

CITY OF CARLSBAD
Fiscal Year 2018-19
Growth Management Plan Monitoring Report

July 1, 2018 through June 30, 2019

Submitted to City Council on Aug. 27, 2020
Circulation Section Revised Oct. 13, 2020

Carlsbad City Council

Matt Hall, Mayor
Priya Bhat-Patel
Keith Blackburn
Cori Schumacher

Report prepared in cooperation with the following departments:

Community Development
Fire
Parks & Recreation
Library and Cultural Arts
Transportation
Utilities
Carlsbad Municipal Water District

Introduction

Carlsbad Municipal Code Section 21.90.130(d) requires the preparation of an annual monitoring report on the Growth Management Plan. This report satisfies this requirement by providing information regarding the status of the Carlsbad Growth Management Plan for the fiscal year covering July 1, 2018 – June 30, 2019, and to verify that the plan is continuing to accomplish its stated objectives. The primary objectives of the Growth Management Plan are to ensure that adequate public facilities are provided concurrent with growth, and to assure compliance with the ultimate dwelling unit limitations that were established by Proposition E, which was passed by voters in 1986. Pursuant to the code section, the report is provided to the city council for review.

Performance Standards

Proposition E established broad guidelines for determining adequacy of public facilities. These guidelines are further defined in the Citywide Facilities and Improvements Plan by means of specific performance standards for each of the eleven public facilities. These public facilities, their performance standards, status, and anticipated adequacy at buildout are outlined in Table 1 and Table 2, as follows:

TABLE 1 – PERFORMANCE STANDARDS

Public Facility	Performance Standard	More Information on Page
City Administrative Facilities	1,500 sq. ft. per 1,000 population must be scheduled for construction within a five-year period or prior to construction of 6,250 dwelling units, beginning at the time the need is first identified.	12
Library	800 sq. ft. (of library space) per 1,000 population must be scheduled for construction within a five-year period or prior to construction of 6,250 dwelling units, beginning at the time the need is first identified.	14
Wastewater Treatment Capacity	Sewer plant capacity is adequate for at least a five-year period.	16
Parks	3.0 acres of Community Park or Special Use Area per 1,000 population within the Park District must be scheduled for construction within a five year period beginning at the time the need is first identified. The five year period shall not commence prior to August 22, 2017.	17
Drainage	Drainage facilities must be provided as required by the city concurrent with development.	19
Circulation	Implement a comprehensive livable streets network that serves all users of the system –	21

Public Facility	Performance Standard	More Information on Page
	vehicles, pedestrians, bicycles and public transit. Maintain LOS D or better for all modes that are subject to this multi-modal level of service (MMLOS) standard, as identified in Table 3-1 of the General Plan Mobility Element, excluding LOS exempt intersections and streets approved by the City Council.	
Fire	No more than 1,500 dwelling units outside of a five-minute response time.	36
Open Space	Fifteen percent of the total land area in the Local Facility Management Zone (LFMZ) exclusive of environmentally constrained non-developable land must be set aside for permanent open space and must be available concurrent with development.	38
Schools	School capacity to meet projected enrollment within the Local Facility Management Zone (LFMZ) as determined by the appropriate school district must be provided prior to projected occupancy.	40
Sewer Collection System	Trunk-line capacity to meet demand, as determined by the appropriate sewer districts, must be provided concurrent with development.	41
Water Distribution System	Line capacity to meet demand as determined by the appropriate water district must be provided concurrent with development. A minimum of 10-day average storage capacity must be provided prior to any development.	43

TABLE 2 – FACILITY ADEQUACY STATUS

Public Facility	FY 2018-19 Adequacy Status (Meets performance standard?)	Buildout Adequacy Status (Meets performance standard?)
City Administrative Facilities	Yes	Yes
Library	Yes	Additional facilities to be provided
Wastewater Treatment Capacity	Yes	Yes
Parks	Yes	Additional facilities to be provided
Drainage	Yes	Additional facilities to be provided
Circulation	No	Additional facilities to be provided
Fire	Yes	Yes

Public Facility	FY 2018-19 Adequacy Status (Meets performance standard?)	Buildout Adequacy Status (Meets performance standard?)
Open Space	Yes	Additional facilities to be provided
Schools	Yes	Yes
Sewer Collection System	Yes	Additional facilities to be provided
Water Distribution System	Yes	Additional facilities to be provided

What Happens if Facilities Do Not Meet the Performance Standard?

The Growth Management Plan requires development activity to stop if a performance standard is not being met (however, the city cannot enforce a moratorium on residential development.¹ Some performance standards apply to the city as a whole, and others apply to more specific areas, as described below:

- Administrative facilities, library, and wastewater treatment capacity are facilities that serve the entire city. Their adequacy in meeting the performance standard is analyzed by considering the cumulative impact of citywide development. The failure of any one of these facilities to meet the adopted performance standard would affect the city as a whole. In that event, all development in the city would be halted until the deficiency is corrected.
- Parks are analyzed on a quadrant basis. This means that if the standard is not being met in the quadrant, development is halted for all Local Facility Management Zones (LFMZs, see description below) in the quadrant.
- Fire facilities are analyzed on the basis of fire station districts which can comprise multiple LFMZs, and if the standard is not met for a district, then development would be halted in that district.
- The remaining facilities (drainage, circulation, open space, schools, sewer collection system, and water distribution system) are analyzed on an LFMZ basis. If one of these facilities falls below the performance standard in a given LFMZ, development in that LFMZ would stop and other zones would not be affected if they are continuing to meet all performance standards.

Local Facility Management Zone Plans

The Citywide Facilities and Improvements Plan divided the city into twenty-five Local Facilities Management Zones (LFMZ). Each LFMZ is required to have an adopted Local Facilities Management Plan (LFMP) prior to any development in the LFMZ. Consistent with the Growth Management Plan, the LFMP must do the following: describe how the LFMZ will be developed, how compliance with the Growth Management Plan standards will be achieved, how the necessary public facilities will be provided, and what financing mechanisms will be used for the facilities. All twenty-five LFMZs have an adopted LFMP. Please see Figure 1 for the general boundaries and locations of the LFMZs.

¹ Pursuant to an opinion issued on April 17, 2020, the California Department of Housing and Community Development finds that the housing development moratorium adopted pursuant to the City's GMP would be impermissible under California Government Code Section 66300 (Housing Crisis Act of 2019)

Population as a Measurement for Facility Performance Standards

As indicated in Table 1, above, the performance standards for city administrative facilities, library facilities, and parks are stated in terms of population. The demand for these facilities is based on each new dwelling unit built and the estimated number of new residents it adds to the city, which is determined using the average number of persons per dwelling unit. Utilizing data from the 2010 Federal Census (total population divided by total number of dwelling units), the average for Carlsbad is 2.358 persons per dwelling unit.

As of June 30, 2019, the city’s population is estimated to be 111,607, which is calculated by multiplying 2.358 persons per dwelling unit by the number of dwelling units, accessory dwelling units, and commercial living units (which were counted as dwelling units in the 2010 Federal Census); in total there are 47,286 dwellings and commercial living units, as shown in Table 3 below.

TABLE 3 – FY 2018-19 POPULATION CALCULATION

Quadrant	Dwelling units ²	Accessory dwelling units ³	Commercial living units ⁴	Total units	Population
NW	12,431	207	226	12,864	30,333
NE	6,971	45	-	7,016	16,544
SW	10,158	28	685	10,871	25,659
SE	16,367	168	-	16,535	39,072
Total	45,927	448	911	47,286	111,607

As part of the Growth Management Plan monitoring process, the persons per dwelling unit number can be adjusted in the future when updated Federal Census data is available. It should be noted that the above population estimates are for growth management facility planning purposes only and may vary from other official population estimates for Carlsbad.

² Dwelling units represent the dwellings that are counted for purposes of the city’s growth management dwelling unit limits per Proposition E (excludes accessory dwelling units and commercial living units); the number of dwelling units shown in this table are updated to June 30, 2018.

³ Accessory dwelling units are accessory to single family dwellings and are separate dwelling units with living space, kitchen and bathroom facilities. Pursuant to state law, accessory dwelling units cannot be counted as dwellings for purposes of the city’s growth management dwelling limits. However, the units are counted here to ensure all city population is considered in regard to the performance standards for administrative facilities, libraries and parks.

⁴ Commercial living units, as shown in this table, are professional care facility living units that were counted as dwelling units in the 2010 Federal Census. Pursuant to city ordinance (CMC Section 21.04.093), commercial living units are not counted as dwellings for purposes of the city’s growth management dwelling limits. However, the units are counted here to ensure all city population is considered in regard to the performance standards for administrative facilities, libraries and parks.

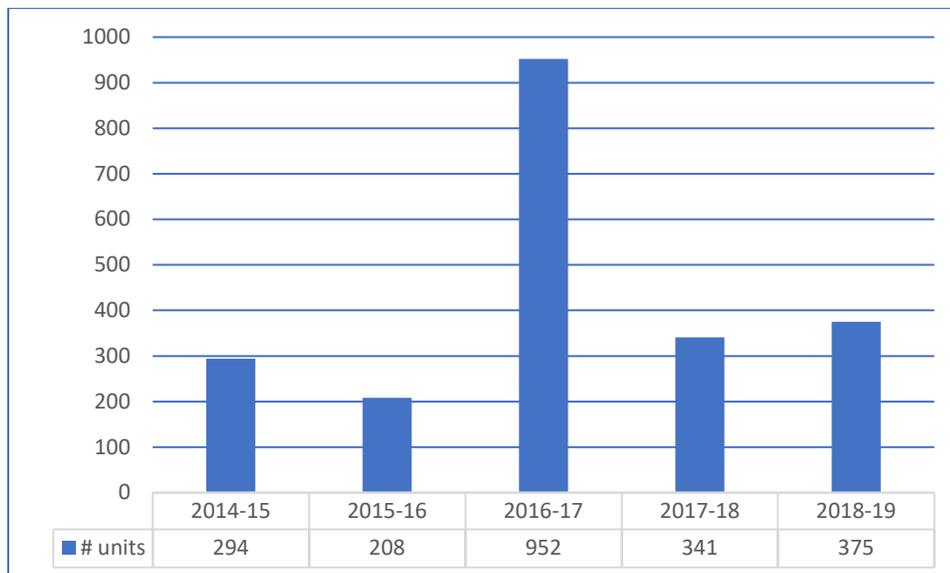
Residential Development Activity

Building permits for 375 new dwelling units were issued during the FY 2018-19. Table 4 provides a breakdown by quadrant and LFMZ, excluding the zones that had no development activity. Figure 2 shows the recent five year trend of building permits issued for dwelling units.

TABLE 4 – FY 2018-19 RESIDENTIAL DEVELOPMENT

Quadrant	LFMZ	Units
NW	1	128
Total NW		128
NE	2	1
	14	98
	25	54
Total NE		153
SW	19	1
	20	5
	21	11
Total SW		17
SE	6	9
	17	68
Total SE		77
Total citywide		375

FIGURE 2 – FISCAL YEAR DWELLING UNITS PERMITTED



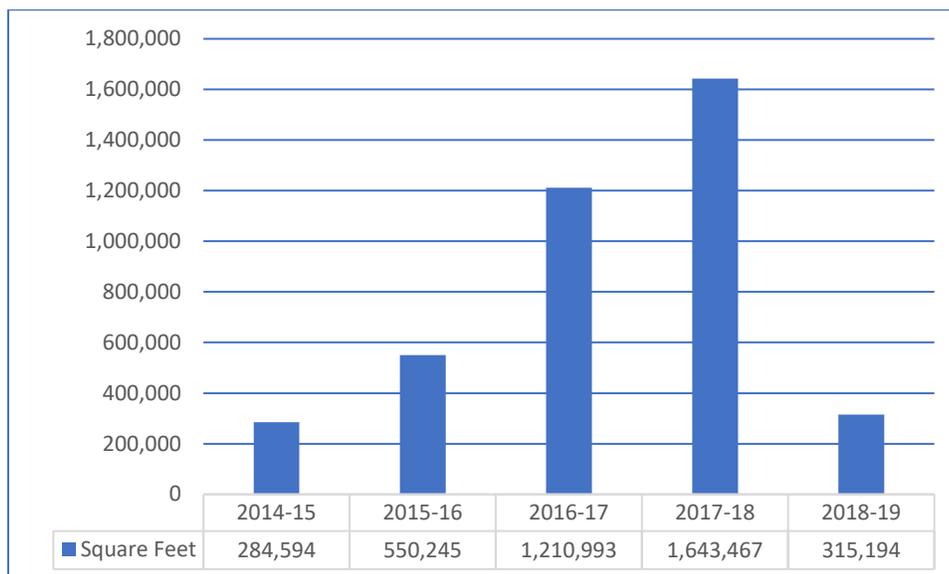
Non-Residential Development Activity

Building permits for 315,194 square feet of new non-residential construction were issued during FY 2018-19, comprising both commercial and industrial development. Table 5 provides a breakdown by quadrant and LFMZ, excluding the zones that had no development activity. Figure 3 shows the recent five-year trend of building permits issued for the square footage of non-residential construction.

TABLE 5 – FY 2018-19 NON-RESIDENTIAL DEVELOPMENT

Quadrant	LFMZ	Commercial (SF)	Industrial (SF)	Combined (SF)
NW	1	37,327		
	5 (NW)	83,900		
	13	23,943		
Total NW		145,170	-	145,170
NE	16		87,776	
Total NE		-	87,776	87,776
SW	4	800		
	19	2,109		
Total SW		2,909	-	2,909
SE	6	32,240		
	11	33,368		
	17		13,731	
Total SE		65,608	13,731	79,339
Total citywide		213,687	101,507	315,194

FIGURE 3 – FISCAL YEAR NON-RESIDENTIAL SQUARE FEET PERMITTED



Proposition E Compliance

The purpose of this part of the report is to demonstrate that the ultimate dwelling unit caps stated in Proposition E will not be exceeded. Proposition E states “the maximum number of residential dwelling units to be constructed or approved in the city after November 4, 1986 is as follows: Northwest Quadrant 5,844; Northeast Quadrant 6,166; Southwest Quadrant 10,667; Southeast Quadrant 10,801.” This resulted in dwelling unit caps as shown in Table 6 (see the totals for each quadrant below). All quadrants are in compliance with the dwelling unit caps established by Proposition E for FY 2018-19. As noted above in Table 3, accessory dwelling units and commercial living units are not counted as dwellings for purposes of Growth Management Plan compliance with the Proposition E caps.

TABLE 6 – FY 2018-19 RESIDENTIAL DWELLING STATUS PER QUADRANT

As of June 30, 2019							
	NORTHWEST QUADRANT			NORTHEAST QUADRANT	SOUTHWEST QUADRANT	SOUTHEAST QUADRANT	CITYWIDE TOTAL
	Outside Village	Village	Total NW				
Proposition E Quadrant Dwelling Limit			15,370	9,042	12,859	17,328	54,599
Existing Dwellings	11,794	637	12,431	6,971	10,158	16,367	45,927
Unbuilt Planned Dwellings ⁵	2,024	227	2,251	1,969	1,469	634	6,323
Total Existing and Unbuilt Planned Dwellings	13,818	864	14,682	8,940	11,627	17,010	52,259
Potential Additional Dwellings⁶	129	559	688	102	1,232	318	2,340

Table 6 represents the number of dwelling units that could be built (based on the applicable growth management density) on all parcels that have a residential land use designation. The “total existing and unbuilt planned dwellings”, as shown in Table 6, assumes all parcels with a residential land use designation will be developed with residential dwellings, including land that is currently developed with non-residential uses (e.g., some existing churches and professional care facilities are on land designated for residential use). Although it is not anticipated that these parcels will convert to

⁵ All quadrants except the Village - includes unbuilt approved projects, as well as vacant and underdeveloped property designated for residential use by the General Plan.

⁶ Dwelling unit capacity in addition to what is currently planned by the General Plan or approved as part of an unbuilt project. "Potential additional dwellings" must be allocated from Excess Dwelling Unit Bank.

residential uses, the dwelling unit potential for these parcels is tracked to ensure compliance with the Proposition E dwelling unit limits.

Table 7 estimates the number of dwellings that will exist at buildout; this estimate assumes that the residentially designated land currently developed with non-residential uses will not all be developed with residential uses in the future. The data in Table 6 and Table 7 show that the Proposition E dwelling unit limits will not be exceeded.

TABLE 7 – ESTIMATED DWELLING UNITS AND POPULATION AT BUILDOUT

Quadrant	Dwelling Units	Population
NW	15,079	38,698
NE	8,940	22,496
SW	10,918	28,071
SE	16,879	42,474
Total	51,816	131,739

Density Control Points and Excess Dwelling Unit Bank

To manage compliance with the Proposition E dwelling unit limitations, the City Council established Growth Management Control Point (GMCP) densities for all residential land use designations in the city (for example, for the R-4 land use designation, the GMCP density is 3.2 dwelling units per acre).

All residential development must, on average, not exceed the GMCP densities. To ensure this, Council Policy Statement 43 (Proposition E “Excess Dwelling” Unit Bank) established a dwelling unit bank concept. When development occurs below the GMCP, the “excess” number of units (difference between the potential number of units at the GMCP density and the number of units built) are available for other residential developments to allow them to be constructed at a density that exceeds the GMCP density.

On December 17, 2002, the City Council adopted Resolution No. 2002-350, which amended Council Policy Statement 43 by reducing the accumulated number of excess units to 2,800. Excess units may be allocated to any quadrant based on the criteria in Council Policy Statement 43, so long as the citywide or individual quadrant dwelling unit limits are not exceeded. Please see Table 8 for the Excess Dwelling Unit Bank status at the end of the FY 2018-19. “Pending” excess units are associated with projects that have been approved below the GMCP density but are not yet constructed, or an approved land use change is not yet effective. “Pending” excess units are not available to allocate to other sites; the units will be made available for allocation at the time the associated projects are constructed, or the land use change becomes effective.

TABLE 8 – EXCESS DWELLING UNIT BANK

Balance as of June 30, 2019	
Inside the Village	559
Outside the Village	424
Pending deposits	429

Public Facility Financing

In 1991, the City of Carlsbad established Community Facilities District No. 1 (CFD) to provide financing for a number of public facilities of citywide importance that are needed to meet the requirements of the Growth Management Plan, including various road and intersection improvements, and the Dove Library. As LFMZ plans were adopted, they were conditioned to annex into the CFD at the time the first discretionary permit grants an entitlement to develop in the LFMZ. This ensures financing for public facilities that can accommodate future growth consistent with the criteria of the Growth Management Plan.

Status of the Facilities

Beginning on page 12 is a discussion of the adequacy of each of the eleven public facilities addressed in Carlsbad’s Growth Management Plan.

CITY ADMINISTRATIVE FACILITIES

A. Performance Standard

1,500 sq. ft. per 1,000 population must be scheduled for construction within a five-year period or prior to construction of 6,250 dwelling units, beginning at the time the need is first identified.

B. FY 2018-19 Facility Adequacy Analysis

Based on the estimated June 30, 2019 population estimate of 111,607, the current demand for administrative facilities is **167,411** square feet. To date, city administrative facilities exceed the performance standard. Staff recently updated the existing facility square footages, which resulted in refinements to some of the existing square footage numbers and a lower total square footage compared to FY 2017-18 report. The existing inventory of city and Carlsbad Municipal Water District buildings (leased and owned) occupied for administrative services includes the following:

Facility	Address	Square Feet
City Hall Complex	1200 Carlsbad Village Drive	16,000
Faraday Administration Building	1635 Faraday Ave.	68,000
Fleet Service Center	2480 Impala Drive	10,540
Water District (Maintenance & Operations)	5950 El Camino Real	18,212
Parks Yard (Maintenance & Operations)	1166 Carlsbad Village Drive	4,012
Public Works Operations	405 Oak Ave.	9,950
Safety Center (Police and Fire administration)	2560 Orion Way	55,027
First Responder Safety Training Center	5750 Orion Way	18,112
Senior Center (Recreation administration)	799 Pine Ave.	5,770
Total		205,623

C. Buildout Facility Adequacy Analysis

Based on the 2035 projected buildout population of 131,739, the demand for city administrative facilities will be **197,608** square feet. The existing **205,169** square feet of administrative facilities exceeds the growth management performance standard at buildout.

D. New Orion Center Project

A development proposal is underway for the Orion Center project, which will centralize the city's maintenance and operations functions into a single location on Orion Way. The goal

for the facility is to accommodate the existing and future needs for the following departments: Public Works (Utilities/CMWD, General Services and Construction Management & Inspection) and Parks & Recreation (Parks Maintenance). The proposed project will free up three existing city facilities for redevelopment: 5950 El Camino Real, 205 Oak Street, and 1166 Carlsbad Village Drive. The new building will be 85,320 square feet, which will provide a net increase in city administrative space of 53,146 square feet over the three existing sites which will no longer be needed.

E. New City Hall Project

The new city hall project is in the process of identifying spatial requirements for city staff to determine the size of the new city hall, and site criteria to determine which of four potential locations is best suited for the new city hall and civic center. The initial project has three phases, including the 1) Space Needs Analysis Report, 2) Site Criteria Evaluation, and 3) Best Professional Recommendation. The City Council approved Phases 1 and 2 on September 17, 2019, with the third phase estimated to be completed prior to the end of the second quarter of 2020.

LIBRARY FACILITIES

A. Performance Standard

800 sq. ft. (of library space) per 1,000 population must be scheduled for construction within a five-year period or prior to construction of 6,250 dwelling units, beginning at the time the need is first identified.

Library space (leased/owned, public/non-public) is used as a standard library measurement of customer use and satisfaction and includes collection space, seating, meeting rooms, staff areas, technology, and other public facility needs. The performance standard, stated above, was originally developed based on surveys of other libraries of comparable size and based on related standards (such as volumes per capita) set by the American Library Association.

B. FY 2018-19 Inventory and Adequacy of Facilities

The current inventory of library facilities (city-owned) is as follows:

Facility	Square Feet
Dove Library	64,000
Cole Library	24,600
Learning Center	11,393
Total	99,993

Based on the June 30, 2019 population estimate of 111,607, the growth management standard requires **89,286** sq. ft. of public library space. The city's current 99,993 sq. ft. of library facilities adequately meets the growth management standard.

C. Facility Adequacy at Buildout

Based on the General Plan projected buildout population of 131,739, the demand for library facilities will be **105,391** sq. ft. The existing **99,993** square feet of library facilities is expected to fall short of the growth management standard at buildout.

In 2015-16, the city completed major maintenance and renovation for both the Cole and Dove facilities that addresses current ADA requirements and allows delivery of modern library services and technology, while extending the life of the Cole Library by 10 to 15 years.

Built in 1967, the design of the Cole Library could not have contemplated modern library services including the extensive delivery of electronic resources, automated materials handling, and the variety of new media formats. Additionally, the library's role as a community gathering space has increased. With an already maximized building footprint and infrastructure constraints, the Cole Library will not expand further to meet these changing

needs. Additional meeting spaces, technology learning labs and maker spaces are examples of elements desired by the community.

Complete replacement of the Cole facility is included in the Capital Improvement Program budget between the years 2020 and buildout. Additionally, civic center and city hall site studies, which are currently underway, will most likely inform the timing and opportunities for a new Cole facility. One of the sites being considered for a new city hall and potential civic center is the property that currently includes Cole. As these plans advance, staff will need to evaluate impacts on a future library space.

WASTEWATER TREATMENT CAPACITY

A. Performance Standard

Sewer plant capacity is adequate for at least a five-year period.

B. FY 2018-19 Facility Adequacy Analysis

The Encina Water Pollution Control Facility (EWPCF) Phase V Expansion, which was completed in 2009, accommodates the ultimate buildout demand for the Carlsbad sewer service area based on projections made in the 2012 City of Carlsbad Sewer Master Plan and, therefore, currently provides adequate capacity in excess of the performance standard.

Carlsbad’s FY 2017-18 annual daily average dry weather sewer flow was 6.03 million gallons per day (MGD) representing 59% of the city’s 10.26 MGD capacity rights. The city’s annual daily average sewage flow to the EWPCF for the previous five years is measured as follows:

Fiscal Year	Annual daily average flow
FY 2014-15	6.17 MGD
FY 2015-16	5.82 MGD
FY 2016-17	6.32 MGD
FY 2017-18	6.18 MGD
FY 2018-19	6.03 MGD

C. Buildout Facility Adequacy Analysis

The Encina Water Pollution Control Facility Phase V Expansion provides adequate sewer treatment capacity to ensure compliance with the growth management wastewater performance standard through buildout of the Carlsbad sewer service area.

The City of Carlsbad 2019 Sewer Master Plan Update contains an analysis of annual daily average sewer flow through buildout of the city based on the Carlsbad General Plan land use projections. The analysis indicates that the city’s projected ultimate buildout flow is approximately 8.31 MGD. The city has purchased capacity rights to 10.26 MGD in the EWPCF, which ensures adequate wastewater treatment capacity is available to accommodate an unanticipated increase in future sewer flows.

PARKS

A. Performance Standard

3.0 acres of Community Park or Special Use Area per 1,000 population within the Park District⁷ must be scheduled for construction within a five year period beginning at the time the need is first identified⁸. The five year period shall not commence prior to August 22, 2017.

B. FY 2018-19 Facility Adequacy Analysis

To date, all quadrants are in compliance with the performance standard.

Quadrant	Park acreage inventory existing	Park acreage required by Performance Standards
NW	105.2	91.0
NE	45.3	49.6
SW	70.2	77.0
SE	114.9	117.2
Total	335.6	334.8

The performance standard requirement for park acreage exceeds the inventory of existing and scheduled park acreage for the NW quadrant, but the other quadrants do not currently meet the performance standard. Although short of the acreage required, these quadrants are not out of compliance with the performance standard because the five year period has not been reached. For the SW and SE quadrants, the five year period began on August 22, 2017 as required by City Council Resolution No. 2017-170. For the NE quadrant, the FY 2017-18 report identified the park acreage deficit, so the five year period began on June 30, 2018.

The completion of the Veterans Memorial Park Master Plan will address the referenced deficits in the NE, SW and SE quadrants. Veteran’s Memorial Park is a city-owned, undeveloped community park site located in the northwest quadrant. Because of its size, centralized location, and citywide significance, the city intends that this site help fulfill future citywide park needs. Thus, when the Citywide Facilities and Improvements Plan (CFIP) was approved in 1986, Veteran’s Memorial Park (then known as Macario Canyon) was apportioned equally to all four city quadrants to meet the GMP parks performance standard.

Further, the City of Carlsbad Community Facilities District No. 1 (CFD) was established in 1991, creating a special tax lien on vacant properties throughout the city. The purpose of the CFD

⁷ "Park District" = "quadrant". There are four park districts within the city, corresponding to the four quadrants.

⁸ The threshold for triggering the construction of a new park is as follows: Once a deficit of park acreage in a quadrant is identified, a new park must be scheduled for construction within the time frame of five years. According to City Council Resolution No. 97-435, "scheduled for construction" means that the improvements have been designed, a park site has been selected, and a financing plan for construction of the facility has been approved.

was to finance the construction of specific public facilities of citywide obligation and benefit, including Veteran’s Memorial Park. Consistent with the intent of the CFIP and the CFD, the General Plan Open Space, Conservation and Recreation Element credits 22.9 acres of the 91.5-acre Veteran’s Memorial Park to each quadrant’s future park inventory (see Table 4-7 of the Open Space, Conservation and Recreation Element).

The master planning process for that site commenced in December 2018, with the award of a professional services agreement to RJM Design, and public outreach began in March 2019. The master plan is scheduled to be completed within the next two years, before the conclusion of either of the five year periods (i.e., for the SE and SW quadrants, and for the NE quadrant). Once the master plan is complete, the park will be considered “scheduled for construction”⁷, and all four quadrants will be fully compliant with the performance standard.

C. Buildout Facility Adequacy Analysis

Based on the current FY 2019-20 CIP list of projects, Veteran’s Memorial Park is proposed to be constructed prior to buildout. Construction of this community park would result in the projected park inventory for all city quadrants exceeding the projected required acreage at buildout, as shown below:

Quadrant	Buildout population ⁹	Buildout required acreage ⁸	Current inventory	Proposed park acreage	Projected inventory
NW	38,698	116.1	105.2	22.9	128.1
NE	22,496	67.5	45.3	22.9	68.2
SW	28,071	84.2	70.2	22.9	93.1
SE	42,474	127.4	114.9	22.9	137.8
Total	131,739	395.2	335.6	91.5	427.2

D. Additional Parks Acreage

The figures above for proposed park acreage do not include park projects listed in the CIP as “partially funded” or “unfunded”. Should alternative funding mechanisms be found, and these parks are built, the additional parks acreage would further aid in meeting/exceeding the growth management parks performance standard.

- Partially funded – In the FY 2019-20 CIP, \$12,592,000 has been transferred to the Robertson Ranch Park project (NE – 11.2 acres), which changes its status to “partially funded”. The master planning process for this park is scheduled to begin in FY 2021-22.
- Unfunded – Zone 5 Business Park Recreational Facility (NW – 9.3 acres) and Cannon Lake Park (NW – 6.8 acres).

⁹ Reflects the General Plan

DRAINAGE

A. Performance Standard

Drainage facilities must be provided as required by the city concurrent with development.

B. FY 2018-19 Facility Adequacy Analysis

All areas of the city currently meet the growth management drainage performance standard.

The standard for drainage distinguishes it from the other public facility standards because, by its very nature, drainage facility needs are more accurately assessed as specific development plans for individual projects are finalized. Therefore, the drainage performance standard was written to allow the city to require appropriate drainage facilities as development plans are finalized and approved.

The larger/master planned facilities have been identified in the city's 2008 Drainage Master Plan. The associated Planned Local Drainage Area (PLDA) fee program was established to finance the construction of these facilities. The original Drainage Master Plan was adopted in 1980 with the goal of assessing the performance of existing drainage infrastructure, identifying anticipated improvements and developing a funding mechanism to ensure construction of these planned facilities. The DMP is updated from time to time to reflect changes in city growth, construction costs, general plan, drainage standards and environmental regulations. At the present, the Public Works Branch is updating the 2008 Drainage Master Plan to ensure these larger/master planned facilities will be adequately funded.

The construction of smaller development/project related drainage facilities are addressed during the review of individual project proposals. Maintenance, repair and replacement projects are identified on an ongoing basis and are incorporated in the Capital Improvement Program as a part of the Storm Drain Condition Assessment Program, the Citywide Storm Drain Rehabilitation and Replacement Program or as individual/stand-alone projects.

The Agua Hedionda and Calavera Creek channels located east of El Camino Real within the residential community of Rancho Carlsbad were found to be of inadequate size to fully contain and convey the 100-year flood event. As a result, the flood plain of these creeks encroaches into the community and therefore projects located within LFMP Zones 5, 7, 14, 15, 16, 18 and 24 that drain to the Agua Hedionda or Calavera Creek must comply with the following conditions to maintain compliance with the drainage performance standard:

1. Payment of the PLDA fee.
2. Install onsite drainage improvements to ensure that direct drainage impacts resulting from the proposed development do not exacerbate the potential for downstream flooding of existing development.

C. Buildout Facility Adequacy Analysis

The 2008 Carlsbad Drainage Master Plan proposes the construction of new facilities to accommodate potential storm events. Construction of the proposed Master Drainage Facilities will ensure the drainage performance standard is maintained through buildout of the city. The current update to the Drainage Master Plan will ensure adequate funds are available for the construction of needed flood control facilities. The estimated costs for these facilities and the programming of PLDA funds are included in the annual Capital Improvement Program.

A. Performance Standard

Implement a comprehensive livable streets network that serves all users of the system – vehicles, pedestrians, bicycles and public transit. Maintain level of service (LOS) D or better for all modes that are subject to this multi-modal level of service (MMLOS) standard, as identified in Table 3-1 of the General Plan Mobility Element, excluding LOS exempt intersections and streets approved by the City Council.

The service levels for each travel mode are represented as a letter “grade” ranging from LOS A to LOS F: LOS A reflects a high level of service for a travel mode (e.g., outstanding characteristics and experience for that mode) and LOS F would reflect an inadequate level of service for a travel mode (e.g., excessive congestion for vehicles or inadequate facilities for bicycle, pedestrian or transit users).

The performance standard for the circulation system is guided by the General Plan Mobility Element as follows:

Implementing Policy 3-P.3: Apply and update the city’s multi-modal level of service (MMLOS) methodology and guidelines that reflect the core values of the Carlsbad Community Vision related to transportation and connectivity. Utilize the MMLOS methodology to evaluate impacts of individual development projects and amendments to the General Plan on the city’s transportation system.

Implementing Policy 3-P.4: Implement the city’s MMLOS methodology and maintain LOS D or better for each mode of travel for which the MMLOS standard is applicable, as identified in Table 3-1 and Figure 3-1¹¹.

B. Livable Streets

The monitoring program for the circulation system is guided by General Plan Mobility Element Goal 3-G.1:

Keep Carlsbad moving with livable streets that provide a safe, balanced, cost-effective, multi-modal transportation system (vehicles, pedestrians, bikes, transit), accommodating the mobility needs of all community members, including children, the elderly and the disabled.

The California Complete Streets Act (2008) requires cities in California to plan for a balanced, multi-modal transportation system that meets the needs of all travel modes. Accomplishing this state mandate requires a fundamental shift in how the city plans and designs the street system – recognizing the street as a public space that serves all users of

¹⁰ Revised Oct. 13, 2020

¹¹ Table 3-1 and Figure 3-1 are found in the General Plan Mobility Element and are summarized in Table 9 of this report.

the system (elderly, children, bicyclists, pedestrians, etc.) within the urban context of that system (e.g., account for the adjacent land uses).

- Prior to adoption of the General Plan Mobility Element on Sept. 22, 2015, the growth management circulation performance standard was based on the circulation needs of a single mode of travel – the automobile.
- The General Plan Mobility Element identifies a new livable streets strategy for mobility within the city.
- The livable streets strategy focuses on creating a ‘multi-modal’ street network that supports the mobility needs of pedestrians, bicyclists, transit users and vehicles.
- Providing travel mode options that reduce dependence on the vehicle also supports the city’s Climate Action Plan in achieving its goals of reducing greenhouse gas emissions within the city.

C. Street Typology

The city’s approach to provide livable streets recognizes that improving the LOS for one mode of transportation can sometimes degrade the LOS for another mode. For example, pedestrian-friendly streets are designed to encourage pedestrian uses and typically have amenities that slow vehicle travel speeds (e.g., short-distance pedestrian crossings that restrict vehicle mobility). The “street typology” is defined in the General Plan Mobility Element and determines which travel modes are subject to the MMLOS D standard, as summarized in Table 9. For example, the vehicular mode of travel is subject to the MMLOS D standard on the following street typologies: freeways, arterial streets, arterial connector streets and Industrial streets.

Table 9: Street Typology and MMLOS Standard				
STREET TYPOLOGY	Modes subject to the MMLOS D Standard			
	Vehicular	Transit	Pedestrian	Bicycle
Freeways	Yes	Yes	No	No
Arterial Streets	Yes	Yes	No	No
Identity Streets	No	No	Yes	Yes
Village Streets	No	No	Yes	Yes
Arterial Connector Streets	Yes	No	Yes	Yes
Neighborhood Connector Streets	No	No	Yes	Yes
Coastal Streets	No	No	Yes	Yes
School Streets	No	No	Yes	Yes
Employment/Transit Connector Streets	No	Yes	Yes	Yes
Industrial Streets	Yes	Yes	No	No
Local/Neighborhood Streets	No	No	Yes	Yes
All Streets Located Within Half-Mile of a Transit Center	No	Yes	Yes	Yes
Bicycle/Pedestrian Pathways	No	No	Yes	Yes

D. Methods to Measure Service to Different Transportation Modes

a. How vehicular LOS is measured

The city monitors facilities that are subject to the vehicular LOS standard according to that street's typology as defined in Table 9. This section of the report summarizes the vehicular LOS methodology used for monitoring purposes. For the fiscal year (FY) 2018-19 monitoring report, the arterial street typology was monitored. The industrial street and arterial connector street typologies will be monitored in the next monitoring cycle so that all the street facilities required to meet the vehicular LOS standard will be monitored in the next monitoring program cycle.

The city evaluates the roadway network at the "facility" level according to Chapter 16 of the Highway Capacity Manual. A facility is defined as one direction of travel along a length of road that has similar travel and geometric characteristics, and it typically extends between multiple signalized intersections. Each facility has an associated capacity that is defined in the Highway Capacity Manual as "the ability of a transportation facility or service to meet the quantity of travel demanded of it." For Growth Management Plan monitoring purposes, travel demand on a roadway is measured by the volume of vehicles using the facility during the peak hours of operation. A volume threshold is established for each LOS grade according to the Highway Capacity Manual. The vehicular LOS is determined by comparing the traffic volume against these thresholds. For example, a LOS D is recorded when a traffic volume exceeds the LOS C threshold but is below the LOS D threshold.

A street "facility" is comprised of smaller and contiguous "segments" that typically extend between two adjacent signalized intersections. Per the Highway Capacity Manual, an entire facility is reported as failing if the volume along any one of its segments exceeds its capacity, which defines LOS F. When a facility has been monitored and found to operate at LOS D, each segment of that facility will be evaluated the following monitoring cycle and the LOS will be reported as follows:

- a. If the volume of any one segment of the facility exceeds the reported capacity for that segment, the facility will be reported as LOS F; or
- b. If none of the segment volumes exceeds its reported capacity for that segment, the facility will be reported as LOS D (or the new level if it has changed).

As noted above, travel demand is assumed to equal the traffic volume measured during the peak hour of operation. Vehicular LOS is determined based on one mid-block traffic count collected for each facility (or segment) being evaluated. The data is collected for one week while school is in session in either the spring or fall. The morning and afternoon (a.m./p.m.) peak hours' LOS is reported for each facility or segment. The approach is considered conservative, as non-peak time period will have reduced congestion and improved LOS. Each street evaluated will have separate LOS results reported for the a.m. and p.m. peak hour conditions with

independent grades reported for each direction of travel. This approach to data collection is consistent with industry standards.

b. How Pedestrian, Bicycle and Transit Service MMLOS is measured

The General Plan Mobility Element calls for the use of a MMLOS methodology to provide a metric for evaluating bicycle, pedestrian and transit modes of travel. In 2015, a method for evaluating bicycle and pedestrian LOS was first developed as part of the General Plan Environmental Impact Report (EIR); this EIR method was applied on a broad, program level to evaluate service to pedestrian, bicycle and transit users. When consultants applied the original method during the preparation of impact studies of proposed development projects, limitations were discovered in terms of the study area, directional travel and potential inconsistent interpretations of how the method should be applied.

Accordingly, a more robust method was developed in 2018 to calculate MMLOS for each mode and to identify a broader range of improvements that could be implemented to ensure the minimum operating standard would be met. As noted in General Plan Mobility Element Policy 3-P.3, the purpose of the MMLOS methodology is to provide a means for evaluating impacts of individual development projects, as well as monitoring the LOS for individual streets to ensure that they are meeting the specified standard by street type. Ultimately the MMLOS methodology was revised to accomplish these goals and a spreadsheet-based MMLOS Tool was developed to provide an easy-to-use way of calculating points for a specified location.

The MMLOS Tool generates a letter grade (A through F) to reflect the quality of service provided to a user of that mode of travel. This grade is based on the applicable attributes of the associated pedestrian, bicycle or transit mode. Examples of the attributes used to develop the MMLOS grade for bicycle travel include pavement condition, posted speed limit, on-street parking and buffered bike lanes. Each attribute contributes to a point system that corresponds to a MMLOS letter grade, when the total points for all attributes are added together. A LOS D score indicates that the existing attributes provide the minimum acceptable service for that mode. The MMLOS grades are determined using field data related to each attribute used in the scoring criteria.

In FY 2018-19, bicycle and pedestrian travel modes were monitored in the City of Carlsbad utilizing the revised MMLOS methodology. The following typologies were monitored for bicycle and pedestrian travel modes: identity streets, Village streets,

coastal streets and school streets. Other applicable typologies (see Table 9 for applicability per travel mode) will be reviewed in the FY 2020-21 monitoring cycle.

The existence of a City Council-adopted citywide Transportation Demand Management (TDM) ordinance provides adequate scoring to meet the criteria for the MMLOS D standard for transit.

Bicycle and pedestrian travel modes were monitored using the MMLOS Tool, staff has identified some concerns with the initial results and underlying MMLOS methodologies. Staff intends to reevaluate the methodologies and make refinements to the MMLOS Tool, in coordination with the Traffic and Mobility Commission. The transit travel mode methodology will also be revisited for possible incorporation into the MMLOS Tool. Once the refined MMLOS Tool has been applied to the bicycle and pedestrian travel modes (and possibly to the transit travel mode) of the FY 2018-19 street typologies, staff will report those MMLOS results to the City Council later this year.

It should be noted that there are a variety of multimodal LOS applications currently being used in California and nationally. However, based on the planning and research conducted as part of the development of the city's MMLOS methodology, there is no MMLOS methodology currently adopted by the metropolitan planning organization, San Diego Association of Governments (SANDAG), and there are no "turnkey" approaches that can be directly implemented in the city. Use of any existing multimodal LOS application being utilized elsewhere would require further refinement to account for the unique characteristics of the City of Carlsbad roadway network and to integrate the methodology into existing city tools and policies such as the GMP monitoring process.

E. Exemptions to the LOS D Standard

General Plan Mobility Element Policy 3-P.9 requires the city to develop and maintain a list of street facilities where specified modes of travel are exempt from the LOS standard (LOS-exempt street facilities), as approved by the City Council.

Regarding vehicular LOS standards, the City Council has the authority to exempt a street facility from the vehicular LOS standard if the street facility meets one or more of the following criteria from General Plan Mobility Element Policy 3-P.9:

- a) Acquiring the rights of way is not feasible; or
- b) The proposed improvements would significantly impact the environment in an unacceptable way and mitigation would not contribute to the nine core values of the Carlsbad Community Vision; or
- c) The proposed improvements would result in unacceptable impacts to other community values or General Plan policies; or
- d) The proposed improvements would require more than three through travel lanes in each direction.

General Plan Mobility Element Policy 3-P.11 requires new development that adds vehicular traffic to street facilities that are exempt from the vehicle LOS D standard to implement:

- Transportation Demand Management (TDM) strategies that reduce the reliance on single-occupant automobiles and assist in achieving the city's livable streets vision; and
- Transportation System Management (TSM) strategies that improve traffic signal coordination and improve transit service.

Per General Plan Mobility Element Policy 3-P.10, the following four streets, and their associated facility descriptions, are exempt from the vehicular LOS standard:

- A. La Costa Avenue between Interstate-5 and El Camino Real
 - 1. Eastbound from Interstate-5 to El Camino Real
 - 2. Westbound from El Camino Real to Interstate-5
- B. El Camino Real between Palomar Airport Road and La Costa Avenue
 - 3. Southbound from Palomar Airport Road to Camino Vida Roble
 - 4. Southbound from Camino Vida Roble to Poinsettia Lane
 - 5. Southbound from Poinsettia Lane to Aviara Parkway/Alga Road
 - 6. Southbound from Aviara Parkway/Alga Road to La Costa Avenue
 - 7. Northbound from La Costa Avenue to Aviara Parkway/Alga Road
 - 8. Northbound from Aviara Parkway/Alga Road to Poinsettia Lane
 - 9. Northbound from Poinsettia Lane to Camino Vida Roble
 - 10. Northbound from Camino Vida Roble to Palomar Airport Road
- C. Palomar Airport Road between Interstate-5 and College Boulevard
 - 11. Eastbound from Interstate-5 to Paseo del Norte
 - 12. Eastbound from Paseo del Norte to Armada Drive
 - 13. Eastbound from Armada Drive to College Boulevard/Aviara Parkway
 - 14. Westbound from College Boulevard/Aviara Parkway to Armada Drive
 - 15. Westbound from Armada Drive to Paseo del Norte
 - 16. Westbound from Paseo del Norte to Interstate-5

D. Palomar Airport Road between El Camino Real and Melrose Drive

17. Eastbound from El Camino Real to El Fuerte Street
18. Eastbound from El Fuerte Street to Melrose Drive
19. Westbound from Melrose Drive to El Fuerte Street
20. Westbound from El Fuerte Street to El Camino Real

On Dec. 17, 2019, City Council determined four street facilities to be operating at deficient levels of service. One of these deficient street facilities is southbound College Boulevard from Aston Avenue to Palomar Airport Road, and City Council expedited a CIP project to fully address this deficiency by adding a southbound right turn lane and converting the existing right turn lane into a second southbound through lane on College Boulevard at the intersection of Palomar Airport Road (CIP Project No. 6028).

On Dec. 17, 2019, City Council determined the following three deficient street facilities to be built-out and exempt from the LOS performance standard, pursuant to General Plan Mobility Element Policy 3-P.9 (Resolution 2019-270). No changes have occurred since adoption of this resolution which would warrant un-exempting these street facilities:

21. Southbound El Camino Real from the Oceanside city limits to Marron Road
22. Northbound El Camino Real from Marron Road to the Oceanside city limits
23. Southbound Melrose Drive from the Vista city limits to Palomar Airport Road

On June 9, 2020, City Council determined the following four street facilities to be deficient, built-out and exempt from the LOS performance standard, pursuant to General Plan Mobility Element Policy 3-P.9 (Resolution 2019-270). No changes have occurred since adoption of this resolution which would warrant un-exempting these street facilities:

24. Southbound El Camino Real from Cannon Road to College Boulevard
25. Northbound El Camino Real from College Boulevard to Cannon Road
26. Eastbound Cannon Road from El Camino Real to College Boulevard
27. Westbound Cannon Road from College Boulevard to El Camino Real

Each of the exempt street facilities was monitored this cycle and evaluated against the vehicular LOS standard. The results of this evaluation are summarized in Table 10.

Table 10: Vehicular LOS Exempt Street Facilities

Street Facility	From	To	LOS (a.m./p.m.)	Meets Vehicular LOS Standard?
1. La Costa Avenue	Interstate-5	El Camino Real	B/C	Yes
2. La Costa Avenue	El Camino Real	Interstate-5	F/B	No
3. El Camino Real	Palomar Airport Road	Camino Vida Roble	D/D	Yes
4. El Camino Real	Camino Vida Roble	Poinsettia Lane	C/C	Yes
5. El Camino Real	Poinsettia Lane	Aviara Parkway/ Alga Road	C/C	Yes
6. El Camino Real	Aviara Parkway/ Alga Road	La Costa Avenue	F/F	No
7. El Camino Real	La Costa Avenue	Aviara Parkway/ Alga Road	C/C	Yes
8. El Camino Real	Aviara Parkway/ Alga Road	Poinsettia Lane	C/C	Yes
9. El Camino Real	Poinsettia Lane	Camino Vida Roble	C/C	Yes
10. El Camino Real	Camino Vida Roble	Palomar Airport Road	D/D	Yes
11. Palomar Airport Road	Interstate-5	Paseo del Norte	F/F	No
12. Palomar Airport Road	Paseo del Norte	Armada Drive	D/D	Yes
13. Palomar Airport Road	Armada Drive	College Boulevard/Aviara Parkway	C/C	Yes
14. Palomar Airport Road	College Boulevard/ Aviara Parkway	Armada Drive	C/C	Yes
15. Palomar Airport Road	Armada Drive	Paseo del Norte	C/D	Yes
16. Palomar Airport Road	Paseo del Norte	Interstate-5	F/F	No
17. Palomar Airport Road	El Camino Real	El Fuerte Street	C/C	Yes
18. Palomar Airport Road	El Fuerte Street	Melrose Drive	C/F	No
19. Palomar Airport Road	Melrose Drive	El Fuerte Street	F/C	No
20. Palomar Airport Road	El Fuerte Street	El Camino Real	C/C	Yes
21. El Camino Real	Oceanside city limits	Marron Road	E/F	No
22. El Camino Real	Marron Road	Oceanside city limits	F/F	No
23. Melrose Drive	Vista city limits	Palomar Airport Road	F/E	No
24. El Camino Real	Cannon Road	College Boulevard	C/F	No
25. El Camino Real	College Boulevard	Cannon Road	F/B	No
26. Cannon Road	El Camino Real	College Boulevard	D/F	No
27. Cannon Road	College Boulevard	El Camino Real	E/D	No

F. FY 2018-19 Facility Adequacy Analysis

The following vehicular LOS and MMLOS results are based on the data reported in the *2018-19 Traffic Monitoring Program City of Carlsbad Growth Management Plan*.

1. Vehicular LOS

Except where noted below, vehicular LOS grades reflect traffic data gathered in the spring of 2019. The LOS results for the vehicular mode are illustrated in Figure 4. Table 11 summarizes the street facilities that: a) are subject to the vehicular LOS standard, b) do not meet the vehicular LOS D standard, and c) do not yet have an exemption approved by City Council. As discussed in section E above, CIP Project No. 6028 is expected to address the deficiency on southbound College Boulevard from Aston Avenue to Palomar Airport Road.

The traffic counts collected along El Camino Real between Tamarack Avenue and Cannon Road in spring of 2019 were inconsistent with historical data. To verify the data, staff recounted the facility and collected additional counts for each segment comprising the facility in the fall of 2019 while school was in session. The a.m. peak hour traffic volume for the segment between Lisa Street and Cannon Road exceeded capacity (or LOS F) in the southbound direction of travel; therefore, the entire facility is reported as LOS F according to the Highway Capacity Manual. Figure 4 and Table 11 identify the facility of El Camino Real southbound from Tamarack Avenue to Cannon Road as failing to meet the vehicular LOS standard.

Table 12 lists the street facilities reported as LOS D. As part of the next monitoring cycle, traffic volumes will be collected on each segment comprising a facility. If a traffic volume reported on one or more segments along that facility exceeds the capacity (or LOS F), the entire facility will be reported as LOS F. Otherwise, the facility will be reported as LOS D. This approach is consistent with the Highway Capacity Manual as discussed in section D. Following this report, city staff will deliver a more detailed report with recommendations of facilities for exemption and/or proposed project improvements to address these identified deficiencies to the City Council on the vehicle LOS reported in the table below and shown in Figure 4.

Table 11: Non-exempt Street Facilities Not Meeting Vehicular LOS D Standard						
Street Facility	From	To	Direction of Travel	Affected Local Facility Management Zone (LFMZ)	Level of Service (LOS)	
					AM	PM
1. College Blvd.	Carlsbad Village Drive	Oceanside City Limits	Northbound	7	D	E
2. College Blvd. ¹	Aston Avenue	Palomar Airport Road	Southbound	5	B	F
3. Cannon Road	Avenida Encinas	Paseo del Norte	Eastbound	3	F	E
4. Cannon Road	Paseo del Norte	Avenida Encinas	Westbound	13, 3	E	F
5. Palomar Airport Road ₂	Avenida Encinas	Paseo del Norte	Eastbound	3	F	F
6. Palomar Airport Road ₂	Paseo del Norte	Avenida Encinas	Westbound	3	F	F
7. El Camino Real	Tamarack Avenue	Cannon Road	Southbound	1, 8	F	C
<p>Note:</p> <p>1. The street facility has been reviewed by the City Council and the appropriate mitigation measure has been identified.</p> <p>2. Palomar Airport Road is exempt from the LOS D standard for the section of the corridor between Interstate-5 and College Boulevard. The non-exempt section of Palomar Airport Road between Avenida Encinas and Interstate-5 does not meet the LOS D standard.</p>						

Table 12: Non-Exempt Street Facilities Reported with Vehicular LOS D					
Street Facility	From	To	Direction of Travel	Level of Service (LOS)	
				AM	PM
a. El Camino Real	La Costa Avenue	Encinitas City Limits	Southbound	D	C
b. College Boulevard	Oceanside City Limits	Carlsbad Village Drive	Southbound	D	D
c. College Boulevard	Cannon Road	Carlsbad Village Drive	Northbound	C	D
d. College Boulevard	Carlsbad Village Drive	Cannon Road	Southbound	D	C
e. College Boulevard	El Camino Real	Aston Avenue	Southbound	D	D
f. College Boulevard	Aston Avenue	El Camino Real	Northbound	D	D
g. Aviara Parkway	Palomar Airport Road	Poinsettia Lane	Southbound	D	D
h. Aviara Parkway	Poinsettia Lane	Palomar Airport Road	Northbound	D	D
i. Rancho Santa Fe Road	Calle Barcelona	La Costa Avenue	Northbound	C	D
j. Cannon Road	Legoland Drive	Faraday Ave	Eastbound	C	D

Multimodal Level of Service Monitoring

Bicycle and pedestrian travel modes were monitored in FY 2018-19. Staff identified some concerns with the initial results related to the MMLOS methodology. Due to these concerns, this report does not include MMLOS results.

Staff intends to reevaluate the methodologies and make refinements to the MMLOS Tool, in coordination with the Traffic and Mobility Commission. The transit travel mode methodology will also be revisited for possible incorporation into the MMLOS Tool. Once the refined MMLOS Tool has been applied to the bicycle and pedestrian travel modes (and possibly to the transit travel mode) of the FY 2018-19 street typologies, staff will report those MMLOS results to the City Council later this year.

Examples of areas where the MMLOS methodology may be refined include its approach to the analysis of the Americans with Disabilities Act (ADA) accessibility. In addition, special consideration will need to be given on how to adequately analyze “Alternative Design Streets.” Alternative Design Streets, described in detail below, typically do not have sidewalks and do not meet the current pedestrian LOS D standard.

Alternative Design Streets

Several street facilities analyzed for pedestrian LOS include “Alternative Design Streets,” which is a designation given to certain streets within the City of Carlsbad in 2000 through the recommendations of the Street and Sidewalk Policy Committee.

Regarding Alternative Design Streets, Carlsbad Municipal Code (CMC) Section 18.40.100 states: “The street fronting on the subject property has already been improved to the maximum feasible and desirable state, recognizing there are some such streets which may have less than standard improvements when necessary to preserve the character of the neighborhood.”

Maintaining these streets in their narrow, less formal configuration was deemed to be important to preserve the character of the existing neighborhoods. Typically, these streets do not have sidewalks, curbs or gutters; are narrower than standard streets; allow off-pavement parking and generally have a rural appearance. Due to the lack of sidewalks, these streets do not meet the current pedestrian MMLOS D standard.

In 2015, when the City Council amended its circulation performance standard to include consideration of non-vehicular modes of transportation, the City did not intend to apply the standard retroactively, i.e., in the absence of new development. Rather, the intent was to require implementation “concurrent” with new development, as contemplated under CMC Section 21.90.045. The City did not intend to initiate a City-wide public works project to fix existing non-vehicular deficiencies or to halt all development until every pedestrian path and bike facility met the City’s new MMLOS standards.

Similar approaches were utilized for the City’s other CFIP performance standards. For example, the City’s 1986 CFIP explained, “The preceding map highlights those areas of the city which will be required to comply with the open space performance standard. The other areas of the city are already developed.” (See also *Friends of H Street v. City of Sacramento* (1993) 20 Cal.App.4th 152 [statutory requirements addressed future growth and did not require local governments to bring existing neighborhoods and streets into compliance with general plan.])

Transit MMLOS

All segments meet the MMLOS D standard. Specifically, the existence of a City Council-adopted citywide TDM ordinance provides adequate scoring to meet the criteria for the MMLOS D standard for transit. Along with the refinement of the pedestrian and bicycle MMLOS methodologies and in coordination with the Traffic and Mobility Commission, staff will review the transit MMLOS methodology to determine if it is the best approach to monitor and report the level of service related to transit and refine or change the methodology as necessary. Results of the refined MMLOS Tool, including for transit, will be reported to City Council later this year.

G. Buildout Facility Adequacy Analysis

The 2015 General Plan EIR evaluated how buildout of the land uses planned by the General Plan will impact the vehicle, pedestrian, bicycle and transit levels of service, and identified that additional circulation facilities may need to be constructed to meet the GMP performance standard at buildout. The following summary provides the results of that evaluation:

Vehicular Level of Service at Buildout

- Additional future road segments (extensions of College Boulevard, Poinsettia Lane and Camino Junipero) needed to accommodate the city's future growth were identified as part of the General Plan update. The General Plan Mobility Element identifies these needed future road segments as "Planned City of Carlsbad Street Capacity Improvements."
- The General Plan also called out the need to implement the scheduled Interstate-5 North Coast Project and Interstate-5/Interstate-78 Interchange Improvement Project that are needed to accommodate future growth.
- The CIP funds projects that will upgrade the LOS including several roadway widenings along El Camino Real near College Boulevard (northbound), La Costa Avenue (southbound) and Cassia Road (northbound). There is also a CIP project to add a second southbound through lane and dedicated right lane on southbound College Boulevard that is expected to address the deficiency reported on College Boulevard (southbound) from Aston Avenue to Palomar Airport Road.
- The General Plan EIR identifies TDM and TSM as mitigation measures for roadway sections that have been determined to be LOS-exempt.

H. Next Steps

Carlsbad Municipal Code Section 21.90.130 (c) states:

If at any time it appears to the satisfaction of the city manager that facilities or improvements within a facilities management zone or zones are inadequate to accommodate any further development within that zone or that the performance standards adopted pursuant to Section 21.90.100 are not being met, he or she shall immediately report the deficiency to the council. If the council determines that a deficiency exists, then no further building or development permits shall be issued within the affected zone or zones and development shall cease until an amendment to the city-wide facilities and improvements plan or applicable local facilities management plan which addresses the deficiency is approved by the city council and the performance standard is met.

A staff report will be prepared on this monitoring report and its results will include a list identifying vehicular facilities that: (a) are subject to the LOS standard, (b) do not meet the appropriate LOS D standard, and (c):

- a list of projects that could be implemented to meet the Vehicle LOS D standard
- a list of the street facilities that meet the conditions for an exemption
- a request that City Council determine which of these facilities are deficient and which ones should be exempted
- recommendations to address outstanding deficiencies
- recommendations regarding exempt street facilities that currently meet the LOS standard.

Staff will initiate a task order with a consultant to update and revise the pedestrian, bicycle and transit MMLOS methodologies. Staff will gather stakeholder feedback on the MMLOS Tool, including from the Traffic and Mobility Commission, to guide this process. Based on the feedback received, staff will update the MMLOS methodologies accordingly and present to the Traffic and Mobility Commission for a recommendation to City Council for approval. Once City Council has approved the refined MMLOS Tool, staff will apply it to the city streets monitored in FY 2018-19 and present the MMLOS results to City Council later this year.

FIRE

A. Performance Standard

No more than 1,500 dwelling units outside of a five-minute response time.

B. FY 2018-19 Facility Adequacy Analysis

The city's fire facilities are in compliance with the Growth Management performance standard. There are no more than 1,500 dwelling units outside of a five-minute response distance from any of the city's six fire stations.

The intent of the growth management standard, as applied to fire facilities, is to establish the distribution of station locations, based upon response distances. At the time the Growth Management Plan was developed, scientific fire behavior information and recognized best practices supported the position that a response time of five minutes would result in effective fire incident intervention. Because the Growth Management Plan provides no other trigger mechanism for the installation of additional fire stations, it follows that up to 1,500 dwelling units could exist outside the five-minute reach of the closest fire station for an indeterminate length of time without violating the growth management standard. The five-minute response distance measure was selected exclusively as a means of geographically positioning fire stations throughout the city. Therefore, the standard is applied as a means of measuring compliance with locating fire facilities in accordance with the Growth Management Plan, not the performance of the Fire Department in meeting service responsibilities.

C. Buildout Facility Adequacy Analysis

At buildout, the established threshold of more than 1,500 units that exist outside of a five minute response distance will not be exceeded for any of the fire stations.

To determine if fire facilities comply with the Growth Management Plan at buildout, the city's Geographic Information System Department (GIS) created a map based upon the following information:

- Existing fire station locations
- Anticipated future development
- 2.5-mile road distance from each of the six fire stations (five minute response time equates to road driving distance of 2.5 miles);
- All planned, major roadway arterials; and
- The number of dwelling units projected at buildout that will be located outside of the 2.5-mile road (5 minute) distance from each fire station.

The GIS map, based upon the above-noted assumptions, revealed the following findings:

Fire Station Number	Total number of dwelling units outside of five minutes
1,3 & 4 (aggregated)	1,227
2	902
5	392
6	1,185

As noted above, the GIS map analysis revealed that at build out, the city's existing and planned fire facilities will meet the growth management performance standard (i.e. the total number of dwelling units that will exist outside of a five-minute response distance from the nearest fire station will not exceed the threshold of 1,500 units).

OPEN SPACE

A. Performance Standard

Fifteen percent of the total land area in the Local Facility Management Zone (LFMZ) exclusive of environmentally constrained non-developable land must be set aside for permanent open space and must be available concurrent with development.

B. FY 2018-19 Facility Adequacy Analysis

To date, adequate open space has been provided to meet the performance standard.

Open space to meet the performance standard is provided concurrent with approval of development projects. The location of performance standard open space must be indicated during project-specific analysis. It must be in addition to any constrained areas, such as protected wildlife habitat or slopes greater than 40%. At the time the Citywide Facilities and Improvements Plan was adopted (1986), the LFMZ's were divided into: a) those that were considered already developed or in compliance with the growth management open space performance standard, and b) those that still needed to comply with the standard.

- a) In 1986 at the time of the CFIP adoption, LFMZs 1 through 10, and 16 were considered to be already developed or in compliance with the open space performance standard¹².

In addition, Ordinance No. 9808 provided exemptions from the Growth Management Plan and all of the performance standards for a number of projects that were approved and/or in process at that time. These projects are also listed in a memo to the City Manager on June 10, 1986.

In the case of LFMZ 9, the zone boundaries coincide with the project boundaries of the Batiquitos Lagoon Educational Park Master Plan (MP 175, approved 10-22-1985), which was exempted from growth management by Section 21.90.030(g) of Ordinance No. 9808 if certain restrictions were met, including a dedication of open space¹³. In anticipation of future construction, the developer of MP 175 dedicated the necessary open space properties, completing that portion of the requirement for 21.90.030(g)¹⁴. Although MP 175 ultimately was never constructed, these open space dedications were maintained and became part of the open space for the project that followed,

¹² City Council Resolution No. 8797

¹³ The restriction for open space required that "Prior to approval of the final map for Phase I the master plan developer shall have agreed to participate in the restoration of a significant lagoon and wetland resource area and made any dedications of property necessary to accomplish the restoration".

¹⁴ City Council Resolution No. 8666 contained an agreement between the city and the developer for the open space property dedications noted above.

the Poinsettia Shores Master Plan (MP 175(D), approved 01-18-94), and are the basis for how MP 175(D) and LFMZ 9 complied with the growth management open space performance standard¹⁵.

- b) The remaining LFMZs were required to comply with the performance standard. Subsequent to the adoption of the CFIP, LFMZs 11-15, 17-21, and 23-25 have provided adequate open space to meet the performance standard concurrent with development.

LFMZ 22 has not yet met the performance standard, and as future development occurs, additional open space will be required.

C. Buildout Facility Adequacy Analysis

As discussed above, all LFMZs, except for Zone 22, have met the growth management open space performance standard. Future projects in LFMZ 22 must provide open space in compliance with the performance standard.

¹⁵ Poinsettia Shores Master Plan, pages 4 and 22. The master plan states “the Growth Management Open Space standard is already met for Zone 9 through the earlier preservation of the sensitive bluffs and slopes”.

SCHOOLS

A. Performance Standard

School capacity to meet projected enrollment within the Local Facility Management Zone (LFMZ) as determined by the appropriate school district must be provided prior to projected occupancy.

B. FY 2018-19 Facility Adequacy Analysis

Currently, school capacity is in compliance with the growth management school performance standard (see below). The city is served by four school districts as listed below:

1. Carlsbad Unified School District (CUSD)

According to both the district's Long Range Facility Master Plan (approved Jan. 17, 2018) and CUSD staff, the district can accommodate both the current enrollment levels and expected future growth. The master plan indicates that the district has plans for accommodating projected student enrollment levels through the next 15-20 years, which includes proposals for renovating and replacing a variety of school facilities.

2. San Marcos Unified School District (SMUSD)

SMUSD staff indicated that the schools serving Carlsbad are currently at maximum capacity, but that will-serve letters are still being issued by SMUSD for proposed developments in the part of Carlsbad that is served by SMUSD schools, and that the schools serving Carlsbad could accommodate the expected future growth within this area. SMUSD completed construction in August 2019 of the La Costa Meadows Elementary School Reconstruction Project, which reconstructed and modernized the school, and also increased student capacity by 80 seats.

3. Encinitas Union Elementary School District

According to student enrollment and school capacity information provided by the school district, sufficient student capacity exists for the 2018-19 school year for schools serving Carlsbad.

4. San Dieguito Union High School District

According to student enrollment and school capacity information provided by the school district, sufficient student capacity exists for the 2018-19 school year for schools serving Carlsbad.

C. Buildout Facility Adequacy Analysis

Based on Chapter 3.11 of the 2015 General Plan EIR, for all school districts at all grade levels, capacity is expected to be sufficient for the buildout student population with no need for additional schools.

SEWER COLLECTION SERVICES

A. Performance Standard

Trunk-line capacity to meet demand, as determined by the appropriate sewer districts, must be provided concurrent with development.

B. FY 2018-19 Facility Adequacy Analysis

Sewer improvements are provided on a project by project basis concurrent with development. Currently, the City of Carlsbad’s sewer service area pipelines comply with the growth management performance standard. The sewer agencies that provide sewer collection systems within the city include: Carlsbad, Leucadia Wastewater District and Vallecitos Water District. Each agency indicates that they currently have adequate conveyance capacity in place to meet Carlsbad’s sewer collection demands.

The City of Carlsbad is served by the following four major interceptor systems:

Interceptor System	Sewer Districts Served	Carlsbad Capacity Rights¹⁶
<i>Vista/Carlsbad Interceptor</i>	City of Carlsbad & City of Vista	Ranges from 1.0 MGD up to 41.8 MGD (3.3% to 50%)
<i>Buena Interceptor</i>	City of Carlsbad & Buena Sanitation District	Ranges from 1.2 MGD up to 3.6 MGD (18% to 35%)
<i>Vallecitos Interceptor</i>	City of Carlsbad, Buena Sanitation District & Vallecitos Water District	5 MGD
<i>Occidental Sewer¹⁷</i>	City of Carlsbad, City of Encinitas & Leucadia Waste Water District	8.5 MGD (40%)
<i>North Agua Hedionda Interceptor</i>	City of Carlsbad	6 MGD (100%)
<i>South Agua Hedionda Interceptor</i>	City of Carlsbad	4.7 MGD (100%)

¹⁶ Million gallons per day (MGD)

¹⁷ The downstream sections (NB8 and NB9) of the North Batiquitos Sewer, often referred to as Ponto Sewer and originally termed the Occidental Sewer

For both the Vista/Carlsbad Interceptor and the Buena Interceptor, the percentage of Carlsbad capacity rights increases in the downstream reaches of each interceptor system (3.3% in the upstream reaches as they enter the Carlsbad service area and up to 35% or 50% in the downstream reaches for Buena Interceptor and Vista/Carlsbad Interceptor, respectively as they enter the Encina Water Pollution Control Facility).

C. Buildout Facility Adequacy Analysis

The City of Carlsbad 2019 Sewer Master Plan Update evaluated the sewer infrastructure needs of the Carlsbad sewer service area and identified facilities required to accommodate future sewer flows at buildout. The master plan identified the Vista/Carlsbad Interceptor and Buena Interceptor as requiring improvements to accommodate build-out demand (see below). Sewer trunk main adequacy is estimated by comparing wastewater flow projections to the capacity of the sewer system using a computer model. Annual sewer flow measurements are used to assess actual flows and to evaluate capacity in the sewers.

Collection system improvements to meet buildout conditions are identified at three locations: Faraday Avenue, Poinsettia Avenue and Kelly Drive. These projects are programmed in the CIP.

The adequacy of major sewer facilities for buildout conditions is summarized as follows:

Vista/Carlsbad Interceptor: The City's 2019 Sewer Master Plan Update indicates that portions of the V/C Interceptor do not satisfy buildout system flows. Hydraulic model results indicate that the 36-inch diameter gravity mains of Reach VC-3 are insufficient to convey buildout flows. Most of reach VC-3 consists of 36-inch diameter gravity main and is scheduled for upsizing to 42 inches as a future CIP project to meet buildout flows.

Buena Interceptor: The Buena Interceptor is currently shared by Vista and Carlsbad and, although the city's wastewater flows are not projected to exceed its capacity rights, the combined flows of Buena Sanitation District and City of Carlsbad during peak wet weather periods exceed the design capacity criterion. As a result, Buena Sanitation District is constructing a parallel trunk sewer which will allow flow from Buena Sanitation District to be diverted to the parallel trunk sewer. Once completed in 2020, the City of Carlsbad will be the only agency with flows remaining in the existing Buena Interceptor and peak wet weather flow at buildout conditions would reach 7.3 mgd or approximately 69 percent of pipe capacity.

WATER DISTRIBUTION SERVICES

A. Performance Standard

Line capacity to meet demand as determined by the appropriate water district must be provided concurrent with development. A minimum of 10-day average storage capacity must be provided prior to any development.

B. FY 2018-19 Facility Adequacy Analysis

Carlsbad's water distribution is provided by three agencies including the Carlsbad Municipal Water District (CMWD) serving 32.32 square miles (82.7 percent of the city), Olivenhain Municipal Water District (OMWD) serving 5.28 square miles (13.5 percent of the city), and Vallecitos Water District (VWD) serving 1.48 square miles (3.8 percent of the city). These districts indicate that they have adequate capacity to meet the growth management performance standard.

Water service demand requirements are estimated using a computer model to simulate two water distribution scenarios: 1) maximum day demand plus a fire event; 2) peak hour demand. This computer model was calibrated using actual flow measurements collected in the field to verify it sufficiently represents the actual water system.

Existing (2014 baseline year) and future (2040) daily demand and storage requirements for CMWD, which is a subsidiary district of the City of Carlsbad, from the CMWD 2019 Potable Water Master Plan are shown below:

Water Demand	Flow Rate ¹⁸
Existing Maximum Day Demand	24.1 MGD
Future Maximum Day Demand	29.6 MGD
Water Storage	Volume ¹⁹
Existing Storage Requirement	35.4 MG
Existing Storage Capacity	47.5 MG (excluding Maerkle Dam storage)

Based on the water model analysis prepared for the CMWD 2019 Potable Water Master Plan, future pipelines and water system facilities were identified to ensure water system improvements are constructed to accommodate future customers. In addition, funds for the construction of future facilities are included in the Capital Improvement Program. Therefore, the future water infrastructure is programmed to be in place at the time of need to ensure compliance with the performance standard.

¹⁸ Million gallons per day (MGD)

¹⁹ Million gallons (MG)

Within the CMWD service area the existing average daily potable water demand for the previous five years is shown below:

Fiscal Year	MGD
2014-15	13.6
2015-16	11.4
2016-17	12.1
2017-18	13.4
2018-19	13.1

Compared to the average daily flow of 18.2 MGD in FY 2007-08, the lower water demand is a result of (1) implementing a new tiered water rate structure to encourage water conservation, (2) in 2009, a campaign was initiated to reduce customer consumption by the wholesale water agencies, (3) the persisting drought has forced voluntary and mandatory conservation measures in 2015, and (4) beginning in 2008 an expansion of CMWD’s recycled water system lowered potable water consumption. Water conservation by CMWD customers has resulted in an overall reduction in per capita consumption.

The 10-day storage requirement is a city growth management performance standard and a planning criterion to accommodate pipeline maintenance recommended by the San Diego County Water Authority. To meet the requirement, CMWD needs 131 MG of storage capacity based on the average water demand identified in the 2019 Potable Water Master Plan and 187 MG for buildout conditions. CMWD has a total storage capacity of 242.5 MG which consists of 195 MG of storage capacity at Maerle Dam and 47.5 MG of storage capacity in various storage tanks throughout the distribution system.

CMWD also has interagency agreements with OMWD, VWD and Oceanside to provide additional supply if needed. In 2004, the OMWD completed construction of a water treatment facility at the San Diego County Water Authority Emergency Storage Reservoir, which provides the storage necessary to meet the 10-day storage criterion for OMWD. VWD’s average day demand is 14.8 MGD with an existing storage capacity of 120.5 MG. Through interagency sharing arrangements, VWD can obtain additional water supplies to meet a 10-day restriction on imported water supply.

C. Buildout Facility Adequacy Analysis

As proposed land development projects are reviewed by the city, the Water Master Plans from CMWD, OMWD, and VWD are consulted to check pipeline sizes and facility capacities to verify adequacy to support the water needs of the project and city. To comply with water master plan requirements, land development projects may be required to construct a master plan water project concurrent with construction of the development project.

The CMWD 2019 Potable Water Master Plan identifies facilities necessary to meet water demands for buildout within its service area. These consist of new pipelines and pipeline rehabilitation projects that are programmed into the CIP, some of which may be constructed concurrently with new development projects in the northeastern portion of the city.

The 2019 Potable Water Master Plan identified that no additional storage is required to meet the future storage requirements, due in part to conservation measures and expansion of CMWD's recycled water system. One pump station is identified as having a 12% capacity deficiency for buildout which can be addressed through the CIP via pump station improvements.