

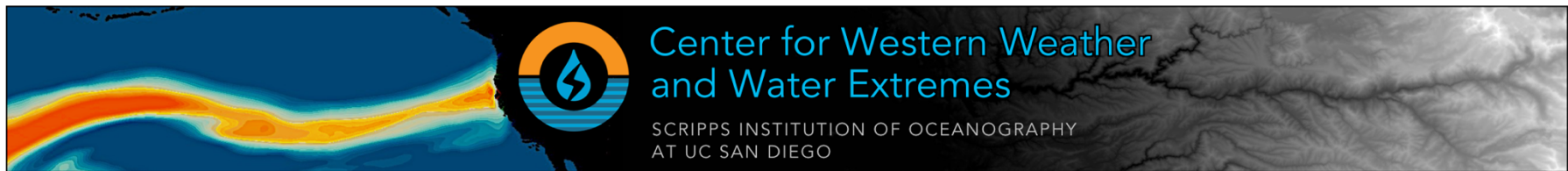
OPENING BALANCES	
CDs	\$1,849,968.60
TRANSACTIONAL ACCOUNTS	\$0.00
<b>TOTAL:</b>	<b>1,849,968.60</b>

**KEY:**

- NEW ACCOUNT OPENED → ACCOUNT ACTIVE → ACCOUNT CLOSED
- GREEN BOX & ARROW: BALANCES CARRIED, NO NEW TRANSFER
- BLUE BOX & BLUE ARROW: TRANSFER \$XX.XX
- GREY BOX & GREY ARROW: ACCOUNT BEING CLOSED

● BALANCE FROM TRANSFERS ONLY. CURRENT, EXISTING BALANCES ARE NOT INCLUDED.  
→ MVB CHECKING IS A DAILY OPERATING ACCOUNT, COLOTRUST IS AN INVESTMENT ACCOUNT → ACCOUNT BALANCES FLUCTUATE DAILY. OPERATING & CAPITAL EXPENDITURES WILL DECREASE END BALANCES SHOWN.

END BALANCES	
CDs	\$900,000
TRANSACTIONAL ACCOUNTS	\$949,968
<b>TOTAL:</b>	<b>1,849,968</b>



## RECOMMENDATIONS FOR SOIL MOISTURE STATIONS AT SNOTEL SITES

### PURPOSE OF THE CW3E/YVSC/CMC EFFORT SPONSORED BY UYWCD:

The scientific goals of the soil moisture monitoring network campaign are to observe and monitor the hydrometeorology of western watersheds in all seasons of the year to understand temporal variations in soil conditions, and specifically to provide critical information before and during:

- impactful precipitation events that result in high streamflow rates
- snow melt events during warm precipitation and during the warm season

Specific scientific goals are: (1) Improve understanding of spatial variability of precipitation and soil moisture within the watershed to inform hydrologic model forecasts of streamflow; (2) Improve understanding of the physical processes that modify runoff efficiency during heavy precipitation; (3) Aid in understanding snowpack evolution and draining throughout the winter and snowmelt seasons; (4) Providing near-real time data on hydrometeorological conditions within the watershed that may be of operational value to partners. This effort leverages the SNOTEL network, which is composed of stations in remote, high-elevation areas, and whose aim is to provide real-time monitoring of snowpack, precipitation, temperature, and other climatic conditions, with the overarching goal of supporting water supply forecasts.

Selected scientific results using CW3E soil moisture stations:

- Soil moisture observations can provide specific lessons for local and regional hydrologic models, including calibrations, appropriate model depths, and essential processes to reproduce (Sumargo et al., 2021)
- Soil moisture observations can provide information on local thresholds, which when exceeded will be followed by substantially increased runoff efficiency (Sumargo et al., 2021).
- Initial analyses indicate that soil moisture observations can provide insight into snowmelt drainage into soils.

### RECOMMENDATIONS:

- **Soil Moisture and Temperature:** Sensors are installed at 6 depths beneath the ground (2, 4, 6, 20, 40 inches). The purpose of having all five depths at each location when possible is to: understand infiltration rates; enable comparisons between stations; and understand the modulation of snowpack drainage by the saturation of the entire available soil column.
  - We checked in with CBRFC and they did not have any specific comments on these priorities; however, they have noted previously that the soil moisture observations are not always deep enough to be helpful.
- Upgrade stations as time and resources permit in the order specified below, with potential partnership from UYWCD, CW3E, YVSC, CMC.

*SNOTEL sites in and near the Upper Yampa River watershed, in order of priority from the CW3E/YVSC/CMC perspective.*

Site	Watershed	Lat (°)	Long(°)	Elev (ft)	Existing Soil Depths (in)	Cluster	Recommendation
Bear River	Upper Yampa (Headwaters)	40.06153	-107.00955	9080	None	2	<b>Priority 1:</b> Recommend installing soil sensors at 6 depths (in UYWCD watershed)
Ripple Creek	Upper White	40.10812	-107.29411	10340	None	NA	<b>Priority 2:</b> Recommend installing soil sensors at 6 depths (used already by UYWCD)
Lynx Pass	CO Headwaters	40.07806	-106.67028	8880	4,8,20	5	<b>Priority 3:</b> Recommend adding 2,40 (looks like 2" was installed but stopped reporting in 2013)
Crosho	Upper Yampa (Headwaters)	40.16745	-107.0575	9100	None	2	<b>Priority 4:</b> Recommend installing soil sensors at 6 depths (in UYWCD watershed, snow information has limited useful correlations for their existing operations)
Rabbit Ears	Upper Yampa (Oak Creek)	40.36783	-106.7404	9400	None	7	<b>Priority 5:</b> Recommend installing soil sensors at 6 depths (closer to UYWCD reservoirs, new cluster representation)
Buffalo Park	CO Headwaters	40.22861	-106.59528	9240	None	5	<b>Priority 6:</b> Recommend installing soil sensors at 6 depths (In Silver Creek recent (Fall 2018) burn scar, just outside UY headwaters)
Dry Lake	Upper Yampa (Oak Creek)	40.53397	-106.7813	8400	2,8,20	4	<b>Priority 7:</b> Recommend adding 4,40 (New cluster, complete soil stack)
Tower	Upper Yampa (Oak Creek)	40.53743	-106.6768	10500	None	7	<b>Priority 8:</b> Recommend installing soil sensors at 6 depths (Very high elevation reported maybe less useful per CBRFC, Rabbit Ears also in Oak Creek, same cluster)
Elk River	Upper Yampa (Headwaters Elk)	40.8478	-106.9687	8700	None	2	<b>Priority 9:</b> Recommend installing soil sensors at 6 depths (Farther from UYWCD, cluster already covered)
Elkhead Divide	Upper Yampa	40.79645	-107.1012	8780	None	2	<b>Priority 10:</b> Recommend installing soil sensors at 6 depths (farther from UYWCD, cluster already covered)

	(Elkhead Creek)						
Lost Dog	Upper Yampa (Headwaters Elk)	40.81588	-106.74835	9320	2,4,8,20,40	7	none