

Lake 4, West Lake and A-Frame Dam Rehabilitation

Weekly Construction Update Report

Date: 3/19/2020

3/9/2020 to 3/13/2020

Location: Boulder County Open Space west of Hygiene, CO

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

Construction Contractors:

Kirkland Construction (Prime Contractor)

Lobato Construction (Sub-contractor)

Design Engineers:

Lake 4 - Engineering Analytics (EA)

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

Lake 4 Outlet Pipeline - Deere & Ault (DA)

Weather & Site Conditions: Mild weather and dry site conditions

Update by: Obadiah Broughton, Boulder County

Work in Progress/Completed

1. Lake 4 upstream embankment (Lake 3 embankment) continued repair and reconstruction – Zone 1, Clay core and zone 3 filter sand installation continued, with clay tie-in around the original slurry wall on the south and northsides of excavation.
1. Lake 4 flood deposited sediment removal – continued haul and placement of excavated material unsuitable for embankment fill into the sediment disposal area within West Lake.
2. Lake 4 Outlet Pipeline – excavations at manhole #2 and #4. Sections of the existing outlet RCP pipeline were located.
3. Lake 4 Outlet Pipeline - Approximately 720 feet of 14" HDPE pipe was fused and then slip lined inside the existing RCP pipe from Lake 4 Tower 2 to the proposed location of manhole #1 on the downstream side of West Lake dam/embankment.
4. West Lake dam - completed excavation of the Foothills Outlet Ditch and the Clough & True Ditch intake and outlet structures subgrade and foundations. Complete formworks and poured concrete foundation slabs on Foothills intake and Clough and True outlet foundations. Started formworks on foundation slabs for the Foothills outlet and the Clough and True inlet.
5. West Lake dam – finished formworks and poured the walls of the West Lake outlet tower.
6. A-Frame Pond - poured concrete in the cutoff wall foundations at the A-Frame Pond outlet.
7. A-Frame Pond – backfilled the box culvert in the N.61st street road prism in compacted lifts with structural backfill in preparation to reopen the road.
8. Continued dewatering operations to remove nuisance water in Lake 3, Lake 4, West Lake and A-Frame Pond to facilitate the work.



3/10: Lake 4 upstream embankment reconstruction – zone 1, Clay core and zone 3 filter sand installation.

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Upcoming Work *(One week look ahead. Week of 3/16/2020 to 3/20/2020)*

1. Lake 4 Dam - install 24' ductile outlet pipe within the encasement between towers 1 and 2. Finish encasement rebar and formwork between towers.
2. West Lake dam - pour concrete for the Foothills Ditch outlet and the Clough and True Ditch intake foundations.
3. West Lake Dam – begin embankment reconstruction placing clay core, filter sands and embankment.
4. West Lake – excavate subgrade and set 3' x 10' box culverts for South Branch Ditch crossing. Prep subgrade for culvert wing walls.
5. Lake 4 Outlet Pipeline – complete excavations of manhole #1, #2 , #3 and #4 to prep for manhole replacement and to facilitate locating the existing outlet pipeline.
6. A-Frame Pond – start formworks and rebar for the outlet cutoff walls.
7. A-Frame Pond – finish backfill and reconstruction of the N.61st street road prism around and over the outlet box culvert.
8. Continue dewatering operations to remove nuisance water from project site.

Additional Notes

1. Kirkland and Lobato worked on Saturday March 14th.
2. March 10th Weekly construction process meeting was held at the jobsite trailer.
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/>



3/10: Lake 4 Outlet Pipeline – excavation of manhole #4. Existing outlet pipe identified.



3/11: Lake 4 Outlet Pipeline – Slip lining new 14" HDPE pipe inside the existing RCP outlet pipe from Lake 4 tower 2 to expected location of manhole #1.



3/11: Lake 4 Outlet Pipeline – Fusing/welding the new 14”HDPE replacement pipe prior to slip lining.



3/12: A-Frame- Backfilling the outlet box culvert with the N.61st street road prism in compacted lifts.



3/11: A-Frame: Pouring concrete in the cutoff wall foundations.



3/11: A-Frame: Pouring concrete in the cutoff wall foundations



3/13: West Lake – Pouring concrete in the Foothills Outlet Ditch siphon inlet foundation slab.



3/13: West Lake – Pump truck pouring concrete in the walls of West Lake outlet tower.



3/13: West Lake –Pouring the Clough & True Ditch outlet footer slab.



3/13: West Lake - Finishing the Clough & True Ditch outlet footer slab.



Longmont, CO
26 °F Cloudy

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

25° VANCE BRAND STATION (/WEATHER/US/CO/LONGMONT/KLMO?CM_VEN=LOCALWX_PWSDASH) | [CHANGE](#)

[HISTORY](#) (/HISTORY/DAILY/US/CO/LONGMONT/KLMO)

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

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

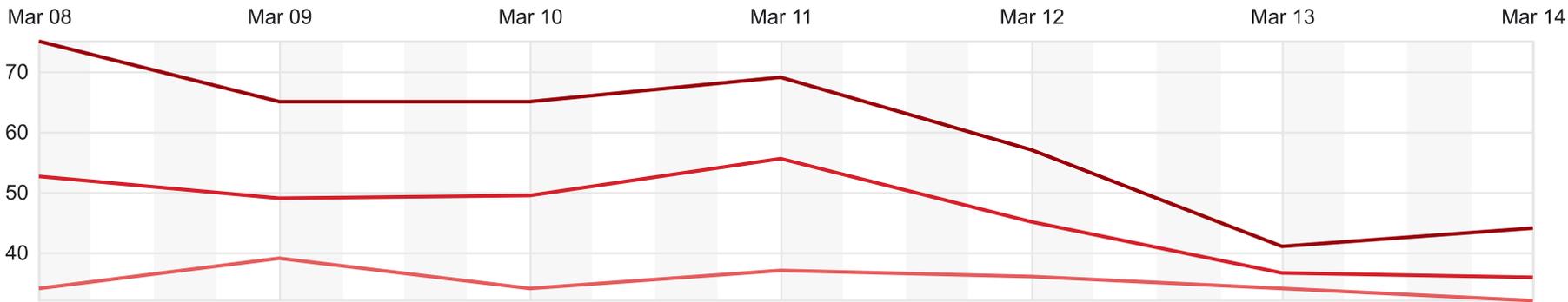
(/history/daily/us/co/longmont/klmo/date/2020-3-9) **(/history/weekly/us/co/longmont/klmo/date/2020-3-9)** (/history/monthly/us/co/longmont/klmo/date/2020-3)

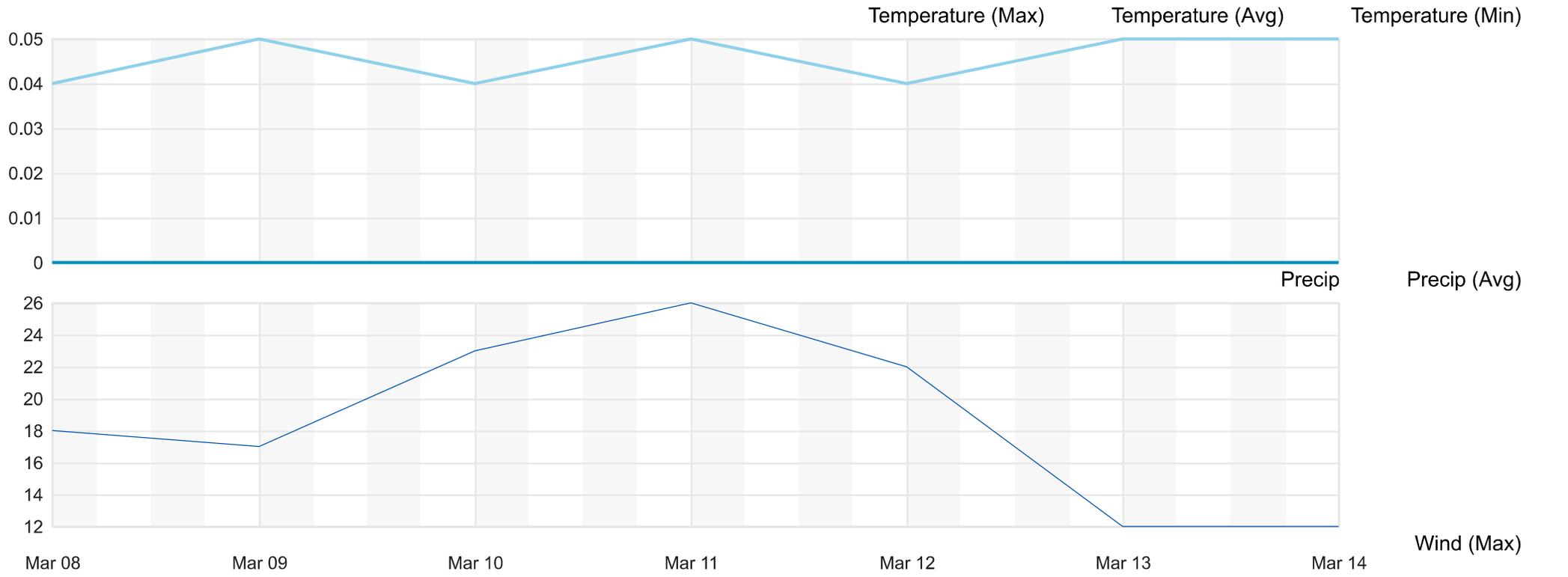
March

9

2020

[View](#)





Summary

Temperature (° F)	Max	Average	Min	▲
Max Temperature	75	59.43	41	
Avg Temperature	55.52	46.28	35.83	
Min Temperature	39	35.14	32	
Dew Point (° F)	Max	Average	Min	▲
Dew Point	42	28.61	14	
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				26	6.74	0	
Gust Wind				36	4.47	0	
Sea Level Pressure				Max	Average	Min	▲
Sea Level Pressure				25.11	24.86	0	

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
8	75	52.6	34	42	27.6	17	87	46.2	12	18	5.8	0	24.9	24.8	24.7	0.00
9	65	49.0	39	40	31.5	14	88	59.6	15	17	3.7	0	25.0	25.0	24.9	0.00
10	65	49.4	34	34	27.9	23	78	47.3	21	23	8.0	0	25.0	24.7	0.0	0.00
11	69	55.5	37	33	24.8	19	62	33.3	16	26	11.2	0	25.0	24.9	24.7	0.00
12	57	45.1	36	31	27.8	23	69	52.6	28	22	7.9	0	25.0	24.9	24.7	0.00
13	41	36.6	34	34	30.4	27	89	78.7	68	12	5.7	0	25.0	24.9	24.8	0.00
14	44	35.8	32	32	30.3	29	88	80.7	61	12	4.8	0	25.1	25.0	24.9	0.00