

Lake 4, West Lake and A-Frame Dam Rehabilitation

Weekly Construction Update Report

Date: 2/11/2020

2/3/2020 to 2/7/2020

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: Snow events, snow on ground, cold weather

Update by: Obadiah Broughton, Boulder County



2/3: Looking north at the A-Frame outlet box culvert as snow is coming down.

Work in Progress/Completed

1. Snow event on February 3rd and subsequent frozen and snow covered ground conditions shut down active construction work on the project. This work stoppage was due to adverse weather conditions.
2. Maintenance activities to maintain dewatering pumps and generators, site conditions and stormwater/erosion control measures during work shut down.
3. Continued dewatering operations to remove nuisance water in Lake 4, Lake 4 and West Lake and to drawdown the water levels in A-Frame Pond to facilitate the work.

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Upcoming Work *(One week look ahead. Week of 2/10/2020 to 2/14/2020)*

1. Lake 4 upstream embankment/dam (Lake 3 embankment) - continue placing clay core and zoned embankment fill in completed excavations. Fill upstream embankment with spoils and Lake 4 flood deposited sediment.
2. Lake 4 downstream embankment/dam - continue installing formwork and rebar in the outlet towers and outlet pipe between the towers; begin placing clay core and zoned embankment fills
3. Lake 4 dam spillway – finalize all sub-grade excavations and begin placement riprap and bedding
4. Lake 4 flood deposited sediment removal – haul and place excavated material unsuitable for embankment fill into the sediment disposal area within West Lake.
5. Clough and True Ditch – continue reconstruction ditch embankment.
6. West Lake dam – continue formwork and rebar installation for the outlet tower and pipe.
7. A-Frame - Begin backfill around outlet box culverts
8. Continue dewatering operations to remove nuisance water from project site.

Additional Notes

1. Weekly construction process meeting was canceled due to weather on Feb. 4th.
2. 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
3. Project website for updates and information:
<https://www.bouldercounty.org/open-space/management/lake-4-west-lake-a-frame-pond/>



2/5: Lake 3 bottom looking west.



2/3: A-Frame Pond staging area under snow.

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2/3: A-Frame Pond during snow event.



2/5: Lake 3 embankment – zone embankment repair
snow covered looking southwest



2/5: Lake 4 bottom looking to the east



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2/5: Lake 4 bottom looking to the east



Longmont, CO
33 °F Fair

Recent Cities

Longmont, CO (weather/us/co/longmont/40.19,-105.18)

40.17 °N, 105.16 °W

Longmont, CO Weather History

33° 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](#)

[\(/history/daily/us/co/longmont/40.19,-105.18/date/2020-02-02\)](/history/daily/us/co/longmont/40.19,-105.18/date/2020-02-02) | [\(/history/weekly/us/co/longmont/40.19,-105.18/date/2020-02-02\)](/history/weekly/us/co/longmont/40.19,-105.18/date/2020-02-02) | [\(/history/monthly/us/co/longmont/40.19,-105.18/date/2020-02-02\)](/history/monthly/us/co/longmont/40.19,-105.18/date/2020-02-02)

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February

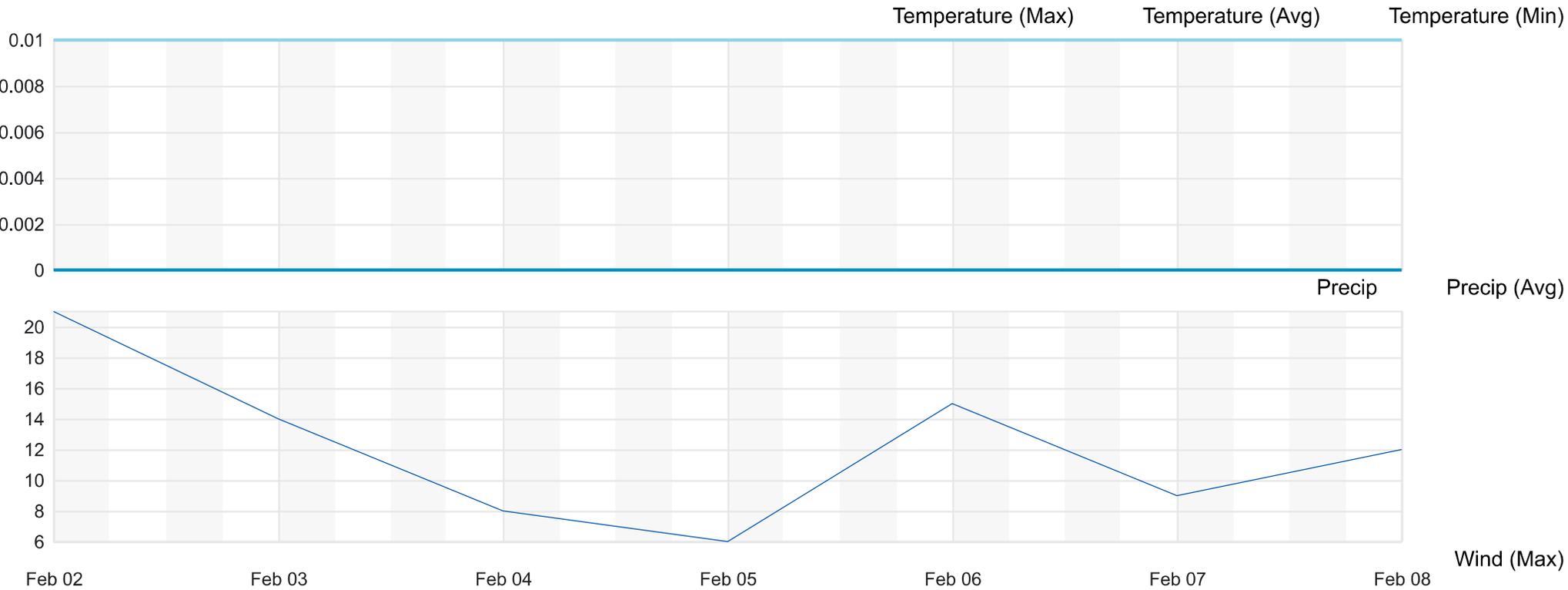
3

2020

[View](#)

Feb 02 Feb 03 Feb 04 Feb 05 Feb 06 Feb 07 Feb 08





Summary

| Temperature (° F) | Max | Average | Min | ▲ |
|------------------------|-------|---------|-------|-------|
| Max Temperature | 78 | 42.57 | 27 | |
| Avg Temperature | 54.67 | 27.9 | 13.09 | |
| Min Temperature | 34 | 12.86 | -7 | |
| Dew Point (° F) | Max | Average | Min | ▲ |
| Dew Point | 31 | 14.65 | -13 | |
| 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 | 21 | 3.96 | 0 | |
| Gust Wind | 32 | 0.75 | 0 | |
| Sea Level Pressure | Max | Average | Min | ▲ |
| Sea Level Pressure | 25.02 | 24.77 | 24.52 | |

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 |
| Feb | 78 | 54.7 | 34 | 24 | 8.7 | 1 | 65 | 20.3 | 5 | 21 | 5.5 | 0 | 25.0 | 24.8 | 24.5 | 0.00 |
| 2 | 35 | 25.3 | 18 | 29 | 20.4 | 14 | 90 | 82.0 | 60 | 14 | 6.6 | 0 | 24.9 | 24.7 | 24.7 | 0.00 |
| 3 | 27 | 14.8 | 0 | 15 | 8.4 | -5 | 86 | 76.4 | 52 | 8 | 3.0 | 0 | 25.0 | 25.0 | 24.9 | 0.00 |
| 4 | 30 | 13.1 | -7 | 13 | 3.4 | -13 | 83 | 67.3 | 33 | 6 | 1.5 | 0 | 24.9 | 24.8 | 24.7 | 0.00 |
| 5 | 38 | 25.6 | 8 | 30 | 16.4 | 2 | 91 | 69.8 | 45 | 15 | 2.9 | 0 | 24.7 | 24.6 | 24.5 | 0.00 |
| 6 | 36 | 29.4 | 24 | 27 | 24.4 | 21 | 90 | 81.8 | 64 | 9 | 4.4 | 0 | 24.9 | 24.8 | 24.7 | 0.00 |
| 7 | 54 | 32.5 | 13 | 31 | 20.9 | 10 | 91 | 67.6 | 26 | 12 | 3.9 | 0 | 24.9 | 24.7 | 24.6 | 0.00 |