PINOLE/HERCULES WASTEWATER SUBCOMMITTEE AGENDA

MARCH 18, 2021
PINOLE CITY HALL, COUNCIL CHAMBER
2131 PEAR STREET
PINOLE, CA 94564

VIA ZOOM TELECONFERENCE
8:30 A.M.

DUE TO THE STATE OF CALIFORNIA'S DECLARATION OF EMERGENCY – THIS MEETING IS BEING HELD PURSUANT TO AUTHORIZATION FROM GOVERNOR NEWSOM'S EXECUTIVE ORDERS – CITY COUNCIL AND COMMISSION MEETINGS ARE NO LONGER OPEN TO IN-PERSON ATTENDANCE.

SUBMIT PUBLIC COMMENTS TO DEVELOPMENT SERVICES DIRECTOR / CITY ENGINEER BEFORE OR DURING THE MEETING VIA EMAIL
tmiller@ci.pinole.ca.us
Comments received before the close of the public comment period for that item will be read into the record and limited to 3 minutes. Please include your full name, city of residence and agenda item you are commenting on. Any comments received after the close of the public comment period will be distributed to Committee Members and relevant Staff after the meeting and filed with the agenda packet.

1. CALL TO ORDER-PLEDGE OF ALLEGIANCE
2. ROLL CALL
3. INTRODUCTIONS
   a. JOSH BINDER
4. CITIZENS TO BE HEARD-FOR ITEMS NOT ON THE AGENDA
5. OPERATOR'S REPORT (VERBAL)
6. NEW CONNECTIONS
   a. PINOLE (VERBAL)
   b. HERCULES (VERBAL)
7. TREE MITIGATION - PH WPCP UPGRADE BY TAMARA MILLER
8. PAVEMENT RESTORATION - PH WPCP UPGRADE BY TAMARA MILLER

9. **ESCROW SUMMARY - PH WPCP UPGRADE BY TAMARA MILLER**

10. **ADJOURN TO THE NEXT REGULAR SUBCOMMITTEE MEETING IN PINOLE ON JUNE 3, 2021 AT 8:30 AM.**

DATE: **MARCH 18, 2021**

TO: **WASTEWATER SUBCOMMITTEE CHAIR AND MEMBERS**

FROM: **TAMARA MILLER, DEVELOPMENT SERVICES DIRECTOR**

SUBJECT: **TREE MITIGATION FOR PH WPCP UPGRADE PROJECT**

RECOMMENDATION

Receive a summary of tree removal impacts arising from the PH WPCP Upgrade Project (Project) and provide a recommendation to City of Pinole to address and close out the warranted mitigation measures for the tree removal impacts.

DISCUSSION

During construction of the Project, several unplanned tree removals were warranted to clear space for planned improvements.

Carollo Engineers, serving as the Construction Manager, worked closely with Kiewit, PG&E, and plant staff throughout the project to best address conflicts between the construction and existing trees as the conflicts arose.

There were some planned tree removals, primarily near the new headworks and realigned road access for Contra Costa County Flood Control. Mitigation for these removals was addressed in the planning documents and will not be addressed now.

The City of Pinole has a codified tree removal mitigation program. The mitigation requires:

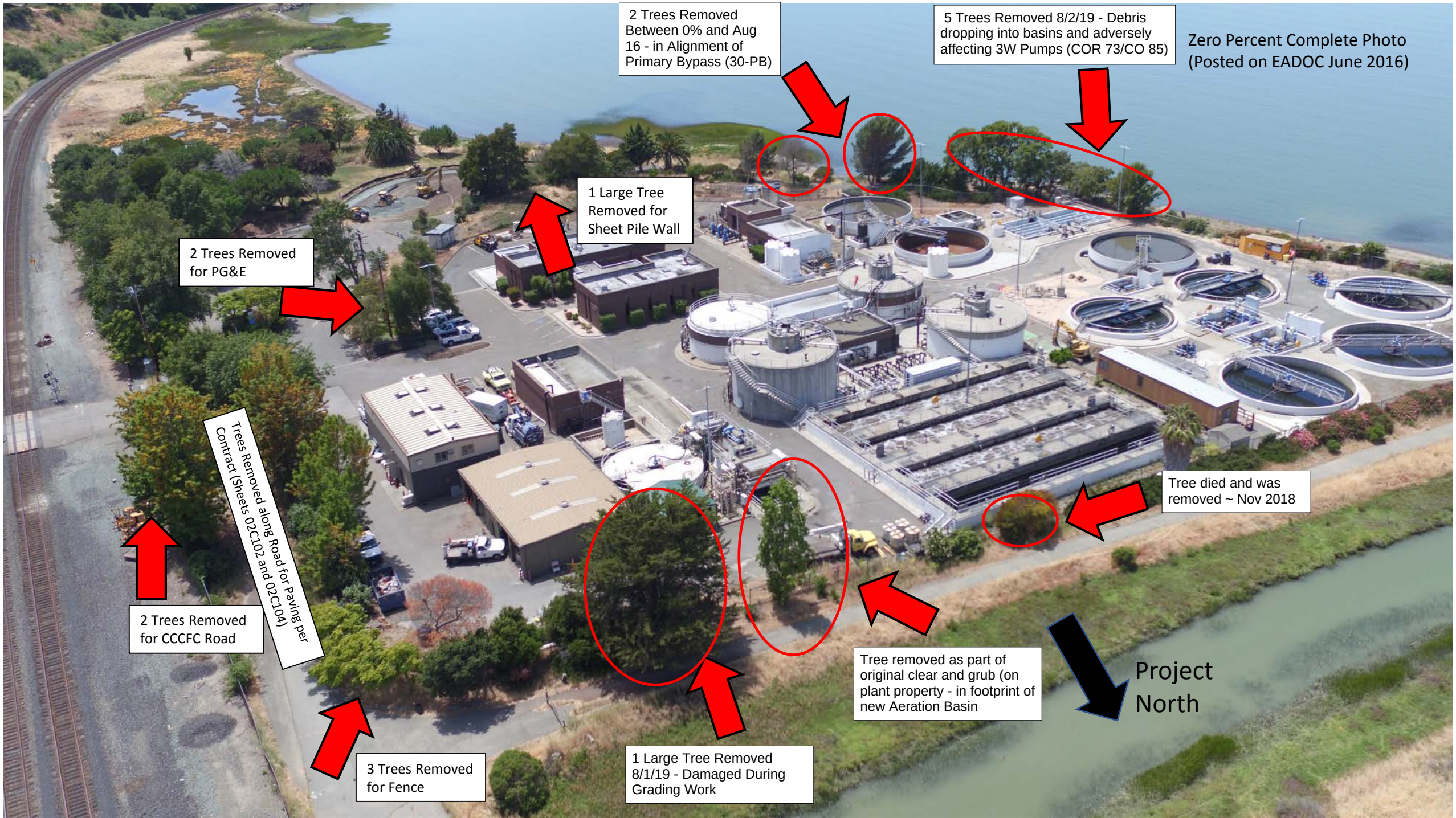
a. Plant trees as part of the development over and above the landscaping that would otherwise be required at a value equal to the value of the protected tree(s) that will be removed; or

b. Pay an in-lieu fee to the city in an amount equal to the value of the protected tree(s) that will be removed.

Any in-lieu fees collected by the city pursuant to this section shall be used only for the installation or replacement of trees in city parks or open space or other areas of benefit to the city.

An additional 18 trees of varying size were removed during construction.

The City of Pinole for this project desires to pay an in-lieu fee as the City has not made a determination as to a replacement location for the trees. The City has plans to complete a tree master planning exercise prior to tree planting. The proposed in lieu fee will be $200 per tree at a ratio of 2 new trees for every tree removed. The proposed total mitigation fee is $7,200.


2 Trees Removed Between 0% and Aug 16 - in Alignment of Primary Bypass (30-PB)
5 Trees Removed 8/2/19 - Debris dropping into basins and adversely affecting 3W Pumps (COR 73/CO 85)
Zero Percent Complete Photo (Posted on EADOC June 2016)
1 Large Tree Removed for Sheet Pile Wall
2 Trees Removed for PG&E
Trees Removed along Road for Paving per Contract (Sheets 02C102 and 02C104)
Tree died and was removed ~ Nov 2018
2 Trees Removed for CCCFC Road
Tree removed as part of original clear and grub (on plant property - in footprint of new Aeration Basin
Project North
3 Trees Removed for Fence
1 Large Tree Removed 8/1/19 - Damaged During Grading Work

DATE: **MARCH 18, 2021**

TO: **WASTEWATER SUBCOMMITTEE CHAIR AND MEMBERS**

FROM: **TAMARA MILLER, DEVELOPMENT SERVICES DIRECTOR**

SUBJECT: **PAVEMENT IMPACT MITIGATION FOR PH WPCP UPGRADE PROJECT**

RECOMMENDATION

1. Receive an estimate of pavement restoration cost for Tennent Avenue from San Pablo Avenue to the WPCP.
2. Receive an analysis from QES regarding the loss of life to the pavement arising from the project.
3. Provide a recommendation to City of Pinole to address the warranted mitigation measures for the Pavement Restoration.

DISCUSSION

During construction of the Project, the pavement leading to the plant was impacted negatively. During the planning process for this project, it was agreed that the two cities would share the cost of the additional impacts to the pavement arising out of the project.

Equally the impact to the pavement life over time due to truck loading for the delivery of supplies and removal of sludge should be shared by the two cities.

QES has analyzed the pavement and reviewed pavement reports which included the pavement condition score for this stretch of Tennent Avenue. They have provided a draft memo with their findings and recommendations. The memo is attached for your review.

The City has prepared a planning level estimate of the proposed restoration project. At this time the City has under contract a design firm to complete the design and refine the estimate. The estimate is attached for your review.

The City of Pinole is at this time reviewing the capacity of the city's sewer trunk line to assess any needs for underground work. Any warranted upgrades to the pipe by the City of Pinole will need to be done before the roadwork is schedule.

The pavement restoration cost is estimated to be $655,000. It is recommended that the cities share with Hercules funding 17.2% and Pinole funding 82.8%.

Tennent Avenue Life Analysis
June 29, 2020

The Pinole-Hercules Water Pollution Control Plant (WPCP), built in 1956, historically treated wastewater that was only generated in the City of Pinole, but was later expanded and upgraded to treat wastewater from the City of Hercules. In February 2015, the City of Pinole and the City of Hercules entered into an agreement to further improve the WPCP which included a provision to restore the pavement of Tennent Avenue once all construction activities associated with the expansion and upgrades to the WPCP had been completed. The purpose of this analysis is to examine and compare the predicted and actual deterioration of the pavement surface in order to quantify the loss of pavement life for Tennent Avenue since construction activities commenced.

Deterioration of Tennent Avenue – Section 020 and Section 030

Tennent Avenue is a major arterial route in the City of Pinole, CA. The scope of this analysis includes Pavement Management Sections 020 and 030 which consist of approximately 2,940 lineal feet of roadway that extends from San Pablo Avenue to the WPCP at the north end of the City. A series of pavement condition inspections were conducted on Tennent Avenue in 2010, 2012, 2015, 2018, and again in May 2020 to track the deterioration of the pavement section by calculating a pavement condition index (PCI) for the section. The PCI is a measurement of the health of the pavement section or condition and ranges from 0 to 100. A newly constructed street would have a PCI of 100, while a failed street that has reached the end of its pavement life would have a PCI of 25 or less. The PCI is calculated based on pavement distresses identified in the field. Sectional PCIs were calculated on the inspection data using only the load-related distresses for each section and then averaged together to represent the historical and current structural PCI trend for Tennent Avenue. We did not include environmental or age-related distresses in the analysis, but instead focused solely on load-related distresses such as alligator cracking and rutting in order to determine the structural pavement damage caused by truck traffic over time.

Beginning in June 2010 (month 0), the average structural PCI was a 72 before declining to the mid to high 60s through 2015 (month 60). Once construction began for the expansion and upgrades to the WPCP, the average structural PCI declined to a 46 by July 2018 (month 97) and to a 26 by May 2020 (month 119). Per the structural PCI deterioration curve in Figure 1 that was developed through the analysis, Tennent Avenue is projected to decline to a terminal PCI of 25 by August 2020 (month 122). At this point, Tennent Avenue will be considered a failed pavement section that requires full reconstruction rather than a thick mill and overlay of asphalt concrete.

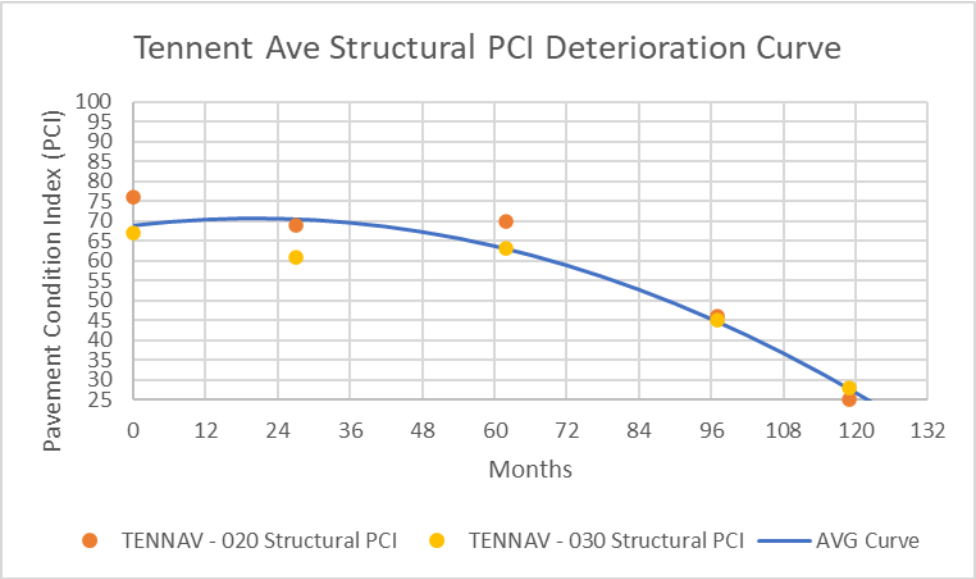


Figure 1. Structural PCI Deterioration Curve for Tennent Avenue

Deterioration of Pinole Valley Road - Section 030

Pinole Valley Road – Pavement Management Section 030, which is located south of I-80 from the bridge at Savage Avenue to Collins Avenue, was selected to be included in this analysis since this section is a major arterial route under similar traffic conditions to Tennent Avenue. Pinole Valley Road – Pavement Management Section 030 has historical pavement inspection data showing similarities to distress experienced by Tennent Avenue pre-2015 thus making it an ideal candidate to demonstrate the deterioration Tennent Avenue likely would have experienced unimpacted by the construction activities associated with the WPCP expansion and upgrades. Inspection data shows that the structural PCI remained around 90 from June 2010 (month 0) to August 2015 (month 60). The structural PCI then declined to a 79 by July 2018 (month 97) and finally a PCI of 69 by May 2020 (month 119). Per the structural PCI deterioration curve in Figure 2 that was developed from the historical inspection data, Pinole Valley Road – Pavement Management Section 030 has approximately 66 months of remaining life left until reaching a terminal PCI of 25 by the year 2026.

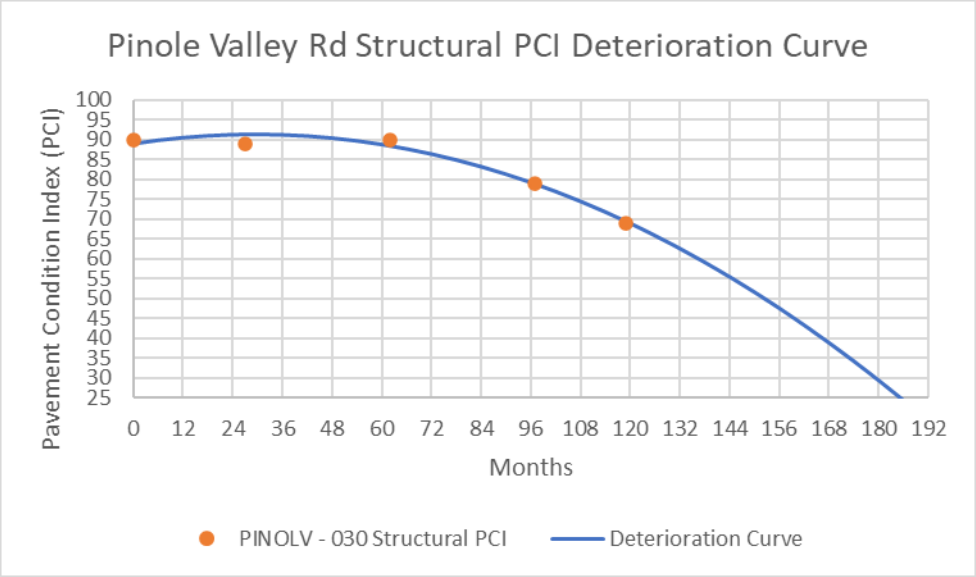


Figure 2. PCI Deterioration Curve of Pinole Valley Road – Section 030

Comparison of Current and Predicted Structural Deterioration Curves for Tennent Avenue

This analysis is based on the assumption that Tennent Avenue likely would have experienced similar structural pavement deterioration to Pinole Valley Road which wasn't impacted by the construction activities associated with the WPCP. As shown in Figure 3, the structural deterioration curve for Pinole Valley Road was shifted to represent the predicted structural PCI deterioration curve for Tennent Avenue and compared to the current structural PCI deterioration curve. The predicted curve shows that Tennent Avenue would have had approximately 157 months of remaining pavement life from 2010 (month 0) until reaching a terminal PCI of 25 in the year 2023. Based on the current PCI deterioration curve, the overall impact of the construction activities of the WPCP expansion and upgrades appears to have adversely impacted the pavement condition by reducing the expected remaining pavement life by approximately 35 months.

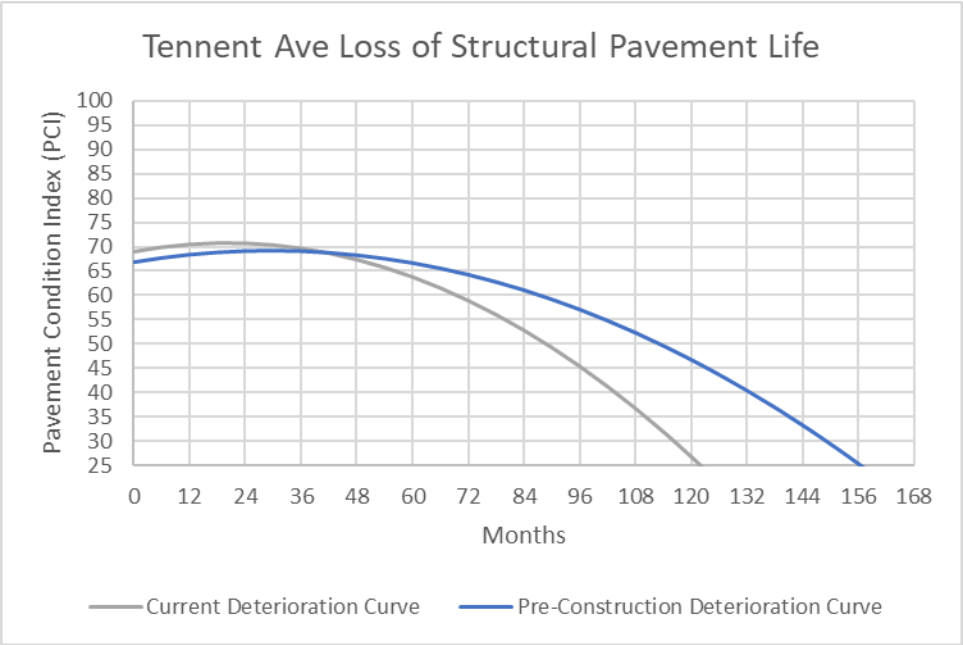


Figure 3. Loss of Structural Pavement Life for Tennent Avenue

Summary Conclusion

The expansion and upgrades to the WPCP appear to have accelerated the pavement deterioration of Tennent Avenue. The loss of pavement life due to increased heavy truck traffic can be quantified by applying the structural deterioration curve of Pinole Valley Road, an arterial route which was unaffected by the construction activities, as the predicted pre-construction structural deterioration curve for Tennent Avenue. By comparing this predicted structural deterioration curve to the actual structural deterioration of Tennent Avenue, we can conclude that Tennent Ave has lost approximately 35 months of pavement life. Furthermore, Tennent Avenue is projected to reach a terminal PCI of 25 by August 2020 which will require full reconstruction to rehabilitate the road section versus the predicted PCI of 46 which would have only necessitated a pavement surface milling and thick overlay that is typically a third to a quarter of the cost of full reconstruction.

City of Pinole
Tennent Avenue Rehabilitation

Item No.	Approx. Quant.	Meas. Unit	Item Description	Unit Price	Total
1	1	LS	Mobilization	$ 20,000.00	$ 20,000.00
2	1	LS	Traffic Control	$ 10,000.00	$ 10,000.00
3	4	EA	Construction Area Signs	$ 200.00	$ 800.00
4	1	LS	Storm Water Pollution Control Measures	$ 5,000.00	$ 5,000.00
5	11,800	SY	0.2' Cold Planing	$ 12.00	$ 141,600.00
6	8,000	SF	0.5' Base Failure Repair	$ 10.00	$ 80,000.00
7	1,590	TON	Hot Mix Asphalt Type A	$ 145.00	$ 230,550.00
8	500	SF	Construct 4" thick PCC Sidewalk	$ 20.00	NA
9	5	EA	Adjust MH Frame and Cover	$ 1,000.00	$ 5,000.00
10	5	EA	Adjust EBMUD valve and cover	$ 1,000.00	$ 5,000.00
11	1	EA	Preserve/Restore Survey Monumentation	$ 3,000.00	$ 3,000.00
12	10	EA	Construct ADA Curb Ramp, Case A	$ 3,000.00	NA
13	24	LF	Construct Type A2-6 curb (Caltrans std plan A87A)	$ 30.00	$ 720.00
14	2,944	LF	STRIPING, DETAIL 22	$ 1.00	$ 2,944.00
16	5,888	LF	6" WIDE WHITE LINE	$ 2.00	$ 11,776.00
17	360	LF	WHTE STOP BAR & CROSSWALK LINES (12" WIDE) (NON-SKID)	$ 6.00	$ 2,160.00
18	100	SF	WHITE PAVEMENT MARKINGS (THERMOPLASTIC) (NON-SKID)	$ 5.00	$ 500.00
19	6	EA	TWO-WAY REFLECTIVE PAVEMENT MARKER (BLUE)	$ 20.00	$ 120.00
20	2,000	LF	PAINT CURB (TWO COATS)	$ 5.00	NA
					$ 519,170.00

Design, CM, Environmental	20%	$103,834.00	
contingency	6%	$31,150.20	
		$ 655,000.00	
Useful Life	12		
Cost per month	$4,548.61		
lost months	35		
Cost of lost pavement life	$159,201.39		

		PINOLE	HERCULES
PH WPCP Upgrade Project Escrow Fund	$159,201.39	$79,600.69	$79,600.69
WPCP Operational Truck Impact (Fund 500-642)	$65,500.00	$32,750.00	$32,750.00
City of Pinole (Fund 325)	$430,298.61	$430,298.61	
	$655,000.00	$542,649.31	$112,350.69
		82.8%	17.2%

Area	105984
Length	2944
width	36

DATE: **MARCH 18, 2021**

TO: **WASTEWATER SUBCOMMITTEE CHAIR AND MEMBERS**

FROM: **TAMARA MILLER, DEVELOPMENT SERVICES DIRECTOR**

SUBJECT: **ESCROW SUMMARY FOR PH WPCP UPGRADE PROJECT**

RECOMMENDATION

1. Receive a status report of the escrow balance for the PH WPCP Upgrade Project.
2. Provide direction to staff regarding release of escrow funds.

DISCUSSION

The PH WPCP Upgrade Project has been complete for over a year. There are three remaining open issues. Listed below with the associated cost estimate

1. Tree mitigation	$7,200
2. Pavement Restoration	$159,201
3. Pending PG&E Claim resolution	$55,000 to $275,000

The current escrow balance is $3,662,680.

As the project is complete with only these three open issues, any funds in excess of the funds necessary to cover these three issues are unnecessarily retained.

The two cities can and should release excess funds.

The escrow service fees are paid thru June 7, 2021. It may be prudent to allocate and disburse all funds to avoid the ongoing cost to maintain the escrow account. The annual escrow fee is less than $3,500.

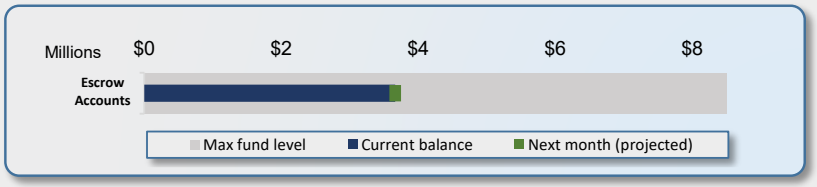
The total recommended funds to continue to retain, with a 7% contingency, are $472,300.

February **2021**

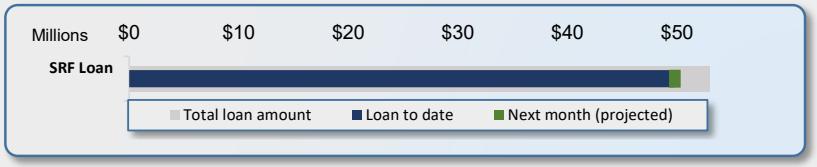
PINOLE/HERCULES WATER POLLUTION CONTROL PLANT

Engineers...Working Wonders With Water®

	Current Funds	Total Expenditures to Date
Escrow Accounts	$3,662,680	$51,709,261

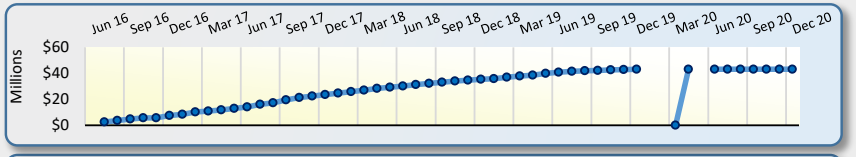


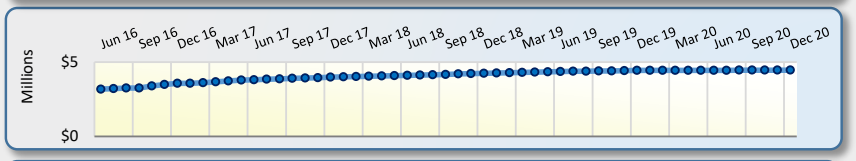
	February Reimbursement	Total to Date Reimbursements
SRF Loan	$0	$49,787,330

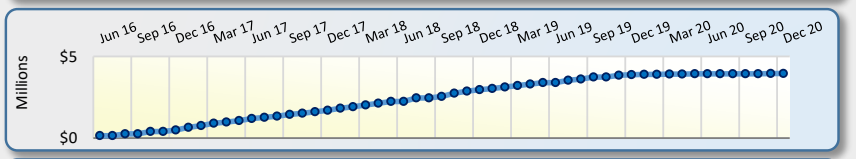


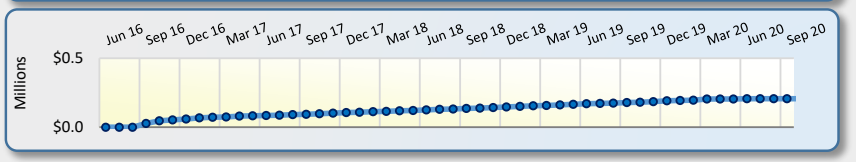
WORK BILLED	Current Month	To Date
Kiewit	$0.00	$46,370,364.14
HDR	$0.00	$4,454,573.23
Carollo - CM	$0.00	$3,955,224.45
Carollo - FA	$1,553.23	$216,870.03
Total Billed	**$1,553.23**	**$54,997,031.85**

Work Billed by Month









CATEGORIES	PINOLE		HERCULES		TOTAL	NOTES
	Debit	Credit	Debit	Credit		
Initial account deposit	$0.00	$2,750,000.00	$0.00	$2,750,000.00	$5,500,000.00	
Kiewit Construction	$23,185,419.55	$0.00	$23,185,419.44	$0.00	($46,370,838.99)	*including 3/1/17 transfer of $664,687.44 & 3/3/20 transfer of $106,280.54*
Carollo Engineers	$2,008,254.08	$0.00	$2,008,254.00	$0.00	($4,016,508.08)	*including 3/1/17 transfer of $83,286.19 and 3/3/20 transfer of $5,687.78* *Discrepancy of $2,992.31 - balance from 03/15/2016, which was paid after construction started (09/2016)* *Also outstanding invoices in AUGUST totaling $2,188.18*
HDR Engineering	$646,957.03	$0.00	$646,956.96	$0.00	($1,293,913.99)	*$0.50 discrepancy*
SRF Reimbursement	$0.00	$24,893,665.00	$0.00	$24,893,665.00	$49,787,330.00	
Annual Escrow Agent Fee	$14,000.00	$0.00	$14,000.00	$0.00	($28,000.00)	
Transfer Pinole to Hercules	$854,254.17	$0.00	$0.00	$854,254.17	$0.00	*3/1/17 transfer of $664,687.44 and $83,286.19 ($747,973.63)* *3/3/20 transfer of $106,280.54*
Transfer Hercules to Pinole	$0.00	$5,687.78	$5,687.78	$0.00	$0.00	*3/3/20 transfer of $5,687.78*
Interest Income	$11.00	$41,979.55	$0.00	$42,642.25	$84,610.80	
Ending Balance		**$1,831,002.90**		**$1,831,676.85**	**$3,662,679.75**	