



CARLSBAD TOMORROW:
GROWTH MANAGEMENT CITIZENS COMMITTEE

Agenda

June 23, 2022, 5 p.m.
Special Meeting

Faraday Center
1635 Faraday Ave.
Carlsbad, CA 92008

Welcome to Carlsbad Tomorrow: Growth Management Citizens Committee Meeting

We welcome your interest and involvement in the city's legislative process. This agenda includes information about topics coming before the Growth Management Citizens Committee and the action recommended by city staff. You can read about each topic in the staff reports, which are available on the city website.

How to watch

In Person



Growth Management Citizen Committee Meetings take place at the Faraday Center, 1635 Faraday Ave.

Online



Watch the livestream and replay past meetings on the city website, carlsbadca.gov/residents/communication/city-tv-channel

How to participate

If you would like to provide comments to the Growth Management Citizens Committee, please:

- Fill out a speaker request form.
 - Submit the form to staff before the item begins.
 - When it's your turn, staff will call your name and invite you to the podium.
 - Speakers have three minutes, unless the presiding officer (usually the chair) changes that time.
 - You may not give your time to another person, but groups can select a single speaker as long as three other members of your group are present. Group representatives have 10 minutes unless that time is changed by the presiding officer.
-
- **In writing:** Email comments to committee@carlsbadca.gov Comments received by 2:30 p.m. the day of the meeting will be shared with the committee prior to the meeting. When e-mailing comments, if the comment relates to a specific item on the agenda, please identify in the subject line the agenda item to which your comments relate. All comments received will be included as part of the official record. **Written comments will not be read out loud.**

Reasonable accommodations

Persons with a disability may request an agenda packet in appropriate alternative formats as require by the Americans with Disabilities Act of 1990. Reasonable accommodations and auxiliary aids will be provided to effectively allow participation in the meeting. Please contact the City Manager's Office at 760-434-2821 (voice), 711 (free relay service for TTY users), 760-720-9461 (fax) or manager@carlsbadca.gov by noon on the Thursday before the meeting to make arrangements.

CALL TO ORDER:

ROLL CALL:

APPROVAL OF MINUTES: *Review and approve minutes from the May 26, 2022 meeting.*

PUBLIC COMMENT: *Members of the public are invited to comment on items both on and not on the agenda. Please treat others with courtesy, civility, and respect. In conformance with the Brown Act, public comment is provided so members of the public may participate in the meeting by submitting comments as provided on the front page of this agenda. The Growth Management Citizens Committee will receive comments for 15 minutes at the beginning of the meeting. As needed, public comments will continue at the end of the meeting. In conformance with the Brown Act, no action can occur on non-agenda public comment items.*

WELCOME & INTRODUCTIONS: *Open meeting and welcome attendees. Review purpose and charge for the Committee. Review agenda and meeting format. Allow for any introductions for those not present at previous meetings – staff and committee. Update on City Council Action to amend the Committee Charter.*

DISCUSSION ITEMS:

1. COMMITTEE BUSINESS – Collaborate and discuss the following topics:

- **Schools Performance Standard.** Receive a presentation from city staff on the existing standard and how it is implemented in the context of school districts, growth and the land use planning framework. Group discussion on the standard: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Eric Lardy, Principal Planner)
- **Drainage Performance Standard.** Receive a presentation from city staff on the existing standard and relationship to the city's Drainage Master Plan. Group discussion on the standard: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Hosseini Ajideh, Public Works)
- **Wastewater Treatment Performance Standard.** Receive a presentation from city staff on the existing standard and relationship to approved plans. Group discussion on the standard: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Dave Padilla, Carlsbad Municipal Water District)
- **Sewer Collection & Water Distribution Performance Standards.** Receive a presentation from city staff on existing standards in the context of infrastructure. Group discussion on the standards: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Dave Padilla, Carlsbad Municipal Water District)

COMMITTEE MEMBER REQUESTS FOR FUTURE AGENDA ITEMS: *Highlight proposed focus for next meeting and invite Committee member suggestions for topics or presentations to consider in upcoming meetings.*

PUBLIC COMMENT:

Continuation of the public comments. This portion of the agenda is set aside for continuation of public comments, if necessary, due to exceeding the total time allotted in the first public comments section. Any remaining public comments shall be read into the record.

ADJOURN: *Closing comments and adjourn meeting.*

NEXT MEETING:

Thursday, July 28, 2022, 5 p.m.

Minutes

May 26, 2022

CALL TO ORDER: 5 p.m.

ROLL CALL:

Present:

Primary – Jeff Segall, Eric Larson, Mike Howes, Mary Ryan, Frank Caraglio, Harry Peacock, Annika Jimenez, Gita Nassiri, Fred Briggs, Chad Majer, Amy Allemann, Steve Linke, Nelson Ross

Alternate – Ron Withall, Patrick Goyarts, Jan Neff-Sinclair, Casey Carstairs, Don Christiansen, Thierry Ibri, Angela O'Hara, Lisa Stark, Allen Manzano, Art Larson, Kevin Sabellico, William Fowler

Absent:

Primary – Scott White, Stephen "Hap" L'Heureux, Frances Schnall, John Nguyen-Cleary, William Sheffler, Joseph Stine

Alternate – Terence Green, Matthew Reese, Nora Jimenez George, Jamie Latiano Jacobs, Patricia Mehan, Marissa Steketee

APPROVAL OF MINUTES:

Minor modifications were made to the minutes. Minutes were approved by a motion by Jeff Segall, seconded by and Steve Linke, to approve the April 28, 2022 minutes as amended.

PUBLIC COMMENTS:

Three public comments were received.

1. Civic Center Location and Growth Management Plan Decisions –

Mr. Gary Nessim stated he came to promote a future Civic Center remain at its current location (1200 Carlsbad Village Drive). He also requested that the reasons behind Growth Management Citizens Committee decisions be laid out in the plan.

2. Local Solar Projects –

Dr. Phil Watts requested that the committee identify public and private lands for local solar projects through public and private partnerships as it would provide the city with large financial benefits.

3. Growth Management Performance Standards Review –

Ms. Diane Nygaard requested that the growth management performance standards be reviewed, as many have not yet been met or are outdated, particularly with standards pertaining to traffic, parks and open space.

WELCOME AND INTRODUCTION:

Meeting opened with a welcome to attendees from Committee Chair Eric Larson, who also asked that questions be held until after each presentation is completed.

DISCUSSION ITEMS:**1. COMMITTEE BUSINESS**

- **City of Carlsbad Budget.** Finance Director Zach Korach provided a presentation on the city budget and financing. Committee members asked follow up questions to clarify items from the presentation and request additional information.
- **Financing & Growth Management.** Nancy Bragado, owner of Bragado Planning, provided a presentation regarding how jurisdictions approach growth management, the basis for public facility demand forecasts and approaches to allocating fiscal costs of public facilities. Committee members asked questions to clarify the information presented and request additional details.
- **City Administration Facilities Performance Standard.** Principal Planner Eric Lardy provided a presentation on current City Administration Facilities Performance Standard. Group discussion followed, which centered around the following two questions: Is this standard important to quality of life in Carlsbad? Should the standard be re-evaluated in any way?

The following key thoughts and considerations regarding the City Administration Facilities Performance Standard were captured:

- Calculating the need by square footage seems antiquated
- Consider inquiring with employees on their needs
- Should standard combine individual office and common work area facilities – or divide amount of common work facilities to account for individual or home offices?
- What is the future of the workforce? Department by department personnel projections?
- Calculating standard by square footage should be reconsidered
- Look into how our administration square foot per person amount compares to other cities
- Consider an alternative to city population for the metric
- Consider employee satisfaction in current facilities
- Consider upgrade to and condition of current facilities
- Continue to monitor standard goals or note when complete
- Look into city Civic Center versus admin facility – did it fulfill the “why”?
- Consider using the number of employees as a metric
- Look into other business practices, not just cities
- Consider whether business practices are being consolidated and any related effects
- If uses are consolidated, will new property become available?
- Could administrative and community facilities be combined?
- Standard should focus on efficiency - does it do that?
- How does this standard work with infill?
- Find a better measure for this standard other than square footage such as efficiency, satisfaction, etc.
- What are the impacts if the state will no longer allow developer impact fees?
- Consider dropping this standard
- **Additional Growth Management Topics.** Susan Harden, Facilitator, shared the schedule for the next few meetings to highlight the standards and topics that are planned to be discussed. She noted also that the committee had brainstormed several topics they might wish to explore as performance standards or consider how they may contribute to existing standards. Regarding these topics, Ms. Harden provided a brief presentation to share what work has been or is being done on behalf of the city to address the topics. She noted that links to these resources (plans,

studies, reports) will be provided to the committee so that they may further think about the topics. The committee will discuss and prioritize whether and/or how to address these topics as part of the growth management plan at a future meeting.

COMMITTEE MEMBER REQUESTS FOR FUTURE AGENDA ITEMS:

Future agenda item requests requested for consideration by the committee include the following:

- Nexus creation
- Prop H restriction
- Prioritization of additional standard topics

Committee suggestions identified for future possible discussion or consideration:


- Adding all 11 performance standards an ongoing meeting reference
- Prepare some sort of pert chart of the committee process with feedback loops
- Consider use of subcommittees
- Consider how many topics are reasonable to be discussed during the process

PUBLIC COMMENT:

None

ADJOURNMENT:

Chair Larson adjourned the duly noticed meeting at 7:20 p.m.


Bailey Warren - Minutes Clerk



GROWTH MANAGEMENT CITIZENS COMMITTEE

Staff Report

Meeting Date: June 23, 2022

To: Growth Management Citizens Committee

Staff Contact: Eric Lardy, Principal Planner
Eric.Lardy@carlsbadca.gov

Sarah Lemons, Communication & Engagement
Sarah.Lemons@carlsbadca.gov

Subject Committee Business

Recommended Action

Receive presentations from city staff and consultants and discuss the following topics:

- **Schools Performance Standard.** Receive a presentation from city staff on the existing standard and how it is implemented in the context of school districts, growth and the land use planning framework. Group discussion on the standard: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Eric Lardy, Principal Planner) (Exhibit 1)
- **Drainage Performance Standard.** Receive a presentation from city staff on the existing standard and relationship to the city's Drainage Master Plan. Group discussion on the standard: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Hossein Ajideh, Public Works) (Exhibit 2)
- **Wastewater Treatment Performance Standard.** Receive a presentation from city staff on the existing standard and relationship to approved plans. Group discussion on the standard: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Dave Padilla, Carlsbad Municipal Water District) (Exhibit 3)
- **Sewer Collection & Water Distribution Performance Standards.** Receive a presentation from city staff on the existing standards in the context of infrastructure.... Group discussion on the standards: Is this standard important to quality of life in Carlsbad? Should this standard be re-evaluated in any way? (Dave Padilla, Carlsbad Municipal Water District) (Exhibits 4 & 5)

Fiscal Analysis

This action has no fiscal impact.

Environmental Evaluation

In keeping with California Public Resources Code Section 21065, this action does not constitute a "project" within the meaning of the California Environmental Quality Act in that it has no potential to cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. Therefore, it does not require environmental review.

Public Notification and Outreach

This item was noticed in keeping with the Ralph M. Brown Act and it was available for public viewing and review at least 72 hours before the scheduled meeting date.

Exhibits

1. Schools Performance Standard
2. Drainage Performance Standard
3. Wastewater Treatment Performance Standard
4. Sewer Collection Performance Standard
5. Waster Distribution Performance Standard

CARLSBAD TOMORROW - GROWTH MANAGEMENT CITIZENS COMMITTEE

STAFF REPORT – Item 1; Exhibit 1

JUNE 23, 2022

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.

BACKGROUND

The performance standard for schools was established in 1986 as part of the Citywide Improvements and Facilities Plan. When development is proposed, the applicable school district must confirm that they can meet projected enrollment numbers.

Other than verifying that there is school capacity to serve the projected enrollment, the city has limited control over construction of school facilities. There are four school districts serving Carlsbad, as described below, and each school district controls the production of public school facilities in their district, including the size, number, and location of these facilities. See the “other standards and considerations” section below for more information about the authority of local governments and school districts related to siting and development of school facilities.

FACILITY PERFORMANCE ANALYSIS

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

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.

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 2020-21 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 2020-21 school year for schools serving Carlsbad.

Buildout Facility Adequacy Analysis

Based on the 2015 General Plan Environmental Impact Report (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.

Projected demand for school facilities is based on two principal factors—the increase in housing units resulting from buildout of the General Plan and ongoing demographic changes that impact the average number of students in each household. The General Plan EIR utilized San Diego Association of Governments (SANDAG) population projections and determined that, while the population of Carlsbad and housing units are projected to grow, the student population is projected to decline during buildout of the General Plan (population aged 5 to 9 years old is likely to decline by 0.2 percent; population aged 15 to 17 is likely to decline up to 14.5 percent; and population aged 10 to 14 is projected to remain relatively stable, with an increase of 0.5 percent).

Based on the housing units planned by the General Plan and declining student population, school capacity is expected to be sufficient for the buildout student population with no need for additional schools. If the city amends the General Plan to plan for more housing units (e.g., per the Housing Element), the impact of the increased household/student population on school capacity will be evaluated.

HOW SCHOOLS ARE FUNDED

California public schools receive funding from local, state, and federal sources. State funding in the form of Proposition 98 is generally the largest funding source. Proposition 98 was passed in 1988 and guarantees a minimum level of funding for K-adult education and community colleges. In addition to Proposition 98, Carlsbad voters in 2006, passed Proposition P which was a General Obligation Bond Measure for \$198 million to be used for renovations, modernization, and new construction for the Carlsbad Unified School District. The State matched \$47 million in funding. In 2010 the San Marcos Unified School District passed Proposition K which was a General Obligation Bond Measure for \$287 million for renovations, modernization, and new construction of school facilities.

OTHER STANDARDS AND CONSIDERATIONS

As mentioned above, the city has limited control over the construction of school facilities. Local governments and school districts have separate but related statutory requirements and authority.

School districts are required to comply with city/county zoning ordinances if the city/county has an adopted general plan and the ordinances make provisions for the location of public schools, as Carlsbad's General Plan and Zoning Ordinance do. Nevertheless, a school district governing board that has complied with the state's notification requirements may, by a two-thirds vote, "render a city or county zoning ordinance inapplicable to a proposed use of property by the school district" for classroom facilities (Gov. Code § 53094) pursuant to Attorney General Opinion No. 99-401, "even though such use would not be in conformity with the general plan" (82 Ops.Cal.Atty.Gen. 135). However, school districts must comply with city and county ordinances regulating improvements in drainage, roads, and on-site grading plans (Gov. Code § 53097). See https://opr.ca.gov/docs/OPR_C4_final.pdf, page 55 for more information.

In addition, the city's Zoning Ordinance ([Chapter 21.55](#)) states that when establishing an interim method of providing classroom facilities in response to overcrowding, the city may require the dedication of land, the payment of fees or both as a condition of the approval of a residential development.

When a development project is proposed, to ensure compliance with the city's "School" facility standard, the project is evaluated to ensure school capacity will remain sufficient to serve the project and the applicable Local Facility Management Zone. The California Environmental Quality Act (CEQA) is one tool used to evaluate a project's impact on school facilities. CEQA requires evaluation of a project's impacts on public services, including schools, to determine if the project would impact service ratios or standards for school facilities that would result in an environmental impact (e.g., the need to construct a new school to increase school capacity could impact the environment).

CARLSBAD TOMORROW - GROWTH MANAGEMENT CITIZENS COMMITTEE
STAFF REPORT – Item 1; Exhibit 2
JUNE 23, 2022

DRAINAGE FACILITIES

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

BACKGROUND

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 construction of appropriate drainage facilities as development plans are finalized and approved.

The original City of Carlsbad Drainage Master Plan, or DMP, was adopted in 1980 with the goal of assessing the performance of existing storm drain infrastructure, identifying anticipated drainage infrastructure needs 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. The current DMP was approved by the City Council in 2008 with Resolution No. 2008-230.

The master planned drainage facilities are identified in the city's 2008 Drainage Master Plan, which assesses the performance of existing drainage facilities and identifies anticipated improvements. The update identified 34 drainage projects across the four drainage basins within the city: Buena Vista Creek, Agua Hedionda Creek, Encinas Creek and San Marcos Creek. At the present, the city is updating the 2008 Drainage Master Plan. The DMP update is expected to be adopted by the City Council in late 2022.

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

FACILITY PERFORMANCE ANALYSIS

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

Planning-level analyses performed as part of the 2008 Drainage Master Plan show that the Agua Hedionda and Calavera Creek channels located east of El Camino Real within the residential community of Rancho Carlsbad do not convey the 100-year flood event within their channel banks. As a result, waters from a 100-year flood event have the potential to encroach into the community. Development projects located within Local Facility Management Plan Zones 5, 7, 14, 15, 16, 18 and 24 that drain to Agua Hedionda Creek or Calavera Creek must comply with the following conditions to maintain compliance with the drainage performance standard:

1. Payment of the Planned Local Drainage Area (PLDA) fee; and

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.

BUILDOUT FACILITY ADEQUACY ANALYSIS

The 2008 Drainage Master Plan proposes the construction of new facilities to reduce the flooding risk from potential storm events. Construction of the proposed drainage facilities will provide the backbone system to maintain the drainage performance standard through buildout of the city.

HOW THE CITY FUNDS DRAINAGE FACILITIES

The PLDA fee program was established to finance the construction of the drainage facilities identified in the 2008 Drainage Master Plan. These funds are independently financed through impact fees to create a restricted cash reserve for the sole use of implementing DMP projects within each respective basin.

The PLDA fees are used to fund projects either through the city's CIP or to reimburse private developers that construct master planned facilities. The current update to the Drainage Master Plan will address funding availability for the construction of future drainage facilities. The estimated costs for these facilities and the allocation of PLDA funds are included in the city's annual Capital Improvement Program.

The DMP update effort will modify the PLDA fee schedule based on current economic conditions in conjunction with addition of new projects and deletion of unnecessary or obsolete projects.

Rehabilitation or replacement of existing drainage facilities are funded by Infrastructure Replacement Funds. These funds are used to design and construct drainage facilities within the Storm Drain Condition Assessment Program and the Citywide Storm Drain Rehabilitation and Repair Program.

OTHER STANDARDS AND CONSIDERATIONS

Staff also use the San Diego County Hydrology Manual and the San Diego County Hydraulic Design Manual to address drainage issues not covered within the City of Carlsbad's Engineering Design Standards. In addition, staff references the FEMA Flood Insurance Study and Flood Insurance Rate Maps when planning and designing projects within major waterways traversing through the city limits.

CARLSBAD TOMORROW - GROWTH MANAGEMENT CITIZENS COMMITTEE
STAFF REPORT – Item 1; Exhibit 3
JUNE 23, 2022

WASTEWATER TREATMENT

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

BACKGROUND

The origin of the wastewater treatment performance standard is the adoption of the city's Growth Management Program in 1986, as part of the Citywide Facilities and Improvements Plan. Implementation of the wastewater treatment standard has occurred during the preparation of Local Facilities Management Plans for each of the 25 Local Facilities Management Zones, and adequacy analyses during individual development project consideration. The city's 1987 Master Plan of Sewerage was revised for consistency with the zone boundaries and buildout projections based on General Plan criteria for land use, development density and population projections to evaluate conformance with the water treatment performance standard. More recently, this approach is implemented in the city's 2019 Sewer Master Plan Update and the Encina Wastewater Authority 2040 Master Plan, based on revised sewer flow generation factors derived from flow monitoring data throughout the Carlsbad sewer service area.

FACILITY PERFORMANCE ANALYSIS

The Encina Water Pollution Control Facility (EWPCF) currently provides capacity in excess of the performance standard. Carlsbad's FY 2020-21 annual daily average dry weather sewer flow was 6.31 million gallons per day (MGD) representing 62% 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 shown in Table 1 below:

TABLE 1: Annual Daily Average Sewage Flow

Fiscal Year	Annual daily average flow
FY 2016-17	6.32 MGD
FY 2017-18	6.18 MGD
FY 2018-19	6.03 MGD
FY 2019-20	6.31 MGD
FY 2020-21	6.31 MGD

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 (EWA, 2040 Master Plan).

The City of Carlsbad 2019 Sewer Master Plan Update contains an analysis of annual average sewer flow through buildout (2040) 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, or 81% of the city's purchased capacity rights of 10.26 MGD in the EWPCF. This ensures adequate wastewater treatment capacity is available to accommodate an unanticipated increase in future sewer flows.

HOW THE CITY FUNDS WASTEWATER TREATMENT FACILITIES

The city's wastewater enterprise fund has the following primary sources of revenue and their uses:

- Sewer connection fees (aka capacity fees) are charged to new users which connect to the sewer collection system based on the quantity of sewer discharge (i.e., equivalent dwelling units, EDUs). These fees are used to pay for the capital cost of wastewater treatment facilities based on usage.
- Sewer service rates distribute the costs of operation, maintenance and capital improvement of wastewater treatment facilities equitably among all users. Replacement or rehabilitation of wastewater treatment facilities is funded through capital reinvestment, or depreciation funding from rate revenue.

OTHER STANDARDS AND CONSIDERATIONS

The evaluation of conformance with the performance standard requires sewer master plan updates be conducted on an interval that is commensurate with development activity. As part of the updates, sewer flow monitoring is necessary to evaluate whether the sewer flow generation factors used to estimate sewer flows and system capacity adequately reflect actual conditions. Further, changes in land use or zoning resulting in higher development density can potentially impact sewer system capacity. The city's goal is to conduct sewer master plan updates on a 5-year interval to evaluate citywide sewer flow rates and assess capacity requirements at the EWPCF. In addition, sewer rate studies are planned at three- to five-year intervals to provide a basis for wastewater rates and funding for required treatment system improvements.

CARLSBAD TOMORROW - GROWTH MANAGEMENT CITIZENS COMMITTEE
STAFF REPORT – Item 1; Exhibit 4
JUNE 23, 2022

SEWER COLLECTION

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

BACKGROUND

The origin of the sewer collection performance standard is the adoption of the city's Growth Management Program in 1986, as part of the Citywide Facilities and Improvement Plan. Implementation of the sewer collection standard has occurred during the preparation of Local Facilities Management Plans for each of the 25 Local Facilities Management Zones, and adequacy analyses during individual development project consideration. The city's 1987 Master Plan of Sewerage was revised for consistency with the zone boundaries and buildout projections based on General Plan criteria for land use, development density and population projections to evaluate conformance with the performance standard. Most recently, this approach is implemented in the 2019 Sewer Master Plan Update, coupled with revised sewer flow generation factors derived from flow monitoring data throughout the Carlsbad sewer service area.

FACILITY PERFORMANCE ANALYSIS

Sewer facility 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: City of 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 six major sewer interceptor systems, as shown in Table 1.

TABLE 1: MAJOR SEWER INTERCEPTOR SYSTEMS

Interceptor System	Sewer Districts Served	Carlsbad Capacity Rights ¹
<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 Interceptor²</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

¹ Million gallons per day (MGD)

² Buena Sanitation District and the City of Carlsbad are negotiating the transfer of this facility to the City of Carlsbad upon City of Vista's completion of their Buena Outfall Force Main, Phase III project.

Interceptor System	Sewer Districts Served	Carlsbad Capacity Rights ³
<i>Occidental Sewer⁴</i>	City of Carlsbad, City of Encinitas & Leucadia Wastewater 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%)

For both the Vista/Carlsbad Interceptor and the Buena Interceptor, Carlsbad’s capacity rights increase in the downstream direction as they flow to the Encina Water Pollution Control Facility. Capacity rights increase from 3.3% to 50% for the Vista/Carlsbad Interceptor and from 18% to 35% in the Buena Interceptor.

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, which are projected to occur by year 2040. 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 city’s Capital Improvement Program.

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 jointly owned V/C Interceptor do not satisfy buildout system flows. Hydraulic model results indicate that Reach VC-3 is insufficient to convey City of Vista flows through buildout. Reach VC-3 consists of 36-inch diameter pipe 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 of Carlsbad’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 has constructed a parallel force main sewer which will allow flow from Buena Sanitation District to be diverted to the force main sewer. Construction was completed in 2021, however Buena Sanitation District has not yet regularly diverted flow to this sewer. When they do, 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.

³ Million gallons per day (MGD)

⁴ The downstream sections (NB8 and NB9) of the North Batiquitos Sewer, often referred to as Ponto Sewer and originally termed the Occidental Sewer

HOW THE CITY FUNDS SEWER FACILITIES

The city's wastewater enterprise fund has the following primary sources of revenue and their uses:

- Sewer connection fees (aka capacity fees) are charged to new users which connect to the sewer collection system based on the quantity of sewer discharge (i.e., equivalent dwelling units, EDUs). These fees are used to pay for the approximate capital cost of the portion of the system used.
- Sewer service rates distribute the costs of operation, maintenance and capital improvement of the City's collection system, and wastewater treatment equitably among all users. Sewer system replacement or rehabilitation is funded through capital reinvestment, or depreciation funding from rate revenue.
- Sewer benefit area fees are used to fund the construction, or reimbursement for construction, of sewer conveyance systems serving more than one developer within a given sewer benefit area. Developers are required to construct the sewer collection system within their respective projects.

OTHER STANDARDS AND CONSIDERATIONS

The evaluation of conformance with the performance standard requires sewer master plan updates be conducted on an interval that is commensurate with development activity. As part of the updates, sewer flow monitoring is necessary to evaluate whether the sewer flow generation factors used to estimate sewer flows and system capacity adequately reflect actual conditions or require revision. Further, changes in land use or zoning resulting in higher development density can potentially impact sewer system capacity. The city's goal is to conduct sewer master plan updates on a 5-year interval to evaluate trunk line capacity, and to require sewer studies during discretionary project review for sewer system sizing.

CARLSBAD TOMORROW - GROWTH MANAGEMENT CITIZENS COMMITTEE
STAFF REPORT – Item 1; Exhibit 5
JUNE 23, 2022

WATER DISTRIBUTION FACILITIES

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.

BACKGROUND

Water supply and distribution planning has been the focus of the Carlsbad Municipal Water District since its creation in 1954. However, the origin of the two-fold water distribution performance standard is the adoption of the city's Growth Management Program in 1986, as part of the Citywide Facilities and Improvements Plan. Implementation of the water distribution standard has occurred during the preparation of Local Facilities Management Plans for each of the 25 Local Facilities Management Zones, and adequacy analyses during individual development project consideration. On a broader perspective, and because of its reliance on imported water, the 10-day average storage capacity was developed to ensure adequate water supplies during periods of annual inspections, maintenance and project construction by the San Diego County Water Authority as part of its Aqueduct Protection Program established in 1992. The performance standard is essential to development project reviews and capital improvement program activities as outlined in CMWD's 2019 Water Master Plan Update.

FACILITY PERFORMANCE ANALYSIS

Carlsbad's water distribution is provided by three agencies including the Carlsbad Municipal Water District (CMWD), which is a subsidiary district of the City of Carlsbad, 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 have adequate capacity to meet the growth management performance standard.

Water distribution demand requirements are estimated using a computer model to simulate the following water distribution scenarios: 1) average day demand; 2) maximum day demand plus a fire event; 3) 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 buildout (2040) daily demands and storage requirements for CMWD from the CMWD 2019 Potable Water Master Plan are shown in Table 1.

TABLE 1: Existing and Buildout Daily Water Distribution and Storage Demand

Water Demand	Flow Rate ¹
Existing Maximum Day Demand	24.1 MGD
Buildout Maximum Day Demand	29.6 MGD
Water Storage	Volume²
Existing Storage Requirement	35.4 MG
Existing Storage Capacity	47.5 MG (excluding Maerkle Reservoir 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. Within the CMWD service area the average daily potable water demand for the previous five years is shown in Table 2:

TABLE 2: Average Daily Potable Water Demand

Fiscal Year	MGD
2016-17	12.1
2017-18	13.4
2018-19	12.4 ³
2019-20	11.9
2020-21	12.8

Water conservation by CMWD customers has resulted in an overall reduction in per capita consumption. Factors leading to this reduction include: (1) expansion of CMWD’s recycled water system beginning in 2008, (2) a campaign initiated in 2009 to reduce customer consumption by the wholesale water agencies, (3) implementation of a new tiered water rate structure to encourage water conservation, and (4) voluntary and mandatory conservation measures in 2015 in response to drought conditions.

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 Maerkle Reservoir and 47.5 MG of storage capacity in various storage tanks throughout the water distribution system.

CMWD also has interagency agreements with OMWD, VWD and Oceanside to obtain additional supply to meet the 10-day storage capacity, 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

¹ Million gallons per day (MGD)

² Million gallons (MG)

³ Corrected demand for 2018-19 based on potable water sales data.

13.3 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.

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 and verify adequacy to support the water demands 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 city's Capital Improvement Program. 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.

HOW THE CITY FUNDS WATER DISTRIBUTION FACILITIES

The city's water enterprise fund has the following primary sources of revenue and their uses:

- Water connection fees are charged to new users which connect to the water distribution system based on estimated consumption and water meter size. These fees are used to pay for the capital cost of water distribution facilities.
- Water service rates pay for the costs of operation, maintenance and capital improvement of the water distribution system. Replacement or rehabilitation of water distribution facilities is funded through capital reinvestment, or depreciation funding from rate revenue.

Funds for the construction of future water distribution facilities are included in the Capital Improvement Program which is funded by water service rates.

OTHER STANDARDS AND CONSIDERATIONS

The evaluation of conformance with the performance standard requires water master plan updates be conducted on an interval that is commensurate with development activity. As part of the updates, water hydraulic modeling is necessary to evaluate whether the planning criteria used to estimate water demands and system capacity adequately reflect actual conditions. Further, changes in land use or zoning resulting in higher development density can potentially impact water demands and system capacity. The city's goal is to conduct water master plan updates on a 5-year interval to evaluate citywide water capacity requirements. In addition, water rate studies are planned at three- to five-year intervals to provide a basis for water rates and funding for required system improvements.