



**MEMORANDUM**  
**DEPARTMENT OF PUBLIC WORKS**  
**ENVIRONMENTAL ENGINEERING DIVISION**  
County of Placer

TO: Board of Supervisors DATE: February 26, 2019  
FROM: Ken Grehm, Director of Public Works  
By: Robin Mahoney, P.E., Senior Civil Engineer  
SUBJECT: Environmental Engineering / Ordinance Amending Placer County Code Chapter 13, Article 13.12, Sewer Service System

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**ACTION REQUESTED**

1. Conduct a Public Hearing and adopt an Ordinance amending Placer County Code Chapter 13, Article 13.12, Sewer Service System.
2. Approve the SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum.
3. Approve the SMD1 Capacity Fee Implementation Guide.

**BACKGROUND**

As part of the ongoing treatment regionalization of the County's sewer systems in 2015, the County completed the Mid-Western Regional Sewer Project that allowed the wastewater from approximately 8,300 Equivalent Dwelling Units (EDUs) collected in Sewer Maintenance District No. 1 (SMD 1) to be conveyed and treated by the City of Lincoln (Lincoln). The ordinance changes being proposed are, in part, to be consistent with the operation agreement with Lincoln.

Chapter 13, Article 13.12 of the Placer County Code (Sewer Ordinance) defines County standards, rates, regulations, and requirements regarding the publicly-owned sewer system within unincorporated Placer County. The Sewer Ordinance applies to the collection, treatment, and disposal of sewage in all of the nine current Sewer Maintenance Districts (SMDs) and County Service Areas (CSAs) under the jurisdiction of your Board.

Staff is proposing amendments to the Sewer Ordinance to:

- Establish an Active Adult residential use category at 0.714 equivalent dwelling unit (EDU) per single family residence.
- Align the commercial EDU calculation with our regional partners.
- Establish the SMD 1 collection system District Capacity Fee reimbursement program.
- Correct minor errors and code references.

Staff recommends that your Board adopt the proposed Sewer Ordinance revisions as described in greater detail below.

The following two proposed Sewer Ordinance revisions apply to SMD 1 (North Auburn), CSA 6 (Sheridan), and CSA 23 (Blue Canyon).

Establish an Active Adult Residential Use Category

In order to be consistent with the Lincoln fee structure and industry standards which show Active Adult communities generate lower sewer flow, staff is proposing a new category of residential use for "Active Adult Residential" at 0.714 EDU per single family residence. In order to qualify for this designation, the project must provide recorded documentation approved by the Director of Public Works, or designee, in which all, or a portion, of the residences are age restricted to persons who are 55 years of age or older.

Align the Commercial EDU Calculation with Regional Partners

Staff is proposing to calculate commercial EDUs based upon building square footage and usage, in accordance with the County's regional partners and to be consistent with the County's other SMDs



and CSAs. Currently, commercial EDUs are calculated on the number and type of plumbing fixtures. Existing commercial customers would be grandfathered in, such that unless there is an intensification to the usage of the property, no additional connection or operation and maintenance fees would be due.

The following proposed Sewer Ordinance revision applies specifically to SMD 1 in North Auburn. The current SMD 1 reimbursement program allows projects that have constructed capacity improvements to be reimbursed from future projects that are: 1) directly upstream of the improvements, and 2) implemented within 15 years of project completion. This often results in limited payback to the original project.

#### Establish the District Capacity Fee Reimbursement Program for SMD 1

In order to more equitably spread the cost of expanding capacity, staff performed an analysis to identify the infrastructure needed to be upsized over the next 30 years and spread the cost over all anticipated growth for the same time period. Staff proposes funding \$1,000,000 from SMD 1 reserves collected for the purpose of capacity expansion to account for existing deficiencies in the SMD 1 collection system. The attached SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum details this information. This analysis will be re-evaluated periodically and the SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum will be updated, subject to approval from your Board. The attached SMD1 Capacity Fee Implementation Guide is the administrative procedure for requesting and approving reimbursement.

The current SMD 1 connection fee is \$8,057 per EDU. Pursuant to the analysis, staff is proposing a reimbursement program that would designate \$4,429 per EDU to reimburse projects for costs beyond their proportionate share that increase the capacity of the sewer collection system. The remaining \$3,628 per EDU would be utilized to fund the purchase of treatment capacity from Lincoln.

The following proposed Sewer Ordinance revision applies to all sewer SMDs and CSAs.

#### Correct Minor Errors and Update Code References

Staff is proposing the correction of minor errors that have been noted in the current Sewer Ordinance. Additionally, and due to changes requested herein, some of the code references will be updated.

### **ENVIRONMENTAL IMPACT**

The proposed Ordinance revisions do not constitute a "Project" under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines sections 15378(a) and (b)(5) because it is an administrative action that does not result in any direct or physical change in the environment and are, therefore, exempt from environmental review.

### **FISCAL IMPACT**

Staff estimates that the creation of the Active Adult category would result in reduced connection and operations and maintenance (O&M) fee revenue over time which will be offset by reduced O&M costs associated with the lower flows from these units. Staff estimates a negligible net change in revenue from connection and O&M fees associated with the commercial EDU calculation change. The new reimbursement program would utilize \$1,000,000 in SMD 1 reserve funds previously collected specifically for capacity expansion to address existing capacity deficiencies, and future costs will be funded solely by future connection fees. There is no fiscal impact associated with the delineation of components of the existing sewer connection fee or cleanup of minor errors and updating code references.

### **ATTACHMENTS**

Ordinance  
SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum  
SMD1 Capacity Fee Implementation Guide

# Before the Board of Supervisors County of Placer, State of California

**In the matter of:** An Ordinance amending Placer  
County Code Chapter 13, Article 13.12, Sewer  
Service System

Ordinance No.: \_\_\_\_\_

Introduced: \_\_\_\_\_

The following Ordinance was duly passed by the Board of Supervisors of the County of Placer at a  
regular meeting held \_\_\_\_\_, by the following vote on roll call:

Ayes:

Noes:

Absent:

Signed and approved by me after its passage.

\_\_\_\_\_  
Chair, Board of Supervisors

Attest:

\_\_\_\_\_  
Clerk of said Board

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THE BOARD OF SUPERVISORS OF THE COUNTY OF PLACER, STATE OF CALIFORNIA,  
DOES HEREBY ORDAIN AS FOLLOWS:

**Section 1:** Definitions of Section 13.12.010 of Chapter 13 of the Placer County Code are  
hereby amended to read as follows:

**"Active Adult Residential" means a residential development with recorded  
documentation approved by the engineer in which all, or a portion, of the residences are  
age-restricted to persons who are fifty five (55) years of age or older.**



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"Connection fee" means the fee paid at the time an application is made for connection to the sewage system of a district to provide for the impact of the connection on the existing capacity of the sewage treatment and collection facilities of the district.

**Section 2:** Subsection (D) of Section 13.12.200 Permit Required of Chapter 13 of the Placer County Code is hereby amended to read as follows:

D. **No** ~~C~~change of use, expansion of an existing use, or increase in wastewater flow or strength shall be undertaken until the user has applied for and obtained a revised connection permit, and paid any additional connection fee therefor. No change of use or decrease in wastewater flow or strength shall entitle any user to a refund of connection fees previously paid.

**Section 3:** Subsections (A), (B), (C), (D), (E) and (F) of Section 13.12.230 Responsibility of the property owner for construction of collecting system sewer and other improvements—Reimbursement of Chapter 13 of the Placer County Code are hereby amended to read as follows:

13.12.230 Responsibility of the property owner for construction of ~~collecting system~~ sewer and other improvements—Reimbursement.

A. **New Construction**

1. ~~As a condition of a parcel of property being provided with sewer service, **public sewer improvements** a collecting system sewer shall be required along the entire frontage of the parcel of property, which will receive sewer service, unless otherwise approved by the engineer.~~

B2. A property owner who, in order to connect to the sewer system, must install **public sewer improvements** ~~a collecting system sewer~~ across any parcel of property owned by other parties in order to provide service to his or her property may enter into a reimbursement agreement with the county. The reimbursement agreement shall provide for repayment of a portion of the costs of construction ~~from in-lieu fees~~. Only those costs which directly pertain to the construction of the **public sewer improvements** ~~collecting sewer system~~ across parcels of property owned by other parties shall be subject to reimbursement.

C3. Any reimbursement agreement entered into pursuant to subsection B ~~(A)(2)~~ of this section shall specify that reimbursement shall be made solely from ~~in-lieu fees~~ collected by the county pursuant to Section 13.12.360(B)(2) to the extent the county is lawfully able to do so, and shall be without interest. Reimbursement may be limited by the county to those fees which are collected over the **thirty (30)** ~~fifteen (15)~~ year period commencing on the date of execution of the reimbursement agreement. ~~The engineer shall have the authority to extend reimbursement agreements in effect as of July 1, 2010 by five additional years, for a total reimbursement period not to exceed fifteen (15) years.~~ The engineer shall have authority to enter into reimbursement agreements when the total amount of reimbursement is less than fifty thousand dollars (\$50,000.00). When the total amount of reimbursement is fifty thousand dollars (\$50,000.00) or more, the reimbursement agreement shall be approved by the board of supervisors.

D4. A property owner who, in order to connect to the district sewer system, must construct a sewage lift station, **force main**, trunk sewer or other **public sewer improvements** which will serve other parcels of property not owned by the property owner constructing the improvements may enter into a reimbursement agreement with the county. The reimbursement agreement shall provide for repayment of only that portion of the costs of construction which is proportionate to the benefit being provided to parcels of property owned by other parties.

E5. Any reimbursement agreement entered into pursuant to subsection D4 of this section shall specify that reimbursement shall be made solely from fees collected by the county



**from properties benefiting from sewer improvements** pursuant to Section 13.12.360(C), to the extent the county is lawfully able to do so, and shall be without interest. Reimbursement may be limited by the county to those fees which are collected over the **thirty (30) fifteen (15)** year period commencing on the date of execution of the reimbursement agreement. ~~The Engineer shall have the authority to extend reimbursement agreements in effect as of July 1, 2010 by five additional years, for a period not to exceed fifteen (15) years.~~ The engineer shall have authority to enter into reimbursement agreements when the total amount of reimbursement is less than fifty thousand dollars (\$50,000.00). When the total amount of reimbursement is fifty thousand dollars (\$50,000.00) or more, the reimbursement agreement shall be approved by the board of supervisors.

**FB. Temporary Facilities** Any temporary facilities required to serve a parcel of property shall be constructed at the sole expense of the property owner. (Ord. 5605-B § 1, 2010; Ord. 5059-B § 18, 2000; prior code § 18.25)

**C. District Capacity Fee Agreements (DCFA) – SMD 1 Capacity Increases**

**1. When required as a condition of project approval for a developer to modify or replace existing sewer infrastructure identified in the SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum to increase sewer capacity, the developer is responsible for all construction costs and, under the conditions delineated in the SMD1 Capacity Fee Implementation Guide, is eligible for reimbursement for specified costs as determined by the engineer on a case-by-case basis. The SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum will be updated periodically based upon eligible sewer upsizing projects that are newly identified and for which the cost has been incorporated into the district capacity fee.**

**a. Excluded for reimbursement through the district capacity fee, including but not limited to, are the following:**

- i. Upsizing or replacement of force main piping,**
- ii. Upsizing or replacement of low pressure piping,**
- iii. New infrastructure, and**
- iv. Relocated infrastructure that does not increase capacity.**

**2. All DCFAs described herein are subject to approval by the board.**

**3. DCFAs must meet all requirements as delineated in the SMD1 Capacity Fee Implementation Guide.**

**Section 4:** Subsections (D), (E), (F), (G) and (H) of Section 13.12.240 Charges of Chapter 13 of the Placer County Code are hereby amended to read as follows:

D. For the purpose of calculating the amount of the connection fee and the sewer service charge for a property, except for properties within sewer maintenance district No. 2, **sewer maintenance district No. 3**, and county service area No. 28, zone of benefit Nos. 2-3A and 55, the quantity of sewage flow from the various types of establishments shall be conclusively presumed to be as follows:

**1. Residential Facilities**

<b>a. Single Family Dwelling (SFD)</b>	<b>1 EDU</b>
<b>b. Duplex (per living unit)</b>	<b>0.771 EDUs</b>
<b>c. Multiple Family Housing (per living unit)</b>	<b>0.714 EDUs</b>
<b>d. Mobile Home Park (per space)</b>	<b>0.714 EDUs</b>
<b>e. Active Adult Residential (per SFD)</b>	<b>0.714 EDUs</b>
<b>f. Hotel/Motel – per living unit w/ kitchen</b>	<b>1.0 EDUs</b>
<b>g. Hotel/Motel – per living unit w/out kitchen</b>	<b>0.5 EDUs</b>



2. Commercial/Industrial Business Use – Low Strength/Low Quantity: (1) Strength less than 300 mg/l BOD and/or suspended solids, and (2) quantity of less than 25,000 gallons per day.

a. Low Density – 1 EDU per 6,000 square feet or fraction thereof;

i. Warehouses

ii. Churches or meeting hall without kitchen

iii. Low usage retail, e.g., hardware, appliance, furniture

b. Medium Density – 1 EDU per 3,000 square feet or fraction thereof;

i. Theaters

ii. Offices

iii. Auditoriums, halls, churches with kitchens, and lodges

iv. Retail stores

v. Schools (without cafeterias or gymnasiums)

vi. Banks and financial offices

vii. Bowling/entertainment centers (without kitchens)

c. High Density – 1 EDU per 1,500 square feet or fraction thereof;

i. Barber/beauty shops (with sinks)

ii. Bars, Coffee Shops, Ice Cream/Yogurt Shops, Delis, etc., that do not have

Cooking Facilities

iii. Medical/dental offices

iv. Schools (with cafeterias or gymnasiums)

v. Service Stations

vi. Sports/fitness centers

vii. Seasonal, uncovered outdoor seating

d. Special Commercial Uses:

i. Carwashes – per automatic washing stall 8.0 EDUs

ii. Carwashes – per self-service stall 2.0 EDUs

iii. Laundromats – per washing machine 0.67 EDUs

iv. Markets (without disposal) – 1 EDU per 1,500 sf or fraction

v. Markets (with disposals) – 1 EDU per 500 sf or fraction

vi. Restaurants, bakeries, cafes – 1 EDU per 500 sf or fraction

vii. Year Round Outdoor Seating – 1 EDU per 500 sf or fraction

viii. Mortuaries – 1 EDU per 500 sf or fraction

ix. Hospitals – per bed 0.5 EDUs

x. Rest home – per bed 0.33 EDUs

xi. Convalescent hospital – per bed 0.33 EDUs

xii. Memory care facility – per bed 0.33 EDUs

e. Other commercial or industrial uses, based upon study by the engineer.

3. Commercial or industrial users – Low-strength high-quantity: (1) Strength less than 300 mg/l BOD and/or suspended solids (SS), and (2) quantity greater than or equal to 25,000 gallons per day:

a. For incremental discharges from 25,000 – 75,000 gpd:  $\text{gpd}/325 = \text{EDUs}$

b. For incremental discharges over 75,000 gpd:  $\text{gpd}/400 = \text{EDUs}$



**4. Commercial or Industrial – High Strength: (1) Strength greater than 300 mg/l BOD and/or suspended solids, and/or (2) requiring either special handling or treatment:**

**a. Calculation of EDUs shall be as follows:**

**EDUs = (gpd/215) x (0.61 + (BOD/300)) x 0.22 + (SS/200) x 0.17) + special treatment or handling costs**

**5. General Regulations:**

**a. For billing purposes, one equivalent dwelling unit is equal to two hundred and fifteen gallons per day (1 EDU = 215 gpd)**

**b. Not less than one EDU per building (shall not apply to Residential Facilities)**

**c. Special provisions can be made within each category where, in the judgment of the engineer, application of ordinance produces inequities or irregularities requiring revision. Prescribed connection charges apply only to the particular uses listed; where multiple uses, within the meaning of the connection charge ordinance contained in the same structure, the engineer will determine and allocate the respective square footage dedicated to each use, and will determine a composite connection charge composed of the respective connection charges for each such use.**

**d. Classification of shell buildings having no use when connecting to the sewage system shall be determined based on the judgment of the engineer based on building permit data, applicable zoning, and plans of the developer. Subsequent modifications to such buildings may result in reclassification and the assessment of additional incremental charges. No refunding of previously paid connection charges will be made where modifications are made to any structure which places it in a classification with a lower connection charge rate.**

**e. The engineer may require additional documentation, procedures, tests, or studies to appropriately classify the connection fees. Such requirements may include, but are not limited to, flow monitoring, flow equalization, installation of flow controls, special treatment, and specific discharge permitting.**

**E. All Residential and Commercial Users that have paid for their connection and use to the sewer system as of March 28, 2019 will be grandfathered as to their existing use as of that date. As specified in section 13.12.200 D, these Users are subject to the payment of incremental sewer impact fees for any intensification of usage from their March 28, 2019 usage. Their incremental sewer impact fee will be based upon the difference between their March 28, 2019 usage (credit) and the present usage connection fee required for the intensified usage.**

Type of Establishment	Equivalent Dwelling Units
<b><u>Residential use</u></b>	
Single family dwelling	1.000
Duplex (per living unit)	0.771
Multiple family housing other than duplex (per living unit)	0.714
Mobile home park (per mobile home space)	0.714
<b><u>Commercial/Industrial Business Use</u></b>	

Type of Establishment	Equivalent Dwelling Units
Rooming house (per bed)	0.157
Boarding house (per bed)	0.286
Hotels, motels and resorts:	
Without private baths (per living unit)	0.186
With private baths (per living unit)	0.229
Tourist Court or Trailer Park (transient):	
With central bathhouse (per unit or trailer space)	0.143
<b><u>Commercial/Industrial Business Use</u></b>	
With private baths or sewer connection (per unit or trailer space)	0.186
Public Use	
Commercial (per restroom)	0.714
Restaurants, including dining rooms of hotels, motels, and resorts (per seating capacity):	
Primary seating *	0.086
Secondary seating **	0.029
Bar or cocktail lounge (per seating capacity)	0.029
Church (per seating capacity)	0.014
Day school (per student capacity plus facility):	
Without cafeteria, gymnasium, or showers	0.057
With cafeteria, but no gymnasium or showers	0.077
With cafeteria, gymnasium and showers	0.100
Boarding school (per bed)	0.286



<b>Type of Establishment</b>	<b>Equivalent Dwelling Units</b>
Hospital (per bed)	0.571
Convalescent home (per bed)	0.286
Self-service laundry (per machine)	0.571
Warehousing facility where total employee hours per week does not exceed forty (40)	
———— (per restroom)	0.143
Business facility where restroom access is limited to employees	
———— (per toilet)	0.286
———— (per urinal)	0.143
Business facility where restroom access is primarily by employees but open to the public	
———— (per toilet)	0.500
———— (per urinal)	0.214
<b><u>Commercial/Industrial Business Use</u></b>	
Commercial building with sink only	0.071

~~\* Primary seating shall be defined as seats in an eating establishment where meals are served on plates and silverware that are washed and reused.~~

~~\*\* Secondary seating shall be defined as follows:~~

- ~~1. Seats in a primary seating type restaurant where the seats are used no more than twice a week (e.g., banquet facilities);~~
- ~~2. Seats in an eating establishment where throw-away plates and silverware are used;~~
- ~~3. Seats in a bar or cocktail lounge.~~

### **Other Use**

~~The quantity of flow for any other use shall be based upon estimated flow as determined by the engineer.~~

**EE.** In the event that any charges established in this article relate to mobile home parks, such charges shall be collected in accordance with the following provisions:



1. Fees shall be computed on the total number of pads specified by the application and collected, on an individual basis, at any time prior to each mobile home being connected to the sewer system of a district.

2. In the event that any fee specified by this article has changed after such application and prior to such payment, the owner shall not be permitted to connect any further mobile home until he or she has paid the difference between the old fee and the new fee as specified and computed. If such new fee is less, the owner shall be entitled to connect upon the payment of such new fee as specified and computed.

3. The sewer service charges shall be computed and payable on the basis of the actual mobile homes initially connected to the sewer. A mobile home, once connected, shall not be deemed disconnected solely because the mobile home is removed from a pad.

~~F. For the purposes of this article, the connection fees and sewer service charges for high-strength and/or metered commercial and industrial connections shall be calculated using an EDU rate determined by the use of the following formula, except for properties within sewer maintenance district No. 2 and County service area No. 28, zone of benefit Nos. 2-3A and 55:~~

~~1. For Connection Fees:  $EDUs = F(0.00301 + 0.000003903BOD + 0.000003928SS)$~~

~~2. For Sewer Service Charges:  $EDUs = F(0.00301 + 0.000002819BOD + 0.000004237SS)$~~

~~F = the metered flow in gallons per day.~~

~~BOD = the measured BOD milligrams per liter.~~

~~SS = the measured suspended solids in milligrams per liter.~~

~~G. For metered wastewater flows, two hundred fifty (250) gallons per day of regular strength sewage flow shall equal one equivalent dwelling unit.~~

**G. Users may be assigned to the Active Adult Residential category through submittal and approval of a completed application with documents that verify the age-restriction for all, or a portion, of a residential development. Examples of legal and governing documents include, but are not limited to, provisions contained in a deed, contract, security instrument, or other legal instrument; covenants, conditions, and restrictions; or other binding and enforceable documents. Users who are approved for the Active Adult Residential category must notify the engineer if any of the following events occur:**

**1. The residential development no longer meets the definition of an Active Adult Residential category;**

**2. The number of age-restricted dwellings is modified.**

H. For the purpose of calculating the amount of the connection fee and the sewer service charge for a property within sewer maintenance district No. 2, sewer maintenance district No. 3, and County service area No. 28, zones of benefit Nos. 2-3A, 173, and 55, the quantity of sewage flow from the various types of establishments shall be conclusively presumed to be as set forth in Section 14.16.100, ~~14.16.230 and 14.16.240~~ of the Roseville City Code, as adjusted from time-to-time by the City of Roseville, which regulations are incorporated by reference into this article. A copy of the referenced provisions of the Roseville City Code shall be kept available for public inspection by the Director and in the office of the Clerk of the Board of Supervisors. (Ord. 5059-B § 20, 2000: prior code § 18.27)

**Section 5:** Subsections (A), (B), (D) and (G) of Section 13.12.270 Connection Fee of Chapter 13 of the Placer County Code are hereby amended, and subsections (H) and (I) are hereby added to said Section 13.12.270, to read as follows:

The owners of property proposed to be connected to county public sewers shall pay a connection fee before the property is connected. The owners of any property already connected to county public sewer shall pay an additional connection fee before any existing use of the property



is expanded or changed to a different use or the wastewater flow from such property increases in quantity or strength.

A. Connection fee costs ~~shall be adjusted to reflect the increase in construction costs in the interim, on the basis of the change in the~~ **are subject to annual increase based upon the percentage change** in the Engineering News Record Construction Cost Index.

B. Property owners shall be responsible to pay all costs incurred in the extension of existing lines to serve their property. **Service will not be provided until all construction of line extensions to include as-built plans are completed and accepted by the district.**

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D. Connection fees collected under this section shall be deposited in trust to be used for future expansion of the districts' wastewater treatment plant **and sewer collection system.**

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G. Fees for multiple connections on the same parcel shall be computed in the following manner:

1. The fee for the first connection shall be determined under the provisions of subsection ~~Section 13.12.240 G of this section.~~

2. Fees for subsequent connections shall be determined by **Section 13.12.240** the formula set forth in this section; however, the total flow in equivalent dwelling units shall be reduced by that paid for by previous connection fees and there shall be no minimum connection fee. ~~Flows shall be computed in accordance with the rates stated in Section 13.12.240(D). (Ord. 5059-B § 23, 2000; prior code § 18.31)~~

**H. Sewer Maintenance District 1 sewer connection fee consists of the components delineated below.**

**1. Regional Capacity Connection Fees - \$3,628.00 per EDU**

**2. District Capacity Connection Fees - \$4,429.00 per EDU**

**I. All Regional Capacity Connection Fees are exempt from inclusion in the Fee Deferral Program as delineated in Placer County Code Section 15.70, inclusive.**

**Section 6:** Section 13.12.320 Service and connection to district public sewers of Chapter 13 of the Placer County Code is hereby deleted in its entirety.

**Section 7:** This Ordinance shall take effect and be in full force thirty (30) days after the date of its passage. The Clerk is directed to publish this ordinance, or a summary thereof, within fifteen (15) days in accordance with Government Code Section 25124.





# MEMORANDUM

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DATE: December 4, 2018  
REVISED: January 10, 2019  
TO: Kevin Bell, P.E.  
FROM: Robin Mahoney, P.E.  
SUBJECT: SMD1 Wastewater Reimbursement Program Fee Analysis

## **Introduction**

Sewer Maintenance District No. 1 (SMD1) was formed in 1961 and currently has ~8,300 Equivalent Dwelling Units (EDUs). Current growth projections for SMD1 are 153 EDUs/yr based upon the historic growth average. Over the next 30 years, SMD1 is projected to add 4,596 EDUs. The purpose of this Memorandum is to determine the appropriate connection fee that will fund the capacity improvement projects necessary to accommodate this projected growth.

## **Capacity Deficiencies Identified**

The North Auburn DeWitt Trunk Sewer Capacity Evaluation Report prepared by Stantec on March 6, 2016 and SMD1 Sewer Model Update & Alternatives Evaluation for Trunk Sewer System Improvements Report prepared by Stantec on October 3, 2017 (Stantec Modeling Reports) identified segments of line in SMD1 that need to be upsized to accommodate for buildout conditions. The SMD1 trunkline capacity projects have been identified as the highest priority capacity projects in the District and staff anticipate that these segments need to be upsized within the 30 year term used for this fee analysis. Attachment 1 itemizes the Highway 49 and DeWitt trunkline segments that need to be upsized based upon the Stantec Modeling Reports. Note that the DeWitt trunk segment AD2-44 to AD2-45 was recently constructed and included in this analysis and intended to be included in the DCFA for the Timberline development.

The Stantec Modeling Reports also identify deficiencies in SMD1 that are not part of the Highway 49 and DeWitt trunklines. Of these, a few segments are anticipated to need upsizing within the 30 year term used for this fee analysis. These include two line segments in the Bowman area (AC7-03 to AC6-28) and one line segment near Bell Road and Highway 49 (AD4-11 to AD4-10).



The Highway 49 Siphon has also been determined to have insufficient capacity within the 30 year analysis term.

## Cost to Correct Identified Deficiencies

Cost estimates for upsizing these deficient areas are presented below in 2018 dollars and rounded to the nearest one thousand dollars. The Highway 49 and DeWitt Trunk segment upsizing cost estimates were derived from the Stantec Modeling Reports inflated to December 2018 per ENR Construction Cost Index (index values used: 9806 and 11186). The Bowman area segment upsizing cost estimate was derived from the Hilltop Center Sewer Capacity Study prepared by TLA Engineering and Planning, Inc. on June 10, 2008 inflated to December 2018 per ENR Construction Cost Index (index values used: 8805 and 11186). The Highway 49 Siphon and Bell Road line segment cost estimates were developed by in-house staff and contained in the attached January 10, 2019 Staff Memorandum. The table below itemizes all of these costs.

SMD1 Capacity Improvements	
Description	Cost
Hwy 49 Trunk segments	\$10,312,000
Hwy 49 Siphon	\$2,000,000
DeWitt Trunk segments	\$8,756,000
AC7-03 to AC6-28	\$108,000
AD4-11 to AD4-10	\$178,000
Total	\$21,354,000

## Fee Analysis

Placer County plans to contribute \$1,000,000 from SMD1 reserves into the new SMD1 reimbursement account to address existing capacity deficiencies. Therefore, \$20,354,000 of capacity improvement projects over the next 30 years needs to be distributed over the 4,596 EDUs that are projected to be added over the same term. This results in a District Capacity Connection Fee of \$4,429 per EDU.

### Attachments

1. Highway 49 and DeWitt Trunkline Segments to be Upsized
2. January 10, 2019 Staff Memorandum



## ATTACHMENT 1

Highway 49 and DeWitt Trunkline Segments to be Upsized



Existing Pipe Upstream ID	Existing Pipe Downstream ID	Existing Pipe Diameter (in)	Upgrade Pipe Diameter (in)
<b>HWY 49 TRUNK SEWER</b>			
AC4-30	AC4-38	15	18
AC4-38	AC4-39	15	18
AC4-39	AC4-41	15	18
AC4-41	AD4-53	15	18
AD4-53	AD4-55	15	18
AD4-55	AD4-07	15	18
AD4-07	AD4-06	15	18
AD4-06	AD4-05	18	18
AD4-05	AD4-04	18	18
AD4-04	AD4-03	15	21
AD4-03	AD4-02	15	21
AD4-02	AD4-01	15	21
AD4-01	AD4-83	18	21
AD3-02	AD3-01	18	24
AD3-01	AE3-19	18	24
AE3-19	AE3-18	18	24
AE3-18	AE3-17	21	24
AE3-17	AE3-16	21	24
AE3-15	AE3-14	21	24
AE3-13	AE3-12	21	27
AE3-12	AE3-11	21	27
AE3-11	AE3-10	21	27
AE3-10	AE3-09	24	30
AE3-09	AE3-08	24	30
AE3-08	AE3-07	21	30
AE3-07	AE3-06	21	30
AE3-06	AE3-05	21	30
AE3-05	AE3-04	21	30
AE3-04	AE3-03	21	30
AE3-03	AE3-02	21	30
AE3-02	AE3-01	24	30
AE3-01	AE3-122	24	30
AE3-122	AF3-14	24	30
AF3-14	AF3-13	24	30
AF3-13	AF3-12	24	30
AF3-12	AF3-78	24	30
AF3-78	AF3-11	24	30
AF3-11	AF3-10	24	30
AF3-10	AF3-09	24	30
AF3-09	AF3-81	24	30
AF3-81	AF3-08	24	30
AF3-08	AF3-82	24	30
AF3-82	AF3-83	24	30
AF3-83	AF3-84	24	30
AF3-84	AF3-07	24	30
AF3-07	AF3-85	24	30
AF3-85	AF3-06	24	36
AF3-06	AF3-05	24	42
AF3-05	AF3-04	24	36
AF3-04	AF3-03	24	36
AG3-04	AG3-03	18	36
AG3-03	AG3-02	21	36
AG3-02	AG3-14	21	36
AG3-14	AG3-01	21	36
AG3-01	AG2-26	21	36



Existing Pipe Upstream ID	Existing Pipe Downstream ID	Existing Pipe Diameter (in)	Upgrade Pipe Diameter (in)
DEWITT TRUNK			
AC3-121	AC3-24	8	15
AD3-78	AD3-106	15	18
AD2-59	AD2-44	15	18
AD2-44	AD2-45	15	18
AD2-45	AD2-47	15	18
AD2-47	AD2-48	15	18
AD2-48	AD2-49	15	18
AD2-49	AD2-50	15	18
AD2-50	AD2-M70	15	18
AD2-M70	AD2-51	15	18
AD2-51	AE2-15	15	18
AE2-15	AE2-16	12	18
AE2-16	AE2-17	12	18
AE2-17	AE2-18	12	18
AE2-18	AE2-19	12	18
AE2-19	AE2-20	12	18
AE2-20	AE2-21	12	18
AE2-21	AE2-22	12	18
AE2-22	AE2-23	10	18
AE2-23	AE2-73	10	18
AE2-73	AE2-24	10	18
AE2-24	AE2-25	10	18
AE2-25	AE2-26	10	18
AE2-26	AE2-49	10	18
AE2-49	AE2-27	10	18
AE2-27	AE2-50	10	18
AE2-50	AE2-51	10	18
AE2-51	AF2-63	10	18
AF2-63	AF2-26	10	18
AF2-26	AF2-27	10	18
AF2-27	AF2-28	12	18
AF2-28	AF2-10	12	18
AF2-10	AF2-09	10	18
AF2-09	AF2-08	12	18
AF2-08	AF2-07	10	18
AF2-07	AF2-06	10	21
AF2-06	AF2-05	15	24
AF2-05	AF2-04	15	24
AF2-04	AF2-76	15	24
AF2-76	AF2-03	15	24
AF2-03	AF2-59	15	24
AF2-59	AF2-02	15	24
AF2-02	AF2-58	15	24
AF2-58	AF2-01	15	24
AF2-01	AG2-04	15	24
AG2-04	AG2-03	15	27
AG2-03	AG2-26	15	27



## ATTACHMENT 2

January 10, 2019 Staff Memorandum



DATE: December 4, 2018

REVISED: January 10, 2019

TO: Kevin Bell, P.E.

FROM: Robin Mahoney, P.E.

SUBJECT: Highway 49 Siphon and AD4-11 to AD4-10 Upsizing Cost Estimates

## Introduction

Sewer Maintenance District No. 1 (SMD1) was formed in 1961 and currently has ~8,300 Equivalent Dwelling Units (EDUs). In order to accommodate growth in SMD1 over the next 30 years, certain segments of sewer pipe will need to be upsized, as identified in The North Auburn DeWitt Trunk Sewer Capacity Evaluation Report prepared by Stantec on March 6, 2016 and SMD1 Sewer Model Update & Alternatives Evaluation for Trunk Sewer System Improvements Report prepared by Stantec on October 3, 2017. Cost estimates for all segments except the Highway 49 Siphon and pipe segment AD4-11 to AD4-10 have been developed. The purpose of this Memorandum is to present cost estimates for upsizing the Highway 49 Siphon and pipe segment AD4-11 to AD4-10. County staff has prepared the cost estimates detailed herein.

The Highway 49 Siphon is approximately 3,300 linear feet in length and constructed of 14 in diameter asbestos concrete pipe. It conveys approximately 25% of the sewer flow in SMD1 north along Highway 49 between Canal Street and New Airport Road. The alignment crosses two intersections with traffic lights and sidewalks. An alternatives analysis for upsizing the siphon determined that construction of a new parallel siphon for increasing capacity through this area is the preferred alternative. A recent condition assessment of the existing Highway 49 Siphon determined that it is in good structural condition.

Pipe segment AD4-11 to AD4-10 is 379 linear feet in length and constructed of 6 inch diameter PVC pipe. It is located within a shopping area parking lot near the intersection of Highway 49 and Bell Road in Auburn.

## Cost Estimates

Table 1 below provides the cost estimate for constructing a parallel line adjacent to the Highway 49 Siphon. This estimate includes a 20% construction contract contingency and assumes:

- A majority of the construction will occur within the paved shoulder of Highway 49
- Horizontal Directional Drilling under the railroad will not be required
- An average of 4 feet of pipe depth and 5 feet of paving width
- 20 utility crossings will be encountered
- 10%, or 330 LF, of water line relocation will be required to achieve minimum separation
- Soft costs (design, project and construction management, and environmental, are 25% of the estimated construction contract cost

**Table 1. Cost Estimate for Upsizing the Highway 49 Siphon**

Item	Quantity	Units	Unit Cost	Cost
Mob/Demob	1	LS	\$100,000	\$100,000
Erosion Control	1	LS	\$20,000	\$20,000
Dewatering	1	LS	\$10,000	\$10,000
Sewer Bypass	1	LS	\$200,000	\$200,000
Trench, Pipe, Backfill & Compaction	3300	LF	\$200	\$660,000
Grinding & Plating	1	LS	\$40,000	\$40,000
Utility Crossings	20	EA	\$5,000	\$100,000
3" HMA, grinding, & slurry	16500	SF	\$5.00	\$82,000
Striping	1	LS	\$30,000	\$30,000
Utility Relocation	330	LF	\$200	\$66,000
Landscaping & Sidewalk Restoration	1	LS	\$40,000	\$40,000
Traffic Control	1	LS	\$30,000	\$30,000

Construction  
 Subtotal \$1,378,000  
 Contingency (20%) \$276,000  
**Construction Total \$1,654,000**

Design (10%)	\$138,000
Project Management & Env (7.5%)	\$104,000
Construction Management (7.5%)	\$104,000

Soft Costs Subtotal \$346,000

**Project Total \$2,000,000**



Table 2 below provides the cost estimate for upsizing pipe segment AD4-11 to AD4-10 from 6 inch diameter to 8 inch diameter. This estimate includes a 20% construction contract contingency and assumes:

- An average of 7 feet of pipe depth and 5 feet of paving width
- Two utility crossings will be encountered
- 40 feet of the alignment are within landscaped (non-paved) area
- Soft costs (design, project and construction management, and environmental, are 25% of the estimated construction contract cost

<b>Table 2. Cost Estimate for Upsizing AD4-11 to AD4-10</b>				
Item	Quantity	Units	Unit Cost	Cost
Mob/Demob	1	LS	\$10,000	\$10,000
Erosion Control	1	LS	\$2,000	\$2,000
Dewatering	1	LS	\$2,000	\$2,000
Sewer Bypass	1	LS	\$5,000	\$5,000
Trench, Pipe, Backfill & Compaction	380	LF	\$180	\$68,400
Plating	1	LS	\$5,000	\$5,000
Utility Crossings	2	EA	\$5,000	\$10,000
3" HMA, grinding, & slurry	1700	SF	\$5.00	\$8,500
Striping	1	LS	\$5,000	\$5,000
Landscaping & Sidewalk Restoration	1	LS	\$5,000	\$5,000
Traffic Control	1	LS	\$2,000	\$2,000

Construction  
Subtotal \$123,000  
Contingency (20%) \$25,000  
**Construction Total \$148,000**

Design (10%)	\$12,000
Project Management & Env (7.5%)	\$9,000
Construction Management (7.5%)	\$9,000

Soft Costs Subtotal \$30,000

**Project Total \$178,000**

## Results

The cost estimates in 2018 dollars for construction of a parallel line adjacent to the Highway 49 Siphon and upsizing pipe segment AD4-11 to AD4-10 from 6 inch diameter to 8 inch diameter are \$2,000,000 and \$178,000, respectively.

## **County of Placer**

### **SMD1 Capacity Fee Implementation Guide**

Pursuant to Placer County Code Chapter 13, Article 13.12, Section 13.12.230 C, developers who are required, as a condition of project approval, to modify or replace existing sewer infrastructure identified in the SMD1 Wastewater Reimbursement Program Fee Analysis Memorandum to increase sewer capacity, are responsible for all construction costs and, under conditions delineated herein, eligible for reimbursement of specified costs as determined by the Engineer on a case-by-case basis.

1. The developer must enter into a District Capacity Fee Agreement (DCFA) with the County.
2. DCFAs must meet the following requirements:
  - a. Aside from projects previously approved in the Wastewater Reimbursement Program Fee Analysis Memorandum noted above, a District Capacity Increase Agreement Application must be submitted to the County before approval of the project improvement plans.
  - b. The Engineer may approve the preliminary DCFA based upon County approved project improvement plans and specifications.
  - c. The developer must follow the instructions, requirements, and conditions included in the District Capacity Increase Agreement Instructions.
  - d. The reimbursement amount in the preliminary DCFA will be based on an estimate of eligible construction costs provided by the developer. The reimbursement amount may include costs for engineering and construction staking services not to exceed 6.5% of the estimate of eligible construction costs. Contingency costs, as approved by the Engineer, may also be added but shall not exceed 10% of the estimate of eligible construction costs.
  - e. Upon completion and acceptance of the sewer improvements, the final DCFA must be approved by the Board.
  - f. In the event the construction of the eligible sewer facilities is not initiated within three years of the preliminary DCFA execution, the preliminary DCFA and associated credits will be terminated.
3. Basis for Reimbursement of Construction Costs – Either the competitive bid process, as defined by the California Public Contract Code, or the unit prices as shown in the Cost Schedule for Sewer Construction (refer to Item 8 below) must be used to determine the reimbursable construction costs, and the methodology selected will be specified in the preliminary DCFA.
4. Reimbursement of Construction Change Orders – Reimbursement of any construction change orders up to 5% of bid cost related to eligible construction must be approved by the Engineer. For change orders to be considered for reimbursement, the developer must:



- a. Notify the County of any proposed change order before performing the change order work.
- b. Justify the reason for the change order, cost estimate, and supporting information to the Engineer.
- c. Fully document any work performed under a change order to verify all associated costs.

Failure to comply with any of these procedures will result in the change order becoming ineligible for reimbursement. Change orders that result in increased contract costs to obtain compliance with the approved project condition and/or mitigation measures will not be included as reimbursable costs as determined by the Engineer.

#### 5. Reimbursement Conditions

- a. Upon project acceptance, the developer must submit a written request for reimbursement to the County for final reconciliation of reimbursable costs.
- b. The final reimbursement amount will be determined by multiplying the unit prices contained in the awarded construction contract by the appropriate as-built quantities. The reimbursement amount may also include any approved construction change orders, engineering, and construction staking costs not to exceed the limits described in section 3.d. above.
- c. Reimbursement of contingency costs is subject to approval by the Engineer and must be properly documented by the developer. The County will not reimburse any costs for land or easement acquisition, accelerated or delayed construction, or other additional costs incurred by the developer for the developer's convenience or benefit.
- d. Upon final determination of the total reimbursement amount, the final DCFA will be submitted for approval to the Board.

#### 6. Reimbursement Payment Methods – Reimbursement will be made as identified in the DFCA in the form of District Capacity Connection Fee credits (credits), cash, or some combination of credits and cash; however, any cash reimbursement will be limited to funds in the Capacity Connection Fee Fund.

- a. After the Engineer approves the preliminary DFCA, the project will be eligible for credits to be applied toward the District Capacity Connection Fees portion of the sewer connection fees due in the area served by the eligible sewer infrastructure. The remainder of the connection fees including, but not limited to, regional connection fees will be due and owing at issuance of the building permit. Credits will not exceed 80% of the estimated reimbursable costs as specified in the preliminary DFCA. After final reconciliation of actual reimbursable project costs by the County and approval by the Board of the final DFCA, any remaining credits will be made available or the value of any excess credits must be paid to the County within 30 days of written notification to the developer.
- b. The earliest DFCAs, as determined by the date of construction acceptance of facilities, will have first priority for reimbursement based on

available funds. In the event the total amount to be reimbursed is not available, the County shall pay the developer on a quarterly basis from the Capacity Connection Fee Fund until paid in full, or thirty (30) years from the acceptance date of the project, whichever is soonest.

- c. Developers must notify the County of any changes in contact and payment remittance information. If the County is unable to submit a payment to the developer because of inaccurate contact information, the County shall return the payment amount back into the Capacity Connection Fee Fund. Should the developer correct the mailing address, payments can recommence.
7. DFCA Assignments – All duly executed DFCA's can be assigned by the party named in the DFCA to another party. The DFCA assignment must be approved in writing by both parties and by the Engineer.
  8. Cost Schedule for Sewer Construction – The cost for sewer construction using this method shall include the addition of the unit cost values from the attached table and associated notes below, as well as the Additional Cost Items below the table. All of these values shall be inflated to the pertinent month the analysis is performed per Engineering News-Record Construction Cost Index for the 20-city average. The base for the inflation analysis is December 2017 with an index of 10873.



UNIT COSTS FOR CONSTRUCTION OF GRAVITY SEWERS											
Pipe Diameter (in)	Depth (ft)										
	8	10	12	14	16	18	20	22	24	26	28
6 (a)	\$35.99	\$38.94	\$41.34	\$44.28	\$47.76	\$52.91	\$59.15	\$67.27	\$78.02		
8	\$43.38	\$48.14	\$50.96	\$54.54	\$58.77	\$65.07	\$72.85	\$82.80	\$95.75		
10	\$52.36	\$59.55	\$63.00	\$67.31	\$72.50	\$80.36	\$89.97	\$102.42	\$118.52		
12		\$69.89	\$73.84	\$78.90	\$85.29	\$94.52	\$105.86	\$120.51	\$139.75	\$161.45	\$191.33
15		\$86.69	\$91.09	\$96.39	\$103.24	\$112.60	\$124.49	\$138.93	\$157.31	\$179.84	\$211.42
18		\$105.12	\$109.64	\$115.40	\$122.81	\$133.35	\$145.20	\$160.52	\$179.16	\$201.79	\$233.57
21 (c)		\$126.74	\$131.85	\$137.85	\$145.79	\$156.18	\$169.22	\$185.41	\$204.62	\$227.35	\$260.06
24 (c)		\$149.60	\$157.05	\$163.47	\$172.00	\$183.38	\$197.31	\$213.74	\$232.96	\$255.95	\$289.77
27 (b)		\$158.26	\$164.38	\$172.57	\$183.31	\$197.37	\$213.84	\$233.72	\$257.24	\$281.92	
30		\$177.47	\$184.16	\$192.92	\$204.22	\$218.30	\$234.98	\$256.09	\$280.63	\$306.35	
33		\$190.08	\$197.35	\$206.26	\$217.98	\$232.29	\$249.45	\$271.53	\$297.04	\$324.21	
36		\$194.44	\$201.82	\$211.27	\$223.16	\$237.59	\$255.62	\$277.87	\$303.92	\$332.74	

NOTES:

- (a) 24-inch diameter and smaller
- (b) RCP with calcareous aggregate
- (c) If for structural reasons, and with Engineer approval, RCP with calcareous aggregate is required for 21" or 24" pipeline, the above unit costs shall be reduced \$5.50 or \$15.16 respectively.
- (d) \$4.39 per cu. yd. for mechanical compaction of intermediate backfill

ADDITIONAL COST ITEMS:

1. 22% for work outside of undeveloped areas.
2. Cost for pavement removal and replacement  
Removal = \$4.86 /L.F.  
Replacement= Asphaltic Concrete: \$195 /ton (1 ton = 160 S.F., 1 inch thick)  
Aggregate Base: \$45 /ton (1 ton = 20 S.F., 8 inch thick)
3. Temporary pavement = \$127 /ton (1 ton = 160 S.F., 1 inch thick)
4. Flag persons = \$522 /day/person
5. Utility Crossings (service lines):  
Cross = \$216 ea.  
Replace = \$645 to \$1,092 ea.
6. Cost for crossing a major utility to be determined on a case-by-case basis.
7. Manholes:  
4 ft MH = \$2,600 for 7 ft depth plus \$216 /ft over 7 ft.  
5 ft MH type A or B = \$3,684 for 8 ft depth plus \$379 /ft over 8 ft.  
Lining additional = \$2,165 for 8 ft depth plus \$216 /ft over 8 ft.
8. Dewatering trench with wells: \$44 to \$95
9. T-Lock lining for RCP: \$7.80 /S.F.
10. Maximum 10% increase for other items such as abandonment of existing utilities, landscape or hardscape replacement, bypass costs for active systems, special bedding, oversized manholes, etc. as approved by the Engineer.