

Budget Committee (final): March 8, 2018
Prelim Budget Board Meeting: March 22, 2018
Final Budget Board Meeting: June 28, 2018



Carmel Area Wastewater District Preliminary Budget 2018-19



Carmel Area Wastewater District 2018-19

Table of Contents

	Page
Operating Budget	
Budget Summary	1
Revenues	3
Non-Operating Expenses	4
Operating Budget	
<i>Consolidated Operating Expenses - Summary</i>	5
<i>Consolidated Departmental Expenses - Detail</i>	7
<i>Treatment & Disposal.</i>	15
<i>Maintenance - Plant</i>	24
<i>Maintenance - Field</i>	32
<i>Administration</i>	35
<i>Collections</i>	41
<i>Reclamation</i>	47
Capital Budget Summary 2018-19	48
<i>Administration</i>	50
<i>Maintenance - Equipment</i>	56
<i>Collections - CIP</i>	64
<i>Collections - Equipment</i>	76
<i>Treatment - CIP</i>	85
<i>Treatment - Equipment</i>	93
<i>Long Term Capital Plan</i>	101

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Budget

Carmel Area Wastewater District
Budget Summary
2018-19

Description	2016-17		Est. 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Budget	Projected 2019-20 Budget	% Chg. Prior Yr. Budget		
	Actual	Budget	% of Budget	Actual					Budget	% of Budget
Beginning Fund Balance	24,150,206	21,528,095		24,454,990	15,787,494		21,912,381		20,392,973	
Operating Revenues	8,651,989	7,947,301	108.87%	8,226,931	8,524,382	96.51%	9,061,993	14.03%	9,456,003	4.35%
	8,651,989	7,947,301	108.87%	8,226,931	8,524,382	96.51%	9,061,993	14.03%	9,456,003	4.35%
Op Expend. (less deprec.)										
Treatment	2,341,173	2,456,006	95.32%	2,335,751	2,613,270	89.38%	2,713,651	10.49%	2,709,517	-0.15%
Maintenance - Plant	1,031,392	1,207,430	n/a	1,015,586	1,207,430	84.11%	1,695,392	40.41%	1,318,881	-22.21%
Maintenance - Field	109,594	111,476	n/a	47,039	111,476	42.20%	100,225	-10.09%	68,765	-31.39%
Administration	1,030,078	1,542,042	66.80%	1,113,667	1,542,042	72.22%	1,589,169	3.06%	1,577,111	-0.76%
Collection	1,012,737	1,119,431	90.47%	909,897	1,119,431	81.28%	1,237,423	10.54%	1,205,809	-2.55%
Reclamation Project	448,974	506,100	88.71%	519,945	506,100	102.74%	457,133	-9.68%	471,350	3.11%
Total Operating Exp	5,973,948	6,942,485	86.05%	5,941,885	7,099,749	83.69%	7,792,993	12.25%	7,351,434	-5.67%
Operating Gain/(Loss) (exclusive of depreciation)	2,678,041	1,004,816	266.52%	2,285,045	1,424,633	160.40%	1,269,000	26.29%	2,104,569	65.84%
Depreciation Expense	2,428,485	2,661,000	91.26%	2,669,000	2,669,000	100.00%	2,669,000	0.30%	2,669,000	0.00%
Amortization Expense	4,860	4,860	100.00%	4,860	4,860	100.00%	4,860	0.00%	4,860	0.00%
Operating Gain/(Loss)	244,696	(1,661,044)	-14.73%	(388,815)	(1,249,227)	31.12%	(1,404,860)	-15.42%	(569,291)	-59.48%
Non Operating Revenues	4,931,756	5,653,096	87.24%	3,031,303	4,407,067	68.78%	3,553,353	-37.14%	2,769,763	-22.05%
Non Operating Expend.	218,813	218,813	100.00%	216,506	216,506	100.00%	213,762	-2.31%	215,625	0.87%
Net Income/(Loss)	4,957,639	3,773,239	131.39%	2,425,982	2,941,334	82.48%	1,934,731	-48.72%	1,984,847	2.59%
Capital Budget										
Equipment Purchases	0	0	n/a	7,000	7,000	100.00%	0	n/a	12,000	n/a
Administration	0	0	n/a	58,013	58,013	100.00%	133,333	n/a	0	-100.00%
Maintenance	80,000	210,840	37.94%	90,000	90,000	100.00%	0	-100.00%	400,000	n/a
Collections										

Carmel Area Wastewater District
Budget Summary
2018-19

Description	2016-17		% of Budget		Est. 2017-18		% of Budget	Proposed 2018-19 Budget	% Chg. Prior Yr. Budget	Projected 2019-20 Budget	% Chg. Prior Yr. Budget
	Actual	Budget	Actual	Budget	Actual	Budget					
Treatment	144,060	168,601	85.44%		103,438	103,438	100.00%	99,667	-40.89%	38,000	-61.87%
Capital Improvement Projects											
Administration	0	12,000	n/a		30,000	30,000	100.00%	0	-100.00%	0	n/a
Maintenance	0	0	n/a		95,000	95,000	100.00%	0	n/a	0	n/a
Collections	540,040	1,267,428	42.61%		1,270,000	1,270,000	100.00%	2,060,000	62.53%	1,490,000	-27.67%
Treatment	762,070	1,098,000	69.41%		44,000	44,000	100.00%	44,000	-95.99%	0	-100.00%
Treatment Long Term Capit	5,560,030	9,422,831	59.01%		5,945,000	5,945,000	100.00%	3,790,999	-59.77%	1,715,000	-54.76%
Total Capital Budget	7,086,200	12,179,700	58.18%		7,642,451	7,642,451	100.00%	6,127,999	-49.69%	3,655,000	-40.36%
Ending Fund Balance	24,454,990	15,787,494	154.90%		21,912,381	13,760,237	159.24%	20,392,973	29.17%	21,396,680	4.92%

Carmel Area Wastewater District
Revenues Budget 2018-19

Description	2016-17		% of Budget		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget
	Actual	Budget	Actual	Budget	Actual	Budget				
OPERATING REVENUES										
Sewer service fees - residents	6,746,787	6,436,201	104.83%	6,986,245	6,995,437	99.87%	7,595,860	8.73%	7,975,653	5.00%
Treatment fees - PBCSD	1,377,192	1,000,000	137.72%	1,000,000	1,000,000	100.00%	1,000,000	0.00%	1,000,000	0.00%
Reclamation Proj O & M reimbursement	518,110	506,100	102.37%	233,486	519,945	44.91%	457,133	95.79%	471,350	3.11%
Permits & inspection fees	9,900	5,000	198.00%	7,200	9,000	80.00%	9,000	25.00%	9,000	0.00%
<i>Total Operating</i>	8,651,989	7,947,301	108.87%	8,226,931	8,524,382	96.51%	9,061,993	10.15%	9,456,003	4.35%
NON OPERATING REVENUES										
Property tax revenue	1,823,473	1,501,830	121.42%	1,731,065	1,734,000	99.83%	1,768,680	2.17%	1,804,054	2.00%
Interest Income	199,913	75,000	266.55%	143,545	140,000	102.53%	145,000	1.01%	145,000	0.00%
Highlands Inn assessment revenue	220,010	218,813	100.55%	216,506	216,506	100.00%	213,762	-1.27%	215,625	0.87%
Reimbursement from PBCSD for 1/3 secondary treatment plant improv.	2,090,686	3,009,648	69.47%	636,759	1,923,083	33.11%	1,375,581	116.03%	582,084	-57.68%
Plant Connection fees	4,351	5,000	87.02%	25,616	18,000	142.31%	18,000	-29.73%	18,000	0.00%
Reclamation Project reimbursement	556,458	842,805	66.02%	272,743	375,478	72.64%	32,330	-88.15%	5,000	-84.53%
Other	36,865	0	n/a	5,069	0	n/a	0	-100.00%	0	n/a
<i>Total Non Operating</i>	4,931,756	5,653,096	87.24%	3,031,303	4,407,067	68.78%	3,553,353	17.22%	2,769,763	-22.05%
TOTAL REVENUES	13,583,745	13,600,397	99.88%	11,258,233	12,931,449	87.06%	12,615,346	12.05%	12,225,766	-3.09%

**Carmel Area Wastewater District
Non-Operating Expenses Budget
2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget
	Actual	Budget	Actual	Budget				
NON OPERATING EXPENSES								
Debt Service - Principal*	140,000	140,000	145,000	145,000	150,000	3.45%	160,000	6.67%
Debt Service - Interest	76,213	76,213	68,906	68,906	61,162	-11.24%	53,025	-13.30%
Bond Fees	2,600	2,600	2,600	2,600	2,600	0.00%	2,600	0.00%
TOTAL	218,813	218,813	216,506	216,506	213,762	-1.27%	215,625	0.87%

Note:

* Highlands Bond is charged to project participants annually on property tax statements in addition to annual user fees
Highlands Bond maturity October 1, 2024

**Carmel Area Wastewater District
Summary Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	% of Budget	Actual				
Total Salaries	2,058,172	2,111,454	97.48%	2,083,094	2,197,787	16.43%	2,530,599	4.34%
Total Payroll Taxes	176,295	159,488	110.54%	159,077	166,115	16.64%	190,871	2.87%
Total Employee Benefits	691,734	757,084	91.37%	761,609	879,886	14.90%	900,700	2.92%
Total Directors Fees	29,694	27,200	109.17%	31,650	27,650	1.90%	32,500	0.78%
Total Trucks & Autos	60,190	106,520	56.51%	34,279	114,030	32.03%	24,850	-45.10%
Total Insurance	82,392	103,986	79.23%	86,833	89,210	7.90%	100,929	7.72%
Audit/Financial Expense	28,000	23,000	121.74%	24,300	26,800	30.86%	31,800	n/a
Total Engineering Fees	133,123	272,000	48.94%	65,549	215,000	220.37%	160,000	-23.81%
Total Attorney Fees	70,520	71,000	99.32%	58,429	116,000	123.35%	115,500	-11.49%
Total Office Supplies & Svc.	67,332	79,795	84.38%	48,719	61,400	71.83%	43,630	-47.88%
Total Operating Supplies	325,565	261,520	124.49%	262,229	370,285	44.39%	370,220	-2.22%
Total Contractual Services	586,249	817,258	71.73%	556,180	748,230	52.66%	689,667	-18.77%
Total Maint & Repairs	684,555	683,815	100.11%	525,663	728,865	57.03%	585,970	-29.01%
Total Utilities	308,560	340,800	90.54%	399,879	373,755	-2.99%	400,283	3.19%
Total Telephone	30,717	31,400	97.82%	34,884	35,150	40.28%	48,500	-0.89%
Total Travel & Meetings	44,045	71,520	61.58%	40,476	82,720	180.97%	101,780	-10.50%
Total Permitting	31,053	41,200	75.37%	38,310	56,335	42.56%	51,285	-6.10%

**Carmel Area Wastewater District
Summary Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	% of Budget	Actual				
Total Membership/Subscrip.	33,724	38,435	87.74%	34,668	39,530	87.70%	38,880	0.24%
Total Safety Expenses	33,938	31,610	107.36%	58,435	41,510	140.77%	38,095	-36.02%
Total Other Expense	49,116	407,300	12.06%	117,678	450,800	26.10%	424,025	-8.98%
CAWD Subtotal	5,524,974	6,436,385	85.84%	5,421,940	6,821,058	79.49%	6,880,084	-6.21%
Reclamation Project	448,974	506,100	88.71%	444,274	519,945	85.45%	471,350	3.11%
Final Subtotal	5,973,948	6,942,485	86.05%	5,866,214	7,341,003	79.91%	7,351,434	-5.67%
Depreciation Expense	2,428,485	2,661,000	91.26%	2,669,000	2,669,000	100.00%	2,669,000	0.00%
Amortization Expense	4,860	4,860	100.00%	4,860	4,860	100.00%	4,860	0.00%
Total Operating Expense	8,407,293	9,608,345	87.50%	8,540,074	10,014,863	85.27%	10,025,294	-4.22%

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	% of Budget	Actual				
Salaries	1,967,241	2,292,224	85.82%	2,007,609	2,405,537	32.18%	2,753,869	3.77%
Salaries - Overtime	47,251	87,200	54.19%	30,029	87,200	57.18%	52,200	10.59%
Salaries - Standby	43,680	43,680	100.00%	45,457	43,680	-3.91%	43,680	0.00%
Temporary Employees	0	0	n/a	0	0	n/a	0	n/a
Allocation to Reclamation	0	(311,650)	0.00%	0	(338,630)	n/a	(319,150)	0.00%
<i>Total Salaries</i>	2,058,172	2,111,454	97.48%	2,083,094	2,197,787	16.43%	2,425,425	4.34%
Payroll Taxes	176,295	181,630	97.06%	159,077	192,020	31.07%	210,871	1.14%
Allocation to Reclamation	0	(22,142)		0	(25,905)		(20,000)	
<i>Total Payroll Taxes</i>	176,295	159,488	110.54%	159,077	166,115	16.64%	190,871	2.87%
Employee Benefits:								
Medical Insurance - Premium	305,731	380,590	80.33%	329,567	400,415	39.24%	477,949	4.15%
Retirement Plan - CalPERS	200,799	211,393	94.99%	247,298	330,558	-7.62%	232,023	1.56%
Pension Contribution - SAM	88,680	88,675	100.01%	89,418	78,940	16.07%	103,791	0.00%
Workers Compensation	93,474	123,585	75.64%	102,427	102,631	5.85%	111,668	3.00%
Life Insurance	7,610	7,645	99.54%	7,650	7,635	-0.04%	7,647	0.00%
PEHP	24,280	23,570	n/a	26,368	24,866	2.34%	27,987	3.71%
Dental Insurance/Claims	40,061	34,450	116.29%	35,214	35,275	15.75%	40,820	0.15%
Vision Insurance	6,734	7,500	89.78%	7,066	7,500	6.15%	7,500	0.00%
Long Term Disability	19,542	20,530	95.19%	20,813	21,700	17.28%	25,340	3.81%
HSA Contributions	31,254	0	n/a	19,864	0	n/a	0	n/a
FSA Contributions	0	0	n/a	0	0	n/a	0	n/a
Tuition reimbursement	5,250	5,250	n/a	5,250	5,250	-42.86%	0	-100.00%
Employee Assistance Program	4,028	3,925	102.62%	3,876	3,925	1.26%	3,925	0.00%
Employee Awards	1,525	0	n/a	1,462	0	n/a	2,150	n/a
Annual District picnic	2,935	0	n/a	2,493	2,500	0.30%	2,500	n/a
Employee BBQ	129	0	n/a	0	0	n/a	0	n/a
Medical Exams	2,898	2,471	117.29%	2,305	2,100	-26.25%	1,700	0.00%
Allocate to Reclamation	(143,196)	(152,500)	93.90%	(139,461)	(143,410)	3.47%	(144,300)	0.00%
<i>Total Employee Benefits</i>	691,734	757,084	91.37%	761,609	879,886	14.90%	900,700	2.92%
Directors Fees								

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	Actual	Budget				
Regular Board Meetings	8,350	8,800	8,800	8,800	8,800	0.00%	8,800	0.00%
PBCSD - Directors fees	1,750	1,750	1,750	1,750	1,750	0.00%	1,750	0.00%
Special Board Meetings	2,400	5,700	5,700	5,700	5,700	0.00%	5,700	0.00%
Committee meetings	2,000	2,100	2,100	2,100	2,100	0.00%	2,200	4.76%
WaterReuse	1,543	300	300	300	300	0.00%	300	0.00%
CASA - Directors fees	1,510	750	750	750	1,350	80.00%	1,500	11.11%
CSDA conference	0	0	0	0	0	n/a	0	n/a
Training	66	0	250	250	250	0.00%	250	n/a
Director's Dental Claims	12,075	7,800	12,000	8,000	12,000	0.00%	12,000	0.00%
<i>Total Directors Fees</i>	29,694	27,200	31,650	27,650	32,250	1.90%	32,500	0.78%
Trucks & Autos								
Gasoline	5,976	16,850	8,084	18,200	8,150	0.81%	8,250	1.23%
Diesel	10,391	31,040	7,916	32,200	2,800	-64.63%	2,900	3.57%
Fuelmaster	110	0	110	0	0	-100.00%	0	n/a
Oil & Grease	1,672	6,000	1,109	7,000	2,200	98.44%	1,200	-45.45%
Tires, Batteries, Service	1,226	5,700	4,636	6,600	2,100	-54.70%	2,600	23.81%
Outside Repair Service	25,614	12,300	4,055	13,000	8,300	104.68%	3,300	-60.24%
Repair Parts	8,327	19,000	3,429	20,000	6,500	89.57%	2,500	-61.54%
Tools	224	10,500	1,436	10,500	6,500	352.58%	500	-92.31%
Vehicle Accessories	5,552	700	1,132	1,500	6,000	429.92%	500	-91.67%
Driver medical exams	0	350	0	0	0	n/a	350	n/a
Smog Check - Vehicles	30	660	320	860	350	9.38%	360	2.86%
DATCO Drug Testing	702	970	1,097	970	970	-11.61%	990	2.06%
Cleaning & detailing	109	1,000	305	1,250	250	-17.91%	260	4.00%
Paint & fluids	0	850	200	1,100	40	-80.00%	40	0.00%
Waste oil & coolants disposal	259	600	450	850	1,100	144.44%	1,100	0.00%
<i>Total Trucks & Autos</i>	60,190	106,520	34,279	114,030	45,260	32.03%	24,850	-45.10%
Property/Liability/Auto Insurance								
Auto insurance	1,309	1,420	1,365	1,475	1,502	10.00%	1,652	10.00%
Property Insurance	20,910	23,756	17,550	19,300	23,405	33.36%	25,165	7.52%
General Liability	53,973	70,510	60,293	60,810	60,402	0.18%	64,888	7.43%
Errors & Omissions	4,800	4,800	4,800	4,800	5,280	10.00%	5,810	n/a
Commercial Crime Policy	700	2,000	1,325	1,325	1,458	10.00%	1,600	n/a
Cyber Crime Insurance	700	1,500	1,500	1,500	1,650	10.00%	1,815	n/a

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget
	Actual	Budget	% of Budget	Actual				
<i>Total Insurance</i>	82,392	103,986	79.23%	86,833	89,210	97.34%	100,929	7.72%
<i>Audit/Financial Expense</i>	28,000	23,000	121.74%	24,300	26,800	90.67%	31,800	n/a
<i>Engineering Fees</i>	133,123	272,000	48.94%	65,549	215,000	30.49%	160,000	-23.81%
<i>Total Engineering Fees</i>	133,123	272,000	48.94%	65,549	215,000	30.49%	160,000	-23.81%
<i>Attorney Fees</i>	70,520	71,000	99.32%	58,429	116,000	50.37%	55,500	-21.28%
District Counsel	0	0	0.00%	0	0	0.00%	60,000	0.00%
Outside Counsel	70,520	71,000	99.32%	58,429	116,000	50.37%	115,500	-11.49%
<i>Office Supplies & Service</i>	253	0	n/a	2,439	0	n/a	2,050	-15.95%
Bank fees	37,528	50,500	74.31%	17,553	28,750	61.05%	13,650	-69.33%
Computers & Equip	7,696	4,800	160.34%	1,283	2,800	45.82%	2,600	-68.67%
Furnishings & fixtures	2,210	8,300	26.63%	4,629	13,500	34.29%	7,050	-35.62%
Paper & printing	1,305	2,550	51.20%	3,501	2,620	133.61%	3,870	6.91%
Postage & shipping	11,685	8,000	146.06%	7,775	8,220	94.58%	7,300	3.55%
Office supplies	0	1,000	0.00%	540	1,000	53.97%	500	n/a
Equipment rent	1,888	2,000	n/a	1,530	2,060	74.25%	2,180	2.83%
Equipment repairs	69	450	15.34%	380	250	152.00%	250	-44.44%
Copier Supplies	140	195	71.79%	166	200	83.00%	180	n/a
Post Office Box Rental	4,557	2,000	n/a	8,924	2,000	446.21%	4,000	n/a
Temp Services	67,332	79,795	84.38%	48,719	61,400	79.35%	43,630	-47.88%
<i>Total Office Supplies & Svc.</i>								
<i>Operating Supplies</i>	2,808	10,000	28.08%	5,000	10,000	50.00%	5,000	0.00%
Chemicals	17,327	18,250	94.94%	23,000	90,000	25.56%	0	n/a
Chlorine	0	0	0.00%	0	0	0.00%	90,000	0.00%
Sodium hypochlorite	97,845	45,000	217.43%	60,280	46,350	130.05%	47,740	3.00%
Sodium bisulfite	23,181	15,420	150.33%	23,510	19,080	123.22%	30,000	0.00%
Ferric chloride	23,593	21,500	109.73%	34,810	22,200	156.80%	36,050	3.00%
Polymer	1,073	1,000	107.27%	1,055	1,050	100.52%	1,115	1.36%
Acetic Acid	430	150	286.72%	200	200	100.00%	450	0.00%
Iodine solution								

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17			Est. YTD 2017-18			Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	% of Budget	Actual	Budget	% of Budget				
Potassium iodate	134	1,750	7.64%	3,650	3,650	100.00%	3,650	0.00%	3,650	0.00%
Generator fuel	4,842	3,000	161.41%	3,700	5,000	74.00%	3,500	-5.41%	3,500	0.00%
Lubricants & packing	100	5,000	1.99%	2,735	5,000	54.70%	5,000	82.82%	5,250	5.00%
Microturbine	19	4,000	0.48%	0	4,000	0.00%	0	n/a	0	n/a
Electrical Supplies	7,056	20,500	34.42%	7,937	35,500	22.36%	35,500	347.27%	36,500	2.82%
Laboratory	23,338	25,000	93.35%	29,846	30,000	99.49%	30,900	3.53%	31,820	2.98%
Paint & fluids	11,219	9,500	118.09%	9,681	11,000	88.01%	11,000	13.63%	11,500	4.55%
Janitorial	152	700	21.67%	590	1,210	48.73%	1,220	106.90%	1,230	0.82%
Personnel	6,453	11,200	57.62%	2,835	11,950	23.73%	11,750	314.42%	11,750	0.00%
Radios & supplies	9,390	1,500	n/a	1,500	1,545	97.09%	1,590	6.00%	1,640	3.14%
Welding	69	1,000	6.95%	45	1,000	4.50%	1,000	2122.22%	200	-80.00%
Hand tools	18,930	14,000	135.21%	15,712	15,000	104.74%	12,075	-23.15%	6,275	-48.03%
General supplies	77,608	51,800	149.82%	34,894	55,300	63.10%	52,300	49.88%	45,300	-13.38%
Source control	0	1,250	0.00%	1,250	1,250	100.00%	1,250	0.00%	1,250	0.00%
<i>Total Operating Supplies</i>	325,565	261,520	124.49%	262,229	370,285	70.82%	378,635	44.39%	370,220	-2.22%
Contractual Services										
Root foaming	52,694	53,000	99.42%	53,000	53,000	100.00%	53,000	0.00%	53,000	0.00%
Pump station monitoring	2,432	2,800	86.85%	2,900	2,900	100.00%	4,400	51.72%	4,400	0.00%
Collection system capacity monitoring	0	9,000	0.00%	9,000	9,000	100.00%	9,000	0.00%	9,000	0.00%
Underground Service Alert	569	375	151.61%	1,986	380	522.57%	1,250	-37.05%	1,250	0.00%
Sludge Haul/Disposal	95,766	95,000	100.81%	90,000	97,850	91.98%	97,850	8.72%	97,850	0.00%
Network Administration	60,149	86,000	69.94%	100,831	83,250	121.12%	101,690	0.85%	104,322	2.59%
Website Maintenance	2,150	1,000	n/a	1,000	1,000	100.00%	1,000	0.00%	1,000	n/a
Laboratory Analysis	23,769	29,000	81.96%	21,811	30,450	71.63%	31,970	46.58%	33,570	5.00%
Laboratory Staffing	35,160	0	n/a	0	0	n/a	0	n/a	0	n/a
Microturbine Service	8,946	10,000	89.46%	9,500	10,000	95.00%	6,500	-31.58%	6,500	n/a
Plant Rehabilitation	158,277	150,000	105.52%	49,519	155,000	31.95%	245,000	394.76%	125,000	-48.98%
Alarm System	2,743	2,850	96.25%	3,691	3,000	123.02%	6,250	69.35%	6,400	2.40%
Equip rent - generator	1,000	5,000	20.00%	1,070	5,000	21.40%	0	-100.00%	0	n/a
Janitorial Service	14,365	14,470	99.27%	23,400	14,610	160.16%	14,100	-39.74%	15,250	8.16%
Copier Service	7,123	5,400	131.91%	11,441	5,450	209.93%	10,500	-8.23%	9,750	-7.14%
Actuarial Service	11,894	20,000	59.47%	12,908	15,000	86.05%	10,000	-22.53%	10,000	n/a
Laundry	19,119	12,833	148.98%	23,327	20,700	112.69%	43,110	84.81%	23,830	-44.72%
Payroll Processing	6,336	6,500	97.47%	8,757	6,700	130.70%	9,250	5.63%	9,500	n/a

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget		
	Actual	Budget	% of Budget	Actual					Budget	% of Budget
Data processing - County	21,222	21,000	101.06%	21,250	22,000	96.59%	23,000	3.53%	23,000	n/a
Accounting Services	0	3,800	0.00%	3,600	3,800	94.74%	3,600	0.00%	3,600	n/a
Post Office Box Rental	140	140	100.00%	150	150	100.00%	170	13.33%	185	n/a
Landscape Maintenance	8,625	18,140	47.55%	18,256	18,500	98.68%	11,800	-35.36%	12,000	1.69%
Hazard/Green Waste Disposal	0	1,500	0.00%	600	2,100	28.57%	1,600	166.67%	1,600	0.00%
Grit & Screening Disposal	9,968	13,000	76.67%	11,516	13,500	85.30%	13,500	17.23%	13,500	0.00%
Pest Control	2,016	1,500	134.40%	1,740	1,500	116.00%	3,000	72.41%	2,000	-33.33%
Sewer/pre-treatment ordinance	0	2,500	n/a	2,500	2,500	100.00%	2,500	0.00%	2,500	0.00%
Instrumentation Services	10,844	25,000	43.38%	13,260	25,750	51.50%	26,000	96.07%	23,750	n/a
Hoist Certification	1,276	2,000	63.78%	1,880	2,000	94.00%	3,000	59.57%	3,000	0.00%
Hazardous chemical disposal	842	600	140.33%	1,330	700	189.98%	500	-62.40%	500	0.00%
Outfall Inspection	0	8,850	0.00%	11,000	8,850	124.29%	11,000	0.00%	11,000	0.00%
Ocean Monitoring Program	12,689	23,000	55.17%	6,505	23,690	27.46%	12,225	87.93%	12,600	3.07%
Other Special Studies	13,580	57,000	23.82%	33,954	50,000	67.91%	73,500	116.47%	50,000	-31.97%
Calibration	0	1,000	0.00%	4,500	6,400	70.31%	9,810	118.00%	9,810	0.00%
Boiler Servicing	0	0	n/a	0	0	n/a	0	n/a	0	n/a
Plant tree trimming	0	10,000	n/a	0	10,000	0.00%	10,000	n/a	10,000	0.00%
General Repairs - Collection	2,557	125,000	2.05%	0	43,500	0.00%	0	n/a	0	n/a
Total Contractual Services	586,249	817,258	71.73%	556,180	748,230	74.33%	849,075	52.66%	689,667	-18.77%
Repairs & Maintenance										
Easements	22,420	5,500	407.64%	31,705	7,000	452.93%	48,000	51.40%	48,000	0.00%
Pump stations	1,254	5,000	25.07%	1,155	4,000	28.88%	4,000	246.27%	4,000	0.00%
Pump station equipment	55,506	13,800	402.22%	16,039	27,800	57.69%	34,000	111.98%	34,000	0.00%
Sewer lines	89,887	30,000	n/a	1,900	30,000	6.33%	75,000	3847.37%	75,000	0.00%
Manholes	25,136	26,000	96.68%	33,519	26,000	128.92%	40,000	19.34%	38,000	-5.00%
Generators	12,018	12,000	n/a	10,000	10,000	100.00%	15,000	50.00%	15,000	0.00%
General Repairs	267,092	294,000	90.85%	107,141	275,000	38.96%	191,000	78.27%	111,000	-41.88%
Electric Motors	3,277	10,000	32.77%	0	20,000	0.00%	14,000	n/a	14,000	0.00%
Microturbine R & M	5,798	5,000	115.97%	4,500	5,000	90.00%	5,000	11.11%	5,000	0.00%
Centrifugal Pumps	0	0	n/a	0	0	n/a	0	n/a	0	n/a
Prog. Cav. Pumps	0	0	n/a	0	0	n/a	0	n/a	0	n/a
Plant Pumps	20,558	12,000	171.32%	16,767	51,000	32.88%	35,000	108.74%	20,000	-42.86%
Standby Generator	731	10,000	7.31%	9,879	10,000	98.79%	10,000	1.22%	10,000	0.00%
Control Panels	0	12,000	0.00%	5,000	15,000	33.33%	120,000	2300.00%	40,000	-66.67%
Instruments	148	5,000	2.96%	16,000	18,800	85.11%	65,050	306.56%	49,000	-24.67%

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	Actual	Budget				
	% of Budget		% of Budget					
Boiler Repairs	0	2,000	3,710	4,000	4,397	18.52%	4,000	-9.03%
Lab Equipment	30,721	39,690	3,500	3,740	12,260	250.29%	5,880	-52.04%
Headworks - Primary	23,897	20,000	59,727	20,000	17,750	-70.28%	10,000	-43.66%
IPS/EPS/DAF	15,222	20,000	53,714	17,500	14,500	-73.00%	9,500	-34.48%
Chlorine/Dechlorinator	17,664	36,375	9,386	27,575	20,000	113.08%	15,000	-25.00%
Dewatering/DIG	13,646	16,450	35,931	21,450	17,500	-51.29%	12,500	-28.57%
Plant Valves	804	15,000	4,132	15,000	15,000	263.06%	8,000	-46.67%
Aeration - Secondary	15,221	15,000	35,365	18,000	18,000	-49.10%	8,090	-55.06%
Demolition	19,008	50,000	0	50,000	0	n/a	0	n/a
Buildings	44,549	29,000	66,593	52,000	50,000	-24.92%	50,000	0.00%
<i>Total Maint & Repairs</i>	684,555	683,815	525,663	728,865	825,457	57.03%	585,970	-29.01%
<i>Utilities</i>								
Electricity	255,384	305,900	330,095	328,735	330,085	0.00%	332,720	0.80%
less Secondary Costs attributable to Recl								
Gas	36,398	20,100	48,110	22,400	37,013	-23.07%	32,064	-13.37%
Propane	2,010	2,300	712	2,400	2,300	223.00%	2,800	21.74%
Water	13,515	10,850	19,640	18,445	16,725	-14.84%	30,890	84.69%
Garbage	579	1,050	662	1,075	1,100	66.15%	1,110	0.91%
Cable television	673	600	660	700	700	6.06%	700	0.00%
<i>Total Utilities</i>	308,560	340,800	399,879	373,755	387,923	-2.99%	400,283	3.19%
<i>Telephone</i>								
Fixed Costs	21,565	21,400	23,337	22,250	34,100	46.12%	34,300	0.59%
Cellular Phones	7,347	9,000	9,612	11,900	13,835	43.94%	13,200	-4.59%
Repair to Lines	1,805	1,000	1,935	1,000	1,000	-48.32%	1,000	0.00%
Long Distance	0	0	0	0	0	n/a	0	n/a
Direct Line to Plant	0	0	0	0	0	n/a	0	n/a
<i>Total Telephone</i>	30,717	31,400	34,884	35,150	48,935	40.28%	48,500	-0.89%
<i>Travel & Training</i>								
Employee Training	26,571	36,570	15,537	47,175	85,865	452.65%	72,810	-15.20%
Conferences	13,872	31,750	21,567	32,345	24,460	13.42%	25,445	4.03%
Business meetings	3,602	3,200	3,372	3,200	3,400	0.83%	3,525	3.68%
<i>Total Travel & Meetings</i>	44,045	71,520	40,476	82,720	113,725	180.97%	101,780	-10.50%

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	% of Budget	Actual				
Permitting								
State Water Resource Control	2,088	2,300	90.78%	2,088	2,400	14.94%	2,400	0.00%
MUAPCB	2,826	3,000	94.20%	2,484	3,100	28.82%	3,250	1.56%
Treatment Plant Permits	15,251	20,000	76.26%	14,884	25,000	67.97%	25,000	0.00%
Central Coast RWQCB	0	3,500	n/a	9,800	9,800	0.00%	10,035	2.40%
Air Pollution Control Permit	7,273	6,000	121.22%	4,319	7,500	57.59%	5,600	-19.66%
Air Resources Board-PERP	0	0	n/a	570	1,000	57.00%	500	n/a
Environmental Health Permit	3,615	3,000	120.51%	1,945	3,090	62.94%	2,000	n/a
Lab Registration Fees	0	3,400	0.00%	2,220	4,445	49.94%	2,500	-47.31%
<i>Total Permitting</i>	31,053	41,200	75.37%	38,310	56,335	68.00%	54,615	-6.10%
Membership/Subscriptions								
Employee Certification	4,032	7,755	51.99%	4,864	7,800	62.36%	6,640	-7.39%
CWEA	1,958	2,200	89.00%	1,737	3,100	56.04%	2,940	1.73%
CASA	12,855	13,250	97.02%	12,855	13,250	97.02%	13,500	n/a
WEF	559	1,490	37.52%	910	1,640	55.49%	665	2.31%
WaterReuse	0	700	0.00%	0	700	0.00%	250	n/a
Other	11,109	9,590	115.84%	11,558	9,590	120.52%	11,485	n/a
Subscriptions/Publications	3,211	3,450	93.08%	2,743	3,450	79.52%	3,400	1.49%
<i>Total Membership/Subscrip.</i>	33,724	38,435	87.74%	34,668	39,530	87.70%	38,785	0.24%
Safety								
First Aid Supplies	7	600	1.16%	605	555	109.01%	120	0.00%
First Aid/Medical Services	0	800	0.00%	497	915	54.27%	1,100	-21.43%
Fire Extinguisher Service	1,388	1,660	83.60%	1,762	1,690	104.24%	3,150	0.00%
Safety Supplies/Emerg Respon	8,950	6,400	139.84%	19,511	8,705	224.14%	9,700	0.00%
Emergency Response Supplies	3,750	3,250	115.38%	644	3,350	19.22%	3,500	443.48%
Uniforms/Boots/Gear	3,504	5,400	64.89%	6,041	5,885	102.64%	7,100	-26.97%
Safety Training	13,715	13,500	101.59%	29,376	20,410	143.93%	31,835	-52.57%
Policy & Procedures	2,625	0	n/a	0	0	n/a	2,740	0.00%
<i>Total Safety Expenses</i>	33,938	31,610	107.36%	58,435	41,510	140.77%	59,545	-36.02%
Other Expenses								
LAFCO Admin Fee	15,254	15,500	98.41%	18,855	16,000	117.84%	19,800	5.01%
Training	151	2,000	n/a	1,500	2,000	75.00%	1,500	0.00%
Rate Payer Claims	105	2,500	4.21%	10,000	2,500	400.00%	2,500	-75.00%

**Carmel Area Wastewater District
Consolidated Departmental Operating Budget 2018-19**

Description	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget
	Actual	Budget	% of Budget	Actual				
CAWD Newsletter	25,994	27,500	94.52%	28,500	28,500	0.00%	29,000	n/a
Recruitment	5,796	10,000	57.96%	18,510	10,000	185.10%	10,000	-33.33%
Legal notices	1,013	3,500	28.93%	1,314	5,500	23.88%	4,000	0.00%
Miscellaneous	804	66,300	1.21%	4,000	106,300	3.76%	247,340	-12.28%
Contingency	0	280,000	0.00%	35,000	280,000	12.50%	109,685	-2.56%
<i>Total Other Expense</i>	49,116	407,300	12.06%	117,678	450,800	26.10%	424,025	-8.98%
CAWD Subtotal	5,524,974	6,436,385	85.84%	5,421,940	6,821,058	79.49%	6,880,084	-6.21%
Reclamation Project	448,974	506,100	88.71%	444,274	519,945	85.45%	471,350	3.11%
Final Subtotal	5,973,948	6,942,485	86.05%	5,866,214	7,341,003	79.91%	7,351,434	-5.67%
Depreciation Expense	2,428,485	2,661,000	91.26%	2,669,000	2,669,000	100.00%	2,669,000	0.00%
Amortization Expense	4,860	4,860	100.00%	4,860	4,860	100.00%	4,860	0.00%
Total Operating Expense	8,407,293	9,608,345	87.50%	8,540,074	10,014,863	85.27%	10,025,294	-4.22%

**Carmel Area Wastewater District
Treatment Department: Operating Expense Budget 2018-19**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget	0
		Actual	Budget	% of Budget	Actual					
Salaries	5030.006	798,627	1,135,419	767,778	1,205,205	1,188,116	54.75%	1,240,682	4.42%	a
Salaries - Overtime	5035.006	26,305	80,000	21,029	80,000	40,000	90.22%	45,000	12.50%	b
Salaries - Standby	5040.006	29,120	29,120	30,897	29,120	29,120	-5.75%	29,120	0.00%	c
Allocate to Reclamation			(289,500)		(319,480)	(300,000)	n/a	(300,000)	0.00%	
<i>Total Salaries</i>		854,052	955,039	819,703	994,845	957,236	16.78%	1,014,802	6.01%	
Payroll Taxes	5045.006	87,065	95,210	62,707	101,730	96,179	53.38%	94,912	-1.32%	
Allocate to Reclamation	5205.004	0	(21,550)		(24,440)	(22,950)	n/a	(20,000)	-12.85%	
<i>Total Payroll Taxes</i>		87,065	73,660	62,707	77,290	73,229	16.78%	74,912	2.30%	
<i>Employee Benefits:</i>										
Medical Insurance - Premium	5070.006	147,369	187,295	139,645	186,765	191,842	37.38%	200,958	4.75%	d
Retirement Plan - CalPERS	5080.006	90,249	102,748	110,253	148,421	101,439	-7.99%	104,111	2.63%	e
Pension Contribution - SAM	5090.006	64,848	64,840	68,069	59,237	59,274	-12.92%	59,275	0.00%	f
Workers Compensation	5100.006	45,999	61,145	42,788	50,956	43,051	0.61%	44,342	3.00%	g
Life Insurance	5110.006	3,818	3,980	3,970	3,970	3,970	0.00%	3,970	0.00%	h
PEHP	5120.006	11,632	11,640	11,900	10,771	11,881	-0.16%	12,407	4.42%	i
Dental Insurance/Claims	5130.006	17,428	15,000	15,000	15,000	17,400	16.00%	17,500	0.57%	
Vision Insurance	5140.006	3,307	3,900	3,519	3,900	3,900	10.83%	3,900	0.00%	
Long Term Disability	5150.006	8,960	10,100	9,928	10,870	10,931	10.10%	11,414	4.42%	
HSA Contributions	5160.006	20,794	0	15,793	0	0	-100.00%	0	n/a	
Employee Assistance Program	5180.006	1,989	2,025	1,836	2,025	2,025	10.29%	2,025	0.00%	
Employee Awards	5185.006	931	0	862	0	0	-100.00%	1,450	n/a	
Medical Exams	5200.006	1,133	1,030	1,620	2,100	1,200	-25.93%	1,200	0.00%	
Allocate to Reclamation	5205.006	(123,833)	(144,750)	(130,000)	(135,300)	(135,000)	3.85%	(135,000)	0.00%	
<i>Total Employee Benefits</i>		294,624	318,953	295,183	358,715	311,913	5.67%	327,552	5.01%	
<i>Trucks & Autos</i>										
Vehicle Accessories	5360.006	0	0	125	0	0	n/a	0	n/a	
<i>Total Trucks & Autos</i>		58	0	125	0	0	n/a	0	n/a	
<i>Property/Liability/Auto Insurance</i>										
Auto insurance	5450.006	1,309	1,420	1,365	1,475	1,502	10.00%	1,652	10.00%	
Property Insurance	5480.006	15,000	16,506	15,000	17,000	16,500	10.00%	18,150	10.00%	
General Liability	5480.006	33,495	41,010	32,275	38,000	35,502	10.00%	39,053	10.00%	
<i>Total Insurance</i>		49,804	58,936	48,640	56,475	53,504	10.00%	58,854	10.00%	

**Carmel Area Wastewater District
Treatment Department: Operating Expense Budget 2018-19**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	0
		Actual	Budget	% of Budget	Actual					
Engineering Fees										
Consulting Fees	5500.006	31,689	77,000	47,273	10,000	30,000	-36.54%	10,000	-66.67%	j
<i>Total Engineering Fees</i>		31,689	77,000	47,273	10,000	30,000	-36.54%	10,000	-66.67%	
Attorney Fees										
Legal Fees	5510.006	46,397	35,000	36,679	20,000	35,000	-4.58%	20,000	-42.86%	k
<i>Total Attorney Fees</i>		46,397	35,000	36,679	20,000	35,000	-4.58%	20,000	-42.86%	
Office Supplies & Service										
Computers & Equip	5540.006	18,855	19,000	11,636	11,250	26,600	128.60%	4,250	-84.02%	l
Furnishings & fixtures	5545.006	4,617	3,800	983	1,800	1,800	83.11%	1,800	0.00%	m
Paper & printing	5550.006	624	500	2,500	2,750	2,750	10.00%	2,750	0.00%	n
Postage & shipping	5560.006	155	250	385	300	300	-22.08%	300	0.00%	o
Office supplies	5570.006	8,347	4,000	4,390	4,120	4,500	2.51%	4,500	0.00%	p
Equipment rent	5580.006	0	1,000	540	1,000	500	-7.35%	500	0.00%	q
Equipment repairs	5590.006	1,888	2,000	1,530	2,060	2,120	38.60%	2,180	2.83%	r
Copier Supplies		0	200	0	0	200	n/a	0	n/a	
<i>Total Office Supplies & Svc.</i>		34,486	30,750	21,963	23,280	38,770	76.53%	16,280	-58.01%	
Operating Supplies										
Chemicals	5615.006	2,808	10,000	5,000	10,000	5,000	0.00%	5,000	0.00%	s
Chlorine	5620.006	17,327	18,250	23,000	90,000	0	-100.00%	0	n/a	t
Sodium hypochlorite		0	0	0	0	90,000	n/a	90,000	0.00%	
Sodium bisulfite	5630.006	97,845	45,000	60,280	46,350	46,350	-23.11%	47,740	3.00%	u
Ferric chloride	5640.006	23,181	15,420	23,510	19,080	30,000	27.61%	30,000	0.00%	v
Polymer	5650.006	23,593	21,500	34,810	22,200	35,000	0.55%	36,050	3.00%	w
Acetic Acid	5660.006	1,073	1,000	1,055	1,050	1,100	4.22%	1,115	1.36%	x
Iodine solution	5665.006	430	150	200	200	450	125.00%	450	0.00%	y
Potassium iodate	5670.006	134	1,750	3,650	3,650	3,650	0.00%	3,650	0.00%	z
Laboratory	5700.006	23,338	25,000	29,846	30,000	30,900	3.53%	31,820	2.98%	aa
Janitorial	5730.006	152	0	400	400	400	0.00%	400	0.00%	bb
Personnel	5740.006	3,281	8,000	1,955	8,250	8,250	321.96%	8,250	0.00%	cc
Radio's & supplies	5745.006	9,390	1,500	1,500	1,545	1,590	6.00%	1,640	3.14%	dd
Hand tools	5780.006	3,565	1,500	2,984	2,500	3,275	9.73%	3,275	0.00%	ee
General supplies	5790.006	27,765	12,000	12,120	6,000	8,000	-33.99%	8,000	0.00%	ff
Source control	5795.006	0	1,250	1,250	1,250	1,250	0.00%	1,250	0.00%	gg
<i>Total Operating Supplies</i>		233,880	162,320	201,560	242,475	265,215	31.58%	268,640	1.29%	

**Carmel Area Wastewater District
Treatment Department: Operating Expense Budget 2018-19**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	0
		Actual	Budget	% of Budget	Actual					
<i>Contractual Services</i>										
Sludge Haul/Disposal	5820.006	95,766	95,000	100.81%	90,000	97,850	97,850	97,850	8.72%	hh
Network Administration	5830.006	37,831	40,000	94.58%	63,349	35,750	59,050	60,822	-6.79%	ii
Laboratory Analysis	5840.006	23,769	29,000	81.96%	21,811	30,450	31,970	33,570	46.58%	jj
Laboratory Staffing	5841.006	35,160	0	n/a	0	0	0	0	n/a	
Plant Rehabilitation	5855.006	6,752	0	n/a	6,583	0	0	0	-100.00%	
Alarm System	5880.006	1,127	1,000	112.70%	1,100	1,050	3,200	3,200	190.91%	kk
Equip rent - generator	5890.006	1,000	0	n/a	0	0	0	0	n/a	ll
Janitorial Service	5900.006	11,110	0	n/a	10,925	0	0	0	-100.00%	mm
Copier Service	5910.006	2,370	1,600	148.10%	4,968	1,650	5,000	4,000	0.65%	nn
Laundry	5940.006	10,723	5,863	182.89%	12,762	12,000	12,360	12,730	-3.15%	oo
Landscape Maintenance	5980.006	4,397	0	n/a	8,956	0	0	0	-100.00%	
Hazard/Green Waste Disposal	5990.006	0	0	n/a	600	600	600	600	0.00%	pp
Grit & Screening Disposal	6000.006	9,968	13,000	76.67%	11,516	13,500	13,500	13,500	17.23%	qq
Sewer/pre-treatment ordinance	6015.006	0	2,500	0.00%	2,500	2,500	2,500	2,500	0.00%	rr
Instrumentation Services	6020.006	10,844	25,000	43.38%	13,260	25,750	26,000	23,750	96.07%	ss
Hazardous chemical disposal	6040.006	842	100	842.00%	830	200	500	500	-39.75%	tt
Outfall Inspection	6045.006	0	8,850	0.00%	11,000	8,850	11,000	11,000	0.00%	uu
Ocean Monitoring Program	6050.006	12,689	23,000	55.17%	6,505	23,690	12,225	12,600	87.93%	vv
Other Special Studies	6070.006	6,240	5,000	124.80%	4,923	0	0	0	-100.00%	
Calibration	6220.006	0	1,000	0.00%	4,500	6,400	9,810	9,810	n/a	ww
Total Contractual Services		270,587	250,913	107.84%	276,088	260,240	285,565	286,432	3.43%	
<i>Repairs & Maintenance</i>										
General Repairs	6095.006	8,816	20,000	44.08%	10,500	20,000	10,000	10,000	-4.76%	xx
Instruments	6220.006	0	0	n/a	12,000	13,800	15,050	14,000	25.42%	yy
Lab Equipment	6240.006	30,721	39,690	77.40%	3,500	3,740	12,260	5,880	-52.04%	1
Headworks - Primary	6250.006	0	5,000	0.00%	5,730	5,000	7,750	5,000	-35.48%	2
IPS/EPS/DAF	6260.006	4,502	5,000	90.04%	4,530	2,500	4,500	4,500	0.00%	3
Chlorine/Dechlorinator	6270.006	17,664	21,375	82.64%	5,476	12,575	10,000	10,000	0.00%	
Dewatering/DIG	6280.006	4,913	1,450	338.81%	2,720	1,450	2,500	2,500	-8.10%	4
Aeration - Secondary	6300.006	5,968	0	n/a	3,000	3,000	3,000	3,090	0.00%	5
Buildings	6320.006	8,000	0	n/a	8,800	0	0	0	-100.00%	6
Total Maint & Repairs		80,583	92,515	87.10%	56,255	62,065	65,060	54,970	-15.51%	
<i>Utilities</i>										
Electricity	6352.006	228,969	280,000	81.77%	299,264	301,000	301,000	301,000	0.58%	7

**Carmel Area Wastewater District
Treatment Department: Operating Expense Budget 2018-19**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	0
		Actual	Budget	% of Budget	Actual					
less Secondary Costs attributable to Reel										
Gas	6360.006	34,413	18,000	46,504	20,000	35,000	-24.74%	30,000	-14.29%	8
Propane	6370.006	328	1,000	462	1,000	500	8.21%	1,000	100.00%	9
Water	6380.006	9,678	6,000	13,669	10,200	10,200	-25.38%	10,200	0.00%	10
Cable television	6390.006	673	600	660	700	700	6.06%	700	0.00%	
<i>Total Utilities</i>		274,061	305,600	360,560	332,900	347,400	-3.65%	342,900	-1.30%	
<i>Telephone</i>										
Fixed Costs	6392.006	8,864	8,200	10,106	8,450	20,000	97.89%	20,000	0.00%	11
Cellular Phones	6393.006	2,208	4,000	3,141	5,200	5,200	65.55%	5,200	0.00%	12
Repair to Lines	6394.006	1,805	1,000	1,935	1,000	1,000	-48.32%	1,000	0.00%	
<i>Total Telephone</i>		12,876	13,200	15,182	14,650	26,200	72.57%	26,200	0.00%	
<i>Travel & Training</i>										
Employee Training	6420.006	9,317	10,570	4,514	19,175	29,485	553.18%	21,910	-25.69%	
Conferences	6430.006	6,944	10,250	8,017	8,345	7,860	-1.95%	8,095	2.99%	
Business meetings	6440.006	772	300	720	300	500	-30.58%	525	5.00%	13
<i>Total Travel & Meetings</i>		17,033	21,120	13,251	27,820	37,845	185.60%	30,530	-19.33%	
<i>Permitting</i>										
Treatment Plant Permits	6470.006	15,251	20,000	14,884	25,000	25,000	67.97%	25,000	0.00%	14
Central Coast RWQCB	6475.006	0	1,500	7,800	7,800	7,800	0.00%	8,035	3.01%	15
Air Pollution Control Permit	6480.006	7,273	3,000	2,569	4,500	2,570	0.04%	2,600	1.17%	16
Air Resources Board-PERP	6485.006	0	0	570	1,000	500	-12.28%	500	0.00%	
Environmental Health Permit	6490.006	3,615	3,000	1,945	3,090	2,000	2.83%	2,000	0.00%	17
Lab Registration Fees	6510.006	0	3,400	2,220	4,445	4,745	113.74%	2,500	-47.31%	18
<i>Total Permitting</i>		26,139	30,900	29,988	45,835	42,615	42.11%	40,635	-4.65%	
<i>Membership/Subscriptions</i>										
Employee Certification	6550.006	1,924	4,500	2,467	4,500	4,500	82.44%	4,635	3.00%	
CWEA	6560.006	828	1,000	1,096	1,600	1,600	46.01%	1,650	3.13%	
WEF	6580.006	0	250	320	300	380	18.75%	395	3.95%	19
Subscriptions/Publications	6640.006	1,048	1,500	1,100	1,500	1,500	36.36%	1,500	0.00%	20
<i>Total Membership/Subscrip.</i>		3,800	7,250	4,982	7,900	7,980	60.17%	8,180	2.51%	
<i>Safety</i>										
First Aid Supplies	6710.006	7	500	520	515	0	-100.00%	0	n/a	21
First Aid/Medical Services	6720.006	0	400	0	415	0	n/a	0	n/a	22

**Carmel Area Wastewater District
Treatment Department: Operating Expense Budget 2018-19**

Description	Acct	2016-17		% of Budget		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	0
		Actual	Budget	Actual	Budget	Actual	Budget					
Fire Extinguisher Service	6730.006	845	1,000	84.47%	1,030	710	1,030	1,030	45.07%	1,030	0.00%	23
Safety Supplies/Emerg Respon	6735.006	2,918	3,400	85.81%	3,505	16,677	3,500	3,500	-79.01%	3,500	0.00%	
Emergency Response Supplies	6740.006	3,750	3,250	115.38%	3,350	644	3,500	3,500	443,48%	1,000	-71.43%	
Uniforms/Boots/Gear	6750.006	2,190	2,800	78.22%	2,885	2,585	3,000	3,000	16.03%	2,885	-3.83%	
Safety Training	6760.006	6,435	5,500	117.00%	9,080	19,355	13,720	13,720	-29.12%	9,000	-34.40%	24
Policies and procedures	6770.006	2,100	0	n/a	0	0	0	0	n/a	0	n/a	
<i>Total Safety Expenses</i>		18,244	16,850	108.27%	20,780	40,492	24,750	24,750	-38.88%	17,415	-29.64%	
<i>Other Expenses</i>												
Recruitment	8910.006	5,796	5,000	115.91%	5,000	5,000	5,000	5,000	0.00%	5,000	0.00%	
Legal notices	8920.006	0	0	n/a	2,000	120	2,000	2,000	1566.67%	2,000	0.00%	25
Miscellaneous/Contingency	8989.006	0	1,000	0.00%	51,000	0	104,370	104,370	n/a	104,215	-0.15%	26
<i>Total Other Expense</i>		5,796	6,000	96.59%	58,000	5,120	111,370	111,370	2075.20%	111,215	-0.14%	
Subtotal Operating Expense		2,341,173	2,456,006	95.32%	2,613,270	2,335,751	2,713,651	2,713,651	16.18%	2,709,517	-0.15%	
Depreciation Expense	8997.006	2,059,995	2,300,000	89.56%	2,300,000	2,300,000	2,300,000	2,300,000	0.00%	2,300,000	0.00%	
Total Operating Expense		4,401,168	4,756,006	92.54%	4,913,270	4,635,751	5,013,651	5,013,651	8.15%	5,009,517	-0.08%	

**Carmel Area Wastewater District
Treatment: 2018-19 Operating Expense Budget**

Note No.	<u>Description</u>	<u>Comments</u>
a	Salaries	Reflects the negotiated CPI based on Oct '17 SF/Oakland/San Jose CPI = 3.0%. In addition, this line reflects move of Maint Mechanic and Safety Officer to Maintenance Dept., and addition of Plant Engineer. Finally this line item assumes full staffing; movement of staff through step increases; and addition of Plant Engineer. Prior year actual reflects lower than budget due to staff on Worker Comp wages.
b	Salaries - Overtime	Est. \$40K for winter weather call backs and alarms; assumes reduced Comp Time
c	Salaries - Standby	\$280/wk x 52
d	Medical Insurance	Negotiated formula is EE=100% District paid, Dependents= 90% District paid, plus \$265 in additional funds paid to either HSA or defer premium costs. Blue Cross premium increase 9% split 60/40 with employees. This line items reflects changes in staffing level and changes in status from single to married plus dependents along with reallocation among departments. Finally, assumes a 10% increase effective 1-1-19.
e	CalPERS retirement	Reflects increase in employee contribution to 6% in FY 18-19 for Classic members. Employee contribution 6.25% for PEPPRA members. Total Classic contribution 14.63%. Total PEPPRA contribution 13.09%. Unfunded accrued liability estimated \$14,125.
f	SAM retirement	Actuarial analysis provided 06-30-17 with recommended contribution rates
g	Worker's Compensation	Reallocation and additional positions for department. Also reflects Experience mod factor increase to 1.33 and estimated refund of \$10K.
h	PEHP insurance	Equivalent to 1% of base salary
i	Dental reimbursements	Based on last 4 years avg expenditure
j	Consulting Fees	\$10K Engineering for Wet well mixing and other areas around the plant; \$20K for assistance with NPDES renewal
k	Legal Fees	\$15K pretreatment review; \$15K general legal consulting during the year; \$5K misc other
l	Computers & Equip	11 IP Phone at \$800/ea. = \$8,800. Planned replacement by Exceedio. Replacement copier \$7,800. Engineering station \$10K
m	Furnishings & fixtures	\$1.2K misc furniture replacement & \$600 new chairs
n	Paper & printing	Business cards, time off request slips, source forms, \$2K source control brochures
o	Postage & shipping	Projected misc shipping charges and source control flyer mailing
p	Office supplies	Supplies used by both Operations & Maintenance staff
q	Equipment repairs	Misc copier repairs. Added 3%

**Carmel Area Wastewater District
Treatment: 2018-19 Operating Expense Budget**

<u>Note</u>	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	r	Copier Supplies	Purchase of copier machine staples
	s	Chemicals	Misc chemicals (i.e. Potassium Iodide crystals for chlorine analyzer calibration)
	t	Chlorine	Estimated Sodium Hypochlorite solution - new system on-line
	u	Sodium bisulfite	Estimated solution with use of new system from Phase I. Bulk of cost is reimbursed by Reclamation Project; includes "catch-up" from prior yrs
	v	Ferric chloride	Chemical used for digester H2S removal; reflects new Air Board permit on the new waste burner for sulfide limits
	w	Polymer	Expecting an increase in usage with new screw press and DAFT unit
	x	Acetic Acid	Chemical used for Chlorine Analyzers. 3% CPI increase
	y	Iodine solution	Chemical used for Chlorine Analyzer calibration. Actual costs from 2016-17 plus 3% CPI
	z	Potassium iodate	\$1,785 per 25# bucket - depending on timing could order two for the year
	aa	Laboratory	Increase due to proposed capital expenditures related to consumables for new equipment (Gallery); \$4K plant process control nutrient testing; 3% CPI increase
	bb	Janitorial	Janitorial supplies and paper products (Ops, lunchroom, Lab); 3% CPI increase
	cc	Personnel	Increased provisioning for safety materials: Gloves, safety glasses, face shields, earplugs, tyvek suits
	dd	Radios & supplies	Allowance for replacing any damaged raadios or needed supplies and batteries. 3% CPI inc
	ee	Hand tools	Allowance for new and replacement tools for operators and Source Control (primarily small tools) 3% CPI increase
	ff	General supplies	General supplies decrease due to shift to other line items. Includes: Equipment boxes \$2,625, Storm water supplies \$1,500, Plant wash down hoses \$1,000 and brooms, shovels, rakes, hoes \$200. Plus assumes 3% CPI increase
	gg	Source control	Safety gear \$500; new manhole ladder \$750
	hh	Sludge Haul/Disposal	1500 tons @ \$52/ton from screwpress in 2017. Increase due to removing sludge from Digester #2
	ii	Network Administration	LIMS \$3,426; ENPDES \$800; Exceedio \$44,208; ICOM \$1,500; Ignition \$4,700; Gallery Network \$800; Turf Image \$3,600
	jj	Laboratory Analysis	Anticipate 5% increase from contract labs as advised by vendors
	kk	Alarm System	Annual fee for new Mission monitoring devices within the Treatment Plant
	ll	Equip rent - generator	Transferred to maintenance budget
	mm	Janitorial Service	Transferred to maintenance budget

**Carmel Area Wastewater District
Treatment: 2018-19 Operating Expense Budget**

<u>Note</u>	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	nn	Copier Service	Copy usage spans all departments at the facility - increase anticipated with NPDES renewal
	oo	Laundry	Replacement of damaged/size change plus 3% CPI increase
	pp	Hazard/Green Waste Disposal	Chemicals in the Lab - actual costs reflected in the 2017-18 budget
	qq	Grit & Screening Disposal	Expect increase due to plant rehabilitation and clean up
	rr	Sewer/pretreatment ordinance	Public notice, Public meetings, & Realtor Notice
	ss	Instrumentation Services	Calibration of liquid and air flow meters \$8,184; SCADA changes \$7,000; Suspended solids probes \$5,760; ultra sonic transducer calibration \$5,056
	tt	Hazardous chemical disposal	Removal of chemicals no longer used around facility
	uu	Outfall Inspection	Annual inspection required in NPDES permit
	vv	Ocean Monitoring Program	Clean no cost due to CAWD acting in lead agency capacity. Twice a year Ocean Toxicity \$5,120 per sample (2x) plus DDT \$1,000 twice a year
	ww	Calibration	Balances 4 x \$300 (50% Reclamation); Microscope \$1,500; Weights \$500 (50% Reclamation); Moisture analyzer \$900; TOC \$4,540 (90% Reclamation); IC3000 \$3,100; ICS1100 \$1,500; Gallery \$3,000 (50% Reclamation)
	xx	General Repairs	Emergency repairs
	yy	Instruments	Emergency instrument replacement \$5K; Hach SC200 replacement controller \$7,750; Influent pH on-line probe \$2,300
	zz	Lab Equipment	Hanna Titration Basic System \$1,000 (50% Reclamation); Replace Refrigerated Sampler Grit Tank \$5,880; Replace Refrigerated Sampler secondary Distribution box \$5,880
1		Headworks - Primary	Supplies \$5,000; Hach SC200 Controller \$2,750, Influent pH on-line probe supplies
2		IPS/EPS/DAF	Polyblend supplies; PPE equipment face shield, proper gloves, signage
3		Chlorine/Dechlorinator	Chlorine analyzer parts \$7,800; eye wash/drench shower supplies \$500; PPE equipment for SBS and Hypo \$1,700
4		Dewatering/DIG	Replacement parts for the polyblend \$1,100, polymer cleaning solution \$350
5		Aeration - Secondary	Possible PPE supplies \$600; dissolved oxygen replacement probes \$2,400
6		Buildings	Building repair moved to Maintenance budget
7		Electricity	Estimated PG&E usage
8		Gas	Increase natural gas usage due to only running one micro turbine; new 65kw turbine on order and will be installed for 2018-19
9		Propane	Used for the forklift. Unit used by Collections, Maintenance, & Operations

**Carmel Area Wastewater District
Treatment: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	10	Water	Estimated CalAm water increase of 16.9%. Prior year increased usage due to Phase I use by Anderson Pacific
	11	Telephones - Fixed Costs	\$12K plant fiber optic internet and \$8K VOIP phone system annual service with backupip cellular and email integration
	12	Cellular phones	Increase costs due to purchase of additional ipads for Mainsaver
	13	Business meetings	Prior year Actuals reflect mis-codings
	14	Treatment Plant Permits	Per SWRCB website classified as an A2 site
	15	Central Coast RWQCB	Using 2016-17 actual
	16	Air Pollution Control Permit	Based on invoices from previous year
	17	Environmental Health Permit	Based on 2015-16 invoices - added 3%
	18	Lab Registration Fees	ELAP(TNI) fees are expected to increase \$4,445; TNI membership \$300
	19	WEF	Membership renewal
	20	Subscriptions/Publications	Continue to add books/manuals to the library for Maintenance, Lab & Ops for staff
	21	First Aid Supplies	Transferred to maintenance budget
	22	First Aid/Medical Services	Transferred to maintenance budget
	23	Fire Extinguisher Service	Replace extinguishers that do not meet hydro-testing requirements
	24	Safety training	40 hr Hazwoper initial training \$4,720; On site 8 hr Refresher Hazwoper training \$4,860; On site 8 hr Confined space training \$4,140
	25	Legal notices	Source control ordinance
	26	Miscellaneous/Contingency	4% O&M budget

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	% of Budget	Actual					
Salaries	5030.004	274,012	277,511	306,690	278,499	456,950	48.99%	472,446	3.39%	a
Salaries - Overtime	5035.004	2,384		1,800	0	0	n/a	0	n/a	
<i>Total Salaries</i>		276,396	277,511	308,490	278,499	456,950	48.12%	472,446	3.39%	b
Payroll Taxes	5045.004	21,214	21,230	23,600	21,310	34,957	48.12%	36,142	3.39%	
Allocation to Reclamation		21,214	21,230	23,600	21,310	34,957	48.12%	36,142	3.39%	
<i>Total Payroll Taxes</i>										
Employee Benefits:										
Medical Insurance - Premium	5070.004	43,556	45,450	64,255	63,885	71,976	12.02%	75,118	4.37%	c
Retirement Plan - CalPERS	5080.004	21,933	19,994	42,760	42,985	39,034	-8.71%	39,812	1.99%	d
Pension Contribution - SAM	5090.004	4,116	4,120	2,425	2,410	17,231	610.43%	17,231	0.00%	e
Workers Compensation	5100.004	10,955	16,670	20,040	11,621	18,813	-6.12%	19,377	3.00%	f
Life Insurance	5110.004	1,043	915	925	916	925	0.03%	925	0.00%	g
PEHP	5120.004	3,204	2,865	4,635	4,606	4,720	1.83%	4,875	3.28%	h
Dental Insurance/Claims	5130.004	3,570	3,000	3,400	3,450	3,659	7.62%	3,570	-2.43%	
Vision Insurance	5140.004	947	900	925	900	900	-2.70%	900	0.00%	
Long Term Disability	5150.004	2,533	2,550	2,560	2,560	4,200	64.06%	4,350	3.57%	
Employee Assistance Program	5180.004	662	475	615	475	475	-22.76%	475	0.00%	
Medical Exams	5200.004	783	400	185	0	0	-100.00%	0	n/a	
Allocate to Reclamation	5205.004	(11,254)	0	(810)	0	(800)	-1.23%	(800)	0.00%	
<i>Total Employee Benefits</i>		82,047	97,339	141,915	133,808	161,133	13.54%	165,833	2.92%	
Trucks & Autos										
Gasoline	5310.004	2,757	5,050	4,500	6,000	1,200	-73.33%	1,300	8.33%	i
Diesel	5320.004	644	2,000	1,550	2,200	1,000	-35.48%	1,100	10.00%	j
Fuelmaster software	5325.004	110	0	110	0	0	-100.00%	0	n/a	
Oil & Grease	5330.004	140	1,500	350	2,000	200	-42.86%	200	0.00%	k
Tires, Batteries, Service	5340.004	847	1,500	1,500	1,500	1,500	0.00%	1,500	0.00%	l
Outside Repair Service	5345.004	5,385	2,500	3,000	3,000	3,000	0.00%	2,000	-33.33%	
Repair Parts	5350.004	1,578	4,500	1,065	5,000	1,500	40.85%	1,500	0.00%	m
Tools	5355.004	64	5,000	500	5,000	6,000	1100.00%	500	-91.67%	
Vehicle Accessories	5360.004	291	200	25	500	6,000	23900.00%	500	-91.67%	n
Smog Check - Vehicles	5380.004	0	300	320	500	240	-25.00%	360	50.00%	o
Cleaning & detailing	5410.004	23	250	250	500	0	-100.00%	0	n/a	p
Paint & fluids	5420.004	0	250	200	500	40	-80.00%	40	0.00%	q

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	% of Budget	Actual					
Waste oil & coolants disposal	5440.004	0	500	0.0%	450	750	800	800	n/a	r
<i>Total Trucks & Autos</i>		11,837	23,550	50.3%	13,820	27,450	21,480	9,800	-54.38%	
<i>Office Supplies & Service</i>										
Computers & Equip	5540.004	10,287	15,000	68.6%	2,500	3,000	3,000	3,500	16.67%	s
Furnishings & fixtures	5545.004	1,389	0	n/a	300	0	300	300	0.00%	t
Paper & printing	5550.004	512	800	63.9%	672	750	300	300	0.00%	u
Postage & shipping	5560.004	0	250	0.0%	250	250	500	500	0.00%	v
Office supplies	5570.004	69	250	27.6%	380	250	250	250	0.00%	w
<i>Total Office Supplies & Svc.</i>		12,256	16,300	75.2%	4,102	4,250	4,350	4,850	11.49%	
<i>Operating Supplies</i>										
Generator fuel	5675.004	4,842	3,000	161.4%	3,700	5,000	3,500	3,500	0.00%	x
Lubricants & packing	5680.004	100	5,000	2.0%	2,735	5,000	5,000	5,250	5.00%	y
Microturbine	5685.004	19	4,000	0.5%	0	4,000	0	0	n/a	z
Electrical Supplies	5690.004	3,029	12,000	25.2%	2,495	20,000	20,000	21,000	5.00%	aa
Paint & fluids	5710.004	9,552	8,000	119.4%	9,100	10,000	10,000	10,500	5.00%	bb
Personnel supplies	5740.040	1,830	1,500	122.0%	60	2,000	2,000	2,000	0.00%	cc
Welding	5750.004	69	1,000	6.9%	45	1,000	1,000	200	-80.00%	dd
Hand tools	5780.004	14,246	10,000	142.5%	12,679	10,000	7,800	2,000	-74.36%	ee
General supplies	5790.004	34,101	25,000	136.4%	12,185	25,000	15,000	12,000	-20.00%	ff
<i>Total Operating Supplies</i>		67,789	69,500	97.5%	42,999	82,000	64,300	56,450	-12.21%	
<i>Contractual Services</i>										
Microturbine/Gas Conditioning Service	5850.004	8,946	10,000	89.5%	9,500	10,000	6,500	6,500	n/a	gg
Plant Rehabilitation	5855.004	151,525	150,000	101.0%	42,936	155,000	245,000	125,000	-48.98%	hh
Equip rent - generator	5890.004	0	5,000	0.0%	1,070	5,000	0	0	n/a	ii
Janitorial	5900.040	0	10,860	0.0%	10,000	11,000	11,000	12,000	9.09%	jj
Laundry	5940.004	2,564	1,500	170.9%	4,770	2,000	4,250	4,000	-5.88%	kk
Landscape Maintenance	5980.004	2,728	11,640	23.4%	3,500	12,000	6,000	6,000	0.00%	ll
Hazard/Green Waste Disposal	5990.004	0	1,500	0.0%	0	1,500	1,000	1,000	0.00%	mm
Pest Control	6010.004	2,016	1,500	134.4%	1,740	1,500	3,000	2,000	-33.33%	nn
Hoist Certification	6030.004	1,276	2,000	63.8%	1,880	2,000	3,000	3,000	0.00%	oo
Hazardous chemical disposal	6040.004	0	500	0.0%	500	500	0	0	n/a	pp
Plant tree trimming		0	10,000	0.0%	0	10,000	10,000	10,000	0.00%	
<i>Total Contractual Services</i>		169,053	204,500	82.7%	75,896	210,500	289,750	169,500	-41.50%	

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	% of Budget	Actual					
Repairs & Maintenance										
General Repairs	6095.004	230,368	248,000	95,841	250,000	180,000	87.81%	100,000	-44.44%	qq
Electric Motors	6150.004	3,277	10,000	0	20,000	14,000	n/a	14,000	0.00%	rr
Microturbine R & M	6160.004	5,798	5,000	4,500	5,000	5,000	11.11%	5,000	0.00%	ss
Plant Pumps	6190.004	20,558	12,000	16,767	51,000	35,000	108.74%	20,000	-42.86%	tt
Standby Generator	6200.004	731	10,000	9,879	10,000	10,000	1.22%	10,000	0.00%	uu
Control Panels	6210.004	0	12,000	5,000	15,000	120,000	2300.00%	40,000	-66.67%	vv
Instruments	6220.004	148	5,000	4,000	5,000	50,000	80.0%	35,000	-30.00%	ww
Boiler Repairs	6230.004	0	2,000	3,710	4,000	4,397	18.52%	4,000	-9.03%	xx
Headworks - Primary	6250.004	23,897	15,000	53,998	15,000	10,000	-81.48%	5,000	-50.00%	yy
IPS/EPS/DAF	6260.004	10,720	15,000	49,184	15,000	10,000	-79.67%	5,000	-50.00%	zz
Chlorine/Dechlorinator	6270.004	0	15,000	3,910	15,000	10,000	155.73%	5,000	-50.00%	1
Dewatering/DIG	6280.004	8,733	15,000	33,210	20,000	15,000	-54.83%	10,000	-33.33%	2
Plant Valves	6290.004	804	15,000	4,132	15,000	15,000	263.06%	8,000	-46.67%	3
Aeration - Secondary	6300.004	9,253	15,000	32,365	15,000	15,000	-53.65%	5,000	-66.67%	4
Demolition	6310.004	19,008	50,000	0	50,000	0	n/a	0	n/a	
Buildings	6320.004	35,443	25,000	57,793	50,000	50,000	-13.48%	50,000	0.00%	5
Total Maint & Repairs		368,740	469,000	374,289	555,000	543,397	45.18%	316,000	-41.85%	
Utilities										
Propane	6370.004	0	500	250	500	0	50.00%	0	n/a	
Cellular service	6393.004	1,355	0	1,400	0	1,720	22.86%	1,000	-41.86%	6
Total Utilities		1,355	500	1,650	500	1,720	4.24%	1,000	-41.86%	
Travel & Training										
Employee Training	6420.004	9,539	6,000	3,010	8,000	14,130	369.49%	8,000	-43.38%	7
Conferences	6430.004	2,077	5,000	4,000	7,000	5,100	27.50%	5,100	0.00%	8
Business meetings	6440.004	424	400	300	400	400	33.33%	400	0.00%	
Total Travel & Meetings		12,040	11,400	7,310	15,400	19,630	168.55%	13,500	-31.23%	
Permitting										
Central Coast RWQCB	6475.004	0	2,000	2,000	2,000	2,000	0.00%	2,000	0.00%	9
Air Pollution Control Permit	6480.004	0	3,000	1,750	3,000	4,400	151.43%	3,000	-31.82%	10
Total Permitting		0	5,000	3,750	5,000	6,400	70.67%	5,000	-21.88%	
Membership/Subscriptions										
Employee Certification	6550.004	808	2,000	1,200	2,000	1,470	22.50%	805	-45.24%	11

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		% of		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	Actual	Budget	Actual	Budget					
CWEA	6560.004	614	500	122.8%	750	345	46.0%	540	56.52%	540	0.00%	12
WEF	6580.004	247	400	61.8%	500	320	64.0%	0	-100.00%	0	n/a	
Subscriptions/Publications	6640.004	727	500	145.4%	500	300	60.0%	300	0.00%	300	0.00%	13
<i>Total Membership/Subscrip.</i>		2,396	3,400	70.5%	3,750	2,165	57.7%	2,310	6.70%	1,645	-28.79%	
Safety												
First Aid Supplies	6710.004	0	80	0.0%	20	85	425.0%	100	17.65%	100	0.00%	14
First Aid/Medical Services	6720.004	0	80	0.0%	50	50	100.0%	50	0.00%	50	0.00%	15
Fire Extinguisher Service	6730.004	68	80	85.0%	20	800	4000.0%	1,000	25.00%	1,000	0.00%	16
Safety Supplies/Emerg Response	6735.004	2,849	800	356.2%	200	200	100.0%	2,200	1000.00%	2,200	0.00%	17
Uniforms/Boots/Gear	6750.004	400	880	45.4%	900	800	88.9%	1,600	100.00%	800	-50.00%	18
Safety Training	6760.004	2,425	1,280	189.5%	1,625	1,400	86.2%	11,115	693.93%	4,100	-63.11%	
Policies and procedures	6770.004	525	0	n/a	0	0	n/a	2,740	n/a	2,740	0.00%	
<i>Total Safety Expenses</i>		6,267	3,200	195.8%	2,815	3,335	118.5%	18,805	463.87%	10,990	-41.56%	
Other Expenses												
Recruitment	8910.004	0	5,000	0.0%	5,000	12,265	245.3%	5,000	-59.23%	5,000	0.00%	
Contingency	8989.004	0	0	n/a	0	0	n/a	65,210	n/a	50,725	-22.21%	19
<i>Total Other Expense</i>		0	5,000	0.0%	5,000	12,265	245.3%	70,210	472.44%	55,725	-20.63%	
Subtotal Operating Expense		1,031,392	1,207,430	85.42%	1,345,282	1,015,586	75.5%	1,695,392	66.94%	1,318,881	-22.21%	
Total Operating Expense		1,031,392	1,207,430	85.42%	1,345,282	1,015,586	75.5%	1,695,392	66.94%	1,318,881	-22.21%	

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Note No.	<u>Description</u>	<u>Comments</u>
a	Salaries	Reflects the negotiated CPI based on Oct '17 SF/Oakland/San Jose CPI = 3.0%. In addition, this line reflects move of Maint Mechanic and Safety Officer to Maintenance Dept. Finally this line item assumes full staffing; movement of staff through step increases. Prior year actual reflects lower than budget due to staff on Worker Comp wages.
b	Salaries - Overtime	Est. \$40K for winter weather call backs and alarms; assumes reduced Comp Time
c	Medical Insurance	Negotiated formula is EE=100% District paid, Dependents= 90% District paid, plus \$265 in additional funds paid to either HSA or defer premium costs. Blue Cross premium increase 9% split 60/40 with employees. This line item reflects changes in staffing level and changes in status from single to married plus dependents along with reallocation among departments. Finally, assumes a 10% increase effective 1-1-19.
d	CalPERS retirement	Reflects increase in employee contribution to 6% in FY 18-19 for Classic members. Employee contribution 6.25% for PEPRAs members. Total Classic contribution 14.63%. Total PEPRAs contribution 13.09%. Unfunded accrued liability estimated \$14,125.
e	SAM retirement	Actuarial analysis provided 06-30-17 with recommended contribution rates
f	Worker's Compensation	Reallocation and additional positions for department. Also reflects Experience mod factor increase to 1.33 and estimated refund of \$10K.
g	PEHP insurance	Equivalent to 1% of salary
h	Dental reimbursements	Based on last 4 years avg expenditure
i	Gasoline	2 plant vehicles \$50/mo @ \$2.50/gal - all other fuel purchases shifted to Collections
j	Diesel	Diesel for plant equipment - all other fuel purchases shifted to Collections
k	Tires, Batteries, Service	New batteries and tires for 1 plant truck and 1 electric cart
l	Outside Repair Service	Brakes and repairs for carts and plant vehicles. Will be outsourced for FY 18/19 with goal of performing internally FY 19/20
m	Tools	2 Post rotary truck lift. Will enable maintenance to perform brake and oil changes for trucks
n	Vehicle Accessories	2 golf cart tool boxes. Will improve efficiency of staff by keeping their tools on their cart.
o	Smog Check - Vehicles	Smog vehicles even license plate. Vehicle # 17, 29, 20 and 36
p	Cleaning & detailing	Use shop vac and wash at treatment plant

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	q	Paint & fluids	Washer fluid
	r	Waste oil & coolants disposal	Disposal/recycle of waste oil
	s	Computers & Equip	Computer accessories
	t	Furnishings & fixtures	1 office chair
	u	Paper & printing	Copy paper
	v	Postage & shipping	Shipping for equipment inspections and to send in parts for repairs
	w	Office supplies	Pens, staples, tape, etc.
	x	Generator fuel	Diesel fuel and oil for 450kW and 750kW treatment plant standby generators. Will be used for sampling and then fuel may not have to be changed.
	y	Lubricants & packing	Packing for pumps, lube oil for motors and pumps
	z	Microturbine	Maintenance included in purchase agreement
	aa	Electrical Supplies	Electrical wire, wire labels, small breakers, wire nuts, conduit fittings, electrical consumables
	bb	Paint & fluids	Epoxy paint for fiberglass panels that will be damaged by UV if not coated, concrete coating touch up
	cc	Personnel supplies	Gloves, safety glasses, face shields, earplugs, tyvek suits
	dd	Welding	Welding tip for TIG and gas
	ee	Hand tools	\$1.3K instrumentation meter for calibration; \$1.7K misc hand tools; \$2K Sheetmetal brake; \$2K Metal fixed band saw; \$300 batteries for drill; & \$500 replace pipe threading dies
	ff	General supplies	Reduced due to new LED lights. Additional stainless strut & hardware
	gg	Microturbine Service	Proposed contract for 65kW includes maintenance
	hh	Plant Rehabilitation	\$20K HVAC annual contract; \$80K Electrical annual contract; \$100K PLC/SCADA system integrator annual contract; \$25K Mechanical annual contract; \$5K Mainsaver annual support; \$5K Rockwell PLC annual support; \$10K Cathodic protection assessment. In 2019-20 reduced System Integrator due to system improvement so primarily maintenance & to provide training to staff
	ii	Janitorial	Removed from Ops budget and moved to Maintenance
	jj	Laundry	4 staff uniforms. Increased budget due to arc flash rated clothing
	kk	Landscape Maintenance	Annual contract
	ll	Hazard/Green Waste Disposal	Prior year outsourced with service contract, but we will bring back onsite

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
mm		Pest Control	Annual contract to control rodent population inside plant fence line
nn		Hoist Certification	Cranes over 3 tons need proof load testing every 4 years. All cranes need annual inspection, testing, and maintenance.
oo		Hazardous chemical disposal	Deleted - no longer utilized
pp		Plant tree trimming	Trim trees twice per year to prevent further damage to fences
qq		General Repairs	\$40K Vault lid repair; \$3K smart manole for effluent and stormwater; \$20K rehab piping and add blind flange; \$40K HVAC repair for exhaust fans and supply fans for influent and effluent drywells; \$5K wetwell exhaust fan repair and maintenance; \$15K spot concrete coating and maintenance; \$22K catwalk repair and rehab; \$20K electrical repairs (boxes, conduit, etc.); and \$15K miscellaneous repairs
rr		Electric Motors	Send 1 influent and 1 effluent motor in for recondition
ss		Microturbine R & M	Maintenance of media and fuel pretreatment system. Not include in microturbine contract
tt		Centrifugal Pumps	Purchase spare pump parts and rebuild kits, pump impellers and couplings
uu		Standby Generator	Annual load bank testing and service for 450 kW and 750 kW generators
vv		Control Panels	Spare PLC parts for each type of card and processor. Install new and improved DC UPS system to improve reliability and decrease maintenance. New PLC controls throughout plant.
ww		Instruments	Moved \$25K for instrument calibration from OPS budget. \$10K to replace obsolete level controls. \$10K new flow monitoring and analyzer to improve process control in plant; and \$5K instrument repair, ph, conductivity, and temperature
xx		Boiler Repairs	Annual boiler service
yy		Headworks - Primary	Repair valves, pump seals, electrical enclosures
zz		IPS/EPS/DAF	Repair valves, pump seals, electrical enclosures
1		Chlorine/Dechlorinator	Repair/rehab valves, pump seals, electrical enclosures, recirc pump, analyzers
2		Dewatering/DIG	Repair valves, pump seals, electrical enclosures. Rehab belt press safety switches
3		Plant Valves	Rebuild and perform preventive maintenance on valves
4		Aeration - Secondary	Remove old #3 water piping. Rehab pumps and piping.
5		Buildings	Painting, door repair, update any old locks. Repair rollup doors and maintenance
6		Cellular service	2 Smart phones annual service and annual Mission cell cost for smart manholes at plant

**Carmel Area Wastewater District
Maintenance - Plant: 2018-19 Operating Expense Budget**

Note No.	<u>Description</u>	<u>Comments</u>
	Employee Training	2018-19: \$2K Ignition SCADA Historian training; \$6.3K Instrumentation boot camp; \$630 CWEA test prep; \$1.6K Industrial Electrical; \$1.6K Pump rebuild school; \$500 Asset Mgmt/CMMS; \$1K Advanced Excel class 2019-20: \$6.3K ISA Boot camp; Advanced mechanical training
7		
8	Conferences	\$2,650 CWEA annual x 2; \$250 MBWater Works x 5; \$2K CASA; \$250 Sewer Summit x 5
9	Central Coast RWQCB	Treatment Plant Stormwater permit
10	Air Pollution Control Permit	\$3K Air Board Permit and standby generator permits; \$1.4K Health dept permits
11	Employee Certification	Renewal and new certifications
12	CWEA	3 CWEA memberships
13	Subscriptions/Publications	Int'l Society of Automation
14	First Aid Supplies	Restock 1st Aid kits. Liquid based items are expired and restock bandages
15	First Aid/Medical Services	Coverage for 1 initial WC visit
16	Fire Extinguisher Service	Extinguishers for treatment plant and vehicles
17	Safety Supplies/Emerg Response	\$400 2x rescue winch certification; \$899 rescue gear requests (confined space blower, carabiner, spreader bar); \$1K annual SCBA testing
18	Uniforms/Boots/Gear	2018-19: \$800 x 4 high visibility raingear; \$800 x 4 boots 2019-20: boots only
19	Contingency	4% O&M budget

**Carmel Area Wastewater District
Maintenance - Field: 2018-19 Operating Expense Budget**

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		Actual	Budget	% of Budget	Actual					
<i>Medical Exams</i>	5200.003	0	66	0	0	0	n/a	0	n/a	
<i>Total Employee Benefits</i>		0	66	0	0	0	n/a	0	n/a	
Trucks & Autos										
Gasoline	5310.003	2,578	11,600	3,384	12,000	0	-100.00%	0	n/a	a
Diesel	5320.003	9,747	29,040	6,366	30,000	0	-100.00%	0	n/a	b
Oil & Grease	5330.003	1,533	4,500	759	5,000	2,000	163.64%	1,000	-50.00%	c
Tires, Batteries, Service	5340.003	379	4,200	3,136	5,000	500	-84.06%	1,000	100.00%	d
Outside Repair Service	5345.003	20,153	9,000	1,055	9,200	5,000	373.86%	1,000	-80.00%	e
Repair Parts	5350.003	6,714	14,500	2,364	15,000	5,000	111.52%	1,000	-80.00%	f
Tools	5355.003	160	5,500	936	5,500	500	-46.59%	0	-100.00%	
Vehicle Accessories	5360.003	670	500	107	1,000	0	n/a	350	n/a	
Driver medical exams	5370.003	0	350	0	0	0	n/a	0	n/a	
Smog Check - Vehicles	5380.003	0	250	0	250	0	0.00%	0	n/a	
Cleaning & detailing	5410.003	3	500	0	500	0	0.00%	0	n/a	
Paint & fluids	5420.003	0	600	0	600	0	0.00%	0	n/a	
Waste oil & coolants disposal	5440.003	259	100	0	100	300	n/a	300	0.00%	
<i>Total Trucks & Autos</i>		42,195	80,640	18,107	84,150	13,300	-26.55%	4,650	-65.04%	
Operating Supplies										
Electrical Supplies	5690.003	3,992	8,000	4,000	15,000	15,000	275.00%	15,000	0.00%	g
General supplies	5790.003	31	2,000	200	10,000	10,000	4900.00%	10,000	0.00%	h
<i>Total Operating Supplies</i>		4,024	10,000	4,200	25,000	25,000	495.24%	25,000	0.00%	
Contractual Services										
Laundry	5940.003	0	370	400	500	400	0.00%	400	0.00%	i
Electrical Contractor		0	0	0	0	20,000	n/a	20,000	0.00%	
<i>Total Contractual Services</i>		0	370	400	500	20,000	4900.00%	400	-98.00%	
Repairs & Maintenance										
Pump station equipment	6120.003	51,357	13,800	14,332	13,800	20,000	39.55%	20,000	0.00%	j
Generators	6140.003	12,018	6,000	10,000	10,000	15,000	50.00%	15,000	0.00%	k
<i>Total Maint & Repairs</i>		63,375	19,800	24,332	23,800	35,000	43.84%	35,000	0.00%	
Safety										
First Aid Supplies	6710.003	0	20	0	20	20	n/a	20	0.00%	

**Carmel Area Wastewater District
Maintenance - Field: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		% of		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	Budget	% of	Actual	Budget					
					Budget		Budget					
First Aid/Medical Services	6720.003	0	20	0.00%	0	50	0.00%	50	n/a	50	0.00%	
Fire Extinguisher Service	6730.003	0	20	0.00%	0	20	0.00%	500	n/a	500	0.00%	
Safety Supplies/Emerg Response	6735.003	0	200	0.00%	0	200	0.00%	500	n/a	500	0.00%	
Uniforms/Boots/Gear	6750.003	0	220	0.00%	0	600	0.00%	0	n/a	0	n/a	
Safety Training	6760.003	0	120	0.00%	0	1,705	0.00%	2,000	n/a	0	-100.00%	
<i>Total Safety Expenses</i>		0	600	0.00%	0	2,595	0.00%	3,070	n/a	1,070	-65.15%	
Contingency		0	0	n/a	0	0	n/a	3,855	n/a	2,645	-31.39%	1
Subtotal Operating Expense		109,594	111,476	98.31%	47,039	136,045	34.58%	100,225	113.07%	68,765	-31.39%	
Total Operating Expense		109,594	111,476	98.31%	47,039	136,045	34.58%	100,225	113.07%	68,765	-31.39%	

**Carmel Area Wastewater District
Maintenance - Field: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	a	Gasoline	Moved to Collection Dept. budget
	b	Diesel	Moved to Collection Dept. budget
	c	Tires, Batteries, Service	Batteries for camera truck
	d	Outside Repair Service	Truck repairs by factory service tech
	e	Repair Parts	Wheel bearing service on portable equipment
	f	Tools	Large vehicle tools so more work can be performed in-house.
			Rebuild motor starters. Install updated solid state motor protection relays. Purchase spare
	g	Electrical Supplies	pump breakers or replace
	h	General supplies	Conduit, strut, pipe fittings
	i	Electrical Contractor	Outside electrical contractor services
	j	Pump station equipment	Equipment repair: \$5K new electrical panels at Bay & Scenic and 8th & Scenic; \$5K replace valves after assessment and valve exercise; \$8K new backup battery system for all 7 pump stations; and \$2K pump plug disconnect to pumps at Hacienda and Calle la Cruz.
	k	Generators	Annual load bank and service for standby and portable generators
	l	Contingency	4% O&M budget

**Carmel Area Wastewater District
Administration: 2018-19 Operating Expense Budget**

Description	Account #	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget	Notes
		Actual	Budget	% of Budget	Actual					
Salaries	5030.007	495,451	498,349	515,000	515,468	572,393	11.14%	589,550	3.00%	a
Allocate to Reclamation			(22,150)		(19,150)	(19,150)	n/a	(19,150)	0.00%	
<i>Total Salaries</i>		495,451	476,199	515,000	496,318	553,243	7.43%	570,400	3.10%	
Payroll Taxes	5045.007	35,456	34,380	39,398	36,230	42,323	7.43%	43,636	3.10%	
Allocate to Reclamation			(592)		(1,465)					
<i>Total Payroll Taxes</i>		35,456	33,788	39,398	34,765	42,323	7.43%	43,636	3.10%	
Employee Benefits:										
Medical Insurance	5070.007	45,938	60,590	55,128	61,400	103,304	87.39%	107,079	3.65%	b
CalPERS pension	5080.007	50,752	51,305	53,715	80,777	49,204	-8.40%	48,972	-0.47%	c
SAM pension	5090.007	12,660	12,665	12,418	10,830	16,795	35.25%	16,795	0.00%	d
Worker's Compensation	5100.007	20,387	22,890	22,300	22,310	28,592	28.22%	29,450	3.00%	e
Life Insurance	5110.007	1,222	1,220	1,221	1,222	1,222	0.08%	1,222	0.00%	
PEHP insurance	5120.007	5,212	5,105	5,411	5,275	5,875	8.59%	6,045	2.89%	f
Dental reimbursement	5130.007	9,551	11,150	10,750	10,750	12,750	18.60%	12,750	0.00%	g
Vision insurance	5140.007	1,147	1,200	1,113	1,200	1,200	7.82%	1,200	0.00%	
Disability insurance	5150.007	4,443	4,400	4,595	4,560	5,265	14.59%	5,425	3.04%	
HSA contributions	5160.007	7,140	0	4,071	0	0	-100.00%	0	n/a	
Tuition Assistance	5175.007	5,250	5,250	5,250	5,250	3,000	-42.86%	0	-100.00%	h
Employee Assistance Program	5180.007	612	630	630	630	630	0.00%	630	0.00%	
Annual District picnic	5186.007	2,935	0	2,493	2,500	2,500	0.30%	2,500	n/a	i
Employee BBQ	5187.007	129	0	0	0	500	n/a	0	n/a	j
Medical exams	5200.007	230	0	0	0	0	n/a	0	n/a	
Allocate to Reclamation	5205.007	(8,108)	(7,750)	(8,651)	(8,110)	(8,500)	-1.75%	(8,500)	0.00%	
<i>Total Employee Benefits</i>		159,499	168,655	170,441	198,593	222,637	30.62%	223,568	0.42%	
Directors Fees										
Regular Board Meetings	5230.007	8,350	8,800	8,800	8,800	8,800	0.00%	8,800	0.00%	
PBCSD - Directors fees	5240.007	1,750	1,750	1,750	1,750	1,750	0.00%	1,750	0.00%	
Special Board Meetings	5250.007	2,400	5,700	5,700	5,700	5,700	0.00%	5,700	0.00%	
Committee meetings	5260.007	2,000	2,100	2,100	2,100	2,100	0.00%	2,200	4.76%	
WaterReuse	5269.007	1,543	300	300	300	300	0.00%	300	0.00%	
CASA - Directors fees	5270.007	1,510	750	750	750	1,350	80.00%	1,500	11.11%	
Training	5275.007	66	0	250	250	250	0.00%	250	0.00%	
Director's Dental Claims	5280.007	12,075	7,800	12,000	8,000	12,000	0.00%	12,000	0.00%	k
<i>Total Directors Fees</i>		29,694	27,200	31,650	27,650	32,250	1.90%	32,500	0.78%	
Trucks & Autos										

**Carmel Area Wastewater District
Administration: 2018-19 Operating Expense Budget**

Description	Account #	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	% of Budget	Actual					
Gasoline	5310.007	640	200	320.16%	200	100.00%	0.00%	200	0.00%	
Repair services	5345.007	76	800	9.51%	0	0.00%	n/a	300	0.00%	
Smog Check - Vehicles	5380.007	0	110	0.00%	0	0.00%	n/a	110	0	-100.00%
Cleaning & detailing	5410.007	32	50	63.80%	41	82.00%	21.95%	50	0.00%	
Tires, Batteries, Service		0	0	n/a	0	0.00%	n/a	100	0.00%	
Paint, Coolant, Cleaner, Radios	5360.007	0	0	n/a	0	n/a	n/a	0	n/a	
<i>Total Trucks & Autos</i>		748	1,160	64.51%	241	19.13%	215.35%	760	650	-14.47%
<i>Property/Liability Insurance</i>										
Property Insurance	5450.007	425	1,000	42.50%	550	100.00%	10.00%	665	9.92%	
General Liability	5480.007	7,110	15,000	47.40%	8,500	83.74%	10.00%	9,350	10,285	10.00%
Errors & Omissions	5480.007	4,800	4,800	100.00%	4,800	100.00%	10.00%	5,280	5,810	10.04%
Commerical Crime Policy	5480.007	700	2,000	35.00%	1,325	99.99%	10.00%	1,458	1,600	9.78%
Cyber Crime Insurance		700	1,500	46.67%	1,500	100.00%	10.00%	1,650	1,815	10.00%
<i>Total Insurance</i>		13,735	24,300	56.52%	16,675	91.00%	10.00%	18,343	20,175	9.99%
<i>Audit/Financial Expense</i>										
Audit/Financial Expense	5490.007	28,000	23,000	121.74%	24,300	90.67%	30.86%	31,800	31,800	0.00%
<i>Engineering Fees</i>										
Engineering Fees	5500.007	39,766	85,000	46.78%	2,644	n/a	4628.13%	125,000	125,000	0.00%
<i>Attorney Fees</i>										
District Counsel	5510.007	24,124	35,000	68.92%	21,250	95,000	22.37%	35,000	64.71%	
Outside Counsel		0	0	0.00%	0	0.00%	n/a	60,000	60,000	0.00%
CASA Conference Attendance		0	1,000	0.00%	500	1,000	50.00%	500	500	0.00%
<i>Total Attorney Fees</i>		24,124	36,000	67.01%	21,750	96,000	22.66%	95,500	95,500	0.00%
<i>Office Supplies & Service</i>										
Bank fees	5515.007	253	0	n/a	2,439	0	n/a	2,050	2,050	0.00%
Computers & equipment	5540.007	4,686	10,000	46.86%	3,417	10,000	34.17%	13,000	280,42%	-69.23%
Furnishings & fixtures	5545.007	1,690	1,000	169.02%	0	1,000	0.00%	5,200	500	-90.38%
Paper & printing	5550.007	927	3,500	26.47%	1,457	3,500	41.63%	1,400	1,500	7.14%
Postage & shipping	5560.007	1,126	2,000	56.29%	2,866	2,000	143.28%	2,750	3,000	9.09%
Office Supplies	5570.007	2,910	3,000	97.01%	2,294	3,000	76.47%	1,450	1,600	10.34%
Post Office Box Rental	5585.007	140	195	71.79%	166	200	83.00%	175	180	2.86%
Temp Services	5595.007	4,557	2,000	227.84%	8,924	2,000	446.21%	4,000	4,000	0.00%
<i>Total Office Supplies & Svc.</i>		16,289	21,695	75.08%	21,563	21,700	99.37%	30,025	16,830	-43.95%
<i>Operating Supplies</i>										
Janitorial Supplies	5730.007	0	400	0.00%	190	500	37.93%	500	500	0.00%
Personnel Supplies	5740.007	549	700	78.48%	264	700	37.71%	500	500	0.00%

**Carmel Area Wastewater District
Administration: 2018-19 Operating Expense Budget**

Description	Account #	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes
		Actual	Budget	% of Budget	Actual					
General Operating Supplies	5790.007	30	300	10.01%	64	300	370.27%	300	0.00%	
<i>Total Operating Supplies</i>		579	1,400	41.39%	517	1,500	151.23%	1,300	0.00%	
Contractual Services										
Network Administration	5830.007	12,945	32,000	40.45%	22,395	33,000	67.86%	26,000	1.80%	
Website Maintenance	5835.007	2,150	1,000	214.99%	1,000	1,000	100.00%	1,000	0.00%	
Alarm System	5880.007	1,383	1,250	110.63%	2,404	1,300	184.95%	2,500	4.17%	
Janitorial Service	5900.007	3,255	3,610	90.17%	2,474	3,610	68.54%	3,250	4.84%	
Copier/Fax Service	5910.007	4,754	3,800	125.10%	6,474	3,800	170.36%	5,750	4.55%	u
Actuarial Service	5920.007	11,894	20,000	59.47%	12,908	15,000	86.05%	10,000	0.00%	v
Payroll Processing	5950.007	6,336	6,500	97.47%	8,757	6,700	130.70%	9,500	2.70%	
Data processing - County	5970.007	21,222	21,000	101.06%	21,250	22,000	96.59%	23,000	4.55%	
Landscape Maintenance	5980.007	1,500	6,500	23.08%	5,800	6,500	89.23%	6,000	3.45%	
Accounting Services		0	3,800	0.00%	3,600	3,800	94.74%	3,600	0.00%	
Post Office Box Rental		140	140	100.00%	150	150	100.00%	185	8.82%	
Other Special Studies/Services	6070.007	1,920	52,000	3.69%	27,686	50,000	55.37%	70,000	-28.57%	w
<i>Total Contractual Services</i>		67,499	151,600	44.52%	114,898	146,860	78.24%	158,360	-11.10%	
Repairs & Maintenance										
	6320.007	27,908	26,000	107.34%	800	5,000	16.00%	1,000	0.00%	
Utilities										
Electricity	6358.007	3,921	4,000	98.04%	4,391	4,300	102.13%	4,625	5.32%	
Gas	6360.007	1,476	1,500	98.40%	1,148	1,650	69.59%	1,314	4.00%	
Water	6380.007	2,540	2,700	94.08%	4,376	4,590	95.34%	5,690	12.00%	
Refuse Collection	6385.007	579	650	89.10%	662	675	98.08%	710	1.43%	
<i>Total Utilities</i>		8,517	8,850	96.23%	10,578	11,215	94.32%	12,523	7.33%	
Telephone										
Fixed Costs	6392.007	6,296	7,200	87.44%	7,193	7,300	98.54%	7,500	1.35%	
Long Distance		0	0	n/a	0	0	n/a	0	n/a	
Direct Line to Plant		0	0	n/a	0	0	n/a	0	n/a	
Cellular Phones	6393.007	2,070	2,000	103.52%	3,250	3,200	101.56%	3,500	2.49%	
<i>Total Telephone</i>		8,366	9,200	90.94%	10,443	10,500	99.46%	11,000	1.71%	
Travel & Training										
Employee Training	6420.007	2,885	12,500	23.08%	3,000	12,500	24.00%	36,400	0.41%	x
Conferences	6430.007	1,231	12,000	10.25%	3,500	12,000	29.17%	7,250	3.57%	
Business Meetings - Tri Tac	6440.007	1,761	1,500	117.40%	1,300	1,500	86.67%	1,600	6.67%	
Auto Mileage		0	200	0.00%	150	200	75.00%	200	0.00%	

**Carmel Area Wastewater District
Administration: 2018-19 Operating Expense Budget**

Description	Account #	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr Budget	Notes	
		Actual	Budget	% of Budget	Actual						Budget
<i>Total Travel & Meetings</i>											
		5,877	26,200	22.43%	7,950	26,200	30.34%	44,950	465.41%	45,450	1.11%
<i>Memberships/Subscriptions</i>											
Employee certifications	6550.007	115	285	40.35%	120	300	40.00%	200	66.67%	200	0.00%
Memberships											
CASA	6570.007	12,855	13,250	97.02%	12,855	13,250	97.02%	13,000	1.13%	13,500	3.85%
ASCE	6575.007	0	175	0.00%	295	175	168.57%	300	1.69%	300	0.00%
WEF	6580.007	0	570	0.00%	0	570	0.00%	0	n/a	0	n/a
CSDA	6590.007	6,485	6,100	106.31%	6,842	6,100	112.16%	7,000	2.31%	7,000	0.00%
WaterReuse Association	6600.007	0	700	0.00%	0	700	0.00%	250	n/a	250	0.00%
GFOA	6610.007	160	170	94.12%	170	170	100.00%	175	2.94%	185	5.71%
National Notary Assoc.	6630.007	0	45	0.00%	0	45	0.00%	0	n/a	0	n/a
Other	6635.007	4,464	3,100	144.00%	4,251	3,100	137.13%	4,000	-5.90%	4,000	0.00%
Subscriptions/Publications	6640.007	1,436	1,250	114.86%	559	1,250	44.72%	1,250	123.61%	1,300	4.00%
<i>Total Membership/Subscrip.</i>		25,515	25,645	99.49%	25,092	25,660	97.79%	26,175	4.32%	26,735	2.14%
<i>Other Expenses</i>											
LAFCO Admin Fee	6520.007	15,254	15,500	98.41%	18,855	16,000	117.84%	19,800	5.01%	20,000	1.01%
Fire extinguisher	6730.007	125	150	83.33%	200	200	100.00%	200	0.00%	200	0.00%
Training	6760.007	151	2,000	7.53%	1,500	2,000	75.00%	1,500	0.00%	1,500	0.00%
Recruitment	8910.007	0	0	n/a	1,245	0	n/a	5,000	301.66%	0	n/a
Legal Notices	8920.007	1,013	3,500	28.93%	428	3,500	12.23%	2,000	367.29%	2,000	0.00%
Rate Payer Claims	8930.007	105	2,500	4.21%	10,000	2,500	400.00%	2,500	-75.00%	2,500	0.00%
CAWD Newsletter	8940.007	25,994	27,500	94.52%	28,500	28,500	100.00%	28,500	0.00%	29,000	1.75%
Miscellaneous Expense	8989.007	415	65,000	0.64%	4,000	5,000	80.00%	62,400	1460.00%	62,400	0.00%
Contingency		0	280,000	0.00%	35,000	280,000	12.50%	61,120	74.63%	60,660	-0.75%
<i>Total Other Expense</i>		43,056	396,150	10.87%	99,728	337,700	29.53%	183,020	83.52%	178,260	-2.60%
Subtotal Operating Expense		1,030,078	1,542,042	66.80%	1,113,667	1,611,047	69.13%	1,589,169	42.70%	1,577,111	-0.76%
Depreciation Expense	8997.007	34,664	34,000	101.95%	34,000	34,000	100.00%	34,000	0.00%	34,000	0.00%
Amortization Expense	8998.007	4,860	4,860	100.00%	4,860	4,860	100.00%	4,860	0.00%	4,860	0.00%
Total Operating Expense		1,069,603	1,580,902	67.66%	1,152,527	1,649,907	69.85%	1,628,029	41.26%	1,615,971	-0.74%

**Carmel Area Wastewater District
Administration: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
a		Salaries	Reflects the negotiated CPI based on Oct '17 SF/Oakland/San Jose CPI = 3.0%. In addition, this line reflects move of Maint Mechanic and Safety Officer to Maintenance Dept., and addition of Plant Engineer. Finally this line item reflects potential changes due to recommendations from Admin Assessment performed in Fall 2017. It assumes full staffing; and movement of staff through step increases.
b		Medical Insurance	Negotiated formula is EE=100% District paid, Dependents= 90% District paid, plus \$265 in additional funds paid to either HSA or defer premium costs. Blue Cross premium increase 9% split 60/40 with employees. This line items reflects changes in staffing level and changes in status from single to married plus dependents along with reallocation among departments. Finally, assumes a 10% increase effective 1-1-19.
c		CalPERS retirement	Reflects increase in employee contribution to 6% in FY 18-19 for Classic members. Employee contribution 6.25% for PEPRAs members. Total Classic contribution 14.63%. Total PEPRAs contribution 13.09%. Unfunded accrued liability estimated \$14,125.
d		SAM retirement	Actuarial analysis provided 06-30-17 with recommended contribution rates
e		Worker's Compensation	Reallocation and additional positions for department. Also reflects Experience mod factor increase to 1.33 and estimated refund of \$10K.
f		PEHP insurance	Equivalent to 1% of base salary
g		Dental reimbursements	Based on last 4 years avg expenditure
h		Tuition Assistance	Education reimbursement - 1 course remaining for MPA - Principal Engineer
i		Annual District picnic	Annual picnic plus longevity awards
j		Employee BBQ	Various during year - employee morale
k		Director's Dental Claims	Avg over 4 years
l		Total Insurance	Recommended 10% increase by CSRMA
m		Audit/Financial Expense	Annual financial audit \$23.5K plus Grant Single Audit \$7.5K
n		Engineering Fees	Misc projects to include Sea Level Rise
o		District Counsel	Retainer plus work on Carmel Lagoon
p		Computers & equipment	Server replacement plus Engineer computer
q		Furnishings & fixtures	8 chairs for Board Room @ \$650/ea
r		Postage & shipping	Regular postage needs plus allowance for neighborhood mailings

**Carmel Area Wastewater District
Administration: 2018-19 Operating Expense Budget**

s	Office Supplies	Estimated office supplies - decrease due to lower usage
t	Temp Services	Temp employee to help fill Admin Services position
u	Copier/Fax Service	Usage appears to have increased - budget reflects 2 yr average
v	Actuarial Service	Normal annual report plus one retirement and GASB 68 reports
w	Other Special Studies/Services	Rate Study \$35K and Update of Employee Handbook
x	Employee Training	Long term personnel training course for management \$30K
y	LAFCO Admin Fee	Estimated increase in LAFCO fee
z	Misc Other	Other administration functions
aa	Total Other Expense	4% O&M budget

**Carmel Area Wastewater District
Collections Department: 2018-19 Operating Expense Budget**

Description	Acct	2016-17				Est. YTD 2017-18				Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget	Notes
		Actual	Budget	% of Budget	% of Budget	Actual	Budget	% of Budget	% of Budget					
Salaries	5030.005	399,150	380,945	104.78%	418,141	406,365	102.90%	436,236	4.33%	451,191	3.43%	a		
Salaries - Overtime	5035.005	18,562	7,200	257.80%	7,200	7,200	100.00%	7,200	0.00%	7,200	0.00%	b		
Salaries - Standby	5040.005	14,560	14,560	100.00%	14,560	14,560	100.00%	14,560	0.00%	14,560	0.00%	c		
<i>Total Salaries</i>		432,272	402,705	107.34%	439,901	428,125	102.75%	457,996	4.11%	472,951	3.27%			
Payroll Taxes	5045.005	32,560	30,810	105.68%	33,372	32,750	101.90%	35,037	4.99%	36,181	3.27%			
Employee Benefits:														
Medical Insurance	5070.005	68,868	87,255	78.93%	70,540	88,365	79.83%	91,771	30.10%	94,794	3.29%	d		
CalPERS retirement	5080.005	37,865	37,346	101.39%	40,571	58,375	69.50%	38,772	-4.43%	39,129	0.92%	e		
SAM retirement	5090.005	7,056	7,050	100.09%	6,505	6,463	100.65%	10,490	61.26%	10,490	0.00%	f		
Worker's Compensation	5100.005	16,134	22,880	70.51%	17,299	17,745	97.49%	17,960	3.82%	18,499	3.00%	g		
Life insurance	5110.005	1,527	1,530	99.80%	1,534	1,527	100.49%	1,530	-0.29%	1,530	0.00%			
PEHP insurance	5120.005	4,233	3,960	106.88%	4,422	4,214	104.95%	4,510	1.98%	4,660	3.33%	h		
Dental reimbursements	5130.005	9,512	5,300	179.46%	6,064	6,075	99.82%	6,950	14.61%	7,000	0.72%	i		
Vision insurance	5140.005	1,333	1,500	88.88%	1,509	1,500	100.57%	1,500	-0.57%	1,500	0.00%			
Disability insurance	5150.005	3,606	3,480	103.63%	3,731	3,710	100.57%	4,013	7.57%	4,151	3.43%			
HSA contributions	5160.005	3,320	0	n/a	0	0	n/a	0	n/a	0	n/a			
Employee Assistance Program	5180.005	765	795	96.23%	795	795	100.00%	795	0.00%	795	0.00%			
Employee Awards	5185.005	594	0	n/a	600	0	n/a	650	8.33%	700	n/a			
Medical exams	5200.005	752	975	77.14%	500	0	n/a	500	0.00%	500	n/a			
<i>Total Employee Benefits</i>		155,564	172,071	90.41%	154,070	188,769	81.62%	179,441	16.47%	183,747	2.40%			
Trucks & Autos														
Gasoline	5310.005	0	0	n/a	0	0	n/a	6,750	n/a	6,750	0.00%	j		
Diesel	5320.005	0	0	n/a	0	0	n/a	1,800	n/a	1,800	0.00%	k		
Fuelmaster	5325.005	0	0	n/a	0	0	n/a	0	n/a	0	n/a			
Repair parts	5350.005	7	0	n/a	0	0	n/a	0	n/a	0	n/a			
Vehicle accessories	5360.005	4,591	0	n/a	875	0	n/a	0	-100.00%	0	n/a			
DMV/DATCO fees	5400.005	702	970	72.37%	1,097	970	113.14%	970	-11.61%	990	2.06%	l		
Cleaning & detailing	5410.005	51	200	25.45%	14	200	6.78%	200	1376.01%	210	5.00%			
<i>Total Trucks & Autos</i>		5,352	1,170	457.40%	1,986	1,170	169.77%	9,720	389.35%	9,750	0.31%			
Property/Liability Insurance														
Property Insurance	5450.005	5,485	6,250	87.76%	2,000	1,750	114.29%	6,300	215.00%	6,350	0.79%			
General Liability	5480.005	13,368	14,500	92.19%	19,518	12,660	154.17%	15,550	-20.33%	15,550	0.00%			
<i>Total Insurance</i>		18,853	20,750	90.86%	21,518	14,410	149.33%	21,850	1.54%	21,900	0.23%			

**Carmel Area Wastewater District
Collections Department: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget	Notes
		Actual	Budget	% of Budget	Actual					
Engineering Fees										
Consulting Fees	5500.005	61,669	110,000	15,632	80,000	55,000	251.84%	25,000	-54.55%	m
<i>Total Engineering Fees</i>		61,669	110,000	15,632	80,000	55,000	251.84%	25,000	-54.55%	
Office Supplies & Service										
Computers & equipment	5540.005	3,700	6,500	0	4,500	1,900	n/a	1,900	0.00%	n
Furnishings & fixtures	5545.005	0	0	0	0	1,000	n/a	0	n/a	o
Paper & printing	5550.005	149	3,500	0	6,500	6,500	n/a	2,500	-61.54%	p
Postage	5560.005	25	50	0	70	70	n/a	70	0.00%	q
Office Supplies	5570.005	427	1,000	1,091	1,100	1,100	0.82%	1,200	9.09%	r
<i>Total Office Supplies & Svc.</i>		4,301	11,050	1,091	12,170	10,570	868.84%	5,670	-46.36%	
Operating Supplies										
Electrical Supplies	5690.005	34	500	1,442	500	500	-65.33%	500	0.00%	s
Paint & fluids	5710.005	1,667	1,500	581	1,000	1,000	72.20%	1,000	0.00%	t
Janitorial Supplies	5730.005	0	300	0	310	320	n/a	330	3.13%	u
Personnel Supplies	5740.005	792	1,000	556	1,000	1,000	79.82%	1,000	0.00%	v
Hand Tools	5780.005	1,119	2,500	48	2,500	1,000	1987.25%	1,000	0.00%	w
General Operating Supplies	5790.005	15,680	12,500	10,325	14,000	19,000	84.02%	15,000	-21.05%	x
<i>Total Operating Supplies</i>		19,292	18,300	12,952	19,310	22,820	76.19%	18,830	-17.48%	
Contractual Services										
Network Administration	5830.005	9,373	14,000	15,087	14,500	17,100	13.34%	17,500	2.34%	y
Root foaming	5865.005	52,694	53,000	53,000	53,000	53,000	0.00%	53,000	0.00%	z
Pump station monitoring	5870.005	2,432	2,800	2,900	2,900	4,400	51.72%	4,400	0.00%	aa
Collection system capacity monitoring	5875.005	0	9,000	9,000	9,000	9,000	0.00%	9,000	0.00%	bb
Alarm systems	5880.005	233	600	186	650	650	249.07%	700	7.69%	cc
Underground Service Alert	5930.005	569	375	1,986	380	1,250	-37.05%	1,250	0.00%	
Laundry	5940.005	5,833	5,100	5,395	6,200	6,500	20.49%	6,700	3.08%	
Other Special Studies	6070.005	5,420	0	1,345	0	3,500	160.26%	0	n/a	dd
General Repairs	6095.005	2,557	125,000	0	43,500	0	n/a	0	n/a	
<i>Total Contractual Services</i>		79,110	209,875	88,899	130,130	95,400	7.31%	92,550	-2.99%	
Repairs & Maintenance										
Easements	6100.005	22,420	5,500	31,705	7,000	48,000	51.40%	48,000	0.00%	ee
Pump stations	6110.005	1,254	5,000	1,155	4,000	4,000	246.27%	4,000	0.00%	

**Carmel Area Wastewater District
Collections Department: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget	Notes
		Actual	Budget	% of Budget	Actual					
Pump station equipment	6120.005	4,149	0	1,707	14,000	14,000	720.20%	14,000	0.00%	fi
Sewer lines	6130.005	89,887	30,000	1,900	30,000	75,000	3847.37%	75,000	0.00%	gg
Manholes	6140.005	25,136	26,000	33,519	26,000	40,000	19.34%	38,000	-5.00%	hh
Generators	6200.005	0	6,000	0	0	0	n/a	0	n/a	
Buildings	6320.005	1,105	4,000	0	2,000	0	n/a	0	n/a	
<i>Total Maint & Repairs</i>		143,950	76,500	69,986	83,000	181,000	158.62%	179,000	-1.10%	
<i>Utilities</i>										
Electricity										
8th Ave	6343.005	1,503	1,500	943	1,575	1,220	29.39%	1,345	10.25%	
Bay & Scenic	6344.005	1,978	2,200	2,728	2,310	2,350	-13.84%	2,585	10.00%	
Monte Verde & 16th	6345.005	1,879	2,050	2,331	2,150	2,105	-9.69%	2,315	9.95%	
Calle La Cruz	6346.005	3,925	3,900	4,183	4,100	4,055	-3.06%	4,460	10.00%	
Hacienda	6347.005	954	1,250	1,157	1,300	1,055	-8.85%	1,160	10.00%	
Highlands	6348.005	12,254	11,000	15,098	12,000	13,675	-9.43%	15,045	10.01%	
<i>Total Electricity</i>		22,494	21,900	26,440	23,435	24,460	-7.49%	26,910	10.02%	
Gas-	6360.005	509	600	457	750	750	64.15%	750	0.00%	
Propane	6370.005	1,682	800	0	900	1,800	n/a	1,800	0.00%	
Water	6380.005	1,297	2,150	1,595	3,655	1,445	-9.40%	15,000	938.12%	
Garbage	6385.005	0	400	0	400	400	n/a	400	0.00%	ii
<i>Telephone- No Increase</i>										
Fixed Costs	6392.005	6,405	6,000	6,038	6,500	6,700	10.97%	6,800	1.49%	
Cellular Phones	6393.005	1,714	3,000	1,821	3,500	3,500	92.23%	3,500	0.00%	
<i>Total Telephone</i>		8,120	9,000	7,859	10,000	10,200	29.79%	10,300	0.98%	
<i>Total Utilities</i>		34,102	34,850	36,350	39,140	39,055	7.44%	55,160	41.24%	
<i>Travel & Training</i>										
Employee Training	6420.005	4,830	7,500	5,013	7,500	6,000	19.68%	6,500	8.33%	
Conferences	6430.005	3,620	4,500	6,050	5,000	4,500	-25.62%	5,000	11.11%	
Business meetings	6440.005	645	800	902	800	800	-11.28%	800	0.00%	
<i>Total Travel & Meetings</i>		9,095	12,800	11,965	13,300	11,300	-5.56%	12,300	8.85%	
<i>Permits</i>										
Regional Water Quality Control	6470.005	2,088	2,300	2,088	2,400	2,400	14.94%	2,400	0.00%	

**Carmel Area Wastewater District
Collections Department: 2018-19 Operating Expense Budget**

Description	Acct	2016-17		Est. YTD 2017-18		Proposed 2018-19 Budget	% Chg. Prior Yr. Actual	Projected 2019-20 Budget	% Chg. Prior Yr. Budget	Notes
		Actual	Budget	% of Budget	Actual					
MUAPCB	6480.005	2,826	3,000	94.20%	2,484	3,100	80.13%	3,250	1.56%	
<i>Total permits</i>		4,914	5,300	92.72%	4,572	5,500	83.13%	5,650	0.89%	
<i>Memberships/Subscriptions</i>										
Employee Certification	6550.005	1,185	970	122.12%	1,078	1,000	107.76%	1,000	0.00%	jj
Publications/reference works	6640.005	0	200	0.00%	784	200	392.24%	300	0.00%	
Memberships - CWEA	6560.005	516	700	73.71%	297	750	39.54%	750	0.00%	kk
Memberships - WEF	6580.005	312	270	115.56%	270	270	100.00%	270	0.00%	ll
<i>Total Membership/Subscrip.</i>		2,013	2,140	94.05%	2,429	2,220	109.40%	2,320	0.00%	
<i>Safety</i>										
First Aid Medical Service	6720.005	0	300	0.00%	447	400	111.64%	1,000	-23.08%	mmm
Fire extinguisher service	6730.005	350	410	85.37%	52	420	12.32%	420	0.00%	
Safety supplies	6735.005	3,183	2,000	159.15%	2,634	4,800	54.89%	3,500	0.00%	
Uniforms, boots & gear	6750.005	914	1,500	60.94%	2,655	1,500	177.01%	1,500	-40.00%	nn
Safety training	6760.005	4,854	6,600	73.55%	8,621	8,000	107.76%	2,000	-60.00%	oo
<i>Total Safety</i>		9,302	10,810	86.05%	14,409	15,120	95.30%	8,420	-33.81%	
<i>Other Expenses</i>										
Legal Notices	8920.005	0	0	n/a	766	0	n/a	0	n/a	
Miscellaneous	8989.005	389	300	129.83%	0	50,300	0.00%	50,000	-40.00%	pp
Contingency		0	0	n/a	0	0	n/a	47,595	-2.55%	qq
<i>Total Other Expense</i>		389	300	129.83%	766	50,300	1.52%	97,595	12648.90%	
Subtotal Operating Expense		1,012,737	1,119,431	90.47%	909,897	1,115,413	81.57%	1,237,423	36.00%	-2.55%
Depreciation Expense	8997.005	333,826	327,000	102.09%	335,000	335,000	100.00%	335,000	0.00%	
Total Operating Expense		1,346,563	1,446,431	93.10%	1,244,897	1,450,413	85.83%	1,572,423	26.31%	-2.01%

**Carmel Area Wastewater District
Collection: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	a	Salaries	Reflects the negotiated CPI based on Oct '17 SF/Oakland/San Jose CPI = 3.0%. It assumes full staffing; and movement of staff through step increases.
	b	Salaries - Overtime	Est. \$7,200 for winter weather call backs and alarms; assumes reduced Comp Time
	c	Salaries - Standby	\$280/wk x 52
	d	Medical Insurance	Negotiated formula is EE=100% District paid, Dependents= 90% District paid, plus \$265 in additional funds paid to either HSA or defer premium costs. Blue Cross premium increase 9% split 60/40 with employees. This line items reflects changes in staffing level and changes in status from single to married plus dependents along with reallocation among departments. Finally, assumes a 10% increase effective 1-1-19.
	e	CalPERS retirement	Reflects increase in employee contribution to 6% in FY 18-19 for Classic members. Employee contribution 6.25% for PEPRA members. Total Classic contribution 14.63%. Total PEPRA contribution 13.09%. Unfunded accrued liability estimated \$14,125.
	f	SAM retirement	Actuarial analysis provided 06-30-17 with recommended contribution rates
	g	Worker's Compensation	Reallocation of costs between departments. Also reflects Experience mod factor increase to 1.33 and estimated refund of \$10K.
	h	PEHP insurance	Equivalent to 1% of salary
	i	Dental reimbursements	Based on last 4 years avg expenditure
	j	Diesel	2500 gallons @ \$2.70
	k	Fuelmaster software	500 gallons @ \$3.60
	l	DMV/DATCO fees	\$55/mo for 6 employees plus one test/yr for each employee at \$52 per test. Includes Mike Skinkle - Maintenance
	m	Consulting Fees	West Yost Capacity Study Phase 3 \$30K; Golf course line \$25K
	n	Computers & equipment	1 desktop @ \$1,500 and printer @ \$400
	o	Furnishings & fixtures	6 new office chairs for conference table @ \$180/ea
	p	Paper & printing	Public information flyers for Sale of Home \$3K; Public outreach flyers Design consultant \$2.5
	q	Postage	Depend on Admin Dept for postage, minimal UPS store shipping charges
	r	Office Supplies	Includes toner for 2 desktop printers
	s	Electrical Supplies	Misc electrical tools
	t	Paint & fluids	Misc paint for pump stations
	u	Janitorial Supplies	Split janitorial supplies with Treatment Plant

**Carmel Area Wastewater District
Collection: 2018-19 Operating Expense Budget**

Note	<u>No.</u>	<u>Description</u>	<u>Comments</u>
	v	Personnel Supplies	Nitrile gloves, work gloves, hard hats, safety jackets, etc.
	w	Hand Tools	Tools for trucks and work at stations and on sewer line repairs, collection rods
	x	General Operating Supplies	Tiger tails, nozzles, hoses, equipment for trucks, new warthog cleaning nozzle \$4,500
	y	Network Administration	ICOM annual fee \$4,500; Exceedio annual fee \$7,000; IT Pipes annual fee \$1,000; Turf Image \$3,600
	z	Root foaming	Duke's Root Control: 40K feet @ \$1.32/ft = \$52,800
	aa	Pump station monitoring	Mission Alarm SCADA system; new Smart Alarm lids
	bb	Collection system capacity monitoring	5 flow meters - cell service and batteries for these meters
	cc	Alarm systems	First Alarm service
	dd	Other Special Studies	Pump Station pump efficiency testing \$3,500
	ee	Easements	Clear easements for access and tree clearing & repair of Hatton Canyon roadway
	ff	Pump station equipment	Includes transducer and level floats
	gg	Sewer lines	Emergency repair of sewer lines; 2 yr average \$46K
	hh	Manholes	Replacement of 30 manhole frame & lids plus 20 frame & lids for road improvements throughout the city and county. \$10K for manhole work Smart manhole purchase for redundancy
	ii	Garbage	Special dumpster or hauling
	jj	Employee Certification	5 Collection certifications; 4 Maintenance certifications
	kk	Memberships - CWEA	5 CWEA memberships
	ll	Memberships - WEF	1 WEF membership \$270
	mm	First Aid Medical Service	Hearing tests, respirator tests, and misc visits for poison oak
	nn	Uniforms, boots & gear	5 boots @ \$200/ea; 5 raingear @ \$100/ea
	oo	Safety training	5 Hazwoper training \$2.5K; 5 Confined space training \$2.5K
	pp	Miscellaneous	Potential fine for Hatton Cyn sewer spill 2-23-17 145,000 gallons; est minimum \$1/gal
	qq	Contingency	4% O&M budget

Carmel Area Wastewater District
 Reclamation: Operations Budget 2018-19

Description	2016-17		Est. YTD 2017-18		Proposed 2017-18 Budget	% Chg. Prior Yr. Actual	Projected 2018-19 Budget	% Chg. Prior Yr Budget
	Actual	Budget	Actual	Budget				
Plant Salaries, Benefits & OH								
Plant Superintendent	15,776	21,750	20,013	22,360		2.98%	21,225	2.98%
Laboratory Supervisor	25,017	32,295	37,700	33,200		3.00%	39,995	3.00%
Laboratory Technician	42,441	73,310	55,972	75,365		3.00%	59,380	3.00%
Plant Operators	147,322	125,990	135,800	129,520		3.00%	144,060	3.00%
Maintenance Mechanics	22,509	41,945	2,784	43,120		2.89%	2,950	2.97%
Differential	12,147	15,480	11,397	15,915		2.97%	12,085	2.98%
Payroll Taxes, Benefits, & OH	132,606	155,385	131,833	159,740		2.99%	139,848	3.00%
<i>subtotal</i>	397,819	466,155	395,500	479,220		2.99%	419,543	3.00%
Administrative Salaries								
General Manager	2,897	2,700	1,245	2,775		2.83%	1,315	2.73%
Project Accountant	11,122	13,940	12,860	14,330		2.99%	13,640	2.98%
Engineering	2,198	340	3,029	350		2.99%	3,210	2.88%
Admin. Svcs/Scanner	4,963	1,650	6,164	1,695		3.02%	6,540	2.99%
Payroll Taxes, Benefits, & OH	10,590	9,315	11,649	9,575		2.99%	12,353	2.96%
<i>subtotal</i>	31,769	27,945	34,947	28,725		2.99%	37,058	2.96%
Directors Fees	1,100	1,000	1,000	1,000		0.00%	1,000	0.00%
Operating Supplies/Services	9,696	10,000	8,503	10,000		-0.04%	8,750	2.94%
Repairs & Maintenance	8,590	1,000	4,323	1,000		-0.53%	5,000	16.28%
Total Reimbursable Reclamation	448,974	506,100	444,274	519,945		2.89%	471,350	3.11%
<i>Project Expenditures</i>								

Capital Budget

Carmel Area Wastewater District

Capital Budget Summary 2018-19

ITEM	ALLOCATION						Totals
	Admin	Maintenance	Collection	Treatment	PBCSD	Reclamation	
1 CIP Projects for Administration	0						0
2 CIP Maintenance - Plant		0					0
3 CIP Projects for Collection System			2,060,000				2,060,000
4 CIP Projects for Treatment & Disposal				81,041	40,460	17,500	139,001
5 CIP Long Term Capital Plan for Treatment & Disposal				2,528,597	1,262,403	0	3,791,000
Total CIP	0	0	2,060,000	2,609,638	1,302,863	17,500	5,990,001
1 Capital Equipment - Administration	0						0
2 Capital Equipment - Maintenance		133,333			\$66,667		66,667
3 Capital Equipment - Collections			0				0
4 Capital Equipment - Treatment				12,119	6,051	14,830	33,000
Total Capital Outlay	0	133,333	0	12,119	72,718	14,830	99,667
Total CIP & Capital Outlay 18-19	0	133,333	2,060,000	2,621,757	1,375,581	32,330	6,089,668

Carmel Area Wastewater District

Capital Budget Summary 2018-19

ITEM	ALLOCATION						Totals
	Admin	Maintenance	Collection	Treatment	PBCSD	Recla- mation	
1 CIP Projects for Administration	0						0
2 CIP Maintenance - Plant		0					0
3 CIP Projects for Collection System			1,490,000				1,490,000
4 CIP Projects for Treatment & Disposal				0			0
5 CIP Long Term Capital Plan for Treatment & Disposal				1,143,905	571,095		1,715,000
Total CIP	0	0	1,490,000	1,143,905	571,095	0	3,205,000
1 Capital Equipment - Administration	12,000						12,000
2 Capital Equipment - Maintenance		0					0
3 Capital Equipment - Collections			400,000				400,000
4 Capital Equipment - Treatment				22,011	10,989		38,000
Total Capital Outlay	12,000	0	400,000	22,011	10,989	5,000	450,000
Total CIP & Capital Outlay 19-20	12,000	0	1,890,000	1,165,916	582,084	5,000	3,655,000

Administration

1 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Administration

Project Name: Interior Painting
Dept.: Admin
5 yr. Cap Projection: \$ 20,000
CY Budget -
GL Account:

Asset Type: N/A
Avg Useful Life: 20 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description

The District has not had the interior building walls painted since 1990. There has been some "touch up" work over the years, but we've reached the point where there are repairs that need to be done (i.e. cracks, separation at corners, chipping, etc.) and then the entire office repainted.

Year Built: 1990
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 5 Moderate Deterioration

Justification

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely		
Safety COF	3	Minor Inconvenience		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	1	No change in Process Functionality		
Cost COF	3	In-house Repair Work less than \$1,000		
Total COF:	10		Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other	-	-	-	20,000	-	-	-	\$20,000
Total		-	-	\$20,000	-	-	-	\$ 20,000

2 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Administration

Project Name: Replace Administrative Office Carpeting
Dept.: Admin
5 yr. Cap Projection: \$ 20,000
CY Budget \$ -
GL Account:

Asset Type: Administration
Avg Useful Life: 20 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 5 = Future
Carry Forward: No

Asset Description

It is anticipated that the Administration office building carpeting, which has never been replaced, will need to be replaced within the next 5 years. 400 square yards at \$45/yd. To prolong the carpet life, staff proposes to include a maintenance item to professionally clean the carpets every six months. The proposed carpet replacement will remain an unscheduled expense and be re-evaluated each year.

Year Built: 1990
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 5 Moderate Deterioration

Justification

Original carpet from 1990 when the building was constructed and is showing obvious signs of wear. We currently have carpets cleaned every six months and are hoping to stretch out wear as long as possible

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely	
Safety COF	1	No impact to Safety	
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise	
Permit/Environmental COF	1	No Impact to Environment	
Process Functionality COF	3	Routine Operations to maintain process functionality	
Cost COF	5	Major In-House Repair Work less than \$25,000	
Total COF:	13		Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary					Unscheduled	Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23			
Budget Impact/Other									
Labor							\$	-	
Engineering							\$	-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	20,000	\$ 20,000
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 20,000

3 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Administration

Project Name: Replace Administrative Office Furnaces
Dept.: Treatment
5 yr. Cap Projection: \$ 6,500
CY Budget \$ -
GL Account:

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description

It is anticipated that the Administrative Office building furnaces will need to be replaced at some future date. There are a total of three furnaces in the building. We have had intermittent repairs to the system and replaced on unit in Jan 2009.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): 2009
Rehab Life Extension: N/A
Asset Condition Rating: 4

Justification

The furnaces are being allowed to "run to fail". We have the ability to replace the furnaces on relatively short notice and would make an effort to repair first and then replace as required.

Current minimum efficiency rating requirement is 96%. Furnace #1 is at 80% and #2 is less than 80% as it is older than rating system. Taking the 2016 gas usage numbers *utilizing 80% and 96% the potential yearly savings in natural gas from a furnace gas upgrade now would be approximately \$170.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month		
Safety COF	3	Minor Inconvenience		
Spill/Odor/Noise COF				
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	1	No change in Process Functionality		
Cost COF	3	In-house Repair Work less than \$1,000		
Total COF:	12		Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary
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Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	Unscheduled	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other						\$	6,500	\$ 6,500
Total	\$	- \$	- \$	- \$	- \$	- \$	6,500 \$	6,500

a **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Buikema
Area Administration

Project Name: Admin Copy Machine
Dept.: Admin
5 yr. Cap Projection: \$ 12,000
CY Budget \$ -
GL Account:

Asset Type: Office Equip
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description
The current machine was purchased in July 2013 for \$10,732. The technician advises that the typical lifespan is 5-7 years. We have budgeted for year 6 - but will stretch out replacement purchase depending on the condition of the machine and parts availability.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 3 Minor Defects Only

Justification
The Admin copy machine receives considerable use every working day and is a critical piece of office equipment. While technology will certainly continue to change, based on current average usage we are planning for its replacement with an upgraded machine. The usage on this machine is heavy due to printing of board packets and other admin material.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month		
Safety COF	1	No impact to Safety		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	3	Routine Operations to maintain process functionality		
Cost COF	1	No Cost		
Total COF:	10		Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Budget Impact/Other									
Labor							\$	-	
Engineering			\$12,000					\$12,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	-	\$12,000	\$	-	\$	-	\$	12,000

b **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Administration

Project Name: General Manager's Sedan
Dept.: Admin
5 yr. Cap Projection: \$ 30,000
CY Budget \$ -
GL Account:

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description
The current vehicle (Hyundai Santa Fe) was purchased in 2016 and has less than 10,000 miles on the odometer. We estimate this car will last over 100,000 miles. Replacement is estimated, at minimum, after 10 years.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 4

Justification
This vehicle is used by all staff for daily business meetings, conferences, and training. While it is predominately used by Administration staff, it is available to plant staff for travel to conferences/training. The ability to handle up to four large adults comfortably makes this vehicle quite useful.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact
Safety COF 7 Moderate Injury/Health Risk (Short Recovery)
Spill/Odor/Noise COF
Permit/Environmental COF 1 No Impact to Environment
Process Functionality COF 3 Routine Operations to maintain process functionality
Cost COF 1 No Cost
Total COF: 12 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	Unscheduled	Total
Labor								\$ -	-
Engineering								\$30,000	\$30,000
Parts & Supplies								\$ -	-
Chemicals								\$ -	-
Utility								\$ -	-
Other								\$ -	-
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	30,000	\$ 30,000

Maintenance Capital Equipment

1 FY 2018-19 Budget
Carmel Area Wastewater District

Project Name: Relocate Eaton Switchgear breaker controls to safe location
 Dept: Maintenance
 Total Cost: \$ 60,000
 CY Budget \$ 60,000
 GL Account:

Contact: Foley
 Area: Headworks
 Asset Type: Support Equipment
 Avg Useful Life: 20 years
 Est Residual Life: 15 years
 % Consumed Life: 25
 Category: Capital Equipment
 Urgency: 2 = Very Important
 Carry Forward: No

Asset Description

The Headworks Grit Pump removes the first settled solids from the plant inflow. This pump is critical to ensuring the removal of solids to prevent non organic material from building up in the Digester. Proper operation of this pump extends the life of cleaning cycles of the Digester tanks.

Year Built: 2013
 Rehabilitation Date (Extending life of Asset):
 Rehab Life Extension:
 Asset Condition Rating:

Justification

The Headworks currently has one Grit Pump with no redundancy. This pump can be taken out of service for short periods of time it is critical in the headworks process of removing sand, grit, rocks and other inorganic materials prior to active treatment of the wastewater stream. Purchase of a spare pump is proposed as a less expensive alternative to installation of redundant pumps. This pump can be taken out of service for repair but not for extended periods of time. The lead time of a replacement pump is several weeks so maintaining a pump on plant grounds provides staff the ability to replace a damaged pump immediately if needed.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	7	Cannot be down 1 day	
Safety COF	3	Minor Inconvenience	
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints	
Permit/Environmental COF	1	No Impact to Environment	
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work	
Cost COF	5	Major In-House Repair Work less than \$25,000	
Total COF	26		Probability of Failure N/A

Asset Risk Management Strategy

Capital Improvement Risk Add Backup/Redundancy
 Maintenance Risk Management
 Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies	\$	60,000	\$ -	\$ -	\$ -	\$ -	\$ -	60,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	60,000	\$ -	\$ -	\$ -	\$ -	\$ -	60,000

2

FY 2018-19 Budget

Carmel Area Wastewater District

Project Name: Headworks Grit Pump Redundancy
 Dept: Maintenance
 Total Cost: \$ 30,000
 CY Budget \$ 30,000
 GL Account:

Contact: Foley
 Area: Secondary Clarifiers
 Asset Type: Process Equip (Liquid)
 Avg Useful Life: 20 years
 Est Residual Life:
 % Consumed Life: 100
 Category: Capital Equipment
 Urgency: 2 = Very Important
 Carry Forward: No

Asset Description

Scum pump at secondary clarifiers is used to remove skimmed solids from the secondary clarifier tanks. These solids are removed to be ultimately processed in the Digester.

Year Built: 1978
 Rehabilitation Date (Extending life of Asset):
 Rehab Life Extension:
 Asset Condition Rating:

Justification

The Secondary Scum pump was the original pump style from the 1978 plant expansion. This pump did not have thermal protection which would shut off the pump if it gets to warm or if the pump runs dry. This pump has been damaged in the past due to these scenarios. The proposed replacement pump will include thermal protection to prevent future failures of this equipment. This will also extend the life of this asset as heat damage has occurred several times in the past.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
 Safety COF 3 Minor Inconvenience
 Spill/Odor/Noise COF 5 Short Duration; Small qty Event Offsite; Small no. of Complaints
 Permit/Environmental COF 1 No Impact to Environment
 Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
 Cost COF 5 Major In-House Repair Work less than \$25,000
 Total COF 26 Probability of Failure N/A

Asset Risk Management Strategy

Capital Improvement Risk Add Backup/Redundancy
 Maintenance Risk Management
 Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies	\$	30,000	\$ -	\$ -	\$ -	\$ -	\$ -	30,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	30,000

3 FY 2018-19 Budget
Carmel Area Wastewater District

Project Name: Secondary Scum Sump Pump
 Dept: Maintenance
 Total Cost: \$ 30,000
 CY Budget \$ 30,000
 GL Account:

Contact: Foley
 Area: Secondary Clarifiers
 Asset Type: Process Equip (Liquid)
 Avg Useful Life: 30 years
 Est Residual Life:
 % Consumed Life:
 Category: Capital Improvement
 Urgency: 3 = Important
 Carry Forward: No

Asset Description

Switchgear breaker and generator transfer controls for treatment plant main electrical gear. Currently cabinet must be open and staff has to be adjacent to the 480volt circuit breakers to open, close or reset them during testing or to reset after failure.

Year Built: 2017
 Rehabilitation Date (Extending life of Asset):
 Rehab Life Extension:
 Asset Condition Rating:

Justification

This solution is an engineered fix to remove the need for staff to be exposed to a potential arc flash hazard. This modification to the switch gear will allow a greater number of operational staff to be able to test and reset the switchgear.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact
 Safety COF 9 Major Health Risk (Chronic/Long Recovery) or Death
 Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
 Permit/Environmental COF
 Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
 Cost COF 9 Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
 Total COF 24 Probability of Failure N/A

Asset Risk Management Strategy

Capital Improvement Risk
 Maintenance Risk Management Predictive & Preventative Maintenance
 Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies	\$	30,000	\$ -	\$ -	\$ -	\$ -	\$ -	30,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	30,000	\$ -	\$ -	\$ -	\$ -	\$ -	30,000

4 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Replace SCADA Historian
Dept: Maintenance
Total Cost: \$ 20,000
CY Budget \$ 20,000
GL Account:

Contact: Foley
Area: Ops Bldg
Asset Type: SCADA
Avg Useful Life: 15 years
Est Residual Life: 1 year
% Consumed Life: 90
Category: Capital Equipment
Urgency: 3 = Important
Carry Forward: No

Asset Description

SCADA Historian records all regulatory and process data for the Treatment plant. This system is required for regulatory compliance.

Year Built: 1986
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating:

Justification

The current historian is a part of the RSVIEW software which is being phased out as part of the software upgrade to Ignition®. The new historian software will provide better functionality and reporting. The RSVIEW software is no longer supported and is obsolete.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF 3 Minor Inconvenience
Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
Permit/Environmental COF 10 Permit Jeopardized Environmental Damage Requires Remediation
Process Functionality COF 7 Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF 9 Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF 37 Probability of Failure N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	20,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	20,000

5 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Foley
Area: Ops Bldg
Asset Type: SCADA
Avg Useful Life: 15 years
Est Residual Life:
% Consumed Life:
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Install Domain controller for SCADA
Dept: Maintenance
Total Cost: \$ 20,000
CY Budget \$ 20,000
GL Account:

Asset Description

The Domain Controller for SCADA will provide login security to the SCADA system and prevent unauthorized access or tampering.

Year Built:
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating:

Justification

This control system provides an important function to ensuring cyber security best practices for water/wastewater critical infrastructure. This will integrate with the Ignition software and prevent external unauthorized access. The treatment plant system does require external remote monitoring of some equipment and processes by vendors and on call staff. This system will provide the security needed to allow this gateway.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 5 Cannot be down a week
Safety COF 5 Minor Injury/Health Risk (Readily Treatable)
Spill/Odor/Noise COF
Permit/Environmental COF 10 Permit Jeopardized Environmental Damage Requires Remediation
Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF 30 Probability of Failure N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	20,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	20,000

6 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Mainsaver Purchasing Module
 Dept: Maintenance
 Total Cost: \$ 20,000
 CY Budget \$ 20,000
 GL Account:

Contact: Foley
 Area: Ops Bldg.
 Asset Type: Computer/Network
 Avg Useful Life: 15 years
 Est Residual Life:
 % Consumed Life:
 Category: Capital Equipment
 Urgency: 2 = Very Important
 Carry Forward: No

Asset Description

The Purchasing Module is the tracking software system used by staff to prepare and submit purchase orders for approval. The purchase order process is used to track all purchases and allocate costs to processes and equipment. This system will replace the existing Share Point program.

Year Built:
 Rehabilitation Date (Extending life of Asset):
 Rehab Life Extension:
 Asset Condition Rating:

Justification

The Existing purchase order program will no longer be supported by Microsoft® and was custom built for CAWD. The proposed Mainsaver Module will integrate into the current CMMS work order system and inventory control. This will reduced staff time needed for manual data entry and scanning under the current system. It is anticipated that this program will reduce approximately 10 hrs. of staff time each week from manual paperwork tasks and allow for better tracking of material and create better access to historic documents. This system is required for district public transparency and accounting.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 9	Cannot be down 8 hours		
Safety COF			
Spill/Odor/Noise COF			
Permit/Environmental COF			
Process Functionality COF			
Cost COF			
Total COF 9		Probability of Failure	N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
 Maintenance Risk Management
 Non Asset Risk Management

Funding Source

Primary	Capital Budget		Secondary							Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24			
Budget Impact/Other										
Labor								\$	-	
Engineering								\$	-	
Parts & Supplies	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	20,000	
Chemicals								\$	-	
Utility								\$	-	
Other								\$	-	
Total	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	20,000	

7 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Mainsaver Connect Mobile Module
 Dept: Maintenance
 Total Cost: \$ 20,000
 CY Budget \$ 20,000
 GL Account:

Contact: Foley
 Area: Ops Bldg.
 Asset Type: Computer/Network
 Avg Useful Life: 15 years
 Est Residual Life:
 % Consumed Life:
 Category: Capital Equipment
 Urgency: 2 = Very Important
 Carry Forward: No

Asset Description

The Mainsaver Connect Mobile Module allows operations and maintenance staff to access work orders, O&M manuals, and equipment maintenance history in the field while they are working on equipment. This will give staff access to the Mainsaver CMMS system from field tablets. Staff will also be able to use scanning equipment to check out tools, equipment and inventory and apply to work orders.

Year Built:
 Rehabilitation Date (Extending life of Asset):
 Rehab Life Extension:
 Asset Condition Rating:

Justification

This tool will increase staff productivity and improve maintenance records, provide timely information about equipment and will improve safety by providing field access to lockout tag out, fall protection data, and other maintenance standard operating procedures. Staff will be able to check out inventory and provide real-time asset control and inventory tracking. This system is the first step in "just-in-time" inventory management and ordering.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 9	Cannot be down 8 hours		
Safety COF			
Spill/Odor/Noise COF			
Permit/Environmental COF			
Process Functionality COF			
Cost COF			
Total COF 9		Probability of Failure	N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
 Maintenance Risk Management
 Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	20,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	20,000	\$ -	\$ -	\$ -	\$ -	\$ -	20,000

Collections

Capital Projects

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses, income, and any other financial activity.

The second part of the document provides a detailed explanation of the accounting cycle. It outlines the ten steps involved in the process, from identifying the accounting entity to preparing financial statements. Each step is described in detail, with examples provided to illustrate the concepts.

The third part of the document discusses the various types of accounts used in accounting. It explains the difference between assets, liabilities, and equity accounts, and how they are classified. It also discusses the importance of understanding the normal balances for each type of account.

The fourth part of the document discusses the process of adjusting entries. It explains why adjustments are necessary and provides examples of common adjusting entries, such as depreciation, amortization, and accruals.

The fifth part of the document discusses the preparation of financial statements. It explains how the adjusted trial balance is used to prepare the income statement, balance sheet, and statement of owner's equity. It also discusses the importance of comparing the financial statements to the company's performance.

The sixth part of the document discusses the process of closing the books. It explains how the temporary accounts (revenues, expenses, and dividends) are closed to the permanent accounts (retained earnings and equity). It also discusses the importance of closing the books at the end of each accounting period.

The seventh part of the document discusses the process of reversing entries. It explains why reversing entries are necessary and provides examples of common reversing entries, such as accruals and deferrals.

The eighth part of the document discusses the process of preparing a post-closing trial balance. It explains how the permanent accounts are used to prepare the trial balance and how it is used to verify the accuracy of the accounting records.

The ninth part of the document discusses the process of preparing a financial statement. It explains how the financial statements are prepared and how they are used to provide information to management and other stakeholders.

The tenth part of the document discusses the process of preparing a budget. It explains how a budget is prepared and how it is used to plan and control the company's operations.

In conclusion, this document provides a comprehensive overview of the accounting process. It covers the basic principles of accounting, the accounting cycle, the types of accounts, adjusting entries, the preparation of financial statements, closing the books, reversing entries, and the preparation of a post-closing trial balance. It also discusses the process of preparing a financial statement and a budget.

1 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer

Area Sewer Lines

Asset Type: Collections Gravity

Avg Useful Life: 50 years

Est Residual Life:

% Consumed Life: 100%

Category: Capital Improvement

Urgency: 2 = Very Important

Carry Forward: Yes

Project Name: Hatton Canyon Access Sewer Line Rehabilitation (Carry Over)

Dept.: Collections

5 yr. Cap Projection: \$ 1,300,000

CY Budget \$ 1,300,000

GL Account:

Asset Description

State Parks owns the land in Hatton Canyon and the District holds an easement for sewer. The District's infrastructure is underwater during winter storms and our risk of a sanitary sewer spill has greatly increased because of the road way failure. The sewer line that flow through Hatton canyon are approximately 60 years old and are made of Vitrified Clay Pipe (VCP). The pipe size is 8 inch and is almost a mile in length that starts north of the Carmel High in the canyon and flows to Carmel Valley Road.

Year Built: 1950s

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 8

Justification

The District has had three major overflows over the past 20 years. The District experienced a large SSO resulting in 145,000 gallons of sewage flowing directly into the Hatton creek and then into the Carmel river ultimately ending up in the Ocean. Staff is currently working with MNS Engineering for designs for the replacement of this sewer line. This project and the Hatton road project will be both completed at the same time. Staff is in the review process with FEMA & CalOES grant funding which will take a few months.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	10	Cannot be down 1 hour	
Safety COF			
Spill/Odor/Noise COF	10	Sustained Event impacting offsite, Media Attention, Minor Property Damage	
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover	
Process Functionality COF			
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)	
Total COF:	38		Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Plan Rehabilitation/Replacement

Maintenance Risk Management: Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary		Grant Funding				Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
Labor	\$2,500,000	\$ 1,300,000						\$ 1,300,000
Engineering								\$ -
Parts & Supplies								\$ -
Chemicals								\$ -
Utility								\$ -
Other								\$ -
Total	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,300,000

2 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area Pump Station
Asset Type: SCADA
Avg Useful Life: 20 years
Est Residual Life: 1 year
% Consumed Life: 98%
Category: Capital Improvement
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Replacement of SCADA at all Pump Stations
Dept.: Collections
5 yr. Cap Projection: \$ 300,000
CY Budget \$ 300,000
GL Account:

Asset Description

SCADA (Supervisory Control & Data Acquisition) units are located at all District Pump Stations. The SCADA systems used at the pump stations are programmable logic control interfaces. Once set up, they automate the pump station. Examples of controlled systems include the pumping process, wet well conditions, alarm notifications, reporting current state conditions.

Year Built: 1998
Rehabilitation Date (Extending life of Asset): 2018-19
Rehab Life Extension: 20
Asset Condition Rating: 8

Justification

These SCADA PLC-5 controls are outdated and many of the components are hard to find. The PLC-5 (Programmable Logic Controller) component is no longer made. Newer PLC models offer an easier user interface, smaller footprint and more options. The Treatment plant has upgrading a portion of the PLC/SCADA under phase 1, staff has been saving and using old components to provide Collections SCADA with a bridge until the replacement. The reliability of the PLC and other components are a few of the reason the Treatment plant is upgrading their SCADA as well. Staff plans to integrate the collection SCADA into the Ignition software. Staff will perform a radio band feasibility to possibly eliminate old copper land lines.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF
Spill/Odor/Noise COF 7 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF
Process Functionality COF
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 19 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Moderate Repair
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total	
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24			
Labor							\$	-		
Engineering							\$	-		
Parts & Supplies	\$	300,000					\$	300,000		
Chemicals							\$	-		
Utility							\$	-		
Other							\$	-		
Total	\$	300,000	\$	-	\$	-	\$	-	\$	300,000

3 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area Outfall
Asset Type: Collections Force
Avg Useful Life: 50 years
Est Residual Life: 5 years
% Consumed Life: 98%
Category: Capital Improvement
Urgency: 1 = Critical
Carry Forward: Yes

Project Name: Calle La Cruz force main & Outfall replacement
Dept.: Collections
5 yr. Cap Projection: \$ 250,000
CY Budget \$ 250,000
GL Account:

Asset Description

Aerial portion (200 feet) of the Calle La Cruz force main 2685 feet in total length 6 inch size and Ductile Iron Pipe (DIP) in Material. The section that will be replaced is a temporary piece of HDPE installed in 2013.

Year Built: 1960s
Rehabilitation Date (Extending life of Asset): 2018-19
Rehab Life Extension: 70
Asset Condition Rating: 8

Justification

In August of 2013 staff discovered an emergency condition of imminent failure of the Calle la Cruz force main over the Carmel Lagoon. This prompted immediate action to replace 400 ft. of the existing line with a durable HDPE pipe laid above grade. The emergency repair was an unbudgeted expense for 2013. Staff has worked with Kennedy/Jenks this year to design and develop construction plans for the permanent replacement of the outfall and force main crossing of the Carmel Lagoon. Approximately 440 feet of force main piping will be installed in a joint trench with the 24' HDPE outfall line under the Carmel Lagoon then encased in concrete. Due to the complexity of the environmental review required for the work in the Lagoon it is not anticipated that construction will begin until the summer of budget year 18-19. Staff has submitted a grant application with FEMA & CalOES grant funding is expected to take a few months. This project is combined with the replacement of the outfall line and for budgeting Collections will pay 1/4 of the total cost.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 9 Cannot be down 8 hours
Safety COF 1 No impact to Safety
Spill/Odor/Noise COF 10 Sustained Event impacting offsite, Media Attention, Minor Property Damage
Permit/Environmental COF 10 Permit Jeopardized Environmental Damage Requires Remediation
Process Functionality COF
Cost COF 10 Regulatory Fines and Lawsuits + Emergency Contractor Needed (greater than \$1 Million)
Total COF: 40 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Plan Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary		Grant Funding				Total
Budget Impact/Other								
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	250,000						\$ 250,000
Engineering	\$	300,000						\$ -
Parts & Supplies								\$ -
Chemicals								\$ -
Utility								\$ -
Other								\$ -
Total	\$	250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000

4 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Sewer Lines

Asset Type: Collections Gravity

Avg Useful Life:

Est Residual Life:

% Consumed Life: N/A

Category: Capital Improvement

Urgency: 3 = Important

Carry Forward: No

Project Name: Engineering , Planning and Environmental

Dept.: Collections

5 yr. Cap Projection: \$ 720,000

CY Budget \$ 120,000

GL Account:

Asset Description

List of Projects that will require additional engineering, planning and environmental consultants :

Annual Long Term CIP Project

Rancho Canada Project

Relocation of Calle La Cruz Pump Station

Sea Wall and Pump Station Rehabilitation at Bay & Scenic Pump Station

Monastery Beach Pump Station

Year Built: N/A

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: N/A

Justification

Many of the sewer line replacement projects contemplated by the Collections Department are located in easement areas where environmental or physical constraints make direct line replacement difficult. These funds will be used as needed to acquire engineering, planning or environmental services to prepare bid documents or document as built construction as needed. This type of analysis prior to construction will also allow staff to estimate budgets much more accurately.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact

Safety COF

Spill/Odor/Noise COF

Permit/Environmental COF

Process Functionality COF

Cost COF

Total COF: N/A

Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Plan Rehabilitation/Replacement

Maintenance Risk Management:

Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary							Total	
	Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24			
	Labor								\$	-	
	Engineering	\$	120,000	\$	120,000	\$	120,000	\$	120,000	\$	720,000
	Parts & Supplies								\$	-	
	Chemicals								\$	-	
	Utility								\$	-	
	Other								\$	-	
	Total	\$	120,000	\$	120,000	\$	120,000	\$	120,000	\$	720,000

5 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Administration
Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Project Name: High Meadows Canyon Sewer Line Replacement
Dept.: Collections
5 yr. Cap Projection: \$ 90,000
CY Budget \$ 90,000
GL Account:

Asset Description

This sewer line segment N791 to N797 is 237 feet long and is 8 inches in size made of cast iron pipe (CIP). This trunk line services the High Meadow's Terrace, High Meadows Lane and the Ridge condos area and is located in a canyon easement off of High Meadows Drive.

Year Built: 1966
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 8

Justification

During a manhole evaluation that was conducted during the summer of 2017 staff notice a crack developing at one of the CIP bell and spigots. Staff attempted a CCTV inspection of the sewer line and found that the line back graded towards the bell and spigot and staff could not properly view the crack from inside. Staff performed a temporary repair both internal and external at the crack on the bell. Staff informed the District Engineer of the problem and a field visit was performed. During the visit a complete inspection of the segment was done. Staff noted that the CIP line was in low spot of the canyon and a drainage channel was now formed over the sewer line putting the sewer pipe in the water most of the year. Staff would like to relocate the sewer line on the hillside out of the water channel and reinforce the crossing of the sewer line where it crosses the creek.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month		
Safety COF	3	Minor Inconvenience		
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints		
Permit/Environmental COF				
Process Functionality COF	1	No change in Process Functionality		
Cost COF				
Total COF:	12		Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk: Plan Rehabilitation/Replacement
Maintenance Risk Management: Corrective Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary
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Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	90,000					\$	90,000
Engineering							\$	-
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	90,000	\$	-	\$	-	\$	-
								90,000

6 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Annual CIP sewer line replacement projects
Dept.: Collections
5 yr. Cap Projection: \$ 4,350,000
CY Budget \$ -
GL Account:

Contact: Lauer
Area Sewer Lines
Asset Type: Collections Gravity
Avg Useful Life: 50 years
Est Residual Life: 5 years
% Consumed Life: 95%
Category: Capital Improvement
Urgency: 1 = Critical
Carry Forward: Yes

Asset Description

The District's Long Term CIP has prioritized these five projects as critical : **Carmel**
Meadows Gravity Sewer Replacement Project : Line segments S615 to T603, 1300 feet of Ductile Iron Pipe (DIP) on a aerial span and eight manholes. This project is located on a easement next to Ribera Rd. and was originally installed in the early 1960's.

Pescadero Canyon Gravity Sewer Replacement Project : Line segments N601 to N10, 2200 feet of Vitrified Clay Pipe (VCP) and 7 manholes. This project is located in a easement next to Pescadero Rd. and was original installed in the Early 1920's.

Pine Hills Gravity Sewer Replacement Project : Line segments O947 to P915, 2600 feet of Vitrified Clay Pipe (VCP) and four manholes. This project is located in a easement next to Pine Hills Dr. and was originally installed in the mid 1960's.

High Meadows & Morse Dr. Gravity Sewer Replacement Project : The High meadows portion of this combined project is line segment N797 to N826, 1650 feet of Vitrified Clay Pipe (VCP) and 1 manhole in a easement originally installed in mid 1950's. The Morse Dr. part is Q763 to Q803, 340 feet of Ductile Iron Pipe (DIP) in a easement originally installed in the early 1960's.

Sags & Grading Repairs and Replacement Project : This project has 3,961 ft. of Vitrified Clay Pipe (VCP) located through out the District in the right of way. Staff broke this year into two phase with Phase One being the replacement of line segments R738 to R707 on Rio Rd. and Oliver Dr originally installed in the 1950's. Phase Two will replace line segments O733 to O734 on Allen Place, Q718 to Q721 on Martin Road, Q716 to Q715 on Hatton Road, P779 to P781 on Morse Drive, P775 to P776 on Flanders and N634 to N626 on San Carlos & Second.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 Significant Deterioration

Justification

The condition assessment has been completed and the data is available for review. What was done is the complete assessment of all of CAWD's sewer lines using CCTV. This assessment was performed using the ICOM computer based management program. The first step was to perform a complete assessment using CCTV, this part is now complete. Now that we have the data the ICOM program rates all the sewer pipes using a severity index rating system of 1 - 5 with 1 being a pipe that has no defects and is in good shape and 5 being a line segment with one or more structural defects. Using ICOM we can address the worst pipes in the District and maintain the lines with a rating of 3-4 using more frequent cleaning or root foaming to prolong their lifespan until lines that are in the worst shape are repaired. SSO history and the consequence of failure along with the defect rating from CCTV data combined have identified these five projects for repair. **Please see attached map.**

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	10	Cannot be down 1 hour
Safety COF		
Spill/Odor/Noise COF	10	Sustained Event impacting offsite, Media Attention, Minor Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	10	Loss of Process Functionality Indefinitely
Cost COF	10	Regulatory Fines and Lawsuits + Emergency Contractor Needed (greater than \$1 Million)
Total COF:	49	Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Plan Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Labor		\$ 850,000	\$ 850,000	\$ 850,000	\$ 900,000	\$ 900,000	\$ 4,350,000		
Engineering							\$ -		
Parts & Supplies							\$ -		
Chemicals							\$ -		
Utility							\$ -		
Other							\$ -		
Total		\$ -	\$ 850,000	\$ 850,000	\$ 850,000	\$ 900,000	\$ 900,000	\$ 4,350,000	

7 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Rancho Canada Sewer Line Relocation Project
Dept.: Collections
5 yr. Cap Projection: \$ 450,000.00
CY Budget \$ -
GL Account:

Contact: Lauer
Area Sewer Lines
Asset Type: Collections Gravity
Avg Useful Life: 50 years
Est Residual Life:
% Consumed Life: 90%
Category: Capital Improvement
Urgency: 5 = Future
Carry Forward: No

Asset Description

Rancho Canada Subdivision Sewer Line Capacity increase and Relocation Project : This project is for the relocation of current sewer trunk lines that serves the eastern most assists of the District. Line segments starting at R1006 on Via Mallorca and ending at S807 on Rio Rd. varies in size from 12 inch to 8 inch and is Truss pipe in material that was installed in the early 1970's. Rancho Canada has proposed converting one of its golf courses to a subdivision of Single Family Dwellings (SFD's) and donated the other golf course land to Monterey Regional Park System.

Year Built: 1973
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating:

Justification

Rancho Canada subdivision is currently planning to install a new alignment of the 12 inch sewer trunk line that currently runs through the property. It would be in the District's best interest to take advantage of this opportunity on this project to upsize the pipeline with a pipe diameter of 24" (ID - Internal Dimensions) for future capacity demands. The developer is asking for the District to fund the difference in cost from 12 inch to 24 inch. Staff has approached the Regional Park District with plans to extend this pipeline at the end of the Rancho Canada subdivision all the way to Via Mallorca at the increased size of 24". If more of the Carmel Valley area is annexed into our system, we will benefit from this upgrade now by not incurring the future costs of needing to upgrade later when it is realized the initial pipe capacity was insufficient to convey the potential wastewater generated. The District's extension would include roughly 1,900 ft. of pipe replacement (1,900 x \$150) and 6 manholes (6 x \$10K). The developer may pay for part of this project depending on the extent of their project. Based on the current movement of the developer the time frame for this work has been moved to FY19/20. [See Map](#)

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact			
Safety COF			
Spill/Odor/Noise COF			
Permit/Environmental COF			
Process Functionality COF			
Cost COF			
Total COF:	N/A	Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other		\$	450,000				\$	450,000
Total	\$	-	\$ 450,000	\$	-	\$	-	\$ 450,000

8 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Administration

Project Name: Dump Pit for VacCon
Dept.: Collections
5 yr. Cap Projection: \$ 70,000.00
CY Budget \$ -
GL Account:

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description

Collection dump pit is a place for the dewatering of debris that has been collected in the Vacon vacuum truck. While Collections is the primary user of this, the Treatment plant has used this area in the past also. Once the debris has been dumped into the pit drains will carry the liquid to the headworks to be properly disposed of. Currently the District has a hole dug and dumps into the large hole and water is left to evaporate or be absorbed.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 4 New or Excellent Condition

Justification

The District needs a contained area to properly decant and dispose of debris collected in the vacuum truck. The construction of this disposal area will remove water and not allow it to be absorbed directly into the ground. This project is pending Costal Commission permitting.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	9	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	1	No change in Process Functionality
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF:	38	Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Budget Impact/Other									
Labor		\$	70,000					\$ 70,000	
Engineering								\$ -	
Parts & Supplies								\$ -	
Chemicals								\$ -	
Utility								\$ -	
Other								\$ -	
Total		\$ -	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ 70,000	

9 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area Pump Station
Asset Type: Pump Station
Avg Useful Life: 50 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Project Name: Monastery Beach Pump Station
Dept.: Collections
5 yr. Cap Projection: \$ 850,000.00
CY Budget \$ -
GL Account:

Asset Description

Construction of a pump station at Monastery Beach: The structure would be built so that there was a minimal footprint to keep any disturbance to the area to a minimum. It has not yet been designed, but staff believes it would likely be underground or similar to Ribera Station. State Parks has verbally indicated they would be in favor of a pump station at this location. They have asked us to write a letter requesting its inclusion in their General Plan.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 1

Justification

The Highlands Pump Station requires pumping for 3 miles to reach the Calle la Cruz station. Since it was constructed we have experienced multiple issues at Highlands PS, primarily with the pump seals and the pumps running off the pump curve. The long length of the force mains allows solids to turn septic and produces hydrogen sulfide at the downstream pump station. Engineering believes that a pump station between Highlands and the plant would reduce, if not eliminate the problems. Reducing the length of pipe between pump station would help to reduce pumping issues and more importantly perhaps, reduce hydrogen sulfide concentrations.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact
Safety COF
Spill/Odor/Noise COF
Permit/Environmental COF 9 Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF
Cost COF
Total COF: 9 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Add Backup/Redundancy
Maintenance Risk Management: Corrective Maintenance
Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	Unscheduled	Total
Labor							\$ -	-
Engineering							\$ -	-
Parts & Supplies						\$ 850,000	\$ 850,000	850,000
Chemicals							\$ -	-
Utility							\$ -	-
Other							\$ -	-
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 850,000	\$ 850,000

10 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer

Area Pump Station

Asset Type: Pump Station

Avg Useful Life: 50 years

Est Residual Life: 10 years

% Consumed Life:

Category: Capital Improvement

Urgency: 3 = Important

Carry Forward: No

Project Name: Bay & Scenic Pump Station Sea Wall & Rehabilitation

Dept.: Treatment

5 yr. Cap Projection: \$ 250,000.00

CY Budget \$ -

GL Account:

Asset Description

This project will consists of structural improvements to the current sea wall to extend the life of the Bay & Scenic pump station. The current sea wall has seen deterioration and erosion caused by large storm events and sea level rise. Bay & Scenic pump station is currently serving more than 200 properties in the Carmel Point area and has been in service since the 1950's.

Year Built: 1950's

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: 70

Asset Condition Rating: 8

Justification

The pump station is located immediately adjacent to the Pacific Ocean underneath the public roadway. Due to existing topography, this pump station cannot be relocated or otherwise decommissioned. For several years staff has observed erosion and deterioration of the decorative Carmel stone facade that protects the pump station from ocean forces during high tides and storm surges. In 2008 the County performed hardscaping (shotcrete) of some of the banks to help protect the slopes and extend the life of the roadway. Since that time erosion of the sandstone has continued and is becoming a concern to staff. Since the pump station is in relatively good condition and has provided more than 60 years of continuous service, staff recommends repairing the exterior wall and sandstone which is beginning to crack and fall off into the ocean. Due to the critical location of this pump station, all of the regulatory agencies with jurisdiction over the area (Coastal Commission, NMFS) and the anticipated expense to accomplish repairs, staff recommends the development of design plans to prolong the life of this asset and perform this maintenance within 4 years. Due to the proximity to the Pacific ocean this pump station has been included in the District wide sea level rise study.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 9 Cannot be down 8 hours

Safety COF

Spill/Odor/Noise COF 10 Sustained Event impacting offsite, Media Attention, Minor Property Damage

Permit/Environmental COF

Process Functionality COF

Cost COF 10 Regulatory Fines and Lawsuits + Emergency Contractor Needed (greater than \$1 Million)

Total COF: 29

Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk: Plan Rehabilitation/Replacement

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	Unscheduled	Total	
Labor							\$ -	\$ -	
Engineering						\$ 250,000	\$ 250,000	\$ 250,000	
Parts & Supplies							\$ -	\$ -	
Chemicals							\$ -	\$ -	
Utility							\$ -	\$ -	
Other							\$ -	\$ -	
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ 250,000	

11 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area Misc Structures

Project Name: Rio Park Bike Trail (Carry Over)
Dept.: Collections
5 yr. Cap Projection: \$ 25,000.00
CY Budget \$ -
GL Account:

Asset Type: Structure
Avg Useful Life: 30 years
Est Residual Life:
% Consumed Life:
Category: Capital Improvement
Urgency: 4 = Less Important
Carry Forward: Yes

Asset Description

Improvements to District parcel through Rio Park for District access. This project is designed to allow safe public pedestrian passage through the open space in the park that is adjacent to the neighboring school. Currently there is not a trail for public access. The proposed trail will cross over our infrastructure in several locations.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 4 New or Excellent Condition

Justification

The pedestrian recreation path construction is in the design phase and it has been determined that it will cross our infrastructure in two locations. Because the City of Carmel-by-the-Sea intends on building a bike path the District will need to clear and build a pathway for its own access. The District has already invested in the tree removal along the proposed pathway for access and potential tree root intrusion into the trunk mains that run through this site and upgraded to tamper resistant fiberglass reinforced polymer (FRP) manhole frame and lids

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact
Safety COF 1 No impact to Safety
Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
Permit/Environmental COF 1 No Impact to Environment
Process Functionality COF 1 No change in Process Functionality
Cost COF
Total COF: 4 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management:
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary								
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	Unscheduled	Total	
	Labor							\$ 25,000	\$ 25,000	
	Engineering							\$	-	
	Parts & Supplies							\$	-	
	Chemicals							\$	-	
	Utility							\$	-	
	Other							\$	-	
	Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000	\$ 25,000	

Collections

Capital Equipment

1 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Lauer
Area: Vehicle
Asset Type: Vehicle Fleet
Avg Useful Life: 10 years
Est Residual Life: 1 year
% Consumed Life 90
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Replace Hydro-Vacuum Truck (#4)
Dept: Collections
Total Cost: \$ 320,000
CY Budget \$ -
GL Account:

Asset Description

Replacement of Unit #4, 2008 Vaccon Combination Hydro Cleaning - Vacuum truck: Unit #4 currently serves as the District's primary hydro cleaning and SSO response vehicle. It's 3/4 inch hose has a smaller diameter allowing a longer hose section to be used (800 ft.), greatly increasing our reach into easements and is more agile than its 1 inch counterpart so it is ideal in most of our cleaning operations. The truck's ability to vacuum up areas affected by SSO's greatly increases our containment and mitigation efforts. The truck's vacuum and water pressure capabilities also allow us to use it as a hydro excavator. This process enables us to dig down to affected pipe lines to be repaired or for exploratory "potholes" to investigate the location of assets without damaging other known or unknown structures or utilities within the work zone. It has 800 gallons of usable water storage and 5 cubic yards of removed liquid and debris capacity with decanting capabilities.

Year Built: 2008
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 7 Significant Deterioration

Justification

At time of replacement, this vehicle will have over 10 years of service and approximately 10,000 hours of run time. This vehicle is a purpose built machine with lots of mechanical parts and computerized controls. With the frequent and heavy duty use it endures, it can be expected that the cost of servicing and repairing of this unit will continue to increase the older this unit gets. This unit had the top end of the engine rebuilt in January 2015, although that repair will keep it in service, major repairs like this are more likely. The auxiliary motor that supplies the water pressure for pipeline service has experienced many electrical issues over the last several years due to shorts in wiring and faulty computers. For the District to be able to continue its level of service and rapid response this vehicle need to be reliable and ready to use at anytime. This vehicle is also utilized for emergency spill clean up when called upon by the City of Carmel and other areas inside the District when called upon by the Fire Departments. While we may be able to be rebuild, this unit takes a considerable amount of abuse. Simply rebuilding the motor ignores the multiple systems/moving parts/electrical wiring required for optimal use on this vehicle. Staff has already spent a considerable amount of time on electrical issues. Additionally, the back end of the debris tank is starting to show evidence of rust. The vacuum side (3 blade fan system) pulls dirt/debris through it and takes considerable wear and would need to be addressed as well in a rebuild. The old unit vehicle could be sold to a disadvantage community that normally would not be able to afford to purchase a new Hydro-Vac truck.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 5 Cannot be down a week
Safety COF 3 Minor Inconvenience
Spill/Odor/Noise COF 7 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF
Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 25 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies		\$	320,000				\$	300,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000

2 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area: Pump Station
Asset Type: Vehicle Fleet
Avg Useful Life: 20 years
Est Residual Life: 5 years
% Consumed Life: 75
Category: Capital Equipment
Urgency: 3 = Important
Carry Forward: No

Project Name: Replace Generac Portable Generator
Dept: Collections
Total Cost: \$ 80,000
CY Budget \$ -
GL Account:

Asset Description

The 1999 Generac 44 kW 270/480 volt 61 amp 3 phase portable diesel generator. This generator is typically used at the Bay and Scenic pump station but is also capable of providing back up power for all pump stations. Currently, all the stations are undergoing compatibility upgrades so this Generator can be deployed and quickly connected at all stations. Additionally, this generator is set up to run a bypass pump in the event of an emergency or through routine maintenance. This generator may also be utilized at the plant on a nonemergency basis.

Year Built: 1999
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 7 Significant Deterioration

Justification

Recent maintenance and load testing look to increased the reliability this unit for few additional years. The two areas of: the major concerns, generators get deployed in residential areas noise is always a concern and the other is new emissions standards. Quieting technologies have improved over the last couple decades and emissions standards have become more stringent. This generator is used primarily at Bay & Scenic pump station and must be "ready to go" given the pivotal nature of this station. This generator will be load tested in the 17/18 budget year, along with maintenance the district looks to extend the life of this asset however new emissions requirements need to be addressed. This generator is a tier 0 motor in regards to emissions and the Air Board is requiring a tier 4 motor by 2020, the District needs to be prepared to meet these requirements by 2020.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF
Spill/Odor/Noise COF 3 Short Duration, Small qty. Event Onsite: No Complaints
Permit/Environmental COF 9 Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF 7 Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF 3 In-house Repair Work less than \$1,000
Total COF: 29 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Preventative Maintenance
Non Asset Risk Management

Funding Source

Budget Impact/Other	Primary		Secondary						Total
	Prior Yr	Capital Budget	18-19	19-20	20-21	21-22	22-23	23-24	
Labor									\$ -
Engineering									\$ -
Parts & Supplies			\$ 80,000						\$ 80,000
Chemicals									\$ -
Utility									\$ -
Other									\$ -
Total			\$ 80,000			\$ -	\$ -	\$ -	\$ 80,000

3 FY 2018-19 Budget
Carmel Area Wastewater District

Project Name: Replace Pump Round Truck (# 8)
Dept: Collections
Total Cost: \$ 45,000
CY Budget \$ -
GL Account:

Contact: Lauer
Area: Vehicle
Asset Type: Vehicle Fleet
Avg Useful Life: 10 years
Est Residual Life: 5 years
% Consumed Life:
Category: Capital Equipment
Urgency: 3 = Important
Carry Forward: No

Asset Description

The Ford F-250 is one of the District's first response vehicles for most emergencies, and second response vehicle in the event of an Sanitary Sewer Overflow (SSO). It is an integral part of the Collections System operations and maintenance. On board are tools used to mitigate SSO's, make repairs in the field, mark out sewer lines when USA tickets are requested and for other repairs as needed. This truck is also the most used for towing the standby generators to the needed locations. It has a utility bed that provides lots of storage for all the required tools for essential field functions and roof racks to transport lengths of pipe, ladders and other materials. Additionally, this truck the District has with a crane, which is used to hoist pumps into and out of wet wells for service and replacement.

Year Built: 2009
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 7 Significant Deterioration

Justification

This unit has a slight engine oil leak that has had it in the repair shop of the past few years. During the last inspection the dealership noted that the rear main oil seal was the cause of the oil leak and that the repair would be over \$5,000. Staff agreed that the district would monitor the leak and that it would be cost effective to replace the truck in 20/21 due to mileage, age and reliability. It is recommended that this vehicle be retired from the CAWD fleet and sold.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month
Safety COF 3 Minor Inconvenience
Spill/Odor/Noise COF
Permit/Environmental COF
Process Functionality COF 3 Routine Operations to maintain process functionality
Cost COF 3 In-house Repair Work less than \$1,000
Total COF: 12 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$ -	-
Engineering							\$ -	-
Parts & Supplies			\$	45,000			\$ 45,000	45,000
Chemicals							\$ -	-
Utility							\$ -	-
Other							\$ -	-
Total		\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 45,000

4 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area: Vehicle
Asset Type: Vehicle Fleet
Avg Useful Life: 15 years
Est Residual Life: 5 years
% Consumed Life 75
Category: Capital Equipment
Urgency: 4 = Less Important
Carry Forward: No

Project Name: Replace Collection Superintendent Truck (#17)
Dept: Collections
Total Cost: \$ 45,000
CY Budget \$ -
GL Account:

Asset Description

Chevy 4X4 truck (Unit #17) primary use as the Collection Superintendent's vehicle with a dual purpose of employee conference vehicle. This vehicle was purchased in 2009 and currently has 85,000 miles on it.

Year Built: 2009
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 5 Moderate Deterioration

Justification

Replacement of the 2009 Chevy 4x4 (Unit #17) which currently has 85,000miles on it. This truck is the Collections Superintendent truck as well as the main vehicle for transportation of the Collection staff to/from conferences and training. Staff is looking at a crew cab truck as the replacement of the current quad cab, this would fit the entire staff of (5) and give Collections the ability to use one vehicle to attend events that require all of the Staff. The District will look at condition and performance closely at that time and extend if possible. Staff will look at the possibility of repurposing this truck to either Maintenance or Operations.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month
Safety COF 3 Minor Inconvenience
Spill/Odor/Noise COF
Permit/Environmental COF
Process Functionality COF 3 Routine Operations to maintain process functionality
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 14 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering								
Parts & Supplies					\$ 45,000		\$	45,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ -		\$ 45,000	\$ -	\$ -	\$ 45,000

5 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area: Pump Station
Asset Type: Pump Station
Avg Useful Life: 20 years
Est Residual Life: 5 years
% Consumed Life: 75
Category: Capital Equipment
Urgency: 3 = Important
Carry Forward: No

Project Name: Replace Pumps at Monte Verde Pump Station
Dept: Collections
Total Cost: \$ 25,000
CY Budget \$ -
GL Account:

Asset Description

Flygt model 3127 pumps at Monte Verde and 16th. These pumps are installed in the wet well at Monte Verde during the station upgrade in 2003.

Year Built: 2003
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 5 Moderate Deterioration

Justification

Staff will complete a two year baseline of pump efficiency testing at all pump stations and will monitor these pump for a drop in efficiency and a rise in electrical usage. At the time of replacement the pumps will be almost 20 years old and will not be as efficient as new pumps leading to higher costs of operation. Over time, cavitation can cause pitting on the impellers that lead to vibration wear from no longer being balanced. Rocks and metals can find their way into the sewer causing these same effects as they crack, pit, and break the impellers and volutes. Currently the pumps are in satisfactory condition; however, we are taking a proactive planning stance and will adjust its position in the budget if required as we get closer to 2022/23.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF
Spill/Odor/Noise COF 5 Short Duration; Small qty Event Offsite; Small no. of Complaints
Permit/Environmental COF 3 Violate Daily Max Effluent
Process Functionality COF
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 20 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies				\$	25,000		\$	25,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ -	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000

6 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Replace Pumps at Bay & Scenic Pump Station
Dept: Collections
Total Cost: \$ 25,000
CY Budget \$ -
GL Account:

Contact: Lauer
Area: Pump Station
Asset Type: Pump Station
Avg Useful Life: 20 years
Est Residual Life: 5 years
% Consumed Life 75
Category: Capital Equipment
Urgency: 3 = Important
Carry Forward: No

Asset Description

Flygt model 3127 pumps at Bay & Scenic pump station.. These pumps are a dry pit installation that took place during the station upgrade in 2004.

Year Built: 2004
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 3 Minor Defects Only

Justification

Staff will complete a two year baseline of pump efficiency testing at all pumps stations and will monitor these pumps for a drop in efficiency and a rise in electrical usage. At the time of replacement the pumps will be almost 20 years old and might not be as efficient as new pumps leading to higher costs of operation. Over time, cavitation can cause pitting on the impellers that lead to vibration wear from no longer being balanced. Rocks and metals can find their way into the sewer causing these same effects as they crack, pit, and break the impellers and volutes. Currently the pumps are in satisfactory condition; however, we are taking a proactive planning stance and will adjust its position in the budget if required as we get closer to 2022/23.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF
Spill/Odor/Noise COF 9 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF 9 Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 35 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary	Capital Budget		Secondary					Total
	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	
Budget Impact/Other								
Labor							\$	-
Engineering							\$	-
Parts & Supplies					\$	25,000	\$	25,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	-	\$	-	\$	-	\$	25,000

7 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Lauer
Area: Pump Station
Asset Type: Pump Station
Avg Useful Life: 20 years
Est Residual Life: 5 years
% Consumed Life: 75
Category: Capital Equipment
Urgency: 3 = Important
Carry Forward: No

Project Name: Replace Pumps at Hacienda Pump Station
Dept: Collections
Total Cost: \$ 20,000
CY Budget \$ -
GL Account:

Asset Description

Direct replacement of existing 3102 Flygt pumps at Hacienda pump station: These pumps are installed in the wet well at Hacienda and lift the wastewater from the lower elevation to a higher elevation at which point the wastewater can then gravity flow its way to the plant.

Year Built: 1999
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 3 Minor Defects Only

Justification

Staff will complete a two year baseline of pump efficiency testing at all pump stations and will monitor these pump for a drop in efficiency and a rise in electrical usage. At the time of replacement the pumps will be almost 20 years old and will not be as efficient as new pumps leading to higher costs of operation. Over time, cavitation can cause pitting on the impellers that lead to vibration wear from no longer being balanced. Rocks and metals can find their way into the sewer causing these same effects as they crack, pit, and break the impellers and volutes. Currently the pumps are in satisfactory condition; however, we are taking a proactive planning stance and will adjust its position in the budget if required as we get closer to 2022/23.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF
Spill/Odor/Noise COF 7 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF
Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 24 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary	Capital Budget	Secondary										
Budget Impact/Other	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total				
Labor							\$	-				
Engineering							\$	-				
Parts & Supplies					\$	20,000	\$	20,000				
Chemicals							\$	-				
Utility							\$	-				
Other							\$	-				
Total	\$	-	\$	-	\$	-	\$	20,000	\$	-	\$	20,000

8 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lauer
Area: Pump Station
Asset Type: Electrical
Avg Useful Life: 25 years
Est Residual Life: 5 years
% Consumed Life 80
Category: Capital Improvement
Urgency: 4 = Less Important
Carry Forward: No

Project Name: Replace Electrical Control Panel at Hacienda Pump Station
Dept: Collections
Total Cost: \$ 55,000
CY Budget \$ -
GL Account:

Asset Description

The Control Panel at Hacienda Pump Station was installed in 1999 and houses all the breakers, motor starters, and delicate electronics that keep the pump station operational.

Year Built: 1999
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 3 Minor Defects Only

Justification

The Control Panel at Hacienda Pump Station was installed in 1999. The Pump Station has had several major upgrades since the control panel was installed. A new generator Transfer switch is scheduled for 17/18 and the service panel was installed in 16/17. This upgrade will complete the pump station electrical improvements and will be good for years to come. At time of scheduled replacement, this control panel will have been in service for 24 years.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 7 Cannot be down 1 day
Safety COF
Spill/Odor/Noise COF 7 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF
Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 24 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Preventative Maintenance
Non Asset Risk Management

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies						\$	55,000	\$ 55,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 55,000	\$ 55,000

Treatment Capital Projects

1 FY 2018-19 Budget
Carmel Area Wastewater District

Project Name: Effluent Building Wet Well Mixing System
 Dept: Treatment
 Total Cost: \$ 30,000
 CY Budget \$ 30,000
 GL Account:

Contact: Waggoner
 Area: Outfall
 Asset Type: Support Equipment
 Avg Useful Life: 20 years
 Est Residual Life:
 % Consumed Life
 Category: Capital Improvement
 Urgency: 1 = Critical
 Carry Forward: No

Asset Description

Effluent Building Wet Well Mixing System

Year Built: 1972
 Rehabilitation Date: 2018
 Rehab Life Extension: 20 years
 Asset Condition Rating: 7

Justification

The Effluent Building Wet Well receives flows from the treatment plant secondary clarifier(s) and/or the Reverse Osmosis System. The secondary clarifier(s) effluent flow stream contains settleable solids that can settle out in the wet well. The RO Reject flow stream is a highly concentrated brine that can precipitate out both settleable and suspended solids. These settleable solids from both of these flow streams have caused NPDES violations. This is due to the low flow and lack of velocity in the wet well which allows settleable solids collect in "dead" areas of the wet well and can accumulate to the point where the Laboratory permit composite sampler grabs these concentrated solids thus causing a permit violation. Staff has determined that a mixing system will help these settleable solids to stay suspended allowing the composite samples to be representative of the effluent flow stream, and then be discharged to the ocean.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 5 Cannot be down a week
 Safety COF 3 Minor Inconvenience
 Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
 Permit/Environmental COF 3 Violate Daily Max Effluent
 Process Functionality COF 3 Routine Operations to maintain process functionality
 Cost COF 5 Major In-House Repair Work less than \$25,000
 Total COF: 20 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
 Maintenance Risk Mgmt Preventative Maintenance
 Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Improvement

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	5,000					\$	5,000
Engineering							\$	-
Parts & Supplies	\$	25,000					\$	25,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	30,000	\$	-	\$	-	\$	-
								30,000

2 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Aeration Basin Slide Gates # 5&6
Dept: Treatment
Total Cost: \$ 14,000
CY Budget \$ 14,000
GL Account:

Contact: Waggoner
Area: Misc Structures
Asset Type: Valve Gate
Avg Useful Life: 20 years
Est Residual Life: 1 year
% Consumed Life \$ 100
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Asset Description

Slide gates for aeration basins 5 & 6 to either stop or control flow of wastewater into each aeration basin.

Year Built: 1994
Rehabilitation Date: N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 significant Deterioration

Justification

This to replace the remain three gates out of a total of the six gates in the basins. These gates are corroded beyond repair. These gates cannot seal off the individual basins when trying to isolate one basin from the other. The manufacture recommends to replace gates rather than trying to repair once seeing the photographs of the slide gates themselves.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3	Cannot be down a month		
Safety COF 1	No impact to Safety		
Spill/Odor/Noise COF 1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF 1	No Impact to Environment		
Process Functionality COF 7	Maintaining Process Functionality Requires Emergency Outside Assistance		
Cost COF 5	Major In-House Repair Work less than \$25,000		
Total COF:	18	Probability of Failure (%)	95%

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Mgmt Predictive & Preventative Maintenance
Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Improvement

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	4,000					\$	4,000
Engineering							\$	-
Parts & Supplies	\$	10,000					\$	10,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	14,000	\$ -	\$ -	\$ -	\$ -	\$ -	14,000

3 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Waggoner
Area: Ops Bldg
Asset Type: SCADA
Avg Useful Life: 20 years
Est Residual Life: 1 year
% Consumed Life \$ 99
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Dream Report Software for SCADA and LIMS
Dept: Treatment
Total Cost: \$ 13,000
CY Budget \$ -
GL Account:

Asset Description

Software that collects from SCADA data and LIMS data and prepares reports to be generated from the collected data to send California State Water Board-Central Coast Region and other regulatory agencies.

Year Built:
Rehabilitation Date:
Rehab Life Extension:
Asset Condition Rating:

Justification

With the new Ignition SCADA System being implement facility wide. Dream Report Software replaces the obsolete Report Builder so the reporting can be done through the new Ignition SCADA system.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 9 Cannot be down 8 hours
Safety COF 1 No impact to Safety
Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
Permit/Environmental COF 7 Violate Monthly Average Effluent Limitation or Fail Class B Biosolids
Process Functionality COF 3 Routine Operations to maintain process functionality
Cost COF 9 Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF: 30 Probability of Failure ~~(0)~~% with new SCADA System

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Mgmt Predictive & Preventative Maintenance
Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Improvement

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total		
Labor							\$	-		
Engineering							\$	-		
Parts & Supplies							\$	-		
Chemicals							\$	-		
Utility							\$	-		
Other		\$13,000					\$	13,000		
Total	\$	13,000	\$	-	\$	-	\$	-	\$	13,000

4 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Waggoner
Area: Ops Bldg
Asset Type: SCADA
Avg Useful Life: 20 years
Est Residual Life: 1 year
% Consumed Life \$ 100
Category: Capital Equipment
Urgency: 1 = Critical
Carry Forward: No

Project Name: SCADA host Historian/Domain Controller
Dept: Treatment
Total Cost: \$ 12,000
CY Budget \$ -
GL Account:

Asset Description

Software that collects SCADA data Historian and allows reports to be generated from the collected data to send California State Water Board-Central Coast Region.

Year Built: 1994
Rehabilitation Date: N/A
Rehab Life Extension: N/A
Asset Condition Rating: End of Useful Life

Justification

Current Historian is no longer supported by vendor. And with the new Ignition Program Based SCADA system an upgraded Historian/Domain Report controller is needed to build Operations Reports for the Staff and the California State Water Board-Central Coast Region.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	10	Cannot be down 1 hour		
Safety COF	1	No impact to Safety		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids		
Process Functionality COF	3	Routine Operations to maintain process functionality		
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)		
Total COF:	31		Probability of Failure (%)	50%

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Mgmt Predictive & Preventative Maintenance
Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary	Capital Equipment		Secondary						Total	
	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24			
Budget Impact/Other										
Labor							\$	-		
Engineering							\$	-		
Parts & Supplies							\$	-		
Chemicals							\$	-		
Utility							\$	-		
Other		\$12,000					\$	12,000		
Total	\$	12,000	\$	-	\$	-	\$	-	\$	12,000

5 FY 2018-19 Budget
Carmel Area Wastewater District

Project Name: Replace Laboratory Grade Water System.
 Dept: Treatment
 Total Cost: \$ 10,000
 CY Budget \$ -
 GL Account:

Contact: Waggoner
 Area: Misc Structures
 Asset Type: Support Equipment
 Avg Useful Life: 10 years
 Est Residual Life: 1 year
 % Consumed Life \$ -
 Category: Capital Equipment
 Urgency: 1 = Critical
 Carry Forward: No

Asset Description

Laboratory Water Purification System for Laboratory Grade Water for analysis. (40% Reclamation)

Year Built: 2000
 Rehabilitation Date: 2011
 Rehab Life Extension: 3 years
 Asset Condition Rating: 7 No replacement Parts

Justification

The current water system used in the laboratory has been in place since the laboratory was constructed in 2000. The unit has been maintained over the years in August 2017 a resistivity cell failed the Laboratory staff installed the backup cell and tried to order a replacement cell. At that time the manufacture responded to the order request by informing the Laboratory staff this water system no longer was manufactured and no spare parts or components are available. The laboratory water system is needed to provide Type 2 water for specific analysis and quality control for the laboratory staff.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours		
Safety COF	1	No impact to Safety		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	3	Routine Operations to maintain process functionality		
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)		
Total COF:	25		Probability of Failure (%)	20%

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
 Maintenance Risk Mgmt Predictive & Preventative Maintenance
 Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Equipment Secondary

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	3,000					\$	3,000
Engineering							\$	-
Parts & Supplies	\$	7,000					\$	7,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	10,000	\$	-	\$	-	\$	-
								10,000

6 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Waggoner
Area: Misc Structures
Asset Type: Process Equip (Liquid)
Avg Useful Life: 20 years
Est Residual Life:
% Consumed Life: N/A
Category: Capital Improvement
Urgency: 3 = Important
Carry Forward: No

Project Name: Aeration Basin 5 baffle
Dept: Treatment
Total Cost: \$ 30,000
CY Budget \$ 30,000
GL Account:

Asset Description

Treatment Plant Aeration Basin 5

Year Built: 1994
Rehabilitation Date:
Rehab Life Extension:
Asset Condition Rating: 7 Significant De Major repair, rehabilitate

Justification

Install Director II Tank Baffles made by Environetics Inc. These modular baffles use a stainless steel frame with integrated reinforced geomembrane panels. By installing these baffles staff can improve the operation of the activated sludge process by the following: 1. Improved isolation of the Anoxic Zone to increase the Denitrification process thus improving the overall treatment plant performance. 2. To eliminate flow short circuiting. This would greatly improve the aeration detention time and oxygen transfer thus improving the Nitrification process and the potential for blower energy savings.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month
Safety COF 1 No impact to Safety
Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
Permit/Environmental COF 7 Violate Monthly Average Effluent Limitation or Fail Class B Biosolids
Process Functionality COF 9 Loss of Process Functionality for less than 1 week
Cost COF 5 Major In-House Repair Work less than \$25,000
Total COF: 26 Probability of Failure (%)

Asset Risk Management Strategy

Capital Improvement Risk Moderate Repair
Maintenance Risk Mgmt Corrective Maintenance
Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Improvement

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	5,000					\$	5,000
Engineering							\$	-
Parts & Supplies	\$	25,000					\$	25,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	30,000	\$ -	\$ -	\$ -	\$ -	\$ -	30,000

7 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Waggoner
Area: Misc Structures
Asset Type: Process Equip (Liquid)
Avg Useful Life: 20 years
Est Residual Life:
% Consumed Life: N/A
Category: Capital Improvement
Urgency: 3 = Important
Carry Forward: No

Project Name: Aeration Basin 6 baffle
Dept: Treatment
Total Cost: \$ 30,000
CY Budget \$ 30,000
GL Account:

Asset Description

Treatment Plant Aeration Basin 6

Year Built: 1994
Rehabilitation Date:
Rehab Life Extension:
Asset Condition Rating: 7 Significant De Major repair, rehabilitate

Justification

Install Director II Tank Baffles made by Environetics Inc. These modular baffles use a stainless steel frame with integrated reinforced geomembrane panels. By installing these baffles staff can improve the operation of the activated sludge process by the following: 1. Improved isolation of the Anoxic Zone to increase the Denitrification process thus improving the overall treatment plant performance. 2. To eliminate flow short circuiting. This would greatly improve the aeration detention time and oxygen transfer thus improving the Nitrification process and the potential for blower energy savings.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month	
Safety COF	1	No impact to Safety	
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise	
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids	
Process Functionality COF	9	Loss of Process Functionality for less than 1 week	
Cost COF	5	Major In-House Repair Work less than \$25,000	
Total COF:	26		Probability of Failure (%)

Asset Risk Management Strategy

Capital Improvement Risk Moderate Repair
Maintenance Risk Mgmt Corrective Maintenance
Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Improvement

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total		
Labor	\$	5,000					\$	5,000		
Engineering							\$	-		
Parts & Supplies	\$	25,000					\$	25,000		
Chemicals							\$	-		
Utility							\$	-		
Other							\$	-		
Total	\$	30,000	\$	-	\$	-	\$	-	\$	30,000

Treatment Capital Equipment

1 FY 2018-19 Budget
Carmel Area Wastewater District

Project Name: Pallet Jacks/Stackers (50% Reclamation)
Dept: Treatment
Total Cost: \$ 10,000
CY Budget \$ 10,000
GL Account:

Contact: Waggoner
Area: Misc Structures
Asset Type: Support Equipment
Avg Useful Life: 10 years
Est Residual Life: 1 year
% Consumed Life: 90
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Asset Description

The Pallet Jack is a device to be able to move heavy items (chemical Totes and Equipment) in different areas of the treatment facility.

Year Built: 2003
Rehabilitation Date (Extendng life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 Significant Deterioration

Justification

The two pallet jacks currently used through out the treatment facility are more than 10 years old and in need of replacement with equipment that can either move items or stack items in different areas of the plant.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week		
Safety COF	7	Moderate Injury/Health Risk (Short Recovery)		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work		
Cost COF	3	In-house Repair Work less than \$1,000		
Total COF	22		Probability of Failure	30%

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Capital Budget Secondary Reclamation 50%

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total		
Labor							\$	-		
Engineering							\$	-		
Parts & Supplies	\$	10,000					\$	10,000		
Chemicals							\$	-		
Utility							\$	-		
Other							\$	-		
Total	\$	10,000	\$	-	\$	-	\$	-	\$	10,000

2 FY 2018-19 Budget

Carmel Area Wastewater District

Contact: Waggoner
 Area: Misc Structures
 Asset Type: Support Equipment
 Avg Useful Life: 15 years
 Est Residual Life: 1 year
 % Consumed Life: 87
 Category: Capital Equipment
 Urgency: 3 = Important
 Carry Forward: Yes

Project Name: Lab BOD incubator (50% Reclamation)
 Dept: Treatment
 Total Cost: \$ 12,000
 CY Budget \$ -
 GL Account:

Asset Description

The BOD incubator is used to incubate the BOD analysis samples at a specific temperature of 20.0 C. This is a NPDES required analysis for Tertiary DMR and for CAWD NPDES permit.

Year Built: 2004
 Rehabilitation Date (Extending life of Asset): 2017
 Rehab Life Extension: 2 years
 Asset Condition Rating: 7 Significant Deterioration

Justification

The incubator was purchased in 2005 and remains operating 24 hours a day and is close to its average useful life. Service technicians replaced the cooling compressor in 2017 which can give the unit 2 to 3 years of useful service. The BOD analysis is a NPDES permit requirement making this a critical equipment in the laboratory to remain compliant to the permits.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation
Process Functionality COF	9	Loss of Process Functionality for less than 1 week
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF	34	Probability of Failure

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
 Maintenance Risk Management Predictive & Preventative Maintenance
 Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Capital Budget Secondary Reclamation 50%

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies		\$	12,000				\$	12,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ 12,000

3 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Waggoner
Area: Misc Structures
Asset Type: Support Equipment
Avg Useful Life: 20 years
Est Residual Life: 1 year
% Consumed Life: 100
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Lab Autoclave (50% Reclamation)
Dept: Treatment
Total Cost: \$ 16,000
CY Budget: \$ -
GL Account:

Asset Description

The autoclave is used to conduct NPDES permit coliform tests and to destroy samples that are completed prior to disposal. It is essential to complete the permit required analysis and maintain compliance with EPA and ELAP requirements.

Year Built: Jun-93
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 Significant Deterioration

Justification

The autoclave unit has reached the end of the service life recommended by the manufacturer.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week		
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation		
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work		
Cost COF	5	Major In-House Repair Work less than \$25,000		
Total COF	26		Probability of Failure	Medium

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Operating Budget Secondary Reclamation 50%

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies		\$	16,000				\$	16,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	-	\$ 16,000	\$	-	\$	-	\$ 16,000

4 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Waggoner
Area: Misc Structures
Asset Type: Support Equipment
Avg Useful Life: 10 years
Est Residual Life: 5 years
% Consumed Life: 70
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Lab Muffle Furnance (50% Reclamation)
Dept: Treatment
Total Cost: \$ 13,500
CY Budget \$ -
GL Account:

Asset Description

The muffle furnace is used in the laboratory to provide the Operations Department with process control data on the Volatile Total Suspended Solids. The data from the percent volatile solids is used for monthly and annual NPDES reporting.

Year Built: 2011
Rehabilitation Date (Extendng life of Asset): Apr-16
Rehab Life Extension: 2 years
Asset Condition Rating: 3 Minor Defects Only

Justification

The muffle furnace was purchased during 2011 and repaired in 2016. The service report stated that this unit model is no longer produced and parts are limited at this time.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month
Safety COF 3 Minor Inconvenience
Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise
Permit/Environmental COF 1 No Impact to Environment
Process Functionality COF 3 Routine Operations to maintain process functionality
Cost COF 9 Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF 20 Probability of Failure

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Capital Budget Secondary Reclamation 10%

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies			\$	13,500			\$	13,500
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ -	\$ 13,500	\$ -	\$ -	\$ -	\$ 13,500

5 FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Waggoner
Area: Misc Structures
Asset Type: Support Equipment
Avg Useful Life: 15 years
Est Residual Life: 5 years
% Consumed Life: 55
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Lab Ion Chromatograph (100 % Reclamation)
Dept: Treatment
Total Cost: \$ 150,000
CY Budget: \$ -
GL Account:

Asset Description

The Ion Chromatograph unit is a Laboratory instrument used to analyze various chemical constituents for the process control and reporting for the Reclamation Project.

Year Built: 2011
Rehabilitation Date (Extending life of Asset): 2016
Rehab Life Extension: 4 years
Asset Condition Rating: 7 Significant Deterioration

Justification

The Ion Chromatography unit is coming to the end of its useful life as outlined by the manufacturer service representative. The manufacture of the Ion Chromatography unit will stop supporting parts and services in the next two years. Once that support stops replacement parts and consumables will become difficult to obtain along with service request of the equipment.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week		
Safety COF	1	No impact to Safety		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation		
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work		
Cost COF	5	Major In-House Repair Work less than \$25,000		
Total COF	22		Probability of Failure	Moderate

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management Strategic Changes to Level of Service

Funding Source

Primary Reclamation 50% Secondary Reclamation 50%

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering							\$	-
Parts & Supplies			\$	150,000			\$	150,000
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total		\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000

6 FY 2017-18 Budget
Carmel Area Wastewater District

Contact: Waggoner
Area: Effluent Bldg
Asset Type: Support Equipment
Avg Useful Life: 15 years
Est Residual Life: 1 year
% Consumed Life: 98
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Siemens DeChlorination Deox 2000 Analyzer
Dept: Treatment
Total Cost: \$ 13,000
CY Budget \$ 13,000
GL Account:

Asset Description

Siemens Deox 2000 Dechlorination Analyzer continuously monitors the dechlorinated residual of the plant effluent for ocean discharge. The monitoring is to ensure continuous permit NPDES compliance when sending (Secondary or Brine Discharge) effluent to the ocean. These values are recorded by both a Circular Chart as well as data on the plant's SCADA System. These values are recorded daily and submitted to the Central Coast Regional Board on a monthly basis in our DMR's and NPDES.

Year Built: 2002
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 5 Moderate Deterioration

Justification

To ensure continuous compliance with the NPDES permit, this analyzer is of high importance. The unit was installed in 2002, it has reached its useful life expectancy. Staff performs all required maintenance to the unit to ensure the reliability and accuracy of the unit. The manufacturer no longer supports this model unit.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	10	Sustained Event impacting offsite, Media Attention, Minor Property Damage
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation
Process Functionality COF	9	Loss of Process Functionality for less than 1 week
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF	39	Probability of Failure 10%

Asset Risk Management Strategy

Capital Improvement Risk Plan Rehabilitation/Replacement
Maintenance Risk Management Predictive & Preventative Maintenance
Non Asset Risk Management Take Asset out of Service

Funding Source

Primary Capital Budget Secondary Operating Budget

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor	\$	2,500					\$	2,500
Engineering							\$	-
Parts & Supplies	\$	10,500					\$	10,500
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	13,000	\$ -	\$ -	\$ -	\$ -	\$ -	13,000

7 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: Ops & Lab Surface Pros
Dept: Treatment
Total Cost: \$ 20,000
CY Budget \$ 10,000
GL Account:

Contact: Waggoner
Area: Ops Bldg
Asset Type: SCADA
Avg Useful Life: 5 years
Est Residual Life: 1 year
% Consumed Life: n/a
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: Yes

Asset Description

Currently staff does not use Surface Pro Tablets for Operational Rounds or CMMS Program.

Year Built: N/A
Rehabilitation Date: N/A
Rehab Life Extension: N/A
Asset Condition Rating: N/A

Justification

To better enter data and keep track of rounds, CMMS work including Inventory, preventive and corrective maintenance work at the Treatment Plant. Management Staff is recommending the purchase of up to 10 Surface Pro Tablets (over two years) so staff members can log in their time and work they accomplish, along with rounds reading and observations while in the field. By inputting in the field this will save valuable time by not having staff members continually returning to the Operation or maintenance buildings to enter data.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week		
Safety COF	3	Minor Inconvenience		
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	3	Routine Operations to maintain process functionality		
Cost COF	3	In-house Repair Work less than \$1,000		
Total COF	18		Probability of Failure (%)	0%

Asset Risk Management Strategy

Capital Improvement Risk Add Backup/Redundancy
Maintenance Risk Mgmt Predictive & Preventative Maintenance
Non Asset Risk Mgmt Strategic Changes to Level of Service

Funding Source

Primary Capital Equipment

Budget Impact/Other

	Prior Yr	18-19	19-20	20-21	21-22	22-23	23-24	Total		
Labor							\$	-		
Engineering							\$	-		
Parts & Supplies							\$	-		
Chemicals							\$	-		
Utility							\$	-		
Other	\$	10,000	\$	10,000			\$	20,000		
Total	\$	10,000	\$	10,000	\$	-	\$	-	\$	20,000

Long Term Capital Projects

**CARMEL AREA WASTEWATER DISTRICT TREATMENT PLANT
LONG TERM CAPITAL PROJECTS - FY 2018/19 - 32/31**

PROJECT	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/31	Unscheduled
1 Technical Studies	\$60,000	\$50,000		\$35,000		\$50,000			\$25,000		\$50,000					\$60,000	
2 Coastal Commission Permitting		\$65,000					\$15,000					\$15,000					
3 Sea Level Rise Analysis & Planning	\$100,000	\$120,000					\$15,000					\$10,000					\$10,000
4 Arc Flash Evaluation					\$30,000										\$60,000		
WWTP - PHASE II, Early Start (ES)																	
5 PH II ES - WWTP O&M Manual	\$100,000	\$60,000			\$50,000												
6 PH II ES - Demo Project (Carry forward)	\$250,000	\$325,000															
7 PH II ES - Design Services PH 2	\$350,000	\$175,000															
8 PH II ES - #1 Digester Clean and Evaluation	\$175,000	\$100,000															
TOTAL PH II ES		\$1,535,000															
WWTP - PHASE II																	
9 PH II - Influent Pump Station		\$150,000	\$600,000	\$600,000													
10 PH II - Effluent Building		\$150,000	\$200,000	\$600,000													
11 PH II - Headworks and Grit Screening		\$120,000		\$650,000	\$900,000												
12 PH II - #1 Digester Rehab, Mixing		\$300,000		\$775,000	\$400,000												
13 PH II - Chlorine Building Repurpose/Electrical		\$200,000	\$100,000	\$400,000	\$200,000												
14 PH II - Blower Building MCC & Power Impr		\$66,000	\$300,000	\$150,000													
15 PLC Programming for PH 2		\$40,000	\$40,000	\$40,000	\$20,000												
16 CM Contract for PH 2 Construction			\$100,000	\$200,000	\$200,000												
17 SCADA Network - Phase II		\$150,000	\$100,000														
TOTAL PH II					\$7,751,000												
WWTP - PHASE III																	
18 PH III - Design and CM assistance									\$200,000		\$100,000	\$100,000					
19 PH III - Gas Conditioning System	\$90,000									\$525,000							
20 PH III - Co-Gen Project											\$1,000,000						
21 PH III - Septage/Wet Waste/Grease Receiving												\$700,000					
22 PLC Programming PH 3										\$50,000	\$50,000	\$150,000					
TOTAL PH III												\$2,875,000					
23 Primary Clarifier Rehab	\$225,000											\$60,000	\$60,000				
24 Micro Turbine Rehab	\$148,000																
25 Outfall Crossing	\$120,000	\$1,200,000															
26 Plant Paving & Drainage	\$100,000	\$100,000			\$50,000									\$100,000			
27 Operations Building Rehab	\$75,000							\$125,000									\$40,000
28 Misc. Yard Piping Rehab	\$50,000	\$120,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000								
29 Treatment Plant Planting and Screening	\$12,000		\$60,000			\$60,000				\$75,000					\$25,000		
30 Secondary Clarifier Rehab		\$250,000									\$60,000			\$60,000			
31 Dewatering Standby Equipment		\$50,000	\$50,000									\$450,000					
32 #3 Water System Automation			\$75,000										\$30,000				\$350,000
33 Cathodic Protection				\$30,000													
34 Lunch Room/Meeting Hall Replacement					\$175,000	\$600,000											
35 Primary Blower Rehab						\$400,000									\$50,000		
36 Chlorine Contact Channel Rehab (Recl 25%)						\$250,000											
37 Rio Road Administration Building						\$70,000											
38 Maintenance Building Addition							\$430,000										
39 Influent Building Pump Rehab							\$100,000						\$70,000				
40 Aeration Basin Rehab								\$740,000									
41 DAFT Rehab (Recl 50%)									\$100,000					\$60,000			
42 Digester #2 Clean and Inspect										\$180,000							
43 Effluent Building Pump Rehab											\$60,000						
44 Digester #1 Clean and Inspect												\$200,000					
45 Headworks Rehab														\$200,000			
46 RAS Building Rehab														\$200,000			
47 Sea Level Rise Structural Protection																	\$15,000,000
48 Ocean Outfall Rehabilitation																	\$1,000,000
49 Air Monitoring																	\$15,000
TREATMENT & DISPOSAL TOTAL	\$1,855,000	\$3,791,000	\$1,715,000	\$3,570,000	\$2,115,000	\$1,520,000	\$650,000	\$215,000	\$1,055,000	\$750,000	\$1,440,000	\$1,545,000	\$360,000	\$220,000	\$535,000	\$60,000	\$16,415,000
RECLAMATION SHARE (1)	\$0	\$0	\$0	\$0	\$0	\$62,500	\$0	\$0	\$50,000	\$62,500	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0
PBCSD SHARE	\$617,715	\$1,262,403	\$571,095	\$1,188,810	\$704,295	\$485,348	\$216,450	\$71,595	\$351,315	\$233,100	\$479,520	\$514,485	\$119,880	\$63,270	\$178,155	\$19,980	\$5,466,195
CAWD COST	\$1,237,285	\$2,528,597	\$1,143,905	\$2,381,190	\$1,410,705	\$1,034,653	\$433,550	\$143,405	\$703,685	\$516,900	\$960,480	\$1,030,515	\$240,120	\$156,730	\$356,845	\$40,020	\$10,948,805
																16 Yr total	\$25,267,390
(1) PBCSD to pay 1/3 of costs. (After Reclamation portion deducted, if applicable) unless otherwise noted. <i>Projects in italics are not funded directly by PBCSD</i>																	

Early Start (ES) Phase 2 early start will provide additional information for the Phase 2 project and also clear the way for the Phase 2 project by performing demolition of unneeded items.

Phase 2 - is the second phase of need reliability improvements as indicated in the K/J capital analysis from 2012

Phase 3 will include co-generation improvements that meet the demands of the new treatment plant improvements.

1 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: N/A

Avg Useful Life: 10 years

Est Residual Life:

% Consumed Life:

Category: Maintenance

Urgency: 3 = Important

Carry Forward: No

Project Name: Technical Studies
Dept.: Treatment
5 yr. Cap Projection: \$ 135,000.00
CY Budget \$ 50,000.00
GL Account:

Asset Description

Planned Engineering Studies - To plan for the future and to provide supporting technical information for capital projects, external third party studies are required. The studies in this category may not associated with any one specific project but are applicable to the treatment plant as a whole. Some examples of studies performed in this category include flood reports (to evaluate and manage flood risk), electrical efficiency and structural evaluation of existing buildings or equipment. In some cases technical studies are needed to properly evaluate the scope of planned Capital projects.

PLANNED STUDIES BY YEAR

18/19 - \$50,000 To continue to ensure best management practices in operation; additional efficiency studies will be needed at the completion of the WWTP - Phase I construction project.

20/21 - \$35,000 To review energy usage and power generation possibilities. Also the Phase I construction will be audited for efficiency.

22/23 - \$50,000 The current NPDES permit requires a technical evaluation be completed regarding the Plant effluent effects on the Carmel Bay every 10 years. These funds shall be utilized to hire an outside independent firm to perform this evaluation as directed by the State Water Quality Control Board (SWQCB).

25/26 - \$25,000 Independent plant operations and process audit to evaluate improvements made to the plant during the First 10 Years of the CIP implementation.

27/28 - \$50,000 Current OSHA regulations require an Arc-Flash analysis to be maintained current at industrial facilities. The treatment plant Arc-Flash study was completed in 2016 and will need to be redone in 10 years. The 2016 study will be updated as we complete the Phase I project in 2017 and every ten years will suffice for the general Arc-Flash analysis cycle.

32/31 - \$60,000 In 15 years a comprehensive treatment plant audit would be valuable data for future planning. Flood studies and equipment audits are conceivable future studies for planning purposes.

Year Built: N/A

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 4

Justification

Specialized technical evaluation is an integral part of the Capital Improvement planning process. These technical evaluations are a tool to obtain required data upon which engineering and planning decisions can be refined. Studies are also required to provide documentation to support operational decisions.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact

Safety COF 7 Moderate Injury/Health Risk (Short Recovery)

Spill/Odor/Noise COF

Permit/Environmental COF 1 No Impact to Environment

Process Functionality COF 3 Routine Operations to maintain process functionality

Cost COF 1 No Cost

Total COF: 12

Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor								\$ -	
Engineering	\$60,000	\$50,000	\$0	\$35,000	\$0	\$50,000	\$0	\$135,000	
Parts & Supplies								\$ -	
Chemicals								\$ -	
Utility								\$ -	
Other								\$ -	
Total		\$ 50,000	\$ -	\$ 35,000	\$ -	\$ 50,000	\$ -	\$ 135,000	

2 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Project Name: Coastal Commission Permitting
Dept.: Treatment
5 yr. Cap Projection: \$ 80,000.00
CY Budget \$ 65,000.00
GL Account:

Asset Description

Development of a Local Area Coastal Plan in 2018/19 fiscal year will be maintained and updated every 5 years. Costs include some consultant fees and environmental study details needed to successfully take the plan to the Coastal commission

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 4

Justification

The Treatment Plant is located in the Jurisdiction of the California Coastal Commission (CCC). CCC permitting is required by law for all planned future capital improvement. The District plans to develop and maintain a Local Area Coastal Plan for operation and maintenance of the Treatment plant. This plan will be reviewed and approved by the CCC and will allow staff to perform the routine maintenance and capital outlay which is presented in the LTCIP without perpetual permit applications with the CCC. This plan will save the District both staff time and cost, and will add transparency to District capital development plans.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact			
Safety COF			
Spill/Odor/Noise COF			
Permit/Environmental COF	1	No Impact to Environment	
Process Functionality COF	3	Routine Operations to maintain process functionality	
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)	
Total COF:	13	Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total			
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24					
Budget Impact/Other												
Labor							\$	-				
Engineering	\$0	\$65,000	\$0	\$0	\$0	\$0	\$15,000	\$ 80,000				
Parts & Supplies							\$	-				
Chemicals							\$	-				
Utility							\$	-				
Other							\$	-				
Total	\$	65,000	\$	-	\$	-	\$	-	\$	15,000	\$	80,000

3 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures

Project Name: Sea Level Rise Analysis & Planning
Dept.: Treatment
5 yr. Cap Projection: \$ 135,000.00
CY Budget \$ 120,000.00
GL Account:

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description

Sea Level Rise (SLR) and Climate impact studies which evaluate the risk and probability of failure of District assets resulting from changing climate. These studies are contracted by the District through the RFP process with independent consulting firms who specialize in climate change analysis.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 4

Justification

This study is a multi-year effort to provide draft guidance for incorporation of SLR into capital planning for the CAWD. The intent is to enable CAWD to better understand and prioritize projects with reference to SLR and to encourage collaboration among all departments on this effort. The responsibility for assessment and adaptation will be the responsibility of each department and will be returned to Budget Committee and the full Board for consideration. These funds will allow staff to pursue consultants with expertise in planning for SLR and to allow staff to purchase software or contract with firms to run models to better understand the future impacts to infrastructure.

The Regional Water Quality Control Board is requiring a Sea Level Rise Analysis prior to any permit renewal. CAWD's permit is scheduled for renewal January 11, 2019.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact			
Safety COF			
Spill/Odor/Noise COF			
Permit/Environmental COF	1	No Impact to Environment	
Process Functionality COF	3	Routine Operations to maintain process functionality	
Cost COF	1	No Cost	
Total COF:	5		Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total			
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24					
Labor							\$	-				
Engineering	\$100,000	\$120,000	\$0	\$0	\$0	\$0	\$15,000	\$ 135,000				
Parts & Supplies							\$	-				
Chemicals							\$	-				
Utility							\$	-				
Other							\$	-				
Total	\$	120,000	\$	-	\$	-	\$	-	\$	15,000	\$	135,000

4 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Project Name: Arc Flash Evaluation
Dept.: Treatment
5 yr. Cap Projection: \$ 30,000.00
CY Budget \$ -
GL Account:

Asset Description

Arc Flash evaluation assessments are performed by an Electrical Engineer. The District will obtain the services of an Arc Flash specialist through the RFP process to re-evaluate reports prepared during the Phase 1 project and update the assessment after Phase 1 and 2 have been completed. These reports will be used to plan future capital electrical needs and to demonstrate worker safety compliance.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 3 Minor Defects Only

Justification

OSHA regulations state an employer must identify and assess the electrical hazards for employees and protect them from those hazards. This includes arc flash and shock. OSHA defers to NFPA 70E for how to comply with this regulation. Therefore NFPA 70E serves as a bridge between OSHA regulations and compliance. These studies are required by California employment safety codes.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact
Safety COF 9 Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF
Permit/Environmental COF
Process Functionality COF 3 Routine Operations to maintain process functionality
Cost COF 9 Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF: 21 Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Budget Impact/Other									
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$ 30,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	30,000 \$	- \$	- \$	30,000 \$	

5 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures
Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Maintenance
Urgency: 3 = Important
Carry Forward: Yes

Project Name: PH II ES - WWTP O&M Manual
Dept.: Treatment
5 yr. Cap Projection: \$ 110,000.00
CY Budget \$ 60,000.00
GL Account:

Asset Description

The O&M Manual is an upgrade from standard paper documents. The O&M Manual is an electronic version that will be accessible on the plant network and will update the entire facility (exclusive of Reclamation) with basic operating parameters, schematics, Standard Operating Procedures, Vendor Manuals, Engineering drawings, etc. It will be accessible from any computer terminal or tablet utilized at the plant. The District contracted with Kennedy Jenks to update its O&M manual in January 2016. Total project was projected to take \$250,000, with a reallocation of \$50,000 from the Construction Management contract and \$100,000 for 2016-17 and 2017-18.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 6

Justification

CAWD is required to maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain useful and relevant, the O&M manual must be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual should be maintained in a usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff. Funding is proposed after major improvements to update this manual.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact			
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)	
Spill/Odor/Noise COF			
Permit/Environmental COF	3	Violate Daily Max Effluent	
Process Functionality COF	3	Routine Operations to maintain process functionality	
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)	
Total COF:	20	Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Budget Impact/Other									
Labor							\$	-	
Engineering	\$100,000	\$60,000	\$0	\$0	\$50,000	\$0	\$0	110,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	60,000	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ 110,000	

6 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: N/A

Avg Useful Life: 10 years

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 3 = Important

Carry Forward: No

Project Name: PH II ES - Demo Project (Carry forward)

Dept.: Treatment

5 yr. Cap Projection: \$ 325,000.00

CY Budget \$ 325,000.00

GL Account:

Asset Description

This project includes the removal of the digesters currently known as the original #2, #3, #4 tanks. This project will include the demolition of the tanks, off haul of debris and back filling the holes to grade. This project also includes the removal of all equipment servicing them and electrical. In 1938 Digester 3 and Sludge Holding Tank 4 were built, in 1960 Digester 2 was built.

Year Built: 1960

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 10 Unserviceable

Justification

The proposed demolition is required to remove failed equipment. These assets have exceeded their life expectancy and are no longer functional on the plant grounds. This demolition will clear way to utilize this area for other plant uses. Demolition of the old tanks will be carried into next fiscal year. Only \$50,000 is anticipated to be expended on this item before the year is out. A portion of the FY17/18 budget will be a carried forward to be added to the expected expenditures in FY18/19.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	1	No Cost
Total COF:	6	

Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management:
Non Asset Risk Management: Take Asset out of Service

Funding Source

Primary	Capital Budget		Secondary						Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Budget Impact/Other									
Labor							\$	-	
Engineering	\$250,000	\$325,000	\$0	\$0	\$0	\$0	\$0	\$ 325,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$ 325,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 325,000	

7 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures
Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life:
Category: Capital Improvement
Urgency: 3 = Important
Carry Forward: No

Project Name: PH II ES - Design Services PH 2
Dept.: Treatment
5 yr. Cap Projection: \$ 175,000.00
CY Budget \$ 175,000.00
GL Account:

Asset Description

Consultant/Engineering services contract with Kennedy Jenks Consultants (K/J) to provide engineering services to develop plans and specifications for the Plant Rehabilitation - Phase 2 ES improvements. These design services include the preparation of demolition plans for equipment to be removed now that Phase 1 is operational and plans and specifications needed to evaluate digester #1 which will be taken out of service. Contract management services during demolition is needed to maintain good document control.

Year Built: Varies
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: 20 -40 years
Asset Condition Rating: 6

Justification

Phase 1 was very successful, in part to the detail of the plans and specifications prepared by K/J. To maintain consistency of documentation and design for Phase 2 the District will plan to maintain a similar level of professional services which have been provided during Phase 1. The District does not have enough staffing to perform all tasks required during the construction of multi-discipline projects. The Principal engineer will need to rely on a project manager to ensure good document control and to make sure contractors stay on task.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact			
Safety COF			
Spill/Odor/Noise COF			
Permit/Environmental COF			
Process Functionality COF			
Cost COF			
Total COF:	N/A	Probability of Failure:	Medium

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total	
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24			
Labor							\$	-		
Engineering	\$350,000	\$175,000	\$0	\$0	\$0	\$0	\$0	\$ 175,000		
Parts & Supplies							\$	-		
Chemicals							\$	-		
Utility							\$	-		
Other							\$	-		
Total	\$	175,000	\$	-	\$	-	\$	-	\$	175,000

FY 2018-19 Budget
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: N/A

Avg Useful Life: 10 years

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 2 = Very Important

Carry Forward: No

Project Name: PH II ES - #1 Digester Clean and Evaluation

Dept.: Treatment

5 yr. Cap Projection: \$ 100,000.00

CY Budget \$ 100,000.00

GL Account:

Asset Description

The District will hire a professional digester cleaning company to empty and clean the existing digester #1 in FY17/18. After the tank has been cleaned thoroughly the District will contract with a structural evaluation service provider to evaluate the condition of the digester using non destructive testing techniques.

Year Built: 1976

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 7 Significant Deterioration

Justification

The digester #1 has not been cleaned and serviced in over 19 years. Cleaning should occur over 10 years as a rule of thumb. Staff has noted some signs of structural damage. This information will be used to better plan for and make the Phase 2 design decisions.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact

Safety COF 9 Major Health Risk (Chronic/Long Recovery) or Death

Spill/Odor/Noise COF 10 Sustained Event impacting offsite, Media Attention, Minor Property Damage

Permit/Environmental COF 5 Violate Weekly Average Effluent Limitation

Process Functionality COF 3 Routine Operations to maintain process functionality

Cost COF 7 Emergency Contractor Needed to Address Failure (less than \$500,000)

Total COF: 34 Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement

Maintenance Risk Management: Corrective Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Budget Impact/Other									
Labor							\$	-	
Engineering	\$175,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$ 100,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	

9 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Building Machinery

Avg Useful Life: 35 years

Est Residual Life: 5 years

% Consumed Life: 85%

Category: Capital Equipment

Urgency: 2 = Very Important

Carry Forward: No

Project Name: PH II - Influent Pump Station

Dept.: Treatment

5 yr. Cap Projection: \$ 1,350,000.00

CY Budget \$ 150,000.00

GL Account:

Asset Description

The Influent Pump Station contains the pumps required to receive sewage into the treatment plant. This building also includes the back up generators for the secondary treatment plant.

The Phase II Technical Memo #2 prepared by K/J Consultants identifies a number of High and Medium risk mechanical items which are nearing end of life. These items include motor control electrical improvements, PLC improvements, pump mechanical and fuel system improvements. Firm capacity electrical improvements to bring further redundancy to the Standby generators have also been identified.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 7 Significant Deterioration

Justification

Failure of the Influent Pump Station pumping system would result in raw sewage back up and a very probable significant sewage spill on the north side of the Carmel River. The Variable Frequency Drives and the Motor Control Center are near end of life. Significant routine maintenance is needed to reduce the risk profile of this equipment. New equipment would greatly reduce the probability of failure of this item. During the Phase I project staff identified additional items of risk associated with the 450KW backup generator. Firm capacity improvements will be needed to continue reliable back up power to the treatment plant.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month

Safety COF 5 Minor Injury/Health Risk (Readily Treatable)

Spill/Odor/Noise COF 9 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage

Permit/Environmental COF 9 Minor Environmental Damage, but Ecosystem can Recover

Process Functionality COF 7 Maintaining Process Functionality Requires Emergency Outside Assistance

Cost COF 7 Emergency Contractor Needed to Address Failure (less than \$500,000)

Total COF: 40 Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Budget Impact/Other									
Labor									
Engineering	\$0	\$150,000	\$600,000	\$600,000	\$0	\$0	\$0	\$1,350,000	
Parts & Supplies									
Chemicals									
Utility									
Other									
Total	\$	\$150,000	\$600,000	\$600,000	\$-	\$-	\$-	\$1,350,000	

10 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures
Asset Type: Building Machinery
Avg Useful Life: 35 years
Est Residual Life: 5 years
% Consumed Life: 85%
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: PH II - Effluent Building
Dept.: Treatment
5 yr. Cap Projection: \$ 950,000.00
CY Budget \$ 150,000.00
GL Account:

Asset Description

The Effluent Building is the final pump station which discharges effluent to the ocean. This pump station is only required when plant inflow exceeds the processing capacity of the Tertiary wastewater reclamation system. Very little discharge is sent out to the ocean most of the year, however in the winter it is possible that peak flows exceed 10 million gallons per day. In these situations the majority of this flow would be discharged to the ocean. Failure of this pump station would result in a reportable unexpected bypass.

The Phase II Technical Memo #2 prepared by K/J Consultants identifies a number of High and Medium risk mechanical items which are nearing end of life. Electrical upgrades (New MCC, etc.) are proposed to be included in Phase 2. Other building clean up will be undertaken by staff. The Variable Frequency Drive (VFD) controllers will need to be upgraded and the Phase 2 design process will review multiple options for this rehabilitation. Rehabilitation of the existing effluent pump system will include new/rebuilt effluent pumps, paint all equipment and upgrade aging electrical systems in the effluent building.

Year Built: 1972
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 Significant Deterioration

Justification

The effluent pumping system is essential to the function of the treatment plant. The pumps have operated reliably for many years with little to no maintenance. Staff has continued to inspect and perform maintenance on these pumps and found that due to the minor use they receive during periods of dry weather the pumps are in relatively good shape now that they have been cleaned up. The electrical system is still very old and requires upgrades. Staff have been monitoring this equipment for 5 years.

The existing Motor Control Center (MCC) equipment is well beyond its useful service life and new replacement parts are no longer commercially available. Additionally, the MCC main circuit breakers are in need of replacement. To enhance power system reliability, the existing main power feeders to MCC-ESM, which are nearly 40 years old, need to be replaced with new conductors. The existing PLC-5 hardware is no longer supported by Allen-Bradley and is beyond its useful service life. The existing main power feeder conduits enter the structure via the basement. During wet weather, there is significant water intrusion into the basement level via the electrical conduits. To mitigate this problem, the existing underground duct bank runs would be modified to turn the "up" above grade and enter the building at the ground level. The existing bubbler level system is beyond its useful service life and will require significant long-term maintenance. This level measurement system would be replaced with a modern ultrasonic level measurement system.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)
Spill/Odor/Noise COF	9	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	40	Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
Budget Impact/Other									
Labor								\$	-
Engineering	\$0	\$150,000	\$200,000	\$600,000	\$0	\$0	\$0	\$	950,000
Parts & Supplies								\$	-
Chemicals								\$	-
Utility								\$	-
Other								\$	-
Total		\$ 150,000	\$ 200,000	\$ 600,000	\$ -	\$ -	\$ -	\$ -	950,000

11 **FY 2018-19 Budget**
Carmel Area Wastewater District

Project Name: PH II - Headworks and Grit Screening
Dept.: Treatment
5 yr. Cap Projection: \$ 1,670,000.00
CY Budget \$ 120,000.00
GL Account:

Contact: Lander
Area Misc. Structures
Asset Type: Building Machinery
Avg Useful Life: 45 year
Est Residual Life: 1 year
% Consumed Life: 98%
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Asset Description

The headworks and grit classifier system remove non organic material from the wastestream prior to the process of active treatment. This system separates the heavy non-biological material such as sand, gravel, plastics and metals from the wastestream to prevent build up of these materials later in treatment processes.

Year Built: 1972
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 Significant Deterioration

Justification

An efficient and effective headworks will reduce maintenance costs in subsequent treatment processes and will improve performance of the Digester. The existing equipment is primarily original equipment from 1972 with the last major improvements completed in the early 1990's. The concrete building is in very good condition, however electrical and steel equipment have reached end of life. A substantial rehabilitation of the mechanical equipment and replacement of the electrical panels will be required to extend the life of this asset.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)
Spill/Odor/Noise COF	9	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	40	Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
	Labor							\$	-
	Engineering	\$0	\$120,000	\$0	\$650,000	\$900,000	\$0	\$0	\$ 1,670,000
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$ 120,000	\$ -	\$ 650,000	\$ 900,000	\$ -	\$ -	\$ -	\$ 1,670,000

12 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Digesters

Asset Type: Process Equip (Solid)

Avg Useful Life: 50

Est Residual Life: 5 years

% Consumed Life: 93%

Category: Capital Equipment

Urgency: 2 = Very Important

Carry Forward: No

Project Name: PH II - #1 Digester Rehab, Mixing
Dept.: Treatment
5 yr. Cap Projection: \$ 1,475,000.00
CY Budget \$ 300,000.00
GL Account:

Asset Description

Digester #1 is one of two digesters which serve the treatment plant. This tank is essential to providing firm capacity of the treatment plant permit. This digester must be repaired and maintained in operational condition as it provides redundancy when the new digester #2 is in operations. K/J has provided recommendations for the repair of this tank and funding in FY18/19 is for the design of these improvements. These recommendations will be developed and design plans will include the needed repairs in the Phase 2 rehabilitation.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 7 Significant Deterioration

Justification

The Digester is an essential process of the Treatment Plant facility. This piece of equipment is usually scheduled for maintenance every 8 to 10 years and it was scheduled for cleaning in 2013 at which point 12 years had already passed since the last inspection of the Digester. However due to some mechanical failures at the treatment plant, staff could not isolate this tank and allow it to be taken out of service. The new digester is now online allowing staff to move forward with the cleaning and evaluation of digester #1.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact

Safety COF

Spill/Odor/Noise COF

Permit/Environmental COF

Process Functionality COF

Cost COF

Total COF:

Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Add Backup/Redundancy

Maintenance Risk Management: Corrective Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total					
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24							
Budget Impact/Other														
Labor							\$	-						
Engineering	\$0	\$300,000	\$0	\$775,000	\$400,000	\$0	\$0	\$ 1,475,000						
Parts & Supplies							\$	-						
Chemicals							\$	-						
Utility							\$	-						
Other							\$	-						
Total	\$	300,000	\$	-	\$	775,000	\$	400,000	\$	-	\$	-	\$	1,475,000

13 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Support Equipment

Avg Useful Life: 40 years

Est Residual Life: 5 years

% Consumed Life: 88%

Category: Capital Equipment

Urgency: 2 = Very Important

Carry Forward: No

Project Name: PH II - Chlorine Building Repurpose/Electrical

Dept.: Treatment

5 yr. Cap Projection: \$ 900,000.00

CY Budget \$ 200,000.00

GL Account:

Asset Description

The Chlorine Building will be decommissioned with the completion of Phase I HYPO building improvements. The building contains the Motor Control Center (MCC) for numerous pumps and controllers of plant equipment. This asset will be rehabilitated by upgrading the MCC and removing obsolete equipment including the Chlorine system. The space will then be repurposed as storage, or office space. The best use of this space has yet to be established.

The Phase II Technical Memo #2 prepared by K/J Consultants identifies a number of High and Medium risk mechanical items which are nearing end of life. Design will occur in FY18/19 and will be included in the Phase 2 project.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 5 Moderate Deterioration

Justification

The Chlorine Building is a well constructed structure which has many years of useful life left in the concrete and steel. It is not evident that this structure should be demolished at this time, staff will have a full structural evaluation completed on this building to ensure compliance with seismic regulations. Assuming this building does not have any structural issues it will be repurposed for other plant needs to be determined. The electrical equipment in this building is at end of life and will be relocated within the structure. The Chlorine analyzers also are at end of life and need to be replaced. This project includes all those improvements.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	10	Cannot be down 1 hour
Safety COF	7	Moderate Injury/Health Risk (Short Recovery)
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	41	Probability of Failure: Medium

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$200,000	\$100,000	\$400,000	\$200,000	\$0	\$0	\$900,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	200,000	100,000	400,000	200,000	\$	-	\$ 900,000	

14 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Building Machinery

Avg Useful Life: 40 years

Est Residual Life: 5 years

% Consumed Life: 88%

Category: Capital Equipment

Urgency: 2 = Very Important

Carry Forward: No

Project Name: PH II - Blower Building MCC & Power Impr
Dept.: Treatment
5 yr. Cap Projection: \$ 1,670,000.00
CY Budget \$ 120,000.00
GL Account:

Asset Description

The Blower equipment is essential permit compliance in the secondary treatment plant. Replacement of the existing power distribution equipment is required. As part of this electrical equipment replacement effort, the existing stand alone PG&E service feed to this building can be eliminated and power feeders can come from the Phase 1 switchgear installation. Provisions for elimination of this equipment has already been built in to the new main switchgear installed during the Phase I Plant Rehabilitation Project.

The Phase II Technical Memo #2 prepared by K/J Consultants identifies a number of High and Medium risk mechanical items which are nearing end of life.

Year Built: 1978
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 5 Moderate Deterioration

Justification

In 2013 staff conclude that the electrical equipment in the blower building was within 8years of its useful life. Since the MCC equipment at this location will be approaching the end of its useful service life, it will be replaced to retain process reliability and avoid replacement part obsolescence issues. Elimination of the "stand alone" PG&E service feed to this building will further simplify plant power distribution system configuration. This will also save on power costs as PG&E billing will improve.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	7	Cannot be down 1 day
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	28	Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total			
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24					
Budget Impact/Other												
Labor							\$	-				
Engineering	\$0	\$120,000	\$0	\$650,000	\$900,000	\$0	\$0	\$ 1,670,000				
Parts & Supplies							\$	-				
Chemicals							\$	-				
Utility							\$	-				
Other							\$	-				
Total	\$	120,000	\$	-	\$	650,000	\$	900,000	\$	-	\$	1,670,000

15 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures

Project Name: PLC Programing for PH 2
Dept.: Treatment
5 yr. Cap Projection: \$ 140,000.00
CY Budget \$ 40,000.00
GL Account:

Asset Type: SCADA
Avg Useful Life: 15 years
Est Residual Life: 5 years
% Consumed Life: 66%
Category: Capital Improvement
Urgency: 2 = Very Important
Carry Forward: No

Asset Description

During the Phase 2 installation the District will need to continue to replace the old SCADA (Supervisory Control and Data Acquisition) system and replace it with the new Ignition® software. It is not efficient to run or maintain two different software packages to control the treatment plant. Ignition is working well and as old equipment gets retired the new system is installed in its place.

The Phase II Technical Memo #2 prepared by K/J Consultants identifies a number of High and Medium risk SCADA and PLC items which are nearing end of life.

Year Built: Varies
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 6

Justification

This description will be refined during planning stages for Phase 2. CalCon has provided SCADA programming support for Phase 1 and the District has been satisfied with the work they have done.

As part of the general upgrade of plant facilities the District needs to also upgrade its control system. SCADA systems are widely used in wastewater to assist operators by automating certain operating, trouble shooting and data logging functions. CAWD's existing SCADA system has evolved in piecemeal fashion over the years. The system now consists of various programmable logic controllers and other devices that have been cobbled together resulting in a functional but inefficient amalgamation of equipment and interfacings that only minimally integrate older components. Some of those components are no longer replaceable in the marketplace - they have simply aged out of service. There is a need for consistency in the SCADA network for operating the Districts facilities.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)
Spill/Odor/Noise COF	9	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	40	Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Labor							\$	-	
Engineering	\$0	\$40,000	\$40,000	\$40,000	\$20,000	\$0	\$0	140,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	40,000	\$ 40,000	\$ 40,000	\$ 20,000	\$ -	\$ -	140,000	

16 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: N/A

Avg Useful Life:

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 3 = Important

Carry Forward: No

Project Name: CM Contract for PH 2 Construction
Dept.: Treatment
5 yr. Cap Projection: \$ 500,000.00
CY Budget \$ -
GL Account:

Asset Description

Consultant/Engineering services contract with Kennedy Jenks Consultants (K/J) to provide engineering services to provide construction management services over work proposed to be bid under the Phase 2 Rehabilitation project. These services would be similar to the service provided during the construction of the Phase 1 project.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 7 Significant Deterioration

Justification

The Phase 2 improvements are estimated to cost \$6,000,000 for construction. A project of this size requires constant oversight and management of both documents as well as good communication with the Contractor. The engineering submittals for review are extensive and there are a number of technical specialties that will be required for both inspection as well as document review. K/J Consultants have proven to be very responsive to the District and they have performed well proving they can provide these services together. The Construction management job will be a full time position that will also require additional technical expertise. K/J has the ability to provide all of these services during construction.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely		
Safety COF	1	No impact to Safety		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	1	No change in Process Functionality		
Cost COF	1	No Cost		
Total COF:	6		Probability of Failure:	N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management:
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Budget Impact/Other									
Labor								\$	-
Engineering	\$0	\$0	\$100,000	\$200,000	\$200,000	\$0	\$0	\$	500,000
Parts & Supplies								\$	-
Chemicals								\$	-
Utility								\$	-
Other								\$	-
Total	\$	-	\$ 100,000	\$ 200,000	\$ 200,000	\$	-	\$	500,000

17 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area

Asset Type: Instrumentation

Avg Useful Life: 15 years

Est Residual Life: 1 year

% Consumed Life: 93%

Category: Capital Improvement

Urgency: 2 = Very Important

Carry Forward: No

Project Name: SCADA Network - Phase II

Dept.: Treatment

5 yr. Cap Projection: \$ 250,000.00

CY Budget \$ 150,000.00

GL Account:

Asset Description

As part of the general upgrade of plant facilities the District needs to also upgrade its SCADA (Supervisory Control and Data Acquisition) system. SCADA systems are widely used in wastewater to assist operators by automating certain operating, trouble shooting and data logging functions. CAWD's existing SCADA system has evolved in piecemeal fashion over the years. The system now consists of various programmable logic controllers and other devices that have been cobbled together resulting in a functional but inefficient amalgamation of equipment and interfacings that only minimally integrate older components. Some of those components are no longer replaceable in the marketplace - they have simply aged out of service. There is a need for a state-of-the-art SCADA network for operating the Districts facilities.

Year Built: N/A

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 6

Justification

Staff evaluated several SCADA systems and after thorough analysis staff requested Board approval in 2015 to purchase a SCADA network upgrade named IGNITION®. This system had much lower cost than any other system on the market. Ignition is a JAVA based software package for SCADA. The implementation of the SCADA during 2016 has gone very well. CalCon has integrated the new software in with the plant upgrades as part of the Phase 1 rehabilitation.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	7	Cannot be down 1 day	
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)	
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints	
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation	
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work	
Cost COF	5	Major In-House Repair Work less than \$25,000	
Total COF:	30		Probability of Failure: Medium

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management:
Non Asset Risk Management:

Funding Source

Budget Impact/Other	Primary		Secondary						Total
	Prior Yr.	Capital Budget	18-19	19-20	20-21	21-22	22-23	23-24	
Labor									
Engineering	\$0		\$150,000	\$100,000	\$0	\$0	\$0	\$0	\$250,000
Parts & Supplies									
Chemicals									
Utility									
Other									
Total			\$ 150,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000

18 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: N/A

Avg Useful Life:

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: PH III - Design and CM assistance

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Consultant/Engineering and construction management services may be required when the improvements under the Phase 3 proposal become needed. These services will be contracted out similarly to both Phase 1 and Phase 2.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): N/A

Rehab Life Extension: N/A

Asset Condition Rating: 7 Significant Deterioration

Justification

The Phase 3 improvements are estimated to cost \$3,000,000 for construction. If the district does not have adequate staffing at the time when the Phase 3 improvements become relevant then these services will need to be contracted out.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	1	No Cost
Total COF:	6	

Probability of Failure: N/A

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management:
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
	Labor							\$	-
	Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$

19 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures

Asset Type: N/A
Avg Useful Life: 10 years
Est Residual Life: 10 years
% Consumed Life: 2%
Category: Capital Improvement
Urgency: 4 = Less Important
Carry Forward: No

Project Name: PH III - Gas Conditioning System
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Description

Gas conditioning system consists of a chiller and gas compressor. This system removes water from the digester gas and compresses the gas so it can be used in the micro turbines and the boiler. It is important to condition the gas so that the sensitive power generation equipment is not damaged and to maintain a high quality of gas to comply with Air Board permitting requirements.

Year Built: 1972
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating: 7 Significant Deterioration

Justification

The gas conditioning system is needed to clean digester gas so it can be used to generate power and run the digester boiler. This system was installed with the original micro turbine project and it is in need of some comprehensive repairs. Repairs are to be completed to the existing system to prevent another turbine from being damaged. This system will operate for the next 10 years to support the new turbine.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	10	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$90,000	\$0	\$0	\$0	\$0	\$0	\$0	\$-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

20 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Support Equipment

Avg Useful Life: 10 years

Est Residual Life: 10 years

% Consumed Life: 0%

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: PH III - Co-Gen Project

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Install new co-generation equipment to replace the existing Capstone turbines. In general, turbines have a useful life of 80,000 hrs. New equipment will be sized for full plan gas production capacity and may be a different type of turbine, or reciprocating engine.

Year Built: 2027

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 1 New or Excellent Condition

Justification

This equipment provides a useful life of 10 years. With proper care and bearing replacement staff intends to extend these assets. The turbines have experienced some failures due to moisture, so a more durable generator is desirable. The turbines to be installed in FY18/19 include all maintenance costs. It is important however to similar equipment in order to continue to utilize all available methane and provide redundancy to the boiler for heating the digester.

Further research and study will be conducted by staff prior to recommending replacement equipment.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	10	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Budget Impact/Other									
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

21 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Support Equipment

Avg Useful Life: 30 years

Est Residual Life:

% Consumed Life: 0%

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: PH III - Septage/Wet Waste/Grease Receiving

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Construction of a new Wet Waste/Septage/Grease receiving station to be located adjacent to new Digester. Station will be able to receive up to 10,000gal/day (2 tankers of ~ 5,000 gal size) of material and will be injected directly into the Digester through pump and piping system to be installed.

Year Built: 2028

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 1 New or Excellent Condition

Justification

Preliminary design by K/J of a septage/grease receiver concluded that the pay back at this time would be up to 10 years. Additional investigation by staff this year has uncovered the potential for wet waste to also be added to this receiver. Additional study will occur but this could help double revenue generated. Staff feels that this service would be a good source of revenue and will work with local haulers. This facility is not needed at this time until other more critical improvements are made. This facility is not critical to the operation of the treatment plant or improving reliability. The existing grease receiving station can be utilized better and will be modified to run a pilot test. This improvement can be re-evaluated every couple of years to see if the value to the District improves.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	10	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

22 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures
Asset Type: Support Equipment
Avg Useful Life: 30 years
Est Residual Life:
% Consumed Life: 0%
Category: Capital Improvement
Urgency: 5 = Future
Carry Forward: No

Project Name: PLC Programing PH 3
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Description

Supervisory Control and Data Acquisition (SCADA) is control system architecture that uses computers, networked data communications, and graphical user interfaces for high-level process supervisory management. It also uses other peripheral devices such as programmable logic controllers and discrete Proportional-integral-derivative (PID) controllers to interface to the process plant or machinery. SCADA programming will be required to add additional equipment and controls to the Phase 3 improvements.

Year Built: 2028
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension:
Asset Condition Rating: 1 New or Excellent Condition

Justification

Any new equipment brought on line in Phase III will be required to be integrated into the plant control systems.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	7	Cannot be down 1 day	
Safety COF	3	Minor Inconvenience	
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints	
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids	
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work	
Cost COF	5	Major In-House Repair Work less than \$25,000	
Total COF:	32		Probability of Failure: Medium

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

23 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Project Name: Primary Clarifier Rehab
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Area Primary Clarifiers
Asset Type: Process Equip (Liquid)
Avg Useful Life: 40 years
Est Residual Life: 40 years
% Consumed Life: 2%
Category: Maintenance
Urgency: 3 = Important
Carry Forward: No

Asset Description

The Primary Clarifiers remove settleable solids from the liquid treatment process and are a required part of the treatment process. There are two tanks which provide full redundancy. Both tanks have been fully rehabilitated and will require annual inspection and maintenance with major drive services occurring every 10 to 12 years.

Year Built: 2018
Rehabilitation Date (Extending life of Asset): Mar-18
Rehab Life Extension: 40
Asset Condition Rating: 1 New or Excellent Condition

Justification

The primary clarifiers are essential to meeting permit in the secondary plant. They need to be maintained in good working order to reduce risk and consequence of failure. Both clarifiers have been fully serviced and are on track to last another 40 years.

Planning for center drive service every 10 to 12 years is required to ensure the drive is properly cared for.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints
Permit/Environmental COF	3	Violate Daily Max Effluent
Process Functionality COF	3	Routine Operations to maintain process functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	18	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Add Backup/Redundancy
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
	Labor							\$	-
	Engineering	\$225,000	\$0	\$0	\$0	\$0	\$0	\$0	\$-
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

24 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Support Equipment

Avg Useful Life: 10 years

Est Residual Life: 10 years

% Consumed Life: 0%

Category: Maintenance

Urgency: 3 = Important

Carry Forward: No

Project Name: Micro Turbine Rehab

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

The micro turbines consume digester gas to generate power and to maintain digester temperature in place of burning the methane in the flare. One of two turbines will be replaced in FY17/18 with a C65KW unit. The new unit comes with a 10 year maintenance agreement. The district will maintain this system for 10 years at which time additional cogeneration expenditures will be required.

Year Built: 2018

Rehabilitation Date (Extending life of Asset): Mar-18

Rehab Life Extension: 10

Asset Condition Rating: 1 New or Excellent Condition

Justification

The Microturbines provide secondary heating for the digesters as well as produce incidental power. Operation of equipment which can make beneficial use of the digester gas produced is environmentally superior to the act of flaring off the gas without using this renewable fuel source.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 1 Can be out of service indefinitely

Safety COF 1 No impact to Safety

Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise

Permit/Environmental COF

Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work

Cost COF 5 Major In-House Repair Work less than \$25,000

Total COF: 13 Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget		Secondary						Total
	Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
	Labor							\$	-
	Engineering	\$148,000	\$0	\$0	\$0	\$0	\$0	\$0	\$-
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

25 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures
Asset Type: Structure
Avg Useful Life: 50 years
Est Residual Life: 15 years
% Consumed Life: 70%
Category: Maintenance
Urgency: 1 = Critical
Carry Forward: No

Project Name: Outfall Crossing
Dept.: Treatment
5 yr. Cap Projection: \$ 1,200,000.00
CY Budget \$ 1,200,000.00
GL Account:

Asset Description

The portion of the outfall pipe crossing the Carmel Lagoon is in need of repair. This outfall and the Calle La Cruz force main are critical infrastructure to the District.

Year Built: 1970
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension: 50
Asset Condition Rating: 7 Significant Deterioration

Justification

The Big Sur Land Trust has proposed a floodplain enhancement project which will have some impact to this pipeline. The District has elected to put the line under the lagoon and permitting and flood mitigation grant funding are anticipated to be available this year.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	7	Cannot be down 1 day
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work
Cost COF	10	Regulatory Fines and Lawsuits + Emergency Contractor Needed (greater than \$1 Million)
Total COF:	41	Probability of Failure: High

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Corrective Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget								Secondary	Grant Funding
Budget Impact/Other										
		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
	Labor							\$	-	
	Engineering	\$120,000	\$1,200,000	\$0	\$0	\$0	\$0	\$0	\$	1,200,000
	Parts & Supplies							\$	-	
	Chemicals							\$	-	
	Utility							\$	-	
	Other							\$	-	
	Total	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,200,000

26 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures

Project Name: Plant Paving & Drainage
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Type: N/A
Avg Useful Life: 35 years
Est Residual Life: 15 years
% Consumed Life: 62%
Category: Maintenance
Urgency: 5 = Future
Carry Forward: No

Asset Description

Asphalt and drainage improvements inside the treatment plant grounds. After the Phase I project was completed staff identified additional underground work that needs to be accomplished prior to paving. This work will occur after underground work has been completed.

Year Built: Various
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension: 25
Asset Condition Rating: 7 Significant Deterioration

Justification

After Phase I and Phase II much of the existing asphalt will have been removed for new underground piping. This project will design and install new drainage and asphalt to meet future needs of the treatment plant.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely		
Safety COF	1	No impact to Safety		
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise		
Permit/Environmental COF	1	No Impact to Environment		
Process Functionality COF	1	No change in Process Functionality		
Cost COF	1	No Cost		
Total COF:		6	Probability of Failure:	Medium

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Corrective Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$100,000	\$100,000	\$0	\$0	\$50,000	\$0	\$0	\$ 150,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$ 100,000	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ 150,000	

27 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Influent Manhole
Asset Type: Process Equip (Liquid)
Avg Useful Life: 25 years
Est Residual Life: 25 years
% Consumed Life:
Category: Capital Improvement
Urgency: 5 = Future
Carry Forward: No

Project Name: Operations Building Rehab
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Description

The Operations Building was constructed during the 1970s. It is a concrete two story building serving operations and housing all of the main switchgear and treatment plant servers. It is in relatively good condition with new equipment installed as part of Phase 1 and Phase 2.

Year Built: 1972
Rehabilitation Date (Extending life of Asset):
Rehab Life Extension: 30
Asset Condition Rating: 2

Justification

The Ops Building houses the Central Motor Control Panel, Electrical hub, SCADA, Conference rooms, and telecommunications hub. This building was lightly remodeled on the interior during 2015. Currently the exterior is in reasonably good condition with no evidence of cracking of failure. The roof is currently in poor condition but is scheduled to be replaced in 2018. Funding in FY24/25 will address any needed painting, window repair, wall and door repairs, flooring and other capital improvements. This structure is critical due to the important equipment located inside it.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours
Safety COF	9	Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	48	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other									
	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$		-
Engineering	\$75,000	\$0	\$0	\$0	\$0	\$0	\$0	\$	-
Parts & Supplies							\$		-
Chemicals							\$		-
Utility							\$		-
Other							\$		-
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-

Project Name: Misc. Yard Piping Rehab
Dept.: Treatment
5 yr. Cap Projection: \$ 570,000.00
CY Budget \$ 120,000.00
GL Account:

Asset Description

After inspections of select buried piping segments that have a high consequence of failure, it may be found that the buried pipeline should be rehabilitated. An allowance is estimated for rehabilitation of buried piping in the WWTP.

Buried piping with a high consequence of failure and selected for possible rehabilitation include:

#1 Water Distribution Piping, #3 Water Distribution Piping, Natural Gas Piping, Fire Water Piping, Influent Piping, Carmel Meadows Influent Pipeline, Digester #1 Sludge Piping, Digester #1 Gas Piping, Digester Gas Piping to Flare, Gas Pit, Digesters Supernatant Piping, Secondary Clarifier #1 Effluent Piping, Piping between the Headworks and Primary Clarifiers

Year Built: Various

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension: 30

Asset Condition Rating: 5 Moderate Deterioration

Justification

Piping level of service to carry fluids, gas or chemicals without leaks or breaks. Leaks and breaks should be proactively mitigated to avoid spills to the environment.

Failure Modes Addressed:

1. Lack of proactive failure mitigation and condition assessment of buried piping.
2. The condition of buried piping is unknown however due to the prevalent corrosion that can occur in wastewater process piping it is likely that condition issues exist in some buried piping.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week
Safety COF	5	Minor Injury/Health Risk (Readily Treatable)
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints
Permit/Environmental COF	3	Violate Daily Max Effluent
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	26	Probability of Failure: Medium

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary								Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24			
Labor								\$	-	
Engineering	\$50,000	\$120,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$	570,000	
Parts & Supplies								\$	-	
Chemicals								\$	-	
Utility								\$	-	
Other								\$	-	
Total	\$	\$ 120,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 570,000	

29 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area

Asset Type: N/A

Avg Useful Life: 50 years

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 3 = Important

Carry Forward: No

Project Name: Treatment Plant Planting and Screening

Dept.: Treatment

5 yr. Cap Projection: \$ 120,000.00

CY Budget \$ -

GL Account:

Asset Description

Planning and landscaping around the treatment plant. This will include the replacement of trees around the perimeter of the treatment plant to replace the eucalyptus trees. Some planting will begin this year if an agreement with State Parks can be reached to plant new screening on Parks lands.

Year Built:

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 5 Moderate Deterioration

Justification

The trees surrounding the treatment plant are 40 years old. These trees will need to be replaced with native species in the next 20 years to maintain coverage and screening of the treatment plant.

Director D'Ambrosio has provided staff with a vegetation management plan for the plant grounds. The intent is to maintain the plant grounds in harmony with the surrounding nature preserve that is State Parks.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 1 Can be out of service indefinitely

Safety COF 1 No impact to Safety

Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise

Permit/Environmental COF 1 No Impact to Environment

Process Functionality COF 1 No change in Process Functionality

Cost COF 1 No Cost

Total COF: 6 Probability of Failure: Medium

Asset Risk Management Strategy

Capital Improvement Risk:

Maintenance Risk Management: Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering	\$12,000	\$0	\$60,000	\$0	\$0	\$60,000	\$0	\$120,000
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	- \$	\$ 60,000	\$	- \$	- \$	\$ 60,000	\$ - \$ 120,000

30 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Secondary Clarifiers
Asset Type: Process Equip (Liquid)
Avg Useful Life: 40 years
Est Residual Life: 1 year
% Consumed Life: 99%
Category: Capital Equipment
Urgency: 2 = Very Important
Carry Forward: No

Project Name: Secondary Clarifier Rehab
Dept.: Treatment
5 yr. Cap Projection: \$ 250,000.00
CY Budget \$ 250,000.00
GL Account:

Asset Description

The Secondary Clarifiers remove suspended and floatable biomass from the mixed liquor coming from the Aeration Basins. These tanks are critical to permit compliance. Secondary Clarifier #2 has been fully reconditioned. Secondary #1 is scheduled for the same conditioning in FY18/19. Rehabilitation includes repair of the effluent launders (coating). Replace sludge collector mechanisms and electrical service.

Year Built: 1976
Rehabilitation Date (Extending life of Asset): Mar-18
Rehab Life Extension: 20
Asset Condition Rating: 1 New or Excellent Condition

Justification

One of the two clarifiers were taken out of service in FY16/17and rehabilitated. The inspection revealed that the structure is in good shape. Some coating repair was needed and an overall rehab was completed with new drive mechanism and island. This will be the same repair for Clarifier #2. Every 10 to 12 years the Clarifiers will be taken down and serviced. Down times have been staggered between the 4 clarifiers.

Failure Modes Addressed:

1. The secondary Clarifier Structures are 40 years old (Clarifier #1) and 30 years old (Clarifier #2) which is about the average useful life for this type of structure. Because they are nearing the end of their useful life the structures are evaluated and repaired to extend the useful life as warranted.
2. The Secondary Clarifier Sludge Collectors are beyond their useful life and will need to be replaced.

Planning for center drive service every 10 to 12 years is required to ensure the drive is properly cared for.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints
Permit/Environmental COF	3	Violate Daily Max Effluent
Process Functionality COF	3	Routine Operations to maintain process functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	18	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Add Backup/Redundancy
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total	
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24			
Labor							\$	-		
Engineering	\$0	\$250,000	\$0	\$0	\$0	\$0	\$0	\$ 250,000		
Parts & Supplies							\$	-		
Chemicals							\$	-		
Utility							\$	-		
Other							\$	-		
Total	\$	250,000	\$	-	\$	-	\$	-	\$	250,000

31 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Dewatering Bldg.

Asset Type: Process Equip (Solid)

Avg Useful Life: 40 years

Est Residual Life: 10 years

% Consumed Life: 75%

Category: Maintenance

Urgency: 2 = Very Important

Carry Forward: No

Project Name: Dewatering Standby Equipment

Dept.: Treatment

5 yr. Cap Projection: \$ 100,000.00

CY Budget \$ 50,000.00

GL Account:

Asset Description

The new Screw Press dewatering equipment installed in Phase I is working very well. The existing belt press is now a redundant asset providing back up to the screw press. It is in poor condition so it will need to be cleaned up and placed in standby. The belt press will be repaired and painted with in house maintenance staff and will be cycled by operations staff to maintain its capability to be placed in service when needed.

Year Built: 2018

Rehabilitation Date (Extending life of Asset): Mar-18

Rehab Life Extension: 10

Asset Condition Rating: 1 New or Excellent Condition

Justification

The sludge dewatering system needs to maintain redundancy because hauling un-pressed sludge for disposal is very expensive. The existing press needs some repairs such as replacement of the belt and servicing of the pneumatic cylinders. Once the belt press has been serviced, it will continue to serve the District as a secondary press for its remaining 10 years of projected life. A future screw press will replace the belt press and is anticipated to be 10 years in the future.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month

Safety COF 3 Minor Inconvenience

Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise

Permit/Environmental COF

Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work

Cost COF 5 Major In-House Repair Work less than \$25,000

Total COF: 17 Probability of Failure: Medium

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$50,000	\$50,000	\$0	\$0	\$0	\$0	\$ 100,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000	

32 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area 3 Water System

Asset Type: Process Equip (Liquid)

Avg Useful Life: 30 years

Est Residual Life: 30 years

% Consumed Life: 2%

Category: Capital Equipment

Urgency: 2 = Very Important

Carry Forward: No

Project Name: #3 Water System Automation

Dept.: Treatment

5 yr. Cap Projection: \$ 75,000.00

CY Budget \$ -

GL Account:

Asset Description

The #3 water system is the non-potable process water used by staff to wash down tanks, clean equipment, and provides seal water to some pumps. #3 water is critical to the operation of the plant. The Phase I project recently improved the reliability of this system significantly. This project includes the automation of #3 water system so that it can be controlled by pressure feedback directly to VFD controlled motors.

Year Built: 1976

Rehabilitation Date (Extending life of Asset): Mar-18

Rehab Life Extension: 20

Asset Condition Rating: 1 New or Excellent Condition

Justification

The #3 automation project will save the district a significant amount of money by not running pumps when water is not needed. This improvement is one cost saving measure PG&E has identified to reduce power consumption at the treatment plant.

Planning for center drive service every 10 to 12 years is required to ensure the drive is properly cared for.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints
Permit/Environmental COF	3	Violate Daily Max Effluent
Process Functionality COF	3	Routine Operations to maintain process functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	18	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Labor							\$	-	
Engineering	\$0	\$0	\$75,000	\$0	\$0	\$0	\$0	\$75,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	-	\$ 75,000	\$	-	\$	-	\$ 75,000	

33 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Outfall

Asset Type: Support Equipment

Avg Useful Life: 50 years

Est Residual Life: 40 years

% Consumed Life: 20%

Category: Maintenance

Urgency: 3 = Important

Carry Forward: No

Project Name: Cathodic Protection

Dept.: Treatment

5 yr. Cap Projection: \$ 30,000.00

CY Budget \$ -

GL Account:

Asset Description

Cathodic protection is used to protect the outfall piping and some internal plant piping. It is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell. A simple method of protection connects the metal to be protected to a more easily corroded "sacrificial metal" to act as the anode. The sacrificial metal then corrodes instead of the protected metal. This equipment will need to be replaced as it is already over 40 years old. The in ground anodes are in good condition and were tested in 2014. The District will continue to test the Cathodic protection system every 7 years.

Year Built: 1970

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 3 Minor Defects Only

Justification

Cathodic Protection helps internal and external corrosion defects, stress corrosion cracking, incorrect operation, weather, and other outside forces. Adverse consequences of failure of system could be environmental contamination, operational safety, disaster, reconstruction and recovery costs. Failure to maintain the cathodic protection will allow electrolysis to eat away at the outfall pipe. This would be a very expensive replacement project. It is much cheaper to maintain the system.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month

Safety COF 1 No impact to Safety

Spill/Odor/Noise COF 1 No Effect on Spills/Odors/Noise

Permit/Environmental COF 1 No Impact to Environment

Process Functionality COF 7 Maintaining Process Functionality Requires Emergency Outside Assistance

Cost COF 5 Major In-House Repair Work less than \$25,000

Total COF: 18

Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:

Maintenance Risk Management: Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$ 30,000
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	- \$	- \$	30,000 \$	- \$	- \$	- \$	30,000

34 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Structure

Avg Useful Life: 40 years

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: Lunch Room/Meeting Hall Replacement

Dept.: Treatment

5 yr. Cap Projection: \$ 775,000.00

CY Budget \$ -

GL Account:

Asset Description

Replace the existing lunch room, conference room and outside lunch area with a new 2000 sqft manufactured building and elevated deck.

Year Built:

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating:

Justification

The existing building used as the lunch room and meeting facility for plant related meetings is nearing 80 years old. This building has been repurposed several times over the decades and is nearing its useful life in its current configuration. A new facility would be designed to better serve the staff and provide a location to hold larger meetings indoors, as the current meeting room only holds 15 persons which makes it difficult to hold meeting for the entire staff.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	1	No Cost

Total COF:

6

Probability of Failure:

N/A

Asset Risk Management Strategy

Capital Improvement Risk: Add Backup/Redundancy

Maintenance Risk Management:

Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering	\$0	\$0	\$0	\$0	\$175,000	\$600,000	\$0	\$ 775,000
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	- \$	- \$	- \$	175,000 \$	600,000 \$	- \$	775,000

35 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Blower Bldg.

Asset Type: Process Equip (Gas)

Avg Useful Life: 25 years

Est Residual Life: 25 years

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: Primary Blower Rehab

Dept.: Treatment

5 yr. Cap Projection: \$ 400,000.00

CY Budget \$ -

GL Account:

Asset Description

Air supply is a critical component for aeration processes within wastewater treatment. A reliable low pressure blower system is essential to ensure continuous operations. After balancing of the air demand in the plant during the Phase 2 project and after the installation of the new blower as part of the Phase 1 project, the District will wait two years and evaluate the air supply process for the plant. This project will include evaluating installation of a smaller blower, or replacement of the Lamsom blower that was installed in the 1970's

Year Built: 1972

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension: 30

Asset Condition Rating: 2

Justification

The primary blower will have over 20 years of service and may need a major overhaul. The new blower, installed during the Phase 1 project, will provide redundancy to the air demands of the plant. If it is determined even greater reductions would benefit the District during low flow periods, a smaller blower may be proposed.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours
Safety COF	9	Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	48	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering	\$0	\$0	\$0	\$0	\$0	\$400,000	\$0	\$ 400,000
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	- \$	- \$	- \$	- \$	400,000 \$	- \$	400,000

36 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Chlor/Dechlor Bldg.
Asset Type: Process Equip (Liquid)
Avg Useful Life: 40 years
Est Residual Life: 15 years
% Consumed Life: 62%
Category: Maintenance
Urgency: 5 = Future
Carry Forward: No

Project Name: Chlorine Contact Channel Rehab (Recl 25%)
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Description

Chlorine Contact Channel is a basin that provides sufficient detention time of chlorine contact with wastewater for disinfection to occur. Staff anticipates needing to apply some coating to the interior of these channels to prolong life of this asset within 5 years.

The District's Chlorine Contact Channels are underneath the Chlor/Dechlor building.

Year Built: 1972
Rehabilitation Date (Extending life of Asset): Jul-17
Rehab Life Extension: 25
Asset Condition Rating: 2

Justification

Disinfection is a critical step in the wastewater treatment process. Disinfection is designed to kill or inactivate most microorganisms in wastewater -- essentially killing all pathogenic bacteria. The district's NPDES permit requires that we disinfect prior to discharge into our outfall or prior to turning it over to Reclamation for additional sanitization. This asset must be maintained.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	10	Cannot be down 1 hour
Safety COF	9	Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	10	Permit Jeopardized Environmental Damage Requires Remediation
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF:	52	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total	
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0	\$ 250,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	250,000 \$	- \$	250,000	

37 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area

Asset Type: Structure

Avg Useful Life: 50 years

Est Residual Life: 20 years

% Consumed Life: 60%

Category: Maintenance

Urgency: 3 = Important

Carry Forward: No

Project Name: Rio Road Administration Building

Dept.: Treatment

5 yr. Cap Projection: \$ 70,000.00

CY Budget \$ -

GL Account:

Asset Description

The Rio Road Administration building is the main office for the district where all administrative functions including Board meetings are held. A new roof will be needed in the next 5 years.

Year Built: 1990

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 4

Justification

The Administration building needs to be maintained well as it serves as a place where the public interacts with staff. Also, the cost of replacement of the office greatly exceeds the cost of maintenance. Recent maintenance has really improved the life of the building, this will continue into the future.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	5	Cannot be down a week
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	14	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
	Labor							\$	-
	Engineering	\$0	\$0	\$0	\$0	\$0	\$70,000	\$0	\$ 70,000
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total		\$ -	\$ -	\$ -	\$ -	\$ 70,000	\$ -	\$ 70,000

38 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Outfall

Asset Type: Structure

Avg Useful Life: 40 years

Est Residual Life: 40 years

% Consumed Life:

Category: Maintenance

Urgency: 3 = Important

Carry Forward: No

Project Name: Maintenance Building Addition

Dept.: Treatment

5 yr. Cap Projection: \$ 430,000.00

CY Budget \$ -

GL Account:

Asset Description

Addition to the Maintenance building or possibly a second story for storage and equipment service. After the Phase I and Phase II projects the District will evaluate the maintenance and storage needs of the plant and propose an improvement according to that evaluation.

Year Built:

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating:

Justification

With the improvement of equipment and systems on the plant grounds staff anticipates that the Maintenance department will need to grow to accommodate the technical needs of the plant. The treatment plant is using electronic lockers to store equipment and supplies which greatly reduces the cost of surplus materials but these cabinets are large. If they continue to prove valuable to the District then a project will be brought forward to construct a space that is more conducive to these cabinets which will allow staff to better access the equipment. We have also recognized the need for more vehicle bays -- currently they are used for storage, making it difficult to use them for maintenance.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	1	No Cost
Total COF:	6	

Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$430,000	\$ 430,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	430,000 \$	430,000

39 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Misc. Structures

Asset Type: Process Equip (Liquid)

Avg Useful Life: 25 years

Est Residual Life: 25 years

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: Influent Building Pump Rehab

Dept.: Treatment

5 yr. Cap Projection: \$ 100,000.00

CY Budget \$ -

GL Account:

Asset Description

The influent building will receive electrical rehabilitation during the Phase II project. Improvements proposed for future rehab includes replacement of the pumps as needed and service of other piping and valves

Year Built: 1976

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension: 30

Asset Condition Rating: 2

Justification

The existing Fairbanks/Morris pumps have served the District well. They were serviced in 2016 and will receive new VFD drives as part of Phase II. These motors will receive maintenance and possibly an additional smaller pump will be installed for times of low flow. Work in 23/24 will include servicing the pumps and motors, and also the piping.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	3	Minor Inconvenience
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints
Permit/Environmental COF	3	Violate Daily Max Effluent
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	24	

Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$ 100,000	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	100,000 \$	100,000	

Project Name: Aeration Basin Rehab
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Description

The Aeration Tank is where activated sludge is controlled to biology remove organics from the wastewater stream. This process is critical to the permit compliance of the district.

The Aeration Basins were constructed in the 1970s. Concrete tanks like these last for 50+ years provided they are taken care of. Currently the District's tanks are in very good condition. This is a provision for a future rehabilitation of the tanks that will become more focused over time.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): Jul-17

Rehab Life Extension: 25

Asset Condition Rating: 2

Justification

Aeration is a critical component of the wastewater process. The District current has four Aeration Basins of varying ages -- however they are all built in the 1970s or 1980s. In order to continue to provide wastewater service to the community all tanks must be maintained. The treatment plant will be taking care of internal servicing of the air dissipaters however it is anticipated that in 7 to 10 years in the future the air distribution system will need replacing and the tanks may need some coating.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours		
Safety COF	7	Moderate Injury/Health Risk (Short Recovery)		
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints		
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids		
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance		
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)		
Total COF:	42		Probability of Failure:	Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

41 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area DAFT

Asset Type: Process Equip (Liquid)

Avg Useful Life: 30 years

Est Residual Life: 30 years

% Consumed Life: 2%

Category: Capital Equipment

Urgency: 5 = Future

Carry Forward: No

Project Name: DAFT Rehab (Recl 50%)

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

The Dissolved Air Flotation Thickener (DAFT) removes suspended solids from side stream flows prior to returning these waste streams back to the headworks. This equipment helps to make other systems work more efficiently and it improves secondary water quality, which improves water quality sent to the microfiltration system. This equipment can be bypassed and not used. The DAFT has recently been improved and little mechanical work will be needed for many years. The tank could require interior coating to protect the concrete in 10 years from the most recent rehabilitation. Coating is scheduled for FY26/27

Year Built: 1976

Rehabilitation Date (Extending life of Asset): Jul-05

Rehab Life Extension: 25

Asset Condition Rating: 1 New or Excellent Condition

Justification

The DAFT is an important asset for efficiency and reducing suspended solids into the treatment plant. This tank can be easily maintained for many decades to come with periodic investment.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	1	No impact to Safety
Spill/Odor/Noise COF	3	Short Duration, Small qty. Event Onsite: No Complaints
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	18	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
	Labor							\$	-
	Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$-
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

42 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Digesters

Asset Type: Process Equip (Solid)

Avg Useful Life: 50 years

Est Residual Life: 50 years

% Consumed Life: 1%

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: Digester #2 Clean and Inspect

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Digester #2 was constructed as part of Phase 1 plant rehabilitation. This digester will need to be fully serviced every 10-12 years. Tank will be emptied, cleaned and inspected.

Year Built: 1976

Rehabilitation Date (Extending life of Asset): Jul-05

Rehab Life Extension: 30

Asset Condition Rating: 1 New or Excellent Condition

Justification

The digester must be serviced to ensure both life expectancy as well to maintain efficiency and good working condition. The district will only have two fully redundant tanks so it is important to take care of them. If maintained properly the structures will last indefinitely. Every ten years the tank will be taken out of service and inspected. If minor repairs are undertaken every 10 years this tank can serve the district for many decades. It is anticipated that interior coatings will need to be repaired every 30 years, that is the rehab life extension.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	9	Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids
Process Functionality COF	3	Routine Operations to maintain process functionality
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	36	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total
		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
Budget Impact/Other									
	Labor							\$	-
	Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

43 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Effluent Bldg.

Asset Type: Process Equip (Liquid)

Avg Useful Life: 25 years

Est Residual Life: 25 years

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: Effluent Building Pump Rehab

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

The Effluent building will receive electrical rehabilitation during the Phase II project. Improvements proposed for future rehab includes replacement of the pumps as needed and service of other piping and valves.

Year Built: 1976

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension: 30

Asset Condition Rating: 2

Justification

These 2 large 150 HP pumps were serviced in 2016 and will continue to be maintained until they are replaced or rehabbed again in the Phase 2 project. They are not used very much because the Wimco pump takes care of daily flows which are not reclaimed. Only during substantial rain events do the 150 HP pumps turn on. Since they are only in use for a few hours they are under little pressure, and they only pump clean effluent and will remain in good shape as long as they receive annual maintenance. It is proposed that in 10 years from now the motors and pumps will need servicing.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	3	Cannot be down a month
Safety COF	3	Minor Inconvenience
Spill/Odor/Noise COF	5	Short Duration; Small qty Event Offsite; Small no. of Complaints
Permit/Environmental COF	3	Violate Daily Max Effluent
Process Functionality COF	5	Maintaining Process Functionality requires staff divert from other work
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	24	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-	

44 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Digesters

Asset Type: Process Equip (Solid)

Avg Useful Life: 50 years

Est Residual Life: 25 years

% Consumed Life: 2%

Category: Capital Equipment

Urgency: 5 = Future

Carry Forward: No

Project Name: Digester #1 Clean and Inspect

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

The Digester #1 is the 600,000gal tank constructed in the early 1970's. This tank is scheduled to be completely overhauled as a Phase II project. Every 10 to 12 years a digester should be cleaned and inspected. This project will be for the cleaning and inspection of the tank estimated 10 years after rehabilitation.

Year Built: 1976

Rehabilitation Date (Extending life of Asset): Jul-05

Rehab Life Extension: 30

Asset Condition Rating: 1 New or Excellent Condition

Justification

The digester must be serviced to ensure both life expectancy as well to maintain efficiency and good working condition. The district will only have two fully redundant tanks so it is important to take care of them. If maintained properly the structures will last indefinitely. This asset is already 40 years old and the rehabilitation will extend the life of this tank by 30 years. Every ten years the tank will be taken out of service and inspected. If minor repairs are undertaken every 10 years this tank can serve the district for many more years to come. It is anticipated that interior coatings will need to be repaired every 30 years, that is the rehab life extension.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month

Safety COF 9 Major Health Risk (Chronic/Long Recovery) or Death

Spill/Odor/Noise COF 7 Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage

Permit/Environmental COF 7 Violate Monthly Average Effluent Limitation or Fail Class B Biosolids

Process Functionality COF 3 Routine Operations to maintain process functionality

Cost COF 7 Emergency Contractor Needed to Address Failure (less than \$500,000)

Total COF: Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management: Strategic Changes to Level of Service

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

45 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area Influent Manhole

Asset Type: Process Equip (Liquid)

Avg Useful Life: 25 years

Est Residual Life: 25 years

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: Headworks Rehab

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Anticipated future repair of pumps and motors installed as part of the Phase 2 project. 10 to 15 years after the Phase 2 improvements the drive on the grit launderer will need service. This item is for potential rehabilitation of the Headworks assets 10 years after the Phase 2 project is complete.

Year Built: 1972

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension: 30

Asset Condition Rating: 2

Justification

To maintain new improvements for the headworks, the District will schedule this equipment for routine service, inspection and coating as needed. The grit tank is an important part of the plant process as it removes all large material from the flow stream. When this equipment works well the entire treatment plant process is more efficient. Anticipated expenditure in FY31/32 is for tank and channel coating.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact 3 Cannot be down a month

Safety COF 3 Minor Inconvenience

Spill/Odor/Noise COF 5 Short Duration; Small qty Event Offsite; Small no. of Complaints

Permit/Environmental COF 3 Violate Daily Max Effluent

Process Functionality COF 5 Maintaining Process Functionality requires staff divert from other work

Cost COF 5 Major In-House Repair Work less than \$25,000

Total COF: 24 Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
	Labor							\$	-
	Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

46 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area RAS Pump Bldg.

Asset Type: Process Equip (Liquid)

Avg Useful Life: 25 years

Est Residual Life: 25 years

% Consumed Life:

Category: Capital Improvement

Urgency: 5 = Future

Carry Forward: No

Project Name: RAS Building Rehab

Dept.: Treatment

5 yr. Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Maintenance and replacement of electrical, PLC and controller equipment as needed. In 15 years the Phase I improvements will need to be inspected and planning for replacement needs to begin.

Year Built: 1972

Rehabilitation Date (Extending life of Asset): Jul-17

Rehab Life Extension: 25

Asset Condition Rating: 2

Justification

Electrical components and PLC equipment degrade over time. 20 years after the Phase I improvements the District will be ready to upgrade some components to remain current with safety regulations or operational parameters.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	9	Cannot be down 8 hours
Safety COF	9	Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	9	Minor Environmental Damage, but Ecosystem can Recover
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	48	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

47 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area

Asset Type: Structure

Avg Useful Life: 50 years

Est Residual Life:

% Consumed Life:

Category: Capital Improvement

Urgency: 3 = Important

Carry Forward: No

Project Name: Sea Level Rise Structural Protection

Dept.: Treatment

Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

Design plans, environmental analysis, permit acquisition, construction management and physical construction of a comprehensive solution to combat impacts associated with sea-level rise. The potential impact to the Treatment plant has not fully been analyzed, however based on growing scientific consensus this tentative plan will include protection from wave run up or high tide events.

Sea Level Rise RFP authorized by Board of Directors 03-23-17

Establish "Defend or Managed Retreat" Reserve authorized 03-23-17

Year Built: 1990

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 2

Justification

The treatment plant is 2500 feet from the existing beach so under current assumptions sheet pile or secant wall design will include a concrete wall cap to provide both protection from wave events and subsurface water intrusion. There is a possibility that future data will prove a policy of "managed retreat" is preferable to asset protection. If data becomes available which leads to an alternative conclusion to protecting the treatment plant then this cost projection will be deleted and a new project will be defined to include plant relocation. For that reason this item is not assigned a future date for construction but it will remain unscheduled until a more definitive expectation for impacts becomes evident. Under current assumptions the plant will be able to be protected through walls and piles. This item is unscheduled because the Sea Level Rise analysis is not yet completed.

Cost assumptions: Design and CM - \$3.3M, Environmental documentation and permitting - \$0.5M, Construction of secant pile wall with concrete cap wall (3800 linear ft.) - \$9.5M, Rip-rap revetment - \$0.4M, +10% contingency. Total \$15M

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	10	Cannot be down 1 hour
Safety COF	9	Major Health Risk (Chronic/Long Recovery) or Death
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	7	Violate Monthly Average Effluent Limitation or Fail Class B Biosolids
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	9	Regulatory Fines and Lawsuits + Emergency Contractor Needed (less than \$1 Million)
Total COF:	49	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement

Maintenance Risk Management: Predictive & Preventative Maintenance

Non Asset Risk Management:

Funding Source

Primary Capital Budget Secondary

Budget Impact/Other

	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	Total
Labor							\$	-
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$-
Parts & Supplies							\$	-
Chemicals							\$	-
Utility							\$	-
Other							\$	-
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

48 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander

Area

Asset Type: Structure

Avg Useful Life: 50 years

Est Residual Life: 20 years

% Consumed Life: 60%

Category: Maintenance

Urgency: 3 = Important

Carry Forward: No

Project Name: Ocean Outfall Rehabilitation

Dept.: Treatment

Cap Projection: \$ -

CY Budget \$ -

GL Account:

Asset Description

The outfall pipeline was installed in the 1970s and has experienced a break only one time - in the early 2007. That break in the pipeline cost \$647,504 to repair. The cause of the break remains unknown. Emergency repair to the WWTP outfall in the event of storm damage or natural disaster. This item is an unscheduled repair as it is not anticipated but if it occurs a repair must be made immediately.

Year Built: 1970

Rehabilitation Date (Extending life of Asset):

Rehab Life Extension:

Asset Condition Rating: 2

Justification

The ocean outfall is a critical asset to the function of the treatment plant. The design of the outfall appears to be very good in that it is bedded on the granite shelf and the oceanward side is concrete encased for protection. The full length of the transmission line is over 3000ft. Transmission line inspection in 2014 of the underground portion inside the lagoon revealed that the pipe was in good shape and that the cathodic protection was active and working well with approximately 40 years of life remaining on the anode. A separate budget expense has been generated for the repair of the portion of the pipeline suspended over the south finger of the lagoon (#41 Outfall Crossing). Independent of the crossing the pipeline is not susceptible to damage from the environment except in cases of strong storms, earthquakes or accidental damage from anchored ships which should affect the pipeline exposed in the ocean. The portion of the pipe located in open water is exposed and can also be damaged by the ocean environment. The District should plan for repairs to this structure. The estimate for a potential repair was developed from prior history. In 2007 a repair was required due to damage revealed during the annual inspection. That repair cost was approximately \$700,000. Our NPDES permit requires an annual inspection of the outfall pipeline.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	7	Cannot be down 1 day
Safety COF	7	Moderate Injury/Health Risk (Short Recovery)
Spill/Odor/Noise COF	7	Short Duration; Large qty Event offsite; Aggressive Complaints; No Property Damage
Permit/Environmental COF	5	Violate Weekly Average Effluent Limitation
Process Functionality COF	7	Maintaining Process Functionality Requires Emergency Outside Assistance
Cost COF	7	Emergency Contractor Needed to Address Failure (less than \$500,000)
Total COF:	40	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk: Plant Rehabilitation/Replacement
Maintenance Risk Management: Predictive & Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other		Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24	
	Labor							\$	-
	Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -
	Parts & Supplies							\$	-
	Chemicals							\$	-
	Utility							\$	-
	Other							\$	-
	Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	-

49 **FY 2018-19 Budget**
Carmel Area Wastewater District

Contact: Lander
Area Misc. Structures
Asset Type: Instrumentation
Avg Useful Life: 10 years
Est Residual Life:
% Consumed Life: 0%
Category: Maintenance
Urgency: 5 = Future
Carry Forward: No

Project Name: Air Monitoring
Dept.: Treatment
5 yr. Cap Projection: \$ -
CY Budget \$ -
GL Account:

Asset Description
Installation of air quality sampling equipment to be connected via WIFI so that data can be web enabled. Air quality equipment and specifications will be specified by Monterey Bay Air Quality Board so that data can be correlated with local databases. Includes purchase of equipment, installation, web enabled programing and research needed to reduce ongoing costs.

Year Built: N/A
Rehabilitation Date (Extending life of Asset): N/A
Rehab Life Extension: N/A
Asset Condition Rating:

Justification
Board of Directors discussion in 2016 resulted in the Board request to include investigation into air quality monitoring. Air quality data gathered will be site specific and can be utilized to develop a correlation between employee respiratory health and air quality. In addition, any data gathered on site can be compared to other regional air quality monitors to view any variations. Not health issues have been reported or are identified. This proposal was developed from a discussion on preventative illness.

Condition Rating / Consequence of Failure (COF)

Loss of Service Impact	1	Can be out of service indefinitely
Safety COF	3	Minor Inconvenience
Spill/Odor/Noise COF	1	No Effect on Spills/Odors/Noise
Permit/Environmental COF	1	No Impact to Environment
Process Functionality COF	1	No change in Process Functionality
Cost COF	5	Major In-House Repair Work less than \$25,000
Total COF:	12	Probability of Failure: Low

Asset Risk Management Strategy

Capital Improvement Risk:
Maintenance Risk Management: Preventative Maintenance
Non Asset Risk Management:

Funding Source

Primary	Capital Budget	Secondary							Total
Budget Impact/Other	Prior Yr.	18-19	19-20	20-21	21-22	22-23	23-24		
Labor							\$	-	
Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$-	
Parts & Supplies							\$	-	
Chemicals							\$	-	
Utility							\$	-	
Other							\$	-	
Total	\$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	

