

Lake 4, West Lake and A-Frame Dam Rehabilitation Project

Weekly Construction Update Report

Date: 3/25/2020

3/16/2020 to 3/20/2020

Location: Boulder County Open Space west of Hygiene, CO

Project Owners: Boulder County and St. Vrain & Left Hand Water Conservancy District

Design Engineers:

Lake 4 - Engineering Analytics (EA)

West Lake and A-Frame - Applegate Group (AG);

Lake 4 Outlet Pipeline - Deere & Ault (DA)

Construction Contractors:

Kirkland Construction (Prime Contractor)

Lobato Construction (Sub-contractor)

Weather & Site Conditions: Dry site conditions M-W; heavy snow TH-F

Update by: Obadiah Broughton, Boulder County

Work in Progress/Completed

1. Lake 4 Dam - Installed and secured the 24" DIP (ductile iron pipe) outlet pipe to the pipe encasement foundation between Lake 4 outlet towers 1 and 2. Began finishing the encasement rebar and formwork around 24" DIP.
2. West Lake Dam - completed the formworks and poured the concrete foundation slabs for the Foothills Outlet Ditch outlet structure and the Clough and True Ditch inlet structure.
3. West Lake Dam – finalized the subgrade for dam embankment reconstruction and Foothills Outlet Ditch inverted siphon. Began installing zoned embankment materials - clay core, C33 fine aggregate, #8 coarse aggregate and 3" minus native embankment fill.
4. A-Frame Pond – started installing the formworks and rebar for the A-Frame Pond outlet cutoff walls.
5. Setup re-blending operations with a three bin mixer in the main project staging area to process rip rap bedding to project specifications. Hauled 105 loads of crushed/processed gravel from the Lake 4 sediment removal area to the mixer.
6. Began screening embankment fill to 3" minus from the flood deposited sediment in the Lake 4 sediment removal area. This fill will be used in the West Lake Dam embankment reconstruction.
7. As necessary to facilitate the work dewatering operations occurred to remove nuisance water in Lake 3, Lake 4, West Lake and A-Frame Pond.



3/16: West Lake - pouring concrete in the foundation slab for the Foothills Outlet Ditch outlet structure

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Upcoming Work *(One week look ahead. Week of 3/23/2020 to 3/27/2020)*

1. Lake 4 Dam - finish encasement rebar and formwork around 24' ductile outlet pipe between towers 1 and 2 and pour concrete in the first two sections of encasement
2. West Lake Dam – begin setting the Foothills Outlet Ditch 60" ADS polypropylene inverted siphon pipe within the dam embankment.
3. West Lake Dam – continue zoned embankment reconstruction placing clay core, filter sands and embankment.
4. West Lake – install formworks and rebar for the South Branch Ditch crossing culvert wing walls.
5. A-Frame Dam – continue installing the formworks and rebar for the A-Frame Pond outlet cutoff walls.
6. Continue dewatering operations to remove nuisance water from project site as needed.

Additional Notes

1. Note: The project was shut down on Thursday 3/19 and Friday 3/20 due to inclement weather (rain/snow) & adverse site conditions.
2. March 17th Weekly construction process meeting was held remotely via a conference call due to COVID-19 protocols.
3. N. 61st and 63rd streets between SH 66 and Hygiene Rd. will be temporarily closed to thru traffic for up to two months starting as of Jan. 20.
4. Project website for updates and information:
<https://www.bouldercounty.org/open-space/management/lake-4-west-lake-a-frame-pond/>



3/17: West Lake Dam – looking south at the initial installation of zoned embankment materials



3/17: West Lake Dam – initial installation of zoned embankment materials. Compacting a lift of C33 fine aggregate sand.



3/17: West Lake Dam - finalizing the subgrade prior to placing #8 coarse aggregate bedding for the Foothills Outlet Ditch 60" inverted siphon pipe.



3/17: West Lake Dam – looking west at embankment reconstruction - clay core, filter sands and embankment.



3/17: Setting the South Branch Ditch crossing box culverts.



3/18: West Lake Dam – looking south at embankment reconstruction - clay core, filter sands and embankment.



3/18: Lake 4 – 24” DIP outlet pipe in the encasement formworks between Lake 4 outlet towers 1 and 2.



3/18: Riprap bedding blending operation in the Lake 4 staging area.



3/16: Screening embankment fill from the flood deposited sediment in the Lake 4 sediment removal area.



3/16: Screening embankment fill from the flood deposited sediment in the Lake 4 sediment removal area.



Longmont, CO
40 °F Rain

Recent Cities

Revelstoke, British Columbia, Canada (weather/ca/revelstoke/50.99,-118.19) Crested Butte, CO (weather/us/co/crested-butte/38.91,-106.97)

40.17 °N, 105.16 °W

Longmont, CO Weather History

40° VANCE BRAND STATION (/WEATHER/US/CO/LONGMONT/KLMO?CM_VEN=LOCALWX_PWSDASH) | [CHANGE](#)

[HISTORY](/HISTORY/DAILY/US/CO/LONGMONT/KLMO) (</HISTORY/DAILY/US/CO/LONGMONT/KLMO>)

- [TODAY](/WEATHER/US/CO/LONGMONT/KLMO) (</WEATHER/US/CO/LONGMONT/KLMO>)
- [HOURLY](/HOURLY/US/CO/LONGMONT/KLMO) (</HOURLY/US/CO/LONGMONT/KLMO>)
- [10-DAY](/FORECAST/US/CO/LONGMONT/KLMO) (</FORECAST/US/CO/LONGMONT/KLMO>)
- [CALENDAR](/CALENDAR/US/CO/LONGMONT/KLMO) (</CALENDAR/US/CO/LONGMONT/KLMO>)
- [HISTORY](/HISTORY/DAILY/US/CO/LONGMONT/KLMO) (</HISTORY/DAILY/US/CO/LONGMONT/KLMO>)
- [WUNDERMAP](/WUNDERMAP?LAT=40.17&LON=-105.16) (</WUNDERMAP?LAT=40.17&LON=-105.16>)

[Daily](#) **[Weekly](#)** [Monthly](#)

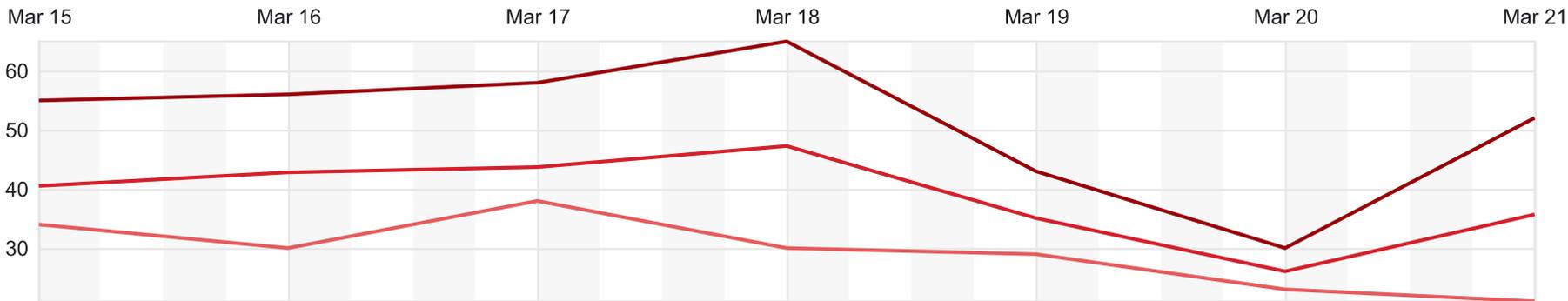
(</history/daily/us/co/longmont/klmo/date/2020-3-16>) **([3-16](/history/weekly/us/co/longmont/klmo/date/2020-3-16))** ([3](/history/monthly/us/co/longmont/klmo/date/2020-3))

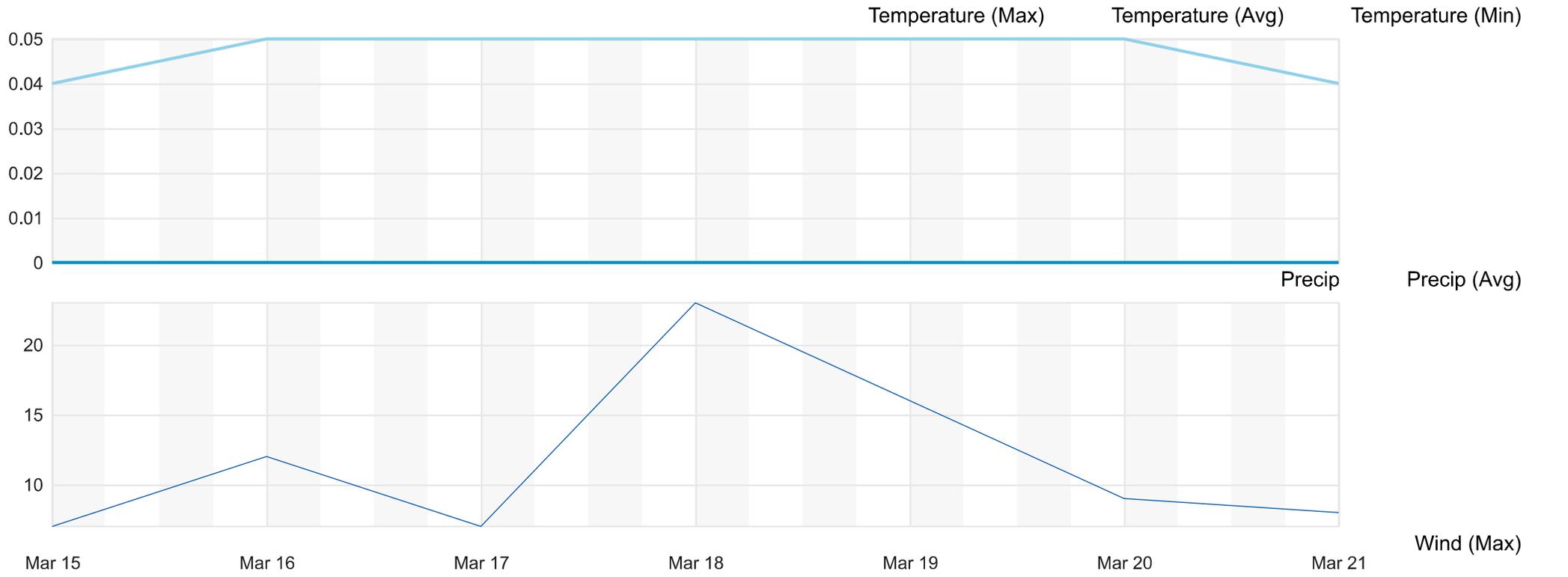
March

16

2020

[View](#)





Summary

Temperature (° F)	Max	Average	Min	▲
Max Temperature	65	51.29	30	
Avg Temperature	47.3	38.75	26.06	
Min Temperature	38	29.29	21	
Dew Point (° F)	Max	Average	Min	▲
Dew Point	40	30.62	18	
Precipitation (Inches)	Max	Average	Min	Sum ▲

Temperature (° F)	Max	Average	Min	▲
Precipitation	0.00	0.00	0.00	0.00
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min	▲
Wind	23	4.65	0	
Gust Wind	30	1.17	0	
Sea Level Pressure	Max	Average	Min	▲
Sea Level Pressure	25.24	24.97	24.63	

Daily Observations

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
Mar 15	55	40.5	34	34	32.3	31	93	74.8	43	7	3.1	0	25.1	25.0	24.9	0.00
16	56	42.8	30	37	32.9	26	91	70.0	47	12	5.4	0	25.1	25.0	24.9	0.00
17	58	43.7	38	40	35.9	34	93	76.7	44	7	2.7	0	25.1	24.9	24.8	0.00
18	65	47.3	30	40	32.7	27	90	62.8	28	23	6.3	0	24.8	24.8	24.7	0.00
19	43	35.1	29	39	32.1	26	92	88.8	84	16	9.3	3	25.2	24.9	24.6	0.00
20	30	26.1	23	25	21.2	18	90	82.3	71	9	4.3	0	25.2	25.2	25.1	0.00
21	52	35.7	21	34	27.2	19	93	73.8	42	8	1.5	0	25.1	25.0	24.9	0.00