APPENDIX K.1:
Existing Conditions Infrastructure Report



CITY OF COSTA MESA
FAIRVIEW DEVELOPMENTAL CENTER SPECIFIC PLAN (FDCSP)

Proposed Conditions Infrastructure Report for Sewer and Drainage

City of Costa Mesa
Orange County, California

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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The City of Costa Mesa ("City") and Placeworks are currently preparing the Fairview Developmental Center Specific Plan ("FDCSP", "Fairview Specific Plan", "Specific Plan") and program level EIR for the reuse of the 95-acre Fairview Developmental Center, including affordable housing opportunities and open space uses. The proposed land use, including the maximum numbers of dwelling units (DUs) and nonresidential square-feet (SF) is presented in Table 1 below:

Table 1 FDCSP Proposed Land Use

Maximum Dwelling Units	Commercial Space	Open Space
4,000	35,000 SF	14 acres

A detailed site plan has not been prepared for the proposed land use but a conceptual layout has been provided to demonstrate the proposed land use within the project site. Evaluations of sanitary sewer and storm drain infrastructure are included in this report. See Figure 1 for an aerial extent of the Costa Mesa FDCSP area.

1.2 SCOPE OF WORK

This infrastructure assessment report evaluates the sanitary sewer and storm drain systems that will serve the Fairview Specific Plan. In accordance with the California Environmental Quality Act (CEQA) the assessment is prepared at a level consistent with a program level Environmental Impact Report ("EIR"). The report provides a comprehensive review of the existing conditions and evaluates projected demands associated with the proposed FDCSP buildout.

Any significant deficiencies will be identified, any coordination with utility providers, to remedy existing or potential deficiencies within the City of Costa Mesa's Fairview Developmental Center Specific Plan area.

As part of the infrastructure analysis, Mesa Water District is leading the water supply assessment (WSA) and conveyance/capacity water system analysis and these reports will be prepared by the Mesa Water District and attached as separate technical reports in the EIR. Additional water details are provided in Section 4.0.

For the dry utility analysis, E4 Design is leading this effort and will be providing a separate technical memorandum.

1.3 LAND USE DESCRIPTION

The Specific Plan establishes a new land use and zoning framework for the site and transitions its current zoning as a Multi-Use Center under the Costa Mesa General Plan to a higher density mixed use configuration. This new zoning configuration allows higher density multi-family residential units, senior living options, neighborhood amenities, and recreational uses.

The project site is currently developed with buildings, paved areas, natural grass areas, trees and ornamental landscaping. The State of California Department of General

Services will continue to operate the Emergency Operations Center (EOC) which is within the project site, but is not part of the proposed project.

The proposed project would include a minimum of 2,300 dwelling units with the potential for up to 4,000 residential units, 35,000 square feet of commercial space and 14 acres of open space as shown in Table 1. As part of the proposed land use, a secondary entrance into the site off Harbor Blvd at the southeast portion through the existing golf course is proposed. The secondary access would require the reconfiguration of up to six holes of the golf course in this area. For CEQA purposes, the maximum allowable number of units (4,000) will be analyzed. See Figure 2 for an over of the proposed land use.



Aerial Date: 09/08/2023

City Of Costa Mesa FDCSP Aerial Extent

Figure 1

2/2/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

BoundarySelection

N

1 inch = 400 feet

0 400 800 Feet

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Proposed FDCSP Land Use

Figure 2

2/19/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

DDS Housing
EOC Not A Part
Mixed Use
Open Space
Residential
Site Boundary
Shelley Circle Trail

N

1 inch = 600 feet

0 600 1,200 Feet

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2. SEWER

2.1 SEWER SYSTEM ENVIRONMENTAL SETTING & INFRASTRUCTURE

COSTA MESA SANITARY DISTRICT (CMSD)

The wastewater for the project site is conveyed from the property to a local sewer system in Harbor Boulevard which is owned and operated by Costa Mesa Sanitary District (CMSD). The existing sanitary sewer system for the property currently connects to the CMSD sewer system via an 18-inch private sewer line just south of Merrimac Way. The wastewater is conveyed in Harbor Boulevard northerly in the CMSD sewer system to the Orange County Sanitation District (OC SAN) trunk sewer facility at Baker Street.

The local CMSD sewer system that accepts wastewater from the project site is comprised of vitrified clay pipe (VCP) in Harbor Boulevard from the project site, northerly to Baker Street, approximately 1 mile northerly of the project site. The CMSD sewer system consists of two parallel 15-inch diameter sewer lines (2,000 linear feet) draining northerly from Fair Drive to Merrimac Way fronting the project site, then combine into an 18-inch diameter sewer (4,000 lineal feet) from Merrimac Way to the connection with the OC SAN trunk sewer at Baker Street to the north.

The OC SAN sewer system at Baker Street consists of a 90-inch diameter reinforced-concrete pipe (RCP) and collects and conveys the wastewater to the OC SAN Plant 1 for treatment and processing. Plant 1 is located in Fountain Valley, northwesterly of the FDCSP site.

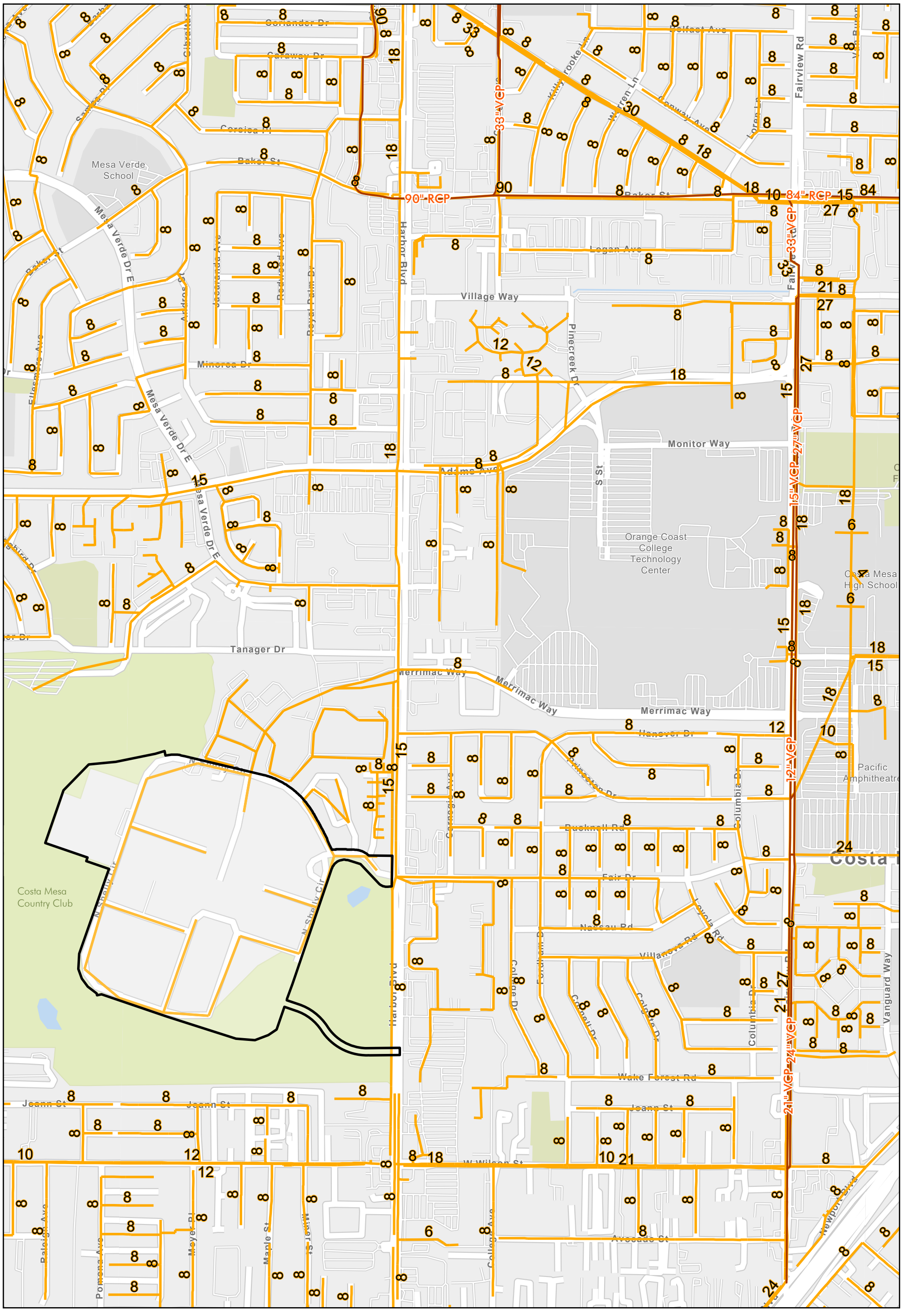
The existing sewer facilities are depicted on Figure 3.

FLOW MONITORING OF EXISTING MANHOLES

As requested by CMSD, two sewer manholes within the 18-inch CMSD sewer main in Harbor Boulevard were monitored for a 3-week period. The monitoring operations were conducted by Utility Systems, Science and Software (US3). The north manhole is located near Baker Street, upstream of the connection to the OC SAN trunk sewer line. The south manhole is located just north of Mesa Verde Drive East. The results of the monitoring are presented in Table 2 below. Data of the south manhole is used in the assessment of sewer capacities due to the higher recorded depth of 6.83 inches.

Table 2 Existing Conditions per Monitored Manholes (MH): 3/28/24 to 4/19/24

Manhole (MH)	Location	Pipe Diameter (in)	Existing Peak Flow (MGD)	Existing Peak Flow (cfs)	Existing Peak Flow Depth (in)	Existing % Full
(Upstream) South MH #103191	Harbor Blvd ~280-ft N/O Mesa Verde Dr. E.	18	1.545	2.391	6.83	38
(Downstream) North MH #103213	Harbor Blvd ~125-ft S/O Baker St.	18	1.641	2.539	5.97	33



Existing Sewer Facilities FDCSP

Figure 3

2/20/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

OCSD Sewer Lines
CMSD Gravity Mains
BoundarySelection

N

1 inch = 800 feet

0 800 1,600 Feet

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2.2 PROPOSED SEWER FLOWS

METHODOLOGY

WASTEWATER FLOWS GENERATION

For the purpose of developing wastewater the generation amount associated with the proposed FDCSP project, the following sewer generation factors (Table 3) provided by CMSD were applied:

Table 3 CMSD Sewer Generation Factors

Occupancy Type	Average Daily Flow	Units
Studio Apt/Condo	150	gal/DU
1 Bedroom Apt/Condo	200	gal/DU
2 Bedroom Apt/Condo	250	gal/DU
3+ Bedroom Apt/Condo	300	gal/DU
Commercial Space	150	gal/1,000 sq ft gross floor area

Using the sewer generation factors and peaking factor[1] of 2.5, provided by CMSD, along with estimates of the proposed unit mix, the wastewater demand from the proposed project elements are estimated (Table 4). The project has the potential to generate 0.953 MGD of average daily flows, and 2.383 MGD of peak flows into the sewer system.

The proposed sewer generation factors are conservative in nature and the total buildout may result in lower flows than identified in this report. Water usage rates (per capita and per residential unit) have come down over the past 15 years due to post-drought water conservation and water efficient technology associated with new homes. Reductions in water usage ultimately result in lower sewer generation for residential uses. The sewer generation rates used do not reflect the recent downward trends of water usage so future sewer studies prepared by the Master Developer in coordination with CMSD including phasing and more project details may utilize lower generation factors thereby resulting in lesser impacts or allow more units to be built before the identified upgrades are required.

The size and type of unit (studio, 1-bedroom, 2-bedroom, etc) is for planning purposes only and was requested by CMSD. It is subject to change but provides a conservative approach for estimating sewer flows and impact evaluation.

[1] Los Angeles County. 2018. Estimated average daily sewage flows for various occupancies. Found Here: https://pw.lacounty.gov/ldd/lddservices/sewerAreaStudy/sewerAreaStudy.shtml

Table 4 FDCSP Projected Wastewater Generation

Description	Units[1] or Commercial Space		Average Flow (MGD)	Peak Flow (MGD)	Peak Flow (cfs)
Studio Apt/Condo	33	DU	0.005	0.012	0.019
1 Bedroom Apt/Condo	1,674	DU	0.335	0.837	1.295
2 Bedroom Apt/Condo	1,634	DU	0.409	1.021	1.580
3 Bedroom Apt/Condo	619	DU	0.186	0.464	0.718
4 Bedroom Apt/Condo	40	DU	0.012	0.030	0.046
Commercial	35,000	SF	0.005	0.013	0.020
Total Project Flows			**0.951**	**2.378**	**3.680**
1: Total Residential Units: 4,000					

2.3 PROPOSED SEWER FACILITIES

The existing onsite sewer system will be demolished during construction of the FDCSP, and a new onsite sewer system will be installed to accommodate the flows associated with construction of the proposed land uses. The onsite sewer system will continue to discharge to the existing point of connection in Fair Drive. The onsite sewer system is anticipated to range from 8" to 12" VCP.

2.4 SEWER CAPACITY ASSESSMENT

Using the results of the flow monitoring along with the proposed FDCSP land uses, an evaluation of the existing local CSMD sewer system was performed to confirm capacity of the existing sewer system and determine if upgrades to any of the existing sewer reaches would be required. The evaluation is based on existing conditions (Table 2) combined with the projected wastewater generation peak flows (Table 4). The estimated total peak flows and respective depths are presented in Table 5.

As presented in Table 4, it is projected that the project would see an estimated proposed peak flow of 2.378 MGD associated with the proposed FDCSP development. This peak flow was added to the existing peak flow obtained from the sewer flow monitoring. Based on this assessment, the estimated total peak flow within the 18-inch pipe is projected to flow at 65% full (diameter/Depth (d/D) is 0.65). Additionally, the double- 15-inch sewer pipes fronting the project are projected to be 72% full (d/D is 0.72) under the buildout condition. Projected flows above the 50% full (d/D) threshold exceed the design capacity of an 18-inch pipe (or smaller) set forth by CMSD's Standard Plans and Specifications.

Table 5 FDCSP Proposed Existing & Projected Peak Flows

Peak Q (cfs) (Existing + Projected)	Peak Q (MGD) (Existing + Projected)	Proposed Depth in 18-inch Sewer (in)	Proposed Depth in 2-15-inch Sewer (in)	% Full (18-inch)	% Full (2-15-inch)
6.070	3.923	11.7	9.0	65%	72%

Based on the results presented in Table 5, along with the 50% d/D threshold, the proposed FDCSP development would require the following improvements:

- Upsize one of the two parallel existing 15-inch sewer lines from the project's point of connection at Fair Drive to Merrimac Way with an 18-inch line or greater (approximately 1,860 LF)
- Upsize the 18-inch from Merrimac Way to Baker Street to 21" or greater (approximately 4,240 LF)
- Total estimated lineal feet of sewer replacement or upsizing is 6,100 LF.
- There is existing capacity in the sewer system that would allow up to approximately 1,600 units before the full upgrades are required based on the conservative generation factors.
- Further evaluation and analysis in coordination with CMSD will be required to determine final sizing and cost sharing responsibilities.

Additionally, it is understood that the State of California's Emergency Operations Center (EOC), approximately 15 acres of land adjacent to the FDSCP property at the southwest corner, will result in a new 8-inch sewer line dedicated to all proposed sewer generation within the EOC that will be aligned in a west to east direction and connect into the existing CMSD sewer system in Harbor Blvd to the east. The new EOC sewer alignment will be designed and installed to avoid conflicts with the future development areas proposed by the FDCSP.

ORANGE COUNTY SANITATION DISTRICT (OC SAN)

As mentioned previously, the CMSD sewer system discharges to the OC SAN system at the intersection of Harbor Boulevard and Baker Street. From there, the wastewater continues northwesterly in the OC SAN system to the Plant No. 1 treatment facility in Fountain Valley.

In preparation for development of the Fairview Developmental Center Specific Plan, Fuscoe Engineering, Inc. (Fuscoe) requested verification of capacity of the regional sewer system from OC SAN. The purpose of this request was to ensure that the OC SAN system has the capacity to accept and provide adequate conveyance and treatment for the increased wastewater flows associated with the proposed FDCSP development.

Following their review of the estimated proposed wastewater flows, OC SAN provided Fuscoe with a Sewer Capacity Verification letter, dated December 29, 2025. The letter includes certification from OC SAN that there is sufficient capacity in its facilities to accept the estimated wastewater flows associated with the proposed project, as conveyed to OC SAN by the local CMSD sewer system.

Included in the Sewer Capacity Verification letter is the statement that OC SAN would like to reevaluate the impacts to the OC SAN facilities if the quantity and/or quality of discharge changes from the Fuscoe Engineering, Inc. estimates in the future.

Refer to Figure 4 for the proposed sewer improvements.

UPSIZE EXISTING 18" TO 21" OR GREATER BETWEEN MERRIMAC WAY AND BAKER ST. APPROX 4,240 LF

UPSIZE EXISTING 15" TO 18" OR GREATER BETWEEN FAIR DRIVE AND MERRIMAC WAY (APPROX 1,860 LF)

Proposed Sewer Facilities FDCSP

Figure 4

2/20/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

DDS Housing
EOC Not A Part
Mixed Use
Open Space
Residential

OCSD Sewer Lines
CMSD Gravity Mains
CMSD Gravity Mains

FDCSP Conceptual On-site Sewer System (for planning purposes only, subject to change)

N

1 inch = 800 feet

0 800 1,600 Feet

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2.4.1 CMSD PRIOR MASTER PLAN UPDATED (2005)

CMSD's prior Master Plan was prepared in 2005 and identified seven (7) gravity sewer segments that would eventually require additional capacity. One of these sewer segments included the 18" sewer main in Harbor Boulevard, south of Baker Street. The study indicated that approximately 2,400 lineal feet of 18" sewer in Harbor Boulevard, south of Baker Street would be flowing above ¾ depth at ultimate buildout and should be considered for improvements.

2.4.2 CMSD MASTER PLAN UPDATE (2021)

CMSD, in coordination with Robin B. Hammers & Associates, Inc. prepared an update to its Master Plan in November 2021. The purpose of this updated report was to determine whether the system has the capacity to handle flows from ultimate build-out of the CMSD service area. The plan compares the capacity of the sewer mains to the ultimate flow generated by complete buildout of the land uses inside the jurisdictional boundaries of the agency. When the wastewater system was originally designed in the early 1950's, the development densities and the anticipated ultimate flows were very low when compared with today's calculated maximums. Additionally, stormwater runoff is making its way into the system through infiltration and inflow. These additional flows require wastewater lines to be larger to accommodate the additional flows during periods of heavy rainfall.

CMSD has adopted the industry standard of designing new sewer lines up to 18 inches in diameter to be flowing no more than half-full at peak wet-weather conditions. However, when analyses of existing conditions are completed for the purposes of determining when additional capacity is required, flows above these limits are acceptable. However, at no time are sewers allowed to flow in a surcharged or pressure conditions.

As part of the 2021 Update, flow monitoring indicated the peak flows had not met the threshold for the proposed sewer improvement of the 18-inch line in Harbor Blvd north of the project site up to Baker Street. Implementation of the FDSCP proposed land uses would trigger the upsizing of the existing sewer line or installation of a parallel sewer as noted in Section 2.4.

2.4.3 CMSD'S DEVELOPER RESPONSIBILITY TO PROVIDE ADDITIONAL SEWER CAPACITY

In the interest of fairness, CMSD is committed to providing sewer capacity to the level identified in the City's most current General Plan but any additional capacity needed as a result of a developer proposing a more intense land use would be the responsibility of the developer. This policy relieves CMSD and the rate payers of the burden of funding sewer improvements made necessary by the scenario of increasing project densities.

The CMSD's policy is to require the developer to make a cash deposit to fund a sewer analysis of the system where the new development is proposed. This includes a requirement by CMSD that the Master Developer submit a detailed sewer study including number of units, location, type, size, sewer demand, density, and phasing.

The analysis checks the capacity of the system assuming that the proposed development is the only project that exceeds the General Plan density but also checks

line capacities assuming redevelopment of neighboring parcels also occurs to levels beyond the General Plan. An appropriate participation level is then determined for the developers.

2.5 PROPOSED CONDITION AND CEQA THRESHOLD ANALYSIS (SEWER)

The following questions regarding Utilities and Service Systems are identified in the CEQA Checklist related to sewer.

Would the Project:

A. Require or result in the relocation or construction of new or enhanced water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
B. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Should the answers to these environmental factors prove to have a potentially significant impact, mitigation measures would be required to reduce those impacts to a less-than-significant threshold.

Impact A: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact Analysis: Implementation of proposed land uses within the City's FDCSP will require removal of the existing sewer system on-site and the construction of a new sewer system on-site to support the proposed land uses. In addition, upgrades to existing sewer infrastructure in the public right-of-way to accommodate the increased wastewater flows will also be required. As noted in Section 2.4, approximately 6,100 LF of new or parallel sewer lines within Harbor Blvd from Fair Drive to Baker Street are required to accommodate the full build out of the proposed land use. This includes approximately 1,860 LF of new 18" or greater in Harbor Blvd for the 15" line between Fair Drive and Merrimac Way and approximately 4,240 LF of 21" or greater for the 18" line in Harbor blvd for the existing 18" line between Merrimac Way and Baker St. The final size, timing and alignment of the proposed sewer line improvements will be based on the approved site plan, phasing and coordination with CMSD. All project applicants are required to submit detailed information (i.e. Sewer Study) to CMSD regarding product type, size, number of units or square feet, projected demands (indoor and outdoor), and other project details so impacts on the existing sewer system can be managed properly. In those conditions, where hydraulic or capacity impacts affect other service areas or users within CMSD service area, the developer is responsible for paying for the impacts through their connection fees.

The construction of the on-site and off-site sewer lines and associated improvements will primarily include trenching for the pipelines. All construction

will be performed in accordance with the Construction General Permit and all associated requirements. Any work that may affect services to the existing sewer lines will be coordinated with the City and CMSD.

Furthermore, a Construction Management Plan or equivalent, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, will be implemented to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. Moreover, when considering impacts resulting from the installation of any required wastewater infrastructure, all impacts are of a relatively short-term duration and would cease to occur once the installation is complete. Therefore, Project impacts on wastewater associated with construction activities would be less than significant.

Impact B: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact Analysis: The proposed development within the FDCSP is expected to result in an increase in the peak wastewater flows by approximately 2.383 MGD. Additionally, OCSD's Plant No. 1, with a treatment capacity of 185 MGD and an average daily flow of 116 MGD, remains capable of accommodating the projected increase in sewer flows[2]. Based on the Orange County Sanitation District Sewer Capacity Verification letter, dated December 29, 2025, there is sufficient treatment capacity in its facilities to accept the estimated wastewater flows that would be generated by the proposed FDCSP development.

[2] Orange County Sanitation District Facts and Key Statistics. Accessed February 2026. Found here: https://ocsan.gov/wp-content/uploads/2025/07/Facts-and-Key-Statistics-2025_Redesign_v2.pdf

3. Storm Drainage and Water Quality

3.1 EXISTING DRAINAGE FACILITIES

The existing FDCSP onsite storm drain system consists of a network of inlets and storm drain pipes, which discharge via a 36-inch diameter storm drain pipe at the northwest corner of the property. This 36-inch diameter storm drain is conveyed westerly through the adjacent Costa Mesa Country Club's golf course, continues under a golf course pond, and discharges at the ground surface in the vicinity of an existing 42-inch culvert at the Orange County Flood Control District (OCFCD) Fairview Channel (Facility No. D04).

The 15-acre EOC development (currently under construction) includes a drainage system that also discharges to the existing 36-inch storm drain discussed above. The EOC development includes a detention basin that provides flood control and water quality mitigation.

The existing 36-inch storm drain that runs through the golf course is approximately 4 – 5 feet deep and consists of reinforced-concrete pipe (RCP) for the reach from the FDCSP to the pond, and switches to a 36-inch corrugated metal pipe (CMP) for the reach downstream of the pond. Additionally, a site visit confirmed that the downstream portion of the CMP is damaged, and historically there was a sink hole to the west of the pond that has since been repaired. This sink hole was initially noted in a CCTV exploration of the storm drain system prepared by Psomas (6/30/23) on behalf of the State of California Department of General Services (Refer to Appendix A for exhibit).

The Fairview Channel (OCFCD Facility No. D04) consists of a concrete trapezoidal channel that drains northwesterly, and merges into the OCFCD Greenville-Banning Channel (OCFCD Facility No. D03), and then into the Santa Ana River, which ultimately discharges into the Pacific Ocean.

Additionally, there is a City-owned 54-inch storm drain along the northerly golf course boundary at Tanager Drive, that also discharges into the golf course westerly of the clubhouse building. From there the drainage continues through the golf course within a concrete swale before discharging into the channel via a 42-inch diameter storm drain culvert/lateral, discussed above. Based on discussions with golf course staff, there is a significant amount of stormwater in the concrete swale during large storm events resulting in localized flooding of portions of the golf course.

Lastly, there are two storm drain systems that traverse through the southerly and southwesterly portions of the golf course, south of the FDCSP project. These storm drain systems include a 96-inch/114-inch Maple Storm Drain, owned by the City of Costa Mesa, along with a City-owned 72-inch storm drain. These two storm drain systems connect into the upper reach of the reinforced-concrete trapezoidal Fairview Channel (D04).

The existing storm drain facilities are shown on Figure 5.

Existing Storm Drain Facilities FDCSP

Figure 5

2/20/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

Gravity Main
Lateral Line
Private Storm Drain
General Flow Direction

Private Manholes/Catch Basins
BoundarySelection
Gravity Main selection

N

1 inch = 810 feet

0 810 1,620 Feet

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CAPACITY ASSESSMENT – LOCAL (CITY OF COSTA MESA) STORM DRAIN SYSTEM

Correspondence with the City of Cosa Mesa has confirmed the existing City-owned storm drain systems located southerly and southwesterly of the project site do not have sufficient capacity for a direct piped connection from the project site and proposed drainage patterns and connections should remain consistent with existing conditions. There is also the existing City-owned 54-inch storm drain located northerly of the FDCSP site. Based on discussions with the City of Costa Mesa and the golf course operator, connecting to this system is not preferred. This system discharges into the golf course and is conveyed as surface flow prior to entering the flood control channel. Adding additional flows into this system would adversely impact the golf course resulting in more on-site ponding.

CAPACITY ASSESSMENT – STORM DRAIN FROM SITE THROUGH GOLF COURSE

A capacity assessment of the existing 36-inch diameter storm drain, which currently accepts drainage from the FDCSP and the EOC, is recommended to confirm adequacy of the storm drain to accept stormflows from the proposed FDCSP project, or if upgrades to this storm drain are required. Upgrades to the downstream CMP reach are recommended, to be replaced with RCP.

In accordance with a meeting with City staff on January 15, 2026, the City has requested the following conditions be met prior to construction of the FDCSP project:

1. Condition analysis (CCTV) of the existing 36-inch storm drain that accepts drainage from the FDSCP and EOC site;
2. Replacement of the CMP portion of the storm drain with RCP;
3. Realign the 36” RCP storm drain to avoid the lake;
4. Determine capacity of the existing 36-inch storm drain;
5. Proposed condition 25-year peak flow to match existing 25-year peak flow including on-site detention if necessary.
6. Prepare detailed hydrology & hydraulics report for City review and approval based on the approved site plan.

To confirm that the existing golf course storm drain has sufficient capacity to adequately convey the storm flows associated with the proposed FDCSP project, additional information, including pipe slope and ground depth over the pipe would be required. This could be achieved by obtaining survey data of the storm drain manholes along the storm drain alignment.

CAPACITY ASSESSMENT – COUNTY OF ORANGE HYDROLOGY REPORT

The Fairview Channel Hydrology Report (hydrology report), published by County of Orange (Environmental Management Agency) in January 1988 includes the hydrology analysis for areas that are tributary to the Fairview Channel (D04). The hydrology report states that the entire drainage area to this channel consists of 1,503 acres, all located with the City of Costa Mesa.

Based on the County’s hydrology report, the onsite soils are type “D”, which indicates low surface infiltration, and is associated with higher runoff potential. Further, using the hydrology report’s evaluation of local residential areas in the vicinity, a cfs/acre was determined to be about 3.3 cfs/acre for a residential development. Therefore, using this

value with an approximately 100-acre site (which includes the 15-acre EOC site), the total Q25 to this storm drain would be about 330 cfs.

The County's hydrology report includes a land use map exhibit at the back of the report. According to the land use map, the FDCSP site was evaluated as "commercial/industrial" which assumes an impervious percentage of 90%. Based on an estimate of the proposed FDCSP project, the impervious percentage may be reduced to about the 70% to 80% range, which would result in a reduced discharge amount, as compared to what is included in the County's approved hydrology report.

Therefore, since the Fairview Channel includes the FDCSP site as a 90% commercial development, this indicates that theoretically, the channel would be able to continue accepting drainage from the FDCSP property without significant on-site detention. This this will be verified through the detailed hydrology and hydraulic analysis associated with the approved site plan and matching the existing 25-year storm event.

CAPACITY ASSESSMENT – CITY OF COSTA MESA STORM DRAIN MASTER PLAN UPDATE (2022 – 2026)

In 2021, the City hired a consultant to update their storm drain master plan and update their storm drain connection fees. The Existing Conditions Assessment Report (ECAR) was completed in 2022 and ultimately approved by the City in October 2024. The ECAR consisted of a city-wide hydraulic model to analyze existing conditions for 10-year, 25-yer and 100-year storm events. The modeling results were compared against known flooding events to ensure an accurate model.

The ECAR did not identify any high priority storm drain improvements associated with the area of the FDCSP including those city-owned storm drains north and south of the project area. It should be noted the on-site storm drain system and associated storm drain system in the golf course is not a city-owned system and therefore was not included in the report. Similarly, the flood control channel owned by Orange County Flood Control District was not included in the report either.

Phase II of the storm drain master plan update included the development of the Proposed Drainage and Water Quality Improvements report to identify additional details on the highest priority improvements, locations, design details, cost estimates and opportunities for regional stormwater BMP projects for stormwater and water quality benefits. This report was also approved by the City in October 2024. Similar to the existing conditions report, there are not high priority storm drain improvements or regional BMPs associated with the FDCSP area.

Phase III of the storm drain master plan updated included the Storm Drainage Impact Fee Nexus Study prepared in February 2026. The formal approval of the fee study is on track to go before City Council for approval and implementation by August 2026. The updated fee study identifies different drainage fees for the Santa Ana Watershed compared to the Newport Bay Watershed. The FDCSP falls within the Santa Ana Watershed and would be subject to the updated fees associated with this watershed. The proposed fees would be based on a fee per impervious acre based on different land uses. The excerpt below shows the breakdown.

Table 3-8: Santa Ana Watershed Storm Drainage Fee

Land Use	Fee Per Impervious Acre	Impervious Factor	Fee per Acre	Administration Fee (5%)	Total Fee per Acre
Residential					
Low Density Residential	$ 104,580	0.50	$ 52,290	$ 2,615	$ 54,905
Medium Density Residentia	$ 104,580	0.70	$ 73,206	$ 3,660	$ 76,866
High Density Residential	$ 104,580	0.80	$ 83,664	$ 4,183	$ 87,847
Non-Residential					
Commercial	$ 104,580	0.90	$ 94,122	$ 4,706	$ 98,828
Industrial	$ 104,580	0.90	$ 94,122	$ 4,706	$ 98,828

The proposed fees represent a significant increase over the current fees. The report provides the rationale and explanations for the increased fees and the methodology for how to apply the proposed fees for new development and redevelopment.

3.2 PROPOSED DRAINAGE FACILITIES

The existing onsite drainage system will be demolished during construction of the FDCSP, and a new onsite storm drain system will be installed to accommodate the drainage associated with construction of the proposed land uses. The onsite storm drain system will continue to discharge to the existing 36-inch storm drain system that continues through the golf course with appropriate measures to manage flows to existing conditions. Additionally, the storm drain system that conveys the EOC drainage will be incorporated into the system.

A hydrologic analysis of the FDCSP site will be prepared, along with a hydraulic analysis of the existing 36-inch storm drain that conveys the drainage through the golf course. For CEQA purposes, the existing 25-year peak flow will be the design storm for which the proposed condition peak flow must match. If the proposed condition 25-year peak flow exceeds the existing condition, on-site detention will be required to attenuate peak flows to match existing condition 25-year peak flows. This will ensure the development of the project does not send more peak flows to the golf course than the existing condition. As part of the analyses, a hydraulic evaluation will be made to determine the maximum allowable peak flow for the 36-inch RCP in accordance with local drainage criteria (flow rate, velocity, etc). If the maximum allowable peak flow is less than the 25-year existing peak flow, additional on-site detention will be required to match the allowable peak flow rate. Based on the current site conditions and approved design storm event in the county flood control hydrology report, using the 25-year storm event as the basis for design is applicable.

It is recommended that the downstream CMP section be replaced with RCP of the same size (36-inch). Additionally, there is an option to either allow the flows to discharge prior to the existing 42-inch culvert into the Fairview Channel or install a new connection to the channel. However, a new connection to the channel would require obtaining permits from OCFCD. This decision will be made by the master developer in coordination with the City and Orange County Flood Control District.

Please refer to Figure 6 for the proposed drainage facilities.

3.2.1 EOC PROPOSED DRAINAGE FACILITIES

The EOC site is currently under construction. As part of the drainage improvements, the EOC includes a 21,400 SF bioretention facility in it's northwester corner to provide on-site detention and water quality. Similar to the FDCSP site, the EOC is matching the existing 25-year peak flow condition to ensure that proposed flows do not exceed existing condition. Flows from the bioretention facility are discharged into an 18" RCP that runs south to north along the western edge of the EOC where it connects into the existing 36" RCP that goes under the golf course.

3.2.2 CITY OF COSTA MESA STORMWATER MANAGEMENT

The City of Costa Mesa Public Works' Maintenance Division is responsible for the maintenance and upkeep of the City's public drainage facilities. The Maintenance Division's responsibilities include the annual inspection and cleaning of all City storm drains and catch basins, erosion control of slopes along City open channels, and other City drainage facilities, cleaning of debris and clearance of drainage systems after storm events, and the prevention of standing water issues/concerns in City right-of-way areas.

It is anticipated the portions of proposed storm drain system will be owned and maintained by the City and therefore, all city storm drain design standards will be followed.

3.2.3 STORMWATER DESIGN FOR NEW DEVELOPMENT

The City requires any new development project to submit to the City for review and approval, a hydrology & hydraulics report that presents the analyses of the grading and stormwater design, along with conclusions that demonstrate that any increases in stormwater discharges will be mitigated with onsite detention systems. What is typically required is that the stormwater discharges associated with the new development do not exceed those of the existing or master-planned condition. Since much of the City is built-out with commercial, industrial, or residential development, many of the redevelopment projects may not require detention. However, sites that are currently undeveloped, are increasing impervious conditions compared to existing or have reduced downstream capacities may require detention, to mitigate for additional discharges associated with the new development or to meet local hydromodification requirements associated with the stormwater Municipal Separate Storm Sewer System (MS4) permit.

DRAINAGE CONDITIONS

1. MATCH 25-YEAR EXISTING PEAK FLOW AT 36"RCP
2. CCTV 36" RCP & HYDRAULIC CAPACITY ASSESSMENT
3. RE-ALIGN 36" RCP AROUND LAKE
4. REPLACE 36" CMP WITH RCP

Proposed Storm Drain Facilities FDCSP

Figure 6

2/19/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

DDS Housing
EOC Not A Part
Mixed Use
Open Space
Residential

Gravity Main
Lateral Line
Private Storm Drain

FDCSP On-site Storm Drain (for planning purposes only, subject to change
Private Manholes/
Site Boundary
Gravity Main selection

N

1 inch = 810 feet

0 810 1,620 Feet

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3.3 EXISTING FLOOD PLAIN MAPPING

The National Flood Insurance Act (1968) established the National Flood Insurance Program, which is based on the minimal requirements for flood plain management and is designed to minimize flood damage within Special Flood Hazard Areas. The Federal Emergency Management Agency (FEMA) is the agency that administrates the National Flood Insurance Program. Special Flood Hazard Areas (SFHA) are defined as areas that have a 1-percent chance of flooding within a given year, also referred to as the 100-year flood. Flood Insurance Rate Maps (FIRMs) were developed to identify areas of flood hazards within a community. According to the Flood Zone determination, the City has several flood designations listed as Zone A, Zone AE, Zone AH, Zone X (unshaded) and Zone X(shaded). These zones are described below.

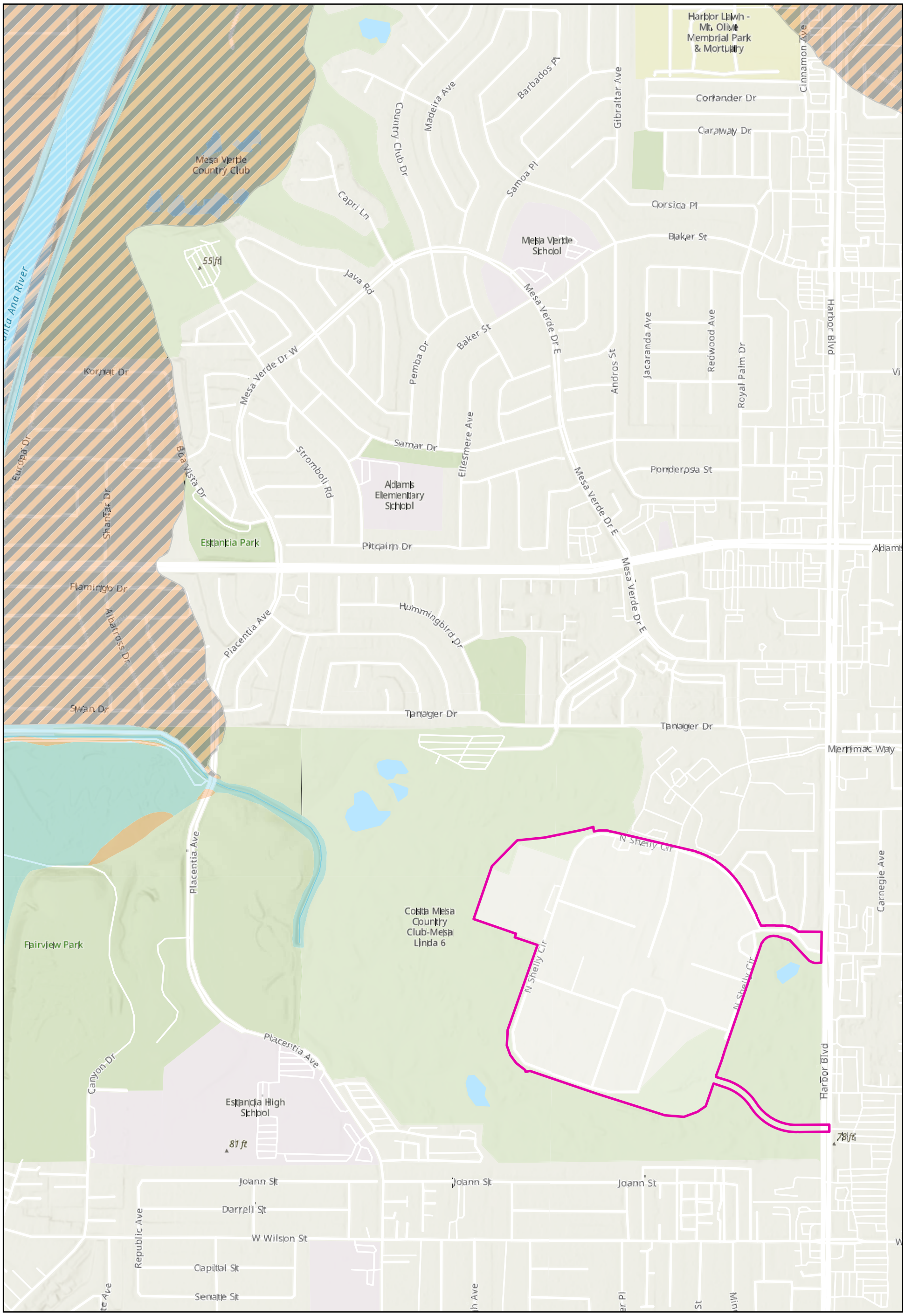
See Table 6 for description of the City's flood zone designations.

Table 6 FEMA Flood Zone Designations

Zone Designation	Zone	Zone Description
Special Flood Hazard Area – With Base Flow Elevation or Depth	Zone A	Areas with a 1% annual chance of flooding and -a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
	Zone AE	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30 year mortgage. Base flood elevations (BFE) are provided.
	Zone AH	Areas with a base floodplain, usually in the form of a pond, with an average depth ranging from 1 to 3 ft. where elevations (BFE) and flood hazard factors are determined.
Other Areas of Flood Hazard	Zone X	Shaded: Area of 500-year flood; area subject to the 100-year flood with average depths of less than 1 foot or with contributing drainage area less than one square mile; and areas protected by levees from the base flood. Unshaded: Area determined to be outside the 500-year floodplain
Source: FEMA, Glossary. Found here: https://www.fema.gov/about/glossary.		

Any development within special flood hazard areas must follow FEMA and the City's floodplain safety requirements, including flood analysis, proper setbacks, and sufficient pad elevations. The City also has preparation measures to protect residents and limit damage and infrastructure loss.

Based on our review, the FDCSP is within unshaded Zone X, and is therefore not within a special flood hazard area, as defined by FEMA. See Figure 7 for a map of the FEMA flood zones within the FDCSP.



FEMA Flood Zones FDCSP

Figure 7

Costa Mesa, Ca

2/20/2026

- Zone A: 1% Annual Chance Flood Hazard
- Zone X: 0.2% Annual Chance Flood Hazard
- Zone X: Area with Reduced Risk Due to Levee
- Zone X: Areas determined to be outside the 0.2% Annual Chance floodplain
- Site Boundary

N

1 inch = 800 feet

0 800 1,600 Feet

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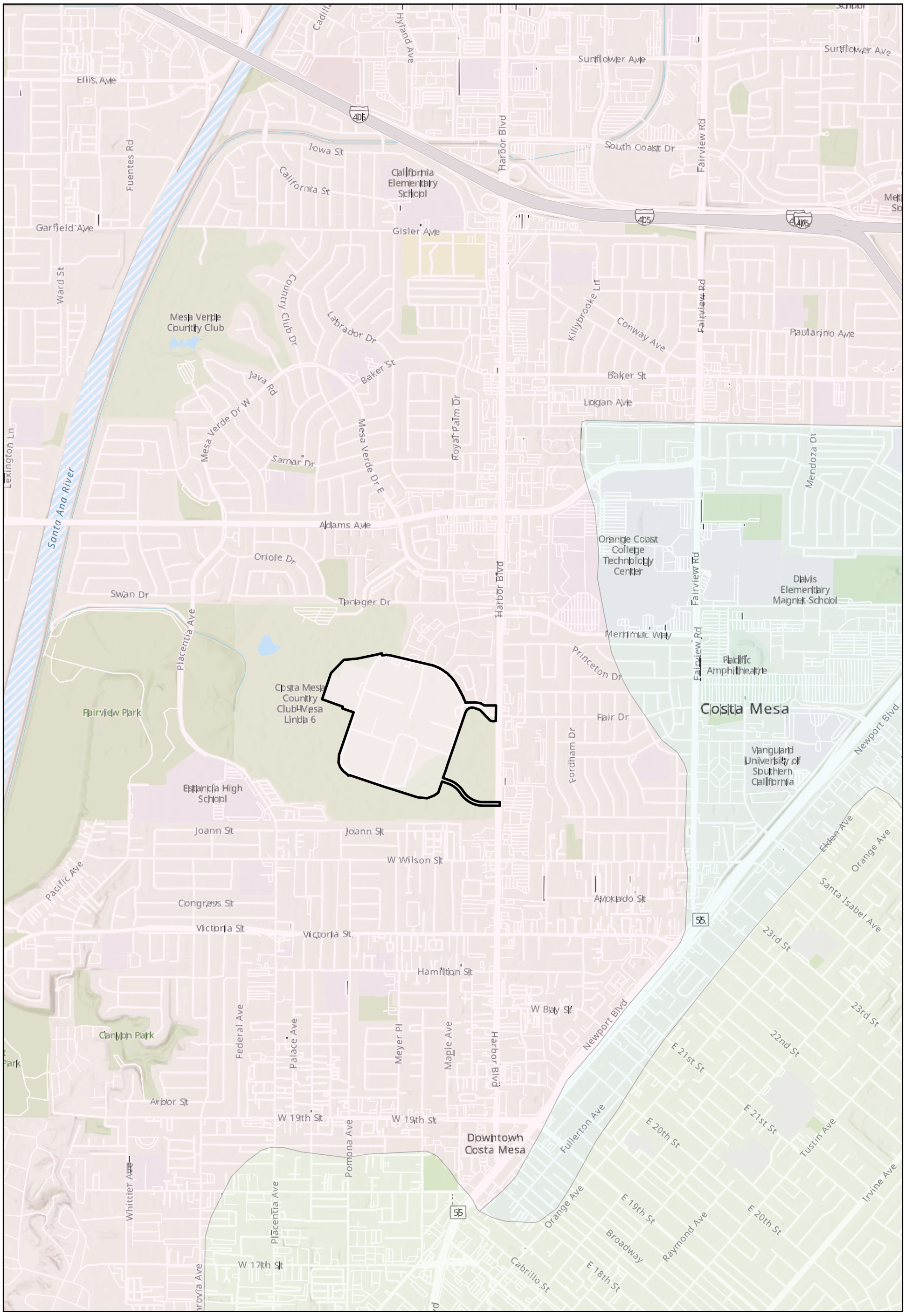


FDCSP Watersheds

Figure 8

2/20/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

- Lower Santa Ana River
- Newport Bay-Frontal Pacific Ocean
- San Diego Creek
- BoundarySelection

N

1 inch = 1,600 feet

0 1,600 3,200 Feet

X:\projects\511\45\mxd\2023_SP_Exhibits\6_Watershed.aprx

3.4 EXISTING WATER QUALITY REGULATIONS

The City is mandated by a National Pollutant Discharge Elimination System (NPDES) permit to implement Storm Water Runoff Management Programs. Unlike the sanitary sewer system, any discharge to the municipal storm drain system does not get treated and will ultimately end up in the ocean. The Storm Water Runoff Management Programs are therefore designed to protect the water quality and beneficial uses of the receiving water body, by requiring onsite water quality treatment of the stormwater prior to discharging offsite into the municipal storm drain system.

The City of Costa Mesa's Water Quality Ordinance gives the City adequate legal authority as may be necessary to carry out the requirements of the NPDES Permit and accomplish the requirements of the Clean Water Act.

In addition to the programs and requirements discussed above there are several state and regional regulations that focus on protecting storm water quality throughout the City and County region. They are described as follows.

3.4.1 SANTA ANA RIVER BASIN PLAN

In addition to its permitting programs, the State Water Resources Control Board (SWRCB), through its nine Regional Water Quality Control Boards (RWQCBs), developed Regional Water Quality Control Plans (or Basin Plans) that designate beneficial uses and water quality objectives for California's surface waters and groundwater basins, as mandated by both the CWA and the state's Porter-Cologne Water Quality Control Act. Water quality standards are thus established in these Basin Plans and provide the foundation for the regulatory programs implemented by the state. The Santa Ana RWQCB's Basin Plan, which covers the FDCSP, specifically (i) designates beneficial uses for surface waters and ground waters, (ii) sets narrative and numerical objectives that must be met in order to protect the beneficial uses and conform to the state's antidegradation policy, and (iii) describes implementation programs to protect all waters in the Region. The ultimate goal is to protect and preserve these water resources as stated in the SWQRCBs Resolution No.68-16, Antidegradation Policy, which requires that existing high quality waters be maintained unless degradation is consistent with allowing the maximum benefit to the people of the State and does not unreasonably affect present and anticipated beneficial uses.

Therefore, the proposed FDCSP will be subject to the Santa Ana RWQCB's Basin Plan objectives.

3.4.2 COUNTY OF ORANGE MS4 PERMIT, DRAINAGE AREA MANAGEMENT PLAN (DAMP) & LOCAL IMPLEMENTATION PLANS (LIP)

In May 2009, the Santa Ana RWQCB re-issued the North Orange County MS4 Storm Water Permit as WDR Order R8-2009-0030 (NPDES Permit No. CAS618030), as amended by Order R8-2010-0062 to the County of Orange, the incorporated cities of Orange County, and the Orange County Flood Control District within the Santa Ana Region. Pursuant to this "Fourth Term" MS4 Permit, the Co-permittees were required to update and implement a Drainage Area Management Plan (DAMP) for its jurisdiction, as well as Local Implementation Plans (LIPs), which describe the Co-permittees' urban runoff management programs for their local jurisdictions.

Under the City's LIP, land development policies pertaining to hydromodification, and low impact development (LID) are regulated for new developments and significant redevelopment projects. The term "hydromodification" refers to the changes in runoff characteristics from a watershed caused by changes in land use condition. More specifically, hydromodification refers to "the change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport." The use of LID Best Management Practices (BMPs) in project planning and design is to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project's land plan. These land development requirements are detailed in the County-wide Model Water Quality Management Plan (WQMP) and Technical Guidance Document (TGD), last updated in 2013, which Cities have incorporated into their discretionary approval processes for new development and redevelopment projects.

The LID hierarchy requires new developments and re-developments to implement BMPs under the LID hierarchy as described in the TGD. The LID hierarchy requires new projects to first attempt to infiltrate if feasible, then harvest and reuse, then biofilter stormwater runoff from their project site depending on site constraints. New projects and redevelopments within the City will follow the set hierarchy of BMP selection, and more runoff throughout the City will be effectively treated as development occurs.

A project Water Quality Management Plan (WQMP) shall be submitted for new development and significant redevelopment projects in the City of Costa Mesa.
Project WQMPs describe how property owners/managers will comply with the post construction water quality requirements described in the City's National Pollutant Discharge Elimination System (NPDES) permit (issued by the Santa Ana Regional Water Quality Control Board). Project plans submitted for plan check must be consistent with the approved project WQMP, and the project WQMP must be approved prior to the issuance of building or grading permits.

3.4.3 TOTAL MAXIMUM DAILY LOADS (TMDLS)

Once a water body has been listed as impaired on the 303(d) list, the State's inventory of surface waters that do not meet water quality standards, a TMDL for the constituent of concern (pollutants) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general terms, Municipal Separate Storm Sewer System (MS4) and other dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline.

The FDCSP drains to the existing City and County storm drain system, which conveys flows to the Fairview Channel (OCFCD Facility D04), then to the Greenville-Banning Channel (D03), and ultimately to Santa Ana River Reach 1, which discharges directly to the Pacific Ocean. The project is located within the Santa Ana River Watershed, and all

stormwater discharges are regulated under the regional Orange County Municipal Separate Storm Sewer System (MS4) Permit, issued and administered by the Santa Ana Regional Water Quality Control Board[3]. Under this Permit compliance with applicable regional water quality objectives and Basin Plan requirements is required.

See Table 7 below for the applicable 303(d) listings and Total Maximum Daily Loads (TMDLs) for the projects receiving water body, Santa Ana River Reach 1, which receives flows from the Costa Mesa FDCSP area by the regional storm drain system.

Table 7 List of 303(d) Impairments and TMDLs

Water Body / Channel	List of 303(d) Impairments	TMDL
Santa Ana River Reach 1	None	None

Source
1. State Water Resources Control Board Division of Water Quality. Surface Water Quality Assessment Program. 2026-01. Found here: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/
2. Orange County Public Works, OC Environmental Resources - Total Maximum Daily Loads. Accessed 2026-02. Found here: https://ocerws.ocpublicworks.com/service-areas/oc-environmental-resources/oc-watersheds/regional-stormwater-program/north-oc-12

Based on review of the States Surface Water Quality Assessment Program for 2024 Integrated Report and the Proposed California 2026 Integrated Report, Santa Ana River Reach 1 is not listed as impaired and has no associated TMDLs. Therefore, no pollutant-specific load allocations or TMDL compliance requirements apply to the project with respect to Santa Ana River Reach 1. Although, no TMDLs currently apply to the Projects receiving water bodies, the FDCSPs discharges will remain subject to regional MS4 Permit requirements, Basin Plan objectives, and local stormwater quality standards.

3.5 EXISTING GROUNDWATER CONDITIONS

The FDCSP site is located within the Orange County Groundwater Basin (Basin or OC Basin) [4]. The Basin is adjudicated and managed by the Orange County Water District (OCWD). OCWD conducts basin-wide monitoring, recharge, and groundwater quality protection programs in coordination with local retail water agencies, including Mesa Water District. A network of nearly 700 wells provides OCWD a source for samples, which are tested for a variety of purposes. OCWD collects 600 to 1,700 samples each month to monitor Basin water quality. These samples are collected and tested according to approved federal and state procedures as well as industry-recognized quality assurance and control protocols.

[3] Santa Ana Regional Water Board. Regional MS4 Permit - Orange County. Found here: https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/orange_county_ms4_permit.html
[4] Map of the Orange County Groundwater Basin. Found here: https://www.ocwd.com/media/3656/threelayerbasinmodelextent.pdf

3.5.1 REGIONAL BENEFICIAL USES AND WATER QUALITY OBJECTIVES

Following the Santa Ana Regional Water Quality Control Board Basin Plan[5], groundwater within the Orange County Groundwater Basin is designated for beneficial uses including the following;

- **Municipal and Domestic Supply (MUN)** – waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.
- **Agricultural Supply (AGR)** – waters are used for farming, horticulture or ranching. These uses may include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing
- **Industrial Service Supply (IND)** – waters are used for industrial activities that do not depend primarily on water quality. These uses may include, but are not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection and oil well repressurization.
- **Industrial Process Supply (PROC)** – waters are used for industrial activities that depend primarily on water quality. These uses may include, but are not limited to, process water supply and all uses of water related to product manufacture or food preparation

Seeing that groundwater in the Basin is used for potable and non-potable supply, protection of water quality is a primary regulatory objective. The Basin Plans established water quality objectives are to protect these beneficial uses. Numeric objectives incorporate the State Water Resources Control Board Maximum Contaminant Levels (MCLs) for drinking water constituents, including nitrate, total dissolved solids (TDS), volatile organic compounds (VOCs), and other regulated contaminants. While other regulatory language prohibits discharges that cause or threaten to cause degradation, contamination, or nuisance conditions in groundwater.

3.5.2 LOCAL WATER QUALITY CONDITIONS AND OBJECTIVES

The FDCSP is located within the Orange County Groundwater Basin and groundwater quality within this basin is actively monitored and managed by OCWD in coordination with retail agencies, including Mesa Water District. Mesa Water District operates groundwater production wells within its service area and extracted groundwater is treated prior to distribution to ensure compliance with State drinking water standards.

According to recent OCWD monitoring data[6], groundwater associated with the Mesa Water District service area has average TDS concentrations of approximately 301 mg/L, which is below the State secondary MCL of 500 mg/L. Reported nitrate concentrations are approximately 0.4 mg/L, which is well below the primary MCL of 10 mg/L. These values demonstrate the regions compliance with applicable drinking water standards for regulated pollutants. Additionally, OCWD conducts ongoing basin-wide monitoring for additional regulated and emerging constituents, including VOCs and per- and polyfluoroalkyl substances (PFAS). Where necessary, treatment or operational

[5] Santa Ana Regional Water Board. Water Quality Control Plan for the Santa Ana River Basin. 2025-04. Found here: https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.html
[6] Mesa Water District. 2025-07. Water Quality 2025 Report. Found here: https://www.mesawater.org/water-quality

measures are implemented to maintain compliance with State and federal regulatory requirements and Basin Plan water quality objectives.

The Basin Plan's numeric and legislative water quality standards apply to surface and groundwater within the OC Basin and as discussed above, existing surface and groundwater quality standards are in compliance. Overall, the FDCSP does not propose activities that would introduce pollutants directly to groundwater or surface waters. The Project will comply with stormwater management, MS4 permit requirements, and LID BMP standards intended to prevent surface and groundwater contamination. Therefore, implementation of the FDCSP would not be expected to degrade groundwater quality or interfere with ongoing surface and groundwater management within the Orange County Groundwater Basin.

3.6 CAPITAL IMPROVEMENT PROGRAMS

3.6.1 CITY OF COSTA MESA

The City of Costa Mesa maintains a Five-Year Capital Improvement Program (CIP) that includes storm drain rehabilitation, system upgrades, and stormwater quality improvements. Several projects identified in the adopted FY 2025–26 CIP[7] are located within the western side of the City and are relevant to the storm drain infrastructure serving the FDCSP area. These projects are summarized in Table 8 below.

Table 8 Drainage System Capital Improvement Plans – City of Costa Mesa

Project Name	CIP Year	Project Description
Citywide Storm Drain Improvements – Fairview Park Storm (No. 550011)	FY 25–26	Rehabilitation and improvement of storm drain infrastructure serving the Fairview Park area, to improve conveyance capacity and reduce localized flooding.
Citywide Storm Drain Improvements (No. 550011)	FY 25–26	Ongoing citywide storm drain rehabilitation program including pipe replacement, structural repairs, and system maintenance to maintain conveyance performance and regulatory compliance.
Westside Storm Drain Improvements (No. 550022)	FY 25–26	Improvements to storm drain infrastructure within the west side of Costa Mesa to enhance drainage capacity, reduce localized flooding, and support long-term system reliability.
Placentia Avenue Stormwater Quality Trash Full-Capture System (No. 550023)	FY 25–26	Installation of a full-capture trash treatment system to comply with MS4 permit requirements and improve stormwater quality prior to discharge to downstream receiving waters.

[7] City of Costa Mesa. 2025-06. Adopted Operating and Capital Improvement Budget Fiscal Year 2025-2026. Found here: https://www.costamesaca.gov/home/showpublisheddocument/61565/638985583612700000

Sources
1. City of Costa Mesa. 2025-06. Adopted Operating and Capital Improvement Budget Fiscal Year 2025-2026. Found here: https://www.costamesaca.gov/home/showpublisheddocument/61565/638985583612700000

As shown above, the City continues to invest in maintenance and improvement of its storm drain system, including conveyance facilities and stormwater quality treatment infrastructure. These projects support ongoing regulatory compliance under the City's MS4 permit and enhance the performance of the local drainage network tributary to the FDCSP.

3.6.2 OC PUBLIC WORKS

In addition to City storm drain infrastructure improvements, the OCWD implements regional groundwater protection, recharge, and remediation programs within the Basin. These capital programs maintain groundwater quality and protect designated beneficial uses of the Orange County Ground Water Basin. Relevant basin-wide programs lead by OC Public Works[8] are summarized in Table 9.

Table 9 Drainage System Capital Improvement Plans – OC Public Works

Project Name	CIP Year	Project Description
Fairview Channel Rehabilitation Phase 1 and 2	Completed FY 22-23	Rehabilitation of portions of the Fairview Channel to bolster structural integrity and conveyance capacity.
Groundwater Replenishment System (GWRS) Final Expansion	Operational Expansion (Final Phase Complete)	Expansion of advanced water purification facilities to maintain production capacity approximately 130 mgd. Treated recycled water is recharged into the groundwater basin via injection wells and spreading basins to support water quality protection and aquifer reliability.
Talbert Seawater Intrusion Barrier Improvements	Ongoing	Injection well operations and infrastructure improvements to maintain a hydraulic barrier preventing seawater intrusion into the coastal portion of the OC Basin.
PFAS Treatment Systems at Production Wells	Ongoing	Installation of treatment systems at impacted groundwater production wells to address per- and polyfluoroalkyl substances (PFAS) and ensure compliance with evolving drinking water standards.
South Basin Groundwater Protection Project	FY 25-26 Ongoing	Regional remediation program addressing volatile organic compounds (VOCs) and perchlorate in

[8] OCFCD 7-year Capital Improvement Program 2023-24 to 2029-30. Projects found at the link below: https://ocpw.maps.arcgis.com/apps/Shortlist/index.html?appid=1e3a74d5dcb744fb9bab39f427fb0079

Project Name	CIP Year	Project Description
		groundwater through extraction, treatment, and hydraulic containment to protect potable supply wells.

1. Orange County Water District. 2025. Budget Report FY 2025-2026. Found here: https://www.ocwd.com/wp-content/uploads/OCWD-Budget-FY-2025-2026.pdf
2. Source: OC Construction Projects – Capital Improvement Program (CIP) and Maintenance Improvement Program (MIP). Accessed February 2024 Found here: https://ocpw.maps.arcgis.com/apps/webappviewer/index.html?id=5bbd1fa12e7a43fa8d27a55afa83afa8

As shown above in Table 8 and Table 9, there are multiple CIP projects within the Costa Mesa FDCSP area over the next years. Collectively, these programs will maintain surface water and basin reliability, prevent seawater intrusion, and ensure compliance with Basin Plan water quality objectives and drinking water standards.

3.7 PROPOSED STORMWATER CONDITION AND CEQA THRESHOLD ANALYSIS

California Environmental Quality Act (CEQA) significance criteria are used to evaluate the degree of impact caused by a development project on environmental resources such as hydrology and water quality. According to Appendix G of the CEQA Guidelines[9], a project would normally have a significant effect on the environment if the project would impact any of the items listed below.

Would the Project:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

    (i) Result in a substantial erosion or siltation on- or off-site;
    (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    (iv) Impede or redirect flood flows?

D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

[9] California Natural Resources Agency, CEQA appendix G. Found here: https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/ab52/final-approved-appendix-G.pdf

E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Should the answers to these environmental factors prove to have a potentially significant impact, mitigation measures would be required to reduce those impacts to a less-than-significant threshold.

Impact A: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impact Analysis: Construction activities within the FDCSP area could potentially result in soil erosion and temporary adverse impacts to surface water quality in the Santa Ana River from construction materials and wastes if left unregulated or unmitigated.

Implementation of State and Local regulations will effectively mitigate construction storm water runoff impacts from the proposed land use changes that take place during construction. Standard erosion control practices shall be implemented for all construction within the City. Additionally, construction sites over one acre will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the requirements of the Statewide Construction General Permit (Order WQ 2022-0057-DWQ) and subject to the oversight of the Santa Ana Regional Water Quality Control Board. The SWPPP must include BMPs to reduce or eliminate erosion and sedimentation from soil disturbing activities, as well as proper materials and waste management.

Due to the size of the proposed land use, phases of development are anticipated. Each phase of development will result in phasing of construction. Each phase of construction will require permit coverage from demolition to final completion as identified in the Notice of Termination conditions of the Construction General Permit. Implementation of these State and Local requirements would effectively prohibit projects from violating any water quality standards or waste discharge requirements resulting from construction activities.

In terms of post-construction related impacts, the incorporation of site design, LID features and BMPs as required under the County of Orange MS4 Permit implemented by the City of Costa Mesa are designed to protect surface waters and groundwater. The redevelopment of the existing site into the proposed higher density residential land uses will result in improvement to water quality runoff based on the implementation of water quality BMPs that likely do not exist under current conditions.

Based on preliminary investigations, infiltration is feasible although full infiltration versus partial infiltration will be determined based on site specific testing locations. Infiltration BMPs are anticipated and will likely be incorporated into the on-site detention requirements. development within the FDCSP will effectively retain or treat the 85th percentile 24-hour stormwater runoff for pollutants such as bacteria, metals, nutrients, oil & grease, organics, pesticides, sediment, trash, and oxygen demanding substances prior to discharge off their property. Opportunities exist to include one large regional

stormwater and water quality BMP at the northwest corner of the site to handle all detention and water quality requirements for the proposed development or each phase of development can be designed to handle their respective detention and water quality components. This will be evaluated by the master developer.

From a cumulative perspective, as properties within the City undergo redevelopment, existing properties that do not have water quality BMPs will be replaced with projects incorporating LID BMPs. Therefore, long-term surface water quality of runoff from the FDCSP areas would be expected to improve over existing conditions as more LID BMPs are installed and implemented. This is considered an overall benefit of the proposed land use changes associated with implementation of the FDCSP. Impacts on surface water and groundwater quality will be less than significant.

Impact B: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Impact Analysis: Groundwater is actively managed throughout the City by numerous water agencies and stakeholders and individual projects will not utilize site-specific wells for groundwater supply. All groundwater is managed through OCWD and the water retailers and planning documents such as the Urban Water Management Plans. It is also likely that through LID features, infiltration will be feasible in specific areas throughout specific plan area and will augment groundwater recharge. Through management by the local water districts, land development and redevelopment within the City will not result in interference with groundwater recharge or management of the groundwater basin. Therefore, the impacts are expected to be less than significant.

Impact C: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) Result in a substantial erosion or siltation on- or off-site;
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
(iv) Impede or redirect flood flows?

Impact Analysis: Under the existing conditions, the specific plan area is fully developed with established drainage patterns, stable surface and soil conditions and an on-site storm drain system. Under the proposed conditions, drainage patterns will largely be maintained and will direct flows with a newly designed storm drain system to the northwest corner of the site as occurs under existing conditions. The proposed storm drain system will connect to an existing 36-inch storm drain that will deliver flows under the golf course and to the OCFCD flood control concrete channel before discharging into the Santa Ana River. By matching the existing 25-year peak flow rate through on-site detention, flow

rates will be similar to existing conditions thereby reducing the potential for increased erosion on or off-site. Measures are also in place to verify the condition of the 36-inch storm drain including hydraulic capacity, structural integrity, modified alignment and replacement of the CMP section with RCP.

Overall impacts to erosion and siltation, because of FDCSP land use changes, are anticipated to be less than significant.

Impact D: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Analysis: The FDCSP is located outside the 100-year flood zone, and therefore potential impacts to flooding of the site are less than significant. Additionally, the FDCSP is not subject to impacts from tsunami or seiche zones, and thus risks from these hazards are not applicable.

Impact E: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis: The FDCSP does not impact implementation of local or regional water quality control plans or sustainable groundwater management plans. All development within the City will follow the Santa Ana Regional Water Quality and Control Boards MS4 permit. Groundwater levels are managed by various stakeholders, and development projects with infiltration will be reviewed for conformance with groundwater management goals. Impacts on water quality and groundwater management will be less than significant.

4. WATER

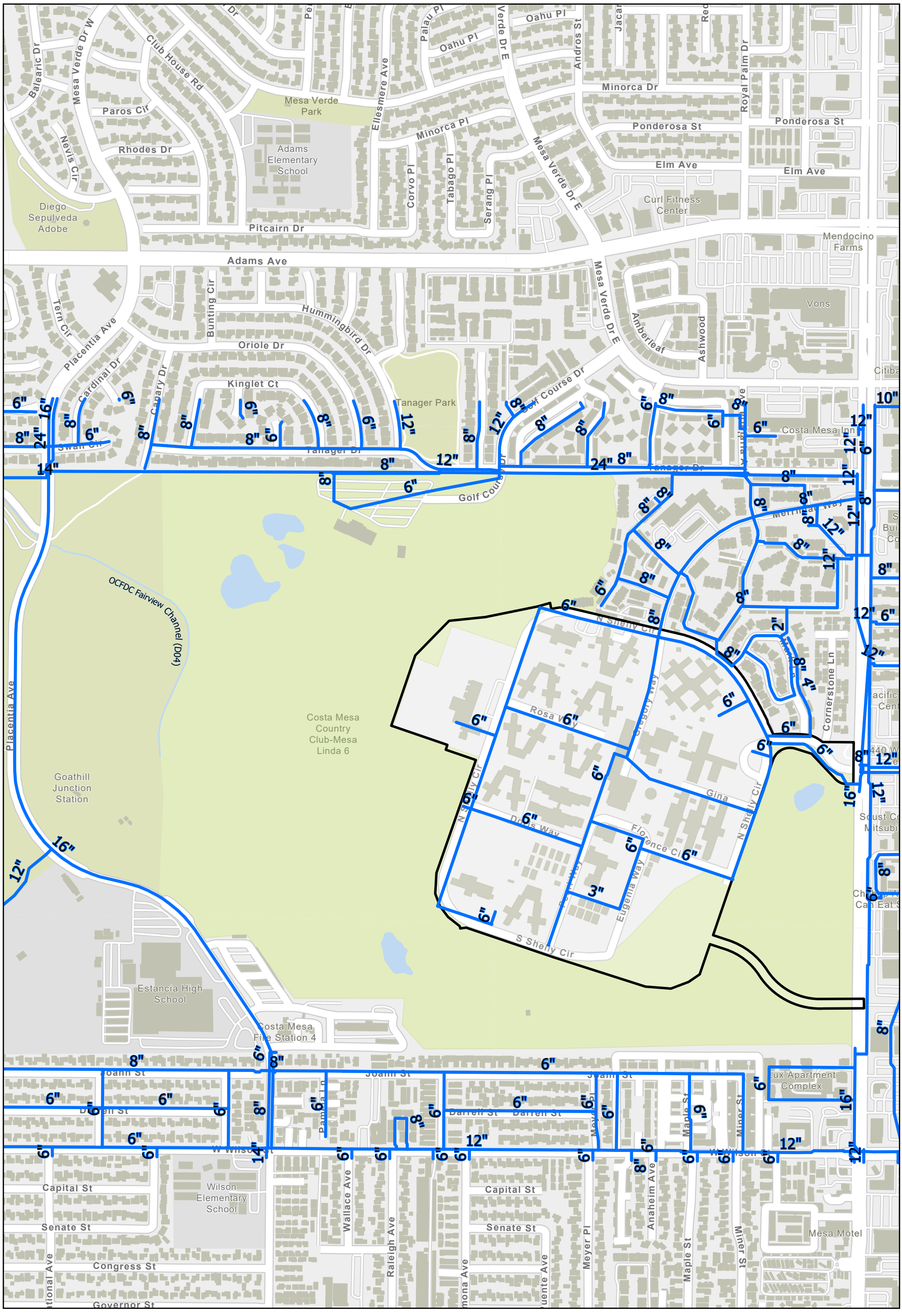
4.1 WATER SYSTEM ENVIRONMENTAL SETTING & INFRASTRUCTURE

MESA WATER DISTRICT (MWD)

The FDCSP's existing potable water system is served by the Mesa Water District (MSD), which consists of 25,032 connections, approximately 18 square miles of pipelines, seven wells, which includes two future wells, a nanofiltration facility, two storage reservoirs with a total capacity of 29 million gallons (MG), three metered imported water connections, and 16 emergency interconnections. Two of the wells pump amber-tinted water located below the primary production aquifer. The amber-tinted water wells are treated at the Mesa Water Reliability Facility (MWRF), an advanced membrane treatment plant, before being pumped into the distribution system. The sixteen interconnections are from the following areas:

- Four are emergency interconnections with the City of Santa Ana.
- Seven are emergency interconnections with the City of Newport Beach.
- Five are emergency interconnections with IRWD.

Distribution pipelines within and around the project area range in diameter between 6-inches to 30-inches and have a total length of approximately 114,765 ft (22 miles), and most were constructed in the 1950s (26%). See Figure 9 for a map of the existing water system facilities within and around the FDCSP area.



Existing Water System FDCSP

Figure 9

4/30/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

DDS Housing
EOC Not A Part
Mixed Use
Open Space
Residential

Existing Offsite Water lines
Site Boundary

N

1 inch = 600 feet

0 600 1,200 Feet

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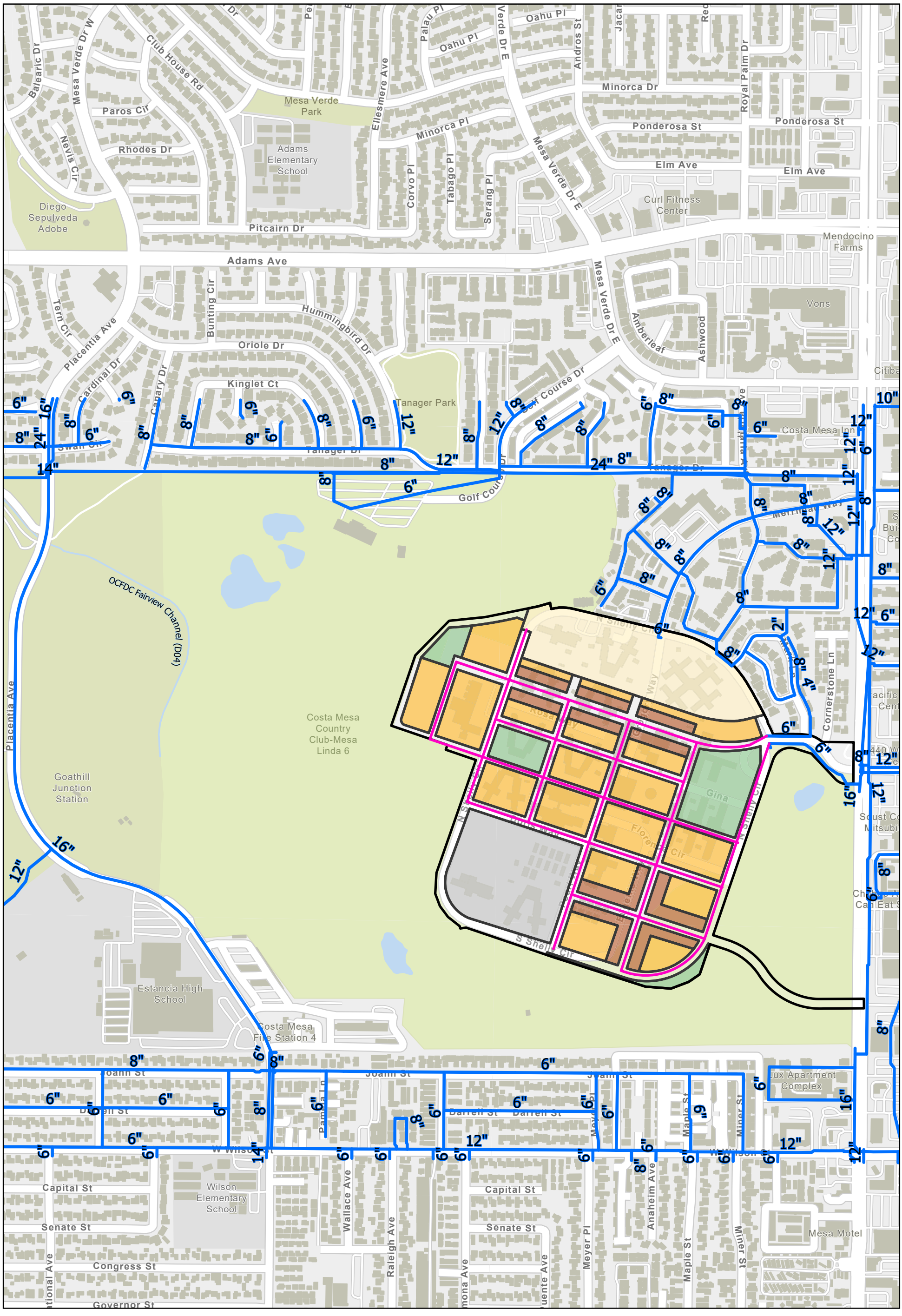
4.2 PROPOSED WATER FACILITIES

The existing onsite water system will be demolished during construction of the FDCSP, and a new onsite water system will be installed to convey flows to the proposed land uses . The onsite water system will continue to connect off Fair Drive and also the future roadway to Fair Drive for a looped system. The onsite water system is anticipated to range from 8" to 12" PVC pipes. See Figure 10 for a map of the proposed water system facilities within and around the FDCSP area.

4.3 WATER CAPACITY & WATER SUPPLY ASSESSMENT

As previously noted, Mesa Water District conducted two separate technical studies including preparation of a Water Supply Assessment (WSA) and a hydraulic analysis of their water system for the full buildout of the proposed land use. The WSA demonstrated the District has sufficient supply for the proposed project. The hydraulic analysis indicated that if the maximum peak demand was applied (full build out), Reservoir 1 was negatively impacted for a few hours per day. The modeling analysis did not include modifications to run cycles, activation of other wells or other programming controls to minimize impacts to Reservoir 1. The District has a number of options to address Reservoir 1 impacts and may include infrastructure improvements. The full build not will occur many years and it will be the responsibility of the Master Developer to work with Mesa Water District to identify the specific improvements needed as phases of development come online. Additional details and the full analyses can be found in the appendix of the EIR for both of these studies.

Additionally, it is understood that the State of California's Emergency Operations Center (EOC), approximately 15 acres of land adjacent to the FDSCP property at the southwest corner, will result in a new 10-inch domestic line dedicated for all proposed water needs within the EOC. The new water line connects off an existing water main at Fair Drive and Harbour Blvd. The new EOC water alignment will be designed and installed to avoid conflicts with the future development areas proposed by the FDCSP.



Proposed Water System FDCSP

Figure 10

4/30/2026

Costa Mesa, Ca

FUSCOE ENGINEERING

DDS Housing
EOC Not A Part
Mixed Use
Open Space
Residential

FDCSP Proposed Onsite Water Lines (for planning purposes only)
Existing Offsite Water lines
Site Boundary

N

1 inch = 600 feet

0 600 1,200 Feet

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4.4 PROPOSED CONDITION AND CEQA THRESHOLD ANALYSIS (WATER)

The following questions regarding Utilities and Service Systems are identified in the CEQA Checklist related to water.

Would the Project:

C. Require or result in the relocation or construction of new or enhanced water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Should the answers to these environmental factors prove to have a potentially significant impact, mitigation measures would be required to reduce those impacts to a less-than-significant threshold.

Impact A: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact Analysis: Implementation of proposed land uses within the City's FDCSP will require removal of the existing water system on-site and the construction of a new water system on-site to support the proposed land uses. Off-site water infrastructure improvements related to Mesa Water District's Reservoir 1 may be required for the full buildout if operational or system adjustments are not sufficient to maintain the reservoir minimum operating criteria during peak demand. The Master Developer will be responsible for working with CMSD on the detailed phasing plans to ensure impacts and any infrastructure improvements for Reservoir 1 are properly addressed.

All project applicants are required to submit detailed information to Mesa Water District regarding product type, size, number of units or square feet, projected demands (indoor and outdoor), hydrants, and other project details so impacts on the existing water conveyance system including fire flow protection can be managed properly. In those conditions, where hydraulic or fire flow requirements may impact other local users, the developer is responsible for paying for the impacts through their connection fees.

The construction of the on-site water lines and associated improvements will primarily include trenching for the pipelines. All construction will be performed in accordance with the Construction General Permit and all associated requirements. Any work that may affect services to the existing sewer lines will be coordinated with the City and MWD.

Furthermore, a Construction Management Plan or equivalent, which would ensure safe pedestrian access as well as emergency vehicle access and safe vehicle travel in general, will be implemented to reduce any temporary pedestrian and traffic impacts occurring as a result of construction activities. Moreover, when considering impacts resulting from the installation of any required water infrastructure, all impacts are of a relatively short-term duration

and would cease to occur once the installation is complete. Therefore, Project impacts on water associated with construction activities would be less than significant.

5. Appendices

Appendix A Sewer Demand Calculations
Appendix B OC San Sewer Verification Letter
Appendix C CCTV Storm Drain Exhibit – Fairview Development Center and Costa Mesa Country Club

APPENDIX A

SEWER DEMAND CALCULATIONS

Fairview SP - 4,000 Unit Alternative
Residential: 4,000 units
Commercial: 35,000-sqft

Description	number of residential units (du)	SF of amenities or retail/commercial	Average Daily Flow (gal/du/day)* or (gal/1000 sf/day)	unit flow rate (cfs/du)	commercial unit flow rate (cfs/sf)	average wastewater flow (cfs)	average wastewater flow (MGD)	peak wastewater flow (cfs) 2.5x avg.***	peak wastewater flow (MGD) 2.5x avg.***
Studio	33	-	150	0.000232	-	0.008	0.005	0.019	0.012
1 Bedroom Apt	1674	-	200	0.000309	-	0.518	0.335	1.295	0.837
2 Bedroom Apt	1634	-	250	0.000387	-	0.632	0.409	1.580	1.021
3 Bedroom Apt	619	-	300	0.000464	-	0.287	0.186	0.718	0.464
4 Bedroom Apt	40	-	300	0.000464	-	0.019	0.012	0.046	0.030
Commercial**	0	35000	150	-	2.321E-07	0.008	0.005	0.020	0.013
					Total	**1.472**	**0.951**	**3.680**	**2.378**

* Residential and Commercial per 2018 Los Angeles County Estimated Average Daily Sewage Flows for Various Occupancies
**Commercial: 100 gal per 1000 sq ft gross floor area
***Per 2018 Los Angeles County Estimated Average Daily Sewage Flows

	Existing Conditions			Conditions at 1/2 Capacity					Conditions at 3/4 Capacity					Proposed Conditions			
Existing (Ex) 18" Sewer on Harbor Blvd	**Ex Peak Flow (MGD)**	**Ex Peak Flow (cfs)**	**Ex Depth (in)**	**Allowable Depth (in)**	**Total Capacity at 1/2 full (cfs)**	**Available Capacity for Project Flows (cfs)**	**Total Capacity at 1/2 full (MGD)**	**Available Capacity for Project Flows (MGD)**	**Allowable Depth (in)**	**Total Capacity at 3/4 full (cfs)**	**Available Capacity for Project Flows (cfs)**	**Total Capacity at 3/4 full (MGD)**	**Available Capacity for Project Flows (MGD)**	**Existing + Proposed Q (cfs)**	**Existing + Proposed Q (MGD)**	**Calculated Proposed Depth (in)**	**Calculated Proposed % Full**
South MH (upstream)	1.545	2.390	6.83	9	3.97	1.580	2.566	1.021	13.5	7.32	4.930	3.186	1.641	6.070	3.923	11.731	65%
North MH (downstream	1.641	2.539	5.97	9	5.47	2.931	3.535	1.894	13.5	10.1	7.561	4.886	3.245	6.219	4.019	9.706	54%

APPENDIX B

OC SAN SEWER VERIFICATION LETTER

OC SAN
ORANGE COUNTY SANITATION DISTRICT
18480 Bandilier Circle
Fountain Valley, CA 92708
714.962.2411
www.ocsan.gov

ORANGE COUNTY SANITATION DISTRICT
SEWER CAPACITY VERIFICATION

Date: December 29, 2025

Property Address: 2501 Harbor Blvd, Costa Mesa, CA 92705

Assessor Parcel No: 420-012-16

In preparation for the development of the subject address, Sue Williams of Fuscoe Engineering, Inc. requested verification of capacity of the regional sewer system from the Orange County Sanitation District (OC San).

OC San has studied the impacts of Fuscoe Engineering, Inc.'s estimated wastewater discharge rate for the full build out of the Fairview Development Center Specific Plan as follows:

- Proposed Average Discharge Rate = 0.953 MGD
- Proposed Peak Discharge Rate = 2.383 MGD

I hereby certify that OC San has sufficient treatment capacity in its facilities to accept the provided, estimated wastewater flows from the subject property, as conveyed to OC San by the Costa Mesa Sanitary District (CMSD) municipal sanitary sewer system. When OC San Capital Facilities Capacity Charges are paid to the CMSD, this property will be subject to the design and construction of any necessary on-site collection facilities and the discharge of wastewater from the property will not result in a violation of the OC San's National Pollutant Discharge Elimination System permit requirements. Also, OC San would like to reevaluate the impacts to OC San facilities if the quantity and/or quality of discharge changes from the Fuscoe Engineering, Inc. estimates. This Verification Letter is given for information only and is not an approval to directly connect to OC San's sewer.

If you have any questions, please contact Adrian Siew, Planning Division, at (714) 593-7164.

Siew, Adrian

Digitally signed by Siew, Adrian
Date: 2025.12.29 10:22:50-08'00'

Adrian Siew, P.E.

Engineer, Planning Division

Serving:

Anaheim
Brea
Buena Park
Cypress
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
County of Orange
Costa Mesa Sanitary District
Midway City Sanitary District
Irvine Ranch Water District
Yorba Linda Water District

IRVINE
SAN DIEGO
ONTARIO
LOS ANGELES
SAN DIEGO DOWNTOWN



Memorandum

Date: November 21, 2025

To: Orange County Sanitation District (OCSD)

From: Fuscoe Engineering, Inc. Sue Williams, P.E.

Re: Fairview Developmental Center Specific Plan – Request For Sewer Capacity Assessment

Fuscoe Engineering, Inc is working with Placeworks and the City of Costa Mesa on the Fairview Development Center Specific Plan. The Fairview Development Center officially closed down several years ago and is undergoing a planning process to rezone under a Specific Plan for housing, including affordable. This memorandum serves as a formal request for confirmation of available downstream capacity within OCSD facilities.

SITE SETTING

The project site covers approximately 95 acres of the Fairview Development Center (FDC) at 2501 Harbor Boulevard in Costa Mesa. See attached Figure for reference of the project location. Wastewater from the project area enters the Costa Mesa Sanitary District (CMSD) system in Harbor Blvd (2-15" VCP to an 18" VCP) and then discharges northerly to OCSD via an 18-inch VCP sewer at CMSD manhole 114004, which is located on the south side of Baker Street just west of Harbor Boulevard.

EXISTING DEVELOPMENT

The FDC site was previously occupied and operational. At the time of OCSD's 2018 system wide capacity assessment the following conditions were documented:

- 250 resident patients
- 935 full time employees
- Approximately 73 structures on site with a total of about 810,000 SF. Assume approximately 25% were in use.

Seeing that the exact building use conditions are not documented, the most reliable method to estimate existing wastewater generation is to apply per-capita flow-based factors based on the number of patients and full-time employees. These values provide the best available basis for estimating existing wastewater generation on the site.

EXISITNG SEWER FLOW MONITORING

Two CSMD sewer manholes of the 18-inch sewer main in Harbor Boulevard were monitored for a 2-week period. The monitoring operations were conducted by Utility Systems, Science and Software (US3). The north manhole is located near Baker Street, upstream of the connection to OCSD. The south manhole is located just north of Mesa Verde Drive E.

The south manhole recorded the highest flow depth (6.83 inches) and was used as the basis for evaluating existing sewer capacity. The results of the monitoring are presented in the Table below.

Table 1 - Existing Conditions per Monitored Manholes (MH): 3/28/24 to 4/19/24

Man Hole (MH)	Location	Pipe Diameter (in)	Existing Peak Flow (MGD)	Existing Peak Flow (cfs)	Existing Peak Flow Depth (in)	Existing % Full
(Upstream) South MH #103191	Harbor BLVD ~280-ft N/O Mesa Verde Dr. E.	18	1.545	2.391	6.83	38
(Downstream) North MH #103213	Harbor Blvd ~125-ft S/O Baker St.	18	1.641	2.539	5.97	33

This monitoring provides context for existing conditions but will not replace OCSD's evaluation. It does support OCSD's review of whether downstream capacity is sufficient to accommodate the proposed project flows.

PROPOSED DEVELOPMENT

The proposed FDCSP is a specific plan that would allow for a residential and commercial mixed-use community. There are two land use alternatives being analyzed with varying numbers of dwelling units (DUs) and nonresidential square-feet (SF) as presented in the Table below:

Table 2 - Land Use Alternatives

Alternative Land Use Plans	Dwelling Units (Dus)	Commercial Space (SF)
Alternative 1	2,300	25,000
Alternative 2	4,000	35,000

PROPOSED WASTEWATER FLOWS GENERATION

For the process of developing wastewater generations, the following sewer generation factors provided by CMSD were applied:

Table 3 Sewer Generation Factors

Occupancy Type	Average Daily Flow	Units
Studio Apt/Condo	150	gal/DU
1 Bedroom Apt/Condo	200	gal/DU
2 Bedroom Apt/Condo	250	gal/DU
3+ Bedroom Apt/Condo	300	gal/DU
Commercial Space	150	gal/1,000 sq ft gross floor area

Using the sewer generation factors and peaking factor[1] of 2.5, provided by CMSD, the flows from the proposed project alternatives are estimated in Table 4. The project has the potential to generate 0.55 MGD to 0.95 MGD of average daily flows into the sewer system.

[1] Los Angeles County. 2018. Estimated average daily sewage flows for various occupancies. Found Here: https://pw.lacounty.gov/ldd/lddservices/sewerAreaStudy/sewerAreaStudy.shtml

Table 4 Projected Wastewater Generation

Alternative Land Use Plans	Description	Units or Commercial Space		Average Flow (MGD)	Peak Flow (MGD)	Peak Flow (cfs)
Alternative 1	Studio Apt/Condo	61	DU	0.009	0.023	0.035
	1 Bedroom Apt/Condo	944	DU	0.189	0.472	0.730
	2 Bedroom Apt/Condo	769	DU	0.192	0.481	0.744
	3 Bedroom Apt/Condo	516	DU	0.155	0.387	0.599
	4 Bedroom Apt/Condo	14	DU	0.004	0.011	0.016
	Commercial	25,000	SF	0.004	0.009	0.015
	Total Alternative 1 Flows			**0.553**	**1.382**	**2.139**
Alternative 2	Studio Apt/Condo	33	DU	0.005	0.012	0.019
	1 Bedroom Apt/Condo	1,678	DU	0.336	0.839	1.298
	2 Bedroom Apt/Condo	1,639	DU	0.410	1.024	1.585
	3 Bedroom Apt/Condo	619	DU	0.186	0.464	0.718
	4 Bedroom Apt/Condo	40	DU	0.012	0.030	0.046
	Commercial	35,000	SF	0.005	0.013	0.020
	Total Alternative 3 Flows			**0.953**	**2.383**	**3.687**

These numbers represent planning-level estimates provided to support OCSD's capacity evaluation and to confirm whether downstream improvements or connections will be required.

PHASING

The Fairview Developmental Center Specific Plan is anticipated to be implemented I multiple phases over several years. The current planning level schedule is as follows.

- Q4 2026 -Entitlement/CEQA Approval
- Q4 2027 - Selection of a Master Developer
- Q4 2028 - Site Plan Approvals
- Q4 2029 - Design and Permitting
- Q2 2032 - Phase 1 Completion
- Q4 2045 - Entire Project Completed

These dates represent the current expectations for implementation and may be refined as the project progresses. For consistency with long-range planning the wastewater generation values provided in this memo reflect full buildout conditions.

REQUEST

Fuscoe requests OCSD's review and confirmation of the following:

1. Downstream capacity at the receiving trunk line.
2. Verification of acceptable flow factors and methodologies used for estimating existing and proposed wastewater load.
3. Any connection requirements, conditions, modeling applicable to this development.

Thank you for your assistance!

FIGURE: SITE BOUNDARY MAP (Red Boundary)



APPENDIX C

CCTV Storm Drain Exhibit – Fairview Development Center and Costa Mesa Country Club

ORANGE COUNTY FLOOD CONTROL CHANNEL D4

CITY OF COSTA MESA COUNTRY CLUB

36"

24"

FAIRVIEW

STORM DRAIN SYSTEM

LEGEND

MANHOLE

CATCH BASIN/ROAD DRAIN

STORM DRAIN LINE

NOTE: THIS MANHOLE ON GOLFCOURSE,

SCALE 1" = 200'

NORTH SCALE 1" = 100'

DRAWN BY: D.H.G

DATE 7-4-81

HARBOR BLVD

MERRIMAC ST

PLANT OPERATIONS

GROUNDS SHOP

AUX. ELEC. SWITCH HOUSE

SHIPPING RECEIVING WAREHOUSE

MAIN KITCHEN

LAUNDRY

ADMIN

SCHOOL

NORTH SHELLEY CIRCLE

SOUTH SHELLEY CIRCLE

GREGORY WAY

PLEASANTS STATION

STAFF RESIDENCES

FAIR DRIVE

ACTIVITY CENTER

SWIM POOL

SHAMROCK MOUNTAIN