

PALO ALTO PARK MUTUAL WATER COMPANY  
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27 December 2017

Mr. Eric Lacy, P. E., District Engineer, Santa Clara District  
Drinking Water Field Operation Branch  
California Department of Public Health  
850 Marina Bay Parkway, Bldg P., 2nd Floor  
Richmond, CA 94804

Response to: 2017 Sanitary Survey Findings to items due 31 December 2017.

Dear Mr. Lacy,

This is Palo Alto Park Mutual Water Company (PAPMWC) response to the 2017 Sanitary Survey Finding. Again PAPMWC wish to say thanks to you and Ms. Tsang for working with us. As stated to you one of our goals is to make PAPMWC one of the best small ground water system in the State. We believe that with your assistant, cooperation and guidance and help we can do this.

Both booster pumps were installed in 1993. Each has an estimated life of 25 years. The motors for the booster pumps have an estimated life of 20 years.

However, Booster # 2 pump was inspected when we replaced the motor in 2010.

Booster # 1 pump was replaced in 2016, and we are replacing the motor on booster # 1 with a new energy efficiency motor and has scheduled an inspection of the pump at the same time. The old motor will be cleaned inspected and repaired. PAPMWC will keep the motor for a spare should one of the booster motor fail.

PAPMWC engineer Mr. Michael Freitas has developed a preliminary Capital Improvement Plan (CIP) which is attached.

However, we as yet have not put a time schedule on the items in the CIP. We have with the name provided by Ms. Van Tsang made contact with Ms. Julia Martinez with the State Division of Financial Assistance and will be scheduling a date to meet with Ms. Martinez. We have had several telephone communications with her so far. PPMWC is making application for funding, hopefully we will receive a grant or a combination of both grant and a low interest loan. PPMWC is so very grateful to you and Ms. Tsang for this consideration. Once funding is secured, a time line for the much-needed projects will be made.

As far as well 3 is concerned, the second priority of the CIP is for replacement of this well. In the interim until we get funding we are installing a smaller (350 gpm) pump be placed in the existing well casing. This reduced capacity will lessen any sanding because of the decreased-up hole velocity and hopefully prolong the well until a replacement well can be drilled. Mike Maggiora is getting an estimate for PPMWC. We expect the cost to be about \$15,000.

#### Aluminum Concentration from Well 07

The aluminum concentration from Well 07 for a sample collected on August 22, 2017 was 0.720 mg/L, which exceeds the aluminum SMCL of 0.2 mg/L. Section 64449 (c)(1), Chapter 15, Title 22 of the California Code of Regulations states that if the level of any constituent in Table 64449-A, which includes aluminum, exceeds an MCL, the community water system shall initiate quarterly monitoring and determine compliance on the basis of an average of the initial sample and the next three consecutive quarterly samples collected. As such, quarterly monitoring for aluminum must be initiated for Well 07, with the next sample due by December 31, 2017. In addition, aluminum monitoring must also be conducted at the blend point on the same date as the sample from Well 07 to determine the aluminum level served to the community.

We collected samples on the 22 December 2017. The results from the samples collected will be forwarded to the State once received.

#### Cross Connection Control Program

The PPMWC currently contracts with the County to administer your CCCP. According to County records, there are currently four backflow devices installed within the PPMWC system:

- Dumbarton Avenue - Residential connection with private well. Reduced Pressure Principle

Backflow Prevention Device (RP) installed at the service meter.

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- Palo Verde Street - Residential connection with private well. RP installed at service meter.
- Addison Street - Double check valve assembly (DC) installed on a fire suppression system.
- Wash & Go Laundry - DC installed on a fire suppression system.

It was noted during inspection that a cross connection control survey has not been conducted of all premises for potential health hazard to the public water system.

As such, it is uncertain if there are additional private wells within the PPMWVC service area. Therefore, by December 31, 2017, please provide to the Division an action plan and schedule to complete the cross-connection control survey and install the appropriate backflow prevention devices, as needed.

The San Mateo County Environmental Health Water Protection Program plan to conduct a comprehensive investigation of the PPMWVC service area for private wells. They will use the County's Land Use records to determine if any other well permits were pulled in our service area. This will be completed by 3/31/2018. PPMWVC is providing to San Mateo County Environmental Health a list of all metered and unmetered addresses with both APN and addresses that we serve.

#### Records of Hydrant Flushing and Valve Maintenance

PPMWVC is commended for proactively flushing all hydrants located at dead ends every two weeks and the rest of the distribution system once per quarter. In addition, all valves are exercised once a year. The flushing records indicate that the hydrants are flushed for five minutes. Please include the following information on all flushing and valve maintenance records:

- Flushing velocity
- Size of water main
- Condition of hydrant or valve
- Type and size of valve
- Water quality condition at the start and end of flushing - chlorine residual, turbidity and pH
- Name of staff who performed the system maintenance

The records will be reviewed by Division staff during future inspections of the PPMWVC.

Sample taps on Wells

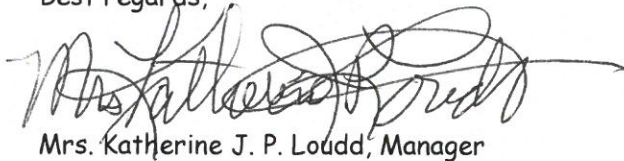
Section 64560(c)(3)(2) of the CA WWS specifies that public water supply wells shall be equipped with a non-threaded sample tap located on the discharge line between the wellhead and check valve. Sampling taps used for obtaining samples for bacteriological analysis shall not have a screen, aerator, or other such appurtenances. Taps should also be protected from potential sanitary hazards, such as animals and outdoor elements. Furthermore, the taps should provide a laminar flow for sample collections, especially for VOC analyses. Please remove the vacuum breaker and threads off the sample tap on the wells. We recommend PAPMWC install a dedicated, protected and down turned gooseneck sampled tap on all wells and at locations used for compliance monitoring.

The PAPMWC has removed all the vacuum breaker and threads off the sample tap on the wells. As per your recommendation has install a dedicated, protected (we purchased down turned gooseneck and will install at each Well) sampled tap on wells # 2, # 5, # 6 and # 7. Well # 3 will be equipped before putting on line, with your permission.

See pictures included of wells # 2, # 5, # 6 and # 7.

PAPMWC wish to say again thanks for all the consideration and support given as we work together to provide Quality on Tap to the community that we serve.

Best regards,



Mrs. Katherine J. P. Loudd, Manager

Please see attachments:

1. Preliminary Capital Improvement Project, Palo Alto Park Mutual Water Company, 1-5 pages
2. Palo Alto Park Mutual Water Company; Flushing Fire Hydrant Record, 1 page
3. Pictures of Sample taps on Wells, 1-4 pages

**Preliminary Capital Improvement Projects  
Palo Alto Park Mutual Water Company**

**Palo Alto Park Mutual Water Company  
Capital Improvement Projects**

**Projects**

**1. Well 7 Iron & Manganese Treatment System**

This project consists of installing an iron and manganese removal system for well 7. This well exceeds the MCL for these constituents and Division of Drinking Water has issued a Citation to Palo Alto Park Mutual Water Company to provide this treatment. The estimated cost is \$314,640. This is the number 1 priority project.

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>						
<b><u>Iron and Manganese Treatment for Well 7</u></b>						
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>	
1	Clearing and Grubbing	1	ls.	\$ 5,000.00	\$ 5,000.00	
2	Existing Facility Demolition	1	ls.	\$ 10,000.00	\$ 10,000.00	
3	8 inch pipelines	150	lf.	\$ 120.00	\$ 18,000.00	
4	Filters	1	ls.	\$ 175,000.00	\$ 175,000.00	
5	Chemical Monitoring Equipment	1	ea.	\$ 7,500.00	\$ 7,500.00	
6	Chlorination Equipment	1	ea.	\$ 7,500.00	\$ 7,500.00	
7	Electrical & Control System	1	ls.	\$ 5,000.00	\$ 5,000.00	
<b>Subtotal</b>					<b>\$ 228,000.00</b>	
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 45,600.00</b>	
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 41,040.00</b>	
<b>Total Construction</b>					<b>\$ 314,640.00</b>	

**2. Replacement Well #3**

Well #3 is severely corroded and has reached the end of its useful life. The estimated cost to drill a new replacement well and equip it with a new pump is \$125,000. This is the number 2 priority.

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>						
<b><u>Replacement of Well 3</u></b>						
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>	
1	Clearing and Grubbing	1	ls.	\$ 5,000.00	\$ 5,000.00	
2	Drill New Well	1	ls.	\$ 90,000.00	\$ 90,000.00	
3	8 inch pipelines	50	lf.	\$ 120.00	\$ 6,000.00	
4	New Well Pump	1	ls.	\$ 15,000.00	\$ 15,000.00	
5	Electrical & Control System	1	ls.	\$ 5,000.00	\$ 5,000.00	
<b>Subtotal</b>					<b>\$ 121,000.00</b>	
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 24,200.00</b>	
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 21,780.00</b>	
<b>Total Construction</b>					<b>\$ 166,980.00</b>	

**Preliminary Capital Improvement Projects  
Palo Alto Park Mutual Water Company**

**3. Replacement of Highway 101 Crossing at Lincoln Street**

The existing crossing of Highway 101 has severe leaks and a temporary 4” plastic pipe has been pulled through the old pipe to keep water flowing to the west side of Highway 101. The 4” pipe is too small and a new crossing consisting of a bored and jacked 12 foot deep 18” casing with a new 8” water main installed under the freeway. The estimated cost of this is \$122,820. This is the number 3 priority.

<u>Preliminary Engineer's Estimate of Construction Costs</u>					
<u>Replacement of Highway 101 Crossing at Lincoln Street</u>					
<u>Item #</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1	Clearing and Grubbing	1	ls.	\$10,000.00	\$ 10,000.00
2	New 18" Casing	200	lf.	\$ 200.00	\$ 40,000.00
3	8 inch pipelines	200	lf.	\$ 120.00	\$ 24,000.00
4	New Pipeline Connections	2	ea.	\$ 7,500.00	\$ 15,000.00
<b>Subtotal</b>					<b>\$ 89,000.00</b>
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 17,800.00</b>
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 16,020.00</b>
<b>Total Construction</b>					<b>\$ 122,820.00</b>

**4. Replacement Well #2**

Well #2 is severely corroded and has reached the end of its useful life. The estimated cost to drill a new replacement well and equip it with a new pump is \$125,000. This is the number 4 priority.

<u>Preliminary Engineer's Estimate of Construction Costs</u>					
<u>Replacement of Well 2</u>					
<u>Item #</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1	Clearing and Grubbing	1	ls.	\$ 5,000.00	\$ 5,000.00
2	Drill New Well	1	ls.	\$ 90,000.00	\$ 90,000.00
3	8 inch pipelines	50	lf.	\$ 120.00	\$ 6,000.00
4	New Well Pump	1	ls.	\$ 15,000.00	\$ 15,000.00
5	Electrical & Control System	1	ls.	\$ 5,000.00	\$ 5,000.00
<b>Subtotal</b>					<b>\$ 121,000.00</b>
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 24,200.00</b>
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 21,780.00</b>
<b>Total Construction</b>					<b>\$ 166,980.00</b>

**Preliminary Capital Improvement Projects  
Palo Alto Park Mutual Water Company**

**5. Installation of Water Meters**

California State law requires all community water systems to be metered by 2015. PAPMWC needs about 670 meters to be installed for all it's customers. The estimated cost for this is about \$400 each for a total of \$408,480. This is priority 5.

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>					
<b><u>Installation of Water Meters</u></b>					
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>
1	Mobilization, Clearing and Grubbing	1	ls.	\$20,000.00	\$ 20,000.00
2	New Water Sevice with Meter	690	ea.	\$ 400.00	\$ 276,000.00
<b>Subtotal</b>					<b>\$296,000.00</b>
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 59,200.00</b>
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 53,280.00</b>
<b>Total Construction</b>					<b>\$ 408,480.00</b>

**6. Green Street Main Replacement**

The existing 4" severely corroded water pipeline needs to be replaced. The estimated cost for this pipeline is \$289,800

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>					
<b><u>Green Street Water Main Replacement</u></b>					
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>
1	Clearing and Grubbing	1	ls.	\$10,000.00	\$ 10,000.00
2	New Sevice Connections	25	ea.	\$ 200.00	\$ 5,000.00
3	8 inch pipelines	1250	lf.	\$ 120.00	\$ 150,000.00
4	New Pipeline Connections	2	ea.	\$ 7,500.00	\$ 15,000.00
5	Fire Hydrants	4	ea.	\$ 7,500.00	\$ 30,000.00
<b>Subtotal</b>					<b>\$210,000.00</b>
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 42,000.00</b>
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 37,800.00</b>
<b>Total Construction</b>					<b>\$ 289,800.00</b>

**Preliminary Capital Improvement Projects  
Palo Alto Park Mutual Water Company**

**7. Glenway Street Main Replacement**

The existing 4” severely corroded water pipeline needs to be replaced. The estimated cost for this pipeline is \$335,340.

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>					
<b><u>Glenway Street Water Main Replacement</u></b>					
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>
1	Clearing and Grubbing	1	ls.	\$10,000.00	\$ 10,000.00
2	New Sevice Connections	40	ea.	\$ 200.00	\$ 8,000.00
3	8 inch pipelines	1500	lf.	\$ 120.00	\$ 180,000.00
4	New Pipeline Connections	2	ea.	\$ 7,500.00	\$ 15,000.00
5	Fire Hydrants	4	ea.	\$ 7,500.00	\$ 30,000.00
<b>Subtotal</b>					<b>\$243,000.00</b>
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 48,600.00</b>
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 43,740.00</b>
<b>Total Construction</b>					<b>\$ 335,340.00</b>

**8. Bell Street Main Replacement**

The existing 4” severely corroded water pipeline needs to be replaced. The estimated cost for this pipeline is \$289,800.

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>					
<b><u>Bell Street Water Main Replacement</u></b>					
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>
1	Clearing and Grubbing	1	ls.	\$ 10,000.00	\$ 10,000.00
2	New Sevice Connections	25	ea.	\$ 200.00	\$ 5,000.00
3	8 inch pipelines	1250	lf.	\$ 120.00	\$ 150,000.00
4	New Pipeline Connections	2	ea.	\$ 7,500.00	\$ 15,000.00
5	Fire Hydrants	4	ea.	\$ 7,500.00	\$ 30,000.00
<b>Subtotal</b>					<b>\$210,000.00</b>
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 42,000.00</b>
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 37,800.00</b>
<b>Total Construction</b>					<b>\$ 289,800.00</b>



**Preliminary Capital Improvement Projects  
Palo Alto Park Mutual Water Company**

**9. Second 350,000 gallon Water Tank**

A second 350,000 gallon water tank is needed to provide operational flexibility for PAPMWC. The estimated cost for a second tank is \$700,000. This is priority 10.

<b><u>Preliminary Engineer's Estimate of Construction Costs</u></b>						
<b><u>Second 350,000 Gallon Tank</u></b>						
<b><u>Item #</u></b>	<b><u>Description</u></b>	<b><u>Quantity</u></b>	<b><u>Unit</u></b>	<b><u>Unit Cost</u></b>	<b><u>Total Cost</u></b>	
1	Clearing and Grubbing	1	ls.	\$ 20,000.00	\$ 20,000.00	
2	New 350,000 G Steel Tank	1	ls.	\$500,000.00	\$ 500,000.00	
3	8 inch pipelines	100	lf.	\$ 120.00	\$ 12,000.00	
4	Electrical and Cathodic Protection	1	ls.	\$ 10,000.00	\$ 10,000.00	
<b>Subtotal</b>					<b>\$542,000.00</b>	
<b>Construction Contingencies</b>				<b>20.00%</b>	<b>\$ 108,400.00</b>	
<b>Engineering Design Fees</b>				<b>15.00%</b>	<b>\$ 97,560.00</b>	
<b>Total Construction</b>					<b>\$ 747,960.00</b>	

**PALO ALTO PARK MUTUAL WATER COMPANY; FLUSHING FIRE HYDRANT RECORD, 2017 SANTARY SURVEY**

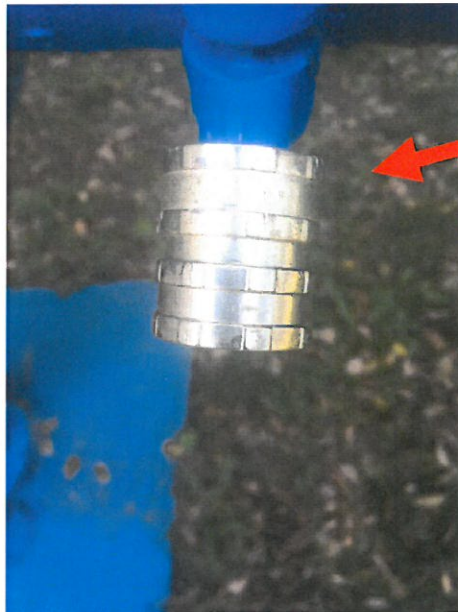
Name of staff who performed the system maintenance: Wilfred Loudd (W.L.), Michael Ward (M.W.) and Jabari Loudd (J.L.)

HYDRANT LOCATION	FLUSHING VELOCITY	SIZE OF WATER MAIN	CONDITION OF HYDRANT OR VALVE	TYPE AND SIZE OF VALVE	SYSTEM MAINTENANCE STAFF
1. 248 Green St.	1000 GPM 35 psi	6"	Good	Gate	W.L. & M. W.
2. 2317 Dumbarton Ave.	920 GPM 30 psi	6"	Good	Gate	W.L. & M. W.
3. 2274 Poplar	1060 GPM 40 psi	6"	Good	Gate	W.L. & M. W.
4. 2217 Poplar	1060 GPM 40 psi	6"	Good	Gate	W.L. & M. W.
5. 2200 Menalto Ave.	1130 GPM 45 psi	6"	Good	Gate	W.L. & M. W.
6. 2144 Ralmar	1060 GPM 40 psi	6"	Good	Gate	W.L. & M. W.

Palo Alto Park Mutual Water Company



#2





#6

