"/>
Sewer Spill Response	<input type="checkbox"/>		<input type="checkbox"/>
Tips for the Home Improvement Projects	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Horse Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Landscaping and Gardening	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Pet Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Pool Maintenance	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Residential Pool, Landscape and Hardscape Drains	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Projects Using Paint	<input type="checkbox"/>		<input type="checkbox"/>

Appendix A:  
Conditions of Approval  
City Council Resolution \_\_\_\_\_ dated \_\_\_\_\_

Appendix B:  
Educational Material

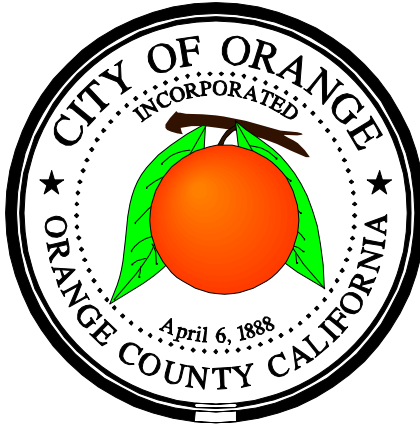
Appendix C:  
BMP Details

Appendix D:  
BMP Maintenance Information



Exhibit A-7.VI

Nonpriority Project Plan



# **NONPRIORITY WATER QUALITY MANAGEMENT PLAN (WQMP)**

**For:**

**(Insert Project Name)  
(Insert Site Address or tract/ lot number)**

**Prepared for:  
(Insert Owner/ Developer Name)  
(Insert Address)  
(Insert City, State, ZIP)  
(Insert Telephone)**

**Prepared by:  
(Insert Consulting/ Engineering Firm Name)  
(Insert Address)  
(Insert City, State, ZIP)  
(Insert Telephone)**

**(Insert date Prepared/ Revised)**

**Reviewed for compliance with the City of Orange Local Implementation Plan:**

\_\_\_\_\_  
**Public Works Director**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**City Engineer**

\_\_\_\_\_  
**Date**

**OWNER'S CERTIFICATION**  
**CITY OF ORANGE**  
**WATER QUALITY MANAGEMENT PLAN**  
**FOR**  
**(Insert Project Name)**

This Water Quality Management Plan (WQMP) for the [insert project name] has been prepared for [insert name of owner/ developer]. This WQMP is intended to comply with the requirements of the City of Orange's [Tract/ Parcel Map # \_\_\_\_, Conditional Use Permit # \_\_\_\_, and/ or Site Development Permit Application # \_\_\_\_] requiring preparation of a Water Quality Management Plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP), and the intent of the NPDES Permit and Waste Discharge Requirements for the City of Orange, County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. A copy of this WQMP will be maintained at the project site or project office.

This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party having responsibility for implementing portions of this WQMP. At least one copy of the approved and certified copy of this WQMP shall be available on the subject property in perpetuity.

Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. The City of Orange will be notified of the changes of ownership and the new owner will submit a new certification.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

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### **Appendix**

- A. Conditions of Approval, Planning Commission Resolution [redacted] dated [redacted]
- B. Educational Material

**I. Discretionary Permit Number(s), Water Quality Condition Number(s) and Conditions**

Tract No. \_\_\_\_\_

Lot No. \_\_\_\_\_

Water Quality Conditions (WQMP conditions listed below)

A complete copy of the signed Conditions of Approval, Planning Commission Resolution \_\_\_\_\_ dated \_\_\_\_\_ are included as Appendix A.

Conditions of Approval:

Insert text here, providing the discretionary permit numbers and the conditions of approval related to water quality (stated verbatim).

## II. Project Description

Planning Area: \_\_\_\_\_

Project Size (ac): \_\_\_\_\_

Percent Change in Impermeable Surfaces: \_\_\_\_\_

SIC Code: (if applicable)

### Project Description

Insert Narrative covering: Project features, purpose, activities, landscaping, paved areas, material or wastes stored on site and other details)

### Potential Storm Water Pollutants

Insert Narrative regarding storm water pollutants typically generated by activities proposed for the site.

### Commercial Projects

Describe any food preparation and eating areas as applicable.

### Residential Projects

Insert Narrative, describing lots and home sizes and note whether attached or detached (see Guidelines).

### Site Ownership and any easements

Insert Narrative, describing ownership of the site and any easements across the property for other parties.

---

### III. Site Description

Reference Location Map

Site Address:

Project Size (acres):

Zoning:

Pre-project pervious area: \_\_\_\_\_%

Post-project pervious area: \_\_\_\_\_%

Watershed:

Downstream Receiving Waters:

Water Quality Impairments: (if applicable)

#### Site Description

Insert Narrative, describing current conditions of the site and drainage before the project begins.



## IV. Best Management Practices

Briefly explain the BMPs selected for the project.

### IV.1 Site Design BMPs

Insert Narrative, discussing each of the Site Design BMPs selected for the Project and list them below.

### IV.2 Source Control BMPs

#### Routine Structural BMPs

Insert Narrative, discussing each of the routine structural BMPs selected for the project with the goal of minimizing/ eliminating pollutant runoff.

\*For any chosen BMP with the potential to have nuisance water (standing water) within the BMP please mention the process to address this potential vector control problem.

#### Routine Non-structural BMPs

Insert Narrative, discussing each of the routine non-structural BMPs selected for the project with the goal of minimizing/ eliminating pollutant runoff.

#### Other BMPs

Insert narrative of other BMPs or devices incorporated to remove pollutants from runoff leaving the project site.

**V. Implementation, Maintenance and Inspection Responsibility for BMPs**

Responsible Party Information

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Phone Number: \_\_\_\_\_

(Complete the Table Below)

Table 1 Frequency Inspection Matrix

BMP	Responsible Party	Maintenance Activity	Inspection/ Maint. Frequency
Source Control BMPs (Structural and Non-Structural)			

## OWNER SELF CERTIFICATION STATEMENT

As the owner of [insert project name] for which a Water Quality Management Plan (WQMP) was approved by the City of Orange, I hereby certify under penalty of law that all Best Management Practices contained within the approved Project WQMP have been maintained and inspected in accordance with the schedule and frequency outlined in the approved WQMP Table 1.

The maintenance activities and inspections conducted are shown in the attached table and have been performed by qualified knowledgeable individuals.

To the best of my knowledge, the information submitted is true and accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and citations for violating water quality regulations.

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Date: \_\_\_\_\_

**VI. Location map, Site Plan and BMP Details**

See instructions for completion of this section. Include all structural and treatment BMPs on the Site Plan and provide copies of applicable BMP details.

## VII. Educational Materials

Insert text and list the educational materials to be included in Appendix. Include the brochure listed below and all other materials applicable to the specific project. All brochures are available for printing from [www.cityoforange.org](http://www.cityoforange.org) under the Public Works Department - NPDES/ Stormwater and also at [www.ocwatersheds.com](http://www.ocwatersheds.com) under Public Education.

- “The Ocean Begins at Your Front Door”

## Appendix A

**Conditions of Approval,  
Planning Commission Resolution \_\_\_\_\_  
dated \_\_\_\_\_**

# **Appendix B**

## **Educational Materials**