



Humboldt Community Services District Sewer Rate and Connection Fee Study Report

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Sewer Rate & Connection Fee Study

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Sewer Rate & Connection Fee Study

Chapter 1 - Background and Introduction

Background - The Humboldt Community Services District (District or HCSD) is a public agency, created in 1952 to provide sewer, water and street lighting services to the unincorporated areas of Eureka including Freshwater, Myrtle town, Pine Hill, Cutten, Humboldt Hill, King Salmon, and Fields Landing.

The District directly provides sewage collection while, through an inter-government wastewater agreement, the City of Eureka (City or COE) provides wastewater treatment at the Elk River Wastewater Treatment Plant (Plant or WWTP). The WWTP has an existing average dry weather flow (ADWF) design capacity of 5.24 million gallons per day (MGD) of which the District maintains a 30.5% capacity right or 1.60 MGD. HCSD shares WWTP expenses with the City for operation and maintenance (O&M), capital improvement projects (CIP), shared sewer system costs and emergency reserve fund expenses.

Introduction – This report and rate study represent the results of ongoing work by HCSD and its rate consultant that began in 2008 with the intent of evaluating sewer rates and sewer connection fees (or system capacity fees). The primary purposes of this study are to (1) determine the impacts of the Martin Slough Interceptor (MSI) project and increased costs associated with City of Eureka Capital Improvement Program and WWTP and (2) summarize new volumetric residential sewer rates based on average winter water consumption.

The District Board has directed staff to prepare an analysis of these impacts, and the new residential rates.¹ Residential rates using average winter water use are being adopted by many similar sewer agencies in California because the improved overall equity of these rates better reflect the amount of effluent generated by individual customers.

For example, the District's current rate structure uses fixed monthly charges (flat-rates), resulting in a one-person household being charged the same as a six-person household (typically a one-person household will have a much lower cost-of-service than a six-person household). Using winter average water use as a proxy for sewage effluent generation results in charging residential customers more equitably (i.e., lower bills for customers with lower costs of service and higher bills for those with a higher cost of service).

The new sewer rates and the basic methodology used in developing the commercial rates and new average winter-water usage-based rates are described in Chapter 2 below.

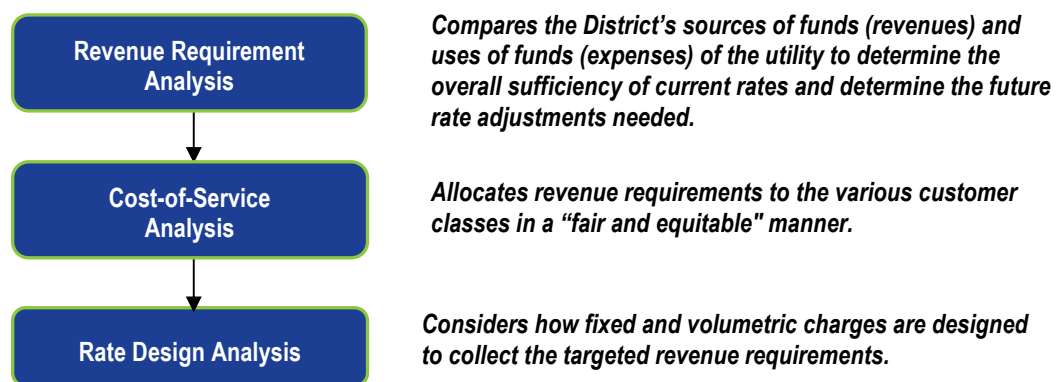
¹ Non-residential customer sewer rates will continue to be billed a fixed monthly charge and a variable rate based on monthly water usage.

Chapter 2 – Sewer Rate and Connection Fee Analysis

Overview

Figure 1 outlines the basic components of a comprehensive rate study. The revenue requirements will develop the financial plan and define the total revenue recovered through rates. The cost-of-service analysis develops an equitable cost-basis for allocating costs to various customers, which is then used in the rate design.

Figure 1 – Overview of Rate Study Components



This rate study includes the costs of the Martin Slough Sewer Project, City of Eureka Capital Improvement Projects, and Wastewater Treatment Plant Expenses (i.e., costs of City wastewater plant improvements; no costs for expansion of capacity beyond the design capacity are included), and HCSD's Capital Improvement Projects.

Although longer-term financial plans have been evaluated, only the next four years of projections are presented in this report. Sewer rates are differentiated from sewer connection fees in that monthly sewer rates cover annual operating, maintenance, and debt service costs, and must conform to Prop 218. Sewer rates must also stand on their own in funding all sewer system costs without relying on sewer connection fee revenue.² In contrast, connection fees are paid by future customers as a method of "buying-in" to existing facility costs and paying for planned capital costs needed to provide sufficient capacity to those future customers. Connections fees are paid only at the time of requested new service and are not subject to Prop 218 requirements.

² The HCSD sewer utility is an enterprise fund, which by definition must be self-sufficient in its funding, cannot rely on connection fees for operating costs, and is not allowed to fund non-sewer related activities.

Sewer Rate & Connection Fee Study

Sewer Rates

The following summarizes the approach to calculating sewer rates along with the recommended new sewer rates.

Approach and Assumptions – The following are the basic assumptions used in developing the new sewer rates:

- No connection fee or monthly service charge revenues from new connections to the District have been included in future revenue projections. If and when those new connections occur, they will improve the District's current financial outlook and can be used to repay existing customers for costs related to providing them with collection and treatment capacity.
- Of the Martin Slough Interceptor capital costs allocated to HCSD, the District is planning to fund \$9.4 million with a State Revolving Fund (SRF) loan in fiscal year 2011-12 (FY11-12), with debt service payments beginning in FY13-14³.
- District reserves are assumed to cover another \$1.2 million of Martin Slough Interceptor Phase 1 capital costs.
- HCSD has cash-funded (i.e., pay-as-you-go) \$1.04 million for MSI costs in FY11-12.
- The City estimates treatment-related charges will rise by 6% per year for the foreseeable future, excluding any treatment plant capacity expansion costs⁴.
- The HCSD Board has requested that commercial rates be related to, and based on the City of Eureka's commercial sewer rates. NBS believes this is a reasonable and acceptable approach because:
 - the treatment costs are the same for COE and HCSD commercial customers,
 - the larger number of commercial customers in the COE provide a better estimate of typical commercial rates, and
 - HCSD commercial customers comprise a relatively small share of total HCSD revenue requirements (approximately 12 percent).
- Commercial "strength categories" of low-, medium-, and high-strength considered State Revenue Program Guidelines and reflect COE strength characteristics: BOD and TSS for low-strength is 240 mg/L, medium-strength is 435 mg/L, and high-strength is 630 mg/L.
- The equivalent residential unit (ERU) factors for multi-family and mobile homes are assumed to be 0.8 and 0.87, respectively, compared to 1.0 ERU per single-family account. There are two primary reasons for this: (1) they typically generate lower levels of effluent due to smaller living areas and fewer effluent-generating appliances (dishwashers, clothes washers, etc.), and; (2) these lower factors also reflect the District's historically lower flat rates for multi-family and mobile homes factors compared to single-family customers.

³ Debt Service payments for SRF loans are planned to begin the year following completion of the Martin Slough Project.

⁴ However, HCSD budget projections exclude COE treatment-related inflation because current code allows annual water rate increases for inflation and assume that if the new sewer rates also provide for annual inflation-based increases, future revenue will automatically adjust to cover these costs.

Sewer Rate & Connection Fee Study

- The HCSD Board has eliminated the senior discount rate due to Prop 218 concerns⁵. Residential customers that previously had senior discount rates of \$27.25 are now subject to the same rates as all other single-family customers. However, a single-family customer with lower consumption levels, as many seniors are, may see actual reductions in the bills. For example, a winter average consumption of one hcf/month results in a monthly bill of \$26.93.
- Winter average water consumption records used in this analysis represent the District's most current data.

Recommended Sewer Rates – Table 1 summarizes the historical, current, new winter average water use based HCSD residential rates, and rates from other nearby districts/cities. Previous HCSD sewer rate increases were based on long term projections of required revenue versus anticipated expenses. Sewer expenditure considerations include:

- HCSD sewer capital improvement projects.
- City of Eureka capital improvement projects.
- City of Eureka new debt service on the Elk River Wastewater Plant.
- Increased City of Eureka wastewater treatment costs, although less than the COE's estimated 6%/year inflation.
- Two years of State property tax transfers under Proposition 1A.

Table 1 – Historical, Current, and Proposed Single-Family Monthly Sewer Rates

| Agency | Historical Rates | | | | | Current | Proposed (Average Winter Use) Rates | | | | |
|---|------------------|---------|---------|---------|---------|---------|-------------------------------------|---------|---------|---------|------|
| | 2002 | 2005 | 2007 | 2008 | 2009 | | 2012 | 2013 | 2014 | 2015 | 2016 |
| HCSD Single-Family | \$16.10 | \$17.60 | \$23.75 | \$27.30 | \$31.40 | \$31.40 | \$39.51 | \$41.88 | \$41.88 | \$41.88 | |
| % Increase | -- | 9.3% | 35.0% | 15.0% | 15.0% | 0.0% | 25.8% | 6.0% | 0.0% | 0.0% | |
| HCSD Senior/New* | -- | -- | -- | -- | -- | \$27.25 | \$26.93 | \$28.55 | \$28.55 | \$28.55 | |
| Other Nearby Districts¹ | | | | | | | | | | | |
| HCSD (at 10 hcf) ³ | -- | -- | -- | -- | -- | -- | \$52.08 | \$55.21 | \$55.21 | \$55.21 | |
| % Increase | -- | -- | -- | -- | -- | -- | 65.9% | 6.0% | 0.0% | 0.0% | |
| Arcata** | \$21.23 | \$26.28 | \$34.83 | \$39.83 | \$44.88 | \$58.07 | -- | -- | -- | -- | |
| Eureka** | \$14.87 | \$18.20 | \$19.60 | \$21.10 | \$21.10 | \$39.87 | \$45.58 | \$52.10 | -- | -- | |
| Ferndale | \$15.00 | \$21.20 | \$47.75 | \$58.00 | \$66.02 | \$66.02 | -- | -- | -- | -- | |
| Fortuna** | \$13.83 | \$21.81 | \$45.49 | \$45.49 | \$78.96 | \$81.80 | -- | -- | -- | -- | |
| McKinleyville** | \$15.99 | \$15.99 | \$16.60 | \$17.05 | \$18.76 | \$21.41 | -- | -- | -- | -- | |

* Although Senior discount rates will be eliminated, these are proposed new rates assuming a winter average water use of one hcf/mo.

** Rate is based on flat fee and 10 hcf of water use; this only applies to HCSD's "Proposed (Average Winter Use) Rates".

1. Average winter water consumption is 5.5 hcf/mo.

2. Historical years selected correspond to HCSD sewer rate increase years.

3. HCSD monthly bills based on 10 hcf are provided for comparison purposes.

Figure 2 compares monthly single-family sewer bills for several communities at various levels of water consumption.

⁵ Besides Prop 218 requirement that rates not subsidize any set of customers, new winter-average water use based rates will result in lower monthly bills for smaller households with less-than average water usage, which are often typical of senior households.

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Figure 2 – Comparison of Single-Family Sewer Bills

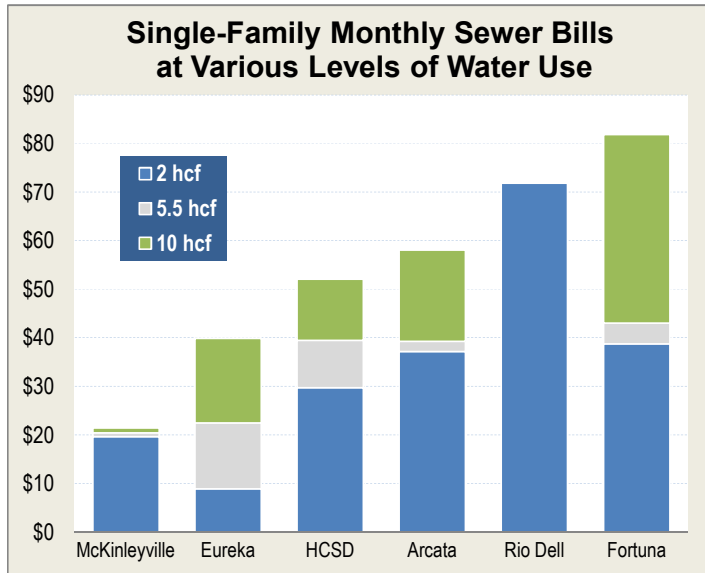
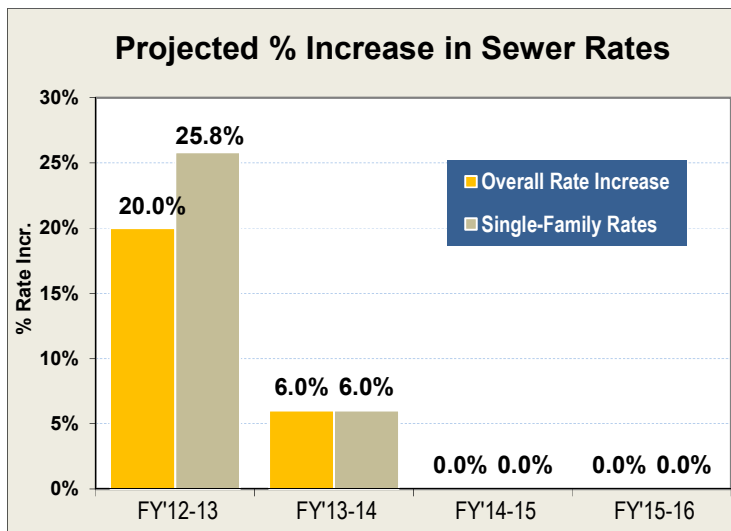


Figure 3 shows the recommended percentage increases in overall rate revenue and single-family rates for the next four years. These increases are the result of financial planning and HCSD Board workshops addressing how to fund projected revenue requirements, including Martin Slough Interceptor (MSI) costs. However, HCSD hopes to offset or reduce the need for future rate increases if future development occurs in a timely manner.

Figure 3 – Projected Sewer Rate Increases



Note: FY12-13 reflects a one-time cost-of-service adjustment; FY13-14 and later reflect "across-the-board" increases where all rates are adjusted by exactly the same percentage.

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Tables 2 and 3 summarize the recommended residential and commercial sewer charges for FY12-13. As noted in these tables, the percentage changes vary by customer class as a result of the cost-of-service analysis. Table 4 shows the resulting average residential monthly sewer bills.

Table 2 – Recommended Residential Sewer Rates (FY12-13)

| Customer Classes | Mo. Bills - Current Flat Rates | New Sewer Rates Based on Winter-Average Water Use | | |
|--------------------|--------------------------------|---|-----------------------|---------------------|
| | | Fixed Mo. Customer Charge | Fixed Monthly Charge | Volumetric Rate (a) |
| Residential | <i>(\$/mo./acct.)</i> | <i>(\$/mo./acct.)</i> | <i>(\$/mo./acct.)</i> | <i>(\$/hcf)</i> |
| Single Family | \$31.40 | \$3.77 | \$20.37 | \$2.79 |
| Multi-Family (a) | \$25.12 | \$3.77 | \$16.29 | \$2.79 |
| Mobile Homes (a) | \$27.32 | \$3.77 | \$17.72 | \$2.79 |
| Trailer Parks (a) | \$15.70 | \$3.77 | \$10.18 | \$2.79 |

a. The same rate per hcf is used for all residential classes; these rates different only because of variations in average winter water consumption on a per dwelling unit basis.

Table 3 – Recommended Commercial Fixed Charges and Volumetric Rates (FY12-13)

| Commercial Fixed Charges | Current Fixed Charges | City of Eureka Base Rates (a) | | New FY12-13 Fixed Charges | |
|-----------------------------|-----------------------------|---|-----------------------|---------------------------|-------------------|
| | | CoE Base Rates | % Increase (b) | (1 Billing Unit) | (% Change) |
| Light Commercial | (1 Billing Unit) \$31.40 | \$8.91 | 0.0% | \$39.40 | 25.5% |
| Medium Commercial | \$31.40 | \$10.82 | 21.4% | \$47.84 | 52.4% |
| Heavy Commercial | \$31.40 | \$12.73 | 42.9% | \$56.29 | 79.3% |
| Commercial Volumetric Rates | Current Volumetric Rates | (For Information Only - No Adjustments) | | New FY12-13 Volume Rates | |
| | <i>(\$/hcf)</i> | <i>CoE Rates</i> | <i>% Increase (b)</i> | <i>(\$/hcf)(c)</i> | <i>(% Change)</i> |
| Light Commercial | \$1.95 | \$3.87 | NA | \$5.38 | 175.8% |
| Medium Commercial | \$3.10 | \$4.82 | NA | \$7.13 | 130.1% |
| Heavy Commercial | \$4.20 | \$5.77 | NA | \$6.27 | 49.2% |

a. HCSD has decided to use SFR fixed monthly charge as the base commercial charge. Medium and heavy commercial fixed charges are adjusted proportionally to CoE base rates.

b. These % increase in CoE commercial rates are used to adjust the other HCSD commercial rates.

c. Volume rates only apply to water consumption over 2 units (same as City of Eureka).

Table 4 – Average Residential Sewer Bills – Recommended Rates (FY12-13)

| Customer Classes | Mo. Bills - Current Flat Rates | New Sewer Bills Based on Winter-Average Water Use | | | % Change |
|--------------------|--------------------------------|---|-----------------------|-----------------------|----------|
| | | Fixed Mo. Charges | Volumetric Charges | Total Mo. Bill (a) | |
| Residential | <i>(\$/mo./acct.)</i> | <i>(\$/mo./acct.)</i> | <i>(\$/mo./acct.)</i> | <i>(\$/mo./acct.)</i> | |
| Single Family | \$31.40 | \$24.14 | \$15.26 | \$39.40 | 25.5% |
| Multi-Family (a) | \$170.21 | \$114.18 | \$72.53 | \$186.70 | 9.7% |
| Mobile Homes (a) | \$1,205.70 | \$904.93 | \$718.67 | \$1,623.60 | 34.7% |
| Trailer Parks (a) | \$932.58 | \$608.68 | \$277.11 | \$885.79 | -5.0% |

a. Monthly bills for Multi-Family, Mobile Homes, and Trailer Parks represent average bills based on the average number of units; actual bills will be reflect actual number of units.

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Table 5 calculates the monthly single-family sewer bills based on the level of winter average water consumption, and include both fixed and volumetric charges. The second column in this table indicates the percentage of single-family customers currently in each consumption level.

Table 5 – New Single-Family Sewer Bills by Level of Winter-Average Water Use

| Winter Water Use (hcf/mo.) | % of Residential Billing Units ^a | Monthly Residential Sewer Charges | | |
|-------------------------------|---|---|-----------|-----------|
| | | Implementation Date for Proposed Rates ^b | | |
| | | July 2012 | July 2013 | July 2014 |
| | % Rate Increase over Current ^c | 20.0% | 6.0% | 0.0% |
| 0 | 3% | \$24.14 | \$25.59 | \$25.59 |
| 1 | 3% | \$26.93 | \$28.55 | \$28.55 |
| 2 | 7% | \$29.73 | \$31.51 | \$31.51 |
| 3 | 11% | \$32.52 | \$34.47 | \$34.47 |
| 4 | 14% | \$35.32 | \$37.44 | \$37.44 |
| 5 | 14% | \$38.11 | \$40.40 | \$40.40 |
| 6 | 12% | \$40.90 | \$43.36 | \$43.36 |
| 7 | 10% | \$43.70 | \$46.32 | \$46.32 |
| 8 | 7% | \$46.49 | \$49.28 | \$49.28 |
| 9 | 5% | \$49.29 | \$52.24 | \$52.24 |
| 10 | 4% | \$52.08 | \$55.21 | \$55.21 |
| 11 | 2% | \$54.87 | \$58.17 | \$58.17 |
| 12 | 2% | \$57.67 | \$61.13 | \$61.13 |
| 13 | 1% | \$60.46 | \$64.09 | \$64.09 |
| 14 | 1% | \$63.26 | \$67.05 | \$67.05 |
| 15 | 1% | \$66.05 | \$70.01 | \$70.01 |
| 16 | 0% | \$68.84 | \$72.98 | \$72.98 |
| 17 | 0% | \$71.64 | \$75.94 | \$75.94 |
| 18 | 0% | \$74.43 | \$78.90 | \$78.90 |
| 19 | 0% | \$77.23 | \$81.86 | \$81.86 |
| 20 | 0% | \$80.02 | \$84.82 | \$84.82 |
| Over 20 ^c | 1% | \$2.79 | \$2.96 | \$2.96 |

a. Average winter consumption and billing units from District records.

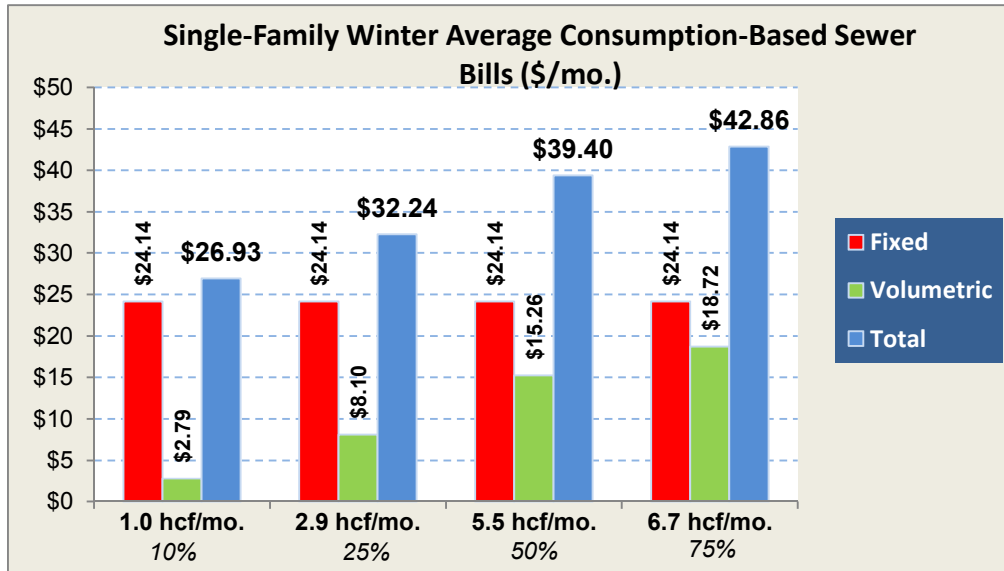
b. Rates shown include the rate increase and are fixed for 12 months beginning in July.

c. From the Recommended Financial Plan.

Figure 4 provides a breakdown of fixed and volumetric charges based on various winter average consumption levels. The 2.9 hcf consumption level in this figure represents the lowest 25% of single-family customers; the middle level is the average consumption level, and the highest level includes up to 75% of all single-family customers (i.e., only 25% of single-family customer have winter-average consumption higher than this). The 1.0 hcf is provided for a comparison for low water users, such as seniors.

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Figure 4 – New Single-Family Fixed and Volumetric Charges by Consumption Level



Tables 6 and 7 summarize new fixed and volumetric sewer charges for commercial customers. In contrast to single-family and other residential customers, commercial volumetric rates are applied to monthly water usage rather than average winter consumption. Further details on the projected residential and commercial sewer rates are presented in Appendix 1.

Table 6 – New Commercial Fixed Charges (FY12-13 through FY14-15)

| Commercial Customers | Current (\$/Acct/mo.) | New Fixed Charges (\$/Account/Mo.) (a) | | |
|-----------------------------------|-----------------------|--|----------|----------|
| | | FY 12-13 | FY 13-14 | FY 14-15 |
| Low-Strength Commercial | | | | |
| 1 Unit | \$31.40 | \$39.40 | \$41.76 | \$41.76 |
| 2 Units | 62.80 | 78.79 | 83.52 | 83.52 |
| 3 Units | 94.20 | 118.19 | 125.28 | 125.28 |
| 4 Units | 125.60 | 157.59 | 167.04 | 167.04 |
| 5 Units | 157.00 | 196.98 | 208.80 | 208.80 |
| 6 Units | 188.40 | 236.38 | 250.56 | 250.56 |
| 7 Units | 219.80 | 275.77 | 292.32 | 292.32 |
| 8 Units | 251.20 | 315.17 | 334.08 | 334.08 |
| Medium-Strength Commercial | | | | |
| 1 Unit | \$31.40 | \$47.84 | \$50.71 | \$50.71 |
| High-Strength Commercial | | | | |
| 1 Unit | \$31.40 | \$56.29 | \$59.66 | \$59.66 |
| 2 Units | 62.80 | 112.57 | 119.33 | 119.33 |
| 4 Units | 125.60 | 225.15 | 238.66 | 238.66 |
| 5 Units | 157.00 | 281.43 | 298.32 | 298.32 |

a. FY'13-14 and '14-15 rates based on financial plan projections of annual rate increases.

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Table 7 – New Commercial Volumetric Rates (FY12-13 through FY14-15)

| Commercial Customers | Current (\$/hcf) | New Volumetric Rates (\$/hcf) (a) | | |
|----------------------|---------------------|-----------------------------------|----------|----------|
| | | FY 12-13 | FY 13-14 | FY 14-15 |
| Low-Strength | \$1.95 | \$5.38 | \$5.70 | \$5.70 |
| Medium-Strength | 3.10 | 7.13 | 7.56 | 7.56 |
| High-Strength | 4.20 | 6.27 | 6.64 | 6.64 |

a. These reflect City of Eureka volume charges, and only apply to water consumption over 7 hcf.

b. FY'13-14 and '14-15 rates based on financial plan annual rate increases.

Financial Plan

A financial plan was prepared for the District to evaluate the net revenue requirements and determine the additional rate revenue needed. These revenue requirements are shown in Table 8, along with the revenue generated from (1) current rates, (2) rate increases, and (3) the year-end reserve fund levels. Appendix 2 provides additional details related to the financial plan.

Table 8 – Recommended Sewer Financial Plan

| Recommended Financial Plan | Current | Projected | | | |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| | FY 11-12 | FY 12-13 | FY 13-14 | FY 14-15 | FY 15-16 |
| Revenue Requirements | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Expenses (a) | | | | | |
| Customer Service/Billing Costs | \$119,077 | \$120,900 | \$122,800 | \$124,900 | \$127,200 |
| Collection System O&M | 1,259,266 | 1,278,000 | 1,298,600 | 1,321,200 | 1,346,100 |
| Treatment System (Elk River WWTP) | 977,340 | 991,900 | 1,007,900 | 1,025,500 | 1,044,800 |
| Sewer Cash-Funded CIP (b) | 659,975 | 562,200 | 313,660 | 535,975 | 223,100 |
| Cash-Funded MSI Phase 1 Capital Outlay | 1,041,000 | 0 | 0 | 0 | 0 |
| Add'l. Contingency (c) | 0 | 500,000 | 0 | 0 | 0 |
| Debt service | | | | | |
| Existing Debt Service (d) | 269,191 | 271,728 | 250,885 | 230,042 | 230,042 |
| MSI-Related Debt Service (e) | 47,400 | 47,400 | 757,400 | 757,400 | 757,400 |
| Total Revenue Requirements | \$4,373,250 | \$3,772,128 | \$3,751,245 | \$3,995,017 | \$3,728,642 |
| Fund Balances | | | | | |
| Beginning Fund Balance | \$ 2,967,696 | \$ 1,845,616 | \$ 1,930,689 | \$ 2,277,176 | \$ 2,408,892 |
| Revenue from Current Rates | 2,857,000 | 2,886,000 | 2,915,000 | 2,944,000 | 2,973,000 |
| Revenue from Rate Increases | | | | | |
| % Rate Increase | 0.0% | 20.0% | 6.0% | 0.0% | 0.0% |
| Additional Rate Revenue | 0 | 577,200 | 786,732 | 786,732 | 786,732 |
| Non-Rate (misc.) Revenue | 394,170 | 394,000 | 396,000 | 396,000 | 396,000 |
| less Total Revenue Requirements | (4,373,250) | (3,772,128) | (3,751,245) | (3,995,017) | (3,728,642) |
| Ending Fund Balance (f) | \$1,845,616 | \$1,930,689 | \$2,277,176 | \$2,408,892 | \$2,835,982 |
| Total Rate Revenue Including Rate Increases | | \$3,463,200 | \$3,701,732 | \$3,730,732 | \$3,759,732 |
| Estimated Coverage Calculation (g) | – | 6.05 | 2.26 | 2.44 | 2.87 |

a. HCSD's budget projections plus planned additional contingency and new MSI-related debt service.

b. Includes Sewer CIP and 50% of Vehicle & Rolling Stock and Building and Yard CIP. Source: Exhibit A, 5/26/2011.

c. Total of \$500,000 additional funding for Martin Slough Phase 2b construction contingency to be added to reserves if not used.

d. Assumes previous 48% allocation to sewer for 2001 CIP loan, 2006 CIP sale and 2006 VacCon Installment sales, and Davis-Grunsky loan.

e. FY'11-12 and FY'12-13 are HCSD estimates. FY'13-14 includes a \$9.14 mil 30-year revenue bond at 6.5% interest and 2% issuance costs.

f. HCSD Board policy requires an Ending Fund balance of at least \$1 million.

g. Assumes coverage of 1.25 (net revenue to debt service) and use of carry-over fund balances in the coverage calculation.

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Connection Fees

Various methodologies have been and are currently used to calculate sewer connection fees. These include basing the fee on the value of existing (historical) system assets, planned future improvements, or a combination of both these approaches. Additionally, asset values can be based on current book value, which typically underestimates the “true value” of facilities, or using replacement-cost-less depreciation, which better represents the true value of assets.⁶

The asset values are then divided by the number of future customers, typically measured in equivalent dwelling units (EDU's), that are expected to connect to the system within the planning period covered by the analysis. Depending on the method used to estimate both the asset values and future customers, there can be a significant range in the connection fee adopted.

The calculation methodology used in this analysis requires new customers to pay their fair share of existing system assets as well as their share of the future capital improvements needed to provide them with capacity in the sewer system. Table 9 summarizes the range of calculated fees based on various estimates of historical asset values, along with a recommended connection fee of \$3,000. As can be seen in this table, the recommended connection fee is quite conservative compared to the fee HCSD could justify using a replacement-cost-less-depreciation approach.⁷

Table 9 – Estimated and Recommended Sewer Connection Fees (in \$2012)

| Costs Allocated to Future Connections (\$mil.) (a) | Conservative (b) | Moderate (c) | Average |
|---|-------------------------|---------------------|----------------|
| Existing Assets | \$2.04 | \$43.82 | -- |
| Planned CIP Costs | \$3.32 | \$3.32 | -- |
| Total Allocated Costs | \$5.36 | \$47.14 | \$26.25 |
| Number of Future Connections (EDU's) (d) | | | |
| Conservative Estimate | 1,950 | -- | -- |
| Moderate Estimate | -- | 3,440 | -- |
| Average | -- | -- | 2,695 |
| Calculated Connection Fee (\$/EDU) (e) | | | |
| Conservative Estimate | \$2,700 | -- | -- |
| Moderate Estimate | -- | \$13,700 | -- |
| Average | -- | -- | \$9,700 |
| Recommended Connection Fee (f) | | \$3,000 | |

a. Historical and expansion costs allocated to growth.

b. Represents shorter-term, less optimistic future growth and low-end (book-value) asset values.

c. Represents medium-term (less than build-out) and higher-end (replacement-cost-less-depreciation) asset values.

d. Based on analysis of existing and future equivalent dwelling units (EDU's).

e. "Total Allocated Costs" divided by "Total New Dwelling Units."

f. Connection fee selected by HCSD Board based on their review of costs and EDU's shown above.

Additional details of the connection fee calculations are presented in Appendix 3.

⁶ The “true value” here refers to a value closer to what the system or facilities would be worth if purchased in an “arms-length” (or market-based) transaction.

⁷ The “Moderate” option uses a replacement-cost-less-depreciation method to estimate existing assets, and, in this case, represents the *maximum* fee an agency could charge. However, the HCSD Board may adopt a fee less than the maximum.

Sewer Rate & Connection Fee Study

Chapter 3 – Proposition 218 (Prop 218)

California Proposition 218, officially titled the “Right to Vote on Taxes Act,” was approved by California voters in 1996. It amended the California Constitution and established substantive and procedural requirements and limitations on new and increased taxes, assessments and property related fees and charges. In 2006 the “Bighorn” court decision concluded that all charges for water or sewer services were property-related services and subject to Prop 218 requirements.

Prop 218 restricted the authority of government agencies to raise and spend local revenue without a “Vote” of the people. In general, Prop 218 guidelines required:

- Revenue cannot exceed the funds required to provide the service.
- Revenue from the fee or charge shall not be used for any purpose other than that for which it was imposed.
- No fee may be imposed for general government services available to the public at large.
- The cost of service may not exceed the proportional cost attributable to the service.
- The fee or charge may only be imposed if the service is actually used or immediately available.

Prop 218 required that a Public Hearing be conducted to hear comments and receive written protests. If written protests against the proposed fee or charge are presented by a majority of customers (at least 50% + 1), the agency shall not impose the fee.

Sewer Rate & Connection Fee Study

Chapter 4 – City of Eureka Capital Improvements

The District/City of Eureka Wastewater agreement requires the District to pay for 32.1% of major City of Eureka GEA WP capital improvement project sewer expenditures. The City of Eureka's next five year GEAWP capital improvements include:

- Wastewater Facilities Plan.
- WWTP Standby Generator.
- WWTP new Digester or Solids thickener.
- Biosolids Dewatering Facility.

These WWTP improvements do not include any capacity expansion beyond that necessary to bring the plant up to its original design capacity of 6.02 MGD. During the planning period the City costs allocated to the District are approximately \$2,000,000.

The City and District have certain cost-sharing arrangements for water and wastewater services, including capital improvement projects. Recently, the City identified wastewater billing and reserve fund accounting irregularities that have occurred over the last several years that resulted in a District over payment to the City. During the same time period, various Martin Slough design service expenses were incurred for which the District owed the City. The net result of these transactions was a City refund to the District of approximately \$1,031,032. The District may apply this refund to City capital project expenses in FY11-12 and 12-13 to reduce the percent increase in sewer rates with the balance remaining in the District wastewater reserve fund.

Sewer Rate & Connection Fee Study

Chapter 5 – Martin Slough Project

The Martin Slough Project is a joint City of Eureka/Humboldt Community Services District capital improvement project. The project consists of constructing a sewer interceptor main (pipeline), regional sewage lift station and pressure discharge main in the Martin Slough drainage basin (south Eureka area). This multi-purpose project is being constructed to:

- Decrease sanitary overflows (SSO's) and reduce fines.
- Bring the existing sewage collection and lift stations into capacity compliance for the 1-hour, 20-year peak storm event.
- Eliminate up to 16 existing individual sewage lift stations.
- Reduce Maintenance requirements.
- Reduce energy requirements.
- Reduce odor complaints.

Another side benefit is that the project is being “Oversized” to provide for future growth.

A grant of \$5,250,000 reduces the estimated total project cost from \$21,552,690 to \$16,302,690 of which Eureka's 36% share amounts to \$5,868,968 and the District's 64% share amounts to \$10,433,722. Each partner's share represents their corresponding design capacity right of the proposed system. The District will fund Phase 1 costs of \$1,403,366 from existing reserves and plans to fund phase 2 costs of approximately \$9.1 million by a State Department of Water Resources Clean Water loan, private placement loan, or bond-debt issue.

Sewer Rate & Connection Fee Study – Appendix 1

Appendix 1 – Sewer Rate Details

Additional Detail on New Sewer Rates

The following tables present additional details related to how the new residential and commercial sewer rates were calculated. These are selected tables from the actual sewer rate model and provide key information and/or calculations.

Table 1-1 Summary of Annual COS Revenue Requirements by Customer Class (FY12-13)

| Customer Classes | Annual Revenue Requirements | | | | | | Total Annual |
|--------------------------------------|-----------------------------|--------------------|-------------------------------|------------------|------------------|--------------------|--------------------|
| | Fixed Costs ^(a) | | Variable Costs ^(b) | | | Subtotal | |
| | Customer | Other | Flow | BOD | TSS | | |
| Residential | | | | | | | |
| Single Family | \$259,424 | \$1,467,414 | \$634,790 | \$248,399 | \$165,833 | \$1,049,021 | \$2,775,860 |
| Multi-Family | 2,626 | 76,841 | 30,545 | 11,953 | 7,980 | 50,478 | 129,945 |
| Mobile Homes | 317 | 75,697 | 36,530 | 14,295 | 9,543 | 60,368 | 136,382 |
| Trailer Parks | <u>226</u> | <u>36,294</u> | <u>10,061</u> | <u>3,937</u> | <u>2,628</u> | <u>16,627</u> | <u>53,148</u> |
| Subtotal - Residential | \$262,593 | \$1,656,247 | \$711,926 | \$278,583 | \$185,984 | \$1,176,494 | \$3,095,335 |
| Non-Residential | | | | | | | |
| Light Commercial | \$3,350 | \$152,515 | \$65,558 | \$25,653 | \$17,126 | \$108,337 | \$264,203 |
| Medium Commercial | 136 | 10,683 | 4,592 | 3,257 | 2,174 | 10,024 | 20,843 |
| Heavy Commercial | <u>905</u> | <u>29,842</u> | <u>12,827</u> | <u>13,176</u> | <u>8,796</u> | <u>34,800</u> | <u>65,547</u> |
| Subtotal - Non-Resid. | \$4,392 | \$193,041 | \$82,977 | \$42,086 | \$28,097 | \$153,161 | \$350,593 |
| Total - Resid. & Non-Res. | \$266,985 | \$1,849,288 | \$794,904 | \$320,670 | \$214,081 | \$1,329,655 | \$3,445,928 |

a. Costs allocated to customer class accounts as a fixed monthly charge. From Rate Model Table COS-2.

b. Costs allocated to customers as a volumetric rate based on winter average water use (residential customers) or monthly water use (commercial customers). From Rate Model Table COS-3.

Table 1-2 Calculation of New Residential Volumetric Rates (FY12-13)

| Customer Classes | Annual Variable Revenue Req't's. | Avg. Winter Consumption | | | Unit Rate - Winter Avg. ^c |
|------------------------|----------------------------------|-------------------------|-------------------------|------------------|--------------------------------------|
| | | Current | Adjustment ^b | Adjusted Average | |
| Residential | (a) | (hcf/mo.) | | (hcf/mo.) | (\$/hcf) |
| Single Family | \$1,049,021 | 32,934 | 5% | 31,287 | \$2.79 |
| Multi-Family | \$50,478 | 1,585 | 5% | 1,506 | \$2.79 |
| Mobile Homes | \$60,368 | 1,895 | 5% | 1,800 | \$2.79 |
| Trailer Parks | <u>\$16,627</u> | <u>522</u> | <u>5%</u> | <u>496</u> | <u>\$2.79</u> |
| Subtotal - Residential | \$1,176,494 | 36,936 | -- | 35,089 | -- |

a. From Cost Allocation of Revenue Requirements Table.

b. Reflects an assumed "price elasticity of demand" reduction in response to implementation of volumetric rates.

c. This rate is applied to the winter average water use of each account.

Table 1-3 Typical Low, Average and High Volumetric Charges by Customer Class (FY12-13)

| Customer Classes | Unit Rate - Winter Avg. ^a | Average Winter Consumption ^b (hcf/mo.) | | | Monthly Volumetric Charges (\$/mo.) | | |
|----------------------------|--------------------------------------|---|---------|-------|-------------------------------------|----------|------------|
| | | Low | Average | High | Low | Average | High |
| Residential | | | | | | | |
| Single Family | \$2.79 | 2.9 | 5.5 | 6.7 | \$8.10 | \$15.26 | \$18.72 |
| Multi-Family | \$2.79 | 18.0 | 26.0 | 30.0 | \$50.29 | \$72.53 | \$83.82 |
| Mobile Homes ^c | \$2.79 | 91.7 | 257.2 | 585.0 | \$256.21 | \$718.67 | \$1,634.52 |
| Trailer Parks ^c | \$2.79 | 4.30 | 99.2 | 311.0 | \$12.01 | \$277.11 | \$868.95 |

a. This rate is applied to the winter average water use of each account.

b. Reflects an assumed "price elasticity of demand" reduction in response to implementation of volumetric rates.

Single-family "Low" includes 25% of all single-family billing units and "High" includes 75% of all single-family billing units.

c. The "Low" and "High" consumption levels reflect the lowest and highest account in these customer classes.

Sewer Rate & Connection Fee Study – Appendix 1

Table 1-4 Calculation of Typical Residential Monthly Bills by Customer Class (FY12-13)

| Customer Classes | Fixed Monthly Charges | | | | Variable (Volumetric) Charges | | |
|------------------|------------------------------------|-----------------------------------|--------------------------------|---------------------------------|-------------------------------|--------------------------------------|-------------------------------------|
| | Fixed Customer Charge ^a | Fixed Monthly Charge ^b | Avg. No. of Units ^c | Avg. Fixed Charges ^d | Unit Rate - Winter Avg. | Avg. Winter Consumption ^e | Mo. Volumetric Charges ^f |
| Residential | (\$/mo./acct.) | (\$/mo./ERU) | | (\$/mo./acct.) | (\$/hcf) | (hcf/mo.) | (\$/mo.) |
| Single Family | \$3.77 | \$20.37 | 1.0 | \$24.14 | \$2.79 | 5.5 | \$15.26 |
| Multi-Family | \$3.77 | \$20.37 | 5.4 | \$114.18 | \$2.79 | 26.0 | \$72.53 |
| Mobile Homes | \$3.77 | \$20.37 | 44.2 | \$904.93 | \$2.79 | 257.2 | \$718.67 |
| Trailer Parks | \$3.77 | \$20.37 | 29.70 | \$608.68 | \$2.79 | 99.2 | \$277.11 |

- a. Fixed charge per account reflecting "customer costs".
- b. Includes all fixed costs except customer costs.
- c. Reflects the ERU factors: Multi-Family = 0.8, Mobile Homes = 0.87, Trailer spaces = 0.5.
- d. Includes "Fixed Customer Charge" and "Fixed Monthly charge" times "Avg. No. of Units".
- e. Reflects an assumed "price elasticity of demand" reduction in response to implementation of volumetric rates.
- f. "Unit Rate - Winter Avg." times "Avg. Winter Consumption".

Table 1-5 Annual Commercial Fixed Costs by Customer Class (FY12-13)

| Customer Classes | FIXED COSTS | | | | | | |
|---------------------------|------------------------|---------------|--------------------|---------------------------------------|------------------------|---------------------------------|---------------------|
| | Customer Costs | | | Other Fixed Costs (Allocated by Flow) | | | |
| | Number of Accounts (a) | \$/Acct./mo | Annual Rev. Req't. | FY12-13 Effluent (hcf/yr)(b) | Annual Rev. Req't. (c) | Equiv. Resid. Units (ERU's) (a) | Mo. Charge (\$/ERU) |
| (1) | (2) | (3) = (1)x(2) | (4) | (5) | (6) | (7) = (5) ÷ (6) | |
| Non-Residential | | | | | | | |
| Light Commercial | 74 | \$3.77 | \$3,350 | 44,718 | \$152,515 | 100 | \$127.10 |
| Medium Commercial | 3 | 3.77 | 136 | 3,132 | 10,683 | 3 | 296.76 |
| Heavy Commercial | <u>20</u> | <u>3.77</u> | <u>905</u> | <u>8,750</u> | <u>29,842</u> | <u>29</u> | <u>85.75</u> |
| Subtotal - Non-Resid. | 97 | -- | \$4,392 | 56,600 | \$193,041 | 132 | -- |
| Total - Resid. & Non-Res. | 5,897 | -- | \$266,985 | 542,221 | \$1,849,288 | 6,909 | |

- a. Accounts from HCSD records. Non-Residential ERU's represent "billing units" from HCSD billing records.
- b. From City of Eureka, WWTP records.
- c. Other Fixed Costs from Rate Model Table COS-1, allocated proportionally based on effluent.

Table 1-6 Annual Commercial Variable Costs by Customer Class (FY12-13)

| Customer Classes | VARIABLE COSTS | | | | | | | | | |
|---------------------------|----------------------|------------------------|--------------------|----------------------------|--------------|--------------------|----------------------------|----------------|--------------------|-------------------------------|
| | Flow | | | BOD | | | TSS | | | Annual Variable Rev. Req't's. |
| | Effluent (hcf/yr)(a) | Unit Cost (\$/hcf) (b) | Annual Rev. Req't. | FY12-13 Units (lbs/yr) (c) | \$/lb. (b) | Annual Rev. Req't. | FY12-13 Units (lbs/yr) (c) | \$/lb. (b) | Annual Rev. Req't. | |
| Non-Residential | | | | | | | | | | |
| Light Commercial | 44,718 | \$1.466 | \$65,558 | 66,952 | \$0.383 | \$25,653 | 66,952 | \$0.256 | \$17,126 | \$108,337 |
| Medium Commercial | 3,132 | 1.466 | 4,592 | 8,500 | 0.383 | 3,257 | 8,500 | \$0.256 | 2,174 | \$10,024 |
| Heavy Commercial | <u>8,750</u> | <u>1.466</u> | <u>12,827</u> | <u>34,388</u> | <u>0.383</u> | <u>13,176</u> | <u>34,388</u> | <u>\$0.256</u> | <u>8,796</u> | <u>\$34,800</u> |
| Subtotal - Non-Resid. | 56,600 | -- | \$82,977 | 109,840 | -- | \$42,086 | 109,840 | -- | \$28,097 | \$153,161 |
| Total - Resid. & Non-Res. | 542,221 | -- | \$794,904 | 836,910 | -- | \$320,670 | 836,910 | -- | \$214,081 | \$1,329,655 |

- a. From City of Eureka, WWTP records.
- b. Unit costs from Table COS-1.
- c. From Rate Model Table COS-1, Summary of Wastewater Flow & Loadings and COS Revenue Requirements (FY'12-13)

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Table 1-7 Commercial Volumetric Costs and Charges by Customer Class (FY12-13)

| Customer Classes | Variable Costs (a) | Effluent/Water Use | | Volume Charges (d) | |
|----------------------------------|--------------------|--------------------|------------------|--------------------|----------------------|
| | | Effluent (b) | Winter Avg. (c) | Effluent | Water Use |
| | | <u>(hcf/yr.)</u> | <u>(hcf/yr.)</u> | <u>(\$/hcf)</u> | <u>(\$/hcf)</u> |
| <u>Non-Residential Customers</u> | (1) | (2) | (3) | (4) = (1) ÷ (2) | (5) = (1) ÷ (3) |
| Light Commercial | \$108,337 | 44,718 | 40,815 | \$2.42 | \$2.65 |
| Medium Commercial | 10,024 | 3,132 | 2,859 | \$3.20 | \$3.51 |
| Heavy Commercial | <u>34,800</u> | <u>8,750</u> | <u>7,986</u> | <u>\$3.98</u> | <u>\$4.36</u> |
| Subtotal - Non-Resid. | \$153,161 | 56,600 | 51,660 | -- | -- |

a. From Rate Model Table COS-4.

b. These charges reflect CoE's estimates based on HCSD water units that are billed sewer consumption charges.

c. From HCSD winter average water consumption records.

d. Effluent volume charges for information only. Water use charges are applied assuming no minimum consumption (i.e., all water consumption is charged this volume charge).

Table 1-8 Projected Commercial Fixed Charges – Humboldt CSD

| Commercial Customers | Current (\$/Acct/mo.) | New Fixed Charges (\$/Account/Mo.) (a) | | |
|-----------------------------------|-----------------------|--|----------|----------|
| | | FY 12-13 | FY 13-14 | FY 14-15 |
| Low-Strength Commercial | | | | |
| 1 Unit | \$31.40 | \$39.40 | \$41.76 | \$41.76 |
| 2 Units | 62.80 | 78.79 | 83.52 | 83.52 |
| 3 Units | 94.20 | 118.19 | 125.28 | 125.28 |
| 4 Units | 125.60 | 157.59 | 167.04 | 167.04 |
| 5 Units | 157.00 | 196.98 | 208.80 | 208.80 |
| 6 Units | 188.40 | 236.38 | 250.56 | 250.56 |
| 7 Units | 219.80 | 275.77 | 292.32 | 292.32 |
| 8 Units | 251.20 | 315.17 | 334.08 | 334.08 |
| Medium-Strength Commercial | | | | |
| 1 Unit | \$31.40 | \$47.84 | \$50.71 | \$50.71 |
| High-Strength Commercial | | | | |
| 1 Unit | \$31.40 | \$56.29 | \$59.66 | \$59.66 |
| 2 Units | 62.80 | 112.57 | 119.33 | 119.33 |
| 4 Units | 125.60 | 225.15 | 238.66 | 238.66 |
| 5 Units | 157.00 | 281.43 | 298.32 | 298.32 |

a. FY'13-14 and '14-15 rates based on financial plan projections of annual rate increases.

Table 1-9 Projected Commercial Consumption Rates – Humboldt CSD

| Commercial Customers | Current (\$/hcf) | New Volumetric Rates (\$/hcf) (a) | | |
|----------------------|------------------|-----------------------------------|----------|----------|
| | | FY 12-13 | FY 13-14 | FY 14-15 |
| Low-Strength | \$1.95 | \$5.38 | \$5.70 | \$5.70 |
| Medium-Strength | 3.10 | 7.13 | 7.56 | 7.56 |
| High-Strength | 4.20 | 6.27 | 6.64 | 6.64 |

a. These reflect City of Eureka volume charges, and only apply to water consumption over 7 hcf.

b. FY'13-14 and '14-15 rates based on financial plan annual rate increases.

Sewer Rate & Connection Fee Study – Appendix 2

Appendix 2 – Financial Plan and Budget Projections

Recommended Financial Plan

The following tables present additional information related to the recommended financial plan:

Table 2-1 Revenue Generated by Rate Increases

| Recommended Financial Plan | | Projected Rate Revenue and Additional Revenue from Rate Increases | | | | |
|--|--------|---|--------------------|--------------------|--------------------|--------------------|
| | | FY 11-12 Year 1 | FY 12-13 Year 2 | FY 13-14 Year 3 | FY 14-15 Year 4 | FY 15-16 Year 5 |
| Rate Increases | | 0.0% | 20.0% | 6.0% | 0.0% | 0.0% |
| Current Revenue | | \$ 2,857,000 | \$ 2,886,000 | \$ 2,915,000 | \$ 2,944,000 | \$ 2,973,000 |
| Additional Rate Revenue Generated from Rate Increases** | | | | | | |
| | Year 1 | \$0 | \$0 | \$0 | \$0 | \$0 |
| | Year 2 | | \$577,200 | \$577,200 | \$577,200 | \$577,200 |
| | Year 3 | | | \$209,532 | \$209,532 | \$209,532 |
| | Year 4 | | | | \$0 | \$0 |
| | Year 5 | | | | | \$0 |
| New Revenue | | \$0 | \$577,200 | \$786,732 | \$786,732 | \$786,732 |

* Assumes that rate increases generate additional revenue beginning at the implementation date.
 ** Rate increase times the Revenue from Current Rates plus the previous revenues shown above.

Table 2-2 Budget Projections – Summary of HCSD Estimates

| Expense Categories | Budget | Projected Expenses | | | |
|---|------------------------|--------------------|--------------------|--------------------|--------------------|
| | FY 11-12 (f) Year 1 | FY 12-13 Year 2 | FY 13-14 Year 3 | FY 14-15 Year 4 | FY 15-16 Year 5 |
| <i>Projected Annual Increases (a)</i> | | 1.49% | 1.61% | 1.74% | 1.88% |
| Customer Service/Billing Costs (a,b) | \$119,077 | \$120,900 | \$122,800 | \$124,900 | \$127,200 |
| Collection System O&M (a) | 1,259,266 | 1,278,000 | 1,298,600 | 1,321,200 | 1,346,100 |
| Treatment System (Elk River WWTP) (a) | 977,340 | 991,900 | 1,007,900 | 1,025,500 | 1,044,800 |
| Debt Service (2003 Greater Eureka WW) (c) | 63,708 | 62,409 | 62,409 | 62,409 | 62,409 |
| " " (misc. other) (c) | 205,483 | 209,319 | 188,476 | 167,633 | 167,633 |
| " " (MSI-related) (d) | 47,400 | 47,400 | 757,400 | 757,400 | 757,400 |
| Total Expenditures | 2,672,275 | 2,709,928 | 3,437,585 | 3,459,042 | 3,505,542 |
| Less: Non-Rate Revenue (e) | (\$394,170) | (\$394,000) | (\$396,000) | (\$396,000) | (\$396,000) |
| Baseline Rev. Req't's. | \$2,278,105 | \$2,315,928 | \$3,041,585 | \$3,063,042 | \$3,109,542 |

a. Reflect HCSD budget projections for operating expenses and assumption that inflation has been excluded from projections because current code allows annual water rate increases for inflation and if the new sewer rates also provide for annual rate increase based on inflation, future revenue will automatically adjust to cover cost increases due to inflation.
 b. Includes 10% of wages, benefits, and office/administrative related costs.
 c. Include actual expenditures (excludes debt repaid through debt service).
 d. Assumes previous 48% allocation to sewer for 2001 CIP loan, 2006 CIP sale and 2006 VacCon Installment sales, and Davis-Grunsky loan.
 e. FY'11-12 and FY'12-13 are HCSD estimates. FY'13-14 assumes a \$9.14 mil 30-year revenue bond at 6.5% interest and 2% issuance costs.
 f. Based on HCSD's 6-30-11 email of Requested Budget and previous rate study % allocations to sewer expense categories.

Sewer Rate & Connection Fee Study – Appendix 3

Appendix 3 – Connection Fee Calculations

The following tables provide additional details related to the connection fees previously shown in Table 9:

Table 3-1 Existing Sewer System Assets Allocated to Future Customers (Book Values)

| Existing Sewer System Assets Allocated to Future Customers (Book Values) | | | | | | |
|--|-----|--------------------------|---|--------------------|---|--------------------|
| <i>Humboldt CSD</i> | | | | | | |
| <u>Existing Sewer System (a)</u> | | <u>Fixed Asset Value</u> | <u>Allocation to HCSD Sewer Customers</u> | | <u>Allocation to Future Sewer Customers</u> | |
| Collection System Assets (Book Value) | | | | | <i>(based on % Future EDU's)</i> | |
| All District Assets | (1) | \$3,738,751 | 100.0% | \$3,738,751 | 35.0% | \$1,308,107 |
| less Outstanding Debt Principal (b) | (2) | (\$1,730,880) | 100.0% | (\$1,730,880) | 35.0% | (\$605,597) |
| Subtotal - Collection System | | \$2,007,871 | -- | \$2,007,871 | -- | \$702,510 |
| City of Eureka WWTP | | | | | | |
| Total Treatment Plant (RCLD) | | \$12,573,845 | 30.5% | \$3,835,023 | 35.0% | \$1,341,790 |
| Total - Existing Assets | | \$14,581,716 | 40.1% | \$5,842,894 | -- | \$2,044,300 |

a. Source: HCSD and/or COE estimates.

b. Remaining outstanding principal that was allocated to sewer system as of 2010.

Table 3-2 Existing Sewer System Assets Allocated to Future Customers

| Existing Sewer System Assets Allocated to Future Customers (Replacement-Cost-Less-Depreciation) | | | | | | |
|---|-----|--------------------------|---|----------------------|---|---------------------|
| <i>Humboldt CSD</i> | | | | | | |
| <u>Existing Sewer System (a)</u> | | <u>Fixed Asset Value</u> | <u>Allocation to HCSD Sewer Customers</u> | | <u>Allocation to Future Sewer Customers</u> | |
| Collection System Assets (Replacement-Cost-Less-Depreciation) | | | | | <i>(%)</i> | <i>(\$)</i> |
| Collection System Pipe (Only) | (1) | \$123,150,709 | 100.0% | \$123,150,709 | 35.0% | \$43,087,717 |
| less Outstanding Debt Principal (b) | (3) | (\$1,730,880) | 100.0% | (\$1,730,880) | 35.0% | (\$605,597) |
| Subtotal - Collection System | | \$121,419,829 | -- | \$121,419,829 | -- | \$42,482,121 |
| City of Eureka WWTP | | | | | | |
| Total Treatment Plant (RCLD) | | \$12,573,845 | 30.5% | \$3,835,023 | 35.0% | \$1,341,790 |
| Total - Existing Assets | | \$133,993,674 | 93.5% | \$125,254,851 | -- | \$43,823,911 |

a. Source: HCSD and/or COE estimates.

b. Remaining outstanding principal that was allocated to sewer system as of 2010.

Sewer Rate & Connection Fee Study – Appendix 3

Table 3-3 Allocation of Planned CIP Costs to Future Customers

| Allocation of Planned CIP Costs to Future Customers | | | | | |
|---|--------------------------|---|--------------------|---|--------------------|
| <i>Humboldt CSD</i> | | | | | |
| | <u>Fixed Asset Value</u> | <u>Allocation to HCSD Sewer Customers</u> | | <u>Allocation to Future Sewer Customers</u> | |
| <u>Planned Improvements (CIP)</u> | | | | <i>(based on % Future EDU's)</i> | |
| | | | | (%) | (\$) |
| Martin Slough Interceptor (a) | | | | | |
| Phase 1 - Construction | \$1,403,366 | 64.0% | \$898,154 | 35.0% | \$314,244 |
| Phase 2A - Design & Construction | \$2,801,920 | 64.0% | \$1,793,229 | 35.0% | \$627,411 |
| Phase 2B - Design & Construction | \$4,983,680 | 64.0% | \$3,189,555 | 35.0% | \$1,115,955 |
| Phase 2C - Design & Construction | <u>\$1,150,300</u> | <u>100.0%</u> | <u>\$1,150,300</u> | 35.0% | <u>\$402,465</u> |
| Subtotal - Martin Slough Interceptor | \$10,339,266 | -- | \$7,031,238 | -- | \$2,460,075 |
| Other Collection System | | | | | |
| Cross Town Interceptor Cathodic Repairs | \$200,000 | 32.1% | \$64,200 | 35.0% | \$22,462 |
| Railroad Anode Bed Replacement | \$100,000 | 32.1% | \$32,100 | 35.0% | \$11,231 |
| Add VFD Drives to Washington and Hill P.S. | \$200,000 | 32.1% | \$64,200 | 35.0% | \$22,462 |
| Construct flood protection dike at Hill St P.S. | \$300,000 | 32.1% | \$96,300 | 35.0% | \$33,693 |
| Miscellaneous (including Biosolids) | <u>\$1,275,851</u> | <u>32.1%</u> | <u>\$409,548</u> | <u>35.0%</u> | <u>\$143,292</u> |
| Subtotal - Other Collection System | \$2,075,851 | -- | \$666,348 | -- | \$233,141 |
| City of Eureka WWTP | | | | | |
| Holding Pond Expansion | \$500,000 | 30.5% | \$152,500 | 35.0% | \$53,356 |
| Primary Clarifier Launderers | \$370,000 | 30.5% | \$112,850 | 35.0% | \$39,484 |
| Secondary Effluent Pipe | \$220,000 | 30.5% | \$67,100 | 35.0% | \$23,477 |
| Solids Contact Tank | \$1,670,000 | 30.5% | \$509,350 | 35.0% | \$178,210 |
| Digester Mixing Upgrade Evaluation | \$25,000 | 30.5% | \$7,625 | 35.0% | \$2,668 |
| DAFT Thickener | \$2,680,000 | 30.5% | \$817,400 | 35.0% | \$285,990 |
| Replace RSS Pumps | \$360,000 | 30.5% | \$109,800 | 35.0% | \$38,417 |
| Coagulant Chemical Feed System Evaluation | <u>\$10,000</u> | <u>30.5%</u> | <u>\$3,050</u> | 35.0% | <u>\$1,067</u> |
| Subtotal - WWTP Improvements | \$5,835,000 | -- | \$1,779,675 | -- | \$622,669 |
| Total - Planned Capital Improvements | \$18,250,117 | 51.9% | \$9,477,261 | -- | \$3,315,885 |

a. Source: HCSD and/or COE estimates.

Table 3-4 Estimated % EDU's and Costs Allocated to Future Customers

| Estimated % of EDU's and Costs Allocated to Future Customers | | | |
|--|-------------------------------------|-------------------|---------------|
| <i>Humboldt CSD</i> | | | |
| <u>Area</u> | <u>HCSD Sewer Customers (EDU's)</u> | | |
| | <u>Existing (a)</u> | <u>Future (b)</u> | <u>Total</u> |
| Myrtle town | 1,869 | 490 | 2,359 |
| Martin Slough | 3,282 | 2,385 | 5,667 |
| Humboldt Hill | <u>1,241</u> | <u>565</u> | <u>1,806</u> |
| Total | 6,392 | 3,440 | 9,832 |
| % of Total | | 35.0% | 100.0% |

a. Source: HCSD billing records.

b. Source: HCSD estimate based on system capacity and likely buildout.

Appendix 4 – Glossary

ADWF – Average Dry Weather Flow

CIP – Capital Improvement Plan

COE – City of Eureka

EDU – Equivalent Dwelling Unit

ERU – Equivalent Residential Unit

HCF (or CCF) – Hundred Cubic Feet (e.g., of water)

HCSD – Humboldt Community Services District

NBS – NBS Government Finance Group, the consultant retained by HCSD to evaluate sewer rates, average winter water use based residential rates, and connection fees.

MGD – Million Gallons per Day

MSI – Martin Slough Interceptor

O&M – Operations and Maintenance

Prop 218 – Proposition 218, an amendment to the state constitution passed by voters in 1996 and dubbed the “Right to Vote on Taxes Act.” It limits the methods by which local governments can create or increase taxes, fees, and charges without taxpayer consent by requiring voter approval prior to imposition or increase of general taxes, assessments, and certain user fees, including water and sewer service charges. (*Source of definition: California Tax Data, www.californiataxdata.com*)

SSO – Sanitary Sewer Overflow

WWTP – Wastewater Treatment Plant