

5.7.2 THRESHOLDS OF SIGNIFICANCE

According to CEQA Guidelines, Appendix G, impacts to agricultural resources would be significant if the proposed project:

- Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency to non-agricultural use;
- Conflicts with existing zoning for agricultural use, or a Williamson Act contract;
- Involves other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use.

5.7.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR 90-01 found that the following significant impacts to agricultural resources would result from implementation of the GDP:

- Conversion of prime farmlands and elimination of existing crop production. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.
- Inconsistency with existing City of Chula Vista plans and policies and State policies regarding the loss of agricultural resources and prime agricultural soil. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.

- Land use interface impacts associated with agricultural activities and urban uses. Mitigation measures that would reduce the impacts to a level below significance were required.

SPHERE OF INFLUENCE UPDATE EIR

The agricultural impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the agricultural resource assumptions or conclusions of the Program EIR 90-01. The SPA One EIR found that the annexation of land into the Otay Ranch GDP would result in a potentially significant impact on agricultural resources, and that no feasible mitigation measures would reduce the impact to less than significant. Mitigation measures described in the Program EIR 90-01 were made conditions of approval, but were not found to reduce impacts to less than significant levels.

AMENDED SPA ONE EIR

The Amended SPA One EIR found that expanding the footprint of the SPA One area and allowing irrigation in the Preserve did not pose any new significant impacts not previously identified.

5.7.4 IMPACTS

GDP AMENDMENTS

The Program EIR 90-01 identified impacts to agriculture resulting from conversion of agricultural land to urban uses, inconsistency with policies regarding the loss of agriculture and land use adjacency. The proposed GDP Amendments are entirely within the development boundaries identified for the adopted GDP. Impacts to agricultural resources and activities resulting from the proposed GDP Amendments would be the same as those identified for the adopted GDP and would still remain significant with the proposed GDP Amendments. Impacts related to the conversion of agricultural land and inconsistency with agricultural policies would be unmitigable.

VILLAGE 11 SPA/TM

According to the FMMP July 1988 San Diego County Important Farmlands Map, the Village 11 Project Area is considered "Farmland of Local Importance." Development of the Village 11 Project Area would result in the direct conversion of approximately 455 acres of "Farmland of Local Importance" to urban uses. This conversion to urban uses will result in an incremental loss to countywide agricultural land. The conversion of "Farmland of Local Importance" would preclude the potential production of coastal-dependent crops.

Continued conversion of agricultural lands to urban development in the maritime and coastal area climates will eventually result in the loss of ability to produce and market off-season fresh tomatoes, vegetables, and field-grown flora crops, most of which have state and national importance. The loss of agricultural land within the County and land suitable for the potential production of coastal-dependent crops would result in a significant impact due to the incremental and irreversible loss or impairment of a limited agricultural resource. The phased development of the proposed project will incrementally convert ongoing agriculture uses to urban development.

Grading and development of the Village 11 Project Area would eventually eliminate all agricultural and grazing activity on-site. However, the proposed University site (alternatively Villages Nine and 10) borders the Village 11 Project Area to the south and will not be developed concurrently. Agricultural activities which occur within the University site may continue to exist during development of the Village 11 Project Area and possibly after its completion. Short-term, significant impacts to land uses within Village 11 resulting from continued agricultural activity on the adjacent proposed University site or alternatively, Villages Nine and 10, could include noise, odor, insects, rodents, and chemicals. An Agriculture Plan has been prepared that includes buffering requirements intended to reduce potentially significant impacts at the land use interface between residential uses and agricultural uses to below a level of significance.

5.7.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 concluded that the following impacts to agricultural resources would occur:

- Conversion of prime farmlands and elimination of existing crop production. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.
- Inconsistency with existing City of Chula Vista plans and policies and State policies regarding the loss of agricultural resources and prime agricultural soil. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.
- Land use interface impacts associated with agricultural activities and urban uses. Mitigation measures that would reduce the impacts to a level below significance were required.

The same conclusions would be applicable to the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The contribution of the development of the Village 11 Project Area to significant unmitigable impacts related to the loss of agricultural land is considered significant. Noise, odor, insects, rodents, and chemicals associated with agricultural operations would create indirect, short-term potentially significant impacts between the agricultural uses and the urban uses through buildout as urban uses replace agricultural uses.

5.7.6 MITIGATION MEASURES

GDP AMENDMENTS

The Program EIR 90-01 includes mitigation measures to reduce impacts to agricultural resources, including preparation of an Agricultural Plan. Program EIR 90-01 mitigation measures are listed in Appendix B, and would still apply with the proposed GDP Amendments. No additional mitigation measures would be required.

VILLAGE 11 SPA/TM

5.7-1 As development proceeds within the Village 11 Project Area, the following measures as listed in the SPA Agricultural Plan shall be implemented:

- (1) A 200-foot distance buffer shall be maintained between developed property and ongoing agriculture operations,
- (2) In those areas where pesticides are to be applied, vegetation shall be utilized to shield adjacent urban development (within 400 feet) from agriculture activities,
- (3) The applicant shall notify adjacent property owners of potential pesticide application through advertisements in newspapers of general circulation, and
- (4) Fencing shall be placed, where The Director of Planning and Building deems necessary for appropriate separation of agricultural and urban land uses.

5.7.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 concluded that the impacts related to the loss of agricultural land and inconsistency with City of Chula Vista plans and policies and State policies regarding the loss of agricultural land would remain significant after mitigation. The proposed GDP Amendments would not change this conclusion.

VILLAGE 11 SPA/TM

An Agricultural Plan has been prepared to reduce short-term significant impacts between urban uses and agricultural operations to a level less than significant. Roadways and adjacent designed landscape areas would provide adequate buffers between development and any ongoing adjacent agriculture. The Agricultural Plan provides separation between urban uses and adjacent agricultural operations, and includes a requirement for notification of adjacent property owners of pesticide use and other potentially harmful activities, plus physical barriers if warranted.

The cumulative loss of important agricultural lands is considered a significant impact, and no mitigation measures are available to reduce this impact below the level of significance (also see *Section 6.0, Cumulative Impacts*).

5.8 HOUSING AND POPULATION

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01), analyzed the existing conditions, potential impacts, and mitigation measures related to growth inducement that would be caused by the implementation of the Otay Ranch GDP. Section 7 of the Program EIR 90-01 included an analysis of growth inducing impacts which is hereby incorporated by reference. The following discussion uses the analysis of housing and population growth from the Program EIR 90-01 as a basis for the discussion and analysis of housing and population impacts related to the proposed GDP Amendments and development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the proposed GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the proposed GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review.

5.8.1 EXISTING CONDITIONS

The following discussion of housing and population applies to both the proposed GDP Amendments and the Village 11 SPA/TM. The total number of housing units in the City of Chula Vista, as of January 1, 2000, was 59,333 (SANDAG). Between 1990 and 2000, approximately 9,480 dwelling units were added to the housing stock. The number of units increased 19.0 percent over the ten-year period. A total of 23,483 dwelling units was approved under the adopted GDP/SRP, as analyzed in Program EIR 90-01.

The City of Chula Vista General Plan Housing Element contains the following objectives and policies regarding affordable housing:

- Achievement of a balanced residential community through the integration of low and moderate-income housing throughout the City and the adequate dispersal of such housing to preclude establishment of specific low income enclaves.
- The Affordable Housing Policy shall require a minimum of 10 percent of each housing development to be affordable to low and moderate-income households, with at least one-half of those units (5 percent of project total units) being designated for low-income households.

The Housing Element also includes Affordable Housing Program Implementation Guidelines which offer flexibility in meeting affordable housing goals by considering alternatives to actual developer built-in production. These alternatives include land set asides, off-site projects, and in-lieu contributions.

Additionally, the Otay Ranch GDP established a 5-year objective that requires each village to proportionately assist the City of Chula Vista to meet or exceed the Otay Ranch's share of the 5-year regional allocation as provided by Chula Vista's Housing Element. The GDP requires that prior to or concurrent with the approval of a SPA Plan, an Affordable Housing Plan and Agreement shall be approved by the City which addresses the type and location of housing to be provided pursuant to the regional share allocation.

The total population of the City of Chula Vista, as of January 1, 2000, was 173,556 (SANDAG). Chula Vista grew by approximately 28.4 percent or 31,735 persons from 1990 to 2000. This represents an annual average increase of 2.8 percent. Buildout of the entire Otay Ranch GDP will result in an estimated population of 70,684. The population estimate is based on the 1999 population generation factor derived from the California Department of Finance of 3.01 persons per dwelling unit. SANDAG has projected that from 1995 to 2020, the City of Chula Vista's population will increase by 82 percent. It is also projected that civilian employment will increase by 90 percent within the same time frame. It is projected that the increase in housing units from 1995 to 2020 will increase by 79 percent.

GDP AMENDMENTS

No housing exists on the site within the Amendment Area, either currently or at the time of certification of the Program EIR 90-01. Development has occurred in portions of the Otay Ranch outside of the Amendment Area, and in other surrounding areas of Chula Vista. A discussion of current housing and population within the City is contained in the previous discussion.

VILLAGE 11 SPA/TM

No housing exists within the Village 11 SPA Area.

5.8.2 THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, Appendix G, impacts to housing and population would be significant if the proposed project:

- Induces substantial population growth in an area, either directly or indirectly;
- Displaces substantial numbers of existing housing, necessitating the construction or replacement housing elsewhere; or
- Displaces substantial numbers of people, necessitating the construction or replacement housing elsewhere.

5.8.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR did not specifically address Housing and Population, but the Findings of Fact for the Program EIR did address growth inducement. The Program EIR identified a significant effect due to the substantial increase in population that would be generated by development of Otay Ranch. Mitigation that would reduce this significant effect included provision of adequate facilities, as proposed in the GDP, to accommodate the growth provided

SPHERE OF INFLUENCE UPDATE EIR

The Sphere of Influence EIR acknowledged that the Otay Ranch GDP would have a significant, unavoidable growth-inducing impact. However, the inclusion of the Otay Ranch parcels into the City's sphere would not in itself result in physical changes.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation appear to alter any of the housing and population assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

The SPA One Amendments EIR does not contain any discussion of housing and population, either regarding the GDP amendments or the Amended SPA One Plan.

5.8.4 IMPACTS

GDP AMENDMENTS

The Program EIR 90-01 found that the implementation of the Otay Ranch GDP would result in significant growth inducing impacts at the program level of analysis. The proposed GDP Amendments would result in an increase of 236 residential dwelling units over the adopted GDP (based on the selection of the Village Eight high school site). Growth inducing impacts would be significant with the proposed GDP Amendments.

Table 3-1 includes a summary of the proposed changes in the total number of dwelling units, and the corresponding changes in projected population for the Otay Ranch associated with the proposed GDP Amendments. The proposed increase of 236 dwelling units is estimated to generate an increase in population of 710 residents., This corresponds to a 1% increase in housing and population over the adopted GDP. The additional residential development proposed by the proposed GDP Amendments would take place within the same development area as identified in the adopted GDP. The proposed GDP Amendments would be consistent with the adopted GDP in terms of the type and character of housing to be provided. The proposed GDP Amendments do not propose any changes to housing policies of the GDP or the General Plan.

VILLAGE 11 SPA/TM**Housing**

The Village 11 SPA and Conceptual TM would provide housing and increase the housing stock of the City of Chula Vista by 2,304 (996 single family and 1,308 multi-family) dwelling units. The proposed project is part of the adopted plans of the City of Chula Vista. The project represents a future housing supply for the region. Phasing will occur in response to market conditions, which will help to fulfill the demand for housing.

SANDAG has adopted a series of plans and policies to address regional growth within the county of San Diego. One of the projects adopted by SANDAG is the Regional Transportation Plan, which includes the Growth Management Plan. The Growth Management Plan incorporates population, housing and transportation forecasts. Particularly, the forecasts have identified specific projections for the City of Chula Vista. The Growth Management Plan stresses maintaining a prosperous economy, while providing an adequate and equitable transportation system, preserving open space and habitat, increasing the rate of home ownership, and reforming the state-local tax system to assist and sustain all of the above. SANDAG encourages compliance with a transit design which promotes pedestrian activity and interconnected public transportation through buses, metro, and trolleys.

Village 11 SPA would implement the SANDAG policies by implementing a bus system, providing a pedestrian-oriented development, preserving open space adjacent to the project, offering new homes and increasing the tax base for the City of Chula Vista. Therefore, implementation of Village 11 would not result in any significant impacts to housing supply or housing policies.

Affordable Housing

The Village 11 development would provide 5 percent low-income and 5 percent moderate-income housing (*Table 5.8-1*). The proposed 10 percent affordable housing is consistent with the objectives of the City's Affordable Housing Plan and the Program EIR 90-01 requirement that each village proportionately assist in meeting regional allocation. No significant impact to the affordable housing programs would result from implementation of the Village 11 SPA Plan.

TABLE 5.8-1 ESTIMATED AFFORDABLE HOUSING OBLIGATION

	Low Income Units	Moderate Income Units	Total Affordable Units
Village 11 SPA Plan	115	115	230

Source: Village 11 SPA Plan

Population

The population increase anticipated as a result of the proposed project, is estimated by multiplying the number of project proposed dwelling units to be constructed by 3.01 persons per dwelling unit. This rate is based on 1999 published by the Department of Finance. *Table 5.8-2* includes the Program EIR forecasts from the GDP for comparison. SANDAG has forecasted that the City of Chula Vista will have an increase of over 41,000 people to accommodate by 2005.

TABLE 5.8-2 POPULATION AND HOUSING MIX

Land Use	Dwelling Units	Generation Factor	Estimated Population
Village 11			
Single-Family	996	3.01/DU	2,998
Multi-Family	1,308	3.01/DU	3,937
Total	2,304		6,935

Source: Village 11 SPA Plan

Buildout of Village 11 would result in a population increase of approximately 6,935 persons. The buildout of Village 11 would provide housing for approximately 9.8% of the population generated by the Otay Ranch. This is consistent with the growth anticipated by the GDP, and does not represent a significant impact to population.

5.8.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01 regard to significant growth inducing impacts. The Program EIR 90-01 stated that, while the

Otay Ranch would foster new growth, the Otay Ranch would provide adequate infrastructure and facilities to accommodate the growth. Significant impacts related to population growth would be mitigated by the provision of infrastructure and public services provided by the GDP, both as it is currently adopted and with the proposed GDP Amendments. The proposed GDP Amendments would not result in significant impacts to housing, since the type and character of housing to be provided with the proposed GDP Amendments would be consistent with the adopted GDP and with the policies related to housing in the City's General Plan.

VILLAGE 11 SPA/TM

The anticipated growth in population and dwelling units within Village 11 is consistent with the growth forecasted by SANDAG and the Growth Management Program adopted by the City, and would not present significant population or housing impacts.

5.8.6 MITIGATION MEASURES

GDP AMENDMENTS

Growth inducing impacts identified at the program-level of analysis would be mitigated by the provision of adequate public services and facilities as provided for in the adopted GDP and with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

No impacts to population and housing are anticipated with the proposed Village 11 SPA Plan; therefore, no mitigation measures are required.

5.8.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

GDP AMENDMENTS

The proposed amendments to the GDP would not result in any significant unmitigated growth inducing impacts.

VILLAGE 11 SPA/TM

There are no impacts to housing and population that would result from implementation of the Village 11 SPA Plan.

5.9 WATER RESOURCES AND WATER QUALITY

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01), analyzed the existing conditions, potential impacts, and mitigation measures related to water resources and water quality for the entire Otay Ranch project area. Section 4.9.10 of the Program EIR 90-01 included an analysis of impacts to water resources and water quality related to the Phase II Progress Plan Alternative (as amended), which ultimately was selected. The analysis and discussion of water resources and water quality issues from the Program EIR is hereby incorporated by reference. References to analysis in the Program EIR 90-01 in this EIR pertain specifically to the analysis of the selected Phase II Progress Plan alternative. The following discussion focuses on the project specific impacts to water resources and water quality that would result from the proposed GDP Amendments and with development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review.

A more detailed drainage study analysis specifically addressing development proposed for Village 11 was conducted by Hunsaker & Associates on January 25, 2001, and is included as part of this SEIR (Appendix F). Groundwater conditions were evaluated in the *Preliminary Geologic/Geotechnical Feasibility* prepared by Geocon, Inc. (Appendix E).

5.9.1 EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 provides a summary of surface and groundwater characteristics, including water quality, for the Otay Ranch project area, including the Amendment Area. The following is a summary of the discussion of existing conditions relevant to the Amendment Area contained in the Program EIR 90-01.

Otay Ranch is located in the southwestern portion of the San Diego Planning Basin. The San Diego Basin has been divided into 11 hydrographic units and 54 hydrographic subunits [Regional Water Quality Control Board (RWQCB) 1975]. The hydrographic divisions are based primarily on surface water drainage basins. The Amendment Area is located within

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Water Resources and Water Quality

the Otay Hydrographic Unit. Throughout the region, the landscape is predominantly rolling hills with arroyos draining to canyons that flow west and south away from the Otay Reservoir basin.

Groundwater Hydrogeology

Groundwater occurs in all sedimentary units and the various surficial deposits present on Otay Ranch. Regional groundwater flow is from east to west. The direction of local groundwater flow is controlled by the orientation of the drainage basins and topography. The quantity and quality of groundwater varies according to the permeability of the geologic formation and location's topography. Groundwater recharge occurs in upland areas with springs most common in the mountainous regions. Permeability rates within the Otay Valley Parcel are greatest in the Otay River Valley.

Groundwater Quality

The Amendment Area is within the Otay Subunit which contains groundwater rated generally poor to very poor due to high levels of total dissolved solids (TDS). The groundwater contains sodium-calcium chloride levels, as reported in the Program EIR 90-01, that exceed established standards. Groundwater samples from both Salt Creek on the east and Otay River Valley to the south exceeded Federal Secondary Drinking Water Standards as reported in the Program EIR 90-01. This situation is caused, at least partially, by imported water, with its higher salt concentrations, used in irrigation and from water containing dissolved salts entrapped at the time the sedimentary rocks were deposited.

Surface Water and Hydrological Setting

The major drainage offsite courses that the Amendment Area drains to are Salt Creek, Poggi Canyon and Otay River. Salt Creek eventually discharges into the Otay River approximately, ½ mile downstream.

Surface Water Quality

Surface water in the Otay Subunit downstream from Otay Lakes is ephemeral (temporary). The RWQCB rates the surface water in the subunit as having beneficial uses for agriculture,

non-contact recreational sport, wildlife, rare and endangered species and potential beneficial uses for industry as reported in the Program EIR 90-01.

No development or substantial disturbance has occurred within the Amendment Area since the certification of the Program EIR 90-01. No additional areas outside of those contemplated to be developed under the adopted plan are proposed for development with the GDP Amendments. The following is a general discussion of surface water, groundwater and water quality issues in the Amendment Area.

VILLAGE 11 SPA/TM

The drainage from the Village 11 Project Area flows easterly and southeasterly into the Salt Creek which then returns flow to the regional drainage pattern from east to west, via Otay River. Unnamed tributaries from the Village 11 Project Area drain easterly and southeasterly into Salt Creek. A small portion of the Village 11 Project Area (36 acres in the northwest corner) currently drains to Poggi Canyon to the west. The only surface water found within the Village 11 Project Area during field observations in late September 1999 was flowing in the northeastern-most drainage. The source of this water appeared to be landscape drainage from the EastLake Greens development to the north. Salt Creek occurs just offsite, along the eastern border of the Village 11 Project Area.

Only minor subsurface water exists within the limits of the Village 11 Project Area. Groundwater occurs at 3.0 to 3.5 feet below the surface within the alluvium at the eastern most point of the property. Minor seepage was observed in the Otay Formation at approximately 48 to 50 feet below the surface along the northern boundary.

5.9.2 THRESHOLDS OF SIGNIFICANCE

Based on the criteria identified in Appendix G of the CEQA Guidelines, the proposed project would have a significant impact on water resources and water quality if it:

- Violates any water quality standards or waste discharge requirements as set by the San Diego RWQCB;

- Substantially depletes groundwater or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alters the existing drainage pattern of the project area 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;
- Substantially alters the existing drainage pattern of the project area or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner which would result in flooding on, or off-site;
- Creates or contributes runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff;
- Alters an existing 100-year floodplain or flood regime;
- Places housing within a 100-year flood hazard area with structures which would impede or redirect flood flows;
- Potentially degrades the water quality associated with a sensitive wetland or hydrologic resource; or
- Otherwise substantially degrades water quality.

5.9.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR 90-01 found the following significant impacts to water resources and water quality:

- Increases in surface water runoff due to an increase in impervious surfaces could increase potential for downstream flooding, cause potential safety impacts, and increase erosion and siltation. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.
- Development may encroach into the 100-year floodplain. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The water supply impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the demand within Otay Ranch would be indistinguishable under the City's land use designations. The incorporation of some non-Otay Ranch parcels into the City's sphere also was deemed less than significant by the Sphere of Influence EIR because the corresponding increase in demand of 209,156 gallons per day (gpd) was considered in the Program EIR 90-01, and the Program EIR 90-01 still concluded that impacts would be less than significant.

The water quality impacts associated with the inclusion of Otay Ranch into the City's sphere were determined not to be significant because the extension of the City's sphere would not, by itself, result in physical change.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the water quality and resource assumptions or conclusions of the Otay Ranch Program EIR 90-01.

AMENDED SPA ONE EIR

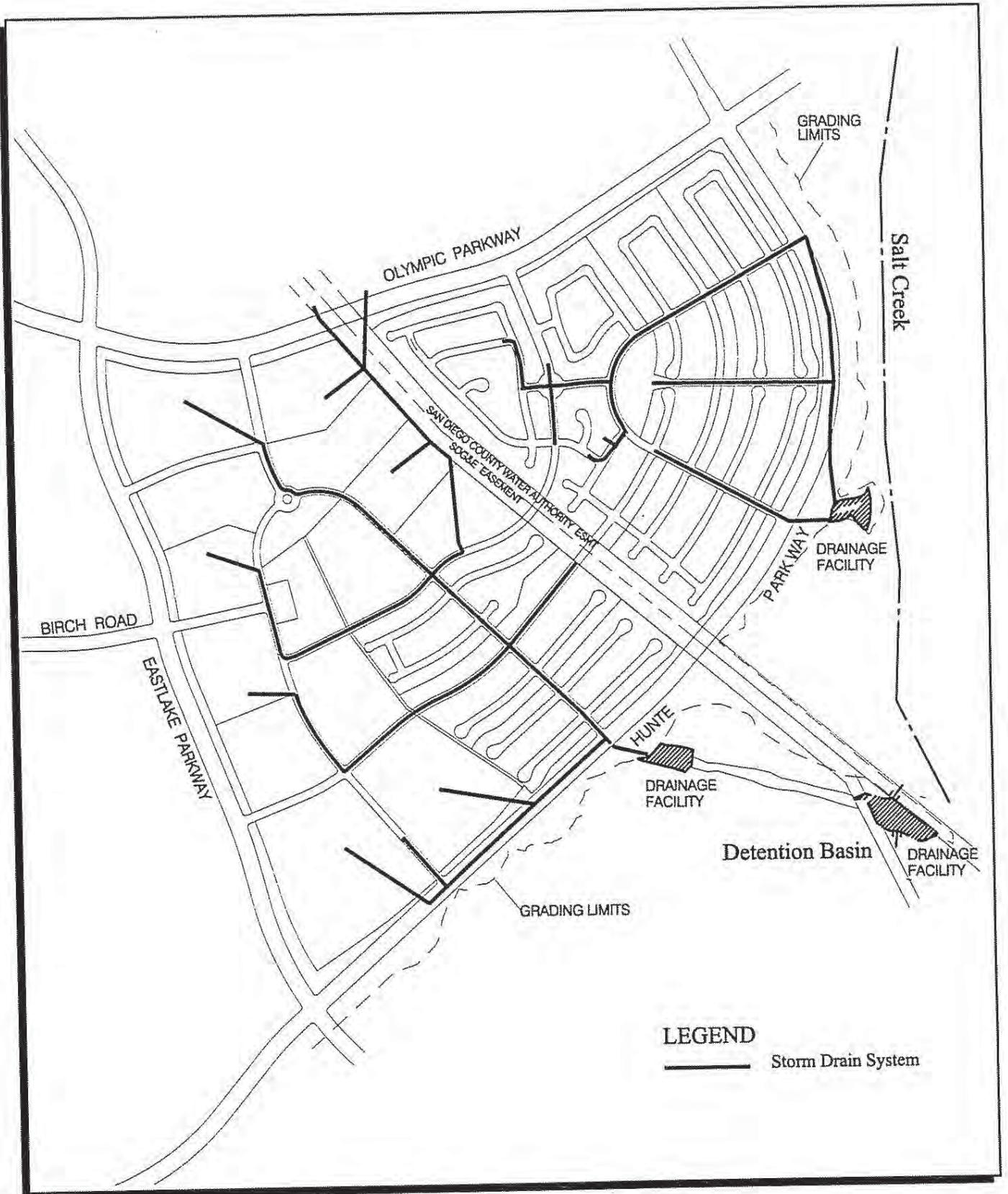
The Amended SPA One EIR found that the implementation of the Amended SPA One Plan would have significant impacts on downstream drainage facilities, urban runoff, and pollutants associated with urban runoff, but that mitigation measures as described in the Amended SPA One EIR would reduce the impacts to a level of insignificance.

5.9.4 IMPACTS**GDP AMENDMENTS**

The Program EIR 90-01 identified impacts to surface water runoff, groundwater recharge and water quality issues for the adopted GDP plan. The proposed GDP Amendments are entirely within the development boundaries identified for the adopted GDP, and development proposed under the GDP Amendments would have similar characteristics related to surface permeability and water quality (i.e., similar density of development and type of use proposed). The proposed GDP Amendments would not result in substantial changes in the direction of flow of surface water, compared to the adopted GDP Plan. The GDP Amendments would, therefore, result in the same significant impacts related to increased surface water runoff, decreased groundwater recharge, erosion and siltation.

VILLAGE 11 SPA/TM***Hydrology***

The Village 11 SPA/TM proposes a drainage system that has been conceptually designed to adequately convey all storm water generated from the Village 11 Project Area (*Figure 5.9-1, Drainage Plan*). Potentially significant impacts related to flooding and water quality could result without implementation of the proposed storm drain system, as approved in its final design by the City Engineer.



SOURCE: Brookfield Shea Otay, LLC (May 2001)

Drainage Plan

Figure 5.9-1

Otay Ranch GDP Amendments and Village 11 SPA/TM EIR



Not to Scale

Groundwater Hydrogeology

Implementation of the proposed Village 11 SPA/TM would increase the amount of impermeable surfaces which would result in increased runoff and reduced on-site water percolation. Because locally the groundwater is perched, flowing laterally rather than into a regional groundwater table, the effects from decreased percolation would be limited to the Village 11 Project Area. The Otay River Valley, as the principal aquifer within Otay Valley Parcel, would ultimately receive the additional surface runoff to replenish groundwater to the basin. Therefore, while groundwater quantities may be altered locally within the Village 11 Project Area, no significant impacts to regional groundwater quantities are anticipated.

Groundwater Quality

The increased exposure to urban pollutants could affect the quality of water that recharges groundwater. The Village 11 Project Area has not been identified as a source of significant groundwater recharge. However, the Village 11 SPA/TM includes water quality Best Management Practices (BMPs), including three detention basins as described in the following subsections that are designed to capture the first 0.6 inch of runoff from the Village 11 Project Area, consistent with the proposed revisions to water quality regulations of the Regional Water Quality Control Board. Control of surface water quality would also have a beneficial effect on groundwater quality. With the proposed measures to avoid water quality impacts proposed as a part of the Village 11 SPA/TM, no significant impacts to groundwater quality are anticipated.

Surface Water Quality

Surface runoff from the Village 11 Project Area would be collected in drainage inlets and catch basins, then conveyed through storm drain facilities to the discharge points primarily into Salt Creek. Small portions of the site would drain to Poggi Canyon and Otay River as well (10 and 14 acres, respectively). Implementation of the Village 11 SPA/TM would result in an increase in the amount of runoff during storms due to the overall increase in impervious surface areas. In accordance with City policy, existing and planned development upstream of the Village 11 Project Area that is within the Salt Creek watershed is required to detain storm water flows in order to avoid increasing the peak storm flow volume in Salt Creek. The detention of upstream flows within the Salt Creek drainage would have the effect of

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Water Resources and Water Quality

delaying the peak flow in Salt Creek, at the point where the Village 11 storm water flows would be added. Development of the Village 11 Project Area would introduce impervious surfaces to the site which would accelerate flows coming from the site. The developed storm water flows from Village 11 would reach Salt Creek faster than the existing flows, and in advance of the detained upstream flows. This would have the effect of decreasing the peak volume of runoff at the downstream end of Salt Creek, as shown in *Table 5.9-1*.

TABLE 5.9-1
100-YEAR VILLAGE 11 DISCHARGE QUANTITIES

Existing Condition Runoff at Downstream End, Salt Creek	Post -Development Runoff at Downstream End, Salt Creek
2,301 cfs	2,165 cfs

Source:Hunsaker and Associates

Therefore, implementation of the Village 11 SPA/TM would not have a significant impact on peak storm water flows within Salt Creek.

Development of the site would have the effect of reducing erosion and sedimentation potential through the increase in impervious surfaces. However, erosion potential would exist at the locations where runoff is ultimately released from the Village 11 Project Area. To avoid potentially significant impacts related to erosion, the Village 11 SPA/TM has been designed to include energy dissipation structures ,including a series of weir structures upstream of the southerly detention basin, to reduce runoff flow velocities to pre-development conditions (no net increase in storm flow velocities coming from the Village 11 Project Area) in accordance with City policy. Therefore, impacts related to erosion would be reduced to a less than significant level, through project design.

Implementation of the Village 11 SPA/TM would result in the potential for urban pollutants accumulating in the surface runoff. Particularly the potential impact would occur from paved areas and chemicals from landscaping areas. Accumulated hydrocarbons such as fuels, solvents, oils and grease would enter runoff flowing over the paved areas. Excess pesticides and herbicides generated from landscaped areas would also be picked up in runoff. The greatest concentration of urban-derived pollutants would be expected to occur during the

early stages of a rainfall event (“first flush”), or as a result of dry-weather flows associated with irrigation and other sources of non-natural flow. The first flush and dry-weather flows contain high concentrations of contaminants that are washed from areas such as roadways, roofs, curbs and parking lots. The proposed drainage facilities for Village 11 will be required to include interception and detention of all possible dry weather flows. Post-construction BMPs are included in the design of the Village 11 SPA/TM. The BMP facilities include, a basin located at the storm drain system outfall just south of the Hunte Parkway – Quiet Creek Circle South intersection, will collect and treat the first flush runoff volume (defined by San Diego Regional Water Quality Control Board Order No. 2000-01 as the runoff generated from the first 0.6 inches of rainfall) from site area east of the SDGE easement. Another basin, located near the divergence of the SDG&E power utility easement and the San Diego County Water Authority easement and roughly 2,000 feet downstream of the proposed 84-inch RCP under Hunte Parkway, will collect and treat the first flush runoff volume from site area west of the easement.

With implementation of the proposed facilities, as demonstrated through the engineering design-level mitigation measures to collect and treat all first flush and dry-weather flows from the Village 11 Project Area, no significant impacts to surface water quality would result from either first flush or dry-weather runoff sources.

In addition to the aforementioned water quality basins, the RWQCB regulations require that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for development within the Village 11 Project Area. The SWPPP would address water quality impacts associated with construction and operation of the project. To mitigate impacts from “first flush” runoff and flow, all BMPs identified in the SWPPP would be implemented. The SWPPP shall be consistent with the requirements of the Clean Water Act and the BMPs of the RWQCB. BMPs identified in the SWPPP shall include, but are not limited to the following:

- a) Existing vegetation shall be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.
- b) Temporary erosion control measures shall be employed for disturbed areas.

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Water Resources and Water Quality

- c) No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.
- d) Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- e) Storm drains will be equipped with silt and oil traps to remove oils, debris and other pollutants. Storm drain inlets shall be labeled "No Dumping-Drains to Ocean."
- f) The parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips and/or oil-water separators to control sediment, oil, and other contaminants.
- g) Permanent energy dissipaters shall be included for drainage outlets.
- h) The project area drainage basins shall be designed to provide effective water quality control measures. Design and operational features of the drainage basins will include design features to provide maximum detention time for settling of fine particles; maximize the distance between basin inlets and outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation and debris.

In addition to the permanent drainage facilities, temporary desiltation basins to control construction related water quality impacts would be constructed within the Village 11 Project Area with each grading phase to control sedimentation during construction. The interim desiltation basins would be designed to prevent discharge of sediment from the project grading operations into the natural drainage channel and would incorporate water quality control features to comply with Regional Water Quality Control Board 401 Certification requirements. The exact size, location and component elements of these interim basins would be identified during preparation of and be shown on the grading plans, subject to the approval of the City of Chula Vista. The proposed temporary basins would reduce short-term impacts related to erosion and sedimentation to less than significant levels.

With implementation of the proposed facilities, as demonstrated through the engineering design-level mitigation measures to collect and treat all first flush and dry-weather flows from the Village 11 Project Area, in addition to the required BMPs, no significant impacts to surface water quality would result from either first flush or dry-weather runoff sources.

5.9.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 concluded that the following impacts to water resources would be significant but mitigable:

- Increases in surface water runoff due to an increase in impervious surfaces could increase potential for downstream flooding, cause potential safety impacts, and increase erosion and siltation. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.
- Development may encroach into the 100-year floodplain. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

The GDP Amendments would not substantially change the character or intensity of impacts to water resources, and would result in the same significant impacts related to increased surface water runoff, decreased groundwater recharge, erosion and siltation as the adopted GDP.

VILLAGE 11 SPA/TM

Potentially significant impacts related to flooding and water quality could result without implementation of the proposed storm drain system, as approved in its final design by the City Engineer.

5.9.6 MITIGATION MEASURES

GDP AMENDMENTS

The Program EIR 90-01 requires that additional study of water-related issues be conducted at the SPA-level of analysis, and requires specific standards to be met. These mitigation measures are included in Appendix B and would still apply under the amended GDP. No additional mitigation measures would be required.

VILLAGE 11 SPA/TM

5.9-1 Prior to approval of Tentative Map, the final design for the Village 11 drainage facilities shall be approved by the City Engineer. The design shall demonstrate the following:

- a) First flush/dry-weather detention facilities shall be demonstrated to contain the dry-weather flows from all sources, as well as first flush runoff from the Village 11 Project Area;
- b) Each inlet, outlet, interceptor, concentration or confluence point, shall be demonstrated to handle the peak runoff for post-development conditions;
- c) The proposed system shall be integrated with existing and proposed downstream drainage facilities to effectively control flows within the entire system;
- d) Main lines and detention/desilting facilities shall be designed pursuant to Section 3-202-1 of the Chula Vista Subdivision Manual; and

5.9-2 The applicant shall provide interim drainage facilities, within Village 11, downstream of each development phase, in compliance with RWQCB regulations. These interim facilities shall be shown on grading plans, to be submitted and approved by the City Engineer, and shall be required until such time that the permanent drainage facilities can be completed per the Village 11 Master Drainage Study (Hunsaker 2001).

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- 5.9-3** Upon completion of all drainage facilities, the applicant shall obtain approval from the Federal Emergency Management Agency (FEMA) for the update of the Salt Creek floodplain boundary. This mitigation measure shall be satisfied by a letter of map revision from FEMA.
- 5.9-4** The applicant shall submit a SWPPP including assignment of maintenance responsibilities for review and approval by the City Engineer prior to issuance of grading permits. The SWPPP shall be consistent with the requirements of the Clean Water Act and the BMPs of the RWQCB. BMPs identified in the SWPPP shall include, but shall not be limited to the following:
- a) Existing vegetation shall be retained where possible. To the extent feasible, grading activities will be limited to the immediate area required for construction.
 - b) Temporary erosion control measures will be employed for disturbed areas.
 - c) No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.
 - d) Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures.
 - e) Storm drains will be equipped with silt and oil traps to remove oils, debris and other pollutants. Storm drain inlets shall be labeled "No Dumping-Drains to Ocean."
 - f) The parking lots shall be designed to allow storm water runoff to be directed to vegetative filter strips and/or oil-water separators to control sediment, oil, and other contaminants.
 - g) Permanent energy dissipaters will be included for drainage outlets.
 - h) The project area drainage basins will be designed to provide effective water quality control measures. Design and operational features of the drainage basins will include design features to provide maximum detention time for settling of fine particles; maximize the distance between basin inlets and

5.9 Water Resources and Water Quality

outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation and debris.

5.9.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 concluded that the impacts to water resources are significant but would be mitigated at the SPA-level of analysis, with the completion of the required studies and implementation of the required mitigation measures. The GDP Amendments would not change any of the conclusions of the Program EIR 90-01 related to water resources and water quality. With implementation of mitigation measures to be developed at the SPA-level of analysis, impacts would be mitigated to less than significant levels.

VILLAGE 11 SPA/TM

The proposed mitigation measures and project design would mitigate all significant impacts related to water resources to a less than significant level.

5.10 Transportation, Circulation, and Access

5.10 TRANSPORTATION, CIRCULATION, AND ACCESS

The following section provides a summary of two studies prepared by Linscott, Law & Greenspan (LLG) including the *Traffic Impact Analysis Village 11, dated July 5, 2001* and the *Traffic Impact Analysis General Plan/Otay Ranch General Development Plan Amendments, dated July 5, 2001*. The Village 11 traffic analysis evaluates the potential impacts generated resulting from short-term, long-term and buildout of the proposed Village 11 SPA Plan/TM. The GDP traffic study analyzes the potential effects of the proposed GDP Amendments as compared to the adopted GDP analyzed in the Otay Ranch Program EIR 90-01. Both traffic reports assume the University land use as the primary land use for Villages Nine and Ten. Please refer to Appendix G for more detailed technical information. Appendices to the Village 11 traffic impact analysis study are on file with the City of Chula Vista City Clerk.

5.10.1 EXISTING CONDITIONS

GDP AMENDMENTS

Currently, the Amendment Area consists of undeveloped land. Regional access to the Amendment Area is provided by I-805, which is located approximately four miles to the west of the Amendment Area. *Figure 3-4* shows the adopted Circulation Element Roads in the Amendment Area.

VILLAGE 11 SPA/TM

The Village 11 Project Area is located in the eastern portion of the Amendment Area. Similarly, regional access to the Amendment Area is provided by I-805. *Figure 5.10-1, Existing and Proposed Circulation Network*, provides a map of the existing and proposed roadways and intersections studied for the proposed Village 11 SPA/TM (study area). The study area roughly encompasses the Otay Ranch and adjacent areas between I-805 to the west, Lower Otay Reservoir to the east, H Street to the north and Otay Valley Road to the south.

Primary Roadways

The existing street system in the study area is described below, and *Table 5.10-1, Existing Street Segment Operations*, identifies the existing street segment operations in the Amendment Area.

5.10 Transportation, Circulation, and Access

TABLE 5.10-1
EXISTING STREET SEGMENT OPERATIONS

STREET SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	EXISTING	
			Vol	LOS
"H" STREET				
I-805 to Hidden Vista Dr.	6-Lane Prime Arterial	50,000	64,270	F
Hidden Vista Dr. to Paseo Del Rey	6-Lane Prime Arterial	50,000	4,410	C
Paseo Rancho to Otay Lakes Rd.	6-Lane Prime Arterial	50,000	26,520	A
Otay Lakes Rd. to Rutgers Rd.	4-Lane Major Street	30,000	18,540	A
Rutgers Rd. to Mount Miguel Rd.	4-Lane Major Street	30,000	14,770	A
PROCTOR VALLEY ROAD				
Mount Miguel Rd. to Lane Ave.	6-Lane Major Street	50,000	4,080	A
TELEGRAPH CANYON ROAD				
I-805 to Halecrest Dr.	6-Lane Major Arterial	40,000	50,800	F
Halecrest Dr. to Paseo Del Rey	6-Lane Prime Arterial	50,000	47,200	C
Paseo Del Rey to Medical Center Dr.	6-Lane Prime Arterial	50,000	42,000	B
Medical Center Dr. to Paseo Rancho	6-Lane Prime Arterial	50,000	40,990	B
Paseo Rancho to Main Street	6-Lane Prime Arterial	50,000	34,480	A
OTAY LAKES ROAD				
"H" St. to Telegraph Canyon Rd.	4-Lane Major Street	33,000	20,760	A
Telegraph Canyon Rd. to Rutgers Rd.	6-Lane Prime Arterial	50,000	31,120	A
Rutgers Rd. to Eastlake Pkwy.	6-Lane Prime Arterial	50,000	28,300	A
Eastlake Pkwy. to Lane Ave.	6-Lane Prime Arterial	50,000	12,420	A
Lane Ave. to Hunte Pkwy.	6-Lane Prime Arterial	50,000	6,830	A
Hunte Pkwy. to Wueste Pkwy.	6-Lane Prime Arterial	50,000	3,620	A
PASEO RANCHO				
"H" St. to Telegraph Canyon Rd.	Class I Collector	22,000	10,420	A
EASTLAKE PARKWAY				
N/O Otay Lakes Rd.	4-lane Major Arterial	30,000	8,760	A
S/O Otay Lakes Rd.	4-lane Major Arterial	30,000	16,590	A
LANE AVENUE				
N/O Otay Lakes Rd.	Class I Collector	22,000	3,900	A
HUNTE PARKWAY				
Otay Lakes Rd. to Clubhouse Dr.	4-lane Major Arterial	30,000	3,590	A
WUESTE ROAD				
Otay Lakes Rd. to Olympic Parkway	Class III Rural Collector	7,500	3,600	A

Levels of service E and F indicated in bold with shading.

Cap - Roadway facility capacity at LOS D based on City of Chula Vista Standards

Vol - Average daily traffic volumes.

Nom - Nominal

5.10 Transportation, Circulation, and Access

Interstate 805. I-805 is a north-south freeway, which originates in South County and terminates at its connection with the I-5 Freeway in Sorrento Valley. Local interchanges in the project vicinity are at Olympic Parkway, Telegraph Canyon Road, and East H Street. I-805 is generally an eight-lane freeway between I-805 and SR 54 with auxiliary lanes present between some interchanges. Two segments of I-805 that would serve the Amendment Area and Village 11 Project Area, currently operate at level of service (LOS) E or F.

East H Street. East H Street traverses the northern boundary of the study area. East H Street is classified as a Six-Lane Prime Arterial from I-805 to Otay Lakes Road, and as a Four-Lane Major east of Otay Lakes Road. Six lanes of divided travel exist today, narrowing to four lanes of divided travel east of Otay Lakes Road. All of the arterials, and all but one of the street segments studied currently operate at LOS D or better. The single exception is East H Street from I-805 to Hidden Vista Drive, which operates at LOS F during the morning and afternoon peak hours.

Olympic Parkway. Olympic Parkway provides direct access into the study area and Village 11 upon completion of an ongoing extension. It is classified as a Six-Lane Prime Arterial from I-805 to Hunte Parkway, and as a Four-Lane Major east of Hunte Parkway. Olympic Parkway currently terminates at Brandywine Avenue, just east of I-805 and is a Four-Lane Major Street with bike lanes on both sides from I-805 to Oleander Avenue. East of Oleander Avenue, this road is a two-lane roadway with improvements along the south side only. On-street parking is prohibited. The posted speed limit is 35 mph east of Oleander Avenue. Extension of this facility to the east is planned to be completed by the year 2002.

Telegraph Canyon Road/Otay Lakes Road. Telegraph Canyon Road/Otay Lakes Road provides east-west access through the northern portions of the study area. Telegraph Canyon Road/Otay Lakes Road is classified as a Six-Lane Major west of Paseo del Rey, and as a Six-Lane Prime Arterial east of Paseo del Rey. It is generally a six-lane facility that transitions into a Two-Lane Collector to the east of Hunte Parkway. Bike lanes exist on both sides of the road and bus stops are located intermittently along Telegraph Canyon Road/Otay Lakes Road. On-street parking is prohibited. The posted speed limit is 40 mph from I-805 to Crest Drive/Oleander Avenue, 45 mph from Crest Drive/Oleander Avenue to Old Telegraph Canyon Road, and 50 mph from Old Telegraph Canyon Road to Hunte Parkway.

5.10 Transportation, Circulation, and Access

Paseo Ranchero. Paseo Ranchero is classified as a Class 1 Collector and currently extends from Rancho del Rey Parkway to Telegraph Canyon Road. Currently, the section of Paseo Ranchero from Telegraph Canyon Road to East Palomar Street is a Six-Lane Prime Arterial. Four lanes of travel are provided in the remaining section of Paseo Ranchero. Bike lanes exist today on both sides of the road; therefore, curbside parking is prohibited. The posted speed limit is 35 mph north of East H Street and 40 mph south of East H Street. Paseo Ranchero is planned to extend south of Telegraph Canyon Road to the future Olympic Parkway extension and beyond to Otay Valley Road as a Six-Lane Prime Arterial.

Otay Lakes Road. Otay Lakes Road is classified as a Six-Lane Prime Arterial. Otay Lakes Road is a four-lane major arterial providing north-south access between Bonita Road and Telegraph Canyon Road, at which point it turns to the east. East of La Media Road, Otay Lakes Road transitions into a Six-lane Prime Arterial, and eventually into a Class 2 Collector (two lanes) east of Hunte Parkway. Bike lanes exist on both sides of the road and the posted speed limit is 50 mph from Telegraph Canyon Road/La Media Road to the easterly city limits, east of Lane Avenue. La Media Road is planned to extend to the south from the intersection of Telegraph Canyon Road/Otay Lakes Road.

Corral Canyon Road/Rutgers Avenue. Corral Canyon Road/Rutgers Avenue provides access between Central Avenue and Telegraph Canyon Road. Corral Canyon Road is classified as a Two-Lane Collector within the County of San Diego and becomes a Class 2 (Three-Lane) Collector within City of Chula Vista limits. Corral Canyon Road becomes Rutgers Avenue, also a Class 2 (Three-Lane) Collector, south of East H Street. Two lanes of travel are provided north of East H Street and four lanes of travel on the portion south of East H Street to Gotham Street. Bike lanes exist on either side of the street on both Corral Canyon Road/Rutgers Avenue. No curbside parking is available. The posted speed limit north of East H Street is 40 mph and 25 mph south of East H Street. Curbside parking is prohibited north of Gotham Street.

EastLake Parkway. EastLake Parkway is classified as a Four-Lane Major Street and as a Six-Lane Prime Arterial south of the SDG&E easement in EastLake Greens. Currently, it provides four lanes (two lanes in each direction). Bike lanes exist on either side of the road and curbside parking is prohibited. The posted speed limit is 40 mph. This Four-Lane Major Arterial would be extended south to the future Olympic Parkway extension.

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Hunte Parkway. Hunte Parkway is classified as a Four-Lane Prime Arterial from Otay Lakes Road to Olympic Parkway. Currently, it extends south of Otay Lakes Road as a Four-Lane Major Street arterial with a posted speed limit of 45 mph. Bike lanes exist on either side of the road and curbside parking is prohibited. This facility connects to Olympic Parkway to the south.

State Route 125 (SR-125). SR-125 is proposed to be completed between SR-54 and State Route 905 (SR-905) initially as a four-lane tollway. It may be constructed by 2004, but the current status is unclear.

Alta Road. Alta Road is planned to be constructed as a Six-Lane Prime Arterial between Hunte Parkway and SR-905.

Wueste Road. Wueste Road is classified as a Class 3 Collector. It is currently a narrow, winding two-lane road extending between Otay Lakes Road and the south city limits.

As shown in *Table 5.10-1*, all key street segment operations are calculated to currently operate at Level of Service (LOS) C or better under existing conditions except the following (Note: A description of LOS thresholds is provided in Appendix G):

- East H Street from I-805 to Hidden Vista Drive (LOS F); and
- Telegraph Canyon Road from I-805 to Oleander Avenue (LOS D).

Intersections

A total of 52 intersections within the study area were evaluated for traffic impacts. These intersections are shown in *Figure 5.10-1*. Twenty-seven of these intersections exist today, while the remaining 25 will be built in the future. Of the 27 existing intersections, 21 are signalized and 6 are unsignalized. The intersections studied were chosen based on the amount of project traffic expected to utilize these intersections.

The existing operations at signalized and unsignalized intersections were determined for the morning (AM) and afternoon (PM) peak hours. AM peak hours are generally between the hours of 7:00 a.m. and 8:00 a.m., and PM peak hours are typically 5:00 p.m. to 6:00 p.m. All but three signalized intersections operate at LOS D or better. The three signalized intersections that currently operate at below LOS D are:

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- H Street/I-805 southbound ramp: LOS F during the PM peak hour;
- Telegraph Canyon Road/I-805 northbound ramp: LOS E during the AM and PM peak hours; and
- Olympic Parkway/I-805 southbound ramp: LOS E during the PM peak hour.

All of the six unsignalized intersections currently operate at LOS C or better.

Arterials

The City of Chula Vista's Traffic Monitoring Program (TMP) assesses the operating performance of the City's arterial street system for compliance with the Threshold Standards of the City's Growth Management Oversight Committee (GMOC). The City of Chula Vista's significance criteria dictates that if a volume/capacity analysis indicates LOS D, E or F conditions, the GMOC TMP method shall be utilized in the analysis of those segments in the short-term (0-4 year horizon). Based on the GMOC TMP methodology described in Appendix G, East H Street and Telegraph Canyon Road were analyzed in the near-term condition (0-4 year horizon) because these arterials are the only sections or links of roadways located within GMOC arterial street segments calculated to operate at LOS D or worse (see Table 5.10-1). Using the TMP methodology, both arterial segments are calculated to operate at LOS C or better:

- East H Street: I-805-South Western College
- Telegraph Canyon Road: Halecrest Avenue to Medical Center Drive
Medical Center Drive to Otay Lakes Road

Freeway Segments

Existing operations on two segments of I-805 were analyzed, including Bonita Road to East H Street and East H Street to Telegraph Canyon Road. The two segments analyzed currently operate at LOS E or F.

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5.10.2 THRESHOLDS OF SIGNIFICANCE

The City of Chula Vista has developed traffic standards, which were used to evaluate the potential traffic impacts of the proposed GDP Amendments and Village 11 SPA Plan/ TM. The significance thresholds depend upon whether intersections, street segments, or freeways are being analyzed and whether the analysis addresses the short-term (study horizon years 0-4 or pre-year 2005), long-term (study horizon years 5 and beyond or year 2005 or later). The project significance criterion then determines whether the project impact is cumulative or direct. The following provides the significance thresholds for each of these conditions:

INTERSECTIONS (Study Horizon Years 0-4)

- A) A direct project impact would occur if both of the following criteria are met:
- An intersection operates at LOS E or F; and
 - Project trips comprise 5 percent or more of entering volume
- B) A cumulative impact would occur if only #1 is met.

STREET SEGMENTS (Study Horizon Years 0-4)

If ADT methodology indicates LOS C or better, the impact is not significant. If ADT methodology indicates LOS D, E, or F, the Growth Management Oversight Committee (GMOCC Growth Management Oversight Committee (GMOC) method should be utilized. The following criteria would then be utilized:

- A) The project would have a direct project impact if all of the following criteria are met:
- LOS is LOS D for more than 2 hours or LOS E/F for 1 hour GMOC criteria;
 - Project trips comprise 5 percent or more of the segment volume; and
 - Project adds greater than 800 ADT to segment.
- B) A cumulative impact would occur if only #1 is met.

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FREEWAYS (Study Horizon Years 0-4)

- A) A direct project impact would result if both the following criteria are met:
- Freeway segment is LOS E or LOS F; and
 - Project constitutes 5 percent or more of the total forecasted ADT on that freeway segment.
- B) A cumulative impact would occur if only #1 is met.

INTERSECTIONS (Study Horizon Year 2005 and Beyond)

- A) A direct project impact would occur if both of the following criteria are met:
- An intersection operates at LOS E or F; and
 - Project trips comprise 5 percent or more of entering volume
- B) A cumulative impact would occur if only #1 is met.

STREET SEGMENTS (Study Horizon Year 2005 and Beyond)

Using the ADT methodology:

- A) The project would have a direct project impact if all of the following criteria are met:
- LOS is LOS D, LOS E, or LOS F;
 - Project trips comprise 5 percent or more of total segment volume; and
 - Project adds greater than 800 ADT to the segment.
- B) A cumulative impact would occur if only #1 is met.

However, if the intersections along a LOS D or LOS E operating segment all operate at a LOS D or better, the segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If the segment LOS is LOS F, the impact is significant regardless of the intersection LOS. The

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impact is direct if the project is responsible for over 5 percent and cumulative if less than 5 percent.

Notwithstanding the foregoing, if the impact identified above occurs at study horizon year 10 or later, and is offsite and not adjacent to the project, the impact is considered cumulative.

In the event a direct project-specific impact identified above occurs at the study horizon year 5 or earlier, and the impact is offsite and not adjacent to this project, but the property immediately adjacent to the identified project-specific impact is also proposed to be developed in approximately the same time frame, an additional analysis may be required to determine whether or not the identified project-specific impact would still occur if the development of the adjacent property does not take place. If the additional analysis concludes that the identified project-specific impact is no longer a direct impact, then the impact shall be considered cumulative.

FREEWAYS (Study Horizon Year 2005 and Beyond)

- A) A direct project impact would result if both the following criteria are met:
- Freeway segment is LOS E or LOS F; and
 - Project constitutes 5 percent or more of the total forecasted ADT on that freeway segment.
- B) A cumulative impact would occur if only #1 is met.

CONGESTION MANAGEMENT PROGRAM

Project traffic and roadway improvements must be in compliance with San Diego Association of Government's (SANDAG) Congestion Management Program, (CMP) which was adopted on November 22, 1991 by SANDAG, and is intended to directly link land use, transportation and air quality through Level of Service Performance. The CMP requires an Enhanced CEQA Review of all large projects that are expected to generate more than 2,400 ADT or more than 200 peak hour trips.

In 1993, the Institute of Transportation Engineers California Border Section and the San Diego Region Traffic Engineer's Council established a set of guidelines to be used in the

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preparation of traffic impact studies that are subject to the Enhanced CEQA review process. This published document, which is titled *1993 Guidelines for Congestion Management Program Transportation Impact Reports for the San Diego Region*, requires that a project study area be established as follows:

- All streets and intersections on CMP roadways or on "regionally significant arterials" where the project would add 50 or more peak hour trips in either direction.
- Mainline freeway locations where the projects would add 150 or more peak hour trips in/either direction.

Per these guidelines, the following regional arterials and freeways were analyzed in this EIR, as required to satisfy the CMP:

- East H Street
- Telegraph Canyon Road
- I-805
- SR-125

5.10.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR 90-01. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR 90-01.

OTAY RANCH PROGRAM EIR

The Program EIR 90-01 found a number of significant impacts to transportation, circulation and access and required a traffic analysis for each proposed SPA. The SPA-level traffic studies were anticipated to identify additional transportation mitigation measures for the construction of new roads, bridges and roadway improvements, and to implement

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transportation demand management (TDM) programs or other measures necessary to mitigate traffic impacts on Circulation Element Roads.

Program EIR 90-01 included a standard to be achieved at the SPA-level such that subsequent SPA development projects avoid reducing the existing level of service on street segments to below LOS C with the exception that LOS D may occur on signalized arterial segments for a period not to exceed a total of two hours per day. Internal streets/roads are not required to meet these standards. The specific impacts addressed in the Program EIR 90-01 include:

- Impacts to the road network in the South Bay, including proposed SR-125;
- Impacts to road segments and intersections due to increase in traffic associated with Otay Ranch; and
- Potential secondary impacts related to offsite roadway improvements.

No feasible mitigation measures were identified at the program-level of analysis to reduce the secondary impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The Sphere of Influence Update EIR concluded that the inclusion of Otay Ranch parcels into the City's sphere would not affect the conclusion in the Program EIR, namely that impacts to traffic and circulation would remain significant and unavoidable in some respects. Nevertheless, because the Sphere of Influence Update would not by itself result in physical change, there would be no significant impact.

OTAY RANCH SPA ONE EIR

Two of the amendments made to the Otay Ranch GDP to implement the SPA One Plan and annexation modified the alignment of the transit corridor within Villages 1 and 5, and required that each SPA Plan locate and dedicate a transit stop as a condition of tentative map approval.

AMENDED SPA ONE EIR

The SPA One West EIR found that the GDP Amendments would not impose any new traffic impacts not previously identified.

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5.10.4 IMPACTS

GDP AMENDMENTS

A traffic analysis was conducted to determine if the implementation of the proposed Otay Ranch GDP Amendments would result in any new traffic impacts, which were not identified in the previous Otay Ranch Program EIR 90-01. The purpose of the analysis was also to determine if significant impacts and corresponding mitigation measures previously identified in the Program EIR 90-01 would be still relevant and applicable to the proposed project.

The methodology utilized for determining buildout segment average daily trips (ADT) and intersection peak hour volumes is explained in the following paragraphs.

Segments

The buildout street segment ADTs were obtained from a Series 9 Model Run prepared by SANDAG. This Model assumes the proposed roadway network, proposed Otay Ranch Village 11 SPA Plan land uses and adopted land uses for other adjacent communities. The following is a description of how the street segments were chosen to be analyzed.

A review of the conclusions of the 1993 adopted GDP traffic analysis indicated that the following 15 segments within the Amendment Area were determined to have a significant traffic impact at buildout. For the purposes of this analysis, these 15 critical segments were evaluated to determine if current methodologies would indicate that significant impacts may still occur.

- Sweetwater Rd. from Bonita Center Pkwy. to Willow St. ¹
- Sweetwater Rd. from Bonita Rd. to SR 54 ¹
- Central Ave from Bonita Rd. and Corral Canyon Rd. ¹
- Bonita Rd. from I-805 to Plaza Bonita Rd. ¹
- Bonita Rd. from Plaza Bonita Rd. to Willow St. ¹
- Bonita Rd. from Willow St. to Otay Lakes Rd. ¹
- Bonita Rd. from Otay Lakes Rd. to Central Ave. ¹
- Bonita Rd. from Central Ave. to San Miguel Rd. ¹
- La Media Rd. from Otay Mesa Rd. to SR 905 ²
- La Media Rd. from SR 905 to Airway Rd. ²
- Camino Maquiladora from Otay Mesa Rd. to Heritage Rd. ²

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- Millar Ranch Rd. from SR 94 to Proctor Valley Rd. ¹
- Oleander Ave. from Telegraph Canyon Rd. to Naples Ave. ³
- Britannia Boulevard from SR 905 to Airway Rd. ²
- Otay Lakes Rd. from SR-125 to EastLake Pkwy. ³

Notes:

- ¹ County of San Diego roadway.
- ² City of San Diego roadway.
- ³ City of Chula Vista roadway.

In addition to the above segments, the following segments were also analyzed. These segments were selected since they have historically carried high volumes and/or are near freeways, where traffic is most constrained.

- East H St. w/o Otay Lakes Rd.
- East H St. w/o Mount Miguel Rd.
- Telegraph Canyon Rd. e/o I-805
- Telegraph Canyon Rd. w/o Otay lakes Rd.
- Telegraph Canyon Rd. w/o SR-125
- Olympic Pkwy. e/o I-805
- Olympic Pkwy e/o Hunte Pkwy.
- Otay Lakes Rd. e/o Hunte Pkwy.
- Paseo Ranchero s/o Olympic Pkwy.
- Otay Lakes Rd. n/o Telegraph Canyon Rd.
- La Media Rd. s/o Olympic Pkwy.
- EastLake Pkwy. s/o Telegraph Canyon Rd.
- Hunte Pkwy. n/o Olympic Pkwy.
- Hunte Pkwy. s/o Olympic Pkwy.

The street segments were assessed on a daily basis by comparing the daily street segment volume (ADT) to the theoretical capacity of the roadway. Capacity standards for each roadway were determined by jurisdiction.

Table 5.10-2, Segment Operations, summarizes the selected segment operations. All the segments selected from the traffic analysis contained in the Program EIR 90-01 are calculated to operate at LOS D or worse except the following:

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- Central Avenue from Bonita Road to Corral Canyon Road,
- Olympic Parkway from Hunte Parkway to Eastlake Vista,
- Hunte Parkway from Otay Lakes Road to Eastlake Greens,
- Hunte Parkway from Eastlake Trails to Olympic Parkway.

TABLE 5.10-2 — SEGMENT OPERATIONS

SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	ALT 4	
			VOLUME	LOS
SEGMENTS IDENTIFIED IN THE OTAY RANCH TRAFFIC ANALYSIS, JULY 1992				
Sweetwater Rd. from Bonita Center Pkwy. to Willow St. ¹	Light Collector	7,100	13,000	F
	6-Ln Road	44,600		A
Sweetwater Rd. from Bonita Rd. to SR 54 ¹	Town Collector	9,500	20,000	F
	4-Ln Major Road	29,600		B
Central Ave from Bonita Rd. and Carrol Canyon Rd. ¹	Town Collector	9,500	7,000	C
Bonita Rd. from I-805 to Plaza Bonita Rd.	6-Ln Major	40,000	44,000	D
	6-Ln Prime	44,000		C
Bonita Rd. from Plaza Bonita Rd. to Willow St. ¹	Major Road	29,600	40,000	F
	6-Ln Major	44,600		C
Bonita Rd. from Willow St. to Otay Lakes Rd. ¹	4-Ln Major Road	29,600	34,000	E
	6-Ln Prime	44,600		B
Bonita Rd. from Otay Lakes Rd. to Central Ave. ¹	Town Collector	9,500	30,000	F
	6-Ln Major	44,600		B
Bonita Rd. from Central Ave. to San Miguel Rd. ¹	Town Collector	9,500	19,000	F
	4-Ln Major Road	29,600		B
La Media Rd. from Otay Mesa Rd. to SR 905 ²	Collector	7,500	15,000	F
	6-Ln Major Arterial	40,000		A
La Media Rd. from SR 905 to Airway Rd. ²	Collector	7,500	20,000	F
	6-Ln Prime Arterial	50,000		A
Camino Maquiladora from Otay Mesa Rd. to Heritage Rd. ²	Collector	5,000	6,000	D
	4-Ln Collector	10,000		B
Millar Ranch Rd. from SR 94 to Proctor Valley Rd. ^{1,3}	Rural	7,100	10,000	D
	4-Ln Major Road	29,600		A
Oleander Ave. from Telegraph Canyon Rd. to Naples Ave.	Class III Collector	7,500	8,000	D
	Class I Collector	22,000		A
Brittania Boulevard from SR 905 to Airway Rd. ²	Collector	7,500	30,000	F
	6-Ln Major Arterial	40,000		C
Otay Lakes Rd. from SR 125 to Eastlake Pkwy.	6-Lane Prime	50,000	59,000	E
	7-Ln Prime	59,000		C
Camoustie Road between Harvest Rd. and Domoch Ct. ^{2,4}	2-Ln Collector	5,000	7,000	E
	Collector	10,000		B
KEY SEGMENTS IDENTIFIED FOR MONITORING				

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TABLE 5.10-2 — SEGMENT OPERATIONS (Continued)

SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	ALT 4	
			VOLUME	LOS
East H St. w/o Otay Lakes Rd.	6-Lane Prime	50,000	36,000	A
East H St. w/o Mount Miguel Rd.	6-Lane Prime	50,000	31,000	A
Telegraph Canyon Rd. e/o I-805	6-Lane Prime	50,000	43,000	B
Telegraph Canyon Rd. w/o Otay lakes Rd.	6-Lane Prime	50,000	36,900	A
Telegraph Canyon Rd. w/o SR 125	6-Lane Prime	50,000	30,900	A
Olympic Pkwy. e/o I-805	6-Lane Prime	50,000	46,700	C
Olympic Pkwy e/o Hunte Pkwy.	4-Lane Major	30,000	30,000	C
Otay Lakes Rd. e/o Hunte Pkwy.	6-Lane Prime	50,000	33,000	A
Paseo Ranchero s/o Olympic Pkwy.	6-Lane Prime	50,000	30,000	A
Otay Lakes Rd. n/o Telegraph Canyon Rd.	6-Lane Prime	50,000	29,500	A
La Media Rd. s/o Olympic Pkwy	6-Lane Major	40,000	20,000	A
Eastlake Pkwy. s/o Telegraph Canyon Rd.	6-Lane Prime	50,000	24,000	A
Hunte Pkwy. n/o Olympic Pkwy	4-Lane Major	30,000	17,000	A
Hunte Pkwy. s/o Olympic Pkwy	6-Lane Prime	50,000	37,000	A

Notes:

1. County of San Diego roadway and capacity threshold.
2. City of San Diego roadway and capacity threshold.
3. ADT obtained from SANDAG 2020 Cities/County Forecast.
4. Estimated volume.
5. City of Chula Vista roadway and capacity threshold if not noted.
6. Shading indicates unacceptable LOS (D, E OR F).
7. Bold indicates mitigated capacity and LOS.

The Program EIR 90-01 identified several mitigation measures to reduce significant impacts to roadway segments that were projected to operate at unacceptable levels of service. Appendix G provides a summary of the mitigations measures originally required for the adopted GDP Program EIR and provides an explanation of those measures that would no longer apply with the proposed GDP Amendments. No mitigation is found necessary on the aforementioned segments since these segments are calculated to operate at LOS C or better with the existing roadway classification under buildout conditions.

All other key segments analyzed are calculated to operate at LOS C or better. Thus, no new mitigation is required. A complete list of mitigation measures that are still applicable to the proposed GDP Amendments is contained below in Section 5.10.6.

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Intersections

Determining Volumes

The SANDAG model output is not as accurate in determining peak hour intersection turn movements. SANDAG recommends that these output volumes should never be used directly. Therefore, peak hour turning movement volumes were estimated using buildout ADTs and the relationship between existing peak hour turn movements and the existing ADTs. The construction of SR-125 was taken into account in terms of changing directionality. The ADT segment volumes were utilized to determine the AM and PM peak hour intersection turning volumes.

For intersections that do not exist today, a peak hour percentage of 8 to 10 percent was generally assumed. Directionality was estimated based on the proximity of each intersection to a freeway.

Intersections Analyzed

The following 10 intersections were analyzed in the GDP Amendments analysis since they were determined to have significant impacts in the 1993 adopted GDP traffic analysis. Grade separation was recommended in the Program EIR 90-01 at the intersections with an asterisk (*) due to entering volumes exceeding thresholds developed at that time. Mitigation at the other eight intersections consisted of special at grade geometric designs.

- EastLake Parkway/EUC North (Birch Road)
- EastLake Parkway/Olympic Parkway
- La Media Road/EUC North (Birch Road)
- La Media Road/Olympic Parkway
- Paseo Ranchero/Olympic Parkway
- Paseo Ranchero/Otay Valley Road
- EastLake Parkway/Otay Lakes Road
- La Media Road/Otay Lakes Road *
- La Media Road/Otay Mesa Road
- East H Street/Otay Lakes Road *

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It should be noted that significant impacts at these intersections would continue to exist if the proposed amendments are implemented. In addition, as currently required under the adopted GDP, it should be noted that more detailed intersection assessments are required to be completed at the SPA level of analysis. This condition is still applicable with the proposed GDP Amendments.

The Program EIR 90-01 required grade separation at two intersections in the City of Chula Vista (Otay Lakes Road/La Media Road and Otay Lakes Road/East "H" St.). The intersection analysis conducted for the proposed GDP Amendments determined that the intersections at Otay Lakes Road/La Media Road and Otay Lakes Road/East H Street would operate at LOS D or better. Therefore, grade separation is not required at either of these intersections.

High School Analysis

This GDP buildout traffic analysis assesses the traffic impacts of a proposed high school location in Village Seven. The GDP traffic analysis also evaluates an alternative high school location in Village Eight. In either location, the proposed high school would generally serve Village 11, the EUC area, the southern portion of Village Seven, the northern portion of Village Eight, and Village Four.

Village Seven High School Scenario

The proposed GDP Amendments would relocate the high school planned for Village 11 to Village Seven. The currently adopted GDP permits the development of 1,303 single-family units in Village Seven. Under this scenario, the proposed GDP would locate a 50-acre high school in Village Seven, thereby reducing the permitted number of single-family units to 1,053, for a total reduction of 250 units. The residential acreage would similarly decrease by 50 acres.

Village Eight High School Scenario

An alternative high school site is being considered in Village Eight as part of the proposed GDP Amendments. The currently adopted GDP permits the development of 1,021 single-family units in Village Eight. Under this scenario, the proposed GDP Amendments would locate a 50-acre high school in Village Eight, thereby reducing the permitted number of single-family units to 781, for a total reduction of 240 units. The residential acreage would similarly decrease by 50 acres.

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School Site Traffic Generation

Table 5.10-3, *Net Trip Generation – High School Analysis*, summarizes the net traffic generation for the proposed Village Seven high school location and the Village Eight alternative. As seen in Table 5.10-3, the Village Seven high school is calculated to generate an additional 2,000 daily trips, with 880 trips in the AM peak hour (696 in and 184 out) and 240 PM peak hour trips (48 less trips in and 288 more trips out). The Village Eight alternative is calculated to generate an almost identical number of net trips. The net ADT generated in the Village Eight alternative is calculated to be 2,100 daily trips, with 888 trips in the AM peak hour (698 in and 190 out) and 252 PM peak hour trips (40 less trips in and 292 more trips out).

**TABLE 5.10-3
ALTERNATIVE HIGH SCHOOL LOCATIONS NET TRIP GENERATION**

LAND USE	QUANTITY	DAILY		AM PEAK HOUR					PM PEAK HOUR				
		Rate	Total	Rate	In:Out	Total	In	Out	Rate	In:Out	Total	In	Out
VILLAGE SEVEN HIGH SCHOOL SCENARIO													
High School	2,500 students	1.80/ student	4,500	24%	7:3	1,080	756	324	0.12	3:7	540	162	378
Single-Family	250 DU	10.00/ unit	(2,500)	8%	3:7	(200)	(60)	(140)	0.12	7:3	(300)	(210)	(90)
Net Increase			2,000			880	696	184			240	(48)	288
VILLAGE EIGHT HIGH SCHOOL SCENARIO													
High School	2,500 students	1.80/ student	4,500	24%	7:3	1,080	756	324	0.12	3:7	(540)	162	378
Single Family	240 DU	10.00/ Unit	(2,400)	8%	3:7	(192)	(58)	(134)	0.12	7:3	(288)	202	86
Net Increase			2,100			888	698	190			252	(40)	292

Source: SANDAG, July 1998.

Note: (xxx) means trips to be removed if a high school is constructed.

School Site Traffic Assignment

The traffic assignment for either high school site in Village Seven or Eight is almost identical. The net traffic volumes generated by the proposed Village Seven high school location, or the Village Eight alternative location, are very similar. Since volumes are similar for either high

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school location, segment and intersection analyses were conducted for the proposed Village Seven site.

Analysis

A high school generates traffic much more locally than residential uses. Therefore, while a high school will add more traffic to the street system in the very immediate area, constructing a high school instead of residential uses will actually decrease traffic in the vast majority of Chula Vista and within adjoining portions of the City and County of San Diego.

SEGMENT ANALYSIS

Since a high school generates traffic in only a very localized area, only one road segment would experience increased traffic due to the high school. The ADT on La Media Road south of Olympic Parkway would increase from 20,000 to 20,100 at buildout, but the LOS would remain at LOS A with or without the additional high school traffic. Therefore, no additional significant segment impacts would result from the high school.

INTERSECTION ANALYSIS

Table 5.10-4, *Intersection Operations – High School Analysis* summarizes the AM and PM peak hour intersection analysis results. Since a high school generates traffic in only a very localized area, only two intersections would have a net increase in traffic and are the only ones analyzed. These intersections are Eastlake Parkway/EUC North (Birch Road) and La Media Road/EUC North (Birch Road). As seen in Table 5.10-4, the two intersections are calculated to continue to operate at LOS D or better at buildout with the increased traffic due to the high school. No significant intersection impacts would result from the high school.

**TABLE 5.10-4
INTERSECTION OPERATIONS – HIGH SCHOOL ANALYSIS**

INTERSECTION	PEAK HOUR	DELAY ¹	LOS ²
1. Eastlake Parkway/EUC North (Birch Road)	AM	31.3	C
	PM	53.5	D
2. La Media Road/EUC North (Birch Road)	AM	54.6	D
	PM	54.8	D

SOURCE: LLG, 2001

Notes: ¹ Delay in seconds.

² LOS – Level of Service

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Proposed SPA/TM Circulation System

The Village 11 traffic analysis has evaluated the capacity of the proposed roadways, as well as existing roadways beyond the boundaries of the Village 11 Project Area. While the generation rates and associated traffic volumes are different for each project, the circulation system needs to meet the buildout requirement of the Village 11 Project Area. The roadways to be constructed or portions thereof, as a part of Village 11 are as follows:

- Olympic Parkway
- EastLake Parkway
- Birch Road
- Hunte Parkway
- La Media Road
- Otay Lakes Road

Project Trip Generation

The SANDAG 2020 City/County Forecast Traffic Model was used to estimate the traffic volumes for each proposed land use. The traffic model calculates freeway and street segment ADTs. These ADTs were utilized directly as calculated by the model, meaning that no manual adjustments were made to any of the calculated traffic volumes. SANDAG trip generation rates were utilized to determine the amount of traffic the project would generate. The project trip generation for Village 11 is estimated at 30,060 ADT. Of this total amount, 8,930 ADT would be generated by non-residential uses.

The proposed Village 11 project is designed in such a manner as to keep a portion of the traffic internal to the project, since schools, commercial uses and recreational uses are planned within the project. Calculations were conducted to determine how much of the project traffic would remain internal to the project site and therefore, not add traffic to the regional street system. The internal trip generation calculations were made with a base assumption that given the land use classification of the non-residential uses, about 15 percent of the residential uses would remain internal to the site. Subtracting the internal trip generation from the total trip generation yields the external trip generation. As shown in *Table 5.10-5, External Trips Proposed Project*, the external trip generation is calculated at 23,720 ADT on the surrounding street system at project buildout. Since the project is expected to be completed prior to 2010, this traffic generation was assumed for the year 2010, 2015, 2020 and buildout

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analysis. Only a portion of the residential uses (639 single family and 197 multi-family), commercial, church, park and elementary school are proposed by 2005.

**TABLE 5.10-5
OTAY RANCH – VILLAGE 11
EXTERNAL TRIPS — PROPOSED PROJECT
YEARS 2010, 2015, 2020 AND BUILDOUT**

USE	% OF TRIPS WHICH ARE EXTERNAL	EXTERNAL TRIPS (ADT)
A. Residential	85%	17,960
B. Non-Residential		
Elementary School	30%	200
Park	20%	20
Commercial	74%	5,200
Church	20%	30
Middle School	30%	310
Subtotal Non-Residential		5,760
TOTAL ADT		23,720

NOTE: External trips obtained by subtracting Internal Trips (Table 11) from Total Trips (Table 10).

Adopted vs. Proposed Analysis

For comparison purposes, an analysis of the study years outlined above was also conducted assuming adopted land uses for all projects in the area. As shown in *Table 5.10-5*, the proposed Village 11 project is calculated to generate 23,720 external ADT.

By comparison, the proposed Village 11 project would generate approximately 3,220 more daily trips than the adopted Village 11 land uses. Overall, Year 2020 traffic volumes are very similar with adopted and proposed land uses. Traffic is forecasted to be slightly higher on Olympic Parkway and Hunte Parkway with the proposed Village 11 land uses.

Existing Plus Project Analysis

The existing plus project analysis was conducted by adding project traffic to existing traffic and also assuming Olympic Parkway was extended from its current terminus to Hunte Parkway. Olympic Parkway is fully funded and will be extended prior to project completion. However, no other circulation improvements were assumed to be constructed in the short-term in this scenario including SR-125.

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The addition of project traffic does not cause any existing intersection LOS to degrade from LOS D (or better) operations to LOS E or F. The intersection at East H Street and I-805 southbound ramps would remain LOS F in the PM peak hour with or without the project. The intersection at Telegraph Canyon Road and I-805 northbound ramps would remain LOS E in the AM peak hour with or without the project. Some of the delays improve along East H Street and Telegraph Canyon Road due to the extension of Olympic Parkway.

The addition of project traffic also does not cause any existing road segment LOS to degrade from LOS C (or better) operations to LOS D, E or F. H Street from I-805 to Hidden Vista Drive would remain LOS F with or without the project because no project trips generated from Village 11 contribute to this segment. The volume on this segment is the same with or without the project. Telegraph Canyon Road from I-805 to Halecrest Drive would also remain LOS F with or without the project. Project trips comprise less than 5 percent of the segment volume; therefore no significant impact on this segment would result from the proposed project.

As discussed in Section 5.10.1, East H Street and Telegraph Canyon Road were identified as TMP arterials. The short-term TMP analysis indicates that the two TMP arterial road segments would operate at LOS C or better. Only a small amount of speed degradation is calculated on the TMP segments in the existing plus project condition.

Therefore, based on the established significance criteria, no new significant traffic impacts are calculated in the existing plus project condition.

Near-term Cumulative Analysis (Pre-year 2005)

The near-term cumulative traffic analysis is similar to the existing plus project analysis in that it includes the proposed project; however, the near-term scenario also includes all projects in the eastern territories of Chula Vista as currently proposed. As traffic increases in the eastern territories of Chula Vista, the LOS on the key east/west streets (East H Street, Telegraph Canyon Road, Olympic Parkway) would exceed City standards unless SR-125 or other capacity-enhancing improvements are constructed. This represents a significant impact; however, this impact would be mitigated by the completion of SR-125 or other network improvements, which would increase system capacity in the Village 11 Project Area.

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The time frame when the standards would be exceeded is dependent on the number of housing units constructed per year. LLG completed an analysis in June 2000, which estimated the total number of housing units that could be constructed east of I-805 before the City roadway LOS standards would be exceeded. It was determined that East H Street and Telegraph Canyon Road just east of I-805 would be the "constraint" in the area street system. These roadways were studied using the City's Traffic Monitoring Program Methodology in terms of average travel speed.

The City thresholds are approached as travel speeds decrease. Historical traffic data (speed and volumes) were collected and a linear regression equation was developed to form a relationship between speed and volume. Traffic models were run by SANDAG for the Years 2001, 2002, 2003 and 2004 to forecast future traffic volumes. Olympic Parkway was assumed to be extended to Hunte Parkway, and SR-125 was assumed not to be constructed.

The 2001-2004 volumes were utilized to determine how much traffic volume would result in City thresholds being exceeded. This volume was then correlated to the number of dwelling units that could be constructed without exceeding the threshold. City thresholds would be exceeded on Telegraph Canyon Road in the near future if SR-125 is not built. The impact on Telegraph Canyon Road was calculated to occur when the total number of new dwelling units in the Eastern Territories exceeded 9,429 units beginning January 1, 2000. Appendix G provides the complete analysis used to determine the dwelling unit threshold.

Long-term Cumulative Analysis (Year 2005 or Later)

A long-term cumulative analysis was conducted to determine the impact of not only Village 11, but all other proposed projects in the eastern territories. The long-term cumulative analysis consists of a future traffic analysis in 5-year increments including 2005, 2010, 2015, 2020 and buildout with all projects constructed as proposed.

All key intersections were analyzed as signalized intersections under future conditions. Intersections west of Otay Lakes Road/La Media Road were not analyzed for the future scenarios with SR-125, as the majority of the traffic from the Village 11 Project Area would be expected to utilize SR-125. The long-term cumulative analysis also considered a scenario where SR-125 is not completed.

Table 5.10-6, Future Street Segment Operations, provides a summary of the street segments evaluated in the project study area. A summary of the levels of service and a determination of significance is provided below in the following discussion.

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**TABLE 5.10-6
FUTURE STREET SEGMENT OPERATIONS**

STREET SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	YEAR 2005 WITHOUT SR 125		YEAR 2005 WITH SR 125		YEAR 2010		YEAR 2015		YEAR 2020		BUILD-OUT	
			Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
			"H" STREET											
I-805 to Hidden Vista Dr.	Prime Arterial	50,000	65,000	F	62,000	E	57,000	E	57,000	E	62,000	E	60,000	E
Hidden Vista Dr. to Paseo Del Rey	Prime Arterial	50,000	46,000	C	44,000	C	40,000	B	40,000	B	43,000	B	41,000	B
Paseo Del Rey to Paseo Ranchero	Prime Arterial	50,000	45,000	C	42,000	B	40,000	B	40,000	B	45,000	B	43,000	B
Paseo Ranchero to Otay Lakes Road	Prime Arterial	50,000	38,000	B	36,000	A	35,000	A	35,000	A	39,000	B	39,000	B
Otay Lakes Road to Rutgers Rd.	Major Arterial (4L)	30,000	23,000	B	19,000	A	24,000	B	23,000	B	23,000	B	24,000	B
Rutgers Rd. to SR 125	Major Arterial (4L)	30,000	19,000	A	14,000	A	15,000	A	15,000	A	14,000	A	20,000	A
SR 125 to Mount Miguel Rd.	Prime Arterial	50,000	11,000	A	17,000	A	19,000	A	20,000	A	18,000	A	30,000	A
PROCTOR VALLEY ROAD														
Mount Miguel Rd. to Lane Ave.	Prime Arterial	50,000	14,000	A	15,000	A	18,000	A	17,000	A	15,000	A	23,000	A
Lane Ave. to Hunte Pkwy.	Prime Arterial	50,000	13,000	A	14,000	A	25,000	A	24,000	A	22,000	A	29,000	A
East of Hunte Pkwy.	Major Arterial (4L)	30,000	13,000	A	13,000	A	22,000	A	21,000	A	17,000	A	21,000	A
TELEGRAPH CANYON ROAD														
I-805 to Paseo Del Rey	Prime Arterial ¹	50,000	55,000	D	51,000	D	57,000	E	55,000	D	52,000	D	42,000	C
Paseo Del Rey to Paseo Ranchero	Prime Arterial	50,000	53,000	D	49,000	C	56,000	D	55,000	D	52,000	D	42,000	B
Paseo Ranchero to Main Street	Prime Arterial	50,000	50,000	C	45,000	C	45,000	C	46,000	C	45,000	C	34,000	A
OTAY LAKES ROAD														
North of "H" St.	Prime Arterial	50,000	42,000	F ²	32,000	D ²	43,000	F ²	40,000	B	41,000	B	37,000	A
"H" St. to Telegraph Canyon Rd.	Prime Arterial	50,000	44,000	F ²	36,000	E ²	45,000	F ²	43,000	B	41,000	B	39,000	B
Telegraph Canyon Rd. to Rutgers Rd.	Prime Arterial	50,000	50,000	C	41,000	B	41,000	B	43,000	B	44,000	C	33,000	A
Rutgers Rd. to SR 125	Prime Arterial	50,000	49,000	C	37,000	A	37,000	A	41,000	B	40,000	B	41,000	B
SR 125 to Eastlake Pkwy.	Prime Arterial	50,000	50,000	C	49,000	C	45,000	C	49,000	C	52,000	D	64,000	F
Eastlake Pkwy. to Lane Ave.	Prime Arterial	50,000	32,000	A	32,000	A	31,000	B	33,000	A	39,000	B	45,000	C
Lane Ave. to Hunte Pkwy.	Prime Arterial	50,000	16,000	A	16,000	A	17,000	A	22,000	A	25,000	A	33,000	A

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TABLE 5.10-6 (Continued)
FUTURE STREET SEGMENT OPERATIONS

STREET SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	YEAR 2005 WITHOUT SR 125		YEAR 2005 WITH SR 125		YEAR 2010		YEAR 2015		YEAR 2020		BUILD-OUT	
			Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
			Hunte Pkwy. to Wueste Rd.	Prime Arterial	50,000	10,000	A	10,000	A	14,000	A	27,000	A	31,000
E/D Wueste Rd.	Prime Arterial	50,000	5,000	A	5,000	A	13,000	A	30,000	A	31,000	A	32,000	A
PALOMAR STREET														
Paseo Ranchera to La Media Rd.	Class I Collector	22,000	11,000	A	10,000	A	14,000	A	13,000	A	15,000	A	16,000	A
OLYMPIC PARKWAY														
Oleander Ave. to Brandywine Ave.	Prime Arterial	50,000	50,000	C	47,000	C	49,000	C	48,000	C	52,000	C	46,000	C
Brandywine Ave. to Paseo Ranchero	Prime Arterial	50,000	46,000	C	38,000	B	45,000	C	43,000	B	47,000	C	41,000	B
Paseo Ranchero to La Media Rd.	Prime Arterial	50,000	31,000	A	27,000	A	42,000	B	42,000	B	55,000	B	40,000	B
La Media Rd. to Palomar St.	Prime Arterial	50,000	27,000	A	23,000	A	31,000	A	29,000	A	35,000	A	27,000	A
Palomar St. to SR 125	Prime Arterial	50,000	40,000	B	34,000	A	52,000	D	48,000	C	50,000	C	46,000	C
SR 125 to Eastlake Pkwy.		7,500	40,000	F	41,000	F	62,000	F	59,000	F	61,000	F	75,000	F
Eastlake Pkwy. to Hunte Pkwy.		7,500	20,000	F	22,000	F	36,000	F	38,000	F	41,000	F	40,000	F
Hunte Pkwy to Wueste Rd.	Major Arterial (4L)	30,000	7,000	A	7,000	A	25,000	B	32,000	D	36,000	E	30,000	C
BIRCH ROAD														
La Media Rd. to SR 125	Major Arterial (4L)	30,000	300	A	7,000	A	36,000	E	34,000	E	30,000	C	24,000	B
SR 125 to Eastlake Pkwy.	Prime Arterial	50,000	600	A	8,000	A	32,000	A	39,000	B	28,000	A	28,000	A
ROCK MOUNTAIN ROAD														
Main St. to La Media Rd.	Class I Collector	22,000	-	-	-	-	-	-	6,000	A	11,000	A	12,000	A
La Media Rd. to SR 125	Class I Collector	22,000	-	-	-	-	8,000	A	11,000	A	22,000	C	24,000	D
MEDICAL CENTER DRIVE														
Telegraph Canyon Rd. to Palomar St.	Class I Collector	22,000	18,000	B	18,000	B	16,000	A	16,000	A	17,000	B	17,000	B
MAIN STREET														
Paseo Ranchero to Rock Mountain Rd.	Major Arterial (6L)	40,000	-	-	-	-	-	-	12,000	A	31,000	B	28,000	A
Rock Mountain Rd. to La Media Rd.	Major Arterial (6L)	40,000	-	-	-	-	-	-	6,000	A	22,000	A	20,000	A
La Media Rd. to SR 125 SB Ramps	Major Arterial (6L)	40,000	-	-	-	-	-	-	7,000	A	11,000	A	10,000	A

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Transportation, Circulation, and Access

TABLE 5.10-6 (Continued)
FUTURE STREET SEGMENT OPERATIONS

STREET SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	YEAR 2005 WITHOUT SR 125		YEAR 2005 WITH SR 125		YEAR 2010		YEAR 2015		YEAR 2020		BUILD-OUT	
			Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
BRANDYWINE AVENUE														
Palomar St. to Olympic Pkwy.	Class I Collector	22,000	18,000	B	17,000	B	16,000	A	16,000	A	16,000	A	14,000	A
Olympic Pkwy. to Main St.	Class I Collector	22,000	18,000	A	15,000	A	18,000	B	18,000	B	18,000	B	19,000	B
PASEO RANCHERO														
"H" St. to Telegraph Canyon Rd.	Class I Collector	22,000	8,000	A	8,000	A	14,000	A	14,000	A	17,000	B	16,000	A
Telegraph Canyon Rd. to Palomar St.	Prime Arterial	50,000	23,000	A	21,000	A	36,000	A	36,000	A	35,000	A	30,000	A
Palomar St. to Olympic Pkwy.	Prime Arterial	50,000	19,000	A	18,000	A	39,000	B	40,000	B	50,000	C	40,000	B
Olympic Pkwy. to Birch Rd.	Prime Arterial	50,000	800	A	800	A	27,000	A	29,000	A	30,000	A	36,000	A
Birch Rd. to Main St.	Prime Arterial	50,000	--	--	--	--	25,000	A	28,000	A	36,000	A	36,000	A
S/D Main St.	Prime Arterial	50,000	--	--	--	--	52,000	D	46,000	C	38,000	B	36,000	A
LA MEDIA ROAD														
Telegraph Canyon Rd. to Palomar St.	Prime Arterial	50,000	22,000	A	19,000	A	35,000	A	33,000	A	33,000	A	28,000	A
Palomar St. to Olympic Pkwy.	Prime Arterial	50,000	4,000	A	8,000	A	23,000	A	21,000	A	25,000	A	19,000	A
Olympic Pkwy. to Birch Rd.	Prime Arterial	50,000	300	A	7,000	A	20,000	A	18,000	A	30,000	A	20,000	A
Birch Rd. to Rock Mountain Rd.	Prime Arterial	50,000	--	--	--	--	10,000	A	10,000	A	27,000	A	22,000	A
Rock Mountain Rd. to Main St.	Prime Arterial	50,000	--	--	--	--	--	--	8,000	A	31,000	A	25,000	A
EASTLAKE PARKWAY														
N/O Otay Lakes Road	Major Arterial (4L)	30,000	33,000	D	34,000	E	35,000	E	36,000	E	32,000	D	31,000	D
Otay Lakes Road to Olympic Parkway	Prime Arterial	50,000	26,000	A	27,000	A	35,000	A	35,000	A	35,000	A	28,000	A
Olympic Parkway to Birch Rd.	Major Arterial (6L)	40,000	17,000	A	22,000	A	41,000	D	48,000	E	50,000	E	45,000	D
Birch Rd. to Hunte Pkwy.	Prime Arterial	50,000	1,000	A	1,000	A	11,000	A	22,000	A	30,000	A	34,000	A
LANE AVENUE														
S/O Proctor Valley Rd.	Class I Collector	22,000	21,000	C	21,000	C	20,000	C	19,000	B	19,000	B	18,000	B
N/O Otay Lakes Road	Class I Collector	22,000	15,000	A	15,000	A	21,000	C	19,000	B	20,000	C	18,000	B

5.10 Transportation, Circulation, and Access

TABLE 5.10-6 (Continued)
FUTURE STREET SEGMENT OPERATIONS

STREET SEGMENT	ROADWAY CLASS	CAPACITY AT LOS C	YEAR 2005 WITHOUT SR 125		YEAR 2005 WITH SR 125		YEAR 2010		YEAR 2015		YEAR 2020		BUILD-OUT	
			Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
			HUNTE PARKWAY											
Proctor Valley Rd. to Otay Lakes Road	Major Arterial (4L)	30,000	19,000	A	19,000	A	29,000	C	28,000	C	30,000	C	29,000	C
Otay Lakes Road to Olympic Parkway	Major Arterial (4L)	30,000	10,000	A	11,000	A	21,000	A	19,000	A	23,000	B	21,000	A
Olympic Parkway to SDG&E	Prime Arterial	50,000	3,000	A	300	A	20,000	A	21,000	A	42,000	B	28,000	A
SDG&E to SR 125 ³	Prime Arterial	50,000	-	-	-	-	21,000	A	28,000	A	57,000	E	48,000	C
WUESTE ROAD														
Otay Lakes Road to Olympic Parkway	Class III Collector	7,500	700	A	900	A	2,000	A	4,000	A	6,000	B	4,000	A

Source: SANDAG Cities/County Transportation Forecast, October 2000.

Notes:

¹ Classified as a 6-lane Major Arterial but functions as a Prime Arterial.

² Four-lane major arterial until 2015.

³ Classification is 6-lane Prime Arterial South of SDG&E easement

Levels of service D, E and F indicated in bold with shading.

2005 Without SR-125

As shown below, all but the following four intersections were calculated to operate at LOS D or better in the AM and PM peak hours without the construction of SR-125:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
INTERSECTIONS		
East H Street/ I-805 Southbound Ramps	LOS E (AM)/LOS F (PM)	Cumulative impact
East H Street/ Hidden Vista Drive	LOS F (PM)	Cumulative impact
Telegraph Canyon Road/ I-805 Southbound Ramps	LOS F (PM)	Cumulative impact
Telegraph Canyon Road/ I-805 Northbound Ramps	LOS E (AM)	Cumulative impact

5.10 Transportation, Circulation, and Access

In the Year 2005 without SR-125 condition and with proposed land uses, all key segments are calculated to operate at LOS C or better except the following segments:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
SEGMENTS		
East H Street: I-805 to Hidden Vista Drive	LOS F	Cumulative impact
Telegraph Canyon Road: I-805 to Paseo Del Rey	LOS D	Not significant
Telegraph Canyon Road: Paseo Del Rey to Paseo Ranchero	LOS D	Not significant
Otay Lakes Road: north of H Street	LOS F	Cumulative impact
Otay Lakes Road: H Street to Telegraph Canyon Road	LOS F	Project impact
Olympic Parkway: I-805 to Oleander	LOS E	Not significant
Olympic Parkway: SR-125 to Eastlake Parkway	LOS F	Project impact
Olympic Parkway: Eastlake Parkway to Hunte Parkway	LOS F	Project impact
EastLake Parkway: north of Otay Lakes Road	LOS D	Not significant

Additionally, I-805 (between Bonita Road and Telegraph Canyon Road) is calculated to operate at LOS F in the year 2005 without the construction of SR-125. A significant cumulative impact is calculated on I-805 (between Bonita Road and Telegraph Canyon Road) in the Year 2005 without the construction of SR-125.

Year 2005 With SR-125

All intersections were calculated to operate at LOS D or better in the AM and PM peak hours with the construction of SR-125 in year 2005.

In the Year 2005 with SR-125 condition and with proposed land uses, all key segments are calculated to operate at LOS C or better except the following segments:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
SEGMENTS		
East H Street: I-805 to Hidden Vista Drive	LOS E	Not significant
Telegraph Canyon Road: I-805 to Paseo Del Rey	LOS D	Not significant
Otay Lakes Road: north of H Street	LOS D	Not significant
Otay Lakes Road: H Street to Telegraph Canyon Road	LOS E	Not significant
Olympic Parkway: I-805 to Oleander	LOS D	Not significant
Olympic Parkway: SR-125 to EastLake Parkway	LOS F	Project impact
Olympic Parkway: EastLake Parkway to Hunte Parkway	LOS F	Project impact
EastLake Parkway: north of Otay Lakes Road	LOS E	Not significant

5.10 Transportation, Circulation, and Access

I-805 is calculated to operate at LOS F (between Bonita Road and Telegraph Canyon Road) and SR-125 at LOS B in the year 2005. A significant cumulative impact is calculated on I-805 (between Bonita Road and Telegraph Canyon Road) in the Year 2005 with the construction of SR-125.

Year 2010

All intersections were calculated to operate at LOS D or better in the AM and PM peak hours in the year 2010 with SR-125 scenario.

In the Year 2010 with SR-125 and with proposed land uses, all key segments are calculated to operate at LOS C or better except the following segments:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
SEGMENTS		
East H Street: I-805 to Hidden Vista Drive	LOS E	Not significant
Telegraph Canyon Road: I-805 to Paseo Del Rey	LOS E	Not significant
Telegraph Canyon Road: Paseo Del Rey to Paseo Ranchero	LOS D	Not significant
Otay Lakes Road: north of H Street	LOS F	Cumulative impact
Otay Lakes Road: H Street to Telegraph Canyon Road	LOS F	Cumulative impact
Olympic Parkway: I-805 to Oleander	LOS E	Not significant
Olympic Parkway: Palomar Street to SR-125	LOS D	Not significant
Olympic Parkway: SR-125 to EastLake Parkway	LOS F	Cumulative impact
Olympic Parkway: EastLake Parkway to Hunte Parkway	LOS F	Project impact
Birch Road: La Media to SR-125	LOS E	Not significant
Paseo Ranchero: South of Main Street	LOS D	Not significant
EastLake Parkway: north of Otay Lakes Road	LOS E	Not significant
EastLake Parkway: Olympic Parkway to Birch Road	LOS D	Not significant

A specific analysis was not conducted for Year 2010 since I-805 would operate at LOS F in Year 2005 with SR-125, and the volumes on I-805 would increase by Year 2010. A significant cumulative impact is calculated on I-805 (between Bonita Road and Telegraph Canyon Road) in the Year 2010.

Year 2015

All intersections were calculated to operate at LOS D or better in the AM and PM peak hours in the year 2015 with SR-125 scenario.

5.10 Transportation, Circulation, and Access

In the Year 2015 with SR-125 and with proposed land uses, all key segments are calculated to operate at LOS C or better except the following segments (*Table 5.10-6*):

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
SEGMENTS		
East H Street: I-805 to Hidden Vista Drive	LOS E	Not significant
Telegraph Canyon Road: I-805 to Paseo Del Rey	LOS D	Not significant
Telegraph Canyon Road: Paseo Del Rey to Paseo Ranchero	LOS D	Not significant
Olympic Parkway: I-805 to Oleander	LOS D	Not significant
Olympic Parkway: SR-125 to EastLake Parkway	LOS F	Cumulative impact
Olympic Parkway: EastLake Parkway to Hunte Parkway	LOS F	Project impact
Olympic Parkway: Hunte Parkway to Wueste Road	LOS D	Not significant
Birch Road: La Media to SR-125	LOS E	Not significant
EastLake Parkway: North of Otay Lakes Road	LOS E	Not significant
EastLake Parkway: Olympic Parkway to Birch Road	LOS E	Not significant

A specific analysis was not conducted for Year 2015 since I-805 would operate at LOS F in Year 2005 with SR-125, and the volumes on I-805 would increase by Year 2015. A significant cumulative impact is calculated on I-805 (between Bonita Road and Telegraph Canyon Road) in the Year 2015.

Year 2020

All intersections were calculated to operate at LOS D or better in the AM and PM peak hours in the year 2020 with SR-125 scenario.

In the Year 2020 with SR-125 and with proposed land uses, all key segments are calculated to operate at LOS C or better except the following segments:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
SEGMENTS		
East H Street: I-805 to Hidden Vista Drive	LOS E	Not significant
Telegraph Canyon Road: I-805 to Paseo Del Rey	LOS D	Not significant
Telegraph Canyon Road: Paseo Del Rey to Paseo Ranchero	LOS D	Not significant
Otay Lakes Road: SR-125 to EastLake Parkway	LOS D	Not significant
Olympic Parkway: I-805 to Oleander	LOS E	Not significant
Olympic Parkway: SR-125 to Eastlake Parkway	LOS F	Cumulative impact
Olympic Parkway: EastLake Parkway to Hunte Parkway	LOS F	Project impact
Olympic Parkway: Hunte Parkway to Wueste Road	LOS E	Not significant
EastLake Parkway: North of Otay Lakes Road	LOS D	Not significant
EastLake Parkway: Olympic Parkway to Birch Road	LOS E	Not significant
Hunte Parkway: SDG&E Easement to SR-125	LOS E	Not significant

5.10 Transportation, Circulation, and Access

A specific analysis was not conducted for Year 2020 since I-805 would operate at LOS F in Year 2005 with SR-125, and the volumes on I-805 would increase by Year 2020. A significant cumulative impact is calculated on I-805 (between Bonita Road and Telegraph Canyon Road) in the Year 2020.

Buildout

All intersections are calculated to operate at LOS D or better in the AM and PM peak hours except:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
INTERSECTIONS		
Olympic Parkway/Wueste Road	LOS F (PM)	Cumulative

At buildout with SR-125 and with proposed land uses scenario, all key segments are calculated to operate at LOS C or better except the following segments:

	LEVEL OF SERVICE (LOS)	SIGNIFICANCE CONCLUSION
SEGMENTS		
East H Street: I-805 to Hidden Vista Drive	LOS E	Not significant
Otay Lakes Road: SR-125 to EastLake Parkway	LOS F	Cumulative impact
Olympic Parkway: I-805 to Oleander Avenue	LOS D	Not significant
Olympic Parkway: SR-125 to EastLake Parkway	LOS F	Cumulative impact
Olympic Parkway: EastLake Parkway to Hunte Parkway	LOS F	Project impact
Rock Mountain Road: La Media Road to SR-125	LOS D	Not significant
EastLake Parkway: North of Otay Lakes Road	LOS D	Not significant
EastLake Parkway: Olympic Parkway to Birch Road	LOS D	Not significant

At buildout, I-805 is calculated to operate at LOS F, and SR-125 is calculated to operate at LOS C (East H Street to Telegraph Canyon Road) and LOS D (north of H Street). A significant cumulative impact is calculated on I-805 (between Bonita Road and Telegraph Canyon Road) at buildout.

Congestion Management Program Compliance

The CMP was adopted on November 22, 1991 by SANDAG and is intended to directly link land use, transportation and air quality through Level of Service performance. Local agencies are required by statute to conform to the CMP. The CMP requires an Enhanced CEQA

5.10 Transportation, Circulation, and Access

Review of all large projects that are expected to generate more than 2,400 ADT or more than 200 peak hour trips. Since the project is calculated to generate over 2,400 ADT and over 200 peak hour trips, this level of review is required of the proposed project. As stated previously, the following regional arterials and greenways were analyzed to satisfy the CMP:

- East H Street
- Telegraph Canyon Road
- I-805
- SR-125

The Regional Growth Management Strategy Regional Growth Management Strategy (RGMS) objective is LOS D (applies to East H Street and Telegraph Canyon Road) and the CMP LOS standard is LOS E (applies to I-805 and SR-125). The CMP LOS standard of LOS E is not met for I-805. This is considered to be a significant traffic impact. LOS D or better is maintained in the existing plus project scenarios. LOS D would not be maintained, if over 9,429 total units are built prior to construction of SR-125, or other improvements in lieu of its construction. Buildout of Village 11 under the SPA Plan would not exceed this number of units.

5.10.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

No new significant impacts were identified due to the proposed GDP Amendments. In addition, all street segments previously identified as having a significant impact would remain significant except for the following:

- Central Avenue between Bonita Road and Corral Canyon Road.
- Olympic Parkway between Hunte Parkway and Eastlake Vista
- Hunte Parkway between Otay Lakes Road and Eastlake Greens
- Hunte Parkway between Eastlake Trails and Olympic Parkway

Mitigation recommended in the Program EIR 90-01 for these segments is no longer necessary since LOS C or better operations are calculated.

5.10 Transportation, Circulation, and Access

The Otay Lakes Road/La Media Road and Otay Lakes Road/East H Street intersections were recommended to be grade separated in the 1993 adopted GDP traffic analysis. Since LOS D operations are calculated using current methodologies, grade separation is no longer required for these intersections.

Development of a high school in Village Seven, or alternatively in Village Eight, would not result in additional significant traffic impacts beyond those impacts identified in Program EIR 90-01.

VILLAGE 11 SPA/TM

Impacts to traffic are not significant in the existing plus project traffic condition.

A near term significant cumulative impact would occur on Telegraph Canyon Road in the near future if SR-125 is not built. The impact on Telegraph Canyon Road was calculated to occur when the total number of new dwelling units in the Eastern Territories exceeded 9,429 units beginning January 1, 2000.

Significant long-term (2005 and beyond) project-specific impacts were identified on the following road segments by analysis year:

Year 2005, Without SR-125

Olympic Parkway:	SR-125 to EastLake Parkway EastLake Parkway to Hunte Parkway
Otay Lakes Road:	H Street to Telegraph Canyon Road

Year 2005, With SR-125

Olympic Parkway:	SR-125 to EastLake Parkway EastLake Parkway to Hunte Parkway
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Year 2010

Olympic Parkway:	EastLake Parkway to Hunte Parkway
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Year 2015

Olympic Parkway:	EastLake Parkway to Hunte Parkway
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Year 2020

Olympic Parkway: EastLake Parkway to Hunte Parkway

Buildout

Olympic Parkway: EastLake Parkway to Hunte Parkway

Significant long-term cumulative impacts were identified at the following road segments by analysis year:

Year 2005, Without SR-125

East H Street: I-805 to Hidden Vista Dr.

Otay Lakes Road: North of H Street

Year 2010

Otay Lakes Road: North of H Street

H Street to Telegraph Canyon Road

Olympic Parkway: SR-125 to EastLake Parkway

Year 2015

Olympic Parkway: SR-125 to EastLake Parkway

Year 2020

Olympic Parkway: SR-125 to EastLake Parkway

Buildout

Otay Lakes Road: SR-125 to EastLake Parkway

Olympic Parkway: SR-125 to EastLake Parkway

Significant cumulative impacts were identified on the following intersections by analysis year:

Year 2005 without SR-125

East H Street/I-805 Southbound Ramps

East H Street/ Hidden Vista Drive

Telegraph Canyon Road/I-805 Southbound Ramps

Telegraph Canyon/I-805 Northbound Ramps

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Significant short- and long- term impacts were identified for I-805 between Bonita Road and Telegraph Canyon Road.

5.10.6 MITIGATION MEASURES

GDP AMENDMENTS

The following mitigation measures amend the mitigation measures that apply to the Amendment Area identified in the Program EIR 90-01, based on the analysis contained in this EIR (see Appendix G):

- 5.10-1** A traffic analysis shall be conducted within the study area of the proposed SPA to identify additional transportation mitigation measures for the construction of new roads, bridges and roadway improvements, and shall implement transportation demand/system management programs and/or facilities or other measures necessary to mitigate traffic impacts on circulation element roads. The standard to be achieved shall be in conformance with the City of Chula Vista's project significance criteria and GMOC criteria applicable at the time of SPA preparation.
- Arterial segment LOS measurements shall be for the average weekday peak hours, excluding seasonal and special circumstance variations.
 - Urban and suburban arterials are defined as surface highways having signal spacing of less than 2 miles with average weekday traffic volumes greater than 10,000 vehicles per day.
 - Arterial segments shall be stratified into three classifications - Class I, Class II, Class III.
 - The LOS measurement of arterial segments and freeway ramps shall be a growth management consideration in situations where proposed developments have significant impact at interchanges.
 - Circulation improvements shall be implemented prior to anticipated deterioration of LOS below established standards.

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- The criteria for calculating arterial LOS and defining arterial lengths and classifications shall follow the procedures detailed in Chapter 11 of the 1985 Highway Capacity Manual (HCM) and shall be confirmed by the City or County Traffic Engineer, as appropriate.
- During the preparation of future Traffic Monitoring Program field surveys, intersections experiencing significant delays would be identified. The information generated by the field surveys would be used to determine possible signal timing changes, geometric and/or traffic operational improvements for the purpose of reducing intersection delay.
- Level of Service values for arterial segments shall be based on the Highway Capacity Manual, Special Report 209, Transportation Research Board, National Research Council, Washington, D.C. 1985.

5.10-2 To the extent that Otay Ranch contributes to the need for a facility outside of its boundaries, the Project shall contribute (at the level at which it impacts the facility) to the mitigation of the impact by participating in impact fee programs or other means identified at the SPA or tentative map level.

5.10-3 Applicants on the Otay Valley Parcel shall contribute their "fair share" to the capital and operating costs associated with the new transit system. This shall be done through provisions in facility financing plans at the SPA level. Further, benefit assessment districts shall be established to fund new transit routes under MTDB Board Policy No. 40 Non-Transit Funding of Transit Services. (This final requirement cannot be mandated because the Lead Agency cannot mandate MTDB to take this action; because this finding is not within the jurisdiction of the Lead Agency it should be interpreted as a mandate for the Applicant to work with MTDB).

5.10-4 For each SPA, the Applicant shall prepare a detailed analysis of peak hour turning movement volumes and intersection capacity for all major affected intersections as determined by the traffic engineer representing the reviewing jurisdiction or agency.

5.10-5 The Applicant shall construct as a condition of approval to the SPA, new roads, bridges and roadway improvements and shall implement transportation

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demand/system management programs and/or facilities, or other measures necessary to fully mitigate traffic impacts (related to traffic impacts of the Project) per the City of Chula Vista's project significance criteria and GMOC criteria applicable at the time of SPA preparation.

5.10-6 No more than 15,000 dwelling units or 4,000,000 square feet of commercial may be constructed within the Otay Ranch Project until funding and construction for light rail transit (LRT) is assured. Applicants in the Otay River Parcel shall contribute their "fair share" to the funding of these facilities and operating costs.

5.10-7 The Applicant shall participate in fair share funding and implementation of the following general mitigation measures:

- Prepare Transportation Demand Management (TDM) Mitigation Strategies
- Update General Plans
- Prepare Transportation Phasing Plans
- Provide Parallel Arterial System
- Improve Mode Split
- Increase Local/Regional Trip Capture
- Regional Freeway System Mitigation - Increase Freeway Capacities
- Arterial Segment Mitigation - Increase Segment Capacities
- Arterial Intersection Mitigation - Increase Intersection Capacities
- Other Mitigation Strategies including: Implement Transportation System Management Strategies and Implement Traffic Control Strategies

5.10-8 The following project-specific measures shall be required for individual on-site and off-site segments and intersections to mitigate significant impacts associated with the project.

On-site Network

- Upgrade EastLake Parkway between Orange Avenue and EUC north from 4-lane major to 6-lane major and provide special at-grade intersection design or grade separated intersection design.

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- Upgrade Village Two Local between EUC north (La Media Road) and EUC north (Village Two Loop Road) from 2-lane local collector to 4-lane collector.
- Upgrade Village Three Local between Village Three Local (Village Three Loop Road) and Paseo Ranchero from 2-lane local collector to 3-lane collector.
- Upgrade Village Three Local (Village Three Loop Road) from 2-lane local collector to 3-lane collector.
- Upgrade Village Seven Local between Village Seven Collector and Village Seven Major from 2-lane local collector to 3-lane collector.
- Upgrade Village Seven Local between Village Seven Major and Village Seven Collector from 2-lane local collector to 3-lane collector.

Off-site Network

The Applicant shall participate in fair share funding and implementation of the following:

- Upgrade Bonita Road between Plaza Bonita Road and Willow Street by providing at-grade intersection design
- Upgrade Bonita Road between Willow Street and Otay Lakes Road by providing special at-grade intersection design
- Upgrade Bonita Road between Otay Lakes Road and Central Avenue by providing special at-grade intersection design
- Upgrade Camino Maquiladora between Otay Mesa Road and Heritage Road from 2-lane local collector to 4-lane collector.
- Upgrade Camoustie Road between Harvest Road and Domoch Court from 2-lane local collector to 3-lane collector.
- Upgrade Del Sol Road west of Paseo Ranchero from 2-lane local collector to 3-lane collector.
- Upgrade East 'H' Street between I-805 and Terra Nova Road from 6-lane prime to 8-lane prime.
- Upgrade EastLake Parkway between Palomar Street and Orange Avenue from 4-lane major to 6-lane prime and provide special at-grade intersection design
- Upgrade La Media Road between SR-905 and Airway Road from 4-lane major to 6-lane prime.

5.10 Transportation, Circulation, and Access

- Upgrade Oleander Avenue between Telegraph Canyon Road and Naples Avenue from 2-lane local collector to 4-lane collector.
- Upgrade Otay Lakes Road between East 'H' Street and Telegraph Canyon Road by providing special at-grade intersection design or grade separated intersection design.
- Upgrade Otay Lakes Road between SR-125 and EastLake Parkway from 6-lane prime to 7-lane prime, and by providing special at-grade intersection design or grade separated intersections.
- Upgrade Paseo del Rey between East 'H' Street and Telegraph Canyon Road from 2-lane local collector to 4-lane collector.
- Upgrade Sweetwater Road between Bonita Mesa Road and Willow Street from 4-lane collector to 6-lane major.
- Upgrade Sweetwater Road between Bonita Road and SR-54 from 4-lane collector to 4-lane major.

5.10-9 If forecasted reductions in traffic activity resulting from village design and TDM analysis do not occur, additional mitigation described below would be required on the following segments:

- Upgrade EUC North between Village Two Local and La Media Road from a 4-lane collector to a 4-lane major, and by providing special at-grade intersection design or grade separated intersection design.
- Upgrade La Media Road between Otay Mesa Road and SR-905 from a 4-lane major to a 6-lane major and by providing special at-grade intersection design.
- Upgrade Britannia Boulevard between SR-905 and Airway road from 4-lane major to 6-lane major.
- Upgrade Millar Ranch Road between SR-94 and Proctor Valley Road from 4-lane collector to 4-lane major.
- Upgrade Otay Lakes Road between Bonita road and East 'H' Street by providing special at-grade intersection design.
- Upgrade Paseo Ranchero between Otay Valley Road and Del Sol Road by providing special at-grade intersection design.

5.10-10 If forecasted reductions in traffic resulting from village design and TDM analysis do not occur, additional segment mitigation, beyond special at-grade intersection upgrades as identified previously would be required including:

- Bonita Road between I-805 and Plaza Bonita Road from 4-lane major to 6-lane prime.
- Bonita Road between Plaza Bonita Road and Willow Street from 4-lane major to 6-lane major.
- Bonita Road between Willow Street and Otay Lakes Road from 4-lane major to 6-lane prime.
- Bonita Road between Otay Lakes Road and Central Avenue from 4-lane major to 6-lane major.
- Bonita Road between Central Avenue and San Miguel Road from a 4-lane collector to a 4-lane major.

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Project Impacts

- 5.10-11** Construct Olympic Parkway from SR-125 to Hunte Parkway to six-lane Prime Arterial standards at the time the first project dwelling unit is constructed.
- 5.10-12** If development exceeds 944 units without SR-125, Otay Lakes Road between H Street and Telegraph Canyon Road shall be widened to six lanes or construction of intersection improvements on Otay Lakes Road, which provides additional capacity to the satisfaction of the City Engineer.
- 5.10-13** Prior to the approval of the first final map, which triggers the installation of related street improvements, developer shall enter into an agreement to construct and secure a fully activated traffic signal including interconnect wiring at the following intersections:
- a) EastLake Parkway/Driveway B
 - b) EastLake Parkway/Birch Road
 - c) EastLake Parkway/Driveway F
 - d) Olympic Parkway/Driveway A
 - e) Olympic Parkway/Driveway E
 - f) Hunte Parkway/Driveway C
 - g) Hunte Parkway/Driveway D
 - h) Hunte Parkway/Driveway H
 - i) Hunte Parkway/Driveway I

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Developer shall fully design the aforementioned traffic signals as part of the improvement plans for the related street. Developer shall install underground improvements, standard and luminaries in conjunction with the construction of the related street improvements. In addition, developer shall install mast arms, signal heads, and associated equipment when traffic signal warrants are met as determined by the City Engineer.

- 5.10-14** All non-residential projects (with the exception of schools) shall comply with the City's GMOC standards and other applicable traffic policies and standards. The City Engineer shall review all site plans for non-residential uses, (with the exception of schools), and require a project-specific traffic study if the project has the potential for resulting in circulation impacts. Recommendations to reduce potentially significant impacts, pursuant to the GMOC standards and City traffic standards and policies, shall be incorporated into the site plan and/or required as a condition of project approval. Should the analysis determine that additional capacity is possible through improvements, such identified improvements may be subject to future environmental review.

Potential traffic impacts resulting from development and operation of the schools shall be reviewed by the respective school districts when specific projects are under consideration. Any street improvements shall be coordinated with the City and shall comply with applicable City street standards and policies. The City shall request review on all draft plans.

Cumulative Impacts

- 5.10-15** The General Plan shall be amended to designate Olympic Parkway from SR-125 to EastLake Parkway as an Enhanced Prime Arterial with eight lanes. The required amendment shall be adopted no later than the first General Plan Amendment considered for adoption in 2002. The applicant shall contribute a fair share towards the construction of the two additional lanes.
- 5.10-16** The General Plan shall be amended to designate Otay Lakes Road from SR-125 to EastLake Parkway as an Enhanced Prime Arterial with seven-lanes (additional lane westbound). The required amendment shall be adopted no later than the first General Plan Amendment considered for adoption in 2002. The applicant shall contribute a fair share towards the construction of the additional lane.

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- 5.10-17** The applicant shall contribute a fair share towards the widening of Otay Lakes Road from H Street to Telegraph Canyon Road to six lanes or towards an intersection improvement, which provides additional capacity along Otay Lakes Road to the satisfaction of the City Engineer.
- 5.10-18** The applicant shall contribute a fair share towards the widening of Otay Lakes Road from Bonita Road to H Street to six lanes or towards an intersection improvement, which provides additional capacity along Otay Lakes Road to the satisfaction of the City Engineer.
- 5.10-19** Prior to the construction of SR-125, the City shall stop issuing new building permits for Village 11 when the City, in its sole discretion determines either:
- a) Building permits for a total of 9,429 dwelling units have been issued for projects east of I-805 or,
 - b) An alternative measure is selected by the City in accordance with the City of Chula Vista Growth Management Ordinance.

The start date for counting the 9,429 dwelling units is January 1, 2000. Notwithstanding the foregoing, the City may issue building permits if the City decides in its sole discretion that either traffic studies demonstrate, to the satisfaction of the City Engineer, that the circulation system has additional capacity without exceeding the GMOC traffic threshold standards; other improvements are constructed which provide additional necessary capacity; or the City selects an alternative method of implementing the GMOC standards. These traffic studies would not require additional environmental review under CEQA. However, any improvements proposed in these traffic studies would be subject to additional environmental review as required.

- 5.10-20** Additional lanes would be required to maintain acceptable levels of service on I-805. Construction of the additional lanes on I-805 is the responsibility of Caltrans. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.

5.10 Transportation, Circulation, and Access

5.10-21 The applicant shall contribute a fair share towards the future signalization of the intersection of Olympic Parkway and Wueste Road.

Secondary Impacts Associated with Offsite Traffic Mitigation Improvements

The off-site traffic improvements described above for direct and cumulative traffic impacts could create secondary impacts associated with land use, biological resources, noise, and cultural resources. Although these off-site roadway improvements have not been designed or engineered, the area potentially affected by the widening is described below along with an evaluation of potential impacts.

Otay Lakes Road: H Street to Telegraph Canyon Road

The widening of Otay Lakes Road to six lanes along this segment would increase the road width by twelve feet on both sides. This segment of Otay Lakes Road, which is approximately one mile in length, exists within an existing developed setting and is characterized by residential, commercial, and public/quasi-public uses such as an educational facility and church. The land adjacent to the roadway is largely landscaped with grass or other ornamental vegetation. No significant biological resources were identified by RECON biologists during a survey for the EastLake III Woods and Vistas Replanning Program EIR (EIR #01-01) of the improvement area, and cultural resource impacts would not be anticipated. Widening of the roadway to six-lane standards could create increased noise impacts for the existing houses with frontage on the roadway by placing the noise source closer to the homes. At the time such improvements are proposed, additional environmental review would be required to determine potential impacts and the need/feasibility of noise mitigation measures.

Olympic Parkway: SR-125 to EastLake Parkway

Construction of this roadway segment to its current six-lane Prime arterial standard was studied in several previous environmental documents. These include both the EastLake Greens and EastLake Trails Final EIR, and the Final Mitigated Declaration for the Olympic Parkway extension. An amendment to the General Plan to designate Olympic Parkway as an eight-lane roadway on the segment between SR-125 and EastLake Parkway has not been addressed and would increase the width of the segment by 12 feet on both sides. Given the disturbed condition (agricultural) of the land on either side of the planned six-lane roadway,

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Transportation, Circulation, and Access

impacts to biological resources would be anticipated to be minimal. Land uses along the segment are planned to be largely residential and commercial. With adequate setbacks and, if needed, screening, noise and land use impacts could create impacts to cultural/paleontological resources and construction-related water quality and traffic impacts. At the time such improvements are designed and proposed, additional environmental review may be required to determine potential impacts and the need for specific mitigation measures.

Otay Lakes Road: SR-125 to EastLake Parkway

Mitigation for cumulative impacts on this segment (which requires an amendment to the General Plan to designate Otay Lakes Road as a seven-lane roadway) would increase width of the road by 12 feet on the north side (westbound). The land adjacent to this segment of roadway is landscaped on both sides of the existing sidewalk. Beyond the landscaping, the potential area of impact is graded and devoid of vegetation. No significant biological resources were identified in a review by RECON biologists, and impacts to cultural resources would not be anticipated. In addition, adverse land use and noise impacts would not be expected given the approved business center uses. However, at the time such improvements are designed and proposed, additional environmental review may be required to determine potential impacts related to construction, including water quality, traffic, and impacts to paleontological resources and the need for specific mitigation measures to address these potential impacts.

Otay Lakes Road: Bonita Road to H Street

Mitigation on this segment requires either an intersection improvement to provide additional capacity along Otay Lakes Road or widening of the road to six lanes. Widening to six lanes would increase the width by 12 feet on both sides. This segment of road is largely characterized by commercial, public/quasi-public uses (Scripps Medical Center), and residential uses, and therefore much of the adjacent land is landscaped with grass or other ornamental vegetation. No significant biological resources were identified in a review by RECON biologists and impacts to cultural resources would not be anticipated. However depending on specific design considerations for the improvement, grading to widen the roadway to this standard could create impacts to cultural/paleontological resources, construction-related water quality and traffic impacts. In addition, widening of the roadway to six lane standards could create landform alteration impacts and increased noise impacts for the existing houses with frontage on the roadway by placing the noise source closer to the

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homes. At the time such improvements are proposed, additional environmental review may be required to determine potential impacts and the need for specific mitigation measures.

Mitigation Measures for Secondary Impacts from Off-site Traffic Improvements

Application of the following program-level mitigation measures shall be implemented at the discretion of the Director of Planning and Building at the time the roadway improvements are proposed to reduce the potential significant impacts to below a level of significance. Depending on the detailed design of the off-site traffic improvements to the above-referenced segments of Olympic Parkway and Otay Lakes Road, additional environmental review may be required. The program-level mitigation measures include the following:

- 5.10-21** Prior to approval of a roadway improvement project, a biological reconnaissance based on detailed grading and design plans shall be conducted to document any impacts to sensitive biological resources. Any impacts to sensitive biological habitats shall be mitigated pursuant to the mitigation ratios described in the Draft Chula Vista MSCP Subarea Plan.
- 5.10-22** Prior to issuance of any grading permits for a roadway improvement, a detailed acoustical study for the affected roadway segment shall be prepared to determine the need for any noise attenuation measures for adjacent sensitive land uses.
- 5.10-23** Prior to the approval of the design plans for a roadway improvement, a detailed landscaping plan shall be prepared to ensure that potential aesthetic impacts associated with any grading necessary for the improvement are mitigated.
- 5.10-24** As a condition of any off-site roadway improvement approval, monitoring of any grading for the presence of cultural and paleontological resources shall be required. If such resources are encountered during grading operations, the protocol described in Section 5.6 of this EIR shall be required.
- 5.10-25** As a condition of any off-site roadway improvement approval, applicable construction-related water quality mitigation measures shall be required by the City Engineer.

5.10 Transportation, Circulation, and Access

- 5.10-26** As a condition of any off-site roadway improvement approval, preparation of a traffic control plan for delays and hazards associated with construction impacts shall be prepared and approved by the City Engineer.
- 5.10-27** For the widening of Otay Lakes Road between H Street and Telegraph Canyon Road, plans prepared for the improvements shall be designed to avoid impacts to the church and the library.

5.10.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

GDP AMENDMENTS

With the required mitigation measures, impacts to intersections and street segments would be reduced below a level of significance. As identified in Program EIR 90-01, secondary impacts associated with offsite roadway improvements would still be significant and unmitigable at the program-level of analysis. At the time such offsite improvements are proposed, additional environmental review would be required to determine potential impacts and the need for mitigation measures.

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With the required mitigation measures, impacts to intersections and street segments would be reduced below a level of significance. Traffic impacts to I-805 remain significant and unmitigable.

5.11 AIR QUALITY

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01), analyzed the existing conditions, potential impacts, and mitigation measures related to air quality for the entire Otay Ranch project area. Section 4.9.12 of the Program EIR 90-01 included an analysis of air quality impacts related to the Phase II Progress Plan Alternative (as amended), which ultimately was selected. The analysis and discussion of air quality issues from the Program EIR is hereby incorporated by reference. References to analysis in the Program EIR 90-01 in this EIR pertain specifically to the analysis of the selected Phase II Progress Plan alternative. The following discussion focuses on the project specific impacts to air quality that would result from the proposed GDP Amendments and with development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the proposed GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the proposed GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review.

The following air quality section also provides a summary of the *Air Quality Impact Analysis* that was prepared by Giroux & Associates (Giroux & Associates 2000) specifically for the Village 11 Project Area. The complete air quality technical report can be found as Appendix H to this document.

5.11.1 EXISTING CONDITIONS

GDP AMENDMENTS AND VILLAGE 11 SPA/TM

The Program EIR 90-01 contains a description of existing regional air quality conditions in the Otay Ranch project area. The following discussion provides an update and summary of the information contained in the Program EIR 90-01. The analysis contained in the Program EIR 90-0-1 is hereby incorporated by reference. Since air quality existing conditions are discussed in a sub-regional context, this discussion applies to both the proposed GDP Amendments and the Village 11 SPA/TM.

Meteorology/Climate

Air quality can be greatly affected by the climate of the area being studied. The climate of Chula Vista, as with all of Southern California, is largely controlled by the strength and

position of the semi-permanent high pressure center over the Pacific Ocean. This high pressure center and the resultant weather patterns combine to limit the ability of the atmosphere to disperse the air pollution. Air pollution becomes trapped in the coastal zone by a temporary inversion that prevents the transport of pollutants over the inland mountains. The abundant sunshine found in Chula Vista and elsewhere in San Diego County causes a number of reactive pollutants to undergo photochemical reactions and form smog.

Air Quality Standards

While emissions control programs have created a substantial improvement in regional air quality within the last several decades, clean air standards are still often exceeded in parts of the San Diego Air Basin (SDAB). The project area is close enough to the coast to benefit from cleansing ocean breezes and is distant enough from major sources of pollution to avoid areas of localized violations of clean air standards. The fact that the project area is currently undeveloped contributes to the good local air quality. Except for the occasional influx of air pollution from the Los Angeles air basin (LAAB), air quality in the project vicinity is considered acceptable.

Some air quality concern has been raised about pollutant transport from Mexico with its considerably less stringent pollution control laws. An air quality station was established on Otay Mesa in part to monitor this phenomenon. Some slight differences in ozone distribution on Otay Mesa are seen compared to Chula Vista. These differences are not so dramatic, however, as to indicate any substantial cross-border pollution transport.

Nitrogen oxides (NO_x) and reactive organic gases (ROG) are the two precursors to photochemical smog formation. In San Diego County, 66 percent of the ROG emitted come from mobile (cars, ships, planes, heavy equipment, etc.) sources. For NO_x , 87 percent comes from mobile sources. Computer modeling of smog formation has shown that all existing programs to reduce NO_x and ROG would allow the San Diego Air Basin to meet the federal ozone standard by 1999 on days when there is no substantial transport of pollution from the South Coast Air Basin or other airshed. In 1999, there was not a single violation of the federal ozone standard anywhere within the entire SDAB.

The nearest air quality measurements to the project site are made in downtown Chula Vista by the San Diego County Air Pollution Control District (APCD), the agency responsible for air quality planning, monitoring and enforcement in the SDAB. A review of the last seven

years of published monitoring data from the Chula Vista (80 East J Street) air quality monitoring station reveals that progress toward cleaner air is seen in almost every pollution category. The only federal clean air standard that was exceeded throughout the 7-year monitoring period was the hourly ozone standard which was exceeded less than once per year (six violations in seven years, none since 1995, once per year is allowable under federal "attainment" guidelines). The more stringent State standards for ozone and for 10-micron diameter respirable particulate matter (PM-10) were exceeded on a somewhat higher frequency; but overall air quality in Chula Vista, as representative of the Otay Ranch area, is nonetheless very good in comparison to other areas of the SDAB.

5.11.2 THRESHOLDS OF SIGNIFICANCE

Based on the thresholds identified in Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact to air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. 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);
4. Expose sensitive receptors to substantial pollutant concentrations such as ozone or respirable particulates (PM-10); or
5. Create objectionable odors affecting a substantial number of people.

In addition, the San Diego APCD has recommended using the following thresholds (*Table 5.11-1*), adopted from the South Coast Air Quality Management District (SCAQMD):

TABLE 5.11-1 SCAQMD THRESHOLDS

	Project Construction	Project Operation
Carbon Monoxide	550 pounds/day	550 pounds/day
Reactive Organic Compounds	75 pounds/day	55 pounds/day
Nitrogen Oxide	100 pounds/day	55 pounds/day
Sulfur Dioxide	150 pounds/day	150 pounds/day
Particulates	150 pounds/day	150 pounds/day

Source: SCAQMD

Exceedance of these thresholds, either during project construction or upon buildout and occupancy, would result in a significant air quality impact.

5.11.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR Findings of Fact found the following significant impacts to air quality:

- Air quality impacts would exceed the State Implementation Plan (SIP) air quality attainment regulations that were based on SANDAG Series 7 growth projections. Also Project emissions of NO_x, reactive organic gases (ROG), CO, and PM-10 from vehicular and stationary sources would add to existing violations of federal and state ozone standards. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.
- Short-term emissions would occur during project construction. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The Sphere of Influence EIR concluded that the inclusion of Otay Ranch parcels into the City's sphere would not affect the analysis in the Program EIR which concluded that impacts to air quality would remain significant and unavoidable. Nevertheless, because the Sphere of Influence Update would not by itself result in physical change, there would be no significant impact.

OTAY RANCH SPA ONE EIR

One of the amendments made to the Otay Ranch GDP to implement the SPA One Plan altered assumptions made in the air quality discussion in Otay Ranch Program EIR 90-01. The Otay Ranch GDP required for the use of solar energy systems, and the amendment now only calls for the use of solar energy systems "as practical." The SPA One EIR did not analyze what incremental effect this GDP amendment would have on air quality, either from a quantitative or a significance perspective. This amendment would not change the significance conclusion of the Program EIR, because that document concluded that despite feasible mitigation measures, impacts to air quality could not be reduced to a level below significance.

AMENDED SPA ONE EIR

The Amended SPA One EIR and Findings of Fact found no significant impacts to air quality from the proposed GDP Amendments beyond those previously identified.

5.11.4 IMPACTS

GDP AMENDMENTS

The Otay Ranch Program EIR 90-01 found that impacts to air quality would exceed the State Implementation air quality attainment regulations which were based on SANDAG growth projections. Also, project emissions of NO_x, reactive organic gases (ROG), CO, and PM-10 from vehicular and stationary sources would add to existing violations of federal and state ozone standards. These impacts were found to be significant and unmitigable. Mitigation measures were adopted to reduce air quality impacts to the greatest extent practicable. Many of the air quality impacts, however, do not originate with the Otay Ranch Project and cannot be avoided by project-level mitigation.

The proposed GDP Amendments would not substantially increase the level of development allowed within the Amendment Area, nor would they substantially change the character of the uses proposed in the adopted GDP. *Section 5.10, Transportation, Circulation and Access* indicates that the total volume of traffic resulting from the amendments, as well as the traffic impacts at critical intersections and roadway segments would not substantially increase over those projected for the adopted GDP. In addition, short-term impacts related to construction

would be similar, since the type and quantity of development under the proposed GDP Amendments would not be substantially different from that proposed under the adopted GDP.

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A SPA-level air quality technical report was prepared by Giroux and Associates (Appendix H), to calculate air quality impacts directly related to the construction and buildout of the Village 11 Project Area. In order to gauge the significance of the air quality impacts associated with implementation of the proposed Village 11 SPA/TM, those impacts, together with existing background air quality levels, have been compared to the applicable ambient air quality standards.

Construction

Construction activities would create a temporary addition of pollutants to the local airshed. These pollutants would be principally associated with site clearing, grading, excavating, and travel on unpaved roadways. Secondary project-related atmospheric impacts derive from a number of other small, growth-connected emissions sources such as temporary emissions of dusts and fumes during project construction, increased fossil-fuel combustion in power plants from project electricity requirements, evaporative emissions at gas stations or from paints, thinners or solvents used in construction and maintenance, increased air travel from area visitors, dust from tire wear and re-suspended roadway dust, etc.

Table 5.11-2 shows maximum calculated single-quarter emissions relative to the above thresholds. Each pollutant analyzed would exceed the adopted threshold. Exceedances of the adopted thresholds represents a significant impact that would require the implementation of mitigation measures.

Small reductions in equipment exhaust emissions can be attained through regular tuneups and enhanced combustion technologies. Such emissions reductions, however, are 5-10 percent of the total NO_x burden which exceeds significance thresholds by several thousand percent. More substantial emissions reductions can be achieved from grading activities using best available control measures (BACMs). While particulate emissions can perhaps be reduced by an additional 50 percent, it would still not be sufficient to reduce the "excess" emissions relative to the significance threshold to a less-than-significant level. Construction activity air quality impacts from Village 11 development, individually and cumulatively with

other Otay Ranch development, would therefore have a significant and non-mitigable air quality impact.

**TABLE 5.11-2 MAXIMUM QUARTER SHORT-TERM
CONSTRUCTION EMISSIONS^{*}
(Tons of Emissions)**

	ROC	NO _x	CO	PM-10
Building Construction	5.84	5.84	18.67	6.09
Grading Equipment	1.36	19.37	6.43	1.94
Grading Dust	---	---	---	168.44
TOTALS	7.20	105.21	25.10	176.47
Significance Threshold	2.50	2.50	24.75	6.75
Percent of Threshold	288%	4,208%	101%	2,614%

* = SO_x emissions are negligible with low sulfur diesel fuel

Source: Giroux and Associates

Operational Mobile Source Emissions

The development of Village 11 would impact air quality almost exclusively through the vehicular traffic generated by project residents. Regionally, site-related travel would add to regional trip generation within the local airshed. There is a potential for the formation of micro-scale air pollution "hot spots" in the area immediately around points of congested traffic. With continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, air pollution "hot spot" potential is steadily decreasing. Standards for carbon monoxide (CO), the most typical indicator of any "hot spot" potential, have not been exceeded at any air basin monitoring station since 1990.

Locally, air quality "hot spots" (especially carbon monoxide, or "CO") would be likely to form if project implementation were to create highly congested intersections where vehicles sit idling through several traffic light cycles. With cleaner cars and declining background CO levels, major intersections must currently operate almost at LOS="F" before hot spot formation is generated. With continued vehicular emissions reductions from newer cars, future hot spot formation is even less likely than any near-term concerns.

A screening analysis was conducted for all intersections studied in the traffic analysis operating at LOS = D or worse for existing conditions, or forecast to experience such congestion in the future. Maximum one-hour CO concentrations were calculated at 25 feet from the roadway edge during p.m. rush hour conditions with worst-case meteorological conditions (strong temperature inversion and near-calm winds). The maximum one-hour background CO concentration in Chula Vista is 4 ppm. It would require a local contribution of 16 ppm if worst-case local exposures were to occur simultaneously with the maximum background in order to equal the most stringent California one-hour standard of 20 ppm. No existing or future intersections would begin to approach a local exposure that would possibly cause a "hot spot." Micro-scale air quality concerns relative to project implementation are, therefore, less than significant.

Project-related mobile source emissions for development within the Village 11 Project Area were calculated using the ARB computer model URBEMIS7G. The year 2010 was selected as the earliest feasible buildout year. The current phasing estimate is that Otay Ranch would likely be only 50 percent built out by 2010. *Table 5.11-3* summarizes the emissions calculations that show emissions would exceed established thresholds by a large percentage for ROC, CO and NO_x, the three principal exhaust pollutants. PM-10 is also forecast to exceed thresholds, but at a smaller level. These projected exceedances are considered significant air quality impacts. Mobile source emissions calculations were also made for buildout years of 2015 and 2020 using the URBEMIS7G model. Although future emissions are anticipated to be lower as cars become progressively cleaner, future mobile source emissions would continue to exceed the adopted significance thresholds seen in *Table 5.11-3*.

TABLE 5.11-3 TOTAL LONG-TERM OPERATION EMISSIONS*
(Pounds/day in 2010)

	ROC	NO _x	CO	PM-10
Mobile Sources	135.2	196.5	1,322.8	181.0
Stationary Sources	1.7	47.2	9.9	0.9
TOTALS	136.9	243.7	1,332.7	181.9
SCAQMD Threshold	55	55	550	150
Percent of Threshold	249%	443%	242%	121%

SOURCE: URBEMIS7G Computer Model for mobile source emissions

Note: Stationary source emissions were estimated from the SPA One DEIR adjusted for smaller Village 11 size and only partial buildout by 2010.

* = SO_x emissions are negligible for mainly passenger automobiles comprising the project-related travel fleet.

Even with a cleaner vehicle fleet for a later buildout year, thresholds would be exceeded by several hundred percent for NO_x, and by 50 percent for ROG and/or CO. Mobile source emissions would remain significant and not mitigable.

Operational Stationary Sources

Stationary sources comprise a very small fraction of the total project air pollution emissions burden. Energy consumption was estimated based upon a ratio of development within the Village 11 Project Area to comparable development within Otay Ranch. This estimate was based upon electrical consumption estimates and assumed that such demand would be met by fossil-fuel combustion at SDG&E power plants in the basin. With electricity deregulation, there is no longer a direct nexus between the locations of the resource generation and its subsequent consumption. As noted below, however, the energy consumption fraction is only a small part of the total project burden which is dominated by mobile source emissions. Therefore, air quality impacts related to stationary sources are not considered to be significant.

5.11.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identified the following significant impacts to air quality:

- Air quality impacts would exceed the State Implementation Plan (SIP) air quality attainment regulations that were based on SANDAG Series 7 growth projections. Also Project emissions of NO_x, reactive organic gases (ROG), CO, and PM-10 from vehicular and stationary sources would add to existing violations of federal and state ozone standards. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.
- Short-term emissions would occur during project construction. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

The proposed amendments to the GDP would not change the conclusions of the Program EIR 90-01 related to air quality impacts.

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Short-term construction-related emissions and long-term impacts associated with mobile-source emissions would exceed the significance thresholds. Therefore, air quality impacts would be significant.

5.11.6 MITIGATION MEASURES

GDP AMENDMENTS

The mitigation measures required in the Program EIR 90-01, as listed in Appendix B, would still be required by the proposed GDP Amendments. No additional mitigation measures beyond those required in the Program EIR 90-01 would be required of the proposed GDP Amendments.

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5.11-1 The following mitigation measures shall be requirements of construction operations:

- Minimize simultaneous operation of multiple construction equipment units.
- Use low pollutant-emitting construction equipment
- Use electrical construction equipment as practical
- Use catalytic reduction for gasoline-powered equipment
- Use injection timing retard for diesel-powered equipment
- Water the construction area twice daily to minimize fugitive dust
- Stabilize graded areas as quickly as possible to minimize fugitive dust
- Pave permanent roads as quickly as possible to minimize dust

- Apply chemical stabilizer or pave the last 100 feet of internal travel path within a construction site prior to public road entry
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blowoff during hauling.
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 mph.

5.11.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 concludes that long-term impacts to air quality would be significant and not mitigable. The same conclusion is applicable to the proposed GDP Amendments.

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Short-term construction-related emissions and long-term, mobile source air quality impacts are considered significant. Mobile emissions would have a temporary significant and unavoidable air quality impact due to emissions of NO_x and PM-10. Emissions would exceed the identified significance threshold for NO_x and PM-10. There are no known mitigation measures considered feasible for construction of a project of this magnitude, and air quality impacts are considered significant and unmitigable.

5.12 NOISE

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01), analyzed the existing conditions, potential impacts, and mitigation measures related to noise for the entire Otay Ranch project area. Section 4.9.13 of the Program EIR 90-01 included an analysis of noise impacts related to the Phase II Progress Plan Alternative (as amended), which ultimately was selected. The analysis and discussion of noise issues from the Program EIR is hereby incorporated by reference. References to analysis in the Program EIR 90-01 in this EIR pertain specifically to the analysis of the selected Phase II Progress Plan alternative. The following discussion focuses on the project specific impacts related to noise that would result from the proposed GDP Amendments and with development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the proposed GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the proposed GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review. In addition, a *Noise Technical Report* prepared specifically for Village 11 Project Area, prepared by Dudek & Associates, Inc. in June 2001.

5.12.1 EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 for the adopted GDP includes a description of the existing noise environment within the Amendment Area. The analysis and discussion of noise impacts from Program EIR 90-01 is hereby incorporated by reference. The Program EIR 90-01 described existing noise sources to be primarily generated by the four main roadways passing through or adjacent to the Otay Ranch: Telegraph Canyon Road, Otay Lakes Road, Proctor Valley Road and Otay Valley Road. Sound levels measures from 50 feet of the centerline of these roadways indicated noise levels ranging from 51 to 73 dBA, Leq (one hour average taken at the peak hour of traffic). Development that has occurred in other portions of Otay Ranch and in EastLake since the time that the Program EIR 90-01 was certified has slightly modified the existing environment for portions of the Amendment Area that are proximal to these changed areas. The following discussion provides an update and summary of regional environmental conditions for the Amendment Area. The updated discussion of existing noise conditions for Village 11 provides an adequate characterization of existing noise conditions for the Amendment Area.

VILLAGE 11 SPA/TM

The Otay Ranch Village 11 Project Area is located south of the EastLake planned community development in the eastern portion of the City of Chula Vista. The site is located within an undeveloped portion of Otay Ranch and is surrounded by undeveloped land. The existing roadways adjacent to the site are Hunte Parkway, Olympic Parkway and Eastlake Parkway.

Presently, Otay Lakes Road is a six lane Prime arterial west of Hunte Parkway and a two-lane road just east of Hunte Parkway. Otay Lakes Road will be expanded from a four- to six-lane Prime arterial adjacent to the project site. Hunte Parkway is a four-lane street running north from its termination at Olympic Parkway. Olympic Parkway is a six-lane street north of the project which is currently under construction. Wueste Road is a two-lane road terminating at Otay Lakes Road on the eastern edge of the project. Proctor Valley Road, north of the project, is currently a gravel road which will be expanded to a Class I Collector with the development of the eastern portions of Rolling Hills Ranch.

Currently, the primary sources of noise in the project area consist of vehicular traffic on surrounding local streets, including Otay Lakes Road, Hunte Parkway, Olympic Parkway, and to a lesser extent Wueste Road and Proctor Valley Road as indicated above. Olympic Parkway and Hunte Parkway provide the primary access to the project area. The site is located within an undeveloped portion of Otay Ranch. Thus, there are no significant noise sources that currently affect the site.

Applicable Standards

The City of Chula Vista has not adopted any specific numerical noise/land use compatibility levels. As a matter of policy, the City of Chula Vista employs the noise guideline levels set forth in the Noise Element of the City of San Diego Progress Guide and General Plan which identifies sound levels compatible with various land uses. All land uses are considered incompatible with noise levels in excess of 75 dB CNEL. A limit of 70 CNEL has been established for office, business and professional uses, and for churches and auditoriums. More sensitive land uses such as residences, schools, parks and libraries are considered significantly impacted by noise in excess of 65 dB CNEL. These standards are typically applied to exterior use areas adjacent to transportation noise sources such as roadways and railways. A noise exposure level of 65 dB CNEL is therefore the appropriate guideline for all land uses in the Village 11 project area. An additional standard of 50 dB CNEL is required for the interior of commercial and professional offices.

The City of Chula Vista Noise Ordinance restricts times of construction activities from 7:00 a.m. to 7:00 p.m., Monday through Saturday, and prohibits construction on Sundays and holidays. Furthermore, the noise levels from construction activities to residential receptors are not to exceed 75 dB, averaged over a 12-hour period.

Fixed source and/or operational noise is also governed by the City of Chula Vista Noise Ordinance. The applicable sound level is a function of the time of day and land use zone. Sound levels are measured at the property line of the noise source. Title 24 of the California Administrative Code requires that multi-family residences' interior noise levels, due to exterior sources, not exceed 45 dB CNEL. This is also considered a desirable noise exposure standard for single-family residences. Title 24 further specifies that if the exterior noise level exceeds 60 dB CNEL, an acoustical analysis shall demonstrate that the design would achieve the prescribed interior noise standard. Structural attenuation of noise from the exterior to interior is found in standard construction practices to be 15 dB or higher if windows are closed. With little additional noise reduction design, a noise reduction of 20 dB can be achieved. Exterior levels of up to 65 dB can therefore be accommodated before double-paned windows and other acoustical upgrades are needed to meet the 45 dB CNEL interior standard.

A noise level of 65 dB CNEL is also the threshold where noise interferes noticeably with an ability to carry on a quiet conversation. An exterior noise exposure of 65 dB is, therefore, the most common noise/land use compatibility guideline for new residential dwellings in California. Because commercial or industrial uses are not occupied on a 24-hour basis, the exterior noise exposure standard for such less sensitive land uses are generally less stringent according to the City of San Diego Noise Ordinance.

Fixed source and/or operational noise is also governed by the City of Chula Vista Noise Ordinance. The applicable sound level is a function of the time of day and land use zone. Sound levels are measured at the property line of the noise source. Title 24 of the California Administrative Code requires that multi-family and single-family residences' interior noise levels do not exceed 45 dB CNEL. According to Title 24, under standard construction practices, this regulation can be achieved if the exterior noise level exceeds 60 dB CNEL. With little additional noise reduction design, a noise reduction of 20 dB can be achieved. Exterior levels can therefore be accommodated before mitigation is needed to meet the 45 dB CNEL interior standard.

Ambient Noise Environment

The site is located within an undeveloped portion of Otay Ranch. Thus, there are no significant noise sources, other than traffic noise, as previously discussed, that currently affect the site.

Sensitive Receptors

Noise sensitive receptors are generally considered to be human activities or land uses that may be subject to the stress of significant interference from noise. Land uses which are associated with sensitive receptors often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, libraries, and CPF uses. Noise sensitive receptors may also include wildlife. Currently, there are no sensitive receptors or land uses on the project site.

5.12.2 THRESHOLDS OF SIGNIFICANCE

The City of Chula Vista has not adopted any specific numerical noise/land use compatibility levels to establish significance criteria. However, as a matter of policy, the City employs the noise guideline levels set forth in the Noise Element of the City of San Diego Progress Guide and General Plan (see *Table 5.12-1*).

Based on *Table 5.12-1*, the proposed project would result in a significant impact originating from noise if it would:

- Result in exterior noise levels that exceed 65 CNEL in residential areas and outdoor recreational areas and 70 CNEL in office and commercial districts;
- Result in interior noise levels that exceed 45 dB CNEL for single-family and multi-family residential homes;
- Create a substantial or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; or
- Result in noise levels that violate the City's Noise Ordinance (Chapter 19.68.010 of the Municipal Zoning Code).

TABLE 5.12-1. NOISE LAND USE COMPATIBILITY CHART

Land Use	Annual Community Noise Equivalent Level in Decibels					
	50	55	60	65	70	75
1. Outdoor Amphitheater (may be suitable for certain types of music)						
2. Schools, Libraries						
3. Nature Preserves, Wildlife Preserves						
4. Residential — Single Family, Multi-Family, Mobile Homes, Transient Housing						
5. Retirement Home, Intermediate Care Facilities, Convalescent Homes						
6. Hospitals						
7. Parks, Playgrounds						
8. Office, Buildings, Business and Professions						
9. Auditoriums, Concert Halls, Indoor Arenas, Churches						
10. Riding Stables, Water Recreation Facilities						
11. Outdoor Spectator Sports, Golf Courses						
12. Livestock Farming, Animal Breeding						
13. Commercial-Retail, Shopping Centers, Restaurants, Movie Theaters						
14. Commercial/Wholesale, Industrial Manufacturing, Utilities						
15. Agriculture (except Livestock), Extractive Industry, Farming						
16. Cemeteries						

 Compatible: The average noise level is such that indoor and outdoor activities associated with the land use may be carried out with essentially no interference from noise.
 Incompatible: The average noise level is so severe that construction costs to make the indoor environment acceptable for performance of activities would probably be prohibitive. The outdoor environment would be intolerable for outdoor activities associated with the land use.

5.12.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR found a significant impact from noise. Noise levels in many areas of the Otay Ranch project area were projected to exceed the 60 CNEL standard for residential uses. Also, indirect roadway and construction noise were projected to exceed the 60 dBA Leq for least Bell's vireos habitat and California gnatcatcher. No feasible mitigation measures were identified to reduce the impacts to a level below significance, although mitigation measures were required.

SPHERE OF INFLUENCE UPDATE EIR

The Sphere of Influence EIR concluded that the inclusion of Otay Ranch parcels into the City's sphere would not affect the analysis in the Program EIR that impacts from noise would remain significant and unavoidable. Nevertheless, because the Sphere of Influence Update would not by itself result in physical change, there would be no significant impact.

OTAY RANCH SPA ONE EIR

Two of the amendments made to the Otay Ranch GDP to implement the SPA One Plan and annexation altered the assumptions and conclusions of the Otay Ranch GDP Program EIR with regard to noise impacts.

The first amendment modified the performance standard regarding noise impacts on habitat for Least Bell's Vireo and California gnatcatcher. The effect of this amendment is discussed in Section 5.3, *Biological Resources*.

The second amendment modified the mandatory mitigation measures for the Otay Ranch GDP by increasing the allowable exterior noise within residential development from 60 CNEL to 65 CNEL.

AMENDED SPA ONE EIR

The amended SPA One EIR found no additional noise impacts from the proposed GDP Amendments.

5.12.4 IMPACT ANALYSIS

GDP AMENDMENTS

The Program EIR 90-01 identifies the primary source of noise impacts as vehicular traffic, for the portion of the project within the Amendment Area. Traffic noise is anticipated to impact sensitive receptors both on and offsite, and potentially could affect wildlife activities in areas adjacent to the preserve. Construction noise is not addressed at the GDP level of analysis. The Program EIR 90-01 requires that subsequent, site-specific noise studies be prepared to address specific localized impacts, including construction noise. This requirement would remain with the proposed GDP Amendments. No feasible measures were identified at the program-level of analysis to mitigate significant noise impacts to less than significant levels.

The proposed GDP Amendments are within the same development boundaries as the adopted GDP. The proposed GDP Amendments would not cause a decrease in the levels of service at any of the critical intersections or roadway segments analyzed (refer to *Section 5.10* of this EIR). In addition, Main Street is proposed to be discontinued through Villages Nine and 10, eliminating a major road in an area in close proximity to the Preserve. The proposed GDP Amendments would not increase noise levels, or place noise generating uses or in areas that would have the potential to result in increased noise levels to sensitive receptors or resources. Therefore, the proposed GDP Amendments would not result in any substantial increase in noise impacts, over those analyzed and addressed in the Program EIR 90-01. The mitigation measures required by the Program EIR 90-01 would be still apply to the proposed GDP Amendments and no new or additional mitigation would be required. The impacts to noise would still be considered significant and unmitigable with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

Construction Noise

Construction noise would be generated by diesel engine driven construction equipment which is commonly used for site preparation and grading. Additional noise would be generated by normal construction activities, such as the use of power saws and drills and hammers. Construction noise levels range widely as a function of the equipment used and the activity level. Earth-moving equipment may produce temporary noise levels ranging from 75 to 90 dB CNEL at a distance of 50 feet from the equipment for short periods during site preparation and grading. After site preparation, noise levels would likely average 65-75 dB CNEL at a distance of 50 feet from operating construction equipment. These impacts would be considered significant.

Construction noise sources are not strictly relatable to a noise standard because they occur only during selected times and source strength varies sharply with time. The penalty associated with noise disturbance during quiet hours and the nuisance factor accompanying such disturbance usually leads to time limits on grading activities imposed as conditions on grading permits. The hours from 7:00 a.m. to 7:00 p.m. from Monday through Saturday have been identified in the City of Chula Vista Noise Ordinance as mitigating construction activity noise impacts to the extent feasible. Limitations on construction activity is considered to mitigate short-term impacts to less than significant.

Traffic-Generated Noise

The future traffic noise levels along Hunte Parkway, Olympic Parkway, and Eastlake Parkway were determined using Caltrans' SOUND32 Traffic Noise Prediction Model (Caltrans 1983) with California noise emission factors (Caltrans 1987). Input used in the noise model included future year 2020 traffic volume with vehicle speeds of 45 mph. The truck mix used was 3.0 percent medium trucks and 2.0 percent heavy trucks based on the parameters of the Caltrans model.

The primary noise source in the future would be traffic noise along Hunte Parkway, Olympic Parkway, and Eastlake Parkway. Single- and multi-family residences located adjacent to Hunte Parkway, Eastlake Parkway, and portions of Olympic Parkway would be exposed to future noise levels exceeding the City's 65 dB (CNEL) exterior noise criteria. The future year 2020 traffic volume along these roads adjacent to the project site would be approximately

42,000 ADT along Hunte Parkway, 41,000 ADT along Olympic Parkway, and 30,000 to 50,000 ADT along Eastlake Parkway (LLG 2001).

Noise modeling of future site conditions indicate that the on-site noise level would exceed a CNEL of 65 dB at lots adjacent to Hunte Parkway, Olympic Parkway, and Eastlake Parkway. The approximate distances to various future first floor exterior CNEL noise contours are depicted in *Figure 5.12-1, Future DNL Noise Contours*. The noise contours do not include the effects of intervening shielding from topography, and the proposed residences that would provide excess noise attenuation beyond the first row of homes.

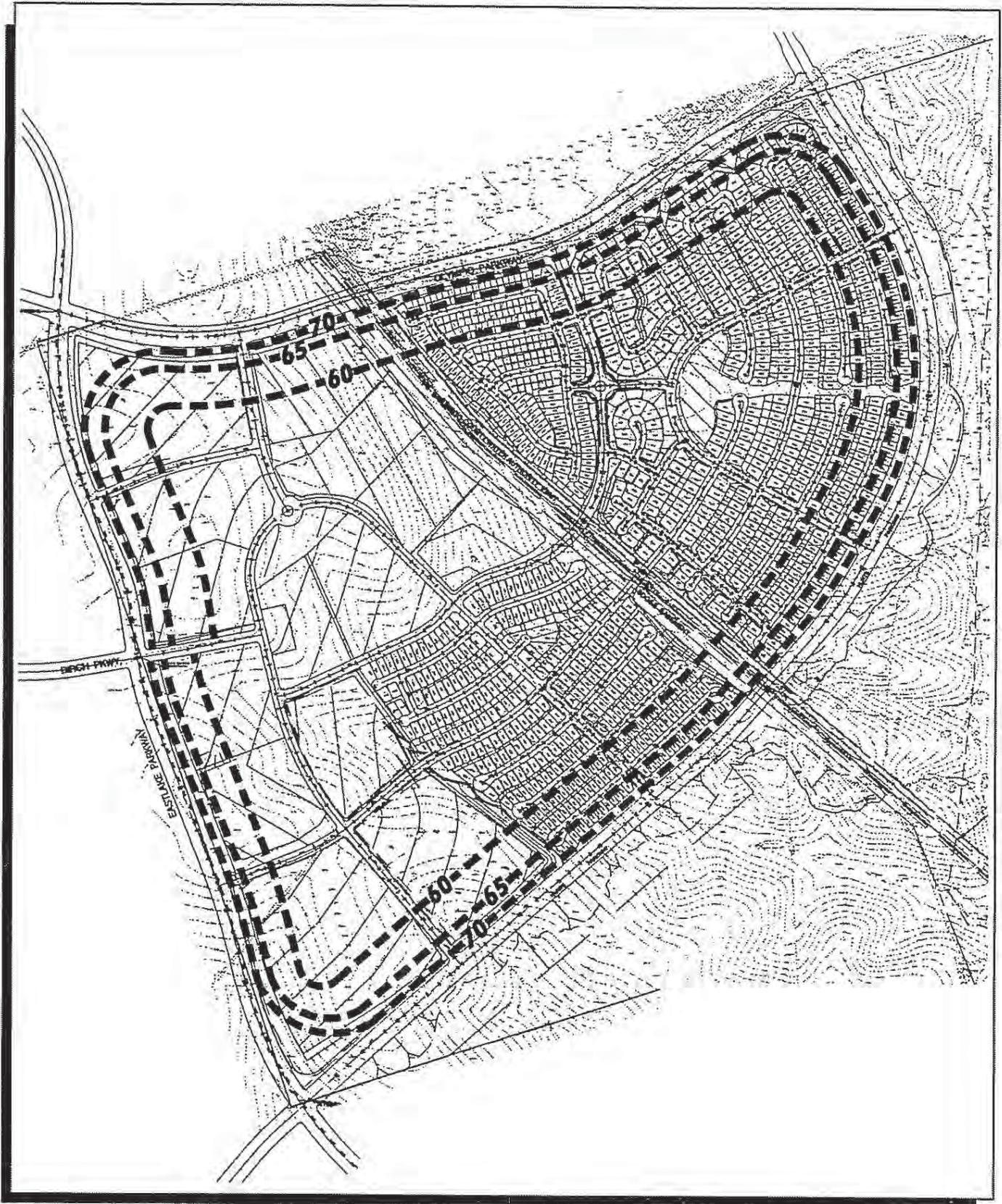
Without noise barriers, the single-family lots adjacent to Hunte Parkway would be exposed to a future CNEL greater than 65 dB. The first floor CNEL would range up to approximately 70 dB at the backyards of the closest homes adjacent to Hunte Parkway. The future noise levels along Hunte Parkway would exceed the City's noise guidelines by up to 5 dB. Unless mitigation measures are implemented, a significant noise impact would result.

The backyards of approximately eight single-family homes located adjacent to the western portion of Olympic Parkway would be exposed to a future noise levels exceeding the 65 dB DNL threshold level. The backyards of the remaining single-family lots adjacent to Olympic Parkway would be located approximately 10 to 20-feet below the elevation of Olympic Parkway. The proposed grade elevation difference, in conjunction with the proposed setback distances, would provide adequate topographic shielding along Olympic Parkway and attenuate the traffic noise at the backyards at these lots to 65 dB CNEL or less. This noise level would comply with the City's exterior CNEL noise criteria and would not be significant.

The noise level at the multi-family lots located adjacent to Hunte Parkway, Olympic Parkway, and Eastlake Parkway would exceed a CNEL of 65 dB and would be significant. Mitigation measures would be required if exterior usable space areas, such as common use recreation areas or private patios, are constructed adjacent to these roads.

Interior Noise Levels

The noise guideline levels implemented by the City of Chula Vista and the State require that interior noise levels not exceed a CNEL 45 dB within multi-family units. Typically, with the windows open, and using standard California construction materials and methods, the building shells provide approximately 15 dB of noise reduction. Therefore, multi-family units exposed to an exterior CNEL greater than 60 dB could result in an interior CNEL greater than



SOURCE: Dudek (2-1-01)



Future DNL Noise Contours

Figure 5.12-1

Otay Ranch GDP Amendments and Village 11 SPA/TM EIR

45 dB. The exterior CNEL at the proposed multi-family residences adjacent to Hunte Parkway, Olympic Parkway and Eastlake Parkway would exceed 60 dB CNEL noise threshold resulting in a significant impact.

Commercial Noise

The proposed project would develop commercial uses adjacent to residential uses at the village core area, as well as at a commercial lot located at the southeast corner of Eastlake Parkway and Birch Parkway. Sources of commercial noise typically include activities at loading docks and parking lots; heating/ventilation and air conditioning equipment (HVAC); maintenance activities; and additional heavy truck traffic along adjacent roads. Noise levels associated with the commercial activities would vary depending on the number of delivery trucks, loading dock areas, and customer traffic generated by the commercial sites. Similarly, HVAC equipment noise would vary depending on the number and type of equipment selected. Typical roof-top HVAC packaged units generate noise levels of approximately 70 dB at 10 feet from the source which would be considered a significant impact. Prior to approval of commercial development plans, the commercial sites would have to be designed so that noise levels would comply with the City's noise ordinance.

5.12.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identified traffic noise in excess of 60 CNEL as a significant impact to residential uses and to sensitive wildlife species. No feasible mitigation measures were identified at the program-level of analysis to reduce the impacts to a less than significant level, even though mitigation was required. Subsequent amendments to the GDP increased the standard for residential noise to 65 CNEL. The proposed Amendments to the GDP would not change this conclusion.

VILLAGE 11 SPA/TM

Potential sources of noise related to the proposed Village 11 SPA/TM include construction noise, traffic-generated noise, and commercial noise. Construction activities, especially heavy equipment, would create short-term noise increases that would exceed significance thresholds. Upon completion of construction, if left unmitigated, project-related traffic would cause a significant increase in noise levels in the Village 11 Project Area.

5.12.6 MITIGATION MEASURES

GDP AMENDMENTS

The Program EIR 90-01 for the adopted GDP requires that site-specific noise studies be prepared for individual SPA Plans at subsequent stages of development. The Program EIR 90-01 also contains standards for noise mitigation for residential uses. The proposed GDP Amendments would require the same measures, and since no new significant impacts related to the proposed amendments have been identified, no additional mitigation is required.

VILLAGE 11 SPA/TM

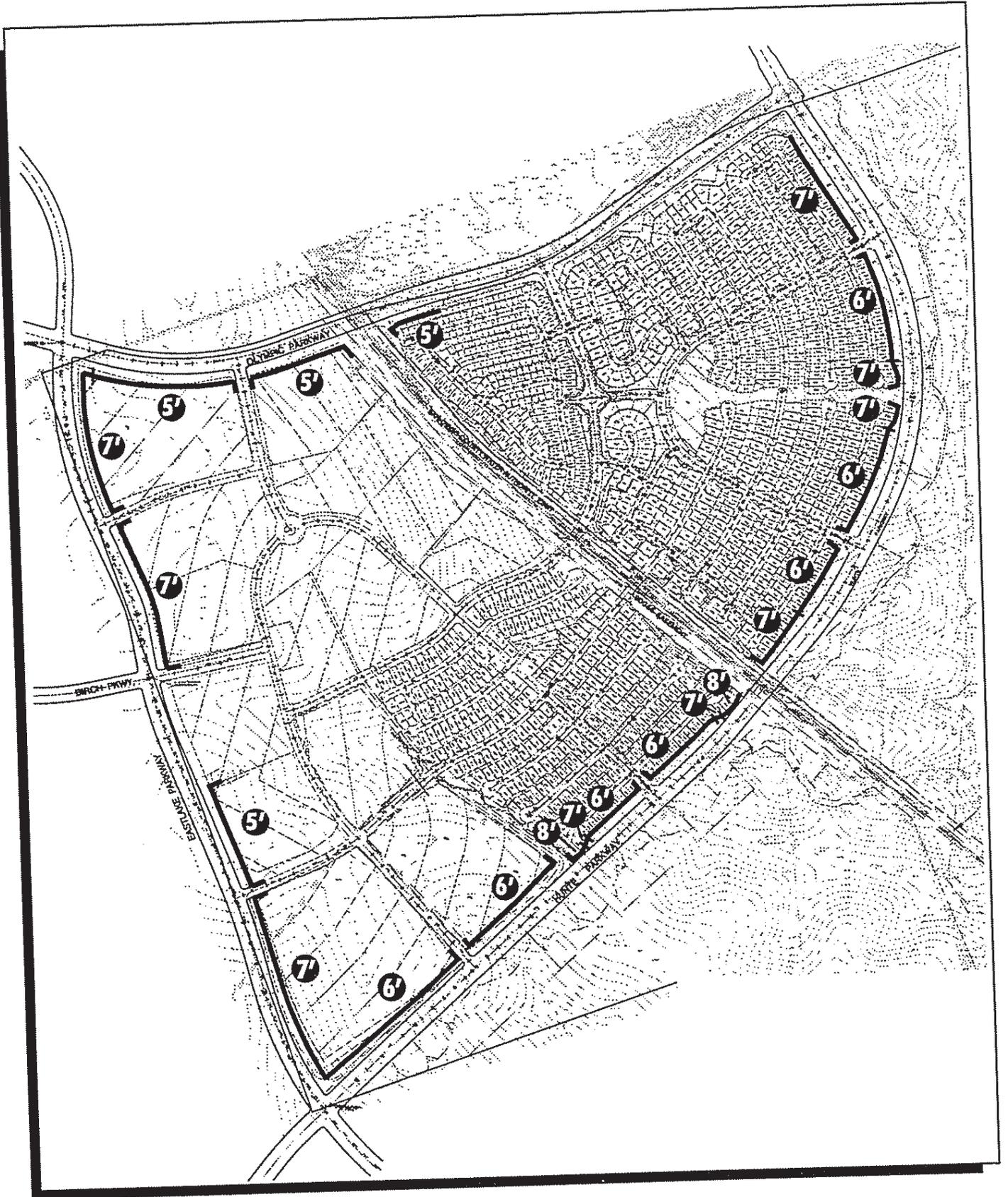
The mitigation measures are based on the conceptual tentative map and grading plan for Village 11 and are in compliance with the noise guideline levels implemented by the City of Chula Vista.

5.12-1 Project construction shall be required to adhere to the time limitations for construction activities identified in the Chula Vista Municipal Code. Those limitations restrict construction activity to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday.

5.12-2 Traffic Generated Noise

a) Exterior Noise

- (1) Noise barriers ranging from 5 to 8 feet in height shall be shown on Improvement Plans for single-family residences located adjacent to Hunte Parkway and Olympic Parkway, and shall be installed concurrent with development. Noise barrier locations and heights are depicted in *Figure 5.12-2, Preliminary Noise Barrier Heights and Locations*.
- (2) Noise barriers ranging from 6 to 7 feet in height shall be shown on Improvement Plans at the multi-family lots adjacent to Hunte Parkway, Olympic Parkway and Eastlake Parkway, if exterior usable space areas (i.e., common use areas and private patio areas) are located adjacent to these roads. Exterior noise levels at the usable space areas of single- and multi-family residences would have to be mitigated to a

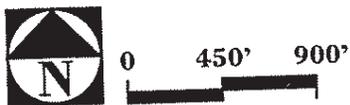


SOURCE: Dudek (2-1-01)

**Preliminary Noise Barrier
Heights and Locations**

Figure 5.1 2-2

Otay Ranch GDP Amendments and Village 11 SPA/TM EIR



CNEL of 65 dB or less. The height of the noise barriers shall be reduced or eliminated through site design measures, such as incorporating setbacks, orienting the buildings to shield exterior usable space areas, or locating non-noise sensitive uses such as parking/carports adjacent to the roads. Noise barriers shall be installed concurrent with development.

- (3) Noise barriers as shown on Improvement Plans where required, shall be constructed as a wall, berm, or combination of both. Construction of the barriers shall be concurrent with development of the impacted uses. The materials used in the construction of the barrier shall have a minimum surface density of 3.5 pounds per square foot. Barriers shall consist of masonry material, plexiglass, tempered glass or a combination of these materials. The barriers shall be designed so that there are no openings or cracks.

b) Interior Noise

- (1) Prior to issuance of grading permits, an interior noise analysis shall be required for the project to comply with the City's interior noise standard. The acoustical analysis shall be required for the multi-family homes located adjacent to Hunte Parkway, Olympic Parkway and Eastlake Parkway to ensure that the interior noise levels would not exceed a CNEL of 45 dB.

5.12-3 Commercial/Mixed Use

- a) Prior to issuance of grading permits, an acoustical study shall be required for all commercial and mixed use development plans, to ensure that potential noise impacts are assessed and mitigation measures are incorporated into the project design. Noise abatement measures may include noise barriers, setbacks, selecting quieter equipment or limiting the hours or operation.

5.12.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identifies noise impacts resulting from the project to be significant and potentially unmitigable at the program-level of analysis. Final determination of significance is to be determined at the SPA-level. The proposed Amendments to the GDP would not change this conclusion.

VILLAGE 11 SPA/TM

Mitigation measure 5.12-1 would mitigate construction noise to less than significant levels. Mitigation measures listed under 5.12-2 would mitigate significant exterior and interior noise impacts to a level below 65 dB CNEL, and 45 dB CNEL respectively. Mitigation measure 5.12-3 would ensure that studies were conducted to identify measures to avoid significant noise impacts generated by commercial uses.

5.13 PUBLIC SERVICES AND UTILITIES

This section discusses the availability of public services and utilities for the proposed Amended GDP and for the Village 11 SPA Plan. The Otay Ranch GDP/SRP Program EIR analyzed the existing conditions, such as water availability and demand; wastewater and sewer service; integrated waste management; police protection; fire protection; emergency medical services; schools; library service; parks, recreation and open space; gas and electricity; health and medical facilities; social and senior service facilities; and other public services (cemeteries, child care, and animal control).

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01), analyzed the existing conditions, potential impacts, and mitigation measures related to: water availability and demand; wastewater and sewer service; integrated waste management; police protection; fire protection; emergency medical services; schools; library service; parks, recreation and open space; gas and electricity; health and medical facilities; social and senior service facilities; and other public services (cemeteries, child care, and animal control) for the entire Otay Ranch project area. Section 4.9.14 of the Program EIR 90-01 included an analysis of public services and utilities impacts related to the Phase II Progress Plan Alternative (as amended), which ultimately was selected. The analysis and discussion of public services and utilities issues from the Program EIR is hereby incorporated by reference. References to analysis in the Program EIR 90-01 in this EIR pertain specifically to the analysis of the selected Phase II Progress Plan alternative. The following discussion focuses on the project specific impacts to public services and utilities that would result from the proposed GDP Amendments and with development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the proposed GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the proposed GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review.

This section is also based on a variety of public service reports which were prepared for the Village 11 SPA/TM, including the *Conceptual Master Plan for Potable and Recycled Water* (September 2000) and the *Overview of Sewer Service for Village 11* (February 2001). The public services and utilities analysis for Village 11 is based on a population figure of 3.01 persons per dwelling unit based on 1999 Department of Finance figures. Based on this figure, the 2,304 proposed dwelling units would generate a population of 6,935.

PUBLIC FACILITIES FINANCE PLAN

A PFFP has been developed for Village 11 SPA Plan by Burkett & Wong. The PFFP is a separate document that supports the Village 11 SPA Plan. The PFFP provides the nature, sizing, extent and timing for the construction of public facilities and addition of public services which would be necessary for the development of the Village 11. The PFFP contains a Facility Threshold Analysis, Capital Financing Plan, Phasing Plan and Fiscal Impact Analysis. The requirements identified in the PFFP become conditions of approval for all subsequent SPA entitlements. The implementation of Village 11 is contingent upon the prior approval and adoption of the PFFP.

5.13.1 WATER**EXISTING CONDITIONS****GDP AMENDMENTS**

The Program EIR 90-01 GDP provides a discussion of existing water service providers and summarizes the analysis of existing facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01 for the adopted GDP. No changes in service providers or service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM**Regional**

The Program EIR 90-01 discusses the County's regional and local water supply system including existing regional capacities, and future planning efforts of Federal, State, and Local agencies to increase the water supply in the region. Approximately 90 percent of the San Diego region's water is imported, while 10 percent is supplied from water produced locally through a system of reservoirs and pipelines. Imported water is supplied to San Diego County by the Metropolitan Water District (MWD). The MWD's primary sources of water are the State Water Project (SWP) and the Colorado River.

Otay Water District

The Village 11 Project Area is located within the Otay Water District (OWD) service area. The OWD has established five pressure zones within the Otay Ranch to provide adequate water pressure to different pad locations. The OWD refers to the Village 11 Project Area as being within the Central Service Area. Potable water is provided to the Central Service Area by the San Diego County Water Authority (SDCWA) via the Second San Diego Aqueduct. Water is delivered at aqueduct connections No. 10 and No. 12, and is conveyed to the OWD's emergency/operating reservoirs at a grade of 624 feet AMSL. There are currently three 624 pressure zone reservoirs in the Central Service Area. These reservoirs are the 12.4 million gallon (mg) 624-1 Patzig Reservoir located adjacent to the Otay Ranch SPA One project, the

8.0 mg 624-2 Reservoir located in the EastLake I development, and the 30 mg 624-3 EastLake Greens Reservoir located adjacent to the EastLake Parkway. Emergency storage for the pressure zones 711 and 980 is provided in the pressure zone 624 Reservoirs. Water is then pumped to the 711 and 980 zones. The Village 11 Project Area is located in pressure zones 711 and 980.

Water service for Village 11 Project Area would be provided by the OWD. Annexation into Improvement Districts 22 and 27 would be required prior to water service being provided. The OWD has existing and planned facilities in the vicinity of the project. The existing and proposed water facilities that would service the Village 11 Project Area are shown in *Figure 5.13-1, Existing and Proposed Water Facilities*.

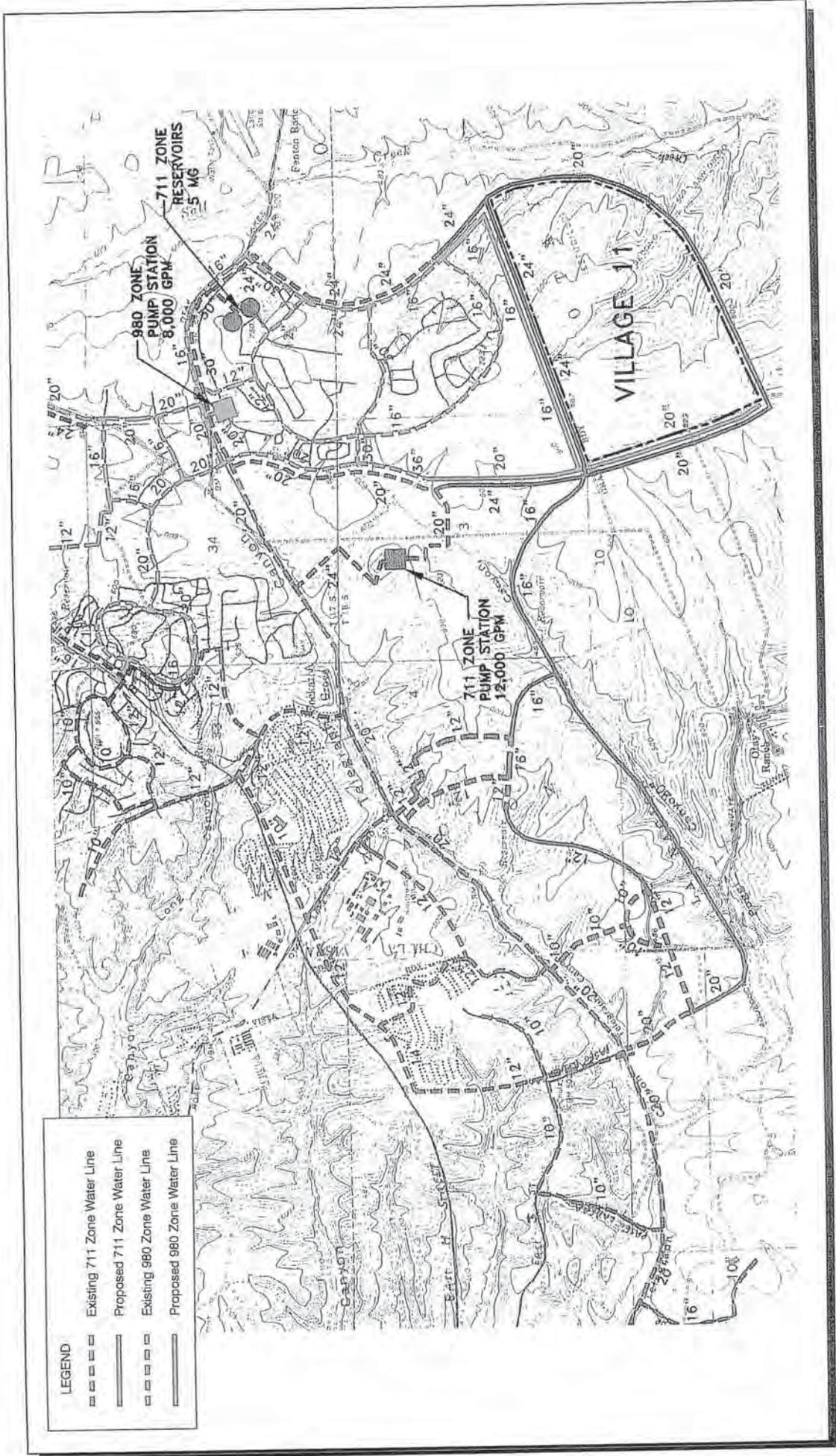
Chula Vista

The City of Chula Vista has adopted a Growth Management Ordinance (Chapter 19.09) which imposes water service standards. These standards are established to ensure that adequate storage, treatment and transmission facilities are constructed concurrently with planned growth.

Water Storage and Supply

The 711 Zone has two existing reservoirs located at the same site within the EastLake Greens development. The reservoirs have capacities of 2.8 and 2.2 mg for a total of 5.0 mg. There are two existing reservoirs in the 980 Zone. These reservoirs are located within the District's Use Area north of the Rolling Hills Ranch subdivision. The reservoirs have a capacity of 5 mg each for a total of 10 mg. *Table 5.13-1* presents a summary of the existing reservoir capacity in the 711 and 980 Zones.

There are currently three 624 Zone reservoirs in the Central Service Area. These reservoirs are the 12.4 mg 624-1 (Patzig) Reservoir located adjacent to the Otay Ranch SPA One project, the 8.0 mg 624-2 Reservoir located in the EastLake I development, and the 30 mg 624-3 (EastLake Greens) Reservoir located adjacent to EastLake Parkway. Emergency storage for the 711 and 980 Zones is provided in the 624 Zone Reservoirs.



LEGEND

	Existing 711 Zone Water Line
	Proposed 711 Zone Water Line
	Existing 980 Zone Water Line
	Proposed 980 Zone Water Line

Existing and Proposed Water Facilities
Figure 5.13-1
 Otay Ranch GDP Amendments and Village 11 SP/ATM EIR

SOURCE: Wilson Engineering Inc., 2001

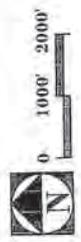


TABLE 5.13-1
EXISTING OPERATIONAL RESERVOIRS

Reservoir Name	Capacity
711 Zone	
711-1 (22-1)	2.78 mg
711-2 (22-1A)	2.22 mg
Total 711 Zone	5.00 mg
980 Zone	
980-1 (22-4)	5.00 mg
980-2 (22-5)	5.00 mg
Total 980 Zone	10.00 mg

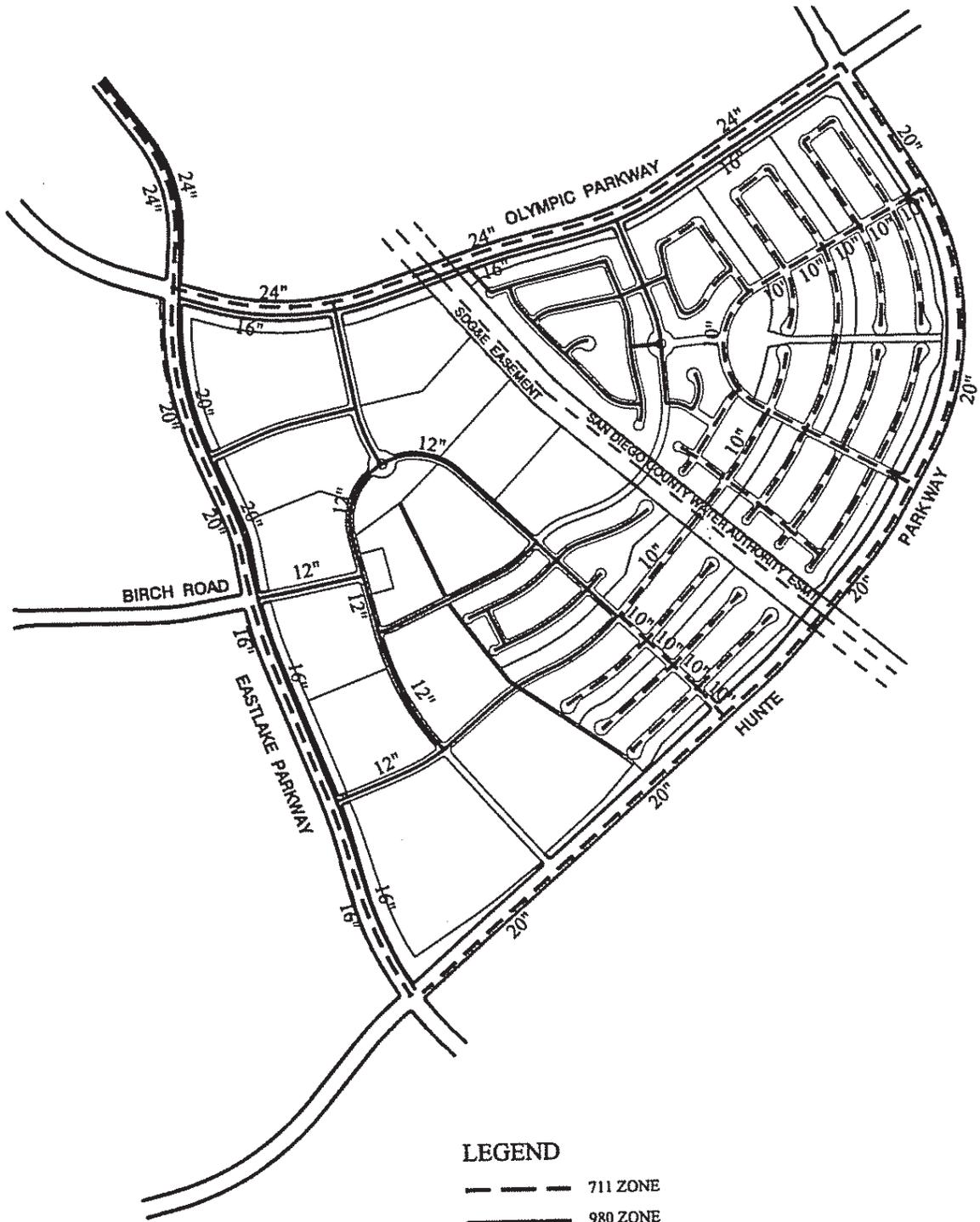
Source: Dexter Wilson Engineering

Pipelines/Potable Water

Existing 20-inch 711 Zone transmission mains are located in Telegraph Canyon Road and Eastlake Parkway along the northern and eastern boundaries of Otay Ranch SPA One. Current development of the SPA One project would include extension of 16-inch transmission mains in La Media Road and East Palomar Street. An existing 980 Zone transmission main, ranging in size from 20 to 36 inches, is located in Eastlake Parkway (Figure 5.13-2, Potable Water). Future 20 to 24-inch 711 Zone pipes would be located in Eastlake Parkway, Hunte Parkway and Olympic Parkway. The proposed village core area would be served by a system of 12-inch lines in the commercial zone and 10-inch lines in residential areas.

Pumping Facilities

The Central Area Pump Station, located at the Patzig Reservoir site, pumps water from the 624 Zone to the 711 Zone distribution system. The pump station currently has four pumps (including one standby), each rated for approximately 4,000 gpm which results in a firm capacity of 12,000 gpm. There is space for the addition of a fifth pump in the future.



LEGEND

- 711 ZONE
- 980 ZONE
- LIMITS OF GRADING

SOURCE: Brookfield Shea Otay, LLC, 2/27/01



Not to Scale

Proposed Potable Water Facilities

Figure 5.1 3-2

Otay Ranch GDP Amendments and Village 11 SPA/TM EIR

The 980 Zone receives potable water from the EastLake Pump Station, which lifts water from the 711 Zone to the 980 Zone distribution system. This pump station is located on the south side of Otay Lakes Road at Lane Avenue and contains three 4,000 gpm pumps (including one standby) for a total capacity of 8,000 gpm.

Recycled Water Supply

An important method of supplementing the water supply is water reclamation. Reclamation is the process of utilizing treated wastewater effluent for specific uses regulated by various agencies. The treated wastewater must meet at a minimum, secondary treatment standards as required by the federal government in the Clean Water Act of 1972 (revised in 1987) in order to be used a reclaimed water for golf courses, cemeteries, freeway or landscape medians and other areas of similar public access. The California State Health Department (Title 22) requires further treatment of the secondary effluent for irrigation of public parks, schools, and playgrounds. By utilizing reclaimed water, the demand for potable water is decreased by an equal amount. The San Diego RWQCB must approve all reclamation projects.

The OWD is the purveyor of reclaimed water for areas within the OWD's jurisdiction. Recycled water supply is currently available to the Otay Ranch area from the 1.3 million gallons per day (mgd) capacity Ralph W. Chapman Water Recycling Facility (WRF) located near the intersection of Singer Lane and Highway 94. This facility can be expanded to an ultimate capacity of 3.84 mgd. Recycled water is delivered from the WRF to two storage ponds located in the District Recycled Use Area located near the two existing 980 Zone potable water tanks. The storage ponds have a high water line of approximately 950 feet and provide the storage and supply for the 950 Zone distribution system.

A planned 2.2 mg capacity storage reservoir to be located in the EastLake Greens development is currently under design by the OWD. The reservoir, with a high water level of 680 feet, would initially receive recycled water from the 950 Recycled Zone distribution system and serve as an operational storage reservoir for a planned 680 Recycled Zone.

Supplemental recycled water supply would be available from the City of San Diego's planned 7.0 mgd capacity South Bay Water Reclamation Plan (SBWRP), to be located in the Tijuana River Valley near the Mexican border. Completion of the SBWRP is anticipated in the year 2001. Deliveries to the District would be pumped up to the planned 680 Recycled Zone reservoir. The District would have the option of pumping recycled water from the 680 Recycled reservoir to supply 950 Recycled Zone demands.

Recycled Water Reservoirs

A 2.2 MG capacity, 680 recycled zone reservoir is currently under design by OWD. The reservoir would be located within the EastLake Greens subdivision between South Greensview Drive and the Second San Diego Aqueduct right-of-way. The reservoir would have a connection to a planned 680 Recycled Zone transmission main within the Aqueduct right-of-way. This main would tie into planned transmission mains in Telegraph Canyon Road and Olympic Parkway.

Two existing 16.3 mg capacity lined and covered ponds located within the District Use Area provide operational storage for the 980 Recycled Zone. The ponds are connected to an existing 20-inch transmission main in Lane Avenue which runs south to the existing main in Otay Lakes Road.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the proposed project would have significant impacts to water resources if it would:

- Encourage activities which result in the use of large amounts of water, or use of water in a wasteful manner;
- Result in substantial need for new, altered, or expanded services; or
- Result in insufficient water supplies available to serve the project from existing entitlements and resources, or if new expanded entitlements are needed.

In addition, according to City of Chula Vista threshold standards, impacts to water resources would be significant if the proposed project:

- Exceeds City of Chula Vista threshold standards to ensure that adequate supplies of quality water, appropriate for intended use, are available. The standards require the following actions:
 - (1) The applicant must request and deliver to the City service availability letters from the appropriate water district for each project at the Tentative Map level.
 - (2) The project applicant is required to submit a Water Conservation Plan (WCP) along with a SPA Plan application.

- (3) The project plans shall ensure an adequate supply of water on a long-term basis, prior to the development of each Otay Ranch SPA.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program found project-generated water requirements would result in significant impacts related to the capability of local jurisdictions to provide adequate water. No feasible mitigation measures were identified at this level of planning to reduce the impacts to a level below significance, although mitigation measures were required.

SPHERE OF INFLUENCE UPDATE EIR

The Sphere of Influence Update EIR did not contain a discussion of water service impacts.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS

GDP AMENDMENTS

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP, with respect to the delivery of water services. No substantial change in water demand over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments since the total population increase represented by the proposed amendments is approximately 1.0%. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments. However, impacts related to water supply would remain significant and unmitigable with the proposed GDP Amendments, at the program-level of analysis.

VILLAGE 11 SPA/TM

Appendix J includes the "Overview of Water Service for Otay Ranch Village 11," dated November 2000, has been prepared for the Village 11 SPA/TM by Dexter Wilson Engineering. The study provides information regarding projected potable water demands, recycled water and infrastructure, as outlined in this section.

Water Supply and Storage

Average annual day (AAD) water demands for the planned development were estimated through application of the way duty method as specified in the OWD's Master Plan. The method involves assigning a representative unit water demand to each land use type in the planning area. Demand projections for the project are then computed by multiplying the gross acreage planned for each land use category by the corresponding water duty (Table 5.13-2). Environmental impacts resulting from OWD's planned supply and storage improvements cannot be determined until the facilities are designed, and therefore any potential impacts may be significant.

Two existing 711 Zone reservoirs are located within the EastLake Greens development. Combined capacity for both reservoirs is 5.0 million gallons. Two existing 980 Zone reservoirs are located on OWD property north of the Rolling Hills Ranch project. The reservoirs have a capacity of 5.0 mg each for a total capacity of 10.0 mg.

TABLE 5.13-2
PROJECTED DAILY POTABLE WATER DEMANDS

Land Use	Gross Area (Acre)	Units	Unit Demand (Gpd/ac)	Total Demand (Gpd)
SF Residential	195.8	996	1,785	349,503
MF Residential	109.1	1,193	2,232	243,288
Schools	36.6	-	2,232	81,690
Town Square Comm./CPF	15.5	-	1,785	27,670
Multiple Use (MU)	10.0	115	2,232	22,320
TOTAL				724,471

gpd = gallons per day

ac = acres

Unit Demand Factors from 1995 OWD Water Resource Master Plan

Source: Dexter Wilson Engineering

Emergency storage capacity for the proposed project would be provided by the EastLake Greens Reservoir (624-3). Based on an average annual day (AAD) demand of 1.91 mgd, the required emergency storage for the proposed project is 6.03 mg, therefore, sufficient capacity exists within the service area to meet the emergency storage needs of the project. OWD is currently processing storage capacity upgrades in Zones 711 and 980 and the district would be the lead agency for environmental review prior to the consideration of those improvements. Without provision of the proposed reservoirs, significant impacts to water pressure and flow would result.

Pipelines

The southeastern portion of the Village 11 Project Area would be served by the 711 Zone. There are several proposed 711 Zone transmission lines surrounding the Village 11 Project Area that are included in the OWD's Capital Improvement Program (CIP). These facilities include 20-inch lines in Hunte Parkway and Eastlake Parkway and a 24-inch line in Olympic Parkway. The northwestern portion of the Village 11 Project Area would be served by the 980 Zone. This would be accomplished by making several connections to transmission lines in Eastlake Parkway and Olympic Parkway. Water pipelines and transmission facilities are planned within proposed streets adjacent to the Village 11 Project Area, or are located in existing roadways, and have been evaluated in previous environmental documents.

Therefore, impacts related to the placement of the pipelines are included in the impacts analyzed for the roadways. No significant impacts would result from construction of the pipelines themselves. Significant impacts to water delivery would result without construction of the pipelines.

Pumping Facilities

The proposed project would be served by the 711 and 980 Zones and, therefore, would place additional demand on the existing Central Area (711) and EastLake (980) Pump Stations. Design criteria for the pump stations is based on providing sufficient capacity to convey the maximum day demands for all higher zones to which the station pumps. As shown on the following table (Table 5.13-3), new development, plus existing development and the proposed project, is expected to have a combined maximum day demand of approximately 12,600 gpm in the 711 Zone and 5,900 gpm in the 980 Zone. Based on these demands, existing 711 Zone pumping capacity would require expansion, either through the installation of an additional pump at the Central Area Pump Station or construction of the planned EastLake Greens Pump station. These improvements would be undertaken by the OWD and would be funded, in part, by connection fees provided by development in the Village 11 Project Area. Without provision of the required facilities, significant impacts to water delivery would result.

TABLE 5.13.3
SHORT-TERM PUMPING CAPACITY BALANCE

Zone	Existing Pumping Need ¹	Proposed Development Storage Requirements (gpm)						Total Pumping Need	Existing Pumping Capacity	Pumping Capacity Deficiency
		Sunbow ²	Rolling Hills Ranch ³	Otay Ranch SPA One ⁴	EastLake Trails ⁵	McMillin Otay Ranch Proposed Projects	Otay Ranch Village 11			
711	2,833	319	NA	2,130	292	1,132	8,758	12,631 ⁶	12,000	631
980	2,180	NA	1,849	NA	583	1,313	2,180	5,925	8,000	NA

¹ Per 1995 OWD Water Master Plan

² Sub-Area Water Master Plan for Sunbow II, John Powell & Associates, Inc. August 1997

³ Sub-Area Master Plan of Potable and Recycled Water for Salt Creek Ranch, Dexter Wilson Engineering, April 1997

⁴ Sub-Area Master Plan of Potable and Recycled Water for Otay Ranch SPA 1, Dexter Wilson Engineering, April 1998

⁵ Sub-Area Master Plan for EastLake Trails and the Land Swap Areas, John Powell & Associates, September 1998

⁶ Includes 980 Zone Demands

Source: Dexter Wilson Engineering

Recycled Water Supply

The only source of recycled water for the OWD is the Ralph W. Chapman WRF. This facility has a capacity of 1.3 mgd, and can be expanded to an ultimate capacity of 3.84 mgd. Storage of the effluent is provided by two ponds in the OWD's Recycled Use Area near the two existing 980 Zone potable water tanks. Supplemental recycled water supply through Zone 680 would be available from the City of San Diego's planned 15 mgd capacity SBWRP, to be located in the Tijuana River Valley near the Mexican border. Completion of the SBWRP is anticipated by 2001.

Projected recycled water demands, based on the estimated acreage shown and the recycled water duties specified above, are shown in *Table 5.13-4*. The recycled water supply would meet projected recycled water demands. Therefore, no significant impacts to recycled water supplies are anticipated.

TABLE 5.13-4 PROJECTED RECYCLED WATER DEMANDS

Land Use	Area (ac)	Percent to be Irrigated	Irrigated Area (ac)	Recycled Water Irrigation Factor, gpd/ac	Average Recycled Water Demand, gpd
Public Park	16.7	100	16.7	2,232	37,300
CPF/COMM	15.5	20	3.1	2,232	6,900
School	36.6	20	7.32	2,232	16,300
Open Space/Graded Slopes	49.2	100	49.2	2,232	109,800
Subtotal	118		138.12	1.55	170,300

*gpd = gallons per day

Source: Dexter Wilson Engineering

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identified significant impacts to water service demand that were identified as significant and unmitigable. Although the population increases represented by the proposed Amendments are relatively minor (1.0%), the proposed GDP Amendments would not change the conclusions of the Program EIR 90-01 and impacts related to water supply would still be significant and unmitigable at the program-level of analysis.

VILLAGE 11 SPA/TM

The Village 11 SPA/TM would result in an incremental increase in water consumption and place additional demands on water storage and pumping facilities. The increase in demand for water would not have a significant impact on the ability of OWD to provide service to the Village 11 Project Area. However, the impact to water storage and pumping facilities would be significant if construction of facilities does not coincide with the anticipated growth associated with the Village 11 SPA/TM.

MITIGATION MEASURES**GDP AMENDMENTS**

The mitigation measures required by Program EIR 90-01, that are listed in Appendix B of this EIR, would still be applicable to the proposed GDP Amendments.

VILLAGE 11 SPA/TM

- 5.13-1** Prior to approval of the first Tentative Map, the applicant shall provide to the City a letter from the OWD stating that adequate storage, delivery and pumping facilities are available or would be available concurrent with need because an additional pump is under installation at Central Area Pump Station or the EastLake Greens Pump Station is under construction.
- 5.13-2** Prior to approval of the first Tentative Map, the applicant shall provide to the City a letter from the OWD stating that adequate storage capacity exists, or would be available, concurrent with need.
- 5.13-3** A complete Subarea Master Plan shall be submitted to the City for review and must be approved by OWD prior to the approval of the Tentative Map. The Master Plan shall include the design of water system infrastructure including timing and cost by phase of development and must be in compliance with the OWD Water Master Plan.
- 5.13-4** Water facilities improvements shall be financed and/or installed on-site and off-site in accordance with the fees and phasing in the approved PFFP for the Village 11 SPA Plan and TM.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 identifies impacts related to water supply that are significant and not mitigated at the program-level of analysis. The proposed GDP Amendments would not change this conclusion.

VILLAGE 11 SPA/TM

Mitigation Measures 5.13-1 through 5.13-4 would assure that adequate water supply and facilities are provided in accordance with OWD standards concurrent with need at the SPA-level, reducing impacts below the level of significance.

5.13.2 SEWER**EXISTING CONDITIONS****GDP AMENDMENTS**

The Program EIR 90-01 provides a discussion of existing sewer service and summarizes the analysis of existing facilities from the Public Facilities Financing Plans, which were included as appendices to the Program EIR 90-01. The Program EIR 90-01 identified the Salt Creek Interceptor Sewer, Wolf Canyon Sewer and Poggi Canyon Sewer as providing sewer service to the Amendment Area. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01. No changes in service providers or service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The existing topography in the Village 11 Project Area ranges in elevation from a low of approximately 470 feet to a high of approximately 650 feet. Natural drainage on the site is generally from northwest to southeast. Nearly all of the Village 11 Project Area is located within the Salt Creek drainage basin, while the northwestern corner (approximately 391 equivalent dwelling units) is within the Poggi Canyon drainage basin. Sewer service in the Poggi Canyon drainage basin is provide by the existing Poggi Canyon Sewer. The Salt Creek drainage basin would be served by the proposed Salt Creek Interceptor Sewer, which is currently in the planning stage.

There are three existing sewer interceptors that collect and convey flow from the Otay Ranch area: the Telegraph Canyon Interceptor, located in Telegraph Canyon Road north of the proposed development; the proposed Poggi Canyon Interceptor, located in Olympic Parkway west of the proposed development; and the Main Street Trunk Sewer which ends just west of the Otay Ranch GDP boundary. These interceptors, which are owned and maintained by the City of Chula Vista, convey westerly to the San Diego Metropolitan Sewerage System (Metro), which collects and treats sewage at the Point Loma Wastewater Treatment Plant. Under the federal Clean Water Act, the City of San Diego is required to provide secondary wastewater treatment. From the Point Loma facility, treated effluent is discharged into the ocean approximately 2 miles off the coast.

Alternatives for providing new water reclamation facilities to serve the South Bay area are being considered. If a water reclamation facility is constructed in this area, the sewage flows from Otay Ranch may be redirected from the Point Loma facility to the South Bay facility.

Sewer Basins

The three sewer interceptors that serve the Otay Ranch property follow natural drainage basins and function by gravity flow. It is a City of Chula Vista policy that gravity flow is preferable to pumping due to the added costs associated with the construction, operation and maintenance of pump stations. Pumping sewage flows from one basin to another is allowed as an interim solution until capital improvements can be completed to provide adequate capacity in the gravity flow system. Pumping may be a long term solution to sewage disposal needs in some cases where the cost of installing a gravity flow system would exceed the cost of pumping to the adjacent gravity flow basin. The following paragraphs describe the existing and proposed sewer interceptors that would serve the Village 11 Project Area.

Poggi Canyon Interceptor

The northwest corner of the Village 11 Project Area area is within the Poggi Canyon Basin. The existing Poggi Canyon Interceptor has been extended easterly in Orange Avenue to Brandywine Avenue, approximately 5 miles west of the proposed project. Plans have been prepared for the extension of the Poggi Canyon Interceptor in Olympic Parkway to future SR-125. This line is currently connected to the Date-Faivre Trunk Sewer, but would ultimately be reconnected to Reach 9B of the Salt Creek Sewer Interceptor upon completion of Reach 9B construction. Operation of Reach 9B is anticipated in early 2002. The City of Chula Vista has estimated capacity thresholds for Poggi Canyon Sewer. These thresholds are outlined in the Department of Public Works Technical Letter Report attached in the Appendix K.

Salt Creek Basin

The Village 11 Project Area is almost entirely within the Salt Creek Basin. The conceptual grading plan indicates that upon completion of grading, the entire development area of Village 11 would be within the Salt Creek Basin. Future development within this basin would ultimately be served by the Salt Creek Interceptor, or an alternative alignment; in either case, Village 11 cannot be fully developed without the approval of a permanent sewer facility to serve the project. Only a small segment of the upstream reaches of the proposed

Salt Creek Interceptor have been installed as part of other projects. The remainder of the proposed Salt Creek Interceptor is the subject of a detailed design study being performed for the City of Chula Vista by Dudek & Associates (February 2001). Once all environmental review is completed and the City has approved a permanent sewer facility to serve the Salt Creek Basin, including Village 11, detailed design drawings for the interceptor would be prepared.

THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, Appendix G, Environmental Checklist, the proposed project would have a significant sewer impact if it would:

- Exceed wastewater treatment requirements of the San Diego Regional Water Control Board;
- Exceed the City Engineering Standards;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Create a public health risk; or
- Contributes to a capacity deficiency in a regional facility.

Based on a review of sewer plans submitted to the City of Chula Vista for development projects east of I-805, City engineers have determined the maximum capacity of the existing sewer system, as well as the capacity that would be added by planned facilities. *Table 5.13-5* and *Table 5.13-6* list the maximum number of EDUs that can be added to the existing sewer system, as well the additional capacity provided by each project. These sewer capacity thresholds apply not only to Village 11, but also to all other projects in the vicinity proposing to connect to the Poggi Canyon Sewer Basin.

**TABLE 5.13-5. POGGI CANYON SEWER BASIN
IMPROVEMENTS REQUIRED FOR BOTH GRAVITY AND PUMPED FLOWS**

EDUs	Improvements Required
948	Improvement P-1 (Completion of Salt Creek Interceptor Reach 9B - City CIP project) must be completed to proceed beyond 947 EDUs.
3,770	Improvement P-2 (Upsizing the Poggi Canyon line beneath I-805) must be completed to proceed beyond 3,769 EDUs.

Source: City of Chula Vista

**TABLE 5.13-6
POGGI CANYON SEWER BASIN IMPROVEMENTS
REQUIRED ONLY FOR PUMPED FLOWS¹**

EDUs	Improvements Required
1,694	Improvement P-3 (Upsizing the Poggi Canyon line in Olympic Parkway between East Palomar and La Media) must be completed to pump beyond 1,693 EDUs.
3,651	Salt Creek Interceptor must be completed for development to pump beyond 3,650 EDUs.

¹ - EDUs can occur from any source.

Source: City of Chula Vista, February, 2001

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR Findings of Fact found that facilities to accommodate additional sewage flow and wastewater would be required to avoid significant impacts to sewer service. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The sewer service impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the demand was virtually indistinguishable under the City's land use designations. The incorporation of some non-Otay Ranch parcels into the City's sphere also was deemed less than significant by the Sphere of Influence EIR because the corresponding increase in demand of approximately 285,000 gallons per day (gpd) was considered in the Program EIR, and the Program EIR still concluded that impacts could be reduced to a level of insignificance because sewer service provider could meet the increased demand.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS**GDP AMENDMENTS**

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP. No substantial change in sewage generation over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments. The proposed Amendments do not represent a substantial increase in population (1.0% increase) which would translate into a substantial increase in sewer demand. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The *Poggi Canyon Basin Gravity Sewer Basin* plan was prepared for the City of Chula Vista by Dexter Wilson Engineering in July 1997. The purpose of this study was to identify future developments within the Poggi Canyon gravity sewer basin. Projected flows from these developments were used to provide the recommended improvements to the existing Poggi Canyon Interceptor and provide recommended sizing for the extension of the interceptor easterly to future SR-125 to accommodate ultimate development. In the study, 391.4 EDUs from the Village 11 SPA/TM project were included.

A February 2001 *Sewer Diversion Analysis*, performed by Dexter Wilson Engineering, found that if the Salt Creek Interceptor were not constructed in time to accept sewage from Village 11, that the Poggi Canyon Interceptor could accept sewage from Village 11 on an interim basis, until such time as the Salt Creek Interceptor was completed. For planning purposes, it was assumed that no more than 500 EDUs would utilize the interim option of pumping sewage to the Poggi Canyon Interceptor. Sewage flows generated in the Poggi Canyon Basin would be conveyed to a planned extension of the Poggi Canyon Interceptor trunk sewer. The Poggi Canyon Interceptor extension would be a 15-inch diameter pipeline located in Olympic Parkway, and a downstream upgrade to an 18-inch diameter pipe. This sewer would be designed and constructed as part of the City's Olympic Parkway extension improvement project.

The Program EIR 90-01 anticipated that any sewage generated in the Salt Creek Basin, including Village 11, would flow by gravity into a sewer interceptor located in Salt Creek. In November 1994, the City of Chula Vista developed a Gravity Sewer Analysis of the Salt Creek Basin that established a Developer Impact Fee (DIF) to fund construction of the Salt Creek Interceptor. The Salt Creek Interceptor is currently under preliminary design by the City of Chula Vista. The City released a Final EIR analyzing the Salt Creek Interceptor and other alternative alignments in June 2001; that document is incorporated in this EIR by reference to cover all off-site sewer improvements within the Salt Creek Basin. Construction of a sewer facility to serve planned development in the Salt Creek Basin within Otay Ranch is slated for 2001, with the pipeline being in operation by 2003. The Salt Creek Interceptor includes three lateral connections between Village 11 and the main pipeline. These lateral connections would be placed beneath roadways within the village and would extend through the Salt Creek Open Space area, as necessary, to connect with the Salt Creek Interceptor Sewer.

The study *Overview of Sewer Service for Village 11* of the Otay Ranch Project dated March 2001 (Appendix K) has been prepared for the proposed Village 11 SPA/TM by Dexter Wilson Engineering. The study provides information on sewage requirements, recommended on site sewer facilities, and recommended off-site sewer improvements. The following discussion summarizes the findings of that study.

All proposed onsite sewer lines internal to Village 11 have been sized based on street grades and sewer alignments (*Figure 5.13-3 Proposed On-site Sewer Facilities*). The exact sizing would be verified once the pipe slopes have been verified. *Figure 5.13-3* provides recommended sewer line sizing of 8-inch and 10-inch gravity sewers.

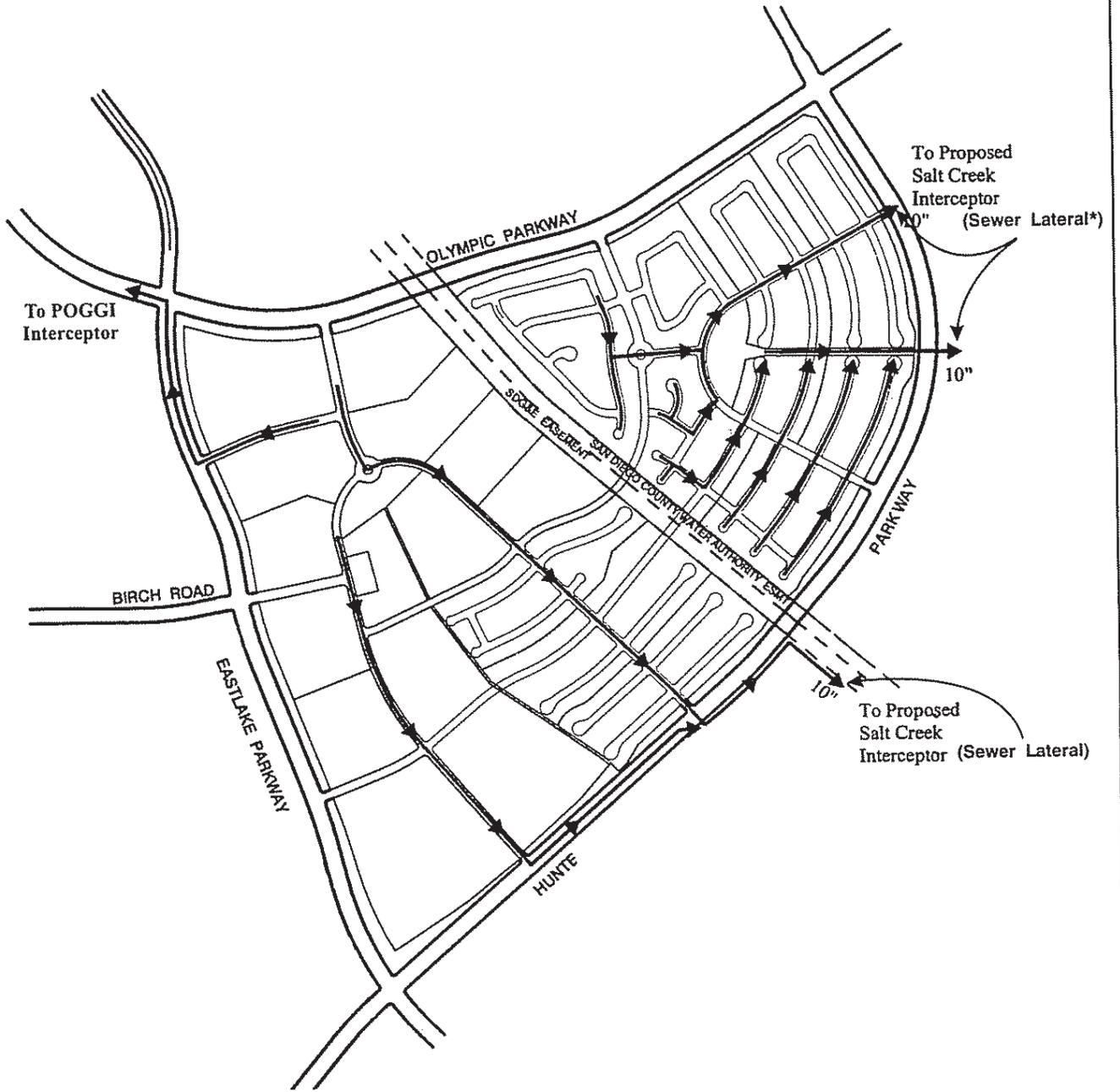
It was assumed that the planned elementary school would have approximately 800 students, and the junior high school would have approximately 1,400 students. Commercial/Industrial areas are assumed to generate 2,500 gpd/acre. Based on these assumptions, the total sewage generation for the proposed project was computed and is shown in *Table 5.13-7*.

TABLE 5.13-7 PROJECTED SEWAGE GENERATION

Land Use	No. of Units	Gross Acres	Generation Rate (gpd)	Total Average Flow (gpd)
Single-family Residential	996	195.8	265 /unit	263,940
Multi-family Residential	1,308	109.1	199/unit	260,292
Elementary School	---	11.0	12,000/site	12,000
Junior High School	---	25.6	28,000/site	28,000
Community Purpose Facilities / Commercial		15.5	2,500/acre	38,750
Parks		16.7	500/acre	8,350
Total		373.7		611,332

Source: Dexter Wilson Engineering, March 2001

Village 11 SPA/TM would require ultimate completion of the Salt Creek Sewer Interceptor to dispose of project-generated sewage. In the interim, the Poggi Canyon Interceptor would accept a pumped sewage flow from the Village 11 Project Area. The sewage generated by the proposed Village 11 SPA/TM would be treated at the Point Loma wastewater treatment facility, which has adequate capacity, to accommodate flows from Village 11. Sewage flows may ultimately be diverted to the City of San Diego's South Bay Water Reclamation Plant,



* Lateral locations and need subject to change (for the two northern laterals only) based on approval of selected option presented in the Salt Creek EIR (dated June 2001).

SOURCE: Brookfield Shea Otay, LLC, 2/27/01



Not to Scale

Proposed On-Site Sewer Facilities

Figure 5.13-3

Otay Ranch GDP Amendments and Village 11 SPA/TM EIR

which is currently under construction. Impacts to land use and biological resources associated with construction of the Salt Creek Interceptor are fully considered by the analysis and alternative alignment identified in the Final EIR for the Salt Creek Interceptor Sewer prepared by Dudek & Associates (June 2001).

The *Gravity Sewer Analysis for the Salt Creek Interceptor* anticipated that flows from the proposed project would be 1.34 mgd. Assuming that 90 percent of the total proposed project sewage flow would be generated in the Salt Creek Basin, the revised land use information used in this study results projected in basin flows of approximately 1.14 mgd.

If needed, two interim pump station are proposed to handle up to 500 EDUs of sewage from Village 11 during the early phases of construction. These pump stations would be located at elevations lower than the areas that they would serve, near the eastern and western project boundaries. There would not be any areas of additional disturbance, as both pump stations would be located within future development areas. Each lift station site would require the following major components: packaged pump station, standby generators, odor control system, telemetry, dual force mains and overflow storage. A diesel-driven standby generator would be provided at the lift station to provide power in the vent of an outage. The generator would have a sub-base diesel fuel tank to supply fuel for up to 24 hours of continuous generator operation. The odor control system for the stations would consist of the addition of bioxide, an odor control liquid. The station would be required to have overflow storage. The minimum volume of overflow storage is equivalent to six hours of ultimate average projected flow to the station. This storage would be accomplished by constructing a concrete structure adjacent to the wet well. Though the location of the lift station is not sited at this time, the pad to be graded would be approximately 5,000 square feet, with a minimum distance of 100 feet from any adjacent residences. The lift station shall have a fiberglass shed covering and would include noise attenuation. The footprint of the station would not exceed 500 square feet and would include landscape screening. Both pump stations would be removed upon completion of the Salt Creek Interceptor. Provision of the proposed facilities would result in less than significant impacts to sewage facilities.

The City of Chula Vista has identified three capital improvement projects needed to upgrade existing or proposed sewer facilities in the Poggi Canyon basin in order to serve the projected sewage flows associated with buildout of the Eastern Territories. These projects have been identified by the City Engineering Department as P1, P2, and P3. Project P1 consists of improvements to Reach 9B of the Poggi Canyon Interceptor. P2 consists of improvements to Reach 200 of the Poggi Canyon Interceptor where it passes under Interstate 805. P3

consists of an increase in pipe size from 15-inch diameter to 18-inch diameter within a soon to be constructed section of the Poggi Canyon Interceptor within Olympic Parkway in the vicinity of East Palomar Street. As shown in *Tables 5.13-5* and *5.13-6*, thresholds have been established on development until each capital improvement can be completed. The combination of P1 - P3 with the construction of the Salt Creek Interceptor would provide the capacity necessary to handle all projected sewage flows within the Poggi Canyon and Salt Creek sewer basins and no significant impacts to sewer facilities would result.

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identified significant impacts to sewer service that were anticipated to be mitigated to less than significant levels with the provision of adequate facilities to serve development. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01.

VILLAGE 11 SPA/TM

The Village 11 SPA Plan and Tentative Map cannot be guaranteed sufficient capacity in a sewage disposal system without the ultimate construction of the Salt Creek Interceptor, or a sewer line in an alternative location. In the interim, with the completion of Reach 9B of the Salt Creek gravity Sewer Interceptor (project P1), the Poggi Canyon Trunk Sewer could accept pumped sewage flows from the project site given the EDU thresholds discussed above.

MITIGATION MEASURES

GDP AMENDMENTS

The mitigation measures required in Program EIR 90-01, as listed in Appendix B, would still be required with the proposed GDP Amendments. No additional measures would be required.

VILLAGE 11 SPA/TM

- 5.13-5** Prior to recordation of any Final Maps, the City Engineer shall be satisfied that the Salt Creek Interceptor, or other acceptable alternative location, is under construction, and that the Poggi Canyon Interceptor has adequate capacity in the interim. The calculations of existing and anticipated sewage flows have determined thresholds at which three capital improvement projects must be completed. These thresholds are 947 EDUs for P1, 3,770 EDUs for P2, and 1,693 EDUs for P3. At the sole discretion of the City Engineer, the thresholds for Poggi Canyon can be amended, if determined that the additional flows, beyond what is currently allowed under these EDU thresholds, can be accommodated as evidenced by monitoring.
- 5.13-6** Sewer facilities improvements shall be financed and/or installed on-site and off-site in accordance with the fees and phasing in the approved PFFP for the Village 11 SPA Plan, and shall comply with City of Chula Vista Policy No. 570-03.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 identifies impacts that are significant, but mitigated to a less than significant level with mitigation measures that would be undertaken at the SPA-level.

VILLAGE 11 SPA/TM

Mitigation Measures 5.13-5 through 5.13-8 would reduce impacts to below the level of significance because there would be adequate capacity for sewage flows concurrent with need. The phasing of development within the Village 11 Project Area allows for early hookup with the Poggi Canyon Interceptor, while allowing time for eventual hookup with the Salt Creek Interceptor, or a sewer line in an alternative location, when completed.

5.13.3 INTEGRATED WASTE MANAGEMENT

EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 provides a discussion of existing waste disposal facilities and systems and summarizes the analysis of existing facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The Program EIR 90-01 also identifies waste management and waste reduction strategies and practices to reduce waste generation. The discussion and analysis from the Program EIR is hereby incorporated by reference. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01 for the adopted GDP. No changes in service providers or service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The Integrated Waste Management Act of 1989, enacted by Assembly Bill 989 (AB 939), requires each city and county within the State of California to recycle or divert 25 percent of its current waste stream from landfills by the year 1995 and 50 percent (or as much as possible) by the year 2000. The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The act has established waste management prioritization as follows:

- Source Reduction
- Recycling
- Composting
- Energy Recovery
- Landfilling
- Household Hazardous Waste Management

Existing solid waste disposal facilities in the area include the Otay Landfill and several recycling facilities in proximity to the landfill. The Otay Landfill is expected to be in operation until 2028.

THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, Appendix G, impacts to integrated waste management would be significant if the project:

- Is served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Does not comply with federal, state, and local statutes and regulations relates to solid waste.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR Findings of Fact found that project-generated solid waste would significantly impact the landfill capacity in the region. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance

SPHERE OF INFLUENCE UPDATE EIR

The solid waste service impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the waste generation within Otay Ranch would be indistinguishable under the City's land use designations. The incorporation of some non-Otay Ranch parcels into the City's sphere also was deemed less than significant by the Sphere of Influence EIR because the corresponding increase in waste generation of 2,508 tons per year was offset by the finding the solid waste generation for the entire area would be only slightly greater under the City's land use designations than under the County's.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS**GDP AMENDMENTS**

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP. As identified in the Program EIR 90-01, this issue requires further study of the issue at the SPA-level of analysis. No substantial change in waste generation over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The Village 11 Project Area would be served by the Otay Landfill. Currently the landfill has adequate capacity for potential waste generated by proposed development within the Village 11 Project Area. To further reduce solid waste impacts, the City of Chula Vista would limit solid waste that reaches the landfill by implementing a curbside recycling program. The curbside recycling program is currently run by Laidlaw Waste Systems and has been active since February of 1997. Participation in the curbside recycling program is mandatory and has helped in reaching the goal of AB 939, 50 percent solid waste reduction by the year 2000.

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 identified significant impacts related to landfill capacity in the region, that were anticipated to be mitigated at the SPA-level with measures identified in Appendix B. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01 and impacts would be significant at the program-level of analysis.

VILLAGE 11 SPA/TM

Measures required by the Program EIR 90-01 have been implemented on a city-wide basis. Therefore, no significant waste impacts have been identified for the Village 11 Project Area.

MITIGATION MEASURES**GDP AMENDMENTS**

The mitigation measures required in Program EIR 90-01 would still be applicable to the proposed GDP Amendments.

VILLAGE 11 SPA/TM

No additional mitigation measures are required.

LEVEL OF MITIGATION AFTER MITIGATION**GDP AMENDMENTS**

Impacts to waste disposal would be significant and unmitigated at the program-level of analysis.

VILLAGE 11 SPA/TM

Mitigation measures that have been applied on a city-wide basis mitigate the impacts from Village 11 to less than significant levels.

5.13.4 LAW ENFORCEMENT

EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 provides a discussion of existing law enforcement services and facilities and summarizes the analysis of existing facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01 for the adopted GDP. Since the adoption of the GDP, the Otay Valley Parcel area of the Otay Ranch, including the Amendment Area, has been annexed to the City of Chula Vista. While the analysis in the Facilities Plans appended to the Program EIR 90-01 for the adopted GDP contemplated that law enforcement services could be provided by the City in this area, it is now certain that the Amendment Area would be serviced by the City. No changes in service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The following provides a summary of police facilities and services as outlined in the PFFP.

The Chula Vista Police Department (CVPD) currently provides police protection in the City of Chula Vista. CVPD has one main police station, currently located at the Civic Center at 276 Fourth Avenue. There are approximately 213 sworn officers and 108 civilian staff for a total of 321 staff members. CVPD has approximately 59 vehicles on patrol including motorcycles. A standard response provides one officer per patrol car. Chula Vista's law enforcement work load is based on approximately 358 patrol calls per 1,000 residents west of I-805 and 268 patrol calls per 1,000 residents east of I-805.

In January 1991, the Chula Vista City Council adopted Ordinance No. 2320 establishing a Development Impact Fee (DIF) to pay for various public facilities within the City of Chula Vista. The facilities are required to support future development within the City and the fee schedule has been adopted in accordance with the Government Code Section 66000. The current fee established by Ordinance is \$2,618 per EDU. The ordinance applies to a variety of infrastructure include law enforcement, fire and emergency medical, and libraries. The Village 11 Project Area is subject to the public facilities DIF program. At the current fee rate, the Village 11 Project Area obligation at build-out is \$735 per EDU for police services.

THRESHOLDS OF SIGNIFICANCE

According to the City's *Growth Management Thresholds*, the proposed project would have a significant impact on police services if it would:

- Exceeds threshold standards, such as the ability to respond to Priority One emergency calls throughout the city within 7 minutes in 84 percent of the cases and the ability to maintain an average response time of 4.5 minutes or less for all Priority One calls, thereby interfering with other police protection performance objectives.
- Exceed threshold standards for Priority Two urgent calls, which require police units to respond to 62 percent of the calls within 7 minutes. An average response time of 7 minutes or less is required.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR found that the Otay Ranch population would result in the need for additional staff and facilities to provide police services. Mitigation measures were identified that, if implemented at the SPA-level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The law enforcement service impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the mitigation measures adopted by the Program EIR would mitigate these impacts below the level of significance. This finding was based in part on the fact that Chula Vista service levels "would be assured through compliance with the City's Quality of Life Threshold/Growth Management Program."

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS

GDP AMENDMENTS

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP. No substantial change in law enforcement demand over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments. Impacts to law enforcement staff and facilities associated with the proposed GDP Amendments would, therefore, remain significant and unmitigable. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The PFFP identifies the need for police facilities and staff, as well as the timing of their implementation. The PFFP relies on past evaluations such as the *Report on Police Threshold Performance 1990-1999* (April 13, 2000) and *A Master Plan for the Chula Vista Civic Center Solving City Space Needs Through Year 2010* (May 8, 1989). In order to identify facility and equipment demand, a field patrol staffing model was used to determine staffing requirements. Development of the proposed project would require eight (8) law enforcement officers needed to serve this portion of the Otay Ranch.

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION**GDP AMENDMENTS**

As concluded in the Program EIR 90-01, impacts to law enforcement staff and facilities associated with the proposed GDP Amendments would, remain significant and unmitigable.

VILLAGE 11 SPA/TM

Development of the proposed project would result in potentially significant impacts to law enforcement services if additional personnel and facilities are not provided to sufficiently handle the increased demand. Implementation of the PFFP would reduce potential impacts to law enforcement to less than significant levels.

MITIGATION MEASURES**GDP AMENDMENTS**

The mitigation measures required in Program EIR 90-01 would still be applicable to the proposed GDP Amendments.

VILLAGE 11 SPA/TM

5.13-8 Police facilities and services shall be financed and/or provided in accordance with the fees and phasing in the approved PFFP for the Village 11 SPA Plan.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

The proposed GDP Amendments would not change the conclusion of the Program EIR 90-01, that significant impacts to law enforcement staff and facilities would result and would not be mitigated at the program-level of analysis.

VILLAGE 11 SPA/TM

Mitigation measure 5.13-8 would reduce the impacts to a level below the level of significant because the addition of personnel and facilities concurrent with need would allow the law enforcement agency to sufficiently handle increases in demand.

5.13.5 FIRE PROTECTION**EXISTING CONDITIONS****GDP AMENDMENTS**

The Program EIR 90-01 for the adopted GDP provides a discussion of existing fire protection services and facilities and summarizes the analysis of existing facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01 for the adopted GDP. Since the adoption of the GDP, the Otay Valley Parcel of the Otay Ranch, which includes the Amendment Area, has been annexed to the City of Chula Vista. While the analysis in the Facilities Plans appended to the Program EIR 90-01 for the adopted GDP contemplated that fire protection services could be provided by the City in this area, it is now certain that the Amendment area would be serviced by the City, as discussed and analyzed in the Sphere of Influence EIR for Otay Ranch. No changes in service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The Chula Vista Fire Department (CVFD) provides fire protection services for the Otay Ranch, including the Village 11 Project Area. The existing CVFD fire station network consists of six Chula Vista based stations. The CVFD currently employs 85 people, including firefighters and administrative staff. The Fire Station Master Plan for the City of Chula Vista proposes nine fire stations at buildout. Station No. 4 is being completed at Rancho Del Rey. Another station is planned to be located in Village Two (Station No. 7) and Interim Fire Station No. 6, located at 975 Lane Avenue, would also serve the Village 11 Project Area.

The nearest station to the Village 11 Project Area project would be Fire Station No. 3, which is located at 1410 Brandywine Avenue, in the Sunbow development. This station would provide first-in coverage to the project area until Planned Fire Station No. 7, to be located in Village Two, is completed. In the future, however, once Hunte Parkway is completed, Planned Fire Station No. 6 would be the station to provide first-in coverage to Village 11.

Emergency medical services to the Village 11 Project Area are currently provided by American Medical Response, which provides contract emergency medical services for the City of Chula

Vista. There are two American Medical Response units which provide paramedic with EMT services to the City of Chula Vista exclusively.

In January 1991, the Chula Vista City Council adopted Ordinance No. 2320 establishing a DIF to pay for various public facilities within the City of Chula Vista. The facilities are required to support future development within the City and the fee schedule has been adopted in accordance with Government Code Section 66000. The proposed project would be subject to the payment of the fee at the rate in effect at the time building permits are issued.

THRESHOLDS OF SIGNIFICANCE

The proposed project would have a significant impact on fire services if it would reduce the ability to respond to calls throughout the Otay Ranch community within seven minutes in 85 percent of the cases.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR 90-01 found that the Otay Ranch population would result in the need for additional staff and facilities to provide fire services. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The fire protection service impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the mitigation measures adopted by the Program EIR would mitigate these impacts below the level of significance. This finding was based in part on the fact that Chula Vista service levels "would be assured through compliance with the City's Quality of Life Threshold/Growth

Management Program,” and based on the acknowledgment that two additional fire stations would be needed to serve the Otay Ranch area. Still, no new mitigation measures were imposed in the Sphere of Influence EIR, since the Sphere of Influence Study “did not itself result in physical change and so would not result in significant fire protection impacts.”

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS

GDP AMENDMENTS

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP, with respect to fire protection services and facilities. No substantial change in fire protection demand over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The additional demand created by the Village 11 SPA/TM would have an adverse effect on response times due to the geographical separation between the project area and the nearest fire station. The demand for fire services would increase because the land use is changing from vacant land to commercial, residential, school, park and CPF. The ability to respond to Otay Ranch urban community calls within 7-minutes in 85 percent of the cases would not be possible from the existing fire stations. The Otay Ranch GDP/SRP plans for the location of fire stations in Otay Ranch Villages Two and Nine of the Otay Valley Parcel and within

Village 13 of Proctor Valley. These villages are all undeveloped at this time. Station #7 within Village Two is expected to be constructed and operational by July 2003. Without the provision of adequate fire facilities and staffing, significant impacts to fire service would result from implementation of the Village 11 SPA/TM.

The Village 11 Project Area occurs adjacent to wildlands in the Salt Creek Open Space. However, residential development proposed within Village 11 would be separated from the native vegetation within Salt Creek by the 75-foot landscape buffer and 104 to 128-foot right-of-way of Hunte Parkway. This separation provides adequate protection from fire in the natural open space area. Therefore, no significant impacts related to hazards from wildland fires would result from the implementation of the Village 11 SPA/TM.

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identified significant impacts related to provision of fire protection services related to potential deficiencies in staff and facilities. Mitigation measures to be implemented at the SPA-level were anticipated to reduce impacts to less than significant levels. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01.

VILLAGE 11 SPA/TM

Lack of adequate fire protection facilities, staffing and planning concurrent with need would have a potentially significant fire protection impact.

MITIGATION MEASURES

GDP AMENDMENTS

The mitigation measures required in Program EIR 90-01 (Appendix B) would still be applicable to the proposed GDP Amendments.

VILLAGE 11 SPA/TM

- 5.13-7** Fire service facilities shall be financed, and/or provided in accordance with the fees and phasing in the approved PFFP for the Village 11 SPA Plan.
- 5.13-8** The City shall continue to monitor Fire Department responses to emergency fire and medical calls and report the results to the Growth Management Oversight Committee (GMOC) on an annual basis.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01, that impacts to five service staff and facilities would be significant and unmitigable at the program-level of analysis.

VILLAGE 11 SPA/TM

Mitigation Measures 5.13-7 through 5.13-8 would reduce the fire service and hazard impacts to below the level of significance. The addition of facilities and staff concurrent with need would allow the fire department to sufficiently handle increases in demand.

5.13.6 SCHOOLS

EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 provides a discussion of existing school service areas. The GDP Amendment Area is within the Chula Vista Elementary School District and the Sweetwater High School District. The service areas for the school districts have not changed since the adoption of the GDP. The Program EIR 90-01 summarizes the analysis of existing school facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01. No changes in service providers would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The Village 11 SPA Plan is located within the jurisdictions of the Chula Vista Elementary School District and the Sweetwater Union High School District. Capacity as defined by the State of California is 33 students per kindergarten classroom, 32 students per first through third grade classroom, and the 1969 statewide student average of 29.9. A student generation factor for the school districts serving this project are provided (*Table 5.13-8*).

**TABLE 5.13-8
STUDENT GENERATION RATES**

District	K-6	7-8	9-12	Total
Chula Vista	.335			.335 ¹
Sweetwater		.11	.21	.32 ¹

¹ Same for Single- and Multi-family

Source: Burkett and Wong, May 2001

THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines Environmental Checklist, Appendix G and the Otay Ranch GDP, the proposed project would have significant impacts on educational facilities if it would:

- Result in a residential population that would exceed the current school facility capacity, requiring the construction of new facilities; or
- Results in the need for new, altered, or expanded school services.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR Findings of Fact found that the Otay Ranch student population would generate the need for additional schools. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The schools impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the mitigation measures adopted by the Program EIR would mitigate these impacts below the level of significance. This finding was based in part on the acknowledgment that the need for additional schools to serve the Otay Ranch area would be more fully analyzed at the time of annexation. No new mitigation measures were imposed in the Sphere of Influence EIR, since the Sphere of Influence Study "did not itself result in physical change and so would not result in significant school impacts."

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS**GDP AMENDMENTS**

The proposed GDP Amendments would result in a net increase of 236 residential units over what was approved in the existing GDP. Applying the student generation factors used in the Program EIR 90-01, the additional units would equate to an increase of a total of 140 new students, including: 60 K-5th grade students; 10 6th grade students; 24 7-8th grade students; and 45 9-12th grade students. The proposed GDP Amendments replace the site designated for a high school in Village 11 with a middle school site, that was originally proposed for Village Ten, and relocate the high school site from Village 11 to Village Seven, or to the alternative location within Village Eight. The additional school site acreage and rearrangement of school locations is anticipated to be consistent with intent of the adopted GDP, to provide land that would be exclusively available for school facilities. The adopted GDP requires that school issues be studied further at the SPA-level of development. That requirement would remain under the proposed GDP Amendments.

Since the adoption of the GDP and certification of the Program EIR 90-01, legislation has been passed limiting the City's ability to require school mitigation beyond the required mitigation fees. The intent of the GDP was to provide a land use designations of appropriate size and locations to allow for school facilities to be provided to serve development. The school districts are ultimately responsible for providing facilities. Based on the City's analysis of land use, phasing and population projections, it is anticipated that provision of the high school site in Village Seven or alternatively in Village Eight would provide adequate

opportunities for facilities to be constructed as demand is generated, consistent with the policies of the adopted GDP. The proposed relocation of the high school site from Village 11 to Village Seven is consistent with recent discussions between the city and the Sweetwater Union High School District to accommodate the needs and timing considerations of the District.

VILLAGE 11 SPA/TM

Otay Ranch Program EIR 90-01 identified significant impacts to school services with the implementation of the Otay Ranch General Development Plan. Mitigation measures adopted in the Program EIR 90-01 required that a master plan for the provision of school facilities be prepared at the SPA-level, the general locations of proposed school facilities be identified, the funding and phasing of all proposed facilities be identified, and a PFFP be prepared. These components have been addressed in the proposed SPA Plans and the PFFP.

The maximum allowed dwelling units to be constructed under the proposed Village 11 SPA Plan is 2,304. A forecast of the students estimated to be generated by the proposed project upon buildout was developed based on the current student generation factors used by each of the school districts. This forecast considered the number of new housing units proposed within the service boundaries of each school district.

According to the Chula Vista Elementary School District and Sweetwater Union High School District student generation rates, the buildout of Village 11 SPA Plan would create the need to house approximately 772 Elementary students, 253 middle school students and 484 high school students.

Presently, EastLake High School is approximately 189 students below of capacity (*Table 5.13-9*). Prior to construction of the proposed high school in Village Two, EastLake High School would be able to absorb Village 11 high school students. By 2002, a new high school would be built in Village Two before the first phase of Village 11 is constructed. The high school development site is scheduled construction in the SPA Plan for the Third Western Phase and has already been graded. Additionally, another high school site is proposed for Village Seven, or alternatively for Village Eight. It is anticipated that the planned high schools within the Otay Ranch would be able to accommodate the approximate 484 high school students generated by Village 11 SPA.

The anticipated high school student generation within Village 11 would be accommodated

with the construction of the new high school in Village Two and the remaining capacity available at EastLake High School.

**TABLE 5.13-9
HIGH SCHOOLS SERVICING THE PROJECT AREA**

School	Grade	1999-2000 Enrollment	1999--2000 Capacity	Remaining Capacity
EastLake High School	9-12	2,424	2,235	189

Source: Bukett and Wong, May 2001

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION

GDP AMENDMENTS

The Program EIR 90-01 identified significant impacts related to school services that required more specific study at subsequent SPA-level planning stages. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01, and would be consistent with the policies of the adopted GDP related to the siting of school facilities.

VILLAGE 11 SPA/TM

A potentially significant impact related to inadequate facilities for new student demands could result without the construction of new school facilities in Otay Ranch. EastLake High can accommodate Village 11 students initially, however, another high school must be built in Otay Ranch to avoid significant cumulative impacts for the future. The additional site within Otay Ranch has been identified in the proposed GDP Amendments to be within Village Seven, or alternatively within Village Eight.

MITIGATION MEASURES**GDP AMENDMENTS**

No new impacts to school services would result from implementation of the GDP Amendments, therefore, no mitigation is required.

- Prior to approval of the first SPA Plan in Phase 3, the location of the high school site proposed for Village Seven or alternatively within Village Eight Nine shall be re-evaluated, to determine the appropriate location for the site. and if found to be necessary in Phase 3, included in one of the Villages in Phase 3.

VILLAGE 11 SPA/TM

5.13-9 The applicant shall pay all required school mitigation fees.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 identifies impacts that are significant, but mitigated to a less than significant level with mitigation measures that would be undertaken at the SPA-level. The proposed GDP Amendments would provide the designation of school sites consistent with the policies of the adopted GDP, and therefore no significant impacts to school facilities would result from the proposed GDP Amendments.

VILLAGE 11 SPA/TM

Mitigation measure 5.13-9 would reduce the impact to below a level of significant because the construction of new school facilities would accommodate increases in the student population.

5.13.7 LIBRARY SERVICE

EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 for the adopted GDP provides a discussion of existing library services and facilities and summarizes the analysis of existing facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01 for the adopted GDP. Since the adoption of the GDP, the Otay Valley Parcel of the Otay Ranch, including the Amendment Area, has been annexed to the City of Chula Vista. While the analysis in the Facilities Plans appended to the Program EIR 90-01 for the adopted GDP contemplated that library services could be provided by the City in this area, it is now certain that the Amendment Area would be serviced by the City. No changes in service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The City of Chula Vista currently provides library and media services for the Otay Ranch area. The City of Chula Vista currently has four library facilities. The main library, the Chula Vista Public Library, is located at 365 F Street and is a two-story, 55,000-square foot facility with circulation of over one million books per year. The library's collection has 220,000 books and other materials as well as a 152-seat auditorium space and two conference rooms. This library is a multi-use facility and provides auditorium space and limited exhibition space. A branch library, Castle Park/Otay, is located at 1592 Third Avenue. This facility has 1,720 square feet of leased space and has a collection of 14,000 books. A second branch library facility is a 508-square-foot room in the Woodlawn Park Community Center at 115 Spruce Street. The city recently built a 35,000-square foot facility at 4th and Orange Avenues.

For the fiscal year dating to June 1999, the City of Chula Vista provided 2.6 books/capita, which is 0.4 books/capita short of the adopted minimum. Additionally, in January 1991, the Chula Vista City Council adopted Ordinance No. 2320 establishing a DIF to pay for nine categories of public facilities within the City of Chula Vista. The facilities are required to support future development within the City. The current fee adopted in accordance with

Government Code Section 66000 is \$2,163 per equivalent dwelling unit. The portion of the fee attributable to libraries is \$638 per dwelling unit.

THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, Appendix G, impacts to libraries would be significant if the proposed project:

- Exceeds current facility capacity requiring the construction of new facilities

According to the City of Chula Vista's adopted threshold standard for library service, impacts to libraries would be significant if the proposed project:

- Exceeds the threshold standard of 600 gross square feet of library space, adequately equipped and staffed, per 1,000 population.
- Exceeds minimum planning guidelines for space requirements and size of collection of library facilities which are outlined in the Public Facilities Element of the Chula Vista General Plan (Chapter 3, Section 5.6):
 - 1) Library space of 0.5 gross square feet per capita
 - 2) Three books per capita
 - 3) One periodical subscription per each 150-200 residents.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR Findings of Fact found that additional library facilities would be required to serve the Otay Ranch population. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The library services impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the mitigation measures adopted by the Program EIR would mitigate these impacts below the level of significance. This finding was based in part on the fact that, while the addition of the non-Otay Ranch parcels into the City's sphere would generate the need for new library facilities, the Program EIR requires a Master EIR plan for libraries. No new mitigation measures were imposed in the Sphere of Influence EIR, since the Sphere of Influence Study "did not itself result in physical change and so would not result in significant library services impacts."

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS**GDP AMENDMENTS**

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP, with respect to library services and facilities. No substantial change in library service demand over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments and the resultant minor (1.0%) increase in population. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments. However, the conclusions of the Program EIR 90-01, that impacts would be significant at the program-level of analysis, would still apply with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

Implementation of the Village 11 SPA Plan would result in a demand on existing library services. Based on the estimate of 6,935 residents generated by the Village 11 Plan, a total of 3,467 additional square feet of library facilities would be needed to meet library demand. The Otay Ranch GDP provides for the location of a 36,758 square foot main library in the Eastern Urban Center. Prior to construction of the EUC Library, interim demand on library facilities would be met by the existing EastLake Library.

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 determined that additional environmental review at the SPA-level of analysis would be required to adequately determine the level of significance of impacts to library services. Impacts were determined to be significant and not mitigated at the program-level of analysis. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01.

VILLAGE 11 SPA/TM

Without the construction of new library facilities, there would be a potentially significant impact because of inadequate library space and book standards for new residents.

MITIGATION MEASURES**GDP AMENDMENTS**

The mitigation measures adopted for the approved GDP, including additional study of library service delivery at the SPA-level, as listed in Appendix B, would still be applicable to the proposed GDP Amendments.

VILLAGE 11 SPA/TM

- 5.13-10** Library facilities, supplies and services shall be financed in accordance with the approved fees and phasing as established in the PFFP for Village 11.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

Impacts to library services would be significant and not mitigated at the program-level of analysis.

VILLAGE 11 SPA/TM

Mitigation measure 5.13-10 would reduce impacts to library services to below the level of significance because the PFFP would delineate funding and phasing of new library facilities and services concurrent with need.

5.13.8 PARKS AND RECREATION

EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 provides a discussion of existing park and recreation services and facilities and summarizes the analysis of existing facilities from the Public Facilities Plans, which were included as appendices to the Program EIR 90-01. The proposed GDP Amendments are within the same service area as identified in the Program EIR 90-01 for the adopted GDP. Since the adoption of the GDP, the Otay Valley Parcel of the Otay Ranch, which includes the Amendment Area, has been annexed to the City of Chula Vista. While the analysis in the Facilities Plans appended to the Program EIR 90-01 for the adopted GDP contemplated that park and recreation services could be provided by the City in this area, it is now certain that the Amendment Area would be serviced by the City. No changes in service availability would be associated with the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The Village 11 Project Area is currently undeveloped agricultural land. The Otay Ranch GDP provides standards for parks for each village and planning area. The GDP further anticipates that specific park acreage and locations would be identified at the SPA level. Parks, recreation, open space and trails are addressed in the Otay Ranch Parks, Recreation, Open Space and Trails Master Plan. The City of Chula Vista is currently preparing a Parks Master Plan to address park facilities.

THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, Environmental Checklist, Appendix G, the proposed project would have a significant impact on park and recreation facilities if it would:

- Result in a residential population that exceeds the capacity of existing and/or planned park and recreation facilities;
- Not conform to the park dedication standards of three acres of neighborhood and community parkland per 1,000 residents;

- Be inconsistent with the goals and policies of the General Plan and other adopted plans addressing parks, trails, and other recreational amenities;
- 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; or
- Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR 90-01 found that Otay Ranch would generate additional demand for regional and local parkland, open space, and recreational facilities. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The parks and recreation impacts associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence were determined to be not significant because the mitigation measures adopted by the Program EIR would mitigate these impacts below the level of significance. This finding was based on the fact that the impacts on parks and recreation would remain essentially the same if Otay Ranch were in the City's sphere. No new mitigation measures were imposed in the Sphere of Influence EIR, since the Sphere of Influence Study "did not itself result in physical change and so would not result in significant parks and recreation impacts."

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the public service assumptions or conclusions of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the Amended SPA One Plan altered any of the public service assumptions or conclusions of the Otay Ranch GDP Findings of Fact.

IMPACTS**GDP AMENDMENTS**

The proposed GDP Amendments include land uses that are similar in type, quantity and intensity as those associated with the adopted GDP, with respect to park and recreation services and facilities. No substantial change in park and recreation service demand over what was previously analyzed for the adopted GDP would result from implementation of the proposed GDP Amendments. No new impacts or increases in the intensity of previously identified impacts would result from implementation of the proposed GDP Amendments.

VILLAGE 11 SPA/TM

The total park land obligation for Village 11 is 20.8 acres, based on the City of Chula Vista and State of California standard of 3 acres per 1,000 residents, multiplied by the projected population for Village 11 of 6,935. The inclusion of a 7.0 net acre public neighborhood park and a 1.0 net acre private town square would provide 8.0 net acres of parkland within Village 11. The City of Chula Vista does not typically apply park credit to private parks, therefore, the project's 3.0 acre and 3.8 acre private common useable open space areas do not qualify for park credit toward the overall parkland obligation for the Village 11. This results in a residual obligation of 12.8 acres of local parkland would be satisfied through the payment of parkland dedication fees which include both acquisition and park development fees toward community parks in Otay Ranch. With the provision of park land within Village 11 and the payment of fees, no significant impacts to parks and recreation facilities would result from the implementation of the Village 11 SPA/TM.

LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 determined that preparation of a parks and recreation master plan at the SPA-level of analysis would be required to adequately determine the level of significance of impacts to park and recreation services. Impacts to parks and recreation would be significant and not mitigated at the program-level of analysis. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01.

VILLAGE 11 SPA/TM

The Village 11 SPA/TM would provide a total of 8.0 acres of total park land within Village 11 and would pay fees to contribute to the funding for regional park acquisition and facilities development that would satisfy the remaining 12.8 acre park obligation of Village 11. Therefore, no significant impacts related to the provision of parks and open space are anticipated with the implementation of the proposed project.

MITIGATION MEASURES**GDP AMENDMENTS**

The mitigation measures adopted for the approved GDP, including preparation of a parks and recreation master plan at the SPA-level (Appendix B) would still be applicable to the proposed GDP Amendments. No additional mitigation measures would be required.

VILLAGE 11 SPA/TM

- 5.13-11** Total local parkland obligation of 20.8 acres (consisting of on-site parks and off-site parks) shall be financed and constructed in accordance with the fees and phasing approved in the PFFP for the Village 11 SPA Plan.

LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 identifies impacts that are significant and not mitigated at the program-level of analysis. The proposed GDP Amendments would not change this significance conclusion.

VILLAGE 11 SPA/TM

Mitigation measure 5.13-11 would reduce the impact of the Village 11 SPA/TM to below the level of significance, because the PFFP would delineate funding and phasing of new park facilities concurrent with need.

5.14 HAZARDS/RISK OF UPSET

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01), analyzed the existing conditions, potential impacts, and mitigation measures related to hazards and risk of upset for the entire Otay Ranch project area. Section 4.9.15 of the Program EIR 90-01 included an analysis of hazards related to the Phase II Progress Plan Alternative (as amended), which ultimately was selected. The analysis and discussion of hazard issues from the Program EIR is hereby incorporated by reference. References to analysis in the Program EIR 90-01 in this EIR pertain specifically to the analysis of the selected Phase II Progress Plan alternative. The following discussion focuses on the project specific impacts to hazards and risk of upset that would result from the proposed GDP Amendments and with development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review.

This section describes the use, storage, transport, and disposal of hazardous materials and hazardous wastes within and surrounding the Amendment Area and the Village 11 SPA Area. The purpose of the description is to identify conditions in which an accident or upset could adversely affect human health or the environment.

5.14.1 EXISTING CONDITIONS

GDP AMENDMENTS

The Program EIR 90-01 discussed existing conditions related to potential hazards associated with the entire Otay Ranch. The following is a summary of the discussion of existing conditions contained in the Program EIR 90-01.

Historically, the proposed project site was used for dry farming, as well as cattle and sheep grazing. Crop production was limited to hay and grains due to limited water availability. Once there was increased availability of water, there was the cultivation of tomatoes and introduction of truck farming. Pesticides were used on irrigated portions of the Otay Valley Parcel after 1950. Based on an analysis of historical and existing uses, there are no known areas within the project site that potentially contain hazardous wastes of soil contamination which exceed the state or federally regulatory threshold levels. A hazardous waste site

assessment conducted as part of the Program EIR 90-01 found that random soil samples in areas "associated with former irrigated farming showed low levels of residual pesticides [in] concentrations that do not exceed hazardous waste standards."

The proposed GDP Amendments are within the same development boundary as the adopted GDP, and there has been no substantial change to environmental conditions that would affect potential hazards.

VILLAGE 11 SPA/TM

The Village 11 Project Area was included in the hazardous waste site assessment conducted as part of the Program EIR 90-01. Due to the fact that Village 11 has been used for dry farming and grazing, similar to the remainder of the Amendment Area, it is likely that the only potential hazardous waste issue within the Village 11 Project Area would be low levels of residual pesticides in the soil.

5.14.2 THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, Appendix G, impacts from hazards and hazardous materials would be significant if the proposed project:

- Creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Creates a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emits hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Is 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, a significant hazard to the public or the environment would be created;
- Is 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, and would result in a safety hazard for people residing or working in the project area;

- Is located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area;
- Impairs implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan;
- Exposes people or structures to a significant risk or loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas.

In addition, the potential for significant impacts would occur if project implementation would result in an interference with the City of Chula Vista emergency response plans.

5.14.3 IMPACT ANALYSIS SUMMARIES FROM PREVIOUS EIRS

The following are summaries from previous EIRs for the Otay Ranch, including the Program EIR 90-01 and subsequent EIRs that were tiered from the Program EIR. The purpose of these summaries is to provide a context for the determination of impacts related to the proposed GDP Amendments and the Village 11 SPA, including changes that have been made to the conclusions and analysis contained in the Program EIR.

OTAY RANCH PROGRAM EIR

The Program EIR found the significant impacts from hazards and the risk of upset, including an increase in urbanization would result in an increase in the use, transport, storage, and disposal of hazardous materials and an associated increase in the risk of an upset condition in the area. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance.

SPHERE OF INFLUENCE UPDATE EIR

The risk of upset associated with the inclusion of Otay Ranch into the City of Chula Vista's Sphere of Influence was determined to be not significant because the mitigation measures adopted by the Program EIR would mitigate these impacts below the level of significance. No new mitigation measures were imposed in the Sphere of Influence EIR, since the Sphere

of Influence Study did not itself result in physical change and so would not result in significant risk of upset.

OTAY RANCH SPA ONE EIR

None of the amendments made to the Otay Ranch GDP to implement the SPA One Plan or annexation altered any of the assumptions or conclusions about hazards or risk of upset of the Otay Ranch GDP Program EIR.

AMENDED SPA ONE EIR

The Amended SPA One EIR did not discuss whether the project would cause any impacts from hazards or risk of upset.

5.14.4 IMPACTS

GDP AMENDMENTS

The proposed GDP Amendments are entirely within the same development area as proposed under the adopted GDP. The types of uses and activities proposed under the Amended GDP would be consistent with the adopted GDP Plan. Therefore, no new impacts, or intensification of impacts related to hazards would be anticipated to result from the proposed Amendments, over what was previously analyzed for the adopted GDP in the Program EIR 90-01.

VILLAGE 11 SPA/TM

The Program EIR 90-01 identified surrounding land uses which may potentially create risk of upset for the Otay Ranch. They are the former Ranch Operations Center, the Otay Landfill, Brown Field and Rock Mountain Quarry. The Ranch Operations Center had historically been utilized for the storage of hazardous materials. The Otay Landfill was the former site of a hazardous waste reprocessing operation and still provides solid wastes disposal services. Brown Field historically maintained numerous storage tanks and a bombing range. The quarry operation represents a potential source of contamination from waste oil, fuel spillage, residual blasting chemical and air emissions. Village 11 is not proposed in the vicinity of these facilities.

Villages Two West and Village Three include planned industrial land uses, but they are located at least 1.5 miles to the west of the Village 11 Project Area. In addition to industrial land use, the Program EIR 90-01 identified that there could be risks from future Otay Ranch development where research facilities, university laboratories and major retail centers are developed. The Village 11 Project Area is adjacent to the FC, EUC and University sites where such land uses are anticipated.

No contaminated soils above state and federal threshold levels, or hazardous materials are known to exist within the Village 11 Project Area. The land uses associated with the Village 11 SPA would not involve the use, storage, or transport of hazardous materials typically associated with manufacturing or industrial land uses. The proposed residential, park, community purpose facilities, commercial/retail sales, school and open space uses are not anticipated to utilize hazardous material that would result in the creation of a public health hazard.

The proposed project would utilize construction materials and methods which are standard in the industry. These materials and methods are closely monitored and controlled by State and Federal agencies including: the EPA and Cal-OSHA.

The nearest airport is Brown Field, which is approximately 3 miles from the project site. The risk for wildfire is very low, as the project itself would be mostly graded for development. Adjacent land uses would eventually be developed, although the Salt Creek open space at the eastern boundary of the project site would have uninterrupted native vegetation.

The project places residential units and schools near major arterial roads that have the potential to have trucks carrying hazardous materials. There is a potential for traffic accidents to occur in the project area involving hazardous materials, although the probability of such an occurrence is low. Unless the use, transport, storage, and disposal of hazardous materials would be conducted in compliance with the relevant regulations of federal, state, and local agencies, including the EPA, California Department of Health Services (DHS), and Caltrans, a potentially significant impact could result.

5.14.5 LEVEL OF SIGNIFICANCE PRIOR TO MITIGATION**GDP AMENDMENTS**

The Program EIR 90-01 identified significant impacts related to hazards on the property, related to and increase in urbanization would result in an increase in the use, transport, storage, and disposal of hazardous materials and an associated increase in the risk of an upset condition in the area. Mitigation measures were identified that, if implemented at the SPA level of review, would reduce the impacts to a level below significance. The proposed GDP Amendments would not change the conclusions of the Program EIR 90-01.

VILLAGE 11 SPA/TM

Potentially significant impacts related to the transport of hazardous materials could result from implementation of the Village 11 SPA Plan.

5.14.6 MITIGATION MEASURES**GDP AMENDMENTS**

The Program EIR 90-01 included mitigation measures that are listed in Appendix B. Those same measures would apply to the GDP Amendments.

VILLAGE 11 SPA/TM

5.14-1 The use, transport, storage, and disposal of hazardous materials shall be conducted in compliance with the relevant regulations of federal, state, and local agencies, including the EPA, California Department of Health Services (DHS), and Caltrans

5.14.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION**GDP AMENDMENTS**

Significant impacts, as identified in the Program EIR 90-01 related to hazards would result from the GDP Amendments that would not be mitigated at the Program-level of analysis.

VILLAGE 11 SPA/TM

With the application of the required mitigation measure, the Village 11 SPA Plan would not result in any significant impacts.

SECTION 6.0 CUMULATIVE IMPACTS

Section 15130 of CEQA requires that an EIR address cumulative impacts when “the project’s incremental effect is cumulatively considerable.” “Cumulatively considerable” means that the incremental effects of an individual 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” (CEQ Statutes 21083). A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in an EIR together with other projects causing related impacts. If the combination of the project’s incremental effect and the related effects from the other projects is not significant, the EIR should briefly explain why the cumulative effects is not significant (CEQA Guidelines, 15130(a)(2)).

Under CEQA Guidelines Sections 15130(a)(1), (2), (3), the discussion of cumulative impacts is to be based on either:

- (A) A list of past, present, and probable projects producing related or cumulative impacts, including those projects outside the control of the agency, or
- (B) A summary of projects contained in an adopted general plan or related planning document which is designed to evaluate regional or area-wide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.

The cumulative analysis is required to include a summary of expected environmental effects and a reasonable analysis of the cumulative impacts of the relevant projects, references for additional information on individual projects, and reasonable options for avoiding or mitigating any significant cumulative effects of a proposed project.

GDP AMENDMENTS

The Program EIR 90-01, the Otay Ranch Annexation EIR, the SPA One EIR and the Amended SPA One EIR provided a comprehensive examination of the cumulative impacts associated with buildout of the entire Otay Ranch in conjunction with other related projects. As discussed in detail in Section 5 of this EIR for each environmental issue area, the proposed GDP Amendments would not substantially change the conclusions of the cumulative impact analysis from the previous EIRs, since the proposed GDP Amendments are considered to be

consistent with the overall intent of the adopted GDP. The following discussion summarizes the significant cumulative impacts discussed in the Program EIR 90-01 and discusses the cumulative impacts related to the Village 11 SPA Plan.

VILLAGE 11 SPA/TM

The potentially significant cumulative impacts associated with the proposed Village 11 SPA Plan/TM are in the areas of: land use, planning and zoning, paleontological resources, cultural resources, landform alteration/aesthetics, biological resources, agricultural resources, water resources and water quality, transportation, circulation and access, public services and utilities and hazards/risk of upset.

The following analysis of cumulative impacts is based on a list of specific projects as well as regional plans. Other cumulative impacts are based on a list of implemented, concurrently processing and future projects in and around the Otay Ranch (*Table 6-1 and Figure 6-1, Major Projects in Vicinity of Village 11 SPA*).

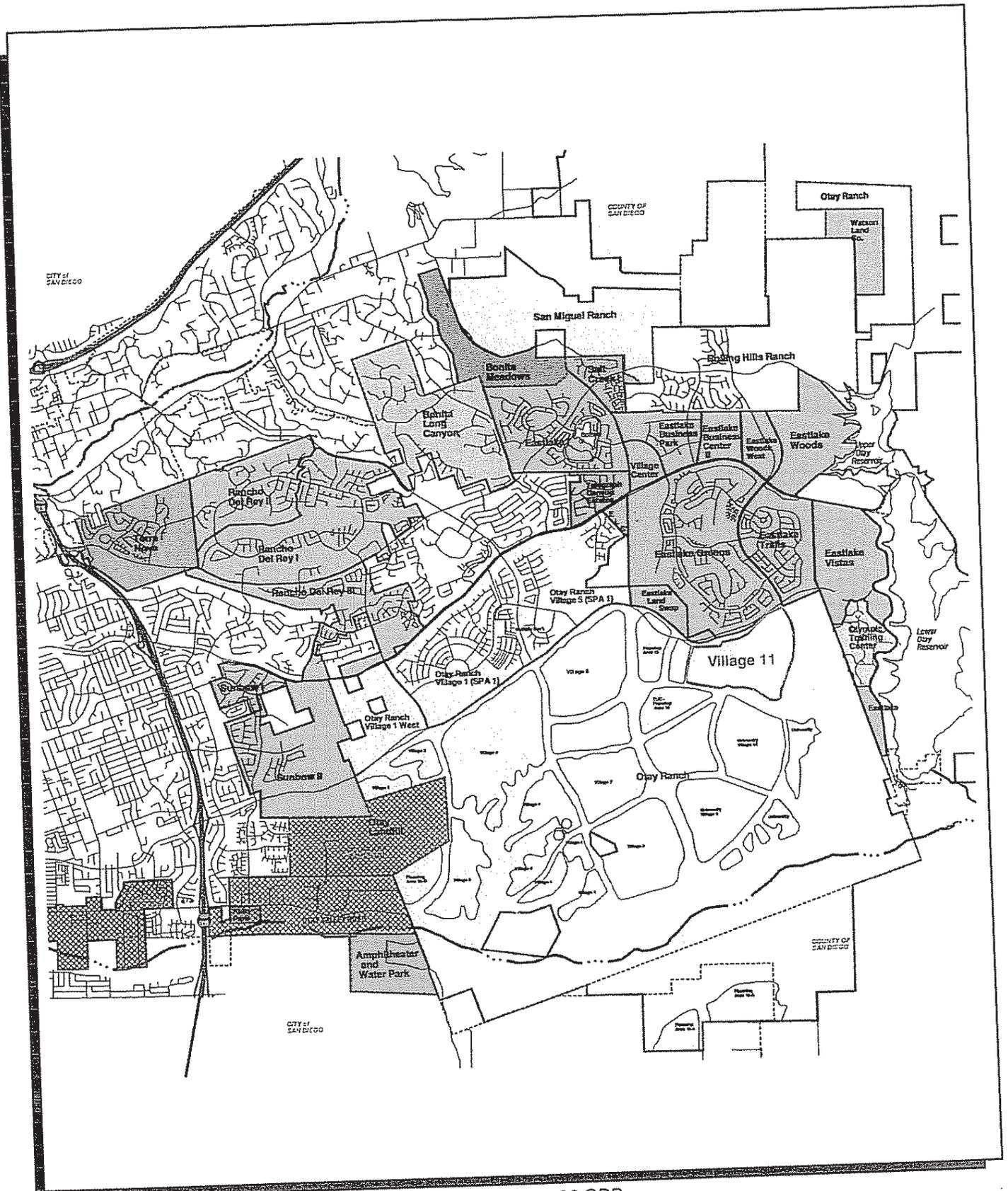
TABLE 6.1 CUMULATIVE PROJECTS

Project Name	Land Use	Status	Dwelling Units
Terra Nova	Planned Community	Completed	529 single-family 739 multi-family Includes: church, elementary school, neighborhood park, and community commercial uses, open space.
Rancho Del Rey I, II	Planned Community	Completed	2,535 single-family 148 multi-family Includes: community and other commercial, neighborhood park, community purpose facility, 20-acre jr. High, middle school
Rancho Del Rey III	Planned Community	Developing	2,512 single-family 298 multi-family Includes: neighborhood park, 108-acre open space preserve and 26-acre jr high/middle school
Sunbow SPA Plan	Planned Community	Developing	1,382 single-family 1,073 multi-family Includes: neighborhood park, elementary school, community commercial, industrial park, veterans home, 28-acre hospital and 176-acre open space

TABLE 6.1 CUMULATIVE PROJECTS (Cont.)

Project Name	Land Use	Status	Dwelling Units
Bonita Long Canyon	Planned Community	Developed	341 single-family 153 multi-family (future phase) Includes: 43-acre open space preserve, 47-acre senior high school, neighborhood commercial uses.
Bonita Meadows	Subdivision	Planned	300 single-family
San Miguel Ranch	Planned Community	Planned	1,394 low, low-medium, medium and medium-high density residential units. Includes: commercial and industrial uses, and 50 acres for SR-125.
EastLake III	Planned Community	Developing/ Completed	300 multi-family units / 150-acre Olympic training center. Includes: neighborhood commercial, commercial tourist, community purpose facility, and possible public/quasi-public use
GDP/Olympic Training Center	Industrial Park	Developing	130 acres industrial park 55 acres light industrial Includes: low rise office, neighborhood park, fire or police station
EastLake I and Business Park	Planned Community	Planned	2,061 single-family Includes: commercial tourist, commercial retail uses, schools, park and recreation areas and a fire station site.
EastLake Woods/Vistas	Planned Community	Developing	2,788 single-family 2,100 multi-family Includes: Senior high school, 2 elementary schools, 158-acre golf course/clubhouse, community commercial, freeway commercial, 2 neighborhood parks, low rise office, church, community purpose facility and private park
EastLake Trails/Greens	Planned Community	Developing	163 single-family 337 multi-family
Salt Creek I	Subdivision	Completed	2,099 single-family 284 multi-family Includes: community purpose facility, 2 elementary schools, a fire/police station and 20-acre community park.
Rolling Hills Ranch	Planned Community	Developing	949 599
College Estates	Planned Community	Completed	N/A
Southwestern	Planned Community	Completed	
College Estates	Sewer	Under Review	
Salt Creek Interceptor and Wolf Canyon Trunk Sewer	Planned Community	Developing	344 Single-family units
Telegraph Canyon Estates	Planned Community	Under Review	40 Single-family units
Vista Mother Miguel	Transportation Corridor	Under Review	Toll Road/Freeway

SOURCE: City of Chula Vista, 2001



SOURCE: City of Chula Vista Geographic Information System - 93 GDP

Major Projects in Vicinity of Village 11 SPA

Figure 6-1



Not to Scale

Olay Ranch GDP Amendments and Village 11 SPA/TM EIR

LAND USE, PLANNING AND ZONING

The proposed Village 11 SPA Plan and Conceptual Tentative Map, in conjunction with buildout of the Otay Ranch and other nearby projects, would contribute to the conversion of over 30,000 acres of vacant land to urban uses. The overall loss of open space associated with the conversion of the proposed Village 11 SPA, in conjunction with buildout of cumulative projects listed in *Table 6.1* would have a significant cumulative land use impact. The City Council found in adopting the Findings of Fact to approve the Otay Ranch GDP/SRP that there are no feasible measures that would mitigate the impact of conversion of land to urban uses to below a level of significance. Therefore, the Village 11 SPA Plan, as a project that implements the GDP, would contribute to this cumulatively significant unmitigable impact.

LANDFORM ALTERATION/AESTHETICS

Development of the proposed Village 11 SPA Plan and TM would contribute to an overall change in the visual quality of the region. The visual quality would be affected by the change in character from a rural to an urban setting. Open expanses of rolling hills used for agricultural purposes would be developed with clustered residential, and commercial areas separated by open space. Impacts to the nighttime visual setting would also occur from the cumulative addition of lights as Otay Ranch and other nearby projects are implemented. Application of the mitigation measures contained in the Program EIR 90-01 to all of Otay Ranch and surrounding projects would reduce the cumulative effect of night lighting to below a level of significance.

The Village 11 conceptual grading plan proposes grading in conformance with the Otay Ranch goal for preserving 83 percent steep slopes overall, and limits impacts to 18 acres of the maximum 18.5 acres of steep slopes for Village 11. Implementation of the mitigation measures described in the Program EIR and Section 5.2 of this EIR would further reduce Village 11's incremental contribution to significant cumulative landform impacts. However, cumulative visual impacts related to the change in visual character for the Otay Ranch and other major projects in the region would remain significant. No mitigation has been identified for the Village 11 SPA Plan to reduce this impact, and therefore, the Village 11 SPA Plan would result in significant cumulative impacts related to a change in the visual character of the Village 11 Project Area that cannot be feasibly mitigated.

PALEONTOLOGICAL RESOURCES

Discovery and recovery of significant paleontological resources have occurred on developments within Otay Ranch. Cumulative buildout of the Otay Ranch and surrounding planned development would result in an increased probability of disturbance to paleontological resources, causing potentially significant cumulative impacts. A positive effect of development is the potential discovery of significant fossils during required monitoring for project brushing and grading. Fossil resources would otherwise go undiscovered. Mitigation measures, including monitoring by a qualified paleontologist would be implemented to protect these resources thereby reducing potential impacts to below a level of significance. Thus, with the implementation of project-specific mitigation measures detailed in Section 5.6, no cumulatively significant impacts to paleontological resources would occur as a result of the proposed project.

CULTURAL RESOURCES

There are over 450 known locations of cultural resources within the cumulative impact projects region. Six of these locations, or sites, have been identified with the Village 11 Project Area. The Program EIR 90-01 found that the cumulative impact for the region would reduce the database for cultural resources by approximately 86 percent, resulting in a significant cumulative impact to cultural resources at the program-level of analysis. Mitigation measures required by the Program EIR included testing of resources at the SPA-level of planning. Such testing performed for the Village 11 Project Area revealed no significant cultural resources. Therefore, since the Village 11 Project Area contains no significant cultural resources, cumulative impacts to cultural resources would not be considered significant for the Village 11 SPA.

BIOLOGICAL RESOURCES

The entire Otay Ranch area is becoming more urbanized. Future plans for the City of Chula Vista and the City of San Diego show increased urban and industrial development for the region. The Program EIR 90-01 identified significant cumulative impacts to biological resources. The biological survey for the Village 11 Project Area identified potential significant impacts to sensitive habitats and species.

The cumulative loss of sensitive habitats and species from the project and other cumulative projects within the City is addressed through participation in a regional conservation

planning effort, the San Diego Multiple Species Conservation Program (MSCP). This planning effort provides a regional plan for preservation and mitigation of sensitive biological resources within San Diego County. The City is currently finalizing their MSCP Subarea Plan, a plan which will outline specific preserve areas, implementation techniques and management parameters unique to lands within City boundaries consistent with the MSCP. The City's Subarea Plan will serve as the implementation tool for the Chula Vista portion of the overall San Diego County preserve system. Preservation of habitat, planning in accordance with the biological resource conservation goals of the MSCP and limitation of impacts in accordance with the City's Subarea Plan is intended to mitigate cumulative biological resource impacts. The Village 11 SPA has been planned in consideration of the RMP and the MSCP. Conformance with the measures included in these plans ensures that sensitive habitats would be preserved in large, contiguous areas of habitat in perpetuity and impacts would be reduced to less than significant.

In the absence of the Subarea Plan, the Resource Management Plan (RMP) for Otay Ranch, combined with the project-specific mitigation measures listed in Section 5.3, would provide similar mitigation for cumulative impacts for projects included in the Otay Ranch GDP/SRP planning area, resulting in no significant cumulative impacts.

AGRICULTURAL RESOURCES

The cumulative development of the 36-square mile Otay Ranch, and surrounding properties, would result in the permanent loss, or impairment, to lands historically used for the production of coastal dependent crops. Although the area is not currently being used for agricultural production, the region represents an agricultural resource because of its coastal climatic conditions. Currently, agricultural activities of the Otay region consist of mostly cattle ranching.

Commitment to urban uses resulting from the Village 11 SPA Plan would be contribute to significant impacts related to the permanent loss of agricultural land, as identified in the Program EIR 90-01. Mitigation measures identified in the Program EIR 90-01 were not found to be sufficient to reduce impacts to agriculture to less than significant. No additional measures are available for the Village 11 SPA Plan to reduce the impacts, and therefore, the cumulative impacts related to the loss of agricultural land represented by the Village 11 SPA Plan remain significant and unmitigable.

WATER RESOURCES AND WATER QUALITY

Cumulatively, existing and proposed development would result in substantial areas of new impervious surfaces. These additional impervious surfaces would reduce the amount of infiltration of storm water. A decrease in potential recharge to the groundwater basin and an increase in runoff would result. Urban activities including, but not limited to, construction would add contaminated materials to the increased volume of surface water runoff. The overall quality of the surface water would be adversely impacted, particularly in Salt Creek and the Otay River. The increase in runoff and decrease in water quality associated with the Village 11 SPA Plan would have a significant cumulative impact on these drainage basins. Features of the Village 11 SPA/TM design, as well as mitigation measures required in Section 5.9, and application of these standards to other projects would reduce the potential cumulative impacts to a less than significant level.

It should be noted that existing water quality regulations require, as a condition of this and other cumulative project approvals, engineering and design features to ensure that the volume, rate and quality of runoff does not exceed existing pre-development levels. The Village 11 SPA/TM would also require maintenance of on-site drainage facilities. In combination, implementation of these features would ensure that the project and other cumulative projects would not contribute to a cumulative impact to hydrology and off-site drainage.

TRANSPORTATION, CIRCULATION AND ACCESS

The Series 9 modeling for the Otay Ranch adopted GDP buildout, in conjunction with other anticipated regional projects, shows that overall the forecasted traffic volumes would be approximately 12 percent lower than the traffic volumes as forecasted in the Program EIR 90-01. However, there would be isolated streets where the volumes would be higher. Regardless of the forecasted decrease in buildout traffic impacts, the street and freeway improvements to provide capacity at buildout would require major costs and funding in addition to the project's contribution of Transportation DIF fees. The construction of SR-125 and the widening of I-805 would be needed as part of these improvements.

The traffic and circulation impacts from the proposed Village 11 development have been addressed for the near-term (pre-2005), long-term (2005 and beyond) and buildout conditions. As discussed in Section 5.10, project-level and cumulative mitigation measures are required to reduce short-term impacts to below a level of significance. One such measure to reduce

cumulative impacts prior to construction of SR-125, requires the City to stop issuing building permits once a total of 9,429 dwelling units have been issued for projects east of I-805, or until another measure has been adopted in order to ensure that the circulation system has additional capacity without exceeding the GMOC traffic threshold standards.

Street improvements have been made conditions of approval for the Village 11 SPA/TM and other cumulative development, and would be phased with development through adopted PFFP's (section 5.10). Cumulative impacts associated with streets would be reduced to a level below significance through implementation of the mitigation measures included in Section 5.10

The analysis contained in Section 5.10 and Appendix G found that cumulative impacts on I-805 would remain significant and unmitigated. All required improvements for SR-125 and I-805 are the responsibility of Caltrans and SANDAG and would likely be infeasible due to funding constraints. Each proposed project would only contribute a relatively small percentage of traffic onto these regional freeways. However, when added together, they represent a significant amount. The associated improvements and DIF fees would be insufficient to resolve the larger problems. Therefore, cumulative traffic impacts to I-805 would remain significant and unmitigated.

AIR QUALITY

The analysis of air quality impacts contained in Section 5.11, and Appendix H included an analysis of cumulative impacts to air quality and found that the cumulative impacts related to long-term mobile emissions would be significant. No mitigation is available to reduce this cumulatively significant impact to less than significant levels.

NOISE

The analysis of noise impacts contained in Section 5.12 and Appendix I are based on regional cumulative traffic data from the most recent Series 9 regional growth forecasts. The analysis contained in Section 5.12, is therefore, inclusive of cumulative effects. Impacts related to noise are determined to be mitigable with the application of feasible mitigation measures contained in Section 5.12.6.

PUBLIC SERVICES AND UTILITIES**Water**

Water supplies in Southern California fluctuate with precipitation, climatic conditions and disputes over water rights from imported sources. Cumulative impacts to water supply associated with ongoing development on a regional scale are anticipated. The additional demand for water associated with the Village 11 development in conjunction with the other proposed and approved projects within the Chula Vista area would be approximately 77.2 mgd. The proposed project, plus cumulative development would incrementally increase regional water consumption, however, this increased demand for service has been anticipated and planned for by the City of Chula Vista. The use of reclaimed water for irrigation purposes and the proposed conservation measures for reducing potable water consumption would reduce water consumption and would result in a less than significant cumulative impact.

Sewer

The 1996 Otay Ranch SPA One Plan and Annexation Final Second-Tier EIR (the most recent estimate of Ranch-wide sewer demand) estimated that the combined effect of buildout of the Otay Ranch GDP/SRP with other surrounding projects would result in an approximate total sewage flow of 35.6 mgd. The same document found that the combined effect of SPA One and surrounding developments would require additional wastewater transmission and treatment facilities to handle cumulative flows. The cumulative impact is considered potentially significant. The increased demand for service has been anticipated and planned for by the City of Chula Vista. The proposed Village 11 SPA Plan combined with planned projects in the surrounding area could have a cumulatively significant impact upon the City of Chula Vista's sewer infrastructure if not mitigated through improvements to existing facilities and extension of facilities under existing roadways as described in Chapter 5.13. These improvements would be made according to City requirements and would reduce the project-specific impacts and the project's contribution to cumulative impacts to a less than significant level.

Integrated Waste Management

Buildout of the southern portion of San Diego County would result in a substantial increase in the generation of solid waste. Landfill capacity in the region is limited. The cumulative impact is potentially significant. All new development within the region would have to comply with the City of Chula Vista and County of San Diego programs and regulations concerning long-term solid waste disposal. An Integrated Waste Management Plan was prepared for the Otay Ranch. The Village 11 SPA Plan, along with other Otay Ranch villages and planning areas, would also be guided by this Plan. The waste management program would include curbside recycling, neighborhood recycling/buyback centers, a materials recovery facility, a composting facility and a household waste collection facility. The cumulative impact could also be reduced by provision of additional solid waste facilities, recycling facilities, transporting trash outside the region to less impacted areas, and/or by meeting state-mandated recycling goals. The required PFFP for new developments would establish the fees and phasing associated with contribution toward the cost of construction of any regional facilities. The cumulative impact would be reduced to a level below significant, through compliance with the City and County programs and regulations for solid waste disposal, the Otay Ranch Integrated Waste Management Plan and the Village 11 PFFP.

Law Enforcement, Fire Protection and Emergency Medical

The overall population growth would substantially increase demands on law enforcement, fire protection and emergency medical services. The cumulative impact would be potentially significant. Staffing and new facilities would be required to adequately accommodate the population increase expected at buildout. A draft PFFP has been prepared for the Village 11 SPA which addresses this issue. The PFFP would be implemented at the time of development, and would provide these services incrementally and concurrent with need. The cumulative impacts would be reduced to a level below significant, through compliance with the PFFP.

Schools

The residential development proposed for Village 11 would increase demand for public schools. The region would require new schools, staff, and supplies in order to accommodate the growing student population, causing a potentially significant impact on Chula Vista Elementary School District (CVESD) and Sweetwater Union High School District (SUHSD).

The development would temporarily increase class sizes in Eastlake High School. However, the implementation of phased development would disperse elementary students from Village 11 evenly amongst the surrounding Otay Ranch schools until the completion of the elementary and junior high schools in Village 11. The elementary and junior high sites have been identified within the project area and are specifically designated under the proposed GDP Amendments. EastLake High school will be able to accommodate a portion of the Village 11 high school population. The Village Two high school will be completed in time to accommodate the additional 438 high school students generated by Village 11 without exceeding the 2500 student capacity level stated in the Program EIR (1992). In addition, a new high school to be located in either Village Seven or Eight is also proposed in Otay Ranch, which will accommodate cumulative school demand. The provision of land and financing mechanisms under the PFFP requirements, plus development of a School Master Plan, would mitigate the cumulative impact on schools to below a level of significance.

Library Services

Population growth in the project area would result in the need for substantial additional library space, books and staff. The impact would be potentially cumulatively significant. The Otay Ranch GDP provides for the establishment of a "main library" as part of the Eastern Urban Center development. Payments to the DIF established for libraries would reduce the cumulative impact on library services to a level of insignificance.

Parks and Recreation

Cumulatively, the proposed and approved projects in the region would place substantial demands on neighborhood, community and regional parks. The cumulative impacts on local and regional park and recreational facilities would be potentially significant. Regional park and community park financing would be provided through the PFFP requirements. Project specific neighborhood and community park improvements would be installed in communities as needed. The cumulative impacts would be reduced to below the level of significance with the long-term provision of both local and regional parks.

HAZARDS/RISK OF UPSET

The potential risk of adverse health effects associated with the use, transport and storage of hazardous materials and generation of hazardous waste would increase with cumulative

buildout. The potential significant cumulative impact would be reduced to a level less than significant with the implementation of the Program EIR 90-01 identified mitigation measures and adherence to applicable laws and regulations. The Program EIR 90-01 requires all Otay Ranch developments, and major nearby projects, to evaluate the need for emergency evacuation routes and other emergency facilities at the SPA level based on the presence of onsite industrial uses as well as the presence of offsite industrial uses. Where land uses associated with an Otay Ranch development would involve the use and transport of hazardous materials (such as light industry, biotech and University research), the Program EIR 90-01 mitigation measures require that the transport of hazardous waste by the Applicant, subcontractors, and future businesses on existing and future roadways shall be conducted in accordance with the California Code of Regulations (CCR) and the Code of Federal Regulations (CFR). These regulations identify Department of Transportation (DOT) approved methods for packaging and containing hazardous waste. DOT approved methods also cover site appropriate options and procedures relative to the handling and transportation of these wastes. Adherence with these regulations would reduce the cumulative impacts of Village 11 to less than significant levels.

CUMULATIVE EFFECTS CONSIDERED NOT SIGNIFICANT

Geology and Soils

Geologic and soils impacts associated with development of the proposed Village 11 SPA Plan are site specific. These site specific impacts are not considered cumulative with other projects.

Housing and Population (Community Social Factors)

The cumulative development area was initially vacant land. No displacement of existing housing stock has, or would, occur. The cumulative increase in housing stock would make a variety of dwelling unit types available to accommodate forecasted growth. SANDAG's Growth Management Plan incorporates population, housing and transportation forecasts. Particularly, the forecasts have identified specific projections for the City of Chula Vista. The Growth Management Plan stresses maintaining a prosperous economy, while providing an adequate and equitable transportation system, preserving open space and habitat, increasing the rate of home ownership, and reforming the state-local tax system to assist and sustain all of the above. SANDAG encourages compliance with a transit design which promotes

pedestrianism and interconnected public transportation through buses, metro, and trolleys. As shown in *Table 6.1-1*, the cumulative projects in the region, as well as the proposed project have incorporated mixed-use projects to accommodate the goals and policies as set forth in the Growth Management Plan. Therefore, there will be no significant impacts to housing and population.

SECTION 7.0

GROWTH INDUCING IMPACTS

As defined in Section 15126.2(d) of the CEQA Guidelines, the growth-inducing impact analysis is intended to address the potential for the project to “foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Project elements which would remove obstacles to population growth are included in this analysis. Also, population increases which would tax existing community service facilities and require construction of new facilities are evaluated where these actions could cause significant effects. Characteristics of the project which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively, are also considered.

The Otay Ranch GDP/SRP Program EIR (Program EIR 90-01) analyzed the existing conditions, potential impacts, and mitigation measures related to growth inducement that would be caused by the implementation of the Otay Ranch GDP. Section 7 of the Program EIR 90-01 included an analysis of growth inducing impacts which is hereby incorporated by reference. The following discussion uses the analysis of housing and population growth from the Program EIR 90-01 as a basis for the discussion and analysis of housing and population impacts related to the proposed GDP Amendments and development of the Village 11 SPA Plan. It should be noted that the discussion of the Village 11 SPA Plan assumes that the proposed GDP Amendments, as described in *Section 3.0* of this EIR, are approved in advance of, or concurrently with the approval of the SPA Plan. If the proposed GDP Amendments are not approved, the SPA Plan would need to be revised and would require additional environmental review.

The Otay Ranch Program EIR concluded that the Otay Ranch GDP/SRP would foster construction of new housing and subsequent population growth. The Otay Ranch GDP/SRP was determined to be growth-inducing because the overall project would increase the population, housing and employment opportunities within the Otay Ranch area in excess of the growth as occurring in 1992 and, as projected in 1992, for the year 2010. Overall development of Otay Ranch would also contribute cumulatively to regional growth by providing economic opportunities in the area.

7.1 GDP AMENDMENTS

The development area for the proposed GDP Amendments would not change from that analyzed for the adopted GDP. Therefore, the discussion in this EIR is limited to the change

in the amount of development that would be allowable under the proposed GDP Amendments, as compared to the adopted GDP. Table 3-1 includes a summary of the proposed changes in the total number of dwelling units, and the corresponding changes in projected population for the Otay Ranch associated with the proposed GDP Amendments. A net increase of 236 dwelling units, and an increase of 710 additional residents (1.0%) would result from the change (based on the 1999 California Department of Finance population generation factor of 3.01 residents per dwelling unit). The Program EIR 90-01 found that impacts related to growth would be significant, but would be mitigated by the provision of adequate public facilities and services, to be provided by the project. The additional residential development proposed by the proposed GDP Amendments would take place within the same development area as identified in the adopted GDP, with reductions in University acreage and commercial acreage. With the provision of additional public facilities, to be provided at the SPA-level of development, and in consideration of the overall scope of the Otay Ranch Project, the proposed changes that would result in residential unit counts and projected population are not anticipated to be significant, and are considered to be consistent with the overall intent of the adopted GDP.

7.2 VILLAGE 11 SPA/TM

The City of Chula Vista's Growth Management Plan calls for directing growth in and around the City in an orderly fashion and avoiding leapfrog development. The Village 11 Project Area is adjacent to existing urban communities and would not create leap frog development. Village 11 is currently in Phase Three of the Otay Ranch Village Phasing Plan. The applicant has applied to amend the Village Phasing Plan to move Village 11 into Phase Two of the Second Western Phase. Phasing changes refer to the order that the villages of Otay Ranch may be constructed. The Village Phasing Plan indicates that the project was placed in the third phase based on the extension of public services. At the time of adoption, no other public facilities were adjacent to this area of the Otay Ranch. Since adoption of the GDP, EastLake Greens has been developed and Olympic Parkway is under construction. Now that public facilities can be logically extended from EastLake and Olympic Parkway, it is rational, under the GDP phasing policies, to include Village 11 in the Second Western Phase. Since the remaining surrounding land is concurrently proposed for development, being placed in permanent open space, or being banked as the initial commitment to the future University, approval of the phasing change would not encourage premature construction of housing in surrounding areas.

The implementation of SR-125 is independent of the growth-inducing effects of Otay Ranch. SR-125 was planned to create a north/south corridor to connect Tierra Santa to the Mexican border/ inland region of San Diego County. SANDAG added SR-125 to the Regional Transportation Plan in 1984, prior to the decision to develop Otay Ranch. The Draft EIR was approved in 1996 and the Final EIR underwent public review in 2000. SR-125 would not use project funds in order to reach completion. The State of California entered into a franchise agreement with California Transportation Ventures (CTV), a private consortium which would control and fund the road for 35 years. After that period of time, Caltrans would regain control of SR-125.

SECTION 8.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) requires the evaluation of the uses of nonrenewable resources during the initial and continued phases of a project when a large commitment of such resources makes removal or non-use thereafter unlikely. Approval of the proposed development of Village 11 would commit the site to a development area of urban uses including housing, commercial, community services, and public facilities; however, the change in use is both planned and projected. The proposed project would require commitment of nonrenewable resources associated with construction and long-term operation, including but not limited to, lumber and other related forest products; sand, gravel and concrete; asphalt; petrochemical construction materials; steel, copper, lead and other metals; water; fuels; and energy. Uses of these resources would represent an incremental effect on the regional consumption of these commodities. Implementation of the Village 11 SPA would involve consumption of energy resources, such as electricity and natural gas, derived from non-renewable sources such as fossil fuels.

The most notable nonrenewable resources identified by the Otay Ranch GDP and Program EIR are related to biological resources. While implementation of the Otay Ranch Resource Management Plan would compensate for this loss by setting aside comparable biological resources within the planned Otay Ranch Preserve, the net loss of these resources would be irreversible. The biological resources occurring within the boundaries of the Village 11 development envelope are limited and do not represent a large commitment of the Otay Ranch's overall resources to development. Approximately 3 percent of the Village 11 Project Area contains natural vegetation, while approximately 97 percent of the site contains non-native grassland and disturbed habitat. Implementation of the Village 11 SPA Plan would eliminate a portion of the Otay Ranch's agricultural fields used by foraging raptors.

SECTION 9.0

EFFECTS FOUND NOT TO BE SIGNIFICANT

MINERAL RESOURCES

The Program EIR 90-01 identified mineral resources of economic value on the Otay Ranch property include sand, gravel, crushed rock (known collectively as construction aggregate), and bentonitic clay. Sand, gravel, and crushed rock materials are important to the local construction industry for such uses as concrete (especially Portland Cement concrete, also known as PCC), fill, road base, and building materials. Bentonitic clay is highly expansive clay derived from the alteration of volcanic ash and is commonly found within the Otay Formation, and has been reported to occur as relatively thin, discontinuous deposits within Telegraph, Poggi and Wolf Canyons. No mineral resources of economic value occur within the Village 11 Project Area. Therefore, no significant impacts with respect to mineral resources would occur with implementation of the proposed project.

GAS/ELECTRIC SERVICE

Gas and electric services are being extended within the grading for Olympic Parkway. Lateral connection to Village 11 would be accomplished by under grounding within the Village 11 street network. Installation of gas and electric infrastructure within street grading is consistent with current design plans and would not create impacts beyond the grading required for the road system. The Village 11 SPA has been included in regional growth forecasts and energy demand projections, and therefore energy supply and regional infrastructure needs are anticipated in long-range energy planning. Therefore, no significant impacts due to the increased demand on installation of gas and electric infrastructure and supply to serve the proposed project would occur.

SECTION 10.0

PROJECT ALTERNATIVES

In order to fully evaluate proposed projects, CEQA mandates that alternatives be discussed. Section 15126.6 of the State CEQA Guidelines requires the discussion of "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The alternatives discussion is intended to "focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives as listed in Section 3.0 of this SEIR.

The Alternative discussion in this EIR focuses on alternative development scenarios for Village 11, and not the proposed GDP Amendments. The reason for not analyzing alternatives for the proposed GDP Amendments is that an extensive alternatives analysis for the GDP is contained in the Program EIR 90-01. That document analyzed nine on-site alternatives, including the no project alternative, at equal levels of detail. The purpose of the proposed GDP Amendments is to accommodate changes in circulation and village configurations for future SPA planning efforts, including the Village 11 SPA Plan. If the Village 11 SPA Plan were not proposed at this time, the proposed GDP Amendments would not be proposed.

Given the previous environmental review and the measures which have been incorporated into the proposed project to substantially lessen the project's direct impacts, this SEIR includes a discussion of the No Project/No Development Alternative and a Reduced Density Alternative. The No Project/No Development Alternative consists of not adopting the Village 11 SPA Plan, not approving the Conceptual TM, and not developing the property per the GDP/SRP. The Reduced Density Alternative provides a modified land use plan with reduced residential densities that would reduce the number of dwelling units and the ultimate population of Village 11. Offsite alternatives are not considered in this report because offsite alternatives for the Otay Ranch GDP/SRP were addressed in the GDP/SRP Program EIR(90-01).

10.1 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

PROJECT DESCRIPTION

The No Project/No Development Alternative assumes that the area within the Village 11 SPA Plan would not be developed. The Village 11 Property would continue to be used for limited agriculture or for livestock grazing. Project-level impacts would be avoided as would all contributions to cumulative impacts.

ENVIRONMENTAL ANALYSIS

Land Use

The No Project/No Development Alternative would retain existing agricultural uses on the site. Significant impacts related to conversion of uses from undeveloped to urban would be avoided.

Landform Alteration/Aesthetics

Landform Alteration/Aesthetic impacts would be avoided by the No Project/No Development Alternative. The terrain of the Village 11 project site would remain unchanged from its current conditions. Significant impact to landform alteration would be avoided with the No Project/No Development Alternative.

Biological Resources

Significant impacts to biological resources would be avoided under the No Project/No Development Alternative. However, because the Village 11 Project Area is nearly all used for agriculture, impacts to sensitive biological resources within the Village 11 Project Area are limited to 6.6 acres of coastal sage scrub, 0.33 acre of southern cactus scrub, 8.8 acres of non-native grassland and 0.02 acres of cismontane marsh.

Cultural and Paleontological Resources

Potentially significant impacts to cultural resources and paleontological resources would be avoided under the No Project/No Development Alternative. This would be a minor reduction in impacts as the cultural resources within the Village 11 Project Area has already been

determined to be not significant. The significance of the paleontological resources cannot be determined without grading. Therefore, the No Project/No Development Alternative provides a potential reduction on significant impacts to paleontological resources.

Geology and Soils

Potential geologic impacts related with ground shaking from earthquakes and localized unstable soils conditions would be avoided under the No Project/No Development Alternative as no development and no public access would be provided.

Agricultural Resources

Agricultural resources would be preserved under the No Project/No Development Alternative. This could lead to incompatible uses between urban development and continuing agricultural activity. Continued agricultural activity could result in nuisance complaints regarding noise, odor, insects, rodents, and chemicals. The nuisance factors would create indirect, short-term potentially significant impacts between the agricultural operations and the urban uses. The impact to agricultural resources would be reduced. The impacts from agricultural uses to adjacent urban development would be increased.

Housing and Population

The No Project/No Development Alternative would reduce impacts on housing and population as there would be no development within the Village 11 Project Area. This is considered to be a negative impact, as the project would not accomplish several of the goals and objectives of the proposed project such as the provision of housing and employment opportunities.

Water Resources and Water Quality

Potential impacts associated with increased urban runoff, such as the introduction of petroleum products from paved surfaces, would be avoided under the No Project/No Development Alternative. However, no structural systems are currently in place to control the pollutants associated with the existing land uses of dry farming and grazing, such as organic matter, animal wastes, pesticides, and fertilizer. Based on the proximity to Salt Creek, the potential hazards to runoff and water quality are considered moderate to high. Also, erosion of agricultural land would be likely to exceed the siltation impacts associated

with development of the Village 11 Project Area. The overall impacts to water resources and water quality are expected to be greater under the No Project/No Development Alternative due to the lack of drainage improvements.

Transportation, Circulation and Access

The No Project/No Development Alternative would avoid the generation of traffic from Village 11. This Alternative would also complicate the completion of the Otay Ranch circulation network in compliance with the Circulation Element of the General Plan. Regional traffic impacts would still be significant without the completion of Eastlake Parkway, Hunte Parkway, Olympic Parkway. Regional traffic impacts would also remain significant without the construction of SR-125.

Air Quality

The No Project/No Development Alternative would avoid the air quality impacts associated with construction, vehicular emissions, and building operations. There would also be no demand for electricity associated with Village 11, thus preventing an increase in emissions from power plants to serve the project. Finally, there would be no operational air quality impacts from residential, commercial, or institutional land uses. The air quality impacts associated with farm equipment and the dust associated with agricultural lands would remain.

Noise

The significant noise impacts associated with the proposed project would be avoided by the No Project/No Development Alternative. This is because no sensitive receptors would be added to the Village 11 Project Area. Noise would continue to be generated by traffic from other development in the region. There would not be any traffic generated by Village 11. The overall noise level within Otay Ranch would therefore be reduced through a reduction in regional traffic.

Public Services and Utilities

The elimination of development within the Village 11 Project Area would reduce the demand for public services and utilities. There would be an approximate 611,332 gpd reduction in the demand for sewer service within the Poggi Canyon and Salt Creek Basins.

Hazards/Risk of Upset

The potential for hazards and the risk of upset would be avoided by the No Project/No Development Alternative as no people would be introduced to the Village 11 SPA Plan area. The site would continue to be used for limited agricultural operations.

PROJECT OBJECTIVES

The No Project/No Development Alternative would not meet the following project objectives as each of these objectives requires development:

- Establish a pedestrian-oriented village with an urban core to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and public transit.
- Promote synergistic uses between Village 11, the neighborhoods of Eastlake and adjacent Otay Ranch villages to balance activities, services, and facilities.
- Implement the goals, objectives, and policies of the Chula Vista General Plan, particularly the Otay Ranch General Development Plan, the Resource Management Plan, the Facility Implementation Plan, the Village Phasing Plan, and the Service/Revenue Plan.
- Implement the City of Chula Vista's Growth Management Program to ensure that the public facilities are provided in a timely manner and financed by the parties creating the demand for, and benefitting from, the improvements.
- Foster development patterns which promote orderly growth and prevent urban sprawl.
- Develop, maintain, and enhance a sense of community identity.
- Accentuate the relationship of the land use plan with its natural setting and the physical character of the region and promote effective management of natural resources by concentrating development into less sensitive areas while preserving large contiguous open space areas with sensitive resources.
- Establish a land use and facility plan which assures the viability of Village 11 in consideration of existing and anticipated economic conditions.

The No Project/No Development Alternative could meet the following project objectives on a regional basis, but not for the Village 11 property:

- Add to the creation of a unique Otay Ranch image and identity which differentiates Otay Ranch from other communities.
- Wisely manage limited natural resources.

The preservation of additional agricultural land could create a unique Otay Ranch image and identity. The preservation of additional agricultural land and the proximity to the Salt Creek Open Space could contribute to the wise management of limited natural resources. The No Project/No Development Alternative does not, however, meet the majority of the project objectives and is not consistent with the Otay Ranch GDP/SRP as amended.

10.2 REDUCED DENSITY ALTERNATIVE

PROJECT DESCRIPTION

Under the Reduced Density Alternative, the intensity of development would be reduced by approximately 26 percent by decreasing the density of all multi- and single-family residential development. The Reduced Density Alternative retains 10 acres of commercial development, but eliminates the residential component of what was planned as mixed use. The junior high school remains in the southwest corner of the Village 11 project site. This Alternative would result in 1,707 residential units on 304.9 acres. This represents a 3 percent reduction in land area combined with a 26 percent reduction in dwelling units. The number of single family residential units would increase by 5 percent (54 units), while the number of multi family residential units would decrease by 45 percent (536 units). The 16.7 acres of park land, 36.6 acres of school land, 66.2 acres of roadways, and 49.2 acres of open space would remain unchanged from the proposed project. *Table 10-1* presents the Reduced Density Alternative. The Reduced Density Alternative reduces the projected build-out population of Village 11 by approximately 2,440 individuals.

TABLE 10-1
OTAY RANCH VILLAGE 11. DRAFT ALTERNATIVE SPA LAND USE PLAN

Neighborhood Area	Land Use	Acres	Dwelling Units	Target DUs/Acre
R-1	SF	26.7	129	4.8
R-2	SF	14.2	46	3.2
R-3	SF	15.3	46	3.0
R-4	SF	12.4	45	3.6
R-5	SF	7.5	32	4.3
R-6	SF	7.5	30	4.0
R-7	SF	11.4	58	5.1
R-8	SF	11.2	52	4.6
R-9	SF	11.6	55	4.7
R-10	SF	18.0	66	3.7
R-11	SF	7.7	24	3.1
R-12	SF	11.1	46	4.1
R-13	SF	11.4	41	3.6
R-14	SF	11.0	44	4.0
R-15	SF	10.3	56	5.4
R-16	SF	8.5	50	5.9
R-17	SF	18.5	93	5.0
R-20	SF	10.6	53	5.0
R-23	SF	16.8	84	8.0
SUBTOTAL	SF	241.7	1,050	
R-18	MF	12.5	100	8.0
R-21	MF	10.5	84	8.0
R-22	MF	8.4	67	8.0
R-19	MF	11.6	139	12.0
R-24	MF	10.2	122	120.0
R-25	MF	10.0	145	14.5
SUBTOTAL	MF	63.2	657	
TOTAL	RES.	304.9	1,707	
MU-1 ¹	MU	10.0		
SUBTOTAL	MU	10.0		
CPF	CPF	5.5	N/A	
SUBTOTAL	CPF	5.5	N/A	
P-1 ²	PARK	7.0	N/A	
P-2 ²	PARK	3.8	N/A	
P-3 ³	PARK	3.0	N/A	
P-4 ³	PARK	1.0	N/A	
SUBTOTAL	PARK	14.8	N/A	
S-1/K-6	SCHOOL	11.0	N/A	
S-2/Jr. HS	SCHOOL	25.6	N/A	
SUBTOTAL	SCHOOL	36.6	N/A	
Hueto Parkway	ROAD	24.2	N/A	
Olympic Parkway	ROAD	9.3	N/A	
Eastlake Parkway	ROAD	7.2	N/A	
W ³ Circulation Streets	ROAD	17.4	N/A	
E ³ Circulation Streets	ROAD	8.1	N/A	
SUBTOTAL	ROAD	66.2	N/A	
Green Buffer	O.S.	27.6	N/A	
Easement thru Property	O.S.	18.8	N/A	
Paseo Area in West	O.S.	1.5	N/A	
Paseo Area in East	O.S.	1.3	N/A	
SUBTOTAL	OTHER	49.2	N/A	N/A

¹ MU-1 assigned 10.0 acres for both residential and commercial, but as a mixed use area, the 10.0 acres is included only once in overall total.

² public park

³ private park

Source: City of Chula Vista

ENVIRONMENTAL ANALYSIS

Land Use

Development of the Otay Ranch is based on the Village Concept, which plans for a Village core with land uses that will meet the day-to-day needs of the village residents. The Village core is required to have a mixed-use center that is pedestrian oriented and served by transit. The mixed-use center will have shops, schools, parks and multifamily housing to support the other uses. The villages are to have a wide variety of housing types for all income levels. Multi-family housing is a key component to the Village Concept.

The Reduced Density Alternative reduces the amount of multi-family dwelling within the Village core. The Reduced Density Alternative does not provide the required multi-family housing to meet the housing needs of future residences as well as support the commercial and public uses in the village core. The Reduced Density Alternative does not meet the Village Concept goals of the Otay Ranch GDP.

Housing and Population (Community Social Factors)

The Reduced Density Alternative would reduce the amount of housing available within Village 11 by approximately 26 percent. This would reduce the ability of the City of Chula Vista to meet the projected need for an additional 13,500 dwelling units by 2005. Approximately 26 percent of the projected population would not be accommodated. The Reduced Density Alternative would not be in conformance with those policies as outlined in SANDAG's Growth Management Plan. The lack of housing concurrent with needs as shown in SANDAG forecasts and in the Growth Management Plan would result in a potentially significant impact.

Water Resources and Water Quality

The Reduced Density Alternative would have little effect on the increase in runoff created by the proposed Village 11 project. This is because the 26 percent reduction in the number of dwelling units would be accomplished by slightly increasing the number of single family homes and substantially decreasing the density of the multi family homes. The overall acreage of development would only be reduced by approximately 3 percent, or 10 acres. This reduction would not be expected to result in a measurable reduction in the volume or quality of the runoff from the site. Water resource and water quality impacts would remain essentially unchanged with those associated with the proposed project.

Transportation, Circulation and Access

The traffic generated by the Village 11 Reduced Density Alternative would be reduced by approximately 5,374 ADT, for a total of 18,346 ADT. The significant traffic impacts associated with the implementation of the proposed Village 11 SPA Plan would be reduced, but would not be avoided. The traffic mitigation measures would be unchanged from those required of the proposed project as the 26 percent reduction in ADTs would not bring significant traffic impacts below the thresholds for significance.

Air Quality

Air quality impacts associated with vehicular trips would be reduced by approximately 26 percent under the Reduced Density Alternative. Short-term air quality impacts associated with construction would not be reduced as the area and extent of grading would remain essentially the same as that for the proposed project. There could be a slight decrease in overall long-term air quality impacts associated with power generation and the operation of on-site commercial facilities due to the reduced population. Overall, the reduction in air quality impacts would be minor and the cumulative impact would remain significant and unmitigable.

Noise

The grading plan for the Reduced Density Alternative would be very similar to the grading plan required for the proposed project. The proximity of future development to major roadways would remain unchanged. The mitigation measures for noise impacts to future development areas would also be expected to remain unchanged. Mitigation measures for noise impacts associated with construction would remain unchanged. The Reduced Density Alternative, therefore, does not avoid or lessen noise impacts.

Public Services and Utilities

The water and sewer demands would be reduced by approximately 26 percent. The police, fire, library, schools, and parkland impacts would also be reduced by approximately 26 percent. While the need for new and improved infrastructure would be reduced, it would not be avoided. Public service and utility impacts would remain significant but mitigable.

Hazards/Risk of Upset

The hazards/risk of upset impacts would be reduced slightly under the Reduced Density Alternative, in accordance with the reduced population at buildout. There would be little change overall in the severity of this less than significant impact.

When compared to the proposed project, the Reduced Density Alternative would not modify the development footprint or the need for off-site infrastructure improvements. It is for this reason that impacts to cultural and paleontological resources, potential conflicts between urban and agricultural uses, and impacts to landforms affecting scenic views would not be reduced or avoided under the Reduced Density Alternative.

PROJECT OBJECTIVES

The following project objectives would continue to be achieved by the Reduced Density Alternative:

- Promote synergistic uses between Village 11, the neighborhoods of Eastlake and adjacent Otay Ranch villages to balance activities, services, and facilities.
- Implement the City of Chula Vista's Growth Management Program to ensure that the public facilities are provided in a timely manner and financed by the parties creating the demand for, and benefitting from, the improvements.
- Foster development patterns which promote orderly growth and prevent urban sprawl.
- Develop, maintain, and enhance a sense of community identity.
- Accentuate the relationship of the land use plan with its natural setting and the physical character of the region and promote effective management of natural resources by concentrating development into less sensitive areas while preserving large contiguous open space areas with sensitive resources.
- Add to the creation of a unique Otay Ranch image and identity which differentiates Otay Ranch from other communities.

The Reduced Density Alternative would not meet the following goals and objectives:

- Implement the goals, objectives, and policies of the Chula Vista General Plan, particularly the Otay Ranch General Development Plan, the Resource Management Plan, the Facility Implementation Plan, the Village Phasing Plan, and the Service/Revenue Plan.
- Establish a pedestrian-oriented village with an urban core to reduce reliance on the automobile and promote walking and the use of bicycles, buses, and public transit.
- Establish a land use and facility plan which assures the viability of Village 11 in consideration of existing and anticipated economic conditions.
- Wisely manage limited natural resources.

The GDP/SRP envisions higher residential densities than proposed by the Reduced Density Alternative. The purpose of the higher densities is to promote pedestrian, bicycle and transit oriented development and to wisely manage limited natural resources through the concentration of development in the least environmentally sensitive areas while preserving large tracts of open space. Reduction in density, as proposed under the Reduced Density Alternative, would provide insufficient density in the village core to support transit facilities and to promote pedestrian oriented land use design.

SECTION 11.0

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SECTION 12.0

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