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CITY OF HERMOSA BEACH

Sewer Service Charges
Commencing Fiscal Year 2024/2025
ENGINEER'S REPORT

Submitted by: NV5
June 20, 2024

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This report has been prepared and submitted by Jeffrey M. Cooper, NV5.



Jeffrey M. Cooper, RCE 31572
June 20, 2024



INTRODUCTION

In order to effectively establish a capital improvement program to implement the needed wastewater system improvements, an equitable method of prioritizing projects must be established. In general, sewer facilities having the greatest degree of defects and deterioration at the present time will receive higher priority than those which are in better conditions.

In 1994, an Infrastructure Management Project Report, prepared by ITX, analyzed the City's sewer network and also recommended a rehabilitation program to address the immediate needs of the sewer network.

In 2008, considering the City's 85 years old sewer network of concrete and clay pipes, City embarked on the implementation of a Sanitary Sewer Master Plan that updated the Sewer portion of the Infrastructure Management Project Report prepared by ITX in 1994. Building on the work the City had completed through the undertaking of previous studies and projects, the Sewer Master Plan was prepared based upon newly collected data from the 2008 Closed Circuit TV (CCTV) inspection of the entire sewer system. This Sewer Master Plan, dated April 2009 and revised March 2011, listed the existing defects and deficiencies and identified projects for improvements for a 10 year program. At the end of a ten-year rehabilitation program, CCTV inspection of the entire sewer system is typically recommended for monitoring any remaining or newly developed physical deterioration and maintenance problems. This would allow the City to continue with development and implementation of a cost effective rehabilitation program that will insure the long-term integrity of the sewer system and service to the community.

The City considered bonding for needed sewer improvements, however has decided to adopt a pay-as-you-go method to pay for addressing major repairs and rehabilitation of the sewer system based on the priority set in the Sewer Master plan. In support of this endeavor, the City updated their Sewer Master Plan in 2017.

The 2017 Sewer Master Plan identified 9.76 miles of sewer (out of 37 miles total) that were in need of improvements at that time – with an estimated cost of \$14.4 million (in 2017 dollars). At the current pace, the City is on track to complete the remaining sewer improvements within approximately 10 years. This timeline is a function of Public Works staffing and funding levels and has allowed staff to address priority repairs.

It is common for sewer master plans to be updated every 10 years or so, as the system continues to age and deteriorate independent of repair schedule. Staff intends to submit a new CIP request in FY 2026/27 to update the master plan, which is estimated to cost approximately \$300,000 and is expected to result in a revised list of priorities.

SUMMARY AND RECOMMENDATIONS

As was previously stated, the City has undertaken rehabilitation work of its sewer system based on programs outlined in previous studies that recommended the City to plan for the eventual replacement of the entire sanitary sewer system. City is estimated to currently have 194,000 lineal feet of sanitary sewer pipes, 880 sewer manholes, one (1) main wastewater pump station and three (3) small beach restroom pumps.

In 2008, Closed Circuit TV (CCTV) inspection of the entire sewer system, that was accessible, was completed and prioritized for repair in the 2009 Sewer Master Plan. Of the 194,000 lineal feet of sanitary sewer pipes in the system, 38,000 lineal feet of sewer pipes were not accessible by CCTV due to obstructions. These pipes are likely to be badly deteriorated considering their age and limited accessibility for routine maintenance. Therefore, these pipes are considered a priority for rehabilitation and repair.



The projected revenue for FY 24-25 is approximately \$1,290,000 based on the new ESU cost, this represents an increase in revenue of approximately 2% from the previous fiscal year.

Again in 2016-2017, CCTV was conducted for the entire sewer system in conjunction with the latest 2017 Master Plan. The current Master Plan recommends over \$14.4 million in improvements over the next ten years.

This Engineer’s Report (“Report”) has been prepared for the City of Hermosa Beach commencing in Fiscal Year 2015/2016 and consists for four (4) parts:

PART A – PLANS AND SPECIFICATIONS

Contains a summary of the improvements within the City to be maintained and the proposed services and activities to be funded by the sewer services charges.

PART B – ESTIMATE OF COST

Identifies the estimated cost of the services and/or maintenance to be provided by the City, including annual service and maintenance expenses; debt service for capital outlays, repairs, rehabilitation or replacement of equipment or facilities; as well as operational and incidental costs and expenses in connection therewith.

PART C – CHARGE CALCULATION AND PROPOSED CHARGES

Outlines the basis on which the annual charges will be calculated for each parcel within the City.

PART D – BOUNDARY DIAGRAM

Contains a Diagram showing the exterior boundaries of the territory within the City of Hermosa Beach subject to annual sewer services charges, which is coterminous with the boundaries of the City of Hermosa Beach. Parcel identification, the lines and dimensions of each lot, parcel and subdivision of land within proposed sewer services boundary described herein are identified and correspond to the Los Angeles County Assessor's Parcel Maps for said parcels as they existed at the time this Report was prepared and shall include all subsequent subdivisions, lot-line adjustments or parcel changes therein. Reference is hereby made to the Los Angeles County Assessor's maps for a detailed description of the lines and dimensions of each lot and parcel of land within the City of Hermosa Beach and subject to the proposed annual sewer services charges to be levied on behalf of the City.

PART A – PLANS AND SPECIFICATIONS

CITY SEWER IMPROVEMENTS¹

The sewer improvements within the City of Hermosa Beach for which the City proposes to be responsible for maintenance and operation of the sewer system as well as levy and collect charges to maintain such improvements, includes, but is not limited to, and may be generally described as follows:

- Approximately 194,000 feet of main sewer lines consisting of the following:
 - 28,868 linear feet (LF) of 6" sewer lines;
 - 149,993 linear feet (LF) of 8" sewer lines;
 - 4,204 linear feet (LF) of 10" sewer lines;
 - 5,071 linear feet (LF) of 12" sewer lines;
 - 1,254 linear feet (LF) of 15" sewer lines;
 - 1,150 linear feet (LF) of 18" sewer lines;
 - 805 linear feet (LF) of 21" sewer lines; and
 - 2,655 linear feet (LF) of 24" sewer lines.
- 880 Sewer Manholes
- Four Lift/Pump station: 394 – 21 inch and 2,629 – 24 inch
 - Three (3) Beach restroom pumps
 - The Strand - 34th

The historical plans and specifications for the city-owned sewer improvements are incorporated and contained in the sewer construction plans and specifications for the various sewer segments of the sewer system within the City of Hermosa Beach. These plans and specifications are voluminous and are not bound in this report but by this reference are incorporated and made a part of this report. The specific plans and specifications for the city-owned sewer improvements are on file in Public Works at the City.

OPERATIONS, MAINTENANCE AND SERVICES

The City of Hermosa Beach proposes to collect funds to cover the expenses for the overall operation, maintenance and servicing of the city-owned sewer system as well as funds that may be necessary to pay for capital outlay expenditures including repairs, rehabilitation or replacement of equipment or facilities. The following is a summary of the services and activities associated with the maintenance, operation, servicing and capital outlay expenditures for the City's sewer system. The frequency, extent and/or level of the services and activities identified below may be modified based on available funding and priorities as determined by the City:

Preventive Maintenance

One of the City's primary objectives for assuming responsibility and management of the operation and maintenance of the City's sewer system is to provide a cost-effective and efficient program that will ensure the integrity and long term stability of the sewer system. This is best accomplished by implementing a preventive maintenance program that addresses the entire sewer system. This preventive maintenance should include, but is not limited to, regular inspection of the sewer manholes, pipes, siphons, pump stations and related facilities as well as regular cleaning, repair, and related activities as warranted. These activities are intended to detect and correct potential problems

¹ Information from the City of Hermosa Beach Master Plan.

before they develop into major problems. The following is a general summary of those preventive maintenance activities.

- Sewer Line and Manhole Inspection - The interior and exterior of manholes to be inspected (at least once a year) for any structural defects, sewage flow condition, presence of vermin or rodents, deleterious industrial waste, odors, and any signs of unusual settlement around or evidence of debris within the manholes and along sewer alignments.
- Sewer Line Cleaning - Sewer lines will be videoed and cleaned by hydro jet or rodding as needed based on a scheduled that ensures each sewer line is addressed at least every three-five years. The actual frequency of cleaning may vary based on inspection records. Sewer lines known to cumulate grease, garbage grinds, or sand may be addressed more frequency with possible monthly, quarterly, or semi-annual cleaning schedule. Those areas prone to root growth may be periodically rodded or chemically treated.
- Sewage Pump Stations - All pump stations are equipped with telemetry/alarm systems and will be inspected at least once a week. Pumps and motors will be inspected and lubricated, control mechanisms and valves will be checked and adjusted as necessary. Pump station equipment will be repaired or modified as required.
- Gas Trap Manholes and Siphons - Inspected and cleared of any stoppages or flow restrictions on a monthly basis.
- Drop Manholes - Inspected and cleared of stoppages and flow restrictions on variable frequencies based on prior inspection records.
- Vermin and Rodent Control - On an as-needed basis, sewers infested by insects will be chemically treated, and those infested by rodents will be baited.

Capital Outlay, Rehabilitation and Replacement

The City has adopted a pay-as-you-go method to pay for addressing major repairs and rehabilitation of the sewer system on a priority basis. However, in addition the City plans to develop and implement a long-term replacement and refurbishment program that will ensure not only the short term integrity of the sewer system, but also the long-term integrity and continue service to the community. As the city's sewer collection system ages, the risk of failure will ultimately increase due to deterioration, collapse, blockage, excessive inflow and infiltration, overflow, and other potential service interruptions. Therefore, while the scheduling of major repairs, rehabilitation projects and replacement projects will ultimately be implemented based on available funding, highest priority will be given to structural deficiency. However, by developing a long-term replacement and refurbishment program with the goal of eventually addressing the entire system, the City may also address hydraulic deficiency in addition to the structural deficiency.

Sewer System Management

- Mapping - As-built plans of the sewer facilities will be maintained by the City. Data on the plans, such as system locations and alignment, pipe material, size, etc., will be maintained and stored electronically by the City. These maps will be available and utilized by the field crews for work scheduling and responding to emergencies, and will be updated to reflect any changes in the system.

- Work Scheduling - Field crew activities will be recorded and tracked by the City utilizing various forms including, but not limited to service requests, cleaning reports, sewer maintenance daily reports, overflow reports forms, project work orders, etc.

Revenue and Expenditures

The City collects an average of approximately \$1.2 million annually from the sewer fee. Since 2015, the City has spent approximately \$415,000-\$630,000 on average for operations/maintenance – including emergency repairs, contracted services for cleaning and video inspections, and personnel. The remainder of the funds are then primarily used to advance design/construction of the recommendations outlined in the Sewer Master Plan.

In fiscal year (FY) 2023-24, the City utilized an estimated \$630,000 for operations and maintenance on the City's sewer system. In FY 2024-25, the City will complete CIP 421- Annual Sewer Improvements Phase 2, which will include sewer replacement and other point repairs at an estimated cost of approximately \$3.5 million.

PART B – ESTIMATED COST OF THE IMPROVEMENTS

The net amount to be charged on the lots or parcels within the City is based on an initial estimate of the annual cost and expenses for the maintenance, operation, servicing of the City's existing sewer system improvements as well as the funding deemed appropriate and necessary for future capital improvements and reserves (Replacement funding). It was originally estimated that sewer capital improvements are needed at \$14.4 million for the current planning period.

USE OF REVENUE	
O & M/year (range)	\$500,000 - \$650,000
Available for Improvement Financing / Year	\$675,000 - \$800,000
\$ Charge/1 ESU (Single Family Resident)	\$139.58/year*

*Rate shown is the 2023-2024 rate.

PART C –CHARGE CALCULATION AND PROPOSED CHARGES

The sewer service charge for 2024/2025 is being reestablished by the City. The charge multiplied by the Equivalent Sewer Units assigned to each parcel will be the charge for each parcel. The Equivalent Sewer Unit (ESU) determination for each parcel is described below.

LAND USE	ESU
Single Family	1.0
Condominiums	1.0
Multi Family	0.6

Sewage Generation Factors

The City of Hermosa Beach updated their sanitary sewer master plan in April 2009, March 2011, and again in June 2017.

A numeric relationship between the various lots and parcels is necessary for the allocation of the costs of sewer maintenance among the lots and parcels. It is customary to relate the various land uses to the single family residential lot which is established as one Equivalent Sewage Unit (ESU), and all other lots and parcels are related proportionally to the single family residential lot. Based on sewage generation rates, a typical single family lot generates 260 gallons per day in Los Angeles County². Therefore, for purposes of comparison of the various land uses for lots and parcels, 260 gallons per day is designated as the equivalent of 1 ESU.

Non-residential Land Uses

The ESU for various non-residential land uses is calculated by the following equation:

$$ESU = [\text{Commercial Water Consumption GPD}]/260 \text{ GPD per SFRU}$$

Single family residential units will be charge at 1.0 ESU per parcel, the multi-family residential parcels will be charged at 0.6 ESU per residential unit in the parcel and condominiums at 1.0 ESU per parcel as they are similar to single family residents in use. For the non-residential, it was allocated by water consumption values for all of Hermosa Beach from information provided by California Water Services Company annually. Vacant parcels of any use are charged 0.5 ESU.

²West Hollywood Sewer Charge Report.

Government Facilities and Parcels

There are several parcels that receive sewer service that are owned and operated by local government. Proposition 218 requires that each parcel not pay more than the proportional cost of providing the service. Therefore, because these government parcels use the sewer service, they are included in the computation of the charge and are charged.

CALCULATION OF THE CHARGE

The sewer service charge is based on the direct cost of providing the service. These costs include staff, rent, utilities, and other costs as needed for sewer repair and improvements as described earlier in this report.

The following table shows the percentage increase of the sewer service charge each year since inception:

CONSUMER PRICE INDEX		
Los Angeles Urban Wage Earners and Clerical Workers (CPI-W)		
Year Ending	Percent Change	Actual Increase
MARCH 2016	1.7	1.7
FEBRUARY 2017	2.5	2
JANUARY 2018	3.7	2
JANUARY 2019	2.9	2
JANUARY 2020	3.5	2
JANUARY 2021	1.1	0
JANUARY 2022	7.6	5
JANUARY 2023	5.8	5
JANUARY 2024	2	2

For fiscal year 2024-2025, it is proposed that a not-to-exceed CPI increase of 2% be approved. The new charge for fiscal year 2024-2025 is \$142.37/ESU. The projected increase in revenue for fiscal year 2024-2025 is approximately 2% from fiscal year 2023-2024.

Due to the pandemic, staff did not move forward with reinstating the five-year term for applying the CPI to the fee in FY 2021-22. The above table details the CPI since 2016, and the annual increases that have been applied each year. With the exception of 2016, the annual increase has lagged behind actual CPI, but has helped the sewer fee keep up with corresponding rises in construction cost due to inflation and supply chain disruptions. This year’s CPI is 2%.

ANNUAL INCREASES

Because the costs of providing the sewer service may increase over time, beginning July 1, 2023 and each July thereafter, the charge per ESU established in 2022-2023 shall be increased by the annual increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers in the Los Angeles-Long Beach-Anaheim (this used to be referred to as Los Angeles-Riverside-Orange County, it is a continuous index linked to the previous index), CA Area (CPI), including all items as published by the US Bureau of Labor Statistics as of January 1 of each year, not to exceed five percent (5%) per year. The annual increases can only be authorized for a five year period. To increase the charge after the initial five year period, would require a new Proposition 218 hearing.

PROPOSITION 218 CONSIDERATIONS

Proposition 218, which the voters of the State of California passed on November 5, 1996, contains requirements for the imposition of a fee or charge for property related services. Requirements for fees and charges are contained in Section 6 of Article XIII D.

Paragraph (b) describes the requirements for new, existing, or increased fees and charges, as:

- (1) Revenues shall not exceed the funds required to provide the service.
- (2) Revenues shall not be used for any other purpose.
- (3) The amount of the fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.
- (4) No fee or charge may be imposed unless the services is actually used by or immediately available to the owner of the property in question.
- (5) No fee or charge shall be imposed for general governmental services, i.e., police, ambulance, library, where the service is available to the public at large in substantially the same manner as it is to the property owners.

This report and recommended charges complies with all five of these requirements.

1. Revenues generated by this charge will not exceed funds required to provide sewer services and shall not be used for any other purpose, besides what has been described herein.
2. The sewer charge is the proportional cost of provided service to the parcels in the City and the charge is for actual use or is immediately available to the property in question.

Due to the number of parcels in the City of Hermosa Beach that will be subject to the Sewer Service Charge, the Parcel Charges (a listing of the Assessor's Parcel Numbers to be levied the proposed charge amounts) is not contained in this Report, but will be filed with the City Clerk in an electronic format prior to the public hearing regarding the levy and collection of the charges for Fiscal 2024/2025. The proposed Parcel Charge Roll, after being filed with the City Clerk, shall be available for public inspection in the City Clerk's Office during normal business office hours. However, the following tables provide a summary of the estimated ESUs by land use anticipated for Fiscal Year 2024/2025, per the County's assigned land use classification of each parcel within the City that was available at the time this Report was prepared.

EXAMPLES OF ESUs BY LAND USE - Residential

Residential Parcel Breakdown by Land Use			
Parcel Co	Land Use Description	Total Parcels	Total ESU's
0100	1 Unit	2877	2879.6
0101	1 Unit, Pool	81	81
0103	1 Unit, Pool and Misc.	34	34
0104	1 Unit, Therapy Pool	165	165
0106	1 Unit	2	4
0107	1 Unit	1	1
0108	1 Unit	9	9.2
0109	1 Unit, Other Improvements	8	8
010C	1 Unit, Condominium	1567	1567
010D	1 Unit, Planned Community	102	101
010E	1 Unit, Condo Conversion	103	103
010V	Vacant Residential	65	32.5
0110	High Value Residence	46	46
0111	High Value Residence with Pool	5	5
0113	High Value Residence with Pool and misc	2	2
0114	High Value Residence with Therapy Pool (spa)	2	2
0120	1 Unit, Townhouse	1	1
012C	Condominium - Townhouse	29	29
01DC	1 Unit, Condominium	75	75
0200	2 Units, 1-4 Stories	818	1174
0201	2 Units, 1-4 Stories, Pool	6	8
0202	2 Units, 1-4 Stories, Pool	1	2
0203	2 Units, Therapy Pool	1	2
020C	1-4 Units, Condominium	1	2
020V	2 Units, Vacant	1	0.5
0300	3 Units, 1-4 Stories	150	268.8
0400	4 Units, 1-4 Stories	152	364.8
0500	5+ Units, 1-4 Stories	159	790.2
0501	5+ Units, 1-4 Stories, Pool	7	379.8
0900	Mobile Home Park	3	48.6

Total Parcels	6,473
Total ESU's	8,186.0

EXAMPLES OF ESUs BY LAND USE - Non-Residential

Non-Residential Parcel Breakdown by Land Use			
Parcel Code	Land Use Description	Total Parcels	Total ESU's
100V	COMMERCIAL	21	10.12
1010	MISCELLANEOUS COMMERCIAL	2	0.00
1100	STORES	85	141.56
1102	STORES	2	15.73
110C	STORE COMBINATION	4	0.18
1200	STORE COMBINATION	18	25.14
1210	STORE COMBINATION	30	54.39
1212	STORE COMBINATION	2	10.30
1340	DEPARTMENT STORES	1	0.00
1400	SUPERMARKETS	1	25.80
1420	SUPERMARKETS	2	1.26
1500	SHOPPING CENTERS (NEIGHBORHOOD, COMMUNITY)	10	101.24
1700	OFFICE BUILDINGS	23	10.03
1702	OFFICE BUILDINGS	4	1.02
1703	OFFICE BUILDINGS	5	6.41
170C	OFFICE BUILDINGS	104	21.57
1720	OFFICE BUILDINGS, RESIDENTIAL	1	0.00
17T0	OFFICE BUILDINGS	1	1.25
1800	HOTELS & MOTELS	1	6.24
1810	HOTELS & MOTELS	1	7.66
181C	HOTELS & MOTELS	102	42.89
1820	HOTELS & MOTELS	2	9.31
1830	HOTELS & MOTELS	3	54.99
1900	PROFESSIONAL BUILDINGS	3	1.74
1902	PROFESSIONAL BUILDINGS	1	2.59
1910	PROFESSIONAL BUILDINGS	3	0.97
1920	PROFESSIONAL BUILDINGS	1	1.12
2100	RESTAURANTS, COCKTAIL LOUNGES	26	93.43
2102	RESTAURANTS, COCKTAIL LOUNGES	1	7.61
2110	RESTAURANTS, COCKTAIL LOUNGES	2	4.45
2120	RESTAURANTS, COCKTAIL LOUNGES	1	1.29
2300	BANKS SAVINGS & LOAN	4	12.63
2500	SERVICE STATIONS	2	1.33
2600	AUTO, RECREATION EQPT, CONSTRUCTION EQPT, SALES & SERVICE	26	10.78
2610	USED CAR SALES	1	0.00
2630	AUTO, RECREATION EQPT, CONSTRUCTION EQPT, SALES & SERVICE	1	1.61
2670	AUTO, RECREATION EQPT, CONSTRUCTION EQPT, SALES & SERVICE	1	0.86
2700	PARKING LOTS	47	2.54
270V	PARKING LOTS VACANT	1	0.50
300V	INDUSTRIAL VACANT	4	2.00
300X	INDUSTRIAL	1	0.00
3100	LGT MANF.SM.EQPT.MANUF SM.SHPS INSTR. PRNT PLNTS	24	6.10
3300	WAREHOUSE, DISTRIBUTOR, UNDER 10,000 SF	2	0.34
3350	PUBLIC STORAGE, MINI-WAREHOUSE	1	0.00
6400	CLUBS, LODGE HALLS, FRATERNAL ORGANIZATIONS	2	4.14
7100	CHURCHES	8	6.04
7110	CHURCH PARKING LOT	5	0.00
7200	SCHOOLS (PRIVATE)	4	1.96
7400	HOSPITALS	2	17.74
7500	HOMES FOR AGED & OTHERS	1	0.35
8100	UTILITY COMMERCIAL AND MUTUAL: PUMPING PLANTS STATE ASSESSED PR	14	95.69
8500	RIGHT OF WAY	2	0.00
8800	GOVERNMENT PARCEL	39	31.45
880V	VACANT LAND, GOVERNMENT OWNED	2	0.00
8814	SEWER UTILITIES	1	0.00
8833	GOVERNMENT PARCEL	1	13.82
8841	GOVERNMENT PARCEL	19	0.11
Total Parcels		678	
Total ESU's			870.28

PART D – BOUNDARY DIAGRAM

The parcels within the Sewer Service Charge Area consist of all lots, parcels and subdivisions of land within the City of Hermosa Beach. A copy of the Boundary Diagram is provided below.



CITY OF HERMOSA BEACH BOUNDARY DIAGRAM



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