

Humboldt Community Services District

Sewer Rate and Connection Fee Study



Revised September 2011

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of October 11, 2011.**



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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 – HDR Engineering, Inc. (HDR) was initially retained by HCSD in 2008 to evaluate sewer connection fees (or system capacity fees) and sewer rates in order to reflect the impacts of the Martin Slough Interceptor (MSI) project and increased costs associated with City of Eureka Capital Improvement Program and Wastewater Treatment Plant.

Those results were initially presented in a report dated December 2009. Since then, the District has experienced recent changes in financial conditions, including a refund from the City of Eureka and an updated sewer budget, that need to be more accurately reflected in the District's sewer rates and connection fees.

Those revised District-wide rates are provided below. This rate analysis and report were prepared as a cooperative effort and joint work product of the HCSD staff and HDR.

Chapter 2 – Sewer Rate and Connection Fee Analysis

Overview

In 2008, the District retained HDR Engineering, Inc., to prepare a cost of service study (Sewer Rate Study) of its monthly sewer rates and its capacity and capital-related connection fees. The primary purpose of the sewer rate study was to determine the funding levels for sewer operations and planned capital improvements over the next five years. The Rate Study was developed based on future revenue requirements including the Martin Slough Sewer Project, City of Eureka Capital Improvement Projects, and Wastewater Treatment Plant Expenses (i.e., costs of City wastewater plant improvements, although 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 first five year 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.¹ In contrast, connection fees are paid by future customers as a method of "buying-in" to existing facility costs and pay 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.

Sewer Rates

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

Methodology and Assumptions –The following are the basic assumptions included in the calculation methodology:

- 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's, the District is planning to fund \$8.5 million with a State Revolving Fund (SRF) loan in FY'11-12, with debt service payments beginning in FY'13-14².
- District reserves are assumed to cover another \$1.2 million of Martin Slough Interceptor capital costs.

¹ The HCSD sewer utility is an enterprise fund, which by definition must be self-sufficient in its funding, and not rely on connection fees for operating costs, and is not allowed to fund non-sewer related activities.

² Debt Service payments for SRF loans are planned to begin the year following completion of the Martin Slough Project.

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- HCSD's share of the City's treatment plant CIP costs³ and other collection system improvements are cash-funded (i.e., pay-as-you-go) as follows: \$1.04 million in FY'11-12 for MSI costs, approximately \$21,000 in FY'13-14, and \$13,300/year thereafter.
- 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. HDR 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.
- The HCSD Board has eliminated the senior discount rate due to Prop 218 concerns (i.e., Prop 218 does not allow subsidies of any customer or class of customers). Residential customers that previously had senior discount rates now have the same rate as other single-family customers.

Recommended Sewer Rates – Table 1 summarizes the historical, current and proposed 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 included:

- 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 (see footnote below).
- Two years of State property tax transfers under Proposition 1A.

³ These WWTP costs do not include any capacity expansion beyond the current design capacity of the existing plant.

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.

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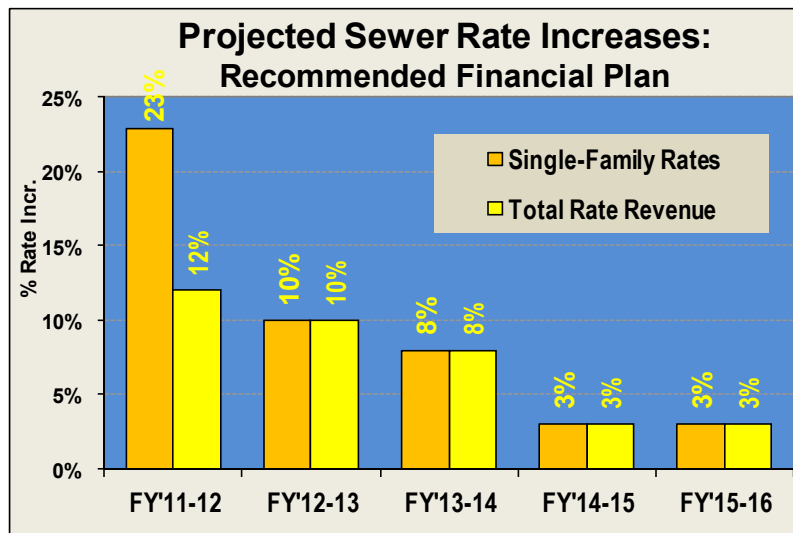
Table 1 – Historical, Current, and Proposed Residential Monthly Rates

Historical, Current and Proposed Residential Monthly Rates Humboldt CSD												
	Historical Rates					Current	Proposed Single-Family Rates					
	2002	2005	2007	2008	2009		2011	2011	2012	2013	2014	2015
HCSD	\$16.10	\$17.60	\$23.75	\$27.30	\$31.40	\$31.40	\$38.59	\$42.45	\$45.84	\$47.22	\$48.63	
% Increase	--	9.3%	35.0%	15.0%	15.0%	0.0%	22.9%	10.0%	8.0%	3.0%	3.0%	
Other Nearby Districts¹												
Arcata*	\$21.23	\$26.28	\$34.83	\$39.83	\$44.88	--	--	--	--	--	--	
Eureka	\$14.87	\$18.20	\$19.60	\$21.10	\$21.10	--	--	--	--	--	--	
Ferndale	\$15.00	\$21.20	\$47.75	\$63.00	\$66.00	--	--	--	--	--	--	
Fortuna*	\$13.83	\$21.81	\$45.49	\$45.49	\$78.96	--	--	--	--	--	--	
McKinleyville*	\$15.99	\$15.99	\$16.60	\$17.05	\$18.76	--	--	--	--	--	--	

* Rate is based on flat fee and 10 hcf of water use.
 1. Note: Historical years selected correspond to to HCSD sewer rate increase years.

Figure 1 shows the recommended overall increase in single-family rates and the total sewer rate revenue for the next five years, although HCSD hopes that future development will provide enough connection fee revenue to offset or reduce the need for future rate increases. Tables 2 through 4 show the recommended residential and commercial sewer rates for fiscal year 2010-2011 (FY'10-11).

Figure 1 – Projected Sewer Rate Increases



Note: FY11-12 reflects a one-time cost-of-service adjustment; FY'11-12 and later reflect "across-the-board" increases where all rates are adjusted by exactly the same percentage.

The annual rate increases in single-family rates and total rate revenue shown in Figure 1 are the result of financial planning and HCSD Board workshops addressing how to fund projected revenue requirements, including Martin Slough Interceptor (MSI) costs. However, as noted in Tables 2 through 4, first year (FY'11-12) rate adjustments vary by customer class (residential vs. commercial customer types) as a result of the cost-of-service analysis, which indicated single-family residential rates should be increased more in comparison to multi-family and mobile home customers. After

Sewer Rate & Connection Fee Study

FY'11-12, rates are adjusted in an “across-the-board” manner, meaning all residential and commercial rates are increased by the same percentage. Also, the overall rate increases reflect the additional MSI-related debt service payments, which begin in FY'13-14.

Table 2 – Recommended Residential Monthly Flat Rates (FY'11-12)

<i>Humboldt CSD - Residential Customers</i>				
Residential Customers	Current 2011 Fixed Charges (1 Billing Unit)	New FY'11-12 Fixed Charges		
		(1 Billing Unit)	(% Change) (b)	
Single Family	\$31.40	\$38.59	22.9%	
Single Family - Seniors (a)	\$27.25	\$38.59	41.6%	
Multi-Family	\$31.40	\$29.02	-7.6%	
Mobile Homes	\$27.26	\$31.31	14.8%	
Trailer Parks	\$13.65	\$19.24	41.0%	

a. HCSD board eliminated senior rates. Current rates are shown for information purposes.
 b. Due to one-time cost-of-service adjustments, percent changes vary by customer class.

Table 3 – Recommended Commercial Fixed Charges and Volume Rates (FY'11-12)

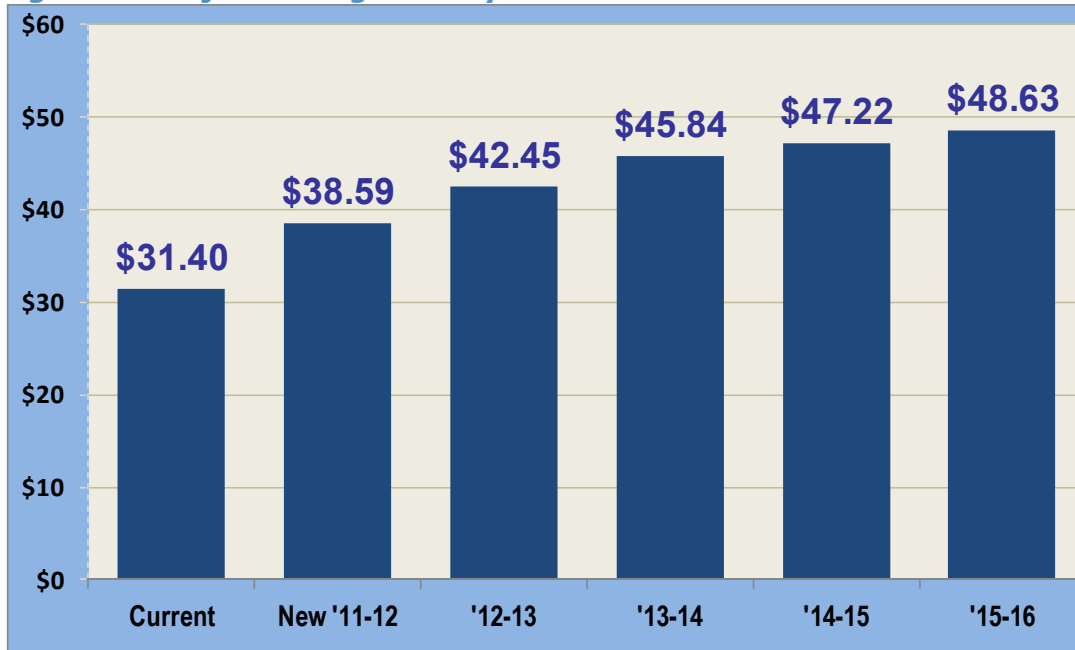
<i>Humboldt CSD - Commercial Customers</i>					
Commercial Fixed Charges	Current 2011 Fixed Charges (1 Billing Unit)	City of Eureka Base Rates (a)		New FY'11-12 Fixed Charges	
		CoE Base Rates	% Increase (b)	(1 Billing Unit)	(% Change)
Light Commercial	\$31.40	\$20.98	0.0%	\$38.59	22.9%
Medium Commercial	\$31.40	\$25.26	20.4%	\$46.46	48.0%
Heavy Commercial	\$31.40	\$29.53	40.8%	\$54.31	73.0%
Commercial Volumetric Rates	Current Rates (\$/hcf)	(No Adjustments)		New FY'11-12 Volume Rates	
				(\$/hcf)(c)	(% Change)
Light Commercial	\$1.95	--	--	\$4.33	122.1%
Medium Commercial	\$3.10	--	--	\$5.40	74.2%
Heavy Commercial	\$4.20	--	--	\$6.46	53.8%

- a. HCSD has decided to use SFR fixed monthly charge as the base commercial charge. Medium and heavy strength commercial customers are adjusted proportionally to CoE base rates.
 b. These % increase in CoE commercial rates are used to adjust the other HCSD commercial rates.
 c. City of Eureka volume charges apply to water consumption over 7 units.

Figure 2 shows the recommended single-family residential sewer rates over the next five years. Further details on the projected residential and commercial sewer rates over the next five years are presented in Appendix 1.

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Figure 2 - Projected Single Family Sewer Rates



Financial Plan

A financial plan was prepared for the District in order to evaluate the net revenue requirements and determine the necessary additional rate revenue needed. These revenue requirements are shown in Table 6, along with (1) the revenue generated from current rates, (2) additional revenue generated by rate increases, and (3) the year-end levels of reserve funds.

Additional details of the financial plan and related projections of O&M budgets are presented in Appendix 2.

Sewer Rate & Connection Fee Study

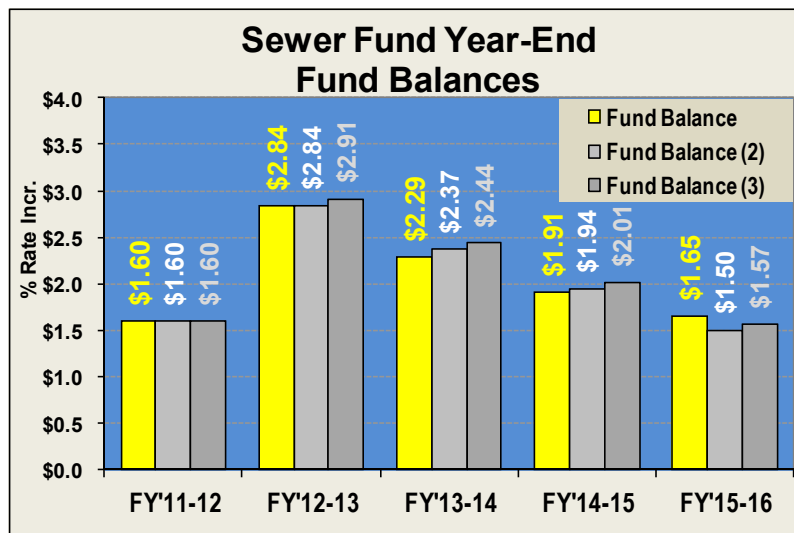
Table 4 – Recommended Sewer Financial Plan

Baseline Revenue Requirements	Requested		Projected		
	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
	Year 1	Year 2	Year 3	Year 4	Year 5
Baseline Net Revenue Req'ts (a)	\$3,319,105	\$2,315,758	\$3,405,228	\$3,418,572	\$3,465,072
<i>Annual % Increase from Previous Year (b)</i>	0.0%	-30.2%	47.0%	0.4%	1.4%
Recommended Financial Plan					
Rate Increase	12.0%	12.0%	8.0%	0.0%	0.0%
<i>Cumulative (Compounded) Rate Increase</i>	12.0%	25.4%	35.5%	35.5%	35.5%
Beginning Fund Balance	\$ 2,967,696	\$ 1,597,140	\$ 2,913,615	\$ 2,437,487	\$ 2,008,972
Revenue from Current Rates (c)	3,119,000	3,150,000	3,182,000	3,214,000	3,246,000
Revenue from Rate Increases	187,140	801,360	1,120,029	1,120,029	1,120,029
less Cash-Funded District CIP	(1,041,000)	0	(21,413)	(13,300)	(13,300)
less Debt Service (Including new MSI-related)	(316,591)	(319,128)	(1,351,515)	(1,330,672)	(1,330,672)
less Baseline Net Revenue Req'ts.	(3,319,105)	(2,315,758)	(3,405,228)	(3,418,572)	(3,465,072)
Ending Fund Balance (d)	\$1,597,140	\$2,913,615	\$2,437,487	\$2,008,972	\$1,565,957
<i>Estimated Coverage Calculation (e)</i>	--	9.13	1.80	1.51	1.18

a. From Table B-1, Budget Projections - Summary. Does not include any new debt service payments for MSI or City WWTP improvements.
 b. Reasons for FY'11-12 through FY'13-14 fluctuations: FY'11-12 included a cash expense for MSI Phase I of approximately \$1.04 million, FY'13-14 includes new debt service payments of approximately \$1.1 million per year.
 c. FY'11-12 is from HCSD's 6-30-11 Requested Budget numbers. Includes '11-12 adjustments. After FY'11-12 includes 1% growth.
 d. HCSD Board policy requires an Ending Fund balance of at least \$1 million.
 e. Coverage ratio assumes the entire Revenue Bonds Issues (Table 2-3) are subject to typical coverage of 1.25 (net revenue to debt service).

Corresponding to the alternative sets of rate increases previously noted in Figure 3, the year-end sewer fund balances for those alternatives are shown in Figure 4. As this figure indicates, there are only slight differences in the fund balances.

Figure 4 – Sewer Fund Year-End Fund Balances



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.⁵

The asset values are then divided by the number of future customers, typically measured in equivalent dwelling units (EDU's), that are expected 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 6 summarizes the range of calculated fees based on various estimates of historical asset values, along with 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.⁶

Table 5– Estimated and Recommended Sewer Connection Fees (in \$2010)

Costs Allocated to Future Connections (\$mil.) (a)	Conservative (b)	Moderate (c)	Average
Existing Assets	\$2.04	\$43.82	--
Planned CIP Costs	\$4.39	\$4.39	--
Total Allocated Costs	\$6.44	\$48.22	\$27.33
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	\$3,300	--	--
Moderate Estimate	--	\$14,000	--
Average	--	--	\$10,100
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.

⁵ 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.

⁶ 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.

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.

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 5 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 5 year 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. As noted in Appendix Table 2-3, Note C, the District may apply this refund to City capital project expenses in fiscal years 11-12 and 12-13 to reduce the percent increase in sewer rates with the balance remaining in the District wastewater reserve fund.

Chapter 5 – Martin Slough Project

The Martin Slough Project is a joint City/District capital improvement project which consists of constructing an interceptor, lift station and discharge main in the Martin Slough drainage basin. 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.

The total project cost is estimated at \$19,400,000 with grant funding making up \$4,400,000, the City of Eureka is contributing \$5,400,000 (36%) and the District \$9,600,000 (64%). HCSD's 64% cost share represents the District's design capacity right of the proposed system.

Appendix 1 – Sewer Rates

Recommended FY'11-12 Sewer Rates

The following tables present the residential and commercial sewer rates for FY'11-12.

Table 1-1 New Residential Flat Rates (FY '11-12), Humboldt CSD

Customer Class		Current Rates	New Flat Rates	
		(\$/Acct/mo.)	(\$/Acct/mo.)	% Change (a)
Single Family (b)				
1 Units		\$31.40	\$38.59	23%
2 Units		62.80	\$55.10	-12%
3 Units		94.20	\$88.03	-7%
Multi-Family Residential (1 Unit = 0.8 ERU, Current Flat rate of \$31.40/unit)				
4 Units		\$125.60	\$107.27	-15%
5 Units		157.00	133.35	-15%
6 Units		188.40	159.43	-15%
7 Units		219.80	185.51	-16%
8 Units		251.20	211.59	-16%
9 Units		282.60	237.67	-16%
12 Units		376.80	315.91	-16%
14 Units		439.60	368.07	-16%
16 Units		502.40	420.23	-16%
26 Units		816.40	681.03	-17%
37 Units		1,161.80	967.92	-17%
Mobile Homes (1 Unit = 0.87 ERU, Current Flat rate of \$27.26/unit)				
Alpha	25 Units	\$681.38	\$711.87	4%
Sea Ave	26 Units	708.63	\$740.23	4%
Lewis Ave	35 Units	953.93	\$995.44	4%
Herrick	46 Units	1,253.73	\$1,307.37	4%
Sea View	79 Units	2,153.15	\$2,243.16	4%
Spruce Point	23 Units	626.87	\$655.16	5%
Humboldt Bay	124 Units	3,387.90	\$3,527.85	4%
Travel Trailer Parks (1 Unit = 0.5 ERU, Current Flat rate of \$15.70/unit)				
Johnny's	53 Units	\$723.45	\$866.85	20%
Redwood Acres	52 Units	737.10	850.55	15%
Allard	82 Units	1,119.30	1,339.56	20%
Obeji/EZ	78 Units	1,064.70	1,274.36	20%
Elks Lodge RV	24 Units	327.60	394.15	20%

a. Due to cost-of-service adjustments, percent changes vary by customer class.

b. Includes Seniors. Due to Prop 218 restrictions, they are not allowed to have a reduced rate.

Sewer Rate & Connection Fee Study – Appendix 1

Recommended Five-Year Projections of Sewer Rates

Table 1-2 presents the residential and commercial sewer rates for the next five years.

Table 1-2 Projected Residential Rates – Humboldt CSD

Customer Classes		Current	New	Projected Flat Rates (\$/Account/Mo.) (a)			
		(\$/Acct/mo.)	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Single Family							
1 Units		\$31.40	\$38.59	\$42.45	\$45.84	\$47.22	\$48.63
2 Units		62.80	55.10	60.61	65.46	67.43	69.45
3 Units		94.20	88.03	96.83	104.58	107.72	110.95
Multi-Family Residential (1 Unit = 0.8 ERU)							
4 Units		125.60	107.27	117.99	127.43	131.25	135.19
5 Units		157.00	133.35	146.68	158.41	163.17	168.06
6 Units		188.40	159.43	175.37	189.40	195.08	200.93
7 Units		219.80	185.51	204.06	220.38	226.99	233.80
8 Units		251.20	211.59	232.75	251.36	258.91	266.67
9 Units		282.60	237.67	261.43	282.35	290.82	299.54
12 Units		376.80	315.91	347.50	375.30	386.56	398.15
14 Units		439.60	368.07	404.88	437.27	450.38	463.89
16 Units		502.40	420.23	462.25	499.23	514.21	529.64
26 Units		816.40	681.03	749.14	809.07	833.34	858.34
37 Units		1,161.80	967.92	1,064.71	1,149.88	1,184.38	1,219.91
Mobile Homes (1 Unit = 0.87 ERU)							
Alpha	25 Units	\$681.38	\$711.87	\$783.06	\$845.71	\$871.08	\$897.21
Sea Ave	26 Units	708.63	740.23	814.25	879.39	905.78	932.95
Lewis Ave	35 Units	953.93	995.44	1,094.99	1,182.59	1,218.07	1,254.61
Herrick	46 Units	1,253.73	1,307.37	1,438.11	1,553.16	1,599.75	1,647.75
Sea View	79 Units	2,153.15	2,243.16	2,467.48	2,664.87	2,744.82	2,827.17
Spruce Point	23 Units	626.87	655.16	720.67	778.33	801.68	825.73
Humboldt Bay	124 Units	3,387.90	3,527.85	3,880.63	4,191.08	4,316.82	4,446.32
Travel Trailer Parks (1 Unit = 0.5 ERU)							
Johnny's	53 Units	\$723.45	\$866.85	\$953.54	\$1,029.82	\$1,060.72	\$1,092.54
Redwood Acres	52 Units	737.10	850.55	935.61	1,010.46	1,040.77	1,072.00
Allard	82 Units	1,119.30	1,339.56	1,473.52	1,591.40	1,639.14	1,688.31
Obeji/EZ	78 Units	1,064.70	1,274.36	1,401.80	1,513.94	1,559.36	1,606.14
Elks Lodge RV	24 Units	327.60	394.15	433.56	468.25	482.30	496.77
<i>a. Projected rates based on financial plan projections of annual rate increases.</i>							

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Table 1-3 Projected Commercial Fixed Charges – Humboldt CSD

Commercial Customers	Current	New	Projected Fixed Charges (\$/Account/Mo.) (a)			
	(\$/Acct/mo.)	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Low-Strength Commercial						
1 Unit	\$31.40	\$38.59	\$42.45	\$45.84	\$47.22	\$48.63
2 Units	62.80	77.18	84.89	91.69	94.44	97.27
3 Units	94.20	115.76	127.34	137.53	141.65	145.90
4 Units	125.60	154.35	169.79	183.37	188.87	194.54
5 Units	157.00	192.94	212.24	229.21	236.09	243.17
6 Units	188.40	231.53	254.68	275.06	283.31	291.81
7 Units	219.80	270.12	297.13	320.90	330.53	340.44
8 Units	251.20	308.71	339.58	366.74	377.75	389.08
Medium-Strength Commercial						
1 Unit	\$31.40	\$46.46	\$51.11	\$55.20	\$56.85	\$58.56
High-Strength Commercial						
1 Unit	\$31.40	\$54.31	\$59.75	\$64.53	\$66.46	\$68.45
2 Units	62.80	108.63	119.49	129.05	132.92	136.91
4 Units	125.60	217.26	238.98	258.10	265.84	273.82
5 Units	157.00	271.57	298.73	322.63	332.31	342.27
<i>a. Projected rates based on financial plan projections of annual rate increases.</i>						

Table 1-4 Project Commercial Consumption Rates – Humboldt CSD

Commercial Customers	Current	New (a)	Projected Fixed Charges (\$/Account/Mo.) (b)			
	(\$/Acct/mo.)	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Low-Strength	\$1.95	\$4.33	\$4.76	\$5.14	\$5.30	\$5.46
Medium-Strength	3.10	5.40	5.94	6.42	6.61	6.81
High-Strength	4.20	6.46	7.11	7.67	7.90	8.14
<i>a. These reflect City of Eureka volume charges, and only apply to water consumption over 7 hcf.</i>						
<i>b. Projected rates based on financial plan annual rate increases; volume charges are applied to water consumption over 7 units.</i>						

Appendix 2 – Financial Plan and Budget Projections

Recommended Financial Plan

The following tables present the recommended financial plan for the sewer utility:

Table 2-1 Sewer Financial Plan, Humboldt CSD

Baseline Revenue Requirements	Requested		Projected		
	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
	Year 1	Year 2	Year 3	Year 4	Year 5
Baseline Net Revenue Req't's (a)	\$3,319,105	\$2,315,758	\$3,405,228	\$3,418,572	\$3,465,072
<i>Annual % Increase from Previous Year (b)</i>	0.0%	-30.2%	47.0%	0.4%	1.4%
Recommended Financial Plan					
<i>Rate Increase (c)</i>	12.0%	12.0%	8.0%	0.0%	0.0%
<i>Cumulative Rate Increase</i>	12.0%	25.4%	35.5%	35.5%	35.5%
Beginning Fund Balance (d)	\$ 2,967,696	\$ 1,597,140	\$ 2,913,615	\$ 2,437,487	\$ 2,008,972
Revenue from Current Rates (e)	3,119,000	3,150,000	3,182,000	3,214,000	3,246,000
Revenue from Rate Increases (f)	187,140	801,360	1,120,029	1,120,029	1,120,029
less Cash-Funded District CIP	(1,041,000)	0	(21,413)	(13,300)	(13,300)
less Debt Service (2003 Greater Eureka WW)(g)	(63,708)	(62,409)	(62,409)	(62,409)	(62,409)
less Debt Service (Misc. Other)(g)	(205,483)	(209,319)	(188,476)	(167,633)	(167,633)
less Debt Service (MSI-Related)(g)	(47,400)	(47,400)	(1,100,631)	(1,100,630)	(1,100,630)
less Baseline Net Revenue Req't's. (g)	(3,319,105)	(2,315,758)	(3,405,228)	(3,418,572)	(3,465,072)
Adjustments	0	0	0	0	0
Ending Fund Balance (h)	\$1,597,140	\$2,913,615	\$2,437,487	\$2,008,972	\$1,565,957
Estimated Coverage Calculation (i)					
Existing Loan Payments	\$269,191	\$271,728	\$250,885	\$230,042	\$230,042
New Loan Payments	\$47,400	\$47,400	\$1,100,631	\$1,100,630	\$1,100,630
Total Debt Service	\$316,591	\$319,128	\$1,351,515	\$1,330,672	\$1,330,672
<i>Coverage (Ending Balance ÷ Total Debt Service)</i>	5.04	9.13	1.80	1.51	1.18
<p>a. From Table B-1, Budget Projections - Summary. Does not include any new debt service payments for MSI or City WWTP improvements.</p> <p>b. Reasons for FY'11-12 through FY'13-14 fluctuations: FY'11-12 included a cash expense for MSI Phase I of approximately \$1.04 million, FY'13-14 includes new debt service payments of approximately \$1.1 million per year.</p> <p>c. Rate increases from HCSD assumptions per 6-30-11 email and Requested Budget for FY'11-12 (Note B).</p> <p>d. Initial fund balance is from Humboldt CSD records as of 6/30/09.</p> <p>e. Source: HCSD, Projected Debt Service Ratio with Increased Sewer Rates and Sewer Debt Service, 4-13-11.</p> <p>f. Revenue from the FY'11-12 rate increase reflects only 6 months of actual revenue collected. Assumes a January 2012 implementation date.</p> <p>g. From Table 2-5, Budget Projections.</p> <p>h. HCSD Board policy requires an Ending Fund balance of at least \$1 million.</p> <p>i. Total coverage ratio assumes sum of existing loans plus new SRF debt is subject to coverage of 1.1 (net revenue to total debt service).</p>					

Sewer Rate & Connection Fee Study – Appendix 2

Table 2-2 Financial Plan – Revenue Generated by Rate Increases, *Humboldt CSD*

Recommended Financial Plan	Projected Rate Revenue and Additional Revenue from Rate Increases				
	<i>FY 11-12</i> Year 1	<i>FY 12-13</i> Year 2	<i>FY 13-14</i> Year 3	<i>FY 14-15</i> Year 4	<i>FY 15-16</i> Year 5
Rate Increases	12.0%	10.0%	8.0%	3.0%	3.0%
Current Revenue	\$ 3,119,000	\$ 3,150,000	\$ 3,182,000	\$ 3,214,000	\$ 3,246,000
Additional Rate Revenue Generated from Rate Increases**					
Year 1	\$187,140	\$378,000	\$378,000	\$378,000	\$378,000
Year 2		\$352,800	\$352,800	\$352,800	\$352,800
Year 3			\$313,024	\$313,024	\$313,024
Year 4				\$127,735	\$127,735
Year 5					\$132,527
New Revenue	\$0	\$187,140	\$730,800	\$1,043,824	\$1,171,559
* 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 2-3 Martin Slough Interceptor CIP Costs, Sources of Funds & Resulting Debt Service Payments, *Humboldt CSD*

Budget Projections

The following tables present the budget expenses for FY'11-12 and five-year projections.

Table 2-3 Budget Allocations – HCSD Estimates (FY '11-12)

Budget Expenses (a)	(FY '11-12)
Customer Service/Billing Costs	\$119,077
Collection System O&M	1,259,266
Treatment System (<i>Elk River WWTP</i>)	977,340
Capital Outlay	1,041,000
Debt Service (<i>2003 Greater Eureka WW</i>)	63,708
" " (<i>Other Loans</i>)	205,483
" " (<i>MSI-related</i>)	47,400
Total Expenditures	3,713,275
Less: Non-Rate Revenue	(394,170)
Baseline Rev. Req't's.	\$3,319,105
a. See Table 2-5 for detailed notes on expenses.	

Sewer Rate & Connection Fee Study – Appendix 2

Table 2-4 – Budget Projections – Summary

Expense Categories	Requested	Projected Expenses			
	FY 11-12(g)	FY 12-13	FY 13-14	FY 14-15	FY 15-16
	Year 1	Year 2	Year 3	Year 4	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
Capital Outlay (c)	1,041,000	0	21,413	13,300	13,300
Debt Service (2003 Greater Eureka WW) (d)	63,708	62,409	62,409	62,409	62,409
" " (misc. other) (d)	205,483	209,319	188,476	167,633	167,633
" " (MSI-related) (e)	47,400	47,400	1,100,631	1,100,630	1,100,630
Total Expenditures	3,713,275	2,709,928	3,802,228	3,815,572	3,862,072
Less: Non-Rate Revenue (f)	(\$394,170)	(\$394,170)	(\$397,000)	(\$397,000)	(\$397,000)
Baseline Rev. Req't's.	\$3,319,105	\$2,315,758	\$3,405,228	\$3,418,572	\$3,465,072
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). 50% of projected HCSD capital outlay are assumed after FY'12-13.					
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 is HCSD estimate of the allocation to sewer. FY'12-13 assumes an \$8.5 mil of State Revolving Fund loan and \$1.2 mil private loan; estimated by total debt service less misc. and 2003 payments.					
f. Reflects Requested FY'11-12 Budget plus HCSD's projected future increases.					
g. Based on HCSD's 6-30-11 email of Requested Budget and previous rate study % allocations to sewer expense categories.					

Appendix 3 – Connection Fee Calculations

Recommended Financial Plan

The following tables present the residential and commercial sewer rates for FY'10-11:

Table 3-1 Estimated and Recommended Sewer Connection Fees (in \$2010)

Costs Allocated to Future Connections (\$mil.) (a)	Conservative (b)	Moderate (c)	Average
Existing Assets	\$2.04	\$43.82	--
Planned CIP Costs	<u>\$4.39</u>	<u>\$4.39</u>	--
Total Allocated Costs	\$6.44	\$48.22	\$27.33
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	\$3,300	--	--
Moderate Estimate	--	\$14,000	--
Average	--	--	\$10,100
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.

Table 3-2 Existing Sewer System Assets Allocated to Future Customers (Book Values)

<i>Humboldt CSD</i>						
Existing Sewer System (a)	Fixed Asset Value	Allocation to HCSD Sewer Customers	Allocation to Future Sewer Customers			
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) <u>(\$1,730,880)</u>	<u>100.0%</u>	<u>(\$1,730,880)</u>	<u>35.0%</u>	<u>(\$605,597)</u>	
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	

Sewer Rate & Connection Fee Study – Appendix 3

Table 3-3 Existing Sewer System Assets Allocated to Future Customers (Using Replacement-Cost-Less-Depreciation)

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>	
					(based on % Future EDU's)	
					(%)	(\$)
Collection System Assets (Replacement-Cost-Less-Depreciation)						
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

Sewer Rate & Connection Fee Study – Appendix 3

Table 3-4 Allocation of Planned CIP Costs to Future Customers

Allocation of Planned CIP Costs to Future Customers					
<i>Humboldt CSD</i>					
	Fixed Asset Value		Allocation to HCSD Sewer Customers		Allocation to Future Sewer Customers
Planned Improvements (CIP)				(based on % Future EDU's)	
				(%)	(\$)
Martin Slough Interceptor (a)					
Phase 1 - Construction	\$2,698,300	64.0%	\$1,726,912	35.0%	\$604,208
Phase 2 - Design & Construction	\$4,500,000	64.0%	\$2,880,000	35.0%	\$1,007,648
Phase 3 - Design & Construction	\$7,500,000	64.0%	\$4,800,000	35.0%	\$1,679,414
Phase 4 - Design & Construction	<u>\$1,016,535</u>	<u>100.0%</u>	<u>\$1,016,535</u>	35.0%	<u>\$355,663</u>
Subtotal - Martin Slough Interceptor	\$15,714,835	--	\$10,423,447	--	\$3,646,934
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	\$23,625,686	54.5%	\$12,869,470	--	\$4,502,744

a. Source: HCSD and/or COE estimates.

Table 3-5 Estimated % EDU's and Costs Allocated to Future Customers

Estimated % of EDU's and Costs Allocated to Future Customers			
<i>Humboldt CSD</i>			
Area	HCSD Sewer Customers (EDU's)		
	Existing (a)	Future (b)	Total
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

HDR – HDR Engineering, Inc., the consultant retained by HCSD to evaluate sewer 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