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Angus McDonald & Associates

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Date: <u>June 2, 1993</u>	Time: <u>12:55</u>	AM <u> </u> PM <u>XX</u>
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TO:	<u>City of Vacaville</u>
ATTENTION:	<u>David Van Kirk</u>
TELECOPIER NUMBER:	<u>(707) 449-5149</u>
cc:	<u>Dale Pfeiffer (707) 449-5377</u>

FROM:	<u>Geoffrey M. Richman</u>
OUR PROJECT:	<u>1751.10 City of Vacaville Interfund</u> (No.) (Name)

SUBJECT: Sewer Summary Fee Table

Attached is the revised summary fee table for the Sewer fee reducing the contingent reimbursement by \$300. This table includes the 2.5% increase in the fee effective April 1, 1993.

The second table includes the variations of residential Sewer fees based on number of bedrooms.

We are transmitting a total of 3 pages (including this transmittal memorandum). If there is a problem with the transmission or you do not receive all of the pages, please call us at (510) 548-5831.

The original will not be sent by regular mail.

Thank you.

Table I-2

SUMMARY FEE TABLE
City of Vacaville - Sewer Fee

02-Jun-93
 11:48 AM

	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total
Per EDU:	\$2,692	\$1,100	\$3,792

Charge Per Unit

Per Building Square Foot
 Non Residential Land Uses

Land Use Categories	Unit	EDU	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total
RESIDENTIAL								
Residential	Dwelling Unit	1.00	\$2,692	\$1,100	\$3,792			
NON-RESIDENTIAL								
Retail	1,000 Sq Ft	0.28				\$0.75	\$0.31	\$1.06
Service	1,000 Sq Ft	0.35				\$0.94	\$0.38	\$1.32
Office	1,000 Sq Ft	0.25				\$0.67	\$0.27	\$0.94
Industrial	1,000 Sq Ft	0.42				\$1.13	\$0.46	\$1.59
INSTITUTIONAL								
Hospital	1,000 Sq Ft	0.67				\$1.80	\$0.74	\$2.54
Church	Acre	4.07	\$10,962	\$4,479	\$15,441			
Schools - Elem/JHS	Students	0.04	\$117	\$48	\$165			
Schools - HS	Students	0.06	\$157	\$64	\$221			

Note: Figures are expressed in April 1, 1993 dollars.

Source: Angus McDonald & Associates.

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RESIDENTIAL								
1 room	Dwelling Unit	0.60	\$1,615	\$660	\$2,275			
2 room	Dwelling Unit	0.80	\$2,153	\$880	\$3,033			
3 room	Dwelling Unit	1.00	\$2,692	\$1,100	\$3,792			
4 or more	Dwelling Unit	1.20	\$3,230	\$1,320	\$4,550			
NON-RESIDENTIAL								
Retail	1,000 Sq Ft	0.28				\$0.75	\$0.31	\$1.06
Service	1,000 Sq Ft	0.35				\$0.94	\$0.38	\$1.32
Office	1,000 Sq Ft	0.25				\$0.67	\$0.27	\$0.94
Industrial	1,000 Sq Ft	0.42				\$1.13	\$0.46	\$1.59
INSTITUTIONAL								
Hospital	1,000 Sq Ft	0.67				\$1.80	\$0.74	\$2.54
Church	Acre	4.07	\$10,962	\$4,479	\$15,441			
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Schools - HS	Students	0.06	\$157	\$64	\$221			

Note: Figures are expressed in April 1, 1993 dollars.

Source: Angus McDonald & Associates.

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Data

City of Vacaville
Sewer Development Impact Fee
Update Through Year 2020

March 2004

Bartle Wells Associates
1889 Alcatraz Av.
Berkeley, CA 94703

RECEIVED

MAR 18 2004

CITY OF VACAVILLE
PUBLIC WORKS
ADMINISTRATION

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Table 1: DIF Project List - \$55 Million Tertiary Project (3 pages)

Table 2: DIF Project Summary Update - \$55 Million Tertiary Project

Table 3: Wastewater Capacity Allocation

Table 4: Calculation of Updated Sewer Development Impact Fee

Table 5: EDU Summary by User Category

Appendix A-1: Sewer DIF Cash Flow with \$55 Million Tertiary Project – 500 New
EDUs

Appendix A-2: Sewer DIF Cash Flow with \$55 Million Tertiary Project – 600 New
EDUs

City of Vacaville

2004 Sewer Facilities Development Impact Fee Update

Introduction

The City of Vacaville adopted a sewer development impact fee (DIF) plan in 1992. DIF revenue along with other appropriate funding sources is needed to provide adequate financing for required wastewater facilities. This DIF plan update is in conformance with the requirements of Government Code Sec. 66000 et seq., and includes the following key elements:

- Schedule of required sewer projects
- Estimated costs of projects
- Allocation of costs between current and future users
- Determination of DIF

The current sewer DIF includes two components, which together comprise the total DIF. A portion of the DIF is referred to as a “contingent reimbursement”, meaning that possibly sometime in the future this portion of the fee would be reimbursed to the original payer of the Sewer DIF, but only if funds were not needed for the project costs. The contingent reimbursement was developed so projects could be funded on a pay-as-you-go basis, instead of issuing bonds. The remaining portion of the DIF is not subject to contingent reimbursement. The latest financial projections show that the portion subject to contingent reimbursement is required for project funding and that no reimbursements will be made.

A number of changes have occurred since adoption of the DIF in 1992. Vacaville adopted a facilities planning and design process that better defined treatment plant expansion needs. The City has nearly completed construction of a treatment plant

expansion to 15.0 million gallons per day (mgd) at a cost of about \$90,000,000. In addition, the latest discharge permit from the Regional Water Quality Control Board would require extensive expenditures to meet new regulations. The City has challenged some of the new requirements, but it is clear that more stringent requirements would result in additional costs. The City has estimated the increased cost of the "best case" permit compliance scenario (seasonal tertiary filtration). Also, certain sewer trunk, interceptor, and force main project descriptions have changed, some projects have been added and some deleted. Costs of projects actually constructed have varied from 1992 estimates.

Because of these significant changes, the City is updating the 1992 DIF study. The update includes the following:

- Review of the 1992 sewer DIF study
- Review and update of sewer projects and estimated costs
- Use of actual costs for completed projects
- Update of expansion project funding to reflect current cost estimates
- Adjustment of 1992 estimates using ENR index
- Allowance for "best case" permit compliance costs
- Allowance for future sewer capital projects and programs
- Allowance for effluent stabilization basins cost
- Allocation of treatment plant capacity to determine DIF capacity
- Determination of total and EDU cost of capacity

Project Cost Estimates

Estimated project costs incorporated in the DIF are based on the best available information. Actual costs have been used for completed projects. Estimated costs for projects in design but not yet constructed are based on preliminary design reports. Other projects have been further defined since 1992 through various master planning studies, which were used where available as the basis for the updated DIF cost estimates. In some cases, specific studies are not available, but citywide modeling has indicated the need to eliminate or modify the scope of projects. For these projects, updated estimates are

included in the DIF that are consistent with other recent estimates prepared for sewer projects in Vacaville. Finally, costs for the remaining projects were not changed, other than updating them to a 2003 cost basis.

Facility Sizing

Wastewater collection and treatment facilities included in the DIF are sized using flow factors and projected land uses. The flow factors are applied through computer modeling to predict peak wet weather flows, including a reasonable factor of safety for flows from future growth areas subject to land use changes through the normal planning process. Modeled flows from existing development are based on flow factors adjusted to fit available flow data.

Future pipeline facilities are sized to accommodate projected hourly peak wet weather flows at build-out of the pipeline's service area without exceeding the following full-pipe gravity flow capacity:

- 8 to 10-inch diameter pipelines: 70% of full pipe gravity flow capacity
- 12 to 18-inch diameter pipelines: 80% of full pipe gravity flow capacity
- 21-inch and larger diameter pipelines: 90% of full pipe gravity flow capacity.

An equivalent dwelling unit (EDU) is assigned a design flow of 275 gallons per day (gpd). This design factor represents the anticipated flow from a new 3-bedroom single family dwelling. Predicted peak flows, and the resulting size of facilities needed to serve growth areas where the exact number of EDU's is not yet determined, incorporate an additional factor of safety.

Ongoing Facilities Planning

The citywide wastewater collection system computer model will be periodically updated. As part of the update currently underway, extensive flow data collected over the last seven years will be used to review and refine flow factors. In particular, the relationship between wastewater flow factors, dry weather peak flow calculations, and infiltration and

inflow allowances are being reviewed using the new data. Revised factors developed through this process may be adopted as part of a master plan update, and subsequently used to conduct further facilities planning and design. These potential changes as well as future land use planning changes may affect the sizing or configuration of certain DIF-funded improvements; however, the DIF project list and allowance for future improvement costs represent the best available information.

Treatment Plant Improvements

The outcome of ongoing treatment plant discharge permit litigation and related studies will have a significant impact on treatment facility costs. Costs included in the DIF are based on an assumed set of improvements that would be needed to comply with the least onerous discharge permit conditions ("best case" permit compliance). These include seasonal filtration, plus an allowance for effluent stabilization basins cost. The costs included in the DIF would not be adequate to fund all required treatment plant improvements if the discharge requirements currently under dispute are ultimately adopted.

DIF Projects

Table 1 shows the project list used for the 1992 DIF study and includes updated information through 2003. The list shows only the share of project costs allocated to DIF. Projects estimated to cost about \$47 million in 1992 are now estimated to total nearly \$134 million. Over \$60 million of this increase is for the Easterly treatment plant expansion to 15.0 mgd and for permit compliance. The proposed low-end permit compliance project (\$55 million total cost with DIF share of \$29.1 million) is used for this latest DIF determination. Other cost increases are the result of updating 1992 costs to current 2003 costs using the ENR index.

Table 2 summarizes DIF project costs as developed on Table 1. Treatment plant expansion projects account for over 60 percent of the total costs assigned to DIF. No costs for treatment plant rehabilitation and upgrades are assigned to DIF; rather these costs are assigned to current users.

Capacity Allocation

Flow at the Easterly wastewater treatment plant is used to allocate share of benefit and use between current users and DIF users. Upon completion of the current expansion project, the plant will have a design capacity of 15.0 mgd.

Table 3 shows how the Easterly flow information is used to allocate costs. During June 1992, plant records show that flow from existing users was 7.5 mgd. In addition, another 0.1 mgd of flow capacity is reserved for prior use not reflected in the June 1992 records. Together a flow of 7.6 mgd is allocated to existing users. The remaining capacity of 7.4 mgd is available for future development. However, new City facilities such as police and fire stations, park & recreation structures, and others are required but are not subject to a DIF. Wastewater capacity (about 0.1 mgd) for these facilities must be funded from those new users that are subject to a DIF. As a result, DIF's share of the project costs are collected based on 7.3 mgd of allocated capacity.

DIF Determination

Table 4 shows the total costs allocated to DIF and the amount of the DIF for an equivalent user. DIF's share of improvements from Table 1 total \$133.6 million. DIF would also share the cost of any effluent stabilization basins required to meet discharge limitations. DIF's share of costs for annual sewer programs including wastewater system studies, sewer main replacements, and infiltration control programs are included through 2020. These programs are ongoing indefinitely into the future to preserve capacity in constructed facilities for planned growth. Similarly, future trunk and sewer projects are continued at 90 percent of the historic projected level used in the 1992 DIF study.

Including the DIF share of the above programs, project costs through the year 2020 total \$185,233,000. Some of this requirement will be collected from certain users that discharge above standard strength ammonia. An estimated \$1.06 million of revenues will be collected from these users. The balance of about \$184.17 million is allocated based on 7.3 mgd of available capacity and is equal to \$25,229,000 per million gallons. An EDU

is assigned a design capacity of 275 gallons per day. The resultant charge per EDU is \$6,938 or an increase over the current sewer DIF of \$2,453.

The various user classes are assigned EDUs as shown on Table 5. Residential users are assigned EDUs based on the number of bedrooms. Most other users are assigned EDUs based on floor area of the establishment. For large commercial/industrial users, or for users with unique sewage generation characteristics, the Public Works Department may establish EDU equivalencies on a case by case basis. For others a formula is used to determine EDU assignments.

Appendix A

Table A-1 shows the sewer DIF cash flow for a \$55 million tertiary treatment project. The table is based on an assumed growth rate of 500 new EDUs added annually. At this growth rate the Nut Tree sewer could not be funded on a pay-as-you-go basis until about 2006/07. The Fry Road sewer would require scheduling beyond the year 2013/14 with pay-as-you-go funding.

Table A-2 shows a similar sewer DIF cash flow for the \$55 million tertiary treatment project except that an annual growth rate of 600 new EDUs is assumed. The increased growth generates additional annual revenues to fund future projects on an earlier schedule. For example, the Nut Tree sewer could now be funded on a pay-as-you-go basis one year earlier in about 2005/06. The Fry Road sewer could be scheduled for pay-as-you-go funding sometime about the year 2014.

Table 1
 City of Vacaville
 Sewer Facilities Development Impact Fee Study Update
 DIF Project List - \$55 Million Tertiary Project

DIF Project Number	Description	1992 DIF Study Cost Allocable to Expansion (1)	Year of Project Completion or Fund Authorization	Actual Expenditures	Applicable ENR	Estimated Project Costs 2003 Dollars (2)
1	54" ELMIRA TRUNK SEWER	\$2,000,000	1994	\$2,343,400	6557.48	\$2,796,000
2	EWWTTP EXPANSION - Predesign Report (3)	300,000			6262.14	see DIF 63
3	18" LINE-Alamo Drive	347,000	1992		6262.14	433,000
4	EWWTTP REHAB/UPGRADES	0			6262.14	0
5	WASTEWATER SYSTEM STUDIES	50,000	1992	50,000	6262.14	62,000
6	SEWER MAIN REPLACEMENT PROGRAM	250,000	1992	250,000	6262.14	312,000
7	INFILTRATION CONTROL PROGRAM	125,000	1992	125,000	6262.14	156,000
8	EWWTTP SLUDGE SPREADING EQUIPMENT	250,000			6262.14	See DIF 15
9	54" ELMIRA TRUNK SEWER	3,250,000	1995	2,146,500	6542.75	2,566,000
10	18" SPRR (MARKHAM SCHOOL)	410,000			6262.14	512,000
11	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
12	WASTEWATER SYSTEM STUDIES	50,000	1993	50,000	6433.55	61,000
13	SEWER MAIN REPLACEMENT PGM	250,000	1993	250,000	6433.55	304,000
14	INFILTRATION CONTROL PROGRAM	125,000	1993	125,000	6433.55	152,000
15	EASTERLY WWTP-SLUDGE SPREADING EQUIP	500,000	1997	768,000	6700.22	897,000
16	NUT TREE SEWER: SPRR TO PUTAH SOUTH CANAL	0			6262.14	1,700,000
17	NUT TREE SEWER: PUTAH SOUTH CANAL TO I-80	0			6262.14	2,460,000
18	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
19	WASTEWATER SYSTEM STUDIES	50,000	1994	50,000	6557.48	60,000
20	SEWER MAIN REPLACEMENT PROGRAM	250,000	1994	250,000	6557.48	298,000
21	INFILTRATION CONTROL PROGRAM	0	1994	0	6557.48	0
22	EASTERLY SECONDARY PLANT TO 12 MGD (3)	3,300,000			6262.14	See DIF 63
23	TERTIARY PLANT 15 MGD PERMIT MITIGATION (4)	1,650,000			6262.14	27,115,000
24	27" BEELARD & NUT TREE ROAD PHASE 2	1,262,000	1995	3,169,000	6542.75	3,789,000
25	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
26	WASTEWATER SYSTEM STUDIES	50,000	1995	50,000	6542.75	60,000
27	21"WALNUT RD-(HWY. 80 TO LEISURE TOWN)	0			6262.14	0
28	27" LEIS. TWN RD (WALNUT AVE-SIERRA RD)	0			6262.14	0
29	SEWER MAIN REPLACEMENT PROGRAM	200,000	1995	200,000	6542.75	239,000
30	INFILTRATION CONTROL PROGRAM	0	1995		6542.75	0
31	LEISURE TOWN: ROAD PUMPING STATION	850,000	1997		6700.22	992,000
32	18" LEISURE TWN RD FORCE MN(Sierra Rd-Ulatis Crk)	466,000	1997		6700.22	544,000
33	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0

34	WASTEWATER SYSTEM STUDIES	75,000	1996	75,000	6551.75	90,000
35	SEWER MAIN REPLACEMENT PROGRAM	250,000	1996	250,000	6551.75	299,000
36	INFILTRATION CONTROL PROGRAM	0	1996	0	6551.75	0
37	ULATIS DRIVE SEWER: NUT TREE ROAD TO LEISURE TOWN RD	993,000			6262.14	8,400,000
38	30" LEISURE TOWN RD (Ulatis Crk to Ulatis Drive)	437,000			6262.14	546,000
38A	LEISURE ROAD SEWER: ULATIS DRIVE TO ELMIRA ROAD	0			6262.14	2,500,000
39	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
40	WASTEWATER SYSTEM STUDIES	75,000	1997	75,000	6700.22	88,000
41	SEWER MAIN REPLACEMENT PROGRAM	250,000	1997	250,000	6700.22	292,000
42	INFILTRATION CONTROL PROGRAM	0	1997	0	6700.22	0
43	15" HWY. 80 CROSSING	0			6262.14	0
44	GOLDEN WEST PUMPING STATION	0			6262.14	0
45	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
46	WASTEWATER SYSTEM STUDIES	75,000	1998	75,000	6761.87	87,000
47	SEWER MAIN REPLACEMENT PROGRAM	50,000	1998	50,000	6761.87	58,000
48	INFILTRATION CONTROL PROGRAM	0	1998	0	6761.87	0
49	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
50	WASTEWATER SYSTEM STUDIES	50,000	1999	50,000	6817.78	57,000
51	SEWER MAIN REPLACEMENT PROGRAM	250,000	1999	250,000	6817.78	287,000
52	INFILTRATION CONTROL PROGRAM	125,000	1999	125,000	6817.78	143,000
53	10" I-80 TO PADAN ROAD	612,000			6262.14	0
54A	FRY ROAD/CSP-S SEWER; FRY ROAD TO EWWTP	1,425,000			6262.14	5,300,000
54B	CSP-S REPLACEMENT/PARALLEL SEWERS; SOUTH OF FRY ROAD					0
54C	FRY ROAD SEWER: LEISURE TOWN RD FRY ROAD TO UPRR					2,000,000
55	EASTERLY WWTP REHAB/UPGRADES				6262.14	0
56	WASTEWATER SYSTEM STUDIES	75,000	2000	75,000	7165.08	82,000
57	SEWER MAIN REPLACEMENT PROGRAM	250,000	2000	250,000	7165.08	273,000
58	INFILTRATION CONTROL PROGRAM	125,000	2000	125,000	7165.08	136,000
59	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
60	WASTEWATER SYSTEM STUDIES	50,000	2001	50,000	7429.30	53,000
61	SEWER MAIN REPLACEMENT PROGRAM	250,000	2001	250,000	7429.30	263,000
62	INFILTRATION CONTROL PROGRAM	125,000	2001	125,000	7429.30	132,000
63	EASTERLY WWTP EXPANSION 15 MGD (3)	18,900,000				55,620,000
64	24"-NUT TREE RD TO LEISURE TOWN ROAD	874,000			6262.14	1,092,000
65	MONTE VISTA PUMPING STATION	0			6262.14	0
66	18"-VACA VALLEY PARKWAY NORTH	0			6262.14	0
67	21"-VV PKY-I-80 & UPGRADE Pine Crk Pump Sta.	0			6262.14	0
68	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
69	WASTEWATER SYSTEM STUDIES	64,000	2002	64,000	7661.58	65,000
70	SEWER MAIN REPLACEMENT PGM	250,000	2002	250,000	7661.58	255,000
71	INFILTRATION CONTROL PROGRAM	125,000	2002	125,000	7661.58	128,000
72	EASTERLY WWTP REHAB/UPGRADES	0			6262.14	0
73	WASTEWATER SYSTEM STUDIES	64,000	2003	64,000	7822.94	64,000
74	SEWER MAIN REPLACEMENT PROGRAM	250,000	2003	250,000	7822.94	250,000

75	INFILTRATION CONTROL PROGRAM	50,000	2003	50,000	7822.94	50,000
76	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
77	WASTEWATER SYSTEM STUDIES	200,000	2004	200,000	7822.94	200,000
78	SEWER MAIN REPLACEMENT PROGRAM	250,000	2004	250,000	7822.94	250,000
79	INFILTRATION CONTROL PROGRAM	450,000	2004	450,000	7822.94	450,000
80	ELMIRA ROAD SEWER: NUT TREE ROAD TO PATWIN PARK	552,000		552,000	6262.14	3,800,000
81	ELMIRA ROAD SEWER: PATWIN PARK TO LEISURE TOWN ROA	106,000		106,000	6262.14	700,000
82	21" -SPRR NORTH OF MARKHAM SCHOOL	292,000		292,000	6262.14	365,000
83	18" YELLOWSTONE RD TO LEISURE TOWN RD	436,000		436,000	6262.14	545,000
84	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
85	WASTEWATER SYSTEM STUDIES	50,000	2005	50,000	6262.14	62,000
86	SEWER MAIN REPLACEMENT PROGRAM	250,000	2005	250,000	6262.14	312,000
87	INFILTRATION CONTROL PROGRAM	125,000	2005	125,000	6262.14	156,000
88	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
89	WASTEWATER SYSTEM STUDIES	50,000	2006	50,000	6262.14	62,000
90	SEWER MAIN REPLACEMENT PROGRAM	250,000	2006	250,000	6262.14	312,000
91	INFILTRATION CONTROL PROGRAM	125,000	2006	125,000	6262.14	156,000
92	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
93	WASTEWATER SYSTEM STUDIES	50,000	2007	50,000	6262.14	62,000
94	SEWER MAIN REPLACEMENT PROGRAM	250,000	2007	250,000	6262.14	312,000
95	INFILTRATION CONTROL PROGRAM	125,000	2007	125,000	6262.14	156,000
96	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
97	WASTEWATER SYSTEM STUDIES	50,000	2008	50,000	6262.14	62,000
98	SEWER MAIN REPLACEMENT PROGRAM	250,000	2008	250,000	6262.14	312,000
99	INFILTRATION CONTROL PROGRAM	125,000	2008	125,000	6262.14	156,000
100	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
101	WASTEWATER SYSTEM STUDIES	50,000	2009	50,000	6262.14	62,000
102	SEWER MAIN REPLACEMENT PROGRAM	250,000	2009	250,000	6262.14	312,000
103	INFILTRATION CONTROL PROGRAM	125,000	2009	125,000	6262.14	156,000
104	EASTERLY WWTP REHAB/UPGRADES	0		0	6262.14	0
105	WASTEWATER SYSTEM STUDIES	50,000	2010	50,000	6262.14	62,000
106	SEWER MAIN REPLACEMENT PROGRAM	250,000	2010	250,000	6262.14	312,000
107	INFILTRATION CONTROL PROGRAM	125,000	2010	125,000	6262.14	156,000
Total		\$46,940,000		\$46,940,000		\$133,608,000

- 1 - From 1992 DIF study.
- 2 - Actual project costs, costs used in 1992 DIF study, or current engineering estimates.
Costs updated to 2003 costs using ENR-CCI for the San Francisco bay area. May 2003 ENR-CCI = 7822.94
- 3 - Secondary plant expansion shared with DIF based on line item allocation per West Yost & Associates (61.8% assigned to DIF).
- 4 - Tertiary plant costs shared between O&M and DIF based on flow. (See Table 3)
(O&M = 7.5 mgd + 0.1 mgd (reuse capacity) = 7.6 mgd/15.0 mgd = 50.7%)
(DIF = 7.4 mgd/15.0 mgd = 49.3%)

Table 2
City of Vacaville
Sewer Facilities Development Impact Fee Study Update
DIF Project Summary Update
\$55 Million Tertiary Project

<u>Category</u>	<u>DIF Costs (1)</u>
Trunk and sewer line projects (1992 - 2005) - 14 years	\$41,125,000
Pump station projects	1,062,000
Treatment plant projects	82,735,000
EWWTTP Rehab/Upgrades	0
Wastewater System Studies	1,401,000
Sewer Main Replacement Program	5,002,000
Infiltration Control Program	<u>2,283,000</u>
Subtotal annual sewer programs (1992 - 2010) - 19 years	8,686,000
Total	133,608,000

1 - Summary of Table 1 costs by category.

Table 3
 City of Vacaville
 Sewer Facilities Development Impact Fee Study Update
 Wastewater Capacity Allocation

Capacity		Units
Total plant capacity after expansion (1)	15.0	mgd
Plant capacity allocation:		
1992 flow (2)	7.5	mgd
Allocation for wet year I/I	0.0	mgd
Historical use capacity (3)	0.1	mgd
City public facilities to serve development (4)	0.1	mgd
DIF capacity	7.3	mgd

-
- 1 - As provided by City of Vacaville design documents
 - 2 - June 1992 Easterly Wastewater Treatment Plant influent data corresponding to DIF study.
 - 3 - Capacity obligated for historical use. (350 EDUs x 275gpd/EDU)
 - 4 - The City reserves 0.1 mgd of capacity for future public facilities required to serve develop
-

DRAFT

Table 4
City of Vacaville
Sewer Facilities Development Impact Fee Study Update
Calculation of Updated Sewer Development Impact Fee
\$55 Million Tertiary Project

Units

Cost of DIF improvements (from Table 1)	\$133,608,000	
Additional projects		
Effluent attenuation facilities (49.3% allocated to DIF)	\$7,395,000	
DIF share of annual sewer programs (2011 - 2020) - 10 years (1)	4,570,000	
Future trunk and sewer projects (2006 - 2020) - 15 years (2)	<u>39,660,000</u>	
Total project costs through 2020	185,233,000	
Less: Charges to high strength ammonia dischargers	<u>1,060,000</u>	
Net project costs allocated to DIF	184,173,000	
Capacity (from Table 3)	7.3	mgd
Cost per million gals. per day of capacity	\$25,229,000	\$/mgd
Cost per EDU - 275 gpd	\$6,938	\$/EDU
Current Sewer DIF per EDU	\$4,485	\$/EDU
DIF increase	\$2,453	\$/EDU

-
- 1- Funding for wastewater system studies, sewer main replacements and upgrades, I/I.
Projects for 2011 through 2020. Ave. cost = \$8,686,000/19 yrs = \$457,000/yr
- 2 - Assumes no additional pump station costs. Estimated based on 1992 DIF study.
Projects for 2006 through 2020. Ave. cost = \$41,125,000/14 yrs = \$2,938,000/yr
Use 90% of prior average cost = \$2,644,000/yr
-

Table 5
City of Vacaville
Sewer Facilities Development Impact Fee Study Update
EDU Summary by User Category

Land Use Category	Equivalent Dwelling Units
RESIDENTIAL Single and Multi-Family Including Mobile Homes	
1 Bedroom	0.6 Per unit
2 Bedroom	0.8 Per unit
3 Bedroom	1.0 Per unit
4 Bedrooms or more	1.2 Per unit
HOTEL/MOTEL	
Living unit w /kitchen	0.6 Per unit
Living unit w/o kitchen	0.4 Per unit
Sleeping quarters sharing common restroom	0.2 Per unit
LOW DENSITY	
Parking garages	1/12 Per 1,000 sq.ft.
Warehouses	1/12 Per 1,000 sq.ft.
Storage facilities	1/12 Per 1,000 sq.ft.
RETAIL STORES	
Apparel	1/5 Per 1,000 sq.ft.
Appliance	1/5 Per 1,000 sq.ft.
Automotive	1/5 Per 1,000 sq.ft.
Furniture	1/5 Per 1,000 sq.ft.
Hardware	1/5 Per 1,000 sq.ft.
Novelty	1/5 Per 1,000 sq.ft.
MEDIUM DENSITY USERS	
Theaters	1/4 Per 1,000 sq.ft.
Auditoriums, halls, lodges	1/4 Per 1,000 sq.ft.
Banks/offices	1/4 Per 1,000 sq.ft.
Schools (w/o cafeterias or gymnasiums)	1/4 Per 1,000 sq.ft.
Bowling/entertainment centers (w/o kitchens)	1/4 Per 1,000 sq.ft.
Churches	1/4 Per 1,000 sq.ft.
HIGH DENSITY USERS	
Barber/beauty shops (w/ lavatories)	1 Per 1,000 sq.ft.
Bars	1 Per 1,000 sq.ft.
Markets (w/o disposals)	1 Per 1,000 sq.ft.
Medical/dental offices	1 Per 1,000 sq.ft.
Schools (w/ cafeterias or gymnasiums)	1 Per 1,000 sq.ft.
Service stations	1 Per 1,000 sq.ft.
Sports/fitness centers	1 Per 1,000 sq.ft.
SPECIAL COMMERCIAL OR INDUSTRIAL USERS	
Carwashes (w/o steam cleaning)	2.5 Per automatic stall
Carwashes (w/o steam cleaning)	2 Per self-serve stall
Laundromats	1/5 Per washer
Markets (w/ disposals)	Pro rata
Restaurants, bakeries, cafes	2 Per 1,000 sq.ft.
Mortuaries	2 Per 1,000 sq.ft.
Hospitals	1/2 Per bed
Rest homes, convalescent hospitals	1/3 Per bed
OTHER COMMERCIAL OR INDUSTRIAL USERS	Not less than 1 EDU
NON-CATEGORICAL USERS For commercial or industrial uses having high wastewater strengths or flow, use the EDU formula * - Including equivalent allowance for high strength ammonia	EDU = GPD/275 [0.44 + BOD*/200 mg/L (0.28)+ SS mg/L/200 (0.28)]

Appendix A-2

City of Vacaville Sewer Utility
Sewer DIF Cash Flow w/Tertiary Treatment Project
Annual Growth - 600 EDUs - \$55 Million Tertiary Project

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
1 Estimated equivalent residential units (EDUs)	39,900	40,500	41,100	41,700	42,300	42,900	43,500	44,100	44,700	45,300	45,900
2 Estimated EDUs added	600	600	600	600	600	600	600	600	600	600	600
3 Development Impact Fee (DIF) - 2% annual escalation	\$4,485	\$7,080	\$7,220	\$7,360	\$7,510	\$7,660	\$7,810	\$7,970	\$8,130	\$8,290	\$8,460
4 DIF increase	2,453	0	0	0	0	0	0	0	0	0	0
5 Total DIF	6,938	7,080	7,220	7,360	7,510	7,660	7,810	7,970	8,130	8,290	8,460
7 DIF beginning cash balance	\$6,000,000	6,897,000	8,406,000	5,507,000	3,530,000	1,624,000	2,736,000	3,099,000	2,869,000	3,428,000	4,100,000
8 DIF revenues											
9 Current development impact fees	4,163,000	4,248,000	4,332,000	4,416,000	4,506,000	4,596,000	4,686,000	4,782,000	4,878,000	4,974,000	5,076,000
10 Interest earnings @ 3%	180,000	207,000	252,000	165,000	106,000	49,000	82,000	93,000	86,000	103,000	123,000
11 Subtotal	4,343,000	4,455,000	4,584,000	4,581,000	4,612,000	4,645,000	4,768,000	4,875,000	4,964,000	5,077,000	5,199,000
12 Tertiary project - DIF share SRF loan (1)	0	1,380,000	4,141,000	8,282,000	13,804,000						
14											
15 Total DIF revenues	4,343,000	5,835,000	8,725,000	12,863,000	18,416,000	4,645,000	4,768,000	4,875,000	4,964,000	5,077,000	5,199,000
16											
17 DIF expenses											
18 Expansion project - DIF funding	1,431,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
19 Tertiary project - DIF	215,000	1,726,000	5,177,000	10,353,000	17,255,000						
20 Tertiary project - DIF SRF loan repayment (2)		0	47,000	187,000	467,000	933,000	1,805,000	1,805,000	1,805,000	1,805,000	1,805,000
21											
22 Total DIF expenses	1,646,000	3,476,000	6,974,000	12,290,000	19,472,000	2,683,000	3,555,000	3,555,000	3,555,000	3,555,000	3,555,000
23											
24											
25											
26 Net annual revenues	2,697,000	2,359,000	1,751,000	573,000	-1,056,000	1,962,000	1,213,000	1,320,000	1,409,000	1,522,000	1,644,000
27											
28											
29 Annual sewer programs											
30 Sewer main	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
31 Infiltrations & inflow	450,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
32 System studies	200,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
33 Subtotal	900,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000
34											
35 Available to fund trunk sewer projects	7,797,000	8,831,000	9,732,000	5,655,000	2,049,000	3,161,000	3,524,000	3,994,000	3,853,000	4,525,000	5,319,000
36											
37 Trunk sewer line projects											
38 Nut Tree sewer: SPRR to Putah South Canal (DIF 16)	0	0	0	1,700,000	0	0	0	0	0	0	0
39 Fry Road/CSP-S sewer: Fry Road to EWWT (DIF 54)	0	0	0	0	0	0	0	0	0	0	0
40 Elmira Road Sewer: Nut Tree Road to Patwin Park (DIF 80)	0	0	3,800,000	0	0	0	0	0	0	0	0
41 Elmira Road Sewer: Patwin Park to Leisure Town Road (DIF 81)	0	0	0	0	0	0	0	700,000	0	0	0
42 Subtotal	0	0	3,800,000	1,700,000	0	0	0	700,000	0	0	0
43											
44 Collection system/trunk projects total	900,000	425,000	4,225,000	2,125,000	425,000	425,000	425,000	1,125,000	425,000	425,000	5,725,000
45											
46 Cash Balance	6,897,000	8,406,000	5,507,000	3,530,000	1,624,000	2,736,000	3,099,000	2,869,000	3,428,000	4,100,000	-406,000

1 - DIF share 49.3%, project 80% eligible
2 - SRF loan payments calculated @ 2.7% for 20 years.

Appendix A-1

City of Vacaville Sewer Utility
Sewer DIF Cash Flow w/Tertiary Treatment Project
Annual Growth - 500 EDUs - \$55 Million Tertiary Project

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
1 Estimated equivalent residential units (EDUs)	39,900	40,400	40,900	41,400	41,900	42,400	42,900	43,400	43,900	44,400	44,900
2 Estimated EDUs added	500	500	500	500	500	500	500	500	500	500	500
3 Development Impact Fee (DIF) - 2% annual escalation	\$4,485	\$7,080	\$7,220	\$7,360	\$7,510	\$7,660	\$7,810	\$7,970	\$8,130	\$8,290	\$8,460
4 DIF increase	2,453	0	0	0	0	0	0	0	0	0	0
5 Total DIF	6,938	7,080	7,220	7,360	7,510	7,660	7,810	7,970	8,130	8,290	8,460
7 DIF beginning cash balance	\$6,000,000	7,103,000	8,335,000	5,137,000	4,538,000	636,000	1,377,000	1,343,000	1,388,000	815,000	1,004,000
8 DIF revenues											
9 Current development impact fees	3,469,000	3,540,000	3,610,000	3,680,000	3,755,000	3,830,000	3,905,000	3,985,000	4,065,000	4,145,000	4,230,000
10 Interest earnings @ 3%	180,000	213,000	250,000	154,000	136,000	19,000	41,000	40,000	42,000	24,000	30,000
11 Subtotal	3,649,000	3,753,000	3,860,000	3,834,000	3,891,000	3,849,000	3,946,000	4,025,000	4,107,000	4,169,000	4,260,000
12 Tertiary project - DIF share SRF loan (1)	0	1,380,000	4,141,000	8,282,000	13,804,000						
13 Total DIF revenues	3,649,000	5,133,000	8,001,000	12,116,000	17,695,000	3,849,000	3,946,000	4,025,000	4,107,000	4,169,000	4,260,000
17 DIF expenses											
18 Expansion project - DIF funding	1,431,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
19 Tertiary project - DIF	215,000	1,726,000	5,177,000	10,353,000	17,255,000						
22 Tertiary project - DIF SRF loan repayment (2)		0	47,000	187,000	467,000	933,000	1,805,000	1,805,000	1,805,000	1,805,000	1,805,000
25 Total DIF expenses	1,646,000	3,476,000	6,974,000	12,290,000	19,472,000	2,683,000	3,555,000	3,555,000	3,555,000	3,555,000	3,555,000
26 Net annual revenues	2,003,000	1,657,000	1,027,000	-174,000	-1,777,000	1,166,000	391,000	470,000	552,000	614,000	705,000
29 Annual sewer programs											
30 Sewer main	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
31 Infiltrations & inflow	450,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
32 System studies	200,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
33 Subtotal	900,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000
35 Available to fund trunk sewer projects	7,103,000	8,335,000	8,937,000	4,538,000	2,336,000	1,377,000	1,343,000	1,388,000	1,515,000	1,004,000	1,284,000
37 Trunk sewer line projects											
38 Nut Tree sewer: SFRR to Putah South Canal (DIF 16)	0	0	0	0	1,700,000	0	0	0	0	0	0
39 Fry Road/CSP-S Sewer: Fry Road to EWWTIP (DIF 54)	0	0	0	0	0	0	0	0	0	0	0
40 Elmira Road Sewer: Nut Tree Road to Patwin Park (DIF 80)	0	0	3,800,000	0	0	0	0	0	0	0	0
41 Elmira Road Sewer: Patwin Park to Leisure Town Road (DIF 81)	0	0	0	0	0	0	0	0	700,000	0	0
42 Subtotal	0	0	3,800,000	0	1,700,000	0	0	0	700,000	0	0
44 Cash Balance	7,103,000	8,335,000	5,137,000	4,538,000	636,000	1,377,000	1,343,000	1,388,000	815,000	1,004,000	1,284,000

1 - DIF share 49.3%, project 80% eligible
2 - SRF loan payments calculated @ 2.7% for 20 years.

① cc DT
Cal
② cc F-27a
③ Return

Angus McDonald & Associates

1950 Addison Street, Suite 107 Berkeley, California 94704-1102
Telephone (510) 548-5831 FAX (510) 548-7599

Date: <u>June 2, 1993</u>	Time: <u>12:55</u>	AM <u> </u> PM <u>XX</u>
---------------------------	--------------------	--------------------------------

TO: <u>City of Vacaville</u>
ATTENTION: <u>David Van Kirk</u>
TELECOPIER NUMBER: <u>(707) 449-5149</u>
cc: Dale Pfeiffer (707) 449-5377

FROM: <u>Geoffrey M. Richman</u>
OUR PROJECT: <u>1751.10</u> <u>City of Vacaville Interfund</u> (No.) (Name)

SUBJECT: Sewer Summary Fee Table

Attached is the revised summary fee table for the Sewer fee reducing the contingent reimbursement by \$300. This table includes the 2.5% increase in the fee effective April 1, 1993.

The second table includes the variations of residential Sewer fees based on number of bedrooms.

We are transmitting a total of 3 pages (including this transmittal memorandum). If there is a problem with the transmission or you do not receive all of the pages, please call us at (510) 548-5831.

The original will not be sent by regular mail.

Thank you.

Table I-2

SUMMARY FEE TABLE
City of Vacaville - Sewer Fee

02-Jun-93
 11:48 AM

	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total
Per EDU:	\$2,692	\$1,100	\$3,792

Charge Per Unit

Per Building Square Foot
 Non Residential Land Uses

Land Use Categories	Unit	EDU	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total
RESIDENTIAL								
Residential	Dwelling Unit	1.00	\$2,692	\$1,100	\$3,792			
NON-RESIDENTIAL								
Retail	1,000 Sq Ft	0.28				\$0.75	\$0.31	\$1.06
Service	1,000 Sq Ft	0.35				\$0.94	\$0.38	\$1.32
Office	1,000 Sq Ft	0.25				\$0.67	\$0.27	\$0.94
Industrial	1,000 Sq Ft	0.42				\$1.13	\$0.46	\$1.59
INSTITUTIONAL								
Hospital	1,000 Sq Ft	0.67				\$1.80	\$0.74	\$2.54
Church	Acre	4.07	\$10,962	\$4,479	\$15,441			
Schools - Elem/JHS	Students	0.04	\$117	\$48	\$165			
Schools - HS	Students	0.06	\$157	\$64	\$221			

Note: Figures are expressed in April 1, 1993 dollars.

Source: Angus McDonald & Associates.

[A]C:\P\1751\SEWER\SEWER-F5.WK3(@FEE-SUMMARYNEW)

Table I-2

SUMMARY FEE TABLE
City of Vacaville - Sewer Fee

02-Jun-93
11:48 AM

	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total
Per EDU:	\$2,692	\$1,100	\$3,792

Charge Per Unit

Per Building Square Foot
Non Residential Land Uses

Land Use Categories	Unit	EDU	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total	Portion Not Subject To Contingent Reimbursement	Portion Subject To Contingent Reimbursement	Total
RESIDENTIAL								
1 Bedroom	Dwelling Unit	0.60	\$1,615	\$660	\$2,275			
2 Bedroom	Dwelling Unit	0.80	\$2,153	\$880	\$3,033			
3 Bedroom	Dwelling Unit	1.00	\$2,692	\$1,100	\$3,792			
4 or more	Dwelling Unit	1.20	\$3,230	\$1,320	\$4,550			
NON-RESIDENTIAL								
Retail	1,000 Sq Ft	0.28				\$0.75	\$0.31	\$1.06
Service	1,000 Sq Ft	0.35				\$0.94	\$0.38	\$1.32
Office	1,000 Sq Ft	0.25				\$0.67	\$0.27	\$0.94
Industrial	1,000 Sq Ft	0.42				\$1.13	\$0.46	\$1.59
INSTITUTIONAL								
Hospital	1,000 Sq Ft	0.67				\$1.80	\$0.74	\$2.54
Church	Acre	4.07	\$10,962	\$4,479	\$15,441			
Schools - Elem/JHS	Students	0.04	\$117	\$48	\$165			
Schools - HS	Students	0.06	\$157	\$64	\$221			

Note: Figures are expressed in April 1, 1993 dollars.

Source: Angus McDonald & Associates.

[A]C:\P\1751\SEWER\SEWER-F5.WK3{@FEE-SUM-NEW-1}