

ENGINEERING REPORT

March 31, 2017



To: PBCSD Board of Directors
From: Nicholas R. Becker, Principal Engineer
Subject: **2017/18 Long-Term Capital Outlay Program**

RECOMMENDATION

Approve the 2017/18 Long-Term Capital Outlay Program.

SUMMARY OF ISSUES

The PBCSD 2017/18 Long-Term Capital Outlay Program (LTCOP) 15-year total cost is as follows:

Administration Department	\$ 1,875,000
Fire Department	\$ 4,891,000
Wastewater Department	\$ 10,700,000
Recycled Water Storage/Distribution System	\$ 4,450,000
Undergrounding Overhead Utility Projects	\$ 17,550,000
Carmel Area Wastewater District (CAWD)	\$ 7,687,000
TOTAL	\$ 47,151,000

PBCSD's financial responsibilities include Administration, Fire, and Wastewater Departments; Undergrounding Overhead Utility Projects; and a one-third (1/3) share of CAWD Treatment Plant costs. The anticipated total cost of PBCSD's financial responsibilities amount to \$42,701,000. The anticipated total cost for the Recycled Water Storage/Distribution System is \$4,450,000; however, these costs will be reimbursed to PBCSD by the Reclamation Project.

The 2017/18 LTCOP has increased 3% from the previous year total of \$45,755,000. All departmental (Fire, Administration, Wastewater, Recycled Water) capital costs have increased; most noticeable within the Wastewater department increasing 16% from the previous year (mainly attributed by the FY17/18's capital approach to completing a sewer main replacement project in addition to the pump station P3 rehabilitation project).

In addition projected capital costs associated with CAWD have decreased from the previous year by approximately 32% (attributed by the partial completion of the first of several wastewater treatment plant capital improvement projects). Staff anticipates that it will require approximately \$3.3 million dollars allocated over of the course of the next two fiscal years to complete Phase III (formerly Phase IIC) of the Underground Program. Long term capital projections (future phases) for the Undergrounding Program beyond the Phase III project shall be determined as funding becomes available. As departmental, undergrounding, and CAWD capital improvement projects develop over the next year, anticipated costs and schedules will be updated and priorities revisited.

BACKGROUND

Each spring, staff presents to the Board the LTCOP for the following fiscal year. The plan outlines PBCSD's capital improvements goals for the subsequent 15 years. Costs are based on current estimated prices and have not been escalated over the life of the plan. Capital items include both new and replacement capital facilities and equipment. The schedules of capital outlays and cost estimates have been prepared in consultation with PBCSD Staff, Cal Fire Staff, and CAWD Treatment Plant Staff.



PEBBLE BEACH

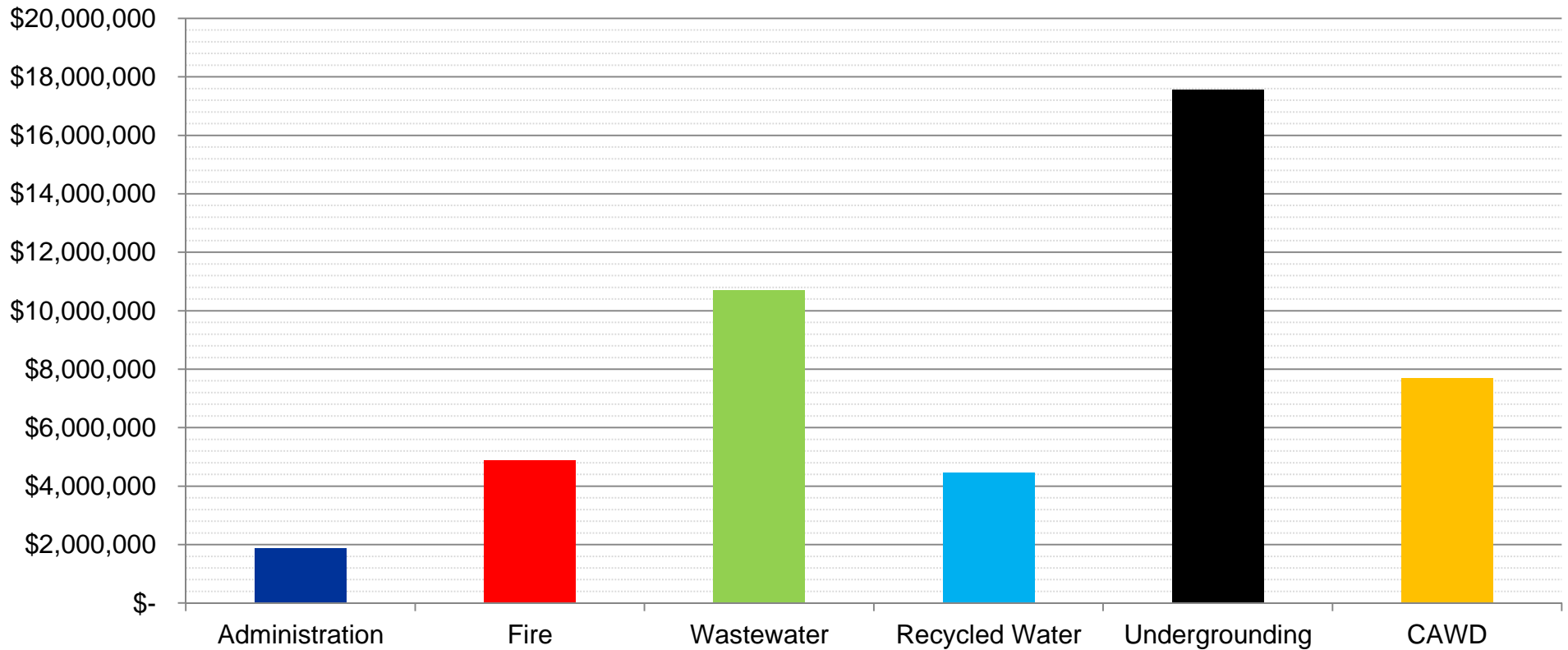
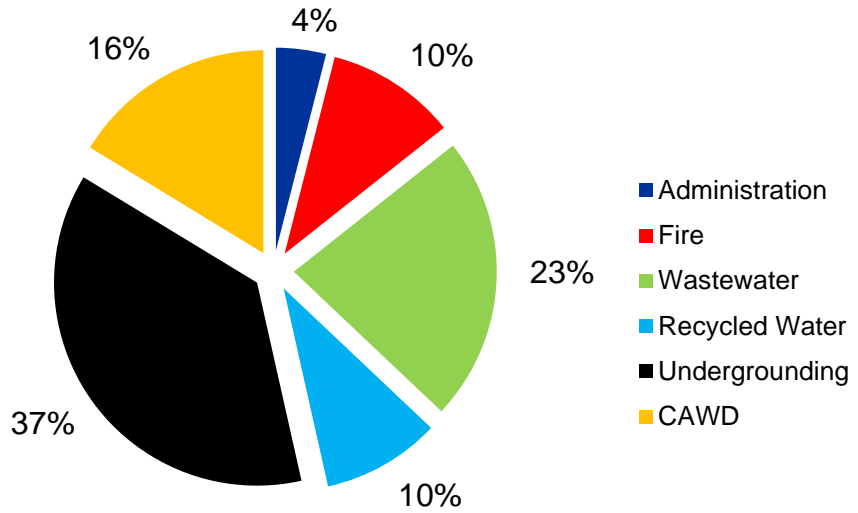
COMMUNITY SERVICES DISTRICT

FY 2017/18

LONG-TERM CAPITAL OUTLAY PROGRAM

MARCH 31, 2017

COST SUMMARY BY DEPARTMENT



SUMMARY
2017/18 LONG-TERM CAPITAL OUTLAY PROGRAM

FISCAL YEAR	Exhibit A Administration	Exhibit B Fire	Exhibit C Wastewater	Exhibit D Recycled Water	Exhibit E Undergrounding	Exhibit F CAWD	FISCAL YEAR TOTAL
2017/18	\$ 95,000	\$ 298,000	\$ 1,160,000	\$ 450,000	\$250,000	\$869,000	\$ 3,122,000
2018/19	\$ 320,000	\$ 446,000	\$ 765,000	\$ 285,000	\$3,000,000	\$1,128,000	\$ 5,944,000
2019/20	\$ 245,000	\$ 251,000	\$ 1,601,000	\$ 95,000	\$1,100,000	\$1,545,000	\$ 4,837,000
2020/21	\$ 35,000	\$ 712,000	\$ 996,000	\$ 135,000	\$1,100,000	\$235,000	\$ 3,213,000
2021/22	\$ 80,000	\$ 27,000	\$ 1,025,000	\$ 100,000	\$1,100,000	\$273,000	\$ 2,605,000
2022/23	\$ 85,000	\$ 43,000	\$ 595,000	\$ 90,000	\$1,100,000	\$268,000	\$ 2,181,000
2023/24	\$ 80,000	\$ 117,000	\$ 535,000	\$ -	\$1,100,000	\$543,000	\$ 2,375,000
2024/25	\$ 75,000	\$ 571,000	\$ 238,000	\$ -	\$1,100,000	\$463,000	\$ 2,447,000
2025/26	\$ 120,000	\$ 1,070,000	\$ 678,000	\$ 40,000	\$1,100,000	\$768,000	\$ 3,776,000
2026/27	\$ 75,000	\$ 230,000	\$ 100,000	\$ 2,890,000	\$1,100,000	\$450,000	\$ 4,845,000
2027/28	\$ 140,000	\$ 107,000	\$ 1,145,000	\$ 170,000	\$1,100,000	\$197,000	\$ 2,859,000
2028/29	\$ 160,000	\$ 84,000	\$ 83,000	\$ 65,000	\$1,100,000	\$273,000	\$ 1,765,000
2029/30	\$ 60,000	\$ 142,000	\$ 836,000	\$ 80,000	\$1,100,000	\$313,000	\$ 2,531,000
2030/31	\$ 115,000	\$ 671,000	\$ 288,000	\$ 50,000	\$1,100,000	\$173,000	\$ 2,397,000
2031/32	\$ 190,000	\$ 122,000	\$ 655,000	\$ -	\$1,100,000	\$187,000	\$ 2,254,000
DEPT TOTAL	\$ 1,875,000	\$ 4,891,000	\$ 10,700,000	\$ 4,450,000	\$17,550,000	\$7,687,000	\$ 47,151,000

2016/17 TOTAL \$ 1,729,000 \$ 4,587,000 \$ 9,260,000 \$ 3,964,000 \$ 15,000,000 \$ 11,215,000 \$ 45,755,000

DIFFERENCE 8.4% 6.6% 15.6% 12.3% 17.0% -31.5% 3.1%

Dept % of Ttl Plan 4.0% 10.4% 22.7% 9.4% 37.2% 16.3% 100.0%

EXHIBIT A
Administration Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER	FISCAL YEAR COSTS (1,000)														
				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
1	GIS/Information Systems Development	Annual	N/A	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35
2	Network Routers & Switches	4 years			\$15				\$15				\$15				\$15	
3	Network Servers (2): File/Email Server Document Management Server	4 years		\$25				\$25				\$25					\$25	
4	Network Servers (2): InfoSys/GIS Server Backup/Security Server	4 years			\$25				\$25				\$25				\$25	
5	Workstation/Laptop Computers (9) + Install	4 years				\$40				\$40				\$40				\$40
6	Digital Scanner	5 years			\$5					\$5					\$5			
7	Network Plotter	5 years		\$10					\$10					\$10				
8	Board Room Presentation System	6 years				\$35						\$35						\$35
9	Training Room Presentation System	6 years				\$25						\$25						\$25
10	Network Combination Copier/Printer/Scanner	6 years			\$20						\$20							\$20
11	Traffic Monitoring Radar Units (4)	6 years			\$20						\$20							\$20
12	Furnaces (4)	10 years			\$10											\$10		
13	Board Room Chairs (9)	10 years			\$15											\$15		
14	Board Room Audience Chairs (50)	10 years			\$20											\$20		
15	Board Room Sound System/Microphones	10 years						\$20										\$20
16	Carpeting	10 years	\$30											\$30				
17	Telephone & Voicemail System	10 years			\$50											\$50		
18	1620 AM Radio Station Equipment (2)	10 years			\$25											\$25		
19	Paint Administration Building Exterior	10 years		\$25										\$25				
20	Window Coverings	12 years				\$20												\$20
21	Training Room Furniture	12 years				\$15												\$15
22	File Storage Space Saver	15 years				\$10												
23	Board Room Furniture	15 years			\$20													
24	Ergonomic Furniture - Front Office (4)	15 years				\$30												
25	Ergonomic Furniture - Back Offices (4)	15 years				\$35												
26	Replace Building Generator	20 years			\$60													
TOTAL FISCAL YEAR COST (in 1,000)				\$95	\$320	\$245	\$35	\$80	\$85	\$80	\$75	\$120	\$75	\$140	\$160	\$60	\$115	\$190

ADMINISTRATION DEPARTMENT TOTAL PLAN COST

\$1,875,000

EXHIBIT A
Administration Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
1	<p><u>GIS/Information Systems Development</u> Improve the Geographic Information System (GIS) and InfoSys annually and make any necessary revisions to the data or systems to better serve employees to provide better services to customers.</p>
2	<p><u>Network Routers & Switches</u> Replace the equipment, including routers and switches, for the local area computer network every four years.</p>
3	<p><u>Network Servers (2): File/Email Server & Document Management Server</u> Replace the File/Email Server & Document Management Server that serve the administration, fire and maintenance departments, which are planned to be upgraded every four years.</p>
4	<p><u>Network Servers (2): InfoSys/GIS Server & Backup/Security Server</u> Replace the InfoSys/GIS Server and the dedicated Backup/Security Server that serve the administration, fire and maintenance departments, which are planned to be upgraded every four years.</p>
5	<p><u>Workstation/Laptop Computers (9)</u> Replace and upgrade nine administration computer/laptop workstations every four years.</p>
6	<p><u>Digital Scanner</u> Replace the workstation digital scanner used to transfer printed material to an electronic copy every five years.</p>
7	<p><u>Network Plotter</u> Replace the plotter used print drawings, maps and exhibits larger than 11"x17" paper every 5 years.</p>
8	<p><u>Board Room Presentation System</u> Replace the Presentation System in the Board Room every six years, including video digital display unit, controllers and presentation console. The presentation console includes a computer and other equipment to connect to the District network.</p>
9	<p><u>Training Room Presentation System</u> Replace the Presentation System in the Training Room every six years, including video digital display unit, controllers and presentation console. The presentation console includes a computer and other equipment to connect to the District network.</p>
10	<p><u>Network Combination Copier/Printer/Scanner</u> Replace the primary network combination color copier/printer/scanner every six years. The replaced unit will serve as back-up to the new unit.</p>
11	<p><u>Traffic Monitoring Radar Units (4)</u> Replace four traffic monitoring radar units every six years.</p>
12	<p><u>Furnaces (4)</u> Replace the four furnaces (Front Office/Board Room/Training Room/Back Offices & DMFC/DMFPO) that serve the administration offices every ten years.</p>
13	<p><u>Board Room Chairs (9)</u> Replace nine chairs used by the Board Members, General Manager, Chief Financial Officer, Legal Council and Clerk during Board Meetings every ten years.</p>
14	<p><u>Board Room Audience Chairs (50)</u> Replace the audience chairs in the Board Room every ten years.</p>
15	<p><u>Board Room Sound System/Microphones</u> Replace the sound system and microphones in the Board Room every ten years.</p>

EXHIBIT A
Administration Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
16	<u>Carpeting</u> Replace the carpeting in the administration offices every ten years.
17	<u>Telephone & Voicemail System</u> Upgrade/replace telephone and voicemail system every ten years.
18	<u>1620 AM Radio Station Equipment (2)</u> Replace the AM information radio station equipment every ten years. Main station equipment is located at Forest Lake and the backup unit is at District Maintenance Building.
19	<u>Paint Administration Building Exterior</u> The exterior of the administration building and maintenance garage will be painted every ten years.
20	<u>Window Coverings</u> Replace the window coverings in the administration offices every twelve years.
21	<u>Training Room Furniture</u> Replace the Training Room tables every twelve years.
22	<u>File Storage Space Saver</u> Replace the file storage space saver used to store administration department records every fifteen years.
23	<u>Board Room Furniture</u> Replace the Board Room desks and tables every fifteen years.
24	<u>Ergonomic Furniture - Front Office (4)</u> Replace the ergonomically designed workstation furniture in four administrative staff cubicles every fifteen years.
25	<u>Ergonomic Furniture - Back Offices (4)</u> Replace the ergonomically designed workstation furniture in four management offices every fifteen years.
26	<u>Replace Building Generator</u> Replace the 100 KW generator that provides emergency back-up power to the administration building complex every twenty years. The generator is fueled by natural gas and includes a back-up propane system.

EXHIBIT B
Fire Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER	FISCAL YEAR COSTS (1,000)															
				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	
1	Carmel Hill Equipment**	Annual	N/A	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10	
2	Command Staff Computers (4)	4 years		\$10				\$10				\$10					\$10		
3	Workstation Computers (7)	4 years					\$25				\$25					\$25			
4	Forcible Entry Training Station	5 years			\$3					\$3						\$3			
5	AED Defibrillators (2)	5 years					\$6					\$6					\$6		
6	Meeting Room Projector	5 years			\$2					\$2						\$2			
7	Battalion Training Program Equipment**	5 years	\$8						\$8					\$8					
8	Thermal Imaging Cameras (3)**	5 years			\$35					\$35						\$35			
9	Mobile Data Computers (9)	5 years		\$20					\$20					\$20					
10	Paramedic EKG Monitors (3)**	5 years				\$67					\$67					\$67			
11	Water Rescue Program Equipment	5 years				\$5					\$5					\$5			
12	Network Combination Copier/Printer/Scanner	6 years					\$12						\$12						
13	Kitchen & Living Room Furniture	7 years				\$9							\$9						
14	Media Center and Electronic Components	7 years					\$4							\$4					
15	Dormitory Furniture	7 years			\$12							\$12							
16	4WD Command Vehicle 4601**	8 years			\$17								\$17						
17	4WD Command Vehicle 4605**	8 years			\$17								\$17						
18	Battalion Training Officer Vehicle 4651**	8 years								\$17								\$17	
19	Carmel Hill Physical Fitness Equipment**	8 years		\$5								\$5							
20	Physical Fitness Equipment	8 years									\$10								
21	Paramedic Vehicle 4617**	8 years									\$17								
22	4WD Command Vehicles 4612 and 4618**	8 years									\$35								
23	Fire Prevention Vehicle 4626	8 years								\$50								\$50	
24	Fire Prevention Vehicle 4624	8 years								\$45									
25	Portable Radios	10 years											\$55						
26	Confined Space Rescue Equipment	10 years										\$17							
27	Training Thermal Imaging Camera**	10 years			\$6											\$6			
28	High-Pressure Rescue Airbag Kit (2)**	10 years											\$7						
29	Rope Rescue Gear Ropes	10 years							\$5										
30	Radio Repeater Equipment	10 years											\$3						
31	Rope Rescue Line Gun	10 years			\$3										\$3				
32	Base Radio	10 years					\$5										\$5		
33	Universal Weight Machine	10 years						\$7										\$7	
34	Furnace	10 years										\$10							

**EXHIBIT B
Fire Department Capital Outlay Plan**

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER	FISCAL YEAR COSTS (1,000)															
				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	
35	Carpet	10 years	\$20												\$20				
36	Carmel Hill Station Utility Truck 7292**	10 years		\$20											\$20				
37	Ergonomic Office Furniture	10 years				\$50											\$50		
38	Paint Building Exterior	10 years		\$25											\$25				
39	Hydraulic Rescue Tools (3)**	10 years									\$32								
40	Medic Engine 22	10 years					\$650											\$650	
41	Ladder Truck 22	10 years										\$1,000							
42	Window Coverings	12 years				\$10													\$10
43	Rescue Struts	15 Years																	\$8
44	Overhead Electric Door Motors (8)	15 years			\$16														
45	Rapid Intervention Crew (RIC) Packs (3)**	15 years			\$25														
46	Vinyl Tile Flooring	15 years												\$20					
47	SCBA Spare Tanks (27)**	15 years		\$40															
48	Air Compressor, Rack, and Fill Station (2)**	15 years												\$65					
49	SCBA Units (20)**	15 years		\$168															
50	Carmel Hill Station Medic Engine 28**	15 years									\$325								
51	Wildland Patrol Vehicle 22	15 years			\$300														
52	PPE Lockers	20 years																	
53	Gym Athletic Rubber Flooring	20 years												\$15					
54	Lower-Level Restroom Remodel (FY 31/32)	20 years																	\$20
55	Kitchen Remodel	20 years				\$100													
56	Upper-Level Restroom Remodel (FY 35/36)	20 years																	
TOTAL FISCAL YEAR COST (1,000)				\$298	\$446	\$251	\$712	\$27	\$43	\$117	\$571	\$1,070	\$230	\$107	\$84	\$142	\$671	\$122	

**Items are cost-shared with other fire districts

FIRE DEPARTMENT TOTAL PLAN COST

\$4,891,000

EXHIBIT B
Fire Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
1	<p><u>Carmel Hill Station Equipment**</u> The Carmel Hill Fire Station is operated jointly with Cal Fire and the Cypress Fire Protection District. An annual allocation of \$10,000 per year is included for the PBCSD's share (50%) of replacing capital equipment.</p>
2	<p><u>Command Staff Computers (4)**</u> Replace four cost-shared computer used by fire command positions every four years. Each workstation will include a computer, monitor, keyboard and printer.</p>
3	<p><u>Workstation Computers (7)</u> Replace seven computer workstations used by the operations and prevention staff every four years. Each workstation will include a computer, monitor, keyboard and printer.</p>
4	<p><u>Forcible Entry Training Station</u> Replace the Forcible Entry Training Station (FETS) that supports Battalion II's ongoing training program to train current and future employees in various forcible entry techniques every five years.</p>
5	<p><u>AED Defibrillators (2)</u> Replace two semi-automatic defibrillators used on first response emergency calls every five years.</p>
6	<p><u>Meeting Room Projector</u> Replace the audiovisual equipment in the Meeting Room every five years, including the multimedia projector and screen.</p>
7	<p><u>Battalion Training Program Equipment**</u> Replace the cost-shared SCBA Fit Tester, Forcible Entry Prop, and Fire Extinguisher Simulator used in the Battalion Training Program every five years. PBCSD is responsible for 37.5%.</p>
8	<p><u>Thermal Imaging Cameras (3)**</u> Replace three thermal imaging cameras every five years. The camera can detect dangerous, unseen obstacles and assist in rescue operations during low-visibility conditions. 1 camera is located on the medic engine, 1 on the ladder truck, and 1 on the Carmel Hill medic engine at 50% cost-share.</p>
9	<p><u>Mobile Data Computers (9)</u> Replace nine laptop computers installed in each apparatus and command vehicle every five years.</p>
10	<p><u>Paramedic EKG Monitors (3)**</u> Replace three cost-shared 12-lead monitor EKGs used by paramedics to monitor heart rhythms every five years. 1 monitor will be located on Medic Engine 22, 1 on the Carmel Hill medic engine at 50% cost-share, and 1 on the paramedic vehicle at 37.5% cost-share.</p>
11	<p><u>Water Rescue Program Equipment</u> Replace fire department water rescue equipment (paddle boards, wetsuits, lifevest) every five years.</p>
12	<p><u>Network Combination Copier/Printer/Scanner</u> Replace the fire department network combination copier/printer/scanner every six years.</p>
13	<p><u>Kitchen & Living Room Furniture</u> Replace kitchen table and chairs, and seating furniture for upstairs and downstairs living areas.</p>
14	<p><u>Media Center and Electronic Components</u> Replace televisions, dvd players and storage center in upstairs and downstairs living areas.</p>
15	<p><u>Dormitory Furniture</u> Replace dormitory furniture, including mattresses, beds, and nightstands (12).</p>

EXHIBIT B
Fire Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
16	<u>4WD Command Vehicle 4601**</u> Replace four-wheel drive utility vehicle 4601 used by the fire division chief, including lights, radio console and command box every eight years at 37.5% cost-share.
17	<u>4WD Command Vehicle 4605**</u> Replace four-wheel drive utility vehicle 4605 used by the fire prevention chief including lights, radio console and command box every eight years at 37.5% cost-share.
18	<u>Battalion Training Officer Vehicle 4651**</u> Replace utility pickup truck used by training officer, which has an expected useful life of eight years. The cost reported for this vehicle represents PBCSD's 37.5% share.
19	<u>Carmel Hill Station Physical Fitness Equipment**</u> Replace physical fitness exercise equipment for the Carmel Hill fire station every five years at a 50% cost-share with Cypress District.
20	<u>Physical Fitness Equipment</u> Replace two commercial-grade treadmill and an elliptical machine in gym every five years.
21	<u>Paramedic Vehicle 4617**</u> Replace the cost-shared pickup truck used by the EMS Captain, including lights, radio console and command box every eight years. The vehicle is cost-shared with Cypress & Carmel Highlands Fire Protection Districts. PBCSD Cost Share = 37.5%.
22	<u>4WD Command Vehicles 4612 and 4618**</u> Replace two cost-shared four-wheel drive utility vehicles 4612 & 4618 used by the two battalion operations chiefs including lights, radio console and command box every eight years. Vehicles are cost-shared with Cypress & Carmel Highlands Fire Protection Districts.
23	<u>Fire Prevention Vehicle 4626</u> Replace utility pickup truck 4624 used by the fire prevention captain including lights, radio console and command box every eight years.
24	<u>Fire Prevention Vehicle 4624</u> Replace utility pickup truck 4626 used by the fire prevention captain including lights, radio console and command box every eight years.
25	<u>Portable Radios</u> District's current portable radios were purchased as part of a County wide grant. Radios have out lived their operational/useful life.
26	<u>Confined Space Rescue Equipment</u> Purchase equipment to perform a confined-space emergency rescue. Including tripod, winch, rescue lines, portable ventilation units and rescue baskets used for permit required confined space entry and rescue.
27	<u>Training Thermal Imaging Camera**</u> Replace one thermal imaging camera used for training every ten years. The camera can detect dangerous, unseen obstacles and assist in rescue operations during low visibility conditions. PBCSD Cost Share = 37.5%
28	<u>High-Pressure Rescue Airbag Kit (2)**</u> Replace two airbag kits containing items required to lift heavy objects during rescue operations every ten years, 1 at a 50% cost-share with Cypress District.
29	<u>Rope Rescue Gear Ropes</u> Rope rescue gear on Truck 22, Medic Engine 22, and Medic Engine 28 (PBCSD Cost Share = 37.5%). Replace rope rescue gear every ten years.
30	<u>Radio Repeater Equipment</u> Replace radio repeater equipment every ten years.

EXHIBIT B
Fire Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
31	<u>Rope Rescue Line Gun</u> Replace the equipment used to shoot a rope rescue line for use in coastal rescue operations every ten years.
32	<u>Base Radio</u> Replace the base radio station located at fire operations offices every ten years.
33	<u>Universal Weight Machine</u> Replace the universal weight machine used in the gym every ten years.
34	<u>Furnace</u> Replace the furnace every ten years
35	<u>Carpet</u> Replace the carpeting in the fire department every ten years.
36	<u>Carmel Hill Station Utility Truck 7292**</u> Replace the cost-shared utility pickup truck with ladder rack for use at the Carmel Hill station every ten years at 50%.
37	<u>Ergonomic Office Furniture</u> Replace ergonomically designed workstation furniture in the Fire Department offices every ten years.
38	<u>Paint Building Exterior</u> Paint the exterior of the fire department building every ten years.
39	<u>Hydraulic Rescue Tools (3)**</u> Replace 3 cost-shared hydraulic rescue tool (jaws of life) used to provide access to damaged vehicles every ten years. 1 hydraulic rescue tool will be located on the medic engine, 1 on the ladder truck, and 1 on the Carmel Hill medic engine at a 50% cost-share.
40	<u>Medic Engine 22</u> Replace the first-line medic engine with a pumping capacity of 1500 gpm every ten years. The replaced medic engine will be reassigned as the reserve engine 22, and the replaced reserve engine will become surplus equipment. The expected useful life is 20 years with approximately 10 years as a first-line engine, and the remaining years as the reserve engine.
41	<u>Ladder Truck 22</u> Replace the quint 70-foot ladder Truck engine 22 with a pumping capacity of 1500 gpm every fifteen years. Quint refers to the five components of the vehicle including pump, water tank, fire hose, aerial device and ground ladders.
42	<u>Window Coverings</u> Replace the window coverings in the fire department every twelve years.
43	<u>Rescue Struts</u> Rescue struts will be stowed on Ladder Truck 22 and used in vehicle accident response to stabilize vehicles allowing for patient access/extraction.
44	<u>Overhead Electric Door Motors (8)</u> Electric motors will be installed on 8 metal overhead doors on for Fire Department parking bays.
45	<u>Rapid Intervention Crew (RIC) Packs (3)**</u> Replace three sling-style, high-capacity RIC packs, which include Self Contained Breathing Apparatus (SCBA) and appurtenances that are specifically designed for firefighter rescue operations every fifteen years. 1 RIC is located on the medic engine, 1 on the ladder truck, and 1 on the Carmel Hill medic engine at a 50% cost-share.

EXHIBIT B
Fire Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
46	<u>Vinyl Tile Flooring</u> Replace tile flooring in high-traffic areas in lower-level of the Fire Department.
47	<u>SCBA Spare Tanks (27)**</u> Purchase twenty-seven spare tanks for Self-Contained Breathing Apparatus units.
48	<u>Air Compressor, Rack, and Fill Station (2)**</u> Replace the air compressor used to fill air bottles, rack to store air bottles, and the fill station every fifteen years. One unit is located at PBCSD and one at Carmel Hill Station at 50% cost-share.
49	<u>SCBA Units (20)**</u> Replace twenty Self-Contained Breathing Apparatuses (SCBA) every fifteen years. Units include a pack, an air cylinder rated for 45 minutes of use, a full-face air mask, mic, and related valves and hoses. 5 SCBAs are located in the medic engine, 5 in the reserve engine, 5 in the ladder truck, and 5 in staff vehicles (2 for prevention and 3 at 37.5% cost-share).
50	<u>Carmel Hill Station Medic Engine 28**</u> Replace the Carmel Hill Station medic engine with a pumping capacity of 1500 gpm every fifteen years at 50% cost-share.
51	<u>Wildland Patrol Vehicle 22</u> Replace the Type IV wildland engine 22 every fifteen years. This vehicle is used for patrolling open space areas daily during peak fire conditions and for initial response to incidents in open spaces. It includes a 300-gallon water storage tank and 190 gpm pump.
52	<u>PPE Lockers</u> Replacement of existing lockers. Current lockers have poor ventilation and do not have enough room to hold all PPE equipment.
53	<u>Gym Athletic Rubber Flooring</u> Replace athletic rubber flooring in the Fire Department gym.
54	<u>Lower-Level Restroom Remodel (2)</u> Rehabilitate lower-level restrooms (2) located in entrance way and hallway of the Fire Department every 20 years. Includes replacing tile, sink, toilet, mirror, lighting, etc. Next replacement scheduled for FY 31/32.
55	<u>Kitchen Remodel</u> Rehabilitate Fire Department Kitchen every 20 years. Includes replacing appliances, cabinetry, countertops, etc.
56	<u>Upper Level Restroom Remodel</u> Rehabilitate Fire Department Upper Level Restroom every 20 years. Includes replacing tile, sink, toilet, showers, mirror, lighting, etc

**Items are cost-shared with other fire districts

EXHIBIT C
Wastewater Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER	FISCAL YEAR COSTS (1,000)																
				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		
1	Maintenance Equipment	Annual	N/A	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25	\$25		
2	Sewer and Manhole Replacement Projects	2 years	\$175	\$600		\$500		\$500		\$500		\$500		\$500		\$500		\$500		
3	Workstation Computers (2)	4 years				\$8					\$8				\$8					
4	Confined Space Safety Equipment	4 years	\$10				\$20					\$20				\$20				
5	SCADA System Servers/Software (3)**	4 years			\$30				\$30				\$30					\$30		
6	Pipe (Underground) Locator	5 years				\$8						\$8						\$8		
7	Pump Station P-8 Spare Pump	5 years			\$10						\$10						\$10			
8	SCADA Alarm System Equipment Upgrade**	7 years			\$15							\$15								
9	Overhead Electric Door Motors (8)	10 years			\$16											\$16				
10	Replace Fiberglass Bay Doors (5)	10 years			\$35											\$35				
11	Pump Station P-7 Flow Meter	10 years				\$25												\$25		
12	Fueling Station Rehabilitation	10 years							\$25											
13	PB-1 Utility Truck	10 years						\$45												
14	PB-4 Utility Truck	10 years	\$45											\$45						
15	PB-5 Utility Truck	10 years											\$45							
16	Pump Station P-3 Flow Meter	10 years			\$50										\$50					
17	Pump Station P-3 75 HP Pumps (4)	10 years	\$150											\$150						
18	Pump Station P-8 Rehabilitation	10 years			\$100											\$100				
19	Pump Station P-3 150 HP Pumps (2)	10 years				\$200											\$200			
20	Pump Station P-7 Rehabilitation	10 years							\$150											
21	Pump Station P-3 Rehabilitation	10 years	\$30	\$400										\$400						
22	PB-2 Line Cleaning Truck	10 years							\$350											
23	Pump Station P-3 Mixer	10 years						\$10										\$10		
24	Pump Station P-7 Mixer	10 years			\$10											\$10				
25	Pump Station P-8 Mixer	10 years		\$20										\$10						
26	Pump Station P-3 Solids Grinder	15 years																\$75		
27	Portable Lighting Tower	15 years								\$10										
28	Automatic Transfer Switches (FY17/18; 3 of 9)	15 years		\$15					\$15					\$15						

**EXHIBIT C
Wastewater Department Capital Outlay Plan**

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER	FISCAL YEAR COSTS (1,000)																
				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		
29	Portable 6-inch Pump	15 years										\$35								
30	PB-6 Dump Truck	15 years		\$50																
31	Pump Station P-5 Diesel Tank System	15 years			\$50															
32	Pump Station P-7 Diesel Tank System	15 years			\$50															
33	Pump Station P-3 Generator	15 years				\$100														
34	Pump Station P-3 Diesel Tank System	15 years			\$75															
35	Carmel Gate Flume Metering Station	15 years		\$75																
36	Portable 10-inch Pump	15 years			\$100															
37	Trailer-Mounted Sewer Rodder	15 years										\$110								
38	Portable 60KW Quiet Generators (4)	15 years		\$120	\$120															
39	Pump Station P-5 Generator	15 years	\$100																	
40	PB-3 Televising Vehicle	15 years				\$135														
41	Pump Station P-7 150KW Generator	15 years									\$160									
42	Rebuild Pump Station P-1	15 years				\$400														
43	Rebuild Pump Station P-2	15 years			\$400															
44	Rebuild Pump Station P-4	15 years		\$400																
45	Rebuild Pump Station P-5	15 years					\$400													
46	Rebuild Pump Station P-6	15 years													\$120					
47	Trench Shoring	20 years			\$10															
48	Fire Alarm System	20 years				\$15														
49	Easement Line Cleaning Equipment	20 years					\$25													
50	Backhoe Loader	20 years				\$80														
51	PB-7 Crane/Flatbed Truck	20 years			\$100															
TOTAL FISCAL YEAR COST (1,000)				\$1,160	\$765	\$1,601	\$996	\$1,025	\$595	\$535	\$238	\$678	\$100	\$1,145	\$83	\$836	\$288	\$655		

**Items are cost-shared with Recycled Water

WASTEWATER DEPARTMENT TOTAL PLAN COST

\$10,700,000

EXHIBIT C
Wastewater Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
1	<u>Maintenance Equipment</u> An annual allocation of \$25,000 has been included each year for the purchase of capital equipment not previously identified on the Capital Outlay Plan.
2	<u>Sewer and Manhole Replacement Projects</u> The maintenance department inspects manholes and wastewater lines to identify problem areas. Each year the wastewater lines and manholes that require replacement or rehabilitation are identified and prioritized by condition. The annual sewer replacement project is designed to address the highest priority areas until the budget limit is reached. The allocation of \$600,000 allows the replacement of approximately one mile of sewer main lines in the wastewater collection system.
3	<u>Workstation computers (2)</u> Replace two maintenance computer workstations and two black and white laser printers every four years.
4	<u>Confined Space Safety Equipment</u> Replace the confined space safety equipment, including tripod, winch, rescue lines, portable ventilation units, rescue baskets and air bottles used for permit required confined space entry and rescue operations every four years.
5	<u>SCADA System Servers/Software (3)**</u> Replace three servers for the Supervisory Control and Data Acquisition (SCADA) system that allows the wastewater pump stations to be continuously monitored and controlled remotely. Cost-shared with Reclamation Project (25%).
6	<u>Pipe (Underground) Locator</u> Improved technology will increase the speed and accuracy of locating underground pipes for Underground Service Alert (USA) work requests.
7	<u>Pump Station P-8 Spare Pump</u> Spare 7.5hp / 480v submersible pump readily deployable in the event of pump failure; one time purchase (estimated cost \$10,000)
8	<u>SCADA Alarm System Equipment Upgrade**</u> Replace and upgrade equipment used for SCADA alarm system every seven years. Cost-shared with Reclamation Project (25%).
9	<u>Overhead Electric Door Motors (8)</u> Replace eight electric motors on metal overhead doors for Maintenance Building bays.
10	<u>Replace Fiberglass Bay Doors (5)</u> Replace five fiberglass bay doors for Maintenance Building bays. Includes electric door openers.
11	<u>Pump Station P-7 Flow Meter</u> Replace the magnetic flow meter at pump station P-7.
12	<u>Fueling Station Rehabilitation</u> The fuel pump and monitoring and security system for the diesel and gasoline fueling station will be rehabilitated.

EXHIBIT C
Wastewater Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
13	<p><u>PB-1 Utility Truck</u> The PB-1 utility truck will be replaced. This vehicle is a half-ton four-wheel drive pickup truck with an estimated useful life of ten years.</p>
14	<p><u>PB-4 Utility Truck</u> This is a one-ton utility truck used primarily for pump station maintenance. The truck has an expected useful life of ten years.</p>
15	<p><u>PB-5 Utility Truck</u> Replace the heavy-duty 4 WD PB-5 utility truck primarily used by the field operations manager every ten years.</p>
16	<p><u>Pump Station P-3 Flow Meter</u> The magnetic flow meter and related piping at pump station P-3 will be replaced.</p>
17	<p><u>Pump Station P-3 75 HP Pumps (4)</u> Replace four 75 horsepower pumps and motors at pump station P-3 every ten years</p>
18	<p><u>Pump Station P-8 Rehabilitation</u> Pump station P-8 is located adjacent to the Inn at Spanish Bay (2700 17-Mile Drive). The pump impellers will be replaced, the pump motors will be rebuilt, the sump pump will be replaced and the ventilation fans will be replaced.</p>
19	<p><u>Pump Station P-3 150 HP Pumps (2)</u> Replace two 150 horsepower pumps and motors at pump station P-3 every ten years.</p>
20	<p><u>Pump Station P-7 Rehabilitation</u> Periodic station rehabilitation will include replacement of or upgrades to the fixed equipment and internal system components. The estimated cost of this rehabilitation is estimated to be \$150,000 and will be scheduled every ten years.</p>
21	<p><u>Pump Station P-3 Rehabilitation</u> Periodic station rehabilitation of fixed equipment and internal system components within Pump Station P-3 will be scheduled every 10 years and include: This years rehabilitation project will focus on Wet-Well / Bypass Improvements aswell as Electrical, Lighting and Ventalation Improvements</p>
22	<p><u>PB-2 Line Cleaning Truck</u> Replace the sewer line cleaning truck, which is used to remove blockages, roots, and debris from the collection system using a water jetting system every ten years. It contains a water storage tank, a water pump, vacuum fan, debris storage tank and 800 feet of hose.</p>
23	<p><u>Pump Station P-3 Mixer</u> Pump Station P-3 wet well sees a high solids load. A permanent mixer would reduce maintenance problems.</p>
24	<p><u>Pump Station P-7 Mixer</u> Pump Station P-7 wet well sees a high grease load from the kitchen. A permanent mixer would reduce maintenance problems.</p>
25	<p><u>Pump Station P-8 Mixer</u> Pump Station P-8 wet well sees a significant grease load from the kitchen. A permanent mixer would reduce maintenance problems.</p>
26	<p><u>Pump Station P-3 Solids Grinders</u> Replaced (1) of (2) Solid Grinders at Pump Station P3 every 15yrs</p>
27	<p><u>Portable Lighting Tower</u> Replace the portable lighting tower used for emergency night time repairs.</p>

EXHIBIT C
Wastewater Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
28	<u>Automatic Transfer Switches (9)</u> Replace Automatic Transfer Switches (3) every 5yrs; transfers the power supply for the pump station from the electrical utility to the emergency diesel generator during electrical outages.
29	<u>Portable 6-inch Pump</u> A trailer mounted 6-inch pump with sound-reducing enclosure capable of transporting wastewater will be purchased for smaller pump station bypass operations.
30	<u>PB-6 Dump Truck</u> This vehicle transports bulk material and allows the crew to perform more field construction work.
31	<u>Pump Station P-5 Diesel Tank System</u> Replace the diesel underground fuel tank for the stand-alone generator at pump station P-5.
32	<u>Pump Station P-7 Diesel Tank System</u> Replace the diesel underground fuel tank for the stand-alone generator at pump station P-7.
33	<u>Rehabilitate Pump Station P-3 Generator</u> The stand-alone 400KW generator at pump station P-3 will be replaced.
34	<u>Pump Station P-3 Diesel Tank System</u> Replace the existing 1,000-gallon underground diesel storage tank with a new 2,000-gallon tank to provide additional diesel storage capacity and allow a longer emergency run-time for the 400 KW stand-alone power generator at pump station P-3.
35	<u>Carmel Gate Flume Metering Station</u> Replace Carmel Gate flume metering station that meters all wastewater flow to CAWD treatment plant.
36	<u>Portable 10-inch Pump</u> Replace the 10-inch, 3000-gpm portable wastewater pump, which allows the maintenance crew to bypass problem areas that require repair every 15 years. The 10-inch diameter pump is sized to handle the expected wet weather flow for the 27-inch diameter interceptor line and to bypass pump station P3. This replacement will include a noise-reduction enclosure.
37	<u>Trailer-Mounted Sewer Rodder</u> Replace the trailer-mounted continuous power rodder that is used to clear stoppages and perform routine root removal maintenance on wastewater lines and also provides a redundant capacity to clear sewer main lines if the line cleaning truck is out of service.
38	<u>Portable 60KW Quiet Generators (4)</u> Replace two of the four 60KW portable generators mounted on trailers with noise reduction enclosures every fifteen years, and replace the remaining two the following year. These portable generators serve pump stations P-1,2,4 and 6 during power outages.
39	<u>Pump Station P-5 Generator</u> Replace the stand-alone 60KW generator at pump station P-5.
40	<u>PB-3 Televising Vehicle</u> The televising truck will be replaced including a self-propelled camera and computer equipment that will allow televised data to be stored in District fileservers.
41	<u>Pump Station P-7 150KW Generator</u> The stand-alone 100KW generator at pump station P-7 will be replaced.

EXHIBIT C
Wastewater Department Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
42	<u>Rebuild Pump Station P-1</u> This project will convert the existing station to a submersible pump station. Construction will include replacing existing dry and wet wells with a single wet well and valve vault; two submersible pumps; guide rail assembly; piping and valves; mixer; bypass pumping piping assembly; and associated electrical and instrumentation. The one-time cost associated with this rebuild is estimated to be \$400,000. Periodic station rehabilitation will include replacement of or upgrades to the fixed equipment and internal system components. The estimated cost of this rehabilitation is estimated to be \$120,000 and will be scheduled every fifteen years.
43	<u>Rebuild Pump Station P-2</u> This project will convert the existing station to a submersible pump station. Construction will include replacing existing dry and wet wells with a single wet well and valve vault; two submersible pumps; guide rail assembly; piping and valves; mixer; bypass pumping piping assembly; and associated electrical and instrumentation. The one-time cost associated with this rebuild is estimated to be \$400,000. Periodic station rehabilitation will include replacement of or upgrades to the fixed equipment and internal system components. The estimated cost of this rehabilitation is estimated to be \$120,000 and will be scheduled every fifteen years.
44	<u>Rebuild Pump Station P-4</u> This project will convert the existing station to a submersible pump station. Construction will include replacing existing dry and wet wells with a single wet well and valve vault; two submersible pumps; guide rail assembly; piping and valves; mixer; bypass pumping piping assembly; and associated electrical and instrumentation. The one-time cost associated with this rebuild is estimated to be \$400,000. Periodic station rehabilitation will include replacement of or upgrades to the fixed equipment and internal system components. The estimated cost of this rehabilitation is estimated to be \$120,000 and will be scheduled every fifteen years.
45	<u>Rebuild Pump Station P-5</u> Rebuild Pump Station P5 and include: 1) Replacement of the four 25-horsepower pumps and motors. 2) Replacement of the motor starters for the four pump motors. 3) Replacement of the surge tank system. 4) Replacement of the flow meter. 5) Reconstruct the wet well and dry well.
46	<u>Rebuild Pump Station P-6</u> Periodic station rehabilitation will include replacement of or upgrades to the fixed equipment and internal system components. The estimated cost of this rehabilitation is estimated to be \$120,000 and will be scheduled every fifteen years.
47	<u>Trench Shoring</u> Replace portable trench shoring equipment that allows the maintenance crew to perform trenching work in poor soil conditions or conditions that require shoring per OSHA standards.
48	<u>Fire Alarm System</u> The fire alarm system for the District Offices will be replaced.
49	<u>Easement Line Cleaning Equipment</u> This equipment extends the range of the line cleaning truck so that sewer lines located in areas with no vehicle accessibility can be reached without manually pulling hose.
50	<u>Backhoe Loader</u> This piece of equipment allows the maintenance crew to perform more field construction work and can be modified to act as a forklift.
51	<u>PB-7 Crane/Flatbed Truck</u> Replace flatbed truck and crane with a lifting capacity of 10,000 lbs.

**Items are cost-shared with Recycled Water

EXHIBIT D
Recycled Water Distribution System Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER																	
				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		
1	SCADA System Servers/Software (3)**	4 years			\$10				\$10				\$10				\$10			
2	SCADA Alarm System Equipment Upgrade**	7 years			\$10							\$10								
3	Air Diffuser Membrane Replacement	7 years				\$15							\$15							
4	Flow Meter Remote Measuring Systems (13)	10 years			\$25										\$25					
5	Forest Lake Chemical Feed System	10 years			\$15										\$15					
6	Forest Lake Instrumentation	10 years			\$25										\$25					
7	Forest Lake Strainer Screens (3)	10 years				\$20										\$20				
8	Storage Tank Exterior Coating	10 years		\$150										\$150						
9	Forest Lake Feed Pumps (2)	10 years							\$80											
10	Forest Lake Spare Feed Pump	10 years					\$40											\$40		
11	Forest Lake Mixers (2)	10 years				\$60										\$60				
12	15 KW Generator	15 years											\$30							
13	Viscaino Pumps & Motor Starters (2)	15 years					\$45													
14	Viscaino Generator	15 years					\$50													
15	Storage Tank Interior Coating	15 years	\$100	\$250																
16	Forest Lake Blowers (2)	15 years						\$100												
17	Acid Tank Replacement	15 years	\$50																	
18	Storage Tank Cathodic Protection Rehab	20 years	\$25																	
19	Pipeline Cathodic Protection - Carmel	20 years		\$50	\$200															
20	Forest Lake Gates and Operators	20 years											\$115							
21	Forest Lake Air System Stainless Steel Piping	20 years											\$250							
22	Forest Lake Hypalon Liner	20 years											\$2,500							
23	Pontoon Work (Crane) Boat	20 years												\$20						
TOTAL FISCAL YEAR COST (1,000)				\$450	\$285	\$95	\$135	\$100	\$90	\$0	\$0	\$40	\$2,890	\$170	\$65	\$80	\$50	\$0		

**Items are cost-shared with Wastewater Department

RECYCLED WATER DISTRIBUTION SYSTEM TOTAL PLAN COST

\$4,450,000

EXHIBIT D
Recycled Water Distribution System Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
1	<u>SCADA System Servers/Software (3)**</u>
	Replace three servers for the Supervisory Control and Data Acquisition (SCADA) system that allows the wastewater pump stations to be continuously monitored and controlled remotely. Cost-shared with Wastewater Department (75%).
2	<u>SCADA Alarm System Equipment Upgrade**</u>
	Replace and upgrade equipment used for SCADA alarm system every seven years. Cost-shared with Wastewater Department (75%)
3	<u>Air Diffuser Membrane Replacement</u>
	Replace a total of (60) flexible membrane tube diffusers located at the bottom of the Forest Lake Reservoir; used for aeration / vertical mixing.
4	<u>Flow Meter Remote Measuring Systems (13)</u>
	Replace remote sensors on the irrigation meter vault lids to allow recycled water meter readings to be electronically recorded without lifting the meter vault doors.
5	<u>Forest Lake Chemical Feed System</u>
	Miscellaneous pumps and measuring equipment for the chlorine and pH adjustment chemical feed systems will be replaced.
6	<u>Forest Lake Instrumentation</u>
	The chlorine analyzer and pH meter for the Forest Lake facilities will be replaced.
7	<u>Forest Lake Strainer Screens (3)</u>
	Three strainer screens that remove algae material prior to distribution will be replaced.
8	<u>Storage Tank Exterior Coating</u>
	Apply new protective layer of paint on the exterior of the 2.5 million-gallon recycled water storage tank.
9	<u>Forest Lake Feed Pumps (2)</u>
	Two feed pumps that transport recycled water to the distribution system will be replaced.
10	<u>Forest Lake Spare Feed Pump</u>
	Replace spare feed pump at Forest Lake.
11	<u>Forest Lake Mixers (2)</u>
	Replace two mixers in Forest Lake.
12	<u>15 KW Generator</u>
	Replacement Cost to purchase a 15KW generator used at Forest Lake Reservoir.
13	<u>Viscaino Pumps & Motor Starters (2)</u>
	Replace the two potable water pumps and motor starters at the Viscaino pump station that supplies potable water to the 2.5 million-gallon storage tank.
14	<u>Viscaino Generator</u>
	Replace 250KW electrical power generator at the Viscaino potable water pump station.

EXHIBIT D
Recycled Water Distribution System Capital Outlay Plan

ITEM NO.	CAPITAL ITEM
15	<u>Storage Tank Interior Coating</u> Apply new protective layer of paint on the interior of the 2.5 million-gallon recycled water storage tank.
16	<u>Forest Lake Blowers (2)</u> Replace two blowers at Forest Lake Chemical Building.
17	<u>Acid Tank Replacement</u> Replaced acid storage tank within the Forest Lake Chemical Storage Building every fifteen years
18	<u>Storage Tank Cathodic Protection Rehabilitation</u> Rehabilitate the cathodic protection system at the recycled Poppy water storage tank that reduces the potential for corrosion on the interior surface of the tank below water level.
19	<u>Pipeline Cathodic Protection - Carmel</u> Field-testing of the recycled water distribution steel pipeline, which has a total length of 40,000 feet, has indicated the potential for corrosion. This project includes the design (FY17/18) and construction (FY18/19) of a cathodic protection system for the recycled water pipeline in Carmel to reduce the potential for corrosion and extend the useful life of the pipeline.
20	<u>Forest Lake Gates and Operators</u> Replace sluice gates and operators located at the outlet structure every twenty years.
21	<u>Forest Lake Air System Stainless Steel Piping</u> Replace the stainless steel air piping located at the bottom of Forest Lake every twenty years.
22	<u>Forest Lake Hypalon Liner</u> Replace the Hypalon Liner for Forest Lake every twenty years.
23	<u>Pontoon Work (Crane) Boat</u> The Pontoon work boat allows safe heavy lifting for servicing and repair of equipment (underwater mixers and underwater slide gates) located out in the Forest Lake Reservoir.

**Items are cost-shared with Wastewater Department

EXHIBIT E
Undergrounding Overhead Utility Projects
Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	USEFUL LIFE	ROLL OVER	FISCAL YEAR COSTS (1,000)															
				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	
1	Undergrounding Overhead Utility Projects	Annual	\$3,873	\$250	\$3,000	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	
TOTAL FISCAL YEAR COST (1,000)				\$250	\$3,000	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100

UNDERGROUNDING OVERHEAD UTILITY PROJECTS TOTAL PLAN COST \$17,550,000

EXHIBIT F
Carmel Area Wastewater District Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	ROLL OVER	FISCAL YEAR COSTS (1,000)														
			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
1	Technical Studies		\$20	\$8		\$12		\$17			\$8		\$17				
2	Sea Level Rise Analysis & Planning		\$17	\$17						\$3				\$3			
3	Arc Flash Evaluation						\$10										\$20
4	PH I - Stand by Blower Replacement	\$22															
5	PH I - Standby & Main Power Integration	\$250															
6	PH I - Hypo/SBS (Reclamation 40%)	\$130															
7	PH I - #3 Water System Improvements	\$8															
8	PH I - Dewatering	\$117															
9	PH I - RAS Building Rehabilitation	\$100															
10	PH I - Digester Firm Capacity Improvements	\$333															
11	PH I - #1 Water Improvements	\$8															
12	PH I - Stormwater Improvements	\$17															
13	PH I - DAFT (Reclamation 50%)	\$29															
14	PH I - Flare Replacement	\$88															
15	CM contract for PH 1 Construction	\$122															
16	PLC Programing for PH 1	\$15															
17	PH II ES - WWTP O&M Manual		\$33														
18	PH II ES - Demo Project		\$208														
19	PH II ES - Design Services PH 2		\$117	\$117													
20	PH II ES - #1 Digester Clean and Evaluation		\$92														
21	PH II - Influent Pump station				\$250												
22	PH II - Effluent Building (Reclamation 40%)			\$60	\$80												
23	PH II - Headworks and Grit Screening			\$150	\$233												
24	PH II - #1 Digester Rehab, Mixing			\$83	\$308												
25	PH II - Chlorine Building Repurpose/Electrical			\$67	\$133												
26	PH II - Blower Building MCC & Power Impr			\$67	\$50												
27	PLC Programing for PH 2 (CalCon)			\$20	\$27												
28	CM Contract for PH 2 Construction			\$100	\$100												
29	SCADA Network - Phase II			\$42													
30	PH III - Design and CM assistance								\$67	\$67	\$33	\$33					
31	PH III - Gas Conditioning System		\$30							\$175							
32	PH III - Co-Gen Project										\$333						
33	PH III - Septage/Wet Waste/Grease Receiving											\$233					
34	PLC Programing PH 3 (CalCon)									\$17	\$17	\$50					

EXHIBIT F
Carmel Area Wastewater District Capital Outlay Plan

ITEM NO.	CAPITAL ITEM	ROLL OVER	FISCAL YEAR COSTS (1,000)														
			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
35	Air Monitoring		\$5														
36	Micro Turbine Rehab		\$49														
37	Aeration Valve/Gate & Instrument Rehab					\$83											
38	Dewatering Standby Equipment			\$33	\$17								\$150				
39	Primary Clarifier Rehab			\$75									\$20			\$20	
40	Secondary Clarifier Rehab		\$83										\$20		\$20		
41	DAFT Rehab											\$33				\$20	
42	Digester #1 Clean and Inspect														\$67		
43	Digester #2 Clean and Inspect												\$60				
44	Influent Building Rehab														\$50		
45	Effluent Building Rehab								\$33								
46	Headworks Rehab														\$67		
47	Primary Blower Rehab						\$133								\$0		\$17
48	RAS Building Rehab																\$50
49	Aeration Basin Rehabilitation										\$247						
50	Chlorine Contact Channel Rehab(Recl 25%)							\$63									
51	Plant Paving & Drainage		\$33		\$50											\$33	
52	Outfall Crossing		\$40	\$150	\$167												
53	Operations Building Rehab		\$25							\$42							
54	Lunch Room/Meeting Hall Replacement							\$58	\$200								
55	Misc. Yard Piping Rehab		\$17	\$40	\$30	\$30	\$30	\$30	\$30	\$30	\$30						
57	Sea Level Rise Structural Protection																
58	Cathodic Protection					\$10									\$10		
59	Maintenance Building Reconstruction								\$143								
60	Influent Conveyance and Screening																
61	Treatment Plant Administration Building																
62	Sea Level Rise Structural Protection																
63	Other Capital Items Frm FY2016/17	\$708															
64	Short-Term Capital Improvements Projects		\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50
65	Capital Purchase		\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50
TOTAL FISCAL YEAR COST (1,000)			\$869	\$1,128	\$1,545	\$235	\$273	\$268	\$543	\$463	\$768	\$450	\$197	\$273	\$313	\$173	\$187

CAWD TOTAL PLAN COST

\$7,687