

New Hampshire Groundwater Level Monitoring
June, 2019



New Hampshire Geological Survey
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July 31, 2019

GROUNDWATER CONDITIONS SUMMARY

According to the Northeast Regional Climate Center at Cornell University, New Hampshire received an average of 5.31 inches of rain during the month of February, which is 0.87 inches below normal or 120% of normal based on the 1981-2010 precipitation records. Precipitation was evenly distributed between the northern and southern portions of the state. The state is currently free from drought and abnormally dry conditions according to data released by the National Drought Mitigation Center.

The overburden wells, or wells that monitor the unconsolidated materials above bedrock, indicate that groundwater levels across the state are low to normal on average. Both overburden wells in Coos County, Colebrook and Lancaster, are low. The groundwater level in the south-central portion of the state is below normal on average with low readings at overburden wells in Newport, Campton, and New Durham. Overburden wells in the southern and eastern portions of the state show groundwater levels are within the normal range. Water levels at overburden wells in Barnstead, Deerfield, Epping, Franklin, Greenfield, Lisbon, and Ossipee have been normal to high over the last six-month period. The groundwater level at the bedrock well in Hooksett is currently below normal. Wells that have a period of record (POR) less than 10 years were not statistically analyzed. However, their six-month hydrographs are shown in the hydrograph section.

The New Hampshire Geological Survey's groundwater monitoring network (Figure 1) currently includes 11 bedrock and 20 overburden (Figure 2) observation wells, all of which are measured monthly by hand. Using the monthly hand readings, monthly averages and percentile statistics were calculated and are summarized in Figures 1 through 3, in the following hydrographs*, and in Table 1.

*The hydrographs show the following data over a period of six months: (1) current groundwater depths, (2) the monthly average over the POR of the well, and (3) color-coded statistical ranges over the POR of the well. Note the POR is listed below each month's column on the chart and reported as the number of measurements for that respective month. This might include multiple readings in the same month and does not include any gaps in data so therefore may not represent a continuous period.

June 2019 Groundwater Levels

Legend

- High
- Above norm
- Normal
- Below norm
- Low
- Not Analyzed
- Counties

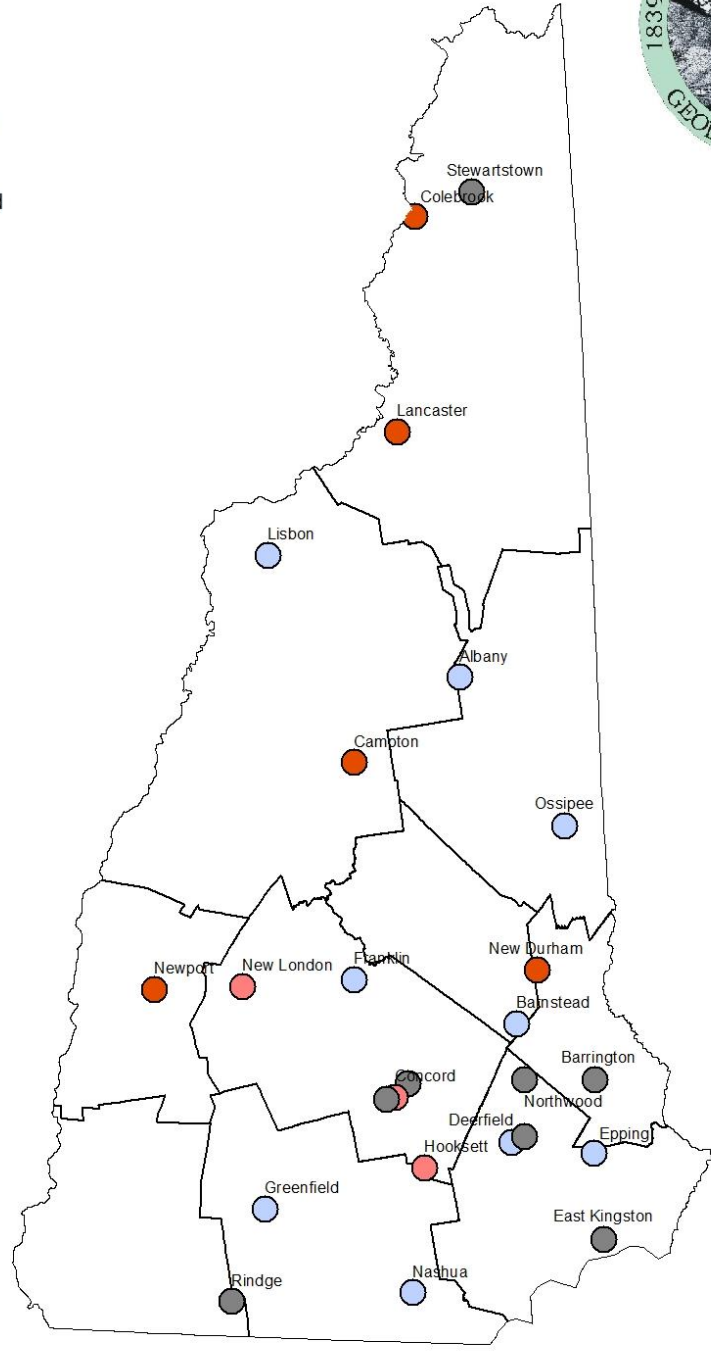
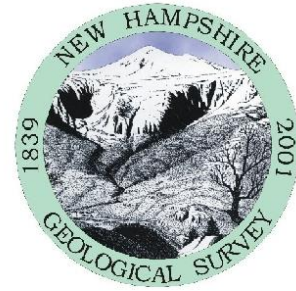


Figure 1. Groundwater Monitoring Network showing groundwater levels with respect to drought areas defined by the National Drought Mitigation Center.

June 2019 Groundwater Levels

Overburden Groundwater Conditions

Legend

- High
- Above norm
- Normal
- Below norm
- Low
- Not Analyzed
- Counties

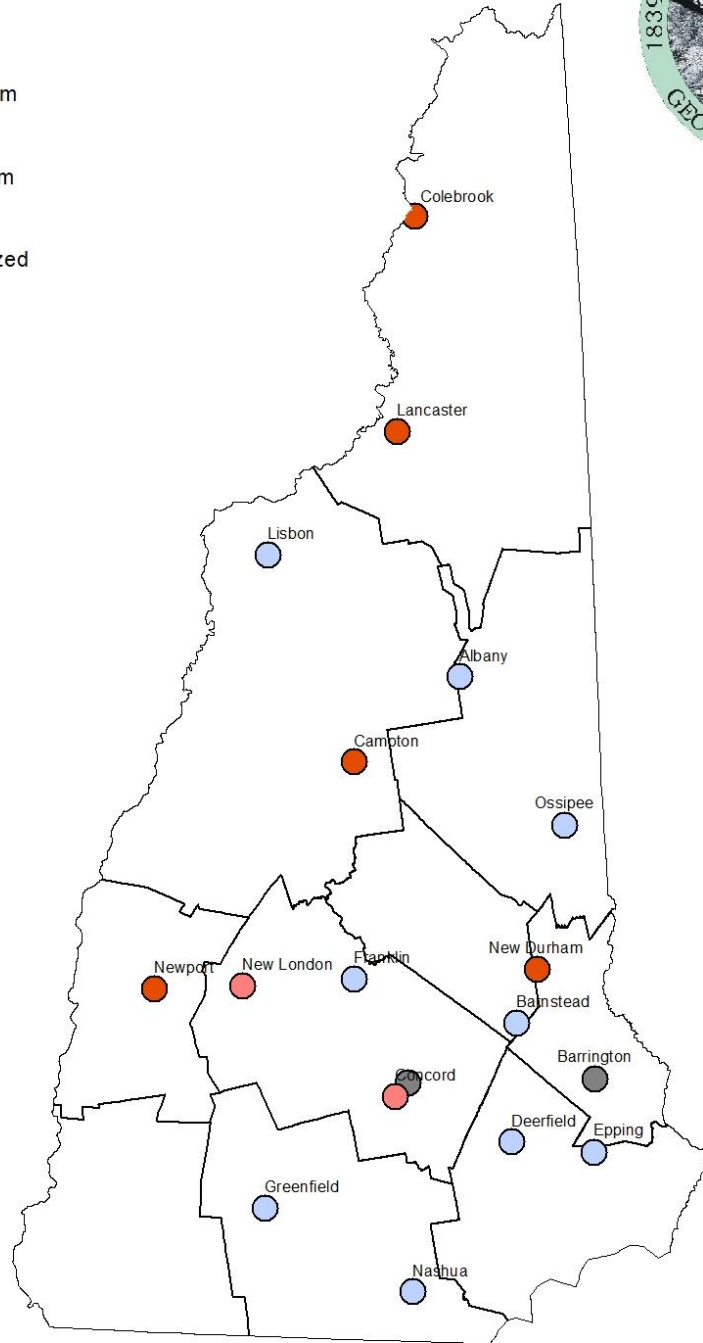
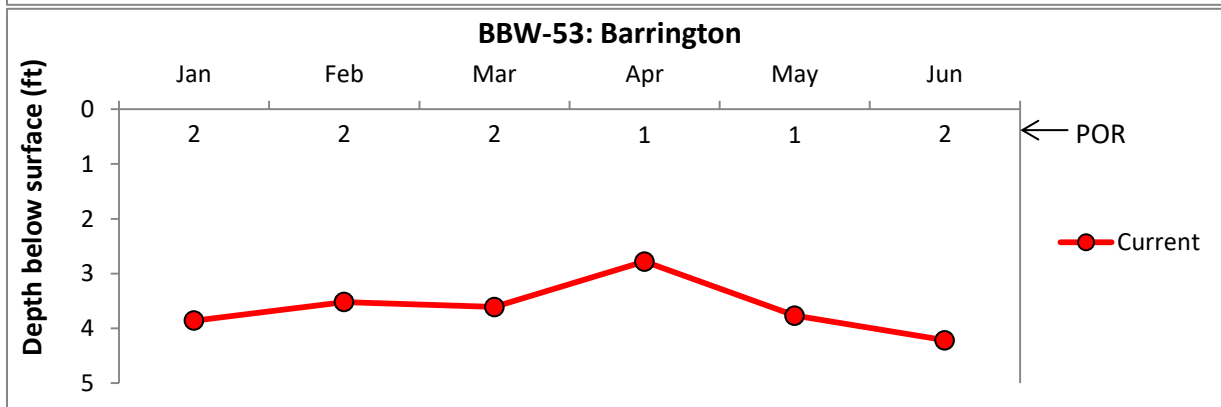
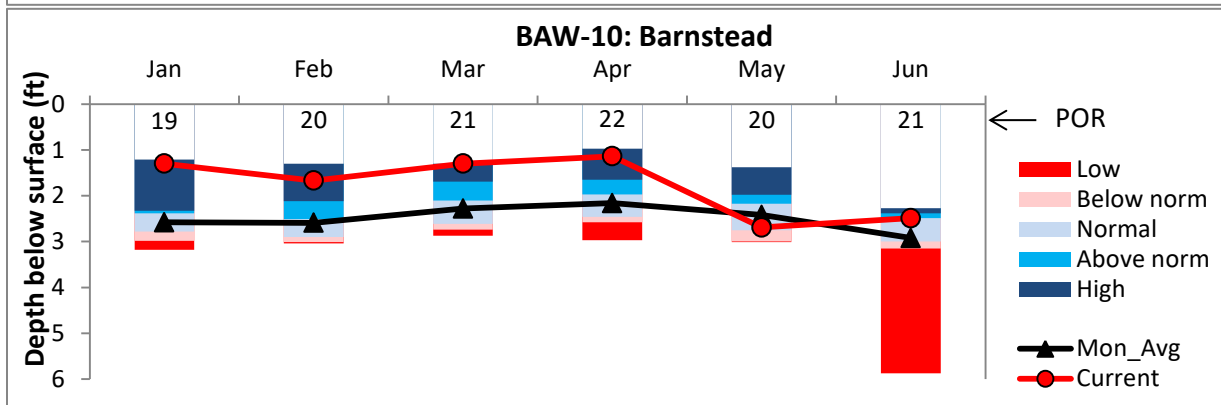
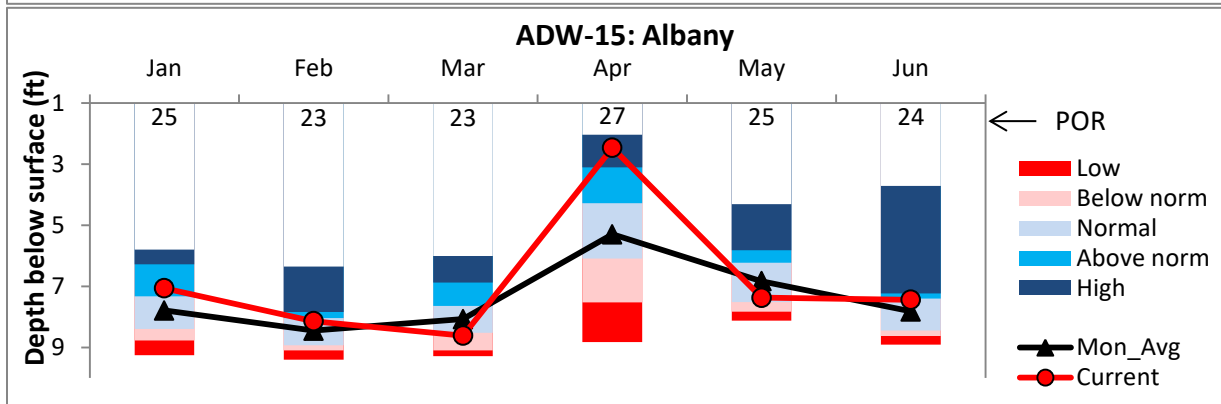
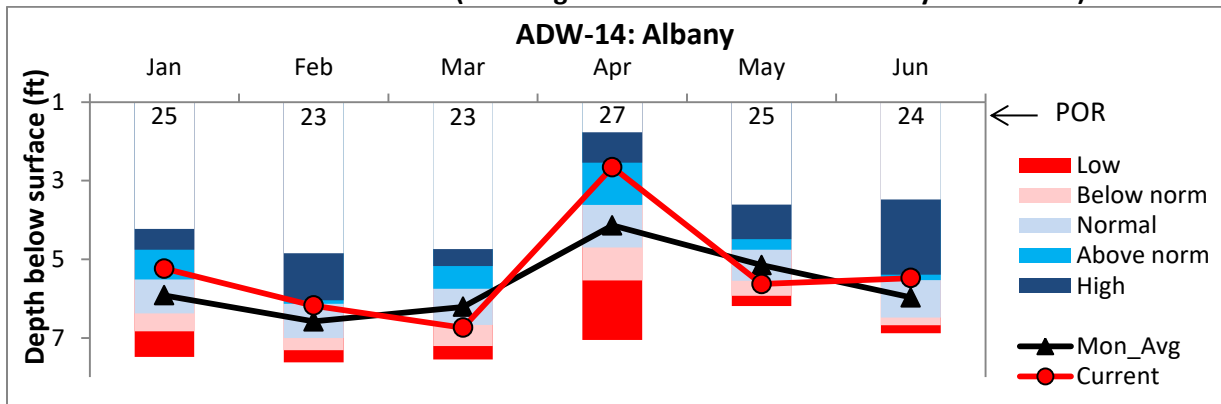
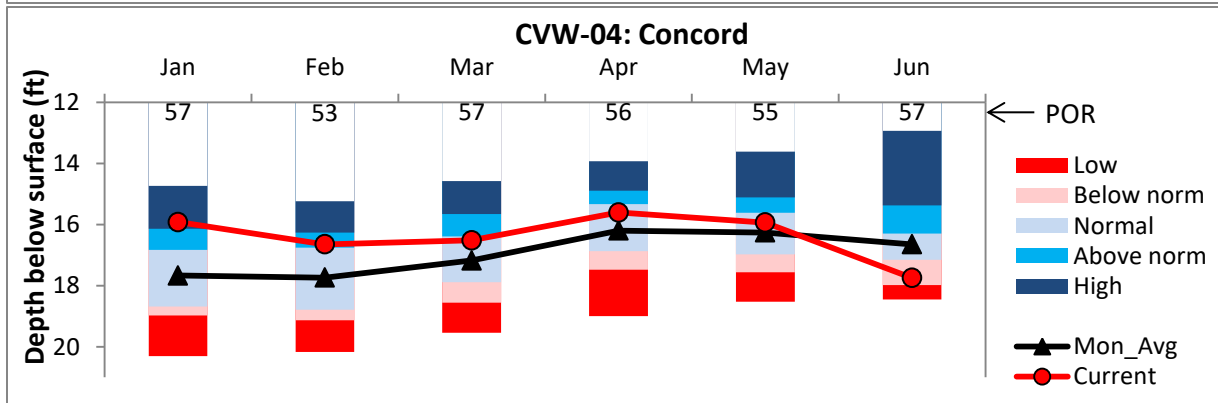
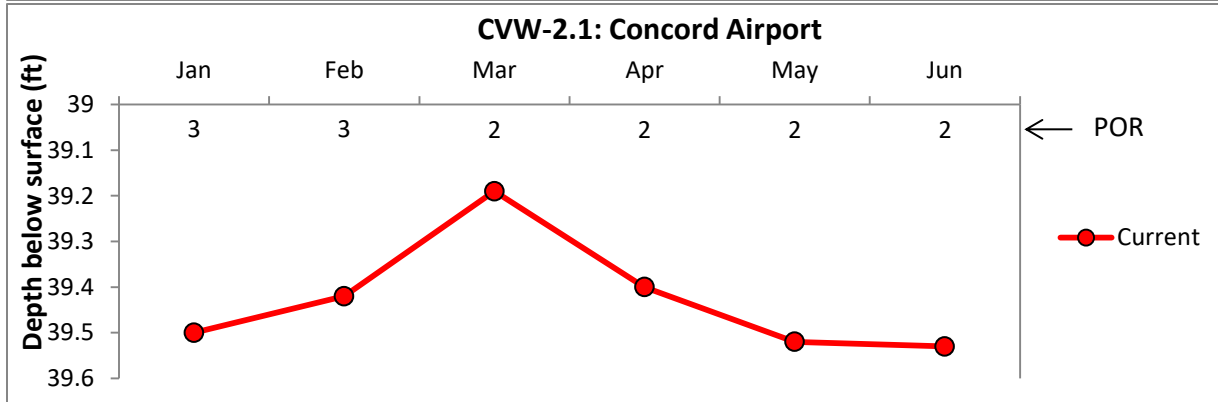
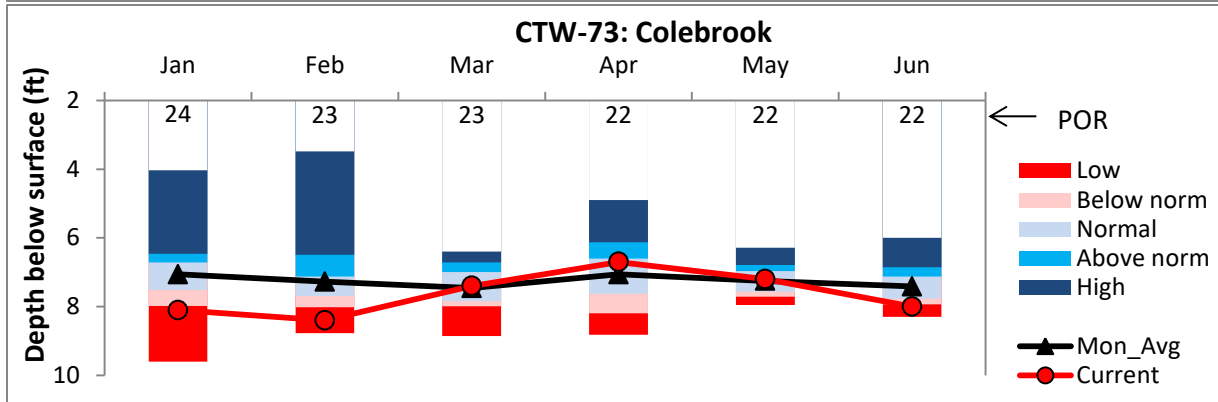
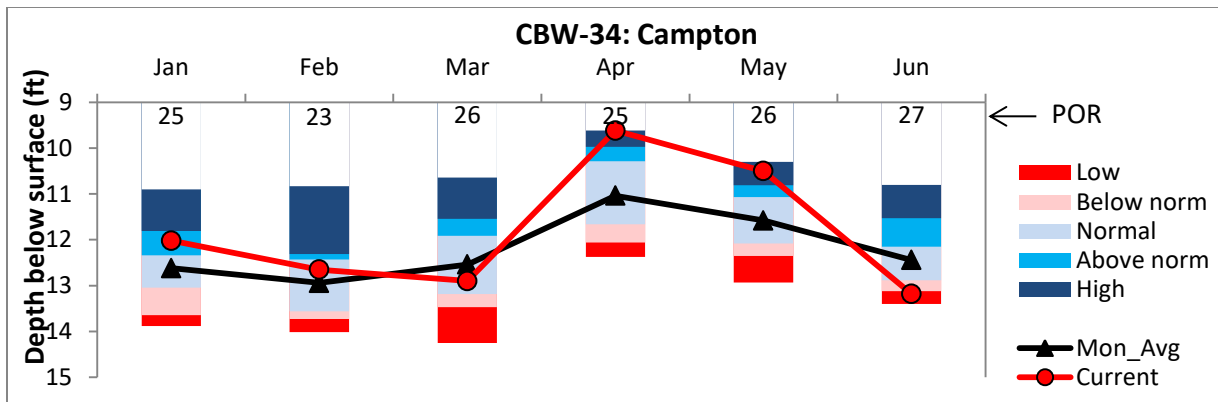
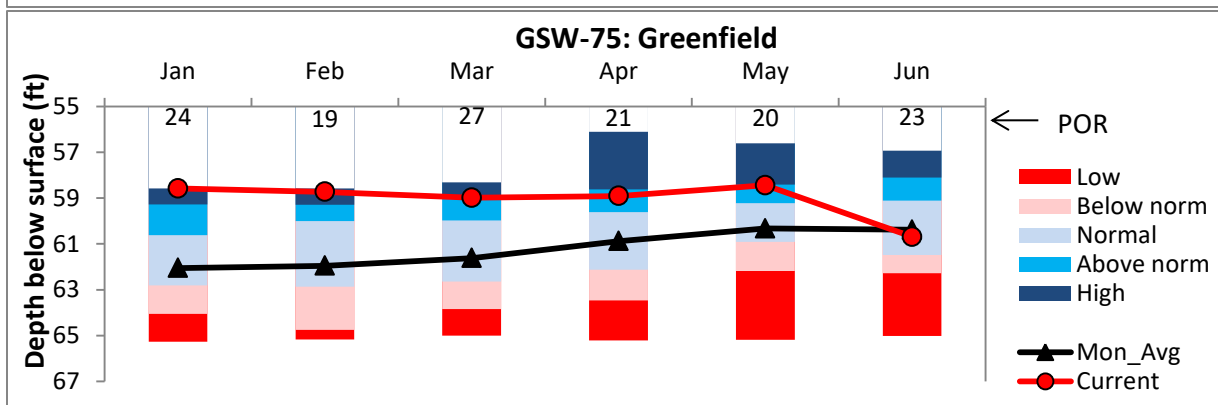
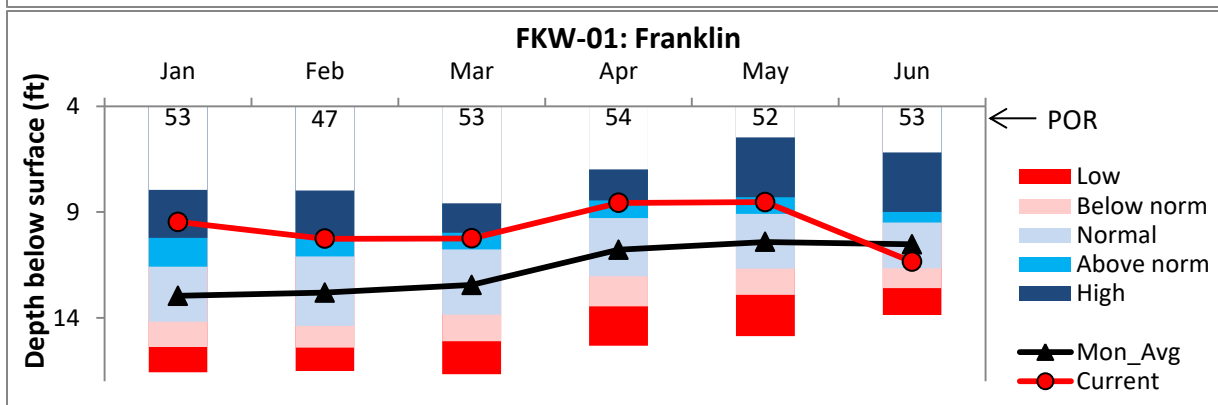
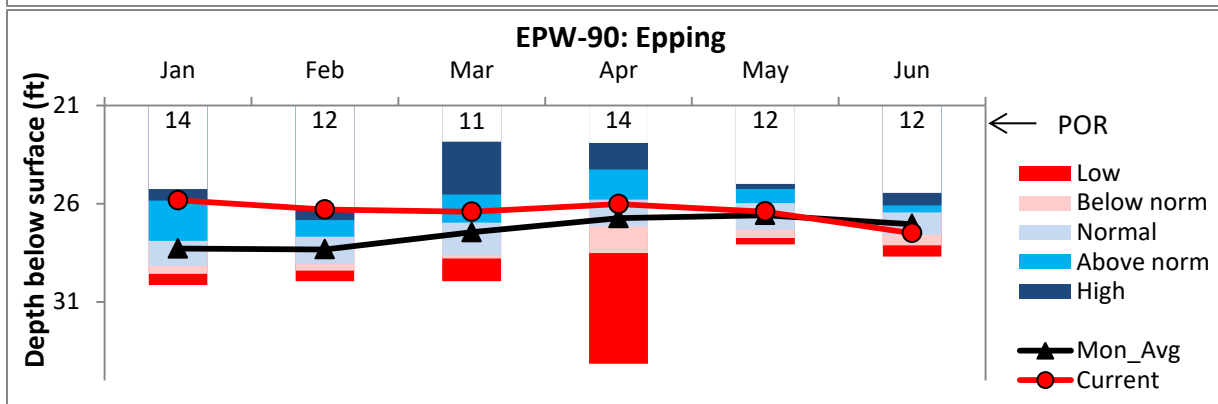
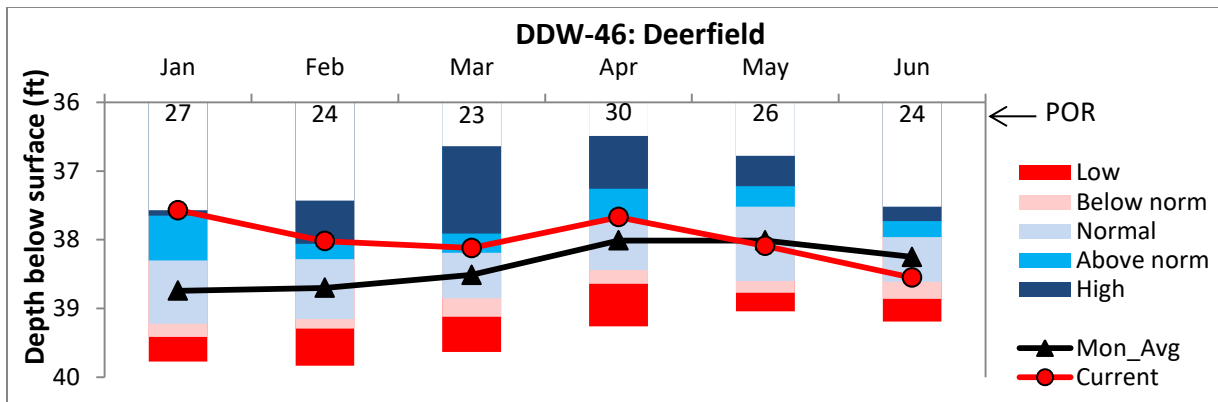


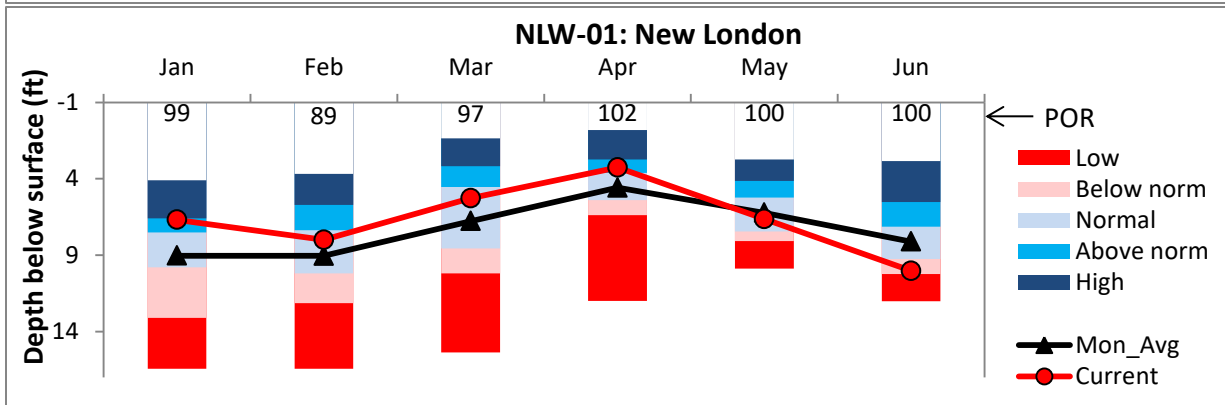
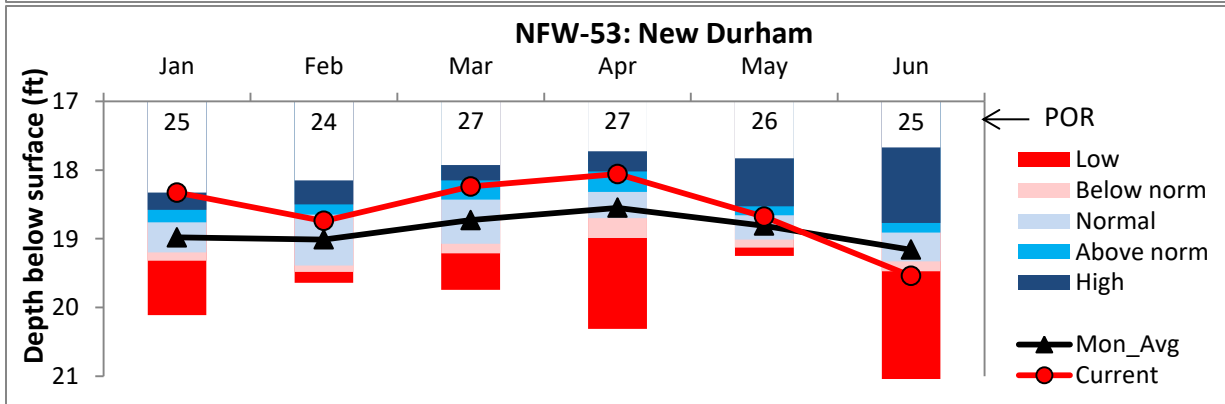
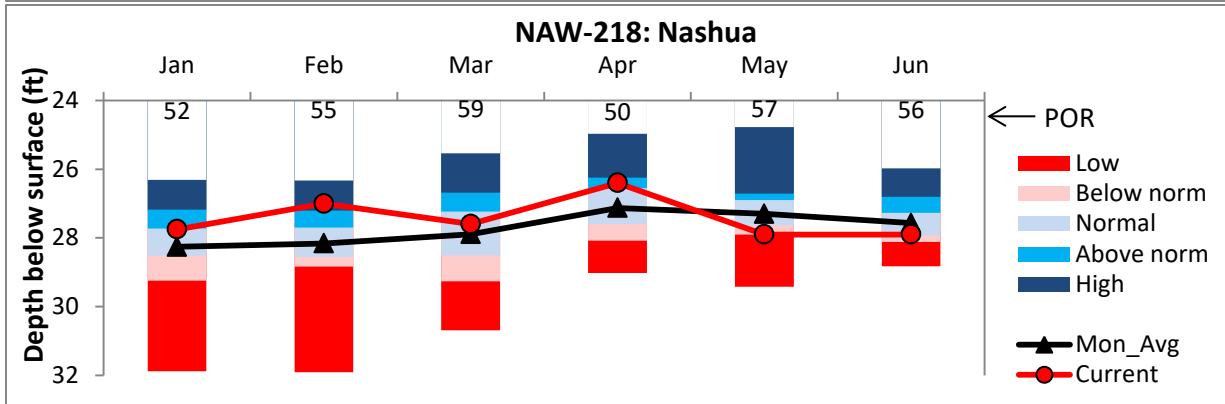
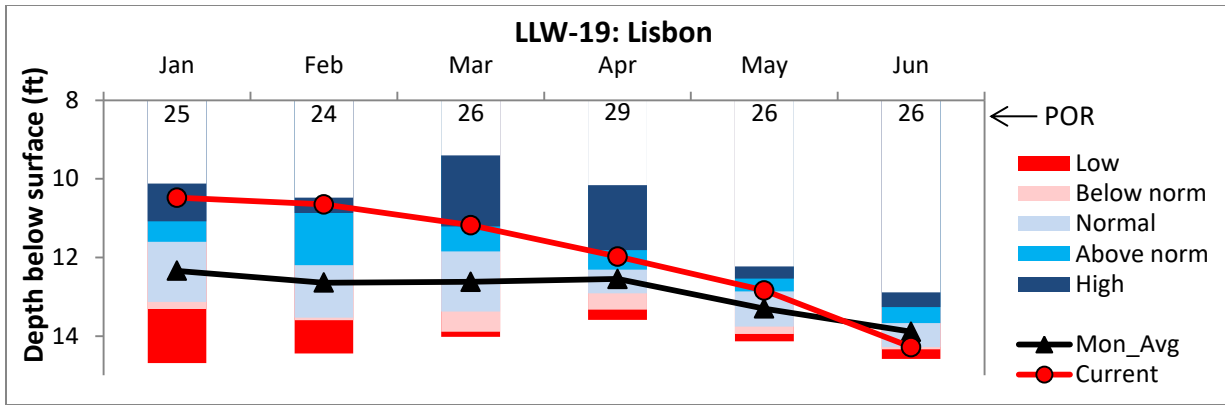
Figure 2. Overburden wells showing groundwater levels with respect to drought areas defined by the National Drought Mitigation Center. Note: Points at Newport and Albany represent couplets.

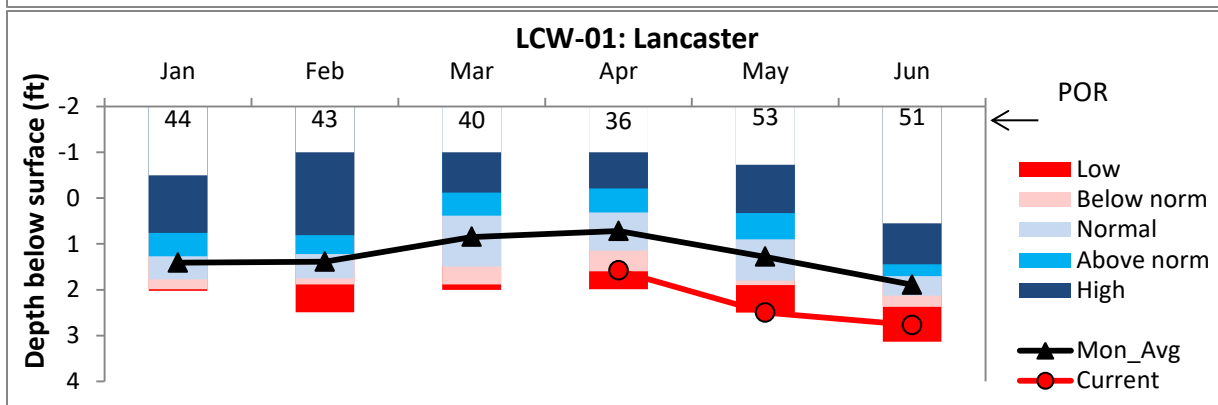
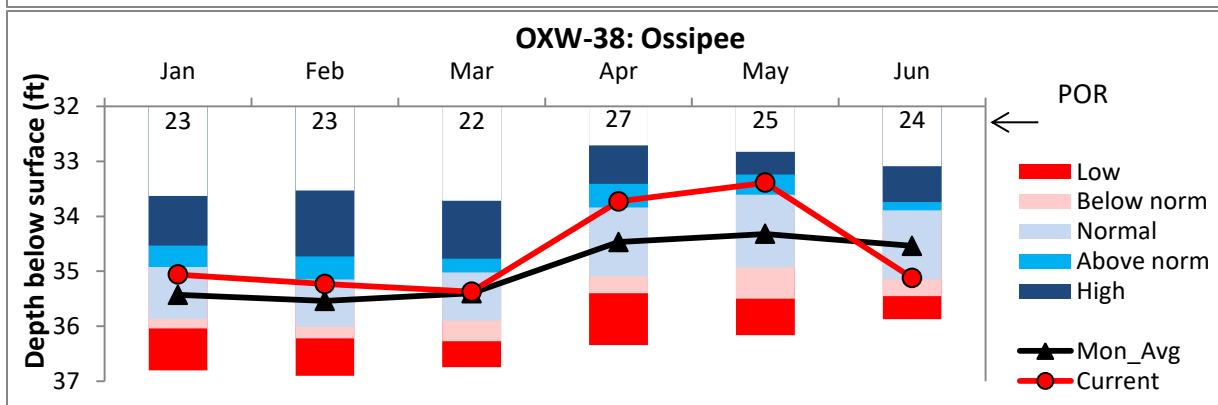
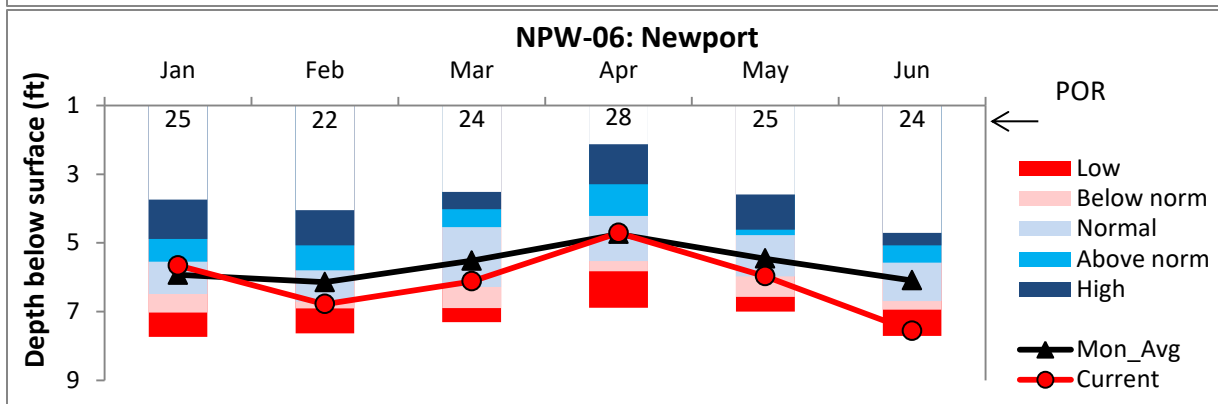
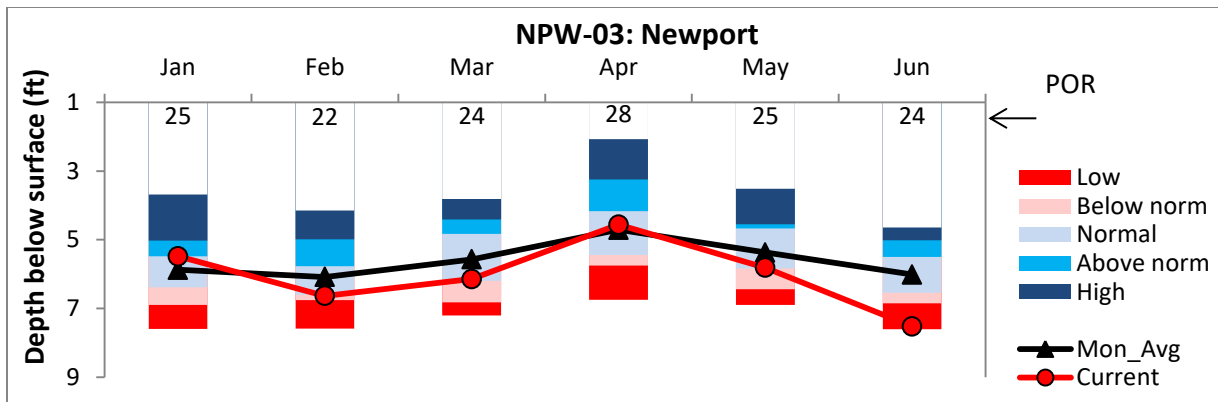
OVERBURDEN WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)



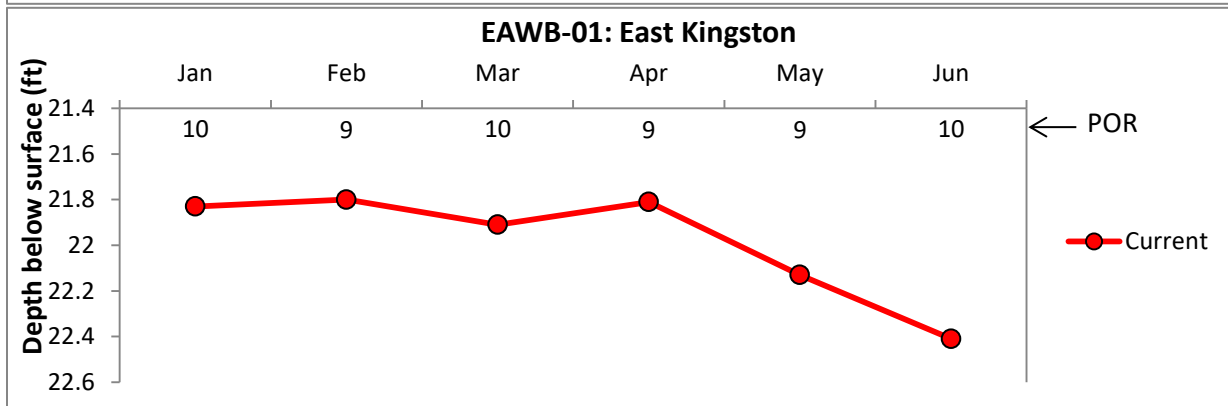
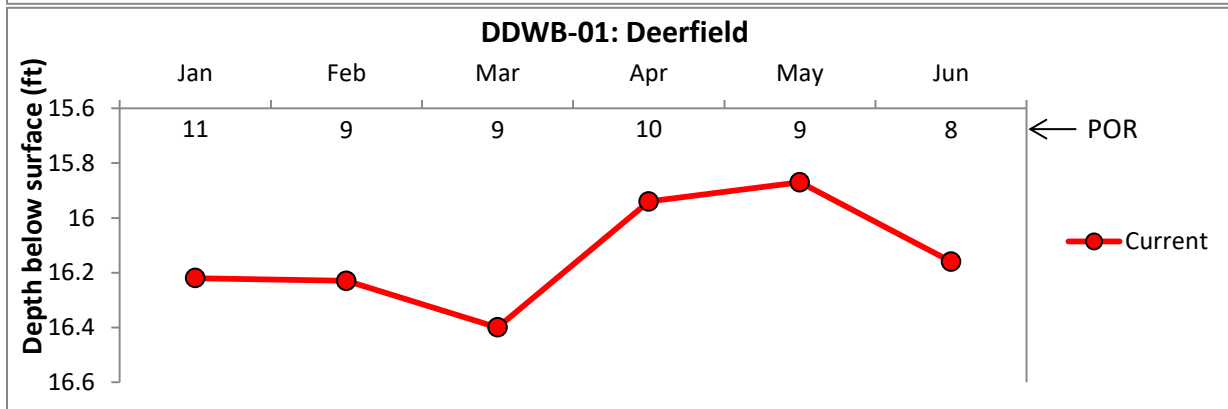
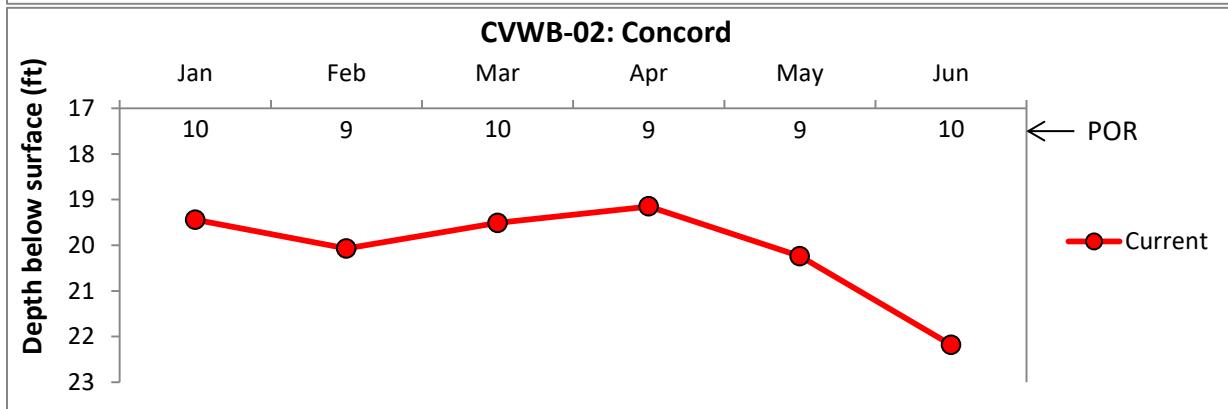
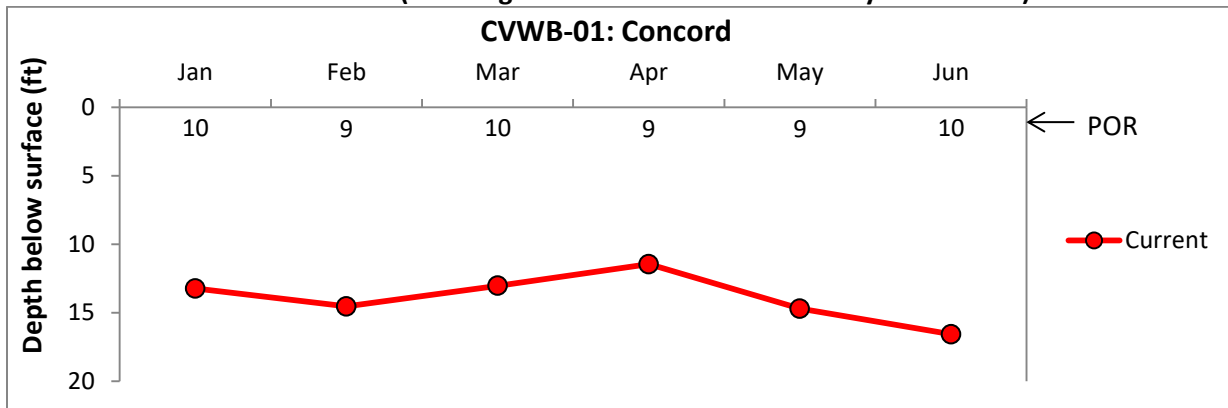


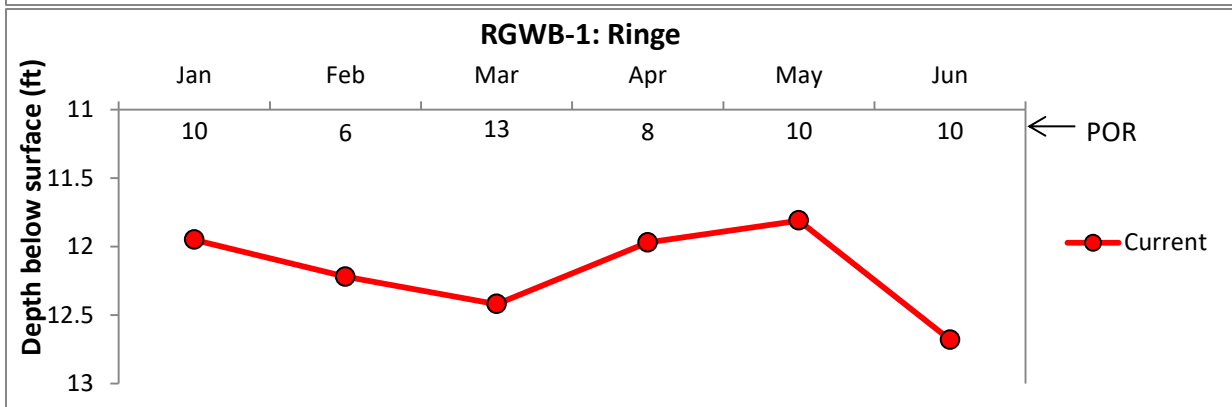
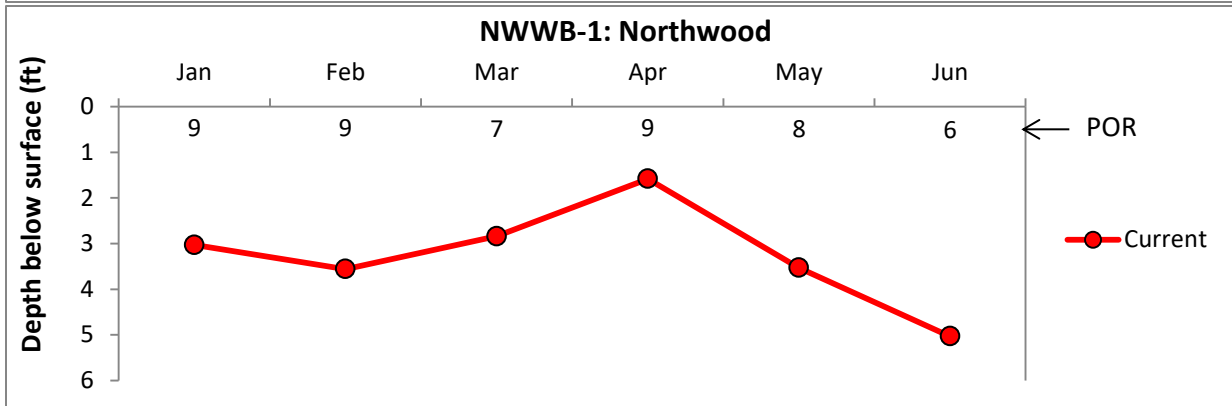
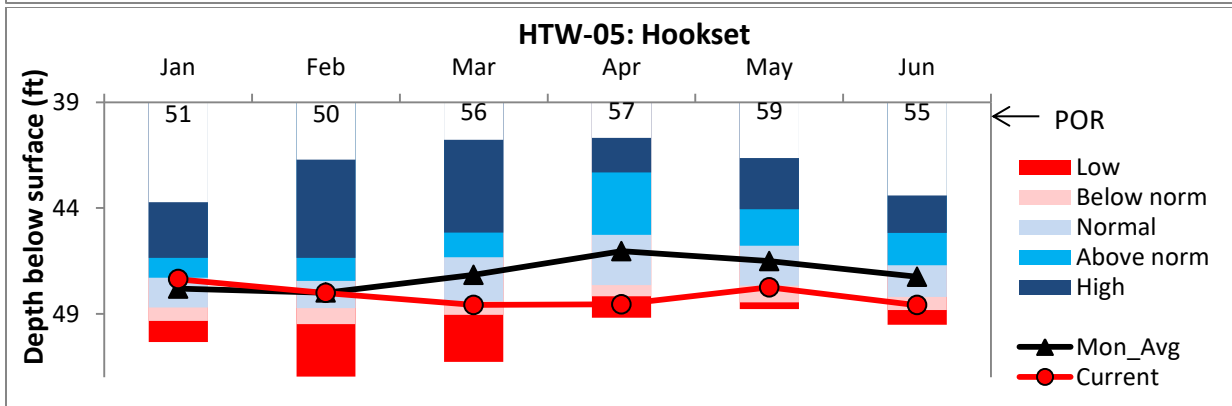
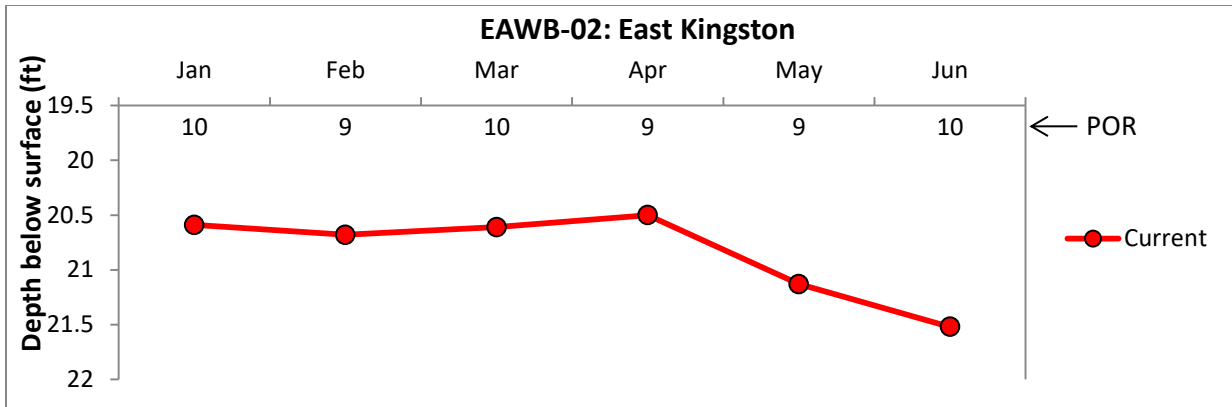






BEDROCK WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)





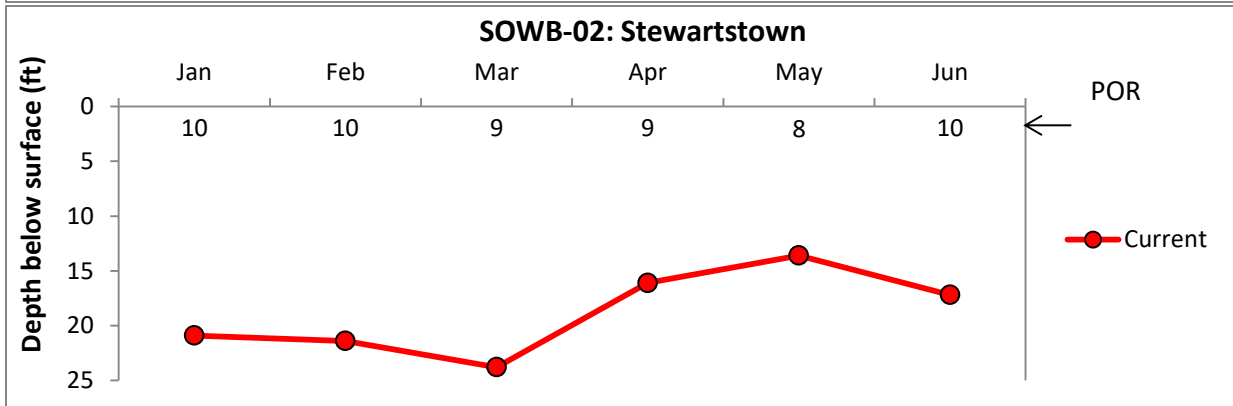
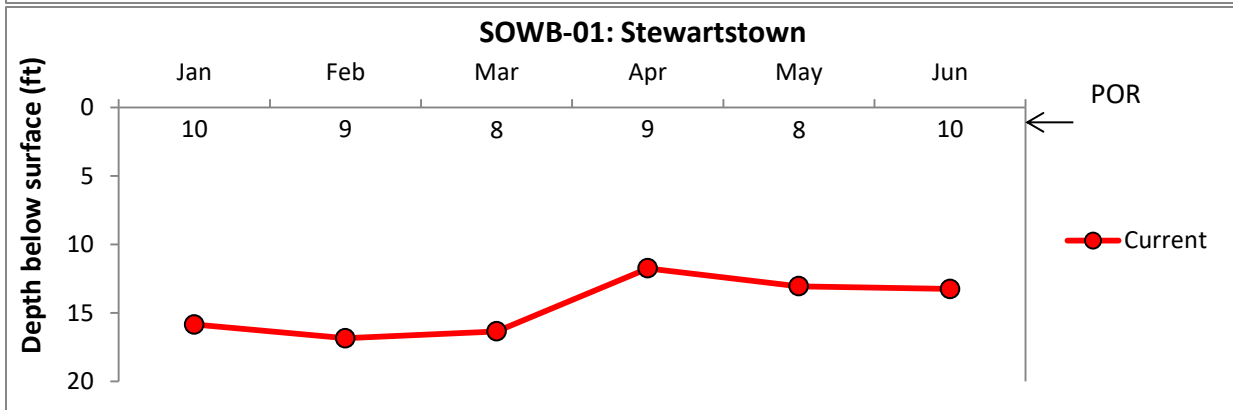
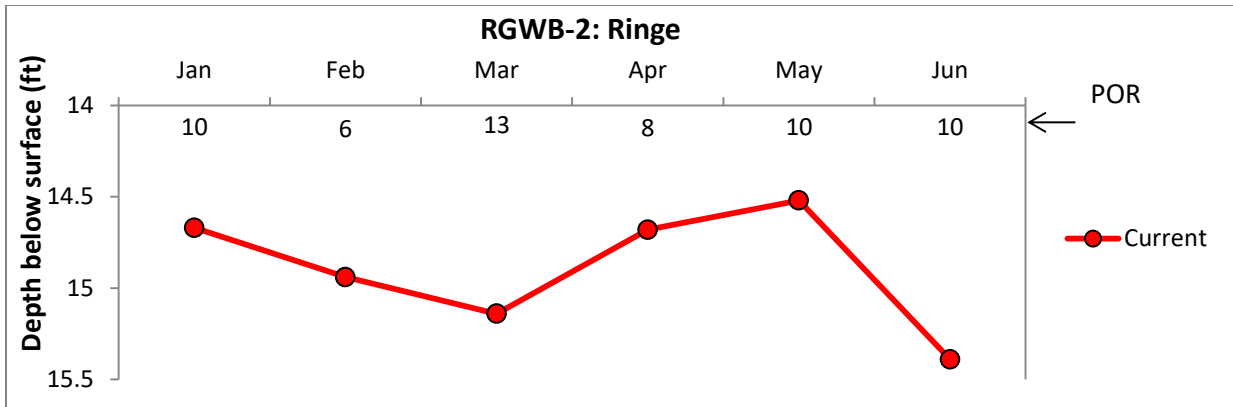


Table 1. Summary of groundwater levels in overburden wells

Well	Region	Well type	Screen/ open Interval (ft)	Depth to Water (ft)	Monthly Average (ft)	Current Status	Departure from Avg. (ft)	No. of meas.
BAW-10	Lakes	Overburden	23-25	2.49	2.92	Normal	0.43	21
FKW-01	Lakes	Overburden	45.5-47.5	11.35	10.53	Normal	-0.82	53
NFW-53	Lakes	Overburden	28-30	19.54	19.16	Low	-0.38	25
OXW-38	Lakes	Overburden	0-22.55	35.12	34.54	Normal	-0.58	24
CVW-02.1	Merrimack	Overburden	59.8-61.8	39.53	-	Not Analyzed	-	2
CVW-04	Merrimack	Overburden	25-27	17.75	16.65	Below norm	-1.1	57
DDW-46	Merrimack	Overburden	59.8-61.8	38.55	38.25	Normal	-0.3	24
NAW-218	Merrimack	Overburden	66-68	27.9	27.57	Normal	-0.33	56
CVWB-01	Merrimack	Bedrock	470-480	22.18	-	Not Analyzed	-	10
CVWB-02	Merrimack	Bedrock	0-315	16.57	-	Not Analyzed	-	10
DDWB-01	Merrimack	Bedrock	0-300	16.16	-	Not Analyzed	-	8
HTW-05	Merrimack	Bedrock	0-102.7	48.59	47.25	Below norm	-1.34	55
NWWB-01	Merrimack	Bedrock	0-130	5.03	-	Not Analyzed	-	6
GSW-75	Monadnock	Overburden	35.8-37.8	60.69	60.38	Normal	-0.31	23
RGWB-01	Monadnock	Bedrock	391-401	12.68	-	Not Analyzed	-	10
RGWB-02	Monadnock	Bedrock	0-285	15.39	-	Not Analyzed	-	10
CTW-73	North Woods	Overburden	105-107	8	7.41	Low	-0.59	22
LCW-01	North Woods	Overburden	28-30	2.77	1.89	Low	-0.88	50
SOWB-01	North Woods	Bedrock	443-453	13.25	-	Not Analyzed	-	10
SOWB-02	North Woods	Bedrock	0-303	17.2	-	Not Analyzed	-	10
BBW-53	Seacoast	Overburden	21-23	4.22	-	Not Analyzed	-	2
EPW-90	Seacoast	Overburden	39.45-40.7	27.5	27.04	Normal	-0.46	12
EAWB-01	Seacoast	Bedrock	463-473	22.41	-	Not Analyzed	-	10
EAWB-02	Seacoast	Bedrock	0-323	21.52	-	Not Analyzed	-	10
NLW-01	Sunapee	Overburden	40-42	10.03	8.11	Below norm	-1.92	100
NPW-03	Sunapee	Overburden	40.5-42.5	7.52	6.01	Low	-1.51	24
NPW-06	Sunapee	Overburden	58-60	7.56	6.09	Low	-1.47	24
ADW-14	White Mtns	Overburden	77.5-79.5	5.48	5.97	Above norm	0.49	24
ADW-15	White Mtns	Overburden	16-18	7.44	7.82	Normal	0.38	24
CBW-34	White Mtns	Overburden	21-23	13.18	12.44	Low	-0.74	27
LLW-19	White Mtns	Overburden	49.8-52.3	14.28	13.89	Normal	-0.39	26