



City of Rancho Palos Verdes – Program Manager RPV LANDSLIDE COMPLEX WORKING GROUP MEETING AGENDA, NOTES, AND ACTION ITEMS

Date/Time: November 13, 2024, 3:00 pm to 4:00 pm PST

Topic: **RPV Community Stakeholder Meeting**

Attendees: **City of Rancho Palos Verdes:** Ara Mhuranian, City Manager; Ramzi Awwad, Director of Public Works; David Copp, Deputy Director of Public Works; Cory Linder; Daniel Trautner; Brandy Forbes; Megan Barnes; Katie Lozano; Juan Hernandez; Brandon Mesker; David Rator; John Fox (attorney); Jeremiah Sunwoo, Noel Casil, Nic Grillo, John Cruikshank; David Bradley, Cheri Bailiff, Catherine Jun, Luna Mohammad, Diego Ascencio

California Office of Emergency Services (CalOES): Anna Hurt

Hout Construction Services, Inc. (HCS): Jayme Fairfield, Document Control Manager

Cotton, Shires and Associates, Inc.: Mike Phipps, Contract City Geologist

Klondike Canyon Landslide Abatement District (KCLAD): Steve Cummins

Abalone Cove Landslide Abatement District (ACLAD): Gordon Leon

Seaview Residents Association: Kit Song, Rayne Sherman, Deirdre Heimer

Portuguese Bend Community Association (PBCA): Kent Attridge, Claudia Gutierrez

Portuguese Beach Club HOA: Michael Barth, Andrew Ely

Palos Verdes Peninsula Land Conservancy: Cris Sarabia

Cal Water: Ralph Felix, Augie Beaza, Kimberly Caballero

Southern California Gas Company (SoCal Gas): Ben Steinberger

Southern California Edison (SCE): Celina Luna

Frontier Communications: Doug McAllister, Ramiro De La Cruz, William Kearns, Stephen McDonald

Los Angeles County Public Works (LACPW): Alex Villarama, Robert Swartz, Brian Kane (fire department), Teagan Ferdinandsen

Los Angeles County Sanitation District (LACSD): Kevin Kim, Michael Chee, Daniel Salama

Wayfarer's Chapel: Peter Gottschalk

(Note: Those in attendance are in black; not in attendance are in gray)

Working Group Purpose: *"We are committed to evaluating and addressing every concern the community has for this important initiative. We will look to share information and ideas amongst all the major stakeholders and initiate short-term measures for proactive success. The community has spoken and the City is taking action."*



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MEETING AGENDA, NOTES, AND ACTION ITEMS**

TABLE 1: AGENDA ITEMS		Presenter(s)
DISCUSSION ITEMS		
Current, Short-Term, and Long-Term Mitigation Projects		Ramzi Awwad Jayme Fairfield
<ul style="list-style-type: none"> See Table 2 below. 		
Declaration(s) of Emergency and Los Angeles County Disaster Management AREA G		Ara Mihranian Ramzi Awwad Brandy Villanueva
<ul style="list-style-type: none"> City staff will be presenting to the City Council at the 11/19/2024 meeting for their consideration to extend the emergency declaration(s). 		
General Comments or Questions		Working Group
<ul style="list-style-type: none"> The sheriff’s command center was removed from the area. However, there has been a patrol car staged at the same location. Ramzi Awwad will follow up with the sheriff’s department. Claudia stated that the sheriff is not staying at the gate for longer than 10-15 minutes and then patrolling. Please email landmovement@rpvca.gov with public/resident concerns, issue reports, or complaints. 		
NEXT MEETING		
<ul style="list-style-type: none"> Occurs the second and fourth Wednesdays of the month at 3:00 pm PST. The next meeting is 11/27/2024. Regular Meeting Format: This meeting will be held virtually via Teams. Notes from past meetings can be found on the City’s website at this link: RPV Landslide Complex Working Group Rancho Palos Verdes, CA - Official Website (rpvca.gov). 		Jayme Fairfield

TABLE 2: CURRENT, SHORT-TERM, AND LONG-TERM MITIGATION PROJECTS

Activity	Responsible Entity	Notes/Status	Estimated Completion
UTILITIES			
Sewer Lines	LACSD	<ul style="list-style-type: none"> LACSD is planning additional projects. There is stress building on the 14” steel trunk lines along PVDS. Historic and ongoing land movement has applied pressure to the line. Engineers have been evaluating the situation and line is at high risk; they are designing a solution. The LACSD Board will need to make the final decision. More information will be shared after the Board’s decision. All immediate situations will be handled without delay. The City will coordinate directly with LACSD for any adjacent projects on/along PVDS. 	Ongoing
Sewer Lines: Seaview Neighborhood	LACPW: Mains Homeowners: Laterals	<ul style="list-style-type: none"> No updates. 	Ongoing
Sewer Lines: Portuguese Bend Community	City	<ul style="list-style-type: none"> There are a couple of repairs on the realignment project that the City will be wrapping up by 11/20/2024. The City is still acquiring new generators to replace the diesel generators. 	Ongoing



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Activity	Responsible Entity	Notes/Status	Estimated Completion
		<ul style="list-style-type: none"> The storm drains that ACLAD wants to install at Narcissa and Cinnamon would impact the sewer lines. The City stated that ACLAD can go ahead and backfill their work. The pump station at Narcissa and Gingerroot has a volunteer monitoring it full-time. Gordon Leon proposed that a lift station be installed at this location. 	
Power Poles Repairs	Southern California Edison (SCE)	<ul style="list-style-type: none"> No updates. 	Ongoing
Communications	Frontier Others	<ul style="list-style-type: none"> No updates. 	Ongoing
Gas Lines: Portuguese Bend Community and Seaview Community	SoCal Gas	<ul style="list-style-type: none"> No updates. 	Ongoing
Water: Seaview Neighborhood	Cal Water	<ul style="list-style-type: none"> The Five Corners area is being tested this week. Once the samples are back and clear, the tie-in will be scheduled. Narcissa to PVDS will be tied in on 11/15/2024. The City had requested a written report on the 11/2/2024 water main break. They request the report include when it happened, when it was stopped, and how much water was released/leaked. Cal Water is currently working on the report. 	TBD
Water: Portuguese Bend Community Association	Cal Water	<ul style="list-style-type: none"> No updates. 	TBD
Water: Portuguese Bend Beach Club	Cal Water	<ul style="list-style-type: none"> No updates. 	Completed
CITY			
Portuguese Bend Landslide EIR, Final Engineering, and E1/E2	City	<p>Deep Dewatering Wells (DDW)</p> <ul style="list-style-type: none"> The DDW program is still showing progress and is promising. There is still reason to be optimistic. DDW9 in Abalone Cove has pinched off and is no longer functional. An alternate location is being drilled. The City hopes to have it tied in next week. The project team is still working on access plans for DDW11. A total of three DDWs in the Abalone Cove area is the goal. The total water extracted 40,000,000 gallons since operations started. Currently, water is being extracted at 1,500,000 per day. The first DDWs had a large startup cost, but each additional DDW costs less. The cost for each DDW depends on access to the drilling site. Therefore, each DDW is site specific. Ramzi Awwad and David Copp can provide KCLAD and ACLAD with numbers/costs to use as a guide. 	October 2024



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Activity	Responsible Entity	Notes/Status	Estimated Completion
		<ul style="list-style-type: none"> The geologists and other specialist are calculating the depths of the slip plane. There will be more info in the coming few days. 	
Winterization	City	<ul style="list-style-type: none"> The Altamira Canyon earthwork is complete. Midway up the canyon, installation of the liner will continue for about another week. Some drainage pipes may need to be replaced. In Klondike Canyon, filling began in one of the northwest fissures. Some more grading is underway. A drain line may need to be temporarily moved to complete the drainage/grading and then it will be replaced/reinstalled. Winterization will commence next in Paintbrush and Ishibashi Canyons. Yesterday afternoon, the pavement was completed on Exultant. Contractor Hardy & Harper is currently performing regrading and drainage work on Admirable. Malcolm will be working on Dauntless/Exultant in the next couple of weeks. The section between upper Narcissa and Cinnamon has excess water that will be mitigated to slow down the increased water flow in the system. Ramzi Awwad suggested that Scott Kerwin talk with Mike Phipps about this excess water. 	Ongoing
PVDS at Peppertree Drainage	City	<ul style="list-style-type: none"> No updates. 	TBD
GPS Surveying of Landslide Movement	City	<ul style="list-style-type: none"> The most recent full monitoring point survey was sent to interested parties. A partial survey was conducted within the past week. This survey indicated no movement at the sample points in Seaview and Klondike Canyon. This data will be reported at the 11/19/2024 City Council meeting. It is still too early to form an opinion/conclusion of the impact of DDWs 9 and 10, especially with the shearing of DDW9. There needs to be at least three DDWs in the area to make a conclusion. 	Ongoing
PVDS Roadway Repairs	City	<ul style="list-style-type: none"> Roadwy repairs on ongoing today and through the week. 	Ongoing
Seaview Neighborhood Roadway Repairs	City	<ul style="list-style-type: none"> See above in winterization. 	Ongoing
Drainage Source Study	City	<ul style="list-style-type: none"> The City released an RFP for the drainage study. The City began to hear back from some interested parties/team. The firms are requesting more time to respond. So, the City is pushing the due date out about a month. 	TBD



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Activity	Responsible Entity	Notes/Status	Estimated Completion
COMMUNITY ASSOCIATIONS AND LANDSLIDE ABATEMENT DISTRICTS			
Road Repairs in the Portuguese Bend Community	Portuguese Bend Community Association	<ul style="list-style-type: none"> • Peppertree was grinded and is being asphalted. This will take a few days. • At Five Corners West, PBCA will be removing the asphalt due to the fissure and replacing it with CMB. 	Ongoing
KCLAD Dewatering Wells	KCLAD	<ul style="list-style-type: none"> • Current Production: Two wells produce a combined volume of 350 gallons per minute (GPM), with a water depth of about 86 feet. The flow was reduced to protect pumps located at 105 feet. • Well Inventory: KCLAD has five wells, with the two active ones developed in 2024, and older wells from 1987 and 2023 (#3 and #4 respectively). A shallow pump (Well #4A) will be retired. • Future Development: Plans include putting wells #3 and #4 back into production, adding ultrasonic meters, and investing in a sonic water level meter to monitor subsurface water. • Additional Data: Weekly readings are updated in the spreadsheet attached. 	Ongoing
Klondike Canyon Fissures	KCLAD & City	<ul style="list-style-type: none"> • No updates. 	Ongoing
Klondike Canyon Culvert and Pipe	KCLAD & City	<ul style="list-style-type: none"> • No updates. 	Ongoing
Lower Seaview/ PVDS at Klondike Canyon Drainage	KCLAD & City	<ul style="list-style-type: none"> • No updates. 	TBD
Winterization and curbs at force mains at curve of PVDS	KCLAD	<ul style="list-style-type: none"> • No updates. 	TBD
ACLAD Dewatering Wells	ACLAD	<ul style="list-style-type: none"> • A group of volunteers are turning the wells on and off. • Ara Mihranian encouraged ACLAD to leave the generators on longer. • Ten wells are running on generators. Several are only running on an intermittent basis because they are very close to residence(s) and are turned off at specific times due to noise. Some wells run 24/7 and are shut off only if there is a pipe break. 	Ongoing
General Maintenance	ACLAD	<ul style="list-style-type: none"> • There was a line break today and a temporary repair was immediately made. • Tomorrow afternoon, ACLAD will fix three separate line beaks at Narcissa and Cinnamon. 	Ongoing
Top of Slide Area and Kelvin Canyon Spring	ACLAD & City	<ul style="list-style-type: none"> • A stormwater retention tank was installed at the Riding Club. For the temporary foreseeable future, a trash pump will pump out the water from the tank. 	TBD
Altamira Canyon Lining	ACLAD, RPV, and LACPW (Flood Control District)	<ul style="list-style-type: none"> • No updates. 	TBD

This document was exported from Numbers. Each table was converted to an Excel worksheet. All other objects on each Numbers sheet were placed on separate worksheets. Please be aware that formula calculations may differ in Excel.

Numbers Sheet Name	Numbers Table Name	Excel Worksheet Name
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2024		
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	Table 1	
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		2024
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2023		
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	Table 1	
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		2023
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2022		
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	Table 1	
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		2022
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2021		
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	Table 1	
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		2021
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2020-2021		
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	Table 1	
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		2020-2021
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2019-2020		
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	Table 1	
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		2019-2020
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2018		
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	Table 1	
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		2018
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DATE	Well #1 (No Pump) Near Klondike Yard			Well #2 - Pump #2 Near Court 3			Well #3 - Pump #1 In Wood Box				Well #4 - Pump #3 In Sand On Beach				Well #4A		Well #5 and Pump			Well #6 and Pump			Notes		
	Time	Water Depth		Time	Water Depth	Pump GPM	Time	Water Depth	Pump Reading	Pump GPM	Time	Water Depth	Pump Reading	Pump GPM	Time	Water Depth	Time	Water Depth	Pump GPM	Time	Water Depth	Pump GPM			
12/14/2023	11:40 AM			12:40 PM	3.2 ft	9	1:40 PM	7.5 ft	39937300	30	1:05 PM													Water sample vials delivered to Steve Cummins on 12/14/23	
12/14/2023	11:40 AM	98.1 ft		12:40 PM	3.2 ft	9	1:40 PM	7.5 ft	39937300	30	1:05 PM	4.9 ft		Not Installed Yet											
12/21/2023	8:45 AM	98.3 ft		9:15 AM	3.1 ft	7	11:10 AM	7.8 ft	40327400	45	9:40 AM	5.1 ft		Not Installed Yet											
#####	8:15 AM	104.0 ft		8:35 AM	10.1 ft	14	9:40 AM	15.8 ft	40800700	48	9:20 AM	24.5 ft		00309600	115										
1/5/2024	9:20 AM	110.0 ft		9:30 AM	6.0 ft	n/a	11:20 AM	23.7 ft	41295200	59	11:10 AM	32.0 ft		01513500	113										
1/11/2024	2:20 PM	114.0 ft		2:35 PM	9.4 ft	n/a	2:40 PM	27.9 ft	41817100	55	3:00 PM	35.5 ft		02543600	114										
1/18/2024	3:10 PM	n/a		3:20 PM	N/A	n/a	3:25 PM	n/a	42365100	53	3:40 PM	n/a		03695600	110										Depth Reader not working
1/26/2024	9:30 AM	117.7 ft		9:45 AM	9.5 ft	n/a	10:15 AM	30.8 ft	42949400	52	10:00 AM	38.6 ft		04945000	110										
2/2/2024	9:00 AM	n/a		9:20 AM	n/a	n/a	10:20am	n/a	43463800	50	9:45 AM	n/a		06022200	102										
2/9/2024	9:00 AM	114.8 ft		9:30 AM	5.2 ft	n/a	10:15 AM	27.8 ft	43956700	48	11:00 AM	34.3 ft		07056900	100										
2/15/2024	10:10 AM	115.8 ft		10:25 AM	6.5 ft	n/a	10:55 AM	28.5 ft	44335300	44	10:30 AM	35.6 ft		07925600	100										
2/23/2024	9:15 AM	113.6 ft		9:25 AM	4.6 ft	n/a	10:05 AM	25.8 ft	44796300	35	9:40 AM	33.1 ft		09086800	100										
3/1/2024	8:35 AM	112.5 ft		8:50 AM	5.9 ft	n/a	9:30 AM	24.5 ft	44906900	n/a	9:40 AM	31.9 ft		10071500	100										
3/8/2024	9:10 AM	110.8 ft		9:20 AM	6.5 ft	n/a	9:45 AM	22.7 ft	44906900	n/a	9:30 AM	29.9 ft		11074600	100										
3/13/2024	8:35 AM	112.3 ft		8:45 AM	6.8 ft	n/a	9:30 AM	25.4 ft	45299300	59	9:10 AM	33.1 ft		11782600	100										
3/21/2024	11:50 AM	112.4 ft		12:15 PM	7.4 ft	n/a	12:30 AM	25.8 ft	45922500	68	12:50 PM	32.5 ft		12912700	96										
3/28/2024	8:35 AM	112.3 ft		8:55 AM	8.4 ft	n/a	9:45 AM	24.3 ft	46602400	n/a	9:25 AM	31.0 ft		13788800	93										
4/5/2024	11:00 AM	108.0 ft		11:25 AM	7.2 ft	n/a	12:15 PM	19.6 ft	46602400	78	11:50 AM	28.0 ft		14857700	92										
4/12/2024	7:25 AM	106.6 ft		7:45 AM	8.5 ft	n/a	8:45 AM	17.5 ft	46609000	86	8:25 AM	22.1 ft		15753000	89										
4/19/2024	9:25 AM	101.9 ft		9:40 AM	8.5 ft	n/a	10:40 AM	13.8 ft	46610200	79	10:20 AM	14.5 ft		16534700	79										
4/26/2024	2:15 PM	101.1 ft		2:25 PM	8.5 ft	n/a	3:00 PM	13.2 ft	46610300	79	2:50 PM	13.5 ft		17308500	70										
5/2/2024	2:30 PM	101.6 ft		2:45 PM	9.0 ft	n/a	3:25 PM	15.8 ft	46718700	77	3:05 PM	14.1 ft		17954500	77	2:35 PM	9.8 ft	2:30pm	9.8 ft						
5/9/2024	2:10 PM	102.3 ft		2:25 PM	8.7 ft	n/a	2:45 PM	16.8 ft	47498800	78	3:15 PM	14.1 ft		18722400	78	2:35 PM	14.1 ft	2:30pm	9.5 ft						
5/17/2024	3:15 PM	101.8 ft		3:35 PM	7.5 ft	n/a	4:15 PM	16.5 ft	48347000	76	4:00 PM	12.0 ft		19621400	77	3:50 PM	12.5 ft	3:40 PM	8.2 ft						
5/23/2024	7:40 AM	102.6 ft		7:55 AM	7.4 ft	n/a	8:50 AM	17.5 ft	48965600	78	8:20 AM	13.5 ft		20237800	78	8:10 AM	12.3 ft	8:00 AM	8.0 ft						
5/30/2024	3:00 PM	102.6 ft		3:05 PM	7.4 ft	n/a	3:55 PM	17.1 ft	49735400	80	3:35 PM	13.0 ft		21025600	78	3:25 PM	12.1 ft	3:15 PM	8.1 ft						
6/7/2024	11:25 AM	102.0 ft		11:45 AM	6.3 ft	n/a	12:30 PM	16.6 ft	50639100	79	12:10 PM	12.3 ft		21896700	81	12:15 PM	10.7 ft	11:55 AM	7.1 ft						
6/14/2024	2:25 PM	101.8 ft		2:45 PM	6.0 ft	n/a	3:30 PM	17.3 ft	51245400	74	3:10 PM	12.3 ft		22564200	81	3:05 PM	10.6 ft	2:55 PM	6.8 ft						
6/21/2024	2:30 PM	101.0 ft		2:50 PM	7.0 ft	n/a	3:25 PM	17.5 ft	52040700	78	3:45 PM	11.8 ft		n/a	n/a	3:15 PM	11.5 ft	3:05 PM	7.7 ft						
6/27/2024	12:15 PM	97.9 ft		11:20 AM	7.0 ft	n/a	11:00 AM	13.1 ft	52581700	82	10:50 AM	9.8 ft		n/a	n/a	11:45 AM	11.7 ft	11:40 AM	7.8 ft						
7/1/2024	9:50 AM	97.6 ft		10:00 AM	6.9 ft	n/a	10:25 AM	13.1 ft	52929400	80	10:20 AM	8.7 ft		n/a	n/a	10:15 AM	11.7 ft	10:10 AM	7.7 ft						
7/5/2024	7:20 AM	96.9 ft		7:25 AM	7.1 ft	n/a	7:40 AM	13.4 ft	53495700	78	7:30 AM	8.9 ft		n/a	n/a	7:30 AM	11.9 ft	7:35 AM	11.5 ft						
7/12/2024	10:35 AM	96.6 ft		10:50 AM	3.8 ft	n/a	12:20 PM	12.4 ft	54327600	78	11:55 AM	7.0 ft		n/a	n/a	11:40 AM	7.3 ft	11:20 AM	4.4 ft						
7/19/2024	10:15 AM	96.3 ft		10:40 AM	4.4 ft	n/a	12:25 PM	12.4 ft	55072700	77	11:45	6.8 ft		n/a	n/a	11:20 AM	9.8 ft	11:05 AM	6.6 ft						
7/26/2024	2:00 PM	95.1 ft		11:30 AM	3.7 ft	n/a	12:35 PM	11.4 ft	55822600	80	1:00 PM	6.2 ft		n/a	n/a	11:45 AM	11.7 ft	11:40 AM	7.8 ft						
8/2/2024	11:50 AM	95.4 ft		10:15 AM	3.9 ft	n/a	10:55 AM	12.0 ft	56584900	82	10:45 AM	8.3 ft		n/a	n/a	10:30 AM	8.9 ft	10:20 AM	6.0 ft						
8/9/2024	2:30 PM	94.6 ft		3:00 PM	5.0 ft	n/a	3:55 PM	11.9 ft	57048600	72	3:25 pm	6.1 ft		23369800	48	3:15 PM	10.5 ft	3:05 PM	7.3 ft						
8/16/2024	8:05 AM	95.2 ft		well #2 & pump #2 terminated			8:30 AM	12.5 ft	57756200	80	8:50 AM	6.8 ft		23682200	n/a	9:00 AM	10.6 ft	8:25 AM	terminated						
8/23/2024	10:10 AM	95.6 ft		well #2 & pump #2 terminated			10:45 AM	13.1 ft	58544800	75	11:10 AM	7.6 ft		23919100	43	11:35 AM	15.4 ft	Well #5 terminated							
8/29/2024	8:25 AM	99.4 ft		well #2 & pump #2 terminated			9:30 AM	17.7 ft	59181600	77	9:05 AM	14.0 ft		21199600	36	8:50 AM	15.5 ft	10:20 AM	3.9 ft	250					
9/4/2024	10:00 AM	100.6 ft		well #2 & pump #2 terminated			10:35 AM	18.7 ft	59844100	75	11:35 AM	29.8 ft		24432900	30	11:20 AM	16.0 ft	10:15 AM	5.4 ft	250					
9/13/2024	11:45 AM	98.8 ft		pump #2 terminated			12:05 PM	15.8 ft	N/A	N/A	12:30 PM	15.7 ft		24634400	12	1:20 PM	15.4 ft	1:30 PM	N/A	250					
9/20/2024	1:20 PM	101.5 ft		pump #2 terminated			2:10 PM	18.5 ft	N/A	N/A	2:55 PM	16.5 ft		24703400	11	2:00 PM	15.4 ft	3:25 PM	24.1 ft	250					
9/27/2024	7:25 AM	111.6 ft		well #2 & pump #2 terminated			9:00 AM	29.2 ft	N/A	N/A	9:20 AM	20.8 ft		N/A	N/A	8:20 AM	17.4 ft	8:30 AM	32.8 ft	250					
10/4/2024	7:15 AM	127.0 ft		well #2 & pump #2 terminated			7:50 AM	35.8 ft	N/A	N/A	8:20 AM	24.8 ft		N/A	N/A	8:50 AM	17.5 ft	9:05 AM	38.9 ft	250	9:25 AM	12.3 ft	n/a		
#####	9:10 AM	125.4 ft		well #2 & pump #2 terminated			10:50 AM	51.0 ft	N/A	N/A	11:25 AM	44.9 ft		N/A	N/A	10:25 AM	19.4 ft	9:30 AM	56.5 ft	0	9:55 AM	76.4 ft	200		
#####	9:05 AM	124.4 ft		well #2 & pump #2 terminated			10:05 AM	49.4 ft	N/A	N/A	10:25 AM	31.9 ft		N/A	N/A	9:25 AM	15.6 ft	11:35 AM	56.3 ft	0	11:05 AM	79.0 ft	280		
#####	8:25 AM	124.4 ft		well #2 & pump #2 terminated			9:20 AM	36.9 ft	N/A	N/A	9:10 AM	25.9 ft		N/A	N/A	NOOPERATIVE	N/A	10:00 AM	41.3 ft	0	10:30 AM	67.8 ft	300		
11/1/2024	8:45 AM	124.4 ft		well #2 & pump #2 terminated			9:50 AM	58.4 ft	N/A	N/A	10:10 AM	56.4 ft		N/A	N/A	9:25 AM	19.4 ft	10:35 AM	89.1 ft	250	11:25 AM	89.7 ft	300		
11/8/2024	7:40 AM	123.4 ft		well #2 & pump #2 terminated			8:30 AM	61.4 ft	N/A	N/A	8:10 AM	63.0 ft		N/A	N/A	8:55 AM	19.6 ft	9:15 AM	85.8 ft	280	9:45 AM	87.5 ft	300		

KLONDIKE READINGS AS OF DECEMBER 31, 2020

DATE	TIME	READING	(gallons per minute)				
Jan. 3 , 2020	7:00 AM	53043900	50				
Jan. 10, 2020	6:50 AM	53545400	50				
Jan. 17,2020	7:30 AM	54045800	50				
Jan. 23, 2020	7:05 AM	54466600	50				
Jan. 31, 2020	7:30 AM	55019800	48				
Feb. 7, 2020	6:45 AM	55496600	48				
Feb. 14,2020	7:15 AM	55970000	48				
Feb. 20, 2020	7:20 AM	56380600	48				
Feb. 28, 2020	6:25 AM	56919500	48				
Mar. 6, 2020	6:50 AM	57381500	48				
Mar. 13, 2020	6:45 AM	57855300	45				
Mar. 19,2020	8:00 AM	58261000	47				
Mar. 26, 2020	7:30 AM	58723400	44				
Apr. 3, 2020	7:10 AM	59243700	44				
Apr. 10, 2020	7:35 AM	59682000	43				
Apr. 17, 2020	6:50 AM	60101800	41				
Apr. 23, 2020	7:00 AM	60456600	40				
May 1, 2020	6:55 AM	60914900	38				
May 8, 2020	7:05 AM	61396400	38				
May 15, 2020	7:20 AM	61856700	35				
May 22, 2020	7:10 AM	62024000	35				
May 29 2020	6:35 AM	62376800	35				
June 5 2020	6:40 AM	62737200	35				
June 12 2020	6:50 AM	63105900	39				
June 19 2020	6:45 AM	63498700	41				
June 26 2020	6:50 AM	63909300	40				
July 3 2020	7:35 AM	64327300	42				
July 10 2020	8:55 AM	64741100	39				
July 17,2020	6:25 AM	65144500	40				
July 24 2020	1:20 PM	65576100	42				
July 31 2020	8:55 AM	65966200	40				
Aug 6 2020	3:25 PM	66317300	40				
Aug 13 2020	8:25 AM	66688900	37				
Aug 20 2020	8:45 AM	67070800	38				
Aug 27 2020	7:30 AM	67442900	38				
Sep 3 2020	7:45 AM	67809700	36				
Sep 10 2020	8:10 AM	68160400	35				
Sep 18 2020	8:30 AM	68555700	33				
Sep 24 2020	8:05 AM	68851700	34				
Oct 1 2020	9:00 AM	69200400	35				
Oct 8 2020	8:05 AM	69549200	33				
Oct 16 2020	8:30 AM	69936700	33				
Oct 23 2020	8:30 AM	70270300	33				
Oct 30 2020	8:35 AM	70554800	34				
Nov 5 2020	8:50 AM	70877800	31				
Nov 12 2020	8:55 AM	71187800	32				
Nov 19 2020	8:10 AM	71493800	32				
Nov 26 2020	12:00 PM	71824600	34				
Dec 3 2020	8:20 AM	72143800	33				
Dec 10 2020	8:25 AM	72473200	33				
Dec 17 2020	8:10 AM	72805200	34				
Dec 24 2020	9:30 AM	73152600	34				
Dec 31 2020	12:50 PM	73524400	35				

KLONDIKE READINGS AS OF DECEMBER 28, 2020

DATE	TIME	READING	(gallons per minute)	DATE	TIME	READING	(gallons per minute)
Jan 4 2019	7:00 AM	33057300	36	Jan. 3 , 2020	7:00 AM	53043900	50
Jan 11 2019	7:30 AM	33412900	38	Jan. 10, 2020	6:50 AM	53545400	50
Jan 18 2019	6:45 AM	33766600	38	Jan. 17,2020	7:30 AM	54045800	50
Jan 24 2019	7:00 AM	34076800	37	Jan. 23, 2020	7:05 AM	54466600	50
Feb 1 2019	8:40 AM	34496200	35	Jan. 31, 2020	7:30 AM	55019800	48
Feb 8 2019	6:50 AM	34856400	37	Feb. 7, 2020	6:45 AM	55496600	48
Feb 15 2019	6:30 AM	35218900	35	Feb. 14,2020	7:15 AM	55970000	48
Feb 21 2019	7:45 AM	35534600	35	Feb. 20, 2020	7:20 AM	56380600	48
Mar 1 2019	7:15 AM	35958900	37	Feb. 28, 2020	6:25 AM	56919500	48
Mar 8 2019	10:35 AM	36344100	37	Mar. 6, 2020	6:50 AM	57381500	48
Mar 15 2019	8:15 AM	36720300	37	Mar. 13, 2020	6:45 AM	57855300	45
Mar 22 2019	7:15 AM	37101100	37	Mar. 19,2020	8:00 AM	58261000	47
Mar 29 2019	6:45 AM	37488700	40	Mar. 26, 2020	7:30 AM	58723400	44
Apr 5 2019	10:50 AM	37890400	39	Apr. 3, 2020	7:10 AM	59243700	44
Apr 12 2019	7:55 AM	38278300	39	Apr. 10, 2020	7:35 AM	59682000	43
Apr 18 2019	7:00 AM	38615000	40	Apr. 17, 2020	6:50 AM	60101800	41
Apr 26 2019	8:15 AM	39071500	40	Apr. 23, 2020	7:00 AM	60456600	40
May 3 2019	8:15 AM	39469000	40	May 1, 2020	6:55 AM	60914900	38
May 10 2019	10:20 AM	39877400	41	May 8, 2020	7:05 AM	61396400	38
May 17 2019	7:20 AM	40272000	40	May 15, 2020	7:20 AM	61856700	35
May 24 2019	6:50 AM	40677900	41	May 22, 2020	7:10 AM	62024000	35
May 31 2019	11:00 AM	41102100	42	May 29 2020	6:35 AM	62376800	35
Jun 7 2019	9:20 AM	41516100	42	June 5 2020	6:40 AM	62737200	35
Jun 14 2019	11:45 AM	41943800	41	June 12 2020	6:50 AM	63105900	39
Jun 20 2019	7:10 AM	42295100	42	June 19 2020	6:45 AM	63498700	41
Jun 28 2019	7:05 AM	42782600	43	June 26 2020	6:50 AM	63909300	40
Jul 5 2019	8:30 AM	43212100	44	July 3 2020	7:35 AM	64327300	42
Jul 12 2019	12:00 PM	43650300	44	July 10 2020	8:55 AM	64741100	39
Jul 18 2019	7:30 AM	44008500	44	July 17,2020	6:25 AM	65144500	40
Jul 26 2019	8:20 AM	44512900	43	July 24 2020	1:20 PM	65576100	42
Aug 2 2019	8:40 AM	44962400	46	July 31 2020	8:55 AM	65966200	40
Aug 9 2019	8:30 AM	45412500	39	Aug 6 2020	3:25 PM	66317300	40
Aug 16 2019	10:30 AM	45868700	44	Aug 13 2020	8:25 AM	66688900	37
Aug 22 2019	8:45 AM	46236200	45	Aug 20 2020	8:45 AM	67070800	38
Aug 30 2019	8:25 AM	46739200	44	Aug 27 2020	7:30 AM	67442900	38
Sep 6 2019	6:45 AM	47178000	39	Sep 3 2020	7:45 AM	67809700	36
Sep 13 2019	6:40 AM	47619200	48	Sep 10 2020	8:10 AM	68160400	35
Sep 19 2019	8:55 AM	48004900	45	Sep 18 2020	8:30 AM	68555700	33
Sep 27 2019	8:45 AM	48513800	46	Sep 24 2020	8:05 AM	68851700	34
Oct 4 2019	7:40 AM	48894100	PNW	Oct 1 2020	9:00 AM	69200400	35
Oct 11 2019	PUMP	NOT	WORKING	Oct 8 2020	8:05 AM	69549200	33
Oct 18 2019	PUMP	NOT	WORKING	Oct 16 2020	8:30 AM	69936700	33
Oct 25 2019	PUMP	NOT	WORKING	Oct 23 2020	8:30 AM	70270300	33
Nov. 1 2019	PUMP	NOT	WORKING	Oct 30 2020	8:35 AM	70554800	34
Nov. 8 2018	PUMP	NOT	WORKING	Nov 5 2020	8:50 AM	70877800	31
Nov. 11, 2019	10:10 AM	48975600	58	Nov 12 2020	8:55 AM	71187800	32
Nov. 15, 2019	8:00 AM	49289206	57	Nov 19 2020	8:10 AM	71493800	32
Nov. 21, 2019	7:25 AM	49770500	55	Nov 26 2020	12:00 PM	71824600	34
Nov. 29, 2019	7:25 AM	50408500	55	Dec 3 2020	8:20 AM	72143800	33
Dec. 6 , 2019	8:15AM	50955400	57	Dec 10 2020	8:25 AM	72473200	33
Dec. 13, 2019	7:00 AM	51482900	53	Dec 17 2020	8:10 AM	72805200	34
Dec. 19, 2019	7:45 AM	51938500	52	Dec 24 2020	9:30 AM	73152600	34
Dec. 27, 2019	9:00 AM	52537000	48	Dec 31 2020	12:50 PM	73524400	35

KLONDIKE PUMP READINGS AS OF OCTOBER 28, 2019

DATE	TIME	READING	GPM (gallons per minute)	DATE	TIME	READING	GPM (gallons per minute)
Jan. 5, 2018	9:10 AM	13726000	36	Dec. 7 2018	11:25 AM	31600300	37
Jan 12 2018	7:15 AM	14077200	35	Dec 14 2018	8:10 AM	31981100	39
Jan 19 2018	6:40 AM	14431900	36	Dec 21 2018	7:35 AM	32304300	35
Jan 25 2018	8:50 AM	14748700	36	Dec 27 2018	8:25 AM	32651400	35
Feb 2 2018	7:00 AM	15141000	35	Jan 4 2019	7:00 AM	33057300	36
Feb 9 2018	7:00 AM	15494300	36	Jan 11 2019	7:30 AM	33412900	38
Feb 16 2018	8:30 AM	15849900	37	Jan 18 2019	6:45 AM	33766600	38
Feb 21 2018	8:20 AM	16101000	36	Jan 24 2019	7:00 AM	34076800	37
Mar 2 2018	7:55 AM	16551300	35	Feb 1 2019	8:40 AM	34496200	35
Mar 9 2018	7:55 AM	16901000	35	Feb 8 2019	6:50 AM	34856400	37
Mar 16 2018	7:30 AM	17251700	36	Feb 15 2019	6:30 AM	35218900	35
Mar 22 2018	7:20 AM	17556600	35	Feb 21 2019	7:45 AM	35534600	35
Mar 30 2018	7:00 AM	17962700	35	Mar 1 2019	7:15 AM	35958900	37
Apr 6 2018	8:30 AM	18320700	35	Mar 8 2019	10:35 AM	36344100	37
Apr 13 2018	6:30 AM	18673500	36	Mar 15 2019	8:15 AM	36720300	37
Apr 19 2018	6:50 AM	18980500	36	Mar 22 2019	7:15 AM	37101100	37
Apr 27 2018	6:35 AM	19387200	35	Mar 29 2019	6:45 AM	37488700	40
May 4 2018	6:20 AM	19739200	36	Apr 5 2019	10:50 AM	37890400	39
May 11 2018	7:00 AM	20093000	35	Apr 12 2019	7:55 AM	38278300	39
May 17 2018	9:30 AM	20402600	35	Apr 18 2019	7:00 AM	38615000	40
May 25 2018	9:15 AM	20805100	36	Apr 26 2019	8:15 AM	39071500	40
Jun 1 2018	7:55 AM	21158200	34	May 3 2019	8:15 AM	39469000	40
Jun 8 2018	11:15 AM	21514100	33	May 10 2019	10:20 AM	39877400	41
Jun 15 2018	8:35 AM	21856500	35	May 17 2019	7:20 AM	40272000	40
Jun 21 2018	6:55 AM	22154000	40	May 24 2019	6:50 AM	40677900	41
Jun 29 2018	6:30 AM	22606900	39	May 31 2019	11:00 AM	41102100	42
Jul 6 2018	7:50 AM	22493400	36	Jun 7 2019	9:20 AM	41516100	42
Jul 12 2018	6:35 AM	23363100	37	Jun 14 2019	11:45 AM	41943800	41
July 19 2018	6:55 AM	23675900	36	Jun 20 2019	7:10 AM	42295100	42
July 27 2018	8:30 AM	24097300	39	Jun 28 2019	7:05 AM	42782600	43
Aug 3 2018	10:10 AM	24483200	40	Jul 5 2019	8:30 AM	43212100	44
Aug 10 2018	9:20 AM	24871700	38	Jul 12 2019	12:00 PM	43650300	44
Aug 17 2018	6:25 AM	25258400	40	Jul 18 2019	7:30 AM	44008500	44
Aug 23 2018	6:45 AM	25599300	39	Jul 26 2019	8:20 AM	44512900	43
Aug 31 2018	6:25 AM	26052700	40	Aug 2 2019	8:40 AM	44962400	46
Sept 7, 2018	8:05 AM	26451600	40	Aug 9 2019	8:30 AM	45412500	39
Sept 13 2018	7:10 AM	26787400	39	Aug 16 2019	10:30 AM	45868700	44
Sept 20,2018	6:45 AM	27233000	40	Aug 22 2019	8:45 AM	46236200	45
Sept 28,2018	6:50 AM	27636400	40	Aug 30 2019	8:25 AM	46739200	44
Oct 5 2018	6:35 AM	28035000	40	Sep 6 2019	6:45 AM	47178000	39
Oct 12 2018	7:20 AM	28435000	38	Sep 13 2019	6:40 AM	47619200	48
Oct 18 2018	8:15 AM	28776800	39	Sep 19 2019	8:55 AM	48004900	45
Oct 26 2018	10:40 AM	29235900	40	Sep 27 2019	8:45 AM	48513800	46
Nov 2 2018	10:35 AM	29635700	40	Oct 4 2019	7:40 AM	48894100	PNW
Nov 9 2018	6:25 AM	30024100	41	Oct 11 2019	PUMP	NOT	WORKING
Nov 16 2018	7:45 AM	30420300	41	Oct 18 2019	PUMP	NOT	WORKING
Nov 23 2018	6:55 AM	30804200	40	Oct 25 2019	PUMP	NOT	WORKING
Nov 29 2018	9:55 AM	31151100	39				