

ENGINEERING COMMITTEE

AGENDA

Committee Meeting:
Tuesday, November 26, 2019
2:00 PM (Board Room)

Calaveras County Water District
120 Toma Court / P.O. Box 846
San Andreas, California 95249

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Administration Office at (209) 754-3028. Notification in advance of the meeting will enable CCWD to make reasonable arrangements to ensure accessibility for this meeting. Any documents that are made available to the Committee before or at the meeting, not privileged or otherwise protected from disclosure, and related to agenda items, will be made available at CCWD for public review.

ORDER OF BUSINESS

CALL TO ORDER / PLEDGE OF ALLEGIANCE

1. **PUBLIC COMMENT**

At this time, members of the public may address the Committee on any non-agendized items. The public is encouraged to work through staff to place items on the agenda for consideration by the Committee. Comments are limited to three (3) minutes per person.

2.* **APPROVAL OF MINUTES**

- Date of Prior Minutes September 30, 2019

3.* **NEW BUSINESS**

- 3a Presentation / Discussion Update on New Operations Maintenance Facility
(Kevin Williams, Civil Engineer)
- 3b Presentation / Discussion Update on Copper Cove Lift Stations 6, 8, 15 and 18
Improvements and Force Main Bypass (Kevin Williams, Civil Engineer)
- 3c Presentation / Discussion Regarding Review of La Contenta Wastewater Capacity and
Capital Improvement Priorities (Bob Godwin, Senior Civil Engineer)
- 3d Presentation / Discussion Regarding Assessment District 604 Background Information and
Current Status (Charles Palmer, District Engineer)
- 3e Presentation of the Status of the District's Large Vehicle Fleet as it relates to the California
Air Resources Board's (CARB) Truck and Bus Regulation (Damon Wyckoff, Director of
Operations)
- 3f Presentation of the Status of District Potable Water Storage Tanks and Rehabilitation Needs
(Damon Wyckoff, director of Operations)

4. **OLD BUSINESS**
Nothing to report
5. **FUTURE AGENDA ITEM**
6. **NEXT COMMITTEE MEETING**
Tentative, January 7, 2020 at 2:00 p.m.
7. **ADJOURNMENT**

*Paperwork included in package

CCWD ENGINEERING COMMITTEE
CALAVERAS COUNTY WATER DISTRICT
SEPTEMBER 30, 2019

The Engineering Committee of CALAVERAS COUNTY WATER DISTRICT met at the CCWD Offices in San Andreas, California, at approximately 2:00 p.m.

The following Directors/Committee Members were present:

Jeff Davidson
Russ Thomas

Also present:

Michael Minkler	General Manager
Charles Palmer	District Engineer
Alesia Danner	Administrative Technician
Peter Martin	Water Resource Manager
Rebecca Hitchcock	Executive Assistant/Clerk to the Board
Vickey Mills	
Bob Godwin	Senior Engineer
Sam Singh	Engineering Technician

1. PUBLIC COMMENT:
There was no public comment.

2. APPROVAL OF MINUTES:

The August 6, 2019 Minutes were approved as presented by a motion from Director Thomas, and seconded by Director Davidson.

3. NEW BUSINESS:

3a Presentation / Discussion Regarding Copper Cove Above Ground Pipeline—Reeds Turnpike (Kevin Williams, Civil Engineer)

Mr. Williams provided a slide show presentation on the issues and goals of minimizing risk to the exposed water pipeline along a section of Reeds Turnpike. Multiple options were provided, each with an underlying issue of complications.

Staff was advised to continue research and provide updates when available.

3b Presentation / Discussion Regarding Design and Contracting Requirements for District's New Operations Maintenance Facility (Kevin Williams, Civil Engineer)

Mr. Williams presented a slideshow presentation of building layout and design options along with site consideration details.

Director Davidson advised staff to follow up with cost projections and bring back to the Engineering Committee along with rough details of a final building design as updates occur.

Ms. Mills provided a public comment that a taller building would be more versatile.

3c Presentation / Discussion Regarding Forest Meadows Wastewater Treatment Plant, Storage and Disposal Capacity (Charles Palmer, District Engineer)

Mr. Palmer presented a slideshow presentation on the capacities at the Forest Meadows Wastewater Treatment Plant. Discussion included the need to improve the filtration system and possible lowering of the effluent pumps to meet the requirements.

Mr. Godwin provided additional comment that CCWD will be renewing the Regional Board Permit within the next 2-3 years for this location.

4. OLD BUSINESS:
There was nothing to report.

5. FUTURE AGENDA ITEMS:

6. NEXT MEETING

Tentatively Scheduled: Tuesday, November 5, 2019 @ 2:00 p.m.

7. ADJOURNMENT

There being no further business, the meeting adjourned at approximately 3:06 p.m.

Respectfully submitted,

Alesia Danner
Administrative Technician

Agenda Item

DATE: November 26, 2019

TO: Engineering Committee
Michael Minkler, General Manager

FROM: Kevin Williams, Civil Engineer

RE: Presentation / Discussion Update Regarding District's New Operations
Maintenance Facility

SUMMARY:

This presentation will be concerning the District's plans for expanding its main campus to include a new operations and maintenance facility. The discussion has been brought to the Engineering Committee and District Board previously to discuss building options and the preferred option. At this time, staff would like to finalized a building floor plan and site plan before moving forward in the design process.

The District had an existing vacant parcel adjacent to the existing Main Headquarters and recently purchased an addition 1.65-acre parcel to the east. The District has performed several iterations on how to best utilize the properties, examined several options and configurations for placement of one or two metal building on the property.

The presentation will examine further the location of the building within the vacant property. Staff will discuss how future expansion of the existing building would be possible with the proposed layout. In design of the building layout staff looked at fulfilling District current needs and allowing for growth over the foreseeable future. In the event the District has additional needs due to growth we will look at possible building and storage locations available on the property and best utilization of the property.

Agenda Item

DATE: November 26, 2019

TO: Engineering Committee
Michael Minkler, General Manager

FROM: Kevin Williams, Civil Engineer

RE: Presentation / Discussion Item on Copper Cove Lift Station Project
Capacity of the Proposed Design – Future Buildout of Vacant Properties

SUMMARY:

This presentation will be on the Copper Cove Lift Station Project and the capacity of the proposed design. The objective of the project is trifold including A) elimination of the existing 6-inch force main used to convey wastewater beneath Lake Tulloch, B) reduce risk and consequences of potential sewer spills by diverting flows away from Lift Stations at the edge of Lake Tulloch and C) reduced O&M requirements and potential hazards associated with existing lift stations dry pits and electrical systems.

Specific project elements include replacing dry-can lift stations 6, 8, 15, and 18 by wet wells with submersible pumps and the installation of two force mains. The longer force main will be 6-inch PVC and used to pump wastewater from LS-6 to LS-40. The shorter force main will be 4-inch PVC and used to pump wastewater from LS-8 to LS-6. The electrical systems will be upgraded to 480V at LS-6, LS-8 and LS-15 to support the larger pumps needed.

The design consultant Lee & Ro has not made the schedule milestones initially promised to the District. An updated has been provided showing the final design will be completed by May 2020. Lee & Ro estimates the cost of construction for the project is \$5.25M.

The presentation will examine the details of the design report including force main sizing for future build-outs. In particular the final section of the new force main that runs from the intersection of Conner Estates Drive and O'Byrnes Ferry Road, along Conner Estates Drive. This force main is 5,200-feet in length and proposed to be 6-inch diameter C900 PVC pipe. The preliminary design report prepared by Lee & Ro shows there are currently 337 Sewer Connections (ESFUs) with projected Build-out of 463 (ESFUs) total. When applying the District Collection System Sizing Standards to projected build out of 463 ESFUs, the force main velocity is only 2.1 ft/sec. Force mains are typically designed to have velocities between 2 ft/sec minimum to 8 ft/sec maximum. The current design is very conservative and could easily handle build-out in excess of what is projected 463 ESFUs. At a velocity of 5 ft/sec, the pipeline is capable of carrying peak flow rate of 440 gpm or equal to 1,083 ESFUs.

Agenda Item

DATE: November 26, 2019

TO: Engineering Committee
Michael Minkler, General Manager

FROM: Bob Godwin, P.E., Senior Civil Engineer

RE: Engineering Committee Presentation for the La Contenta Wastewater Service Area, District 1 and District 5

SUMMARY

This agenda item, a staff presentation for the Engineering Committee, concerns wastewater service for the La Contenta community with a focus on the capacity of the La Contenta Wastewater Treatment Plant, Water Reclamation Facility, Huckleberry Lift Station and sewer forcemain. The presentation will cover the following topics:

- Potential growth within the wastewater service area and rate of growth.
- District treatment, storage, and disposal capacity.
- January 2018 La Contenta Wastewater Master Plan recommended improvements.
- Condition of existing infrastructure.
- Capacity of Huckleberry Lift Station forcemain.
- Operational requirements for Huckleberry Lift Station.
- Regional Board permit requirements and limitations.
- Engineering Department staff activities concerning La Contenta service area.

FINANCIAL CONSIDERATIONS

None at this time.

Agenda Item

DATE: November 26, 2019

TO: Engineering Committee
Michael Minkler, General Manager

FROM: Charles Palmer, District Engineer

RE: Presentation / Discussion of Assessment District (AD) 604
Background Information and Current Status

SUMMARY

The assessment district AD 604 was formed between 1986 and 1991 with the objective of providing bond revenue to fund construction of new water and wastewater infrastructure for New Hogan and La Contenta regional development. The total assessment amount was \$9.7 million including \$2.6 million for water and \$7.1 million for sewer/wastewater projects. The costs were assessed according to equivalent single family units (esfu) including 1538 esfu water assessments allotted to 53 parcels and 1541 esfu sewer assessments allotted to 36 parcels. Also, CCWD paid \$1,192,460 towards construction costs to account for sewer customers (753 esfu) within the pre-existing La Contenta subdivision. Given recent concerns that the wastewater infrastructure has limited reserve capacity, the remainder of this agenda item focuses on the wastewater assessments.

ITEM	WATER	SEWER
Construction	\$ 1,921,031	\$ 5,341,907
Bond Costs	\$ 325,197	\$ 904,290
Incidental Expenses	\$ 326,000	\$ 906,525
TOTALS	\$ 2,572,228	\$ 7,152,722
ESFU's	1538	1541
Cost/ESFU	\$1,672	\$4,642

The attached map shows the distribution of developed versus undeveloped parcels within AD 604. To date only 547 esfu's or 35% of the sewer assessments within AD 604 have been put to beneficial use primarily 106 esfu's for New Hogan Lake Estates and 389 esfu's for Gold Creek Estates. The balance of 994 esfu's or 65% of the sewer assessments have not been used yet.

As of July 1991, AD 604 bonds revenues of \$5,341,907 and CCWD contributions of \$1,192,460 provided a total of \$6,534,367 for construction of sewer and wastewater infrastructure to serve New Hogan and La Contenta regional development. Said construction of sewer and wastewater infrastructure completed by 1993 included the following:

PROJECT COMPONENT	CONSTRUCTION COST
12" Force Main (Huckleberry Lift Station to Wastewater Treatment Plant)	\$ 492,480
8", 10", 12" and 15" Gravity Sewer Trunk Mains from Valley Springs to Huckleberry Lift Station	\$ 1,510,887
Huckleberry Lift Station & Lift Station #1	\$ 687,320
Wastewater Treatment Plant	\$ 2,667,350
Upper and Lower Effluent Storage Ponds and Effluent Pipelines to Golf Course	\$ 1,176,330
TOTAL	\$ 6,534,367

When a majority of the property owners failed to pay their assessments, there was no money to repay bond holders. On property tax payments, the assessment delinquencies averaged 75% per year from the first year 12/10/92 forward through 12/10/02. A bond default occurred when a 3/2/1996 scheduled payment was not made. As a result, nineteen parcels were eventually foreclosed upon, and multiple Sheriff's sales of delinquent parcels took place between 2001 and 2003. Money raised from the Sheriff's sales were distributed to bond owners.

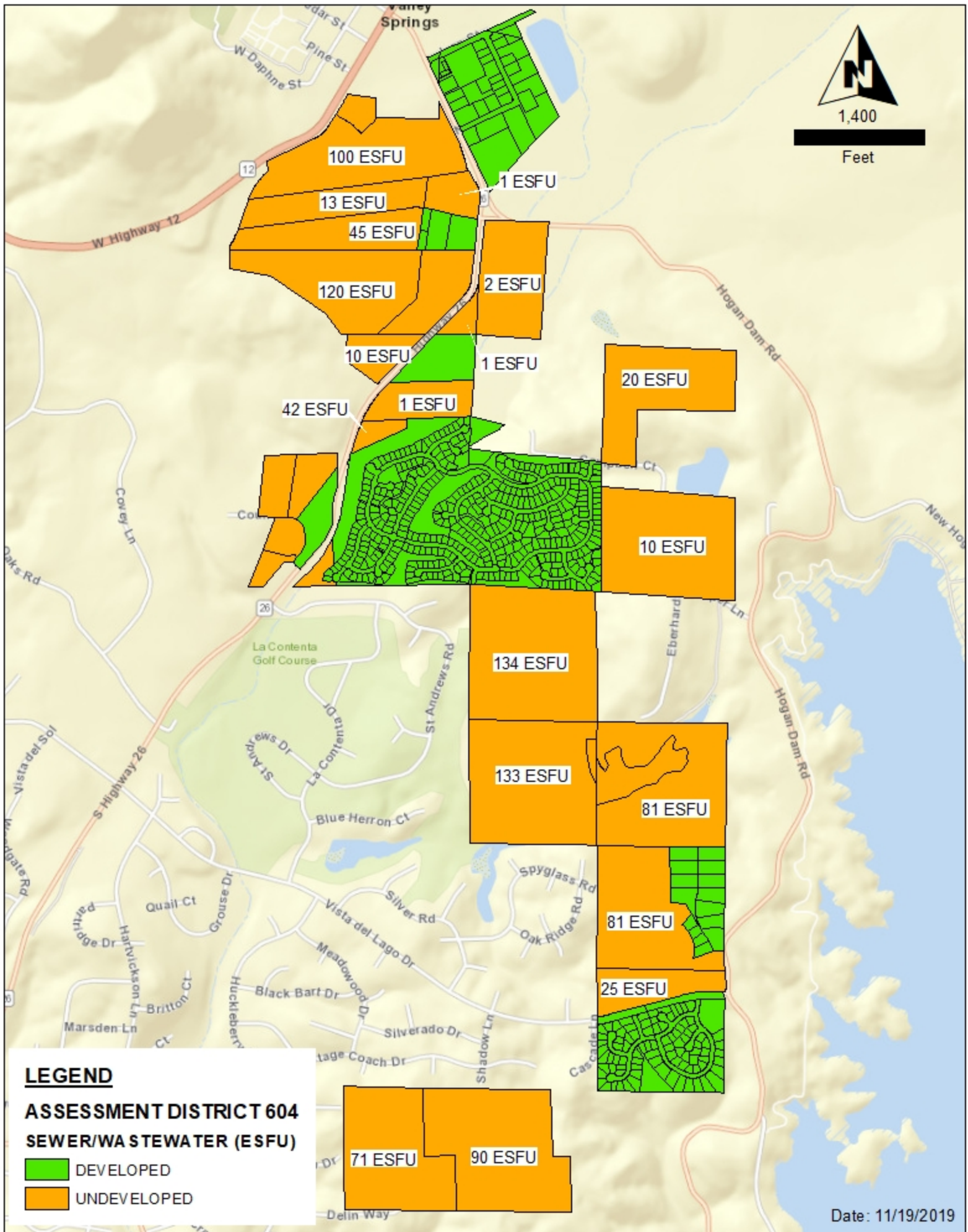
The Calaveras County Water District New Hogan/La Contenta Facilities Plan, 2005 Update prepared by ECO:LOGIC Engineering is the basis of current wastewater capacity fees and provides for a credit for customers within AD 604. In 1992, the original assessment amount was approximately \$4,496 per esfu or single family home. To account for changes in the economy and inflation of construction costs including labor, equipment and material, the capacity fees are escalated annual each July by the Engineering News Record Construction Cost Index (ENRCCI). In ECO:LOGIC's capacity fee analysis, it was decided to escalate the amount of the AD 604 credit. The District's current sewer capacity fee for parcels outside AD604 is \$20,006. After applying a credit of \$8,270 per esfu, the sewer capacity fee inside AD604 is \$11,736.

**LA CONTENTA WASTEWATER
CAPACITY CHARGE**

ITEM	YEAR		
	2003	2005	2019
Standard Fee / Outside AD 604	\$14,100	\$15,750	\$20,006
Credit / Inside AD 604	(\$ 5,830)	(\$ 6,460)	(\$ 8,270)
Adjusted Fee / Inside AD 604	\$ 8,270	\$ 9,290	\$11,736
ENRCCI	6600	7308	11,186

FINANCIAL CONSIDERATIONS

CCWD completed a new update to the La Contenta Wastewater System Master Plan adopted by the Board on December 13, 2017. In the near future staff will be preparing a request for proposals (RFP) to retain a financial consultant to perform an analysis to update capacity fees for the La Contenta wastewater system along with similar analyses for other service areas. Staff will be looking for Committee direction on how to address credits for AD 604 moving forward.



Agenda Item

DATE: November 26th, 2019

TO: Engineering Committee
Michael Minkler, General Manager

FROM: Damon Wyckoff, Director of Operations

SUBJECT: Presentation of the Status of the District's Large Vehicle Fleet as it Relates to the California Air Resources Board's (CARB) Truck and Bus Regulation

SUMMARY:

Compliance Verification of the CARB's Truck and Bus Emissions Regulation will begin January 1st, 2020. This regulation has direct impacts on CCWD's large vehicle fleet and will help to steer the District's future purchases of large Trucks. CARB's Truck and Bus Emissions Regulation applies to nearly all diesel-fueled vehicles with a Gross Vehicle Weight Rating (GVWR) greater than 14,000 pounds and breaks these vehicles up into two categories; Lighter Vehicles weighing between 14,000 and 26,000 pounds GVWR and Heavier Vehicles weighing more than 26,000 pounds GVWR. The Emissions Regulation applies to vehicles with an engine age of 2009 or older. Vehicles with an engine age of 2009 or older are required to be replaced or repowered within a certain time frame. The District has a total of eleven on-highway vehicles currently that are required to comply with the Regulation and a total of seven that must be replaced, repowered, or registered as low-use Vehicles. The low-use vehicle exemption allows non-CARB compliant vehicles to operate less than 1,000 hours per year. Annual odometer and hour meter reading and reporting to comply with the exemption is required.

Vehicles with an Engine Model Year (EMY) of 2003 or older must be replaced, repowered, or registered as a low-use Vehicle by January 1st, 2020. The District has two vehicles that must be registered as low-use / low population County Vehicles before the end of December, 2019. A 2003 VacCon (#123), and a 2000 Ford F-450 Crane Truck (#122). Staff are currently working to register these vehicles as low-use.

Heavy-Duty vehicles with an EMY of 2004 or older must be replaced or re-powered by 2021. The District must replace or re-power its 2004 VacCon (#126) prior to 2021.

Heavy-Duty vehicles with a 2006 or older EMY must be replaced or re-powered by 2022. The District must replace or re-power its 2006 Kenworth Dump Truck (#128) before 2022. A replacement vehicle is estimated to cost approximately \$130K.

Light-Duty Vehicles with an EMY of 2009 or older must be replaced or re-powered by 2023. The District must replace or repurpose its 2009 Peterbilt Pumper Truck (#145), 2007 Ford F-550 Dump Truck (#527), and 2008 Ford F-550 Dump Truck (#709).

The CARB Truck and Bus Emissions Regulation will dictate the decision-making process when it comes to replacing trucks within the District's Large Vehicle Fleet for some years to come.

By leveraging the low-use exemption within the Regulation, the District can optimize the use of existing vehicles while working to purchase new, more reliable, and safe large vehicles.

FINANCIAL CONSIDERATIONS:

The overall cost to replace five vehicles over three years is estimated to be \$950,000 in total. Approximately \$480,000 are currently planned to be expended in fiscal year 2020/21, \$130,000 in 2021/22, and \$340,000 in 2022/23.

Attachments:

CARB Truck and Bus Regulation District Timeline

Regulation	Model Year	Description	Replace / Re-Register	Est Cost	Compliance by	Budget Plan	Notes
EMY 2003 or older	2003	VacCon	Re-Register	Nominal	Jan 1st, 2020		To West Point - less than 1K annual Miles Required
EMY 2003 or older	2000	F-450 Crane Truck	Re-Register	Nominal	Jan 1st, 2020		Deployed to the Copper Cove Maintenance Shop
EMY 2004 or older	2004	VacCon	Replace	\$480K	Jan 1st 2021	20/21 FY	Deployment TBD
EMY 2006 or older	2006	Kenworth Dump Truck	Replace	\$130K	Jan 1st 2022	21/22 FY	Can then work to Register the 2006 unit as Low-Use
EMY 2009 or older	2007	Ford F-550 Dump Truck	Replace	\$70K	Jan 1st 2023	22/23 FY	
EMY 2009 or older	2008	Peterbilt Pumper Truck	Replace	\$70K	Jan 1st 2023	22/23 FY	
EMY 2009 or older	2209	Truck	Replace	\$200K	Jan 1st 2023	22/23 FY	
Totals			2 Re-Registers 5 Replacements 7 Total	\$950K	over 3 years		

Agenda Item

DATE: November 26th, 2019

TO: Engineering Committee
Michael Minkler, General Manager

FROM: Damon Wyckoff, Director of Operations

SUBJECT: The Status of District Potable Water Storage Tanks and Rehabilitation Needs

SUMMARY:

The Calaveras County Water District has 34 potable water storage tanks. These tanks are on a rotating 5-year annual inspection schedule. Annual tank inspections are required by the Division of Drinking Water (DDW) and help to inform both long and short-term tank maintenance, repair, rehabilitation, and replacement for both the District and the DDW.

Recent annual inspections have brought to light the fact that many District tanks are structurally deficient and in need of repair, replacement, and / or rehabilitation. Moreover, some of these tanks are in such poor condition that divers contracted to inspect them will not climb or enter them due to safety concerns and for fear of further damaging the tanks. For instance, B Tank in Copperopolis (steel construction) has a sagging roof plate, broken internal ladder, and numerous pieces of roof truss and debris settled on the floor of the tank. The clearwell at the Copper Cove Water Treatment Plant is in a similar condition. Both tanks will no longer be inspected until rehabilitated. Forest Meadows Tank 1, the Jenny Lind Water Treatment Plant Clearwell #2, and E Tank in the La Contenta HOA have also been identified as needing complete rehabilitation or replacement.

The District continues to prioritize potable water storage tank repair, rehabilitation, and replacement within its Capital Improvement Program (CIP) and budget. The Fiscal Year 2019/20 CIP budget included funding to repair the Jenny Lind Clearwell #2 and the Larkspur Tank in the Ebbett's Pass Service area. Funds are proposed to be allocated in the 2020/21 Fiscal Year to repair and/or rehabilitate the Copper Cove Clearwell, B-Tank, and the Ebbett's Pass Sawmill Tank. District Staff are preparing to solicit bids to repair the Jenny Lind Clearwell #2, Wallace Lake Estates Ground Tank, and Larkspur Tank this winter with an anticipated spring / summer construction schedule.

Staff continue to seek grant funding opportunities to improve infrastructure overall and leverage Renovation and Replacement Funds (R&R Fund) for tank rehabilitation and replacement. Currently, staff are working with the Sierra Institute to develop a bundled proposal from the Mountain Counties Integrated Regional Water Management Proposition 1 region overlay. Sierra Institute seeks to develop a proposal for funding from CalFIRE and CalOES to replace or improve CCWD Tanks that are considered vital to wildfire response. The District provided information to the Sierra Institute regarding nearly \$1.3 million in projects necessary to replace three tanks: The Sheep Ranch Tank, C Tank in Rancho Calaveras, and the Jenny Lind Clearwell #2. Additionally, the District continues to work with FEMA to secure funding to replace six redwood tanks in the Ebbetts Pass Service Area that are identified as being critically vulnerable to wildfire.

In conclusion, many of the District's distribution system tanks are beyond their useful life and must be replaced. Staff are working diligently to ensure these tanks are replaced expediently. Staff continue to leverage both the R&R fund and seek grant funds to ensure these critical tanks are rehabilitated and replaced in a cost-effective manner. As the District successfully implements tank replacement projects, opportunities for tank consolidation and system optimization will also present themselves. Throughout the implementation of these projects, staff will identify opportunities to optimize and remove inefficiencies within service area distribution systems.

FINANCIAL CONSIDERATIONS:

None: informational update only

Attachments: