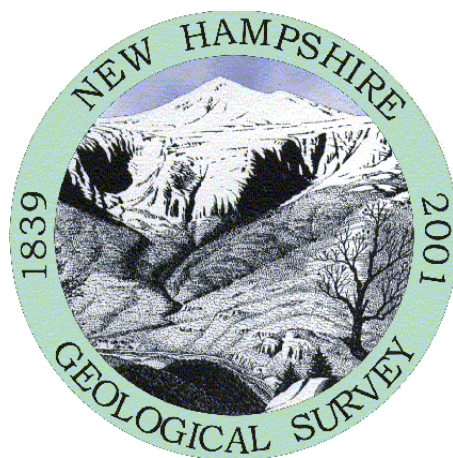


New Hampshire Groundwater Level Monitoring
May, 2020



New Hampshire Geological Survey
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

June 11, 2020

GROUNDWATER CONDITIONS SUMMARY

According to the [Northeast Regional Climate Center](#) (NRCC) at Cornell University, New Hampshire received an average of 2.70 inches of precipitation during the month of May, which is -1.40 inches below normal or 66% of normal based on the 1981-2010 precipitation records. Precipitation was somewhat evenly distributed across the state this month, with the northern portion receiving a third of an inch more than the southern portion (Figure 1). As of May 28th, the [National Drought Mitigation Center](#) declared that a portion of central-southern NH is abnormally dry (Figure 2). On June 11th, that abnormally dry area was expanded to include nearly the entire state except the Coos County pan handle (Figure 3).



Figure 1. Northern (1) and Southern (2) portions of NH, courtesy of NRCC.

Figure 2 shows the monthly status of groundwater levels for both bedrock and overburden wells in the network. Only wells with a period of record (POR) 10 years or more are placed within statistical categories of low through high (symbols red through blue, respectively). Bedrock wells are installed into bedrock and overburden wells are installed in the unconsolidated materials above bedrock.

The majority of the state is experiencing normal groundwater levels, with the exception of the overburden wells in Lancaster, Colebrook, and Newport, which are below normal to low. The majority of wells across the state have experienced a negative departure from their monthly average over their POR (Table 1). Groundwater levels fell in May due to a below-average amount of precipitation ([see NRCC's precipitation figures here](#)).

The New Hampshire Geological Survey's groundwater monitoring network (Figure 2) currently includes 11 bedrock and 20 overburden 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 Figure 2, the following hydrographs*, and in Table 1.

*The hydrographs show the following data over a period of 12 months: (1) monthly groundwater depths in red, (2) the monthly average over the period of record (POR) of the well in black, 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.

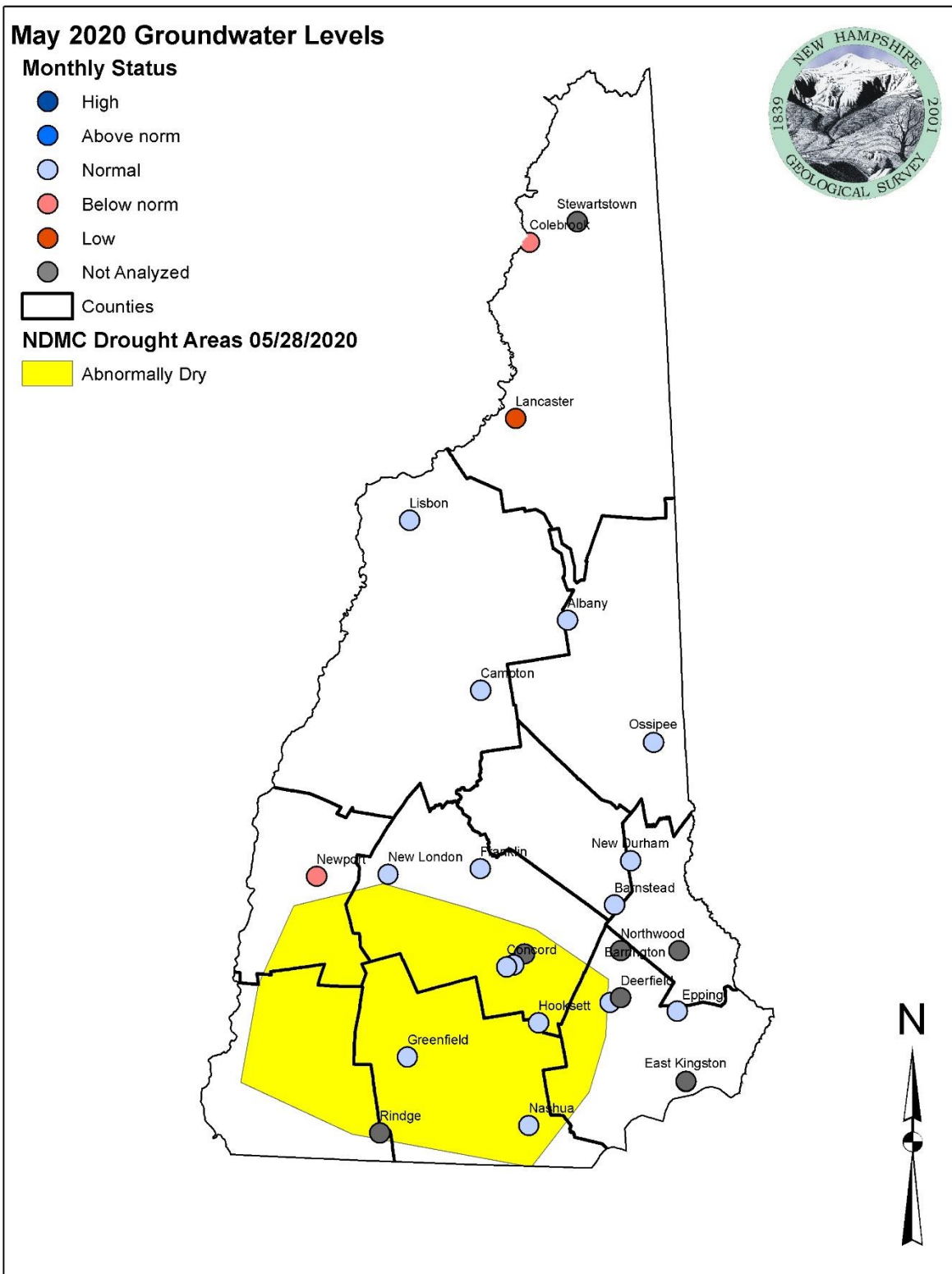


Figure 2. Groundwater Monitoring Network showing groundwater levels relative to statistical envelopes calculated over each well's period of record (POR) and abnormally dry areas according to National Drought Mitigation Center data from May 28th.

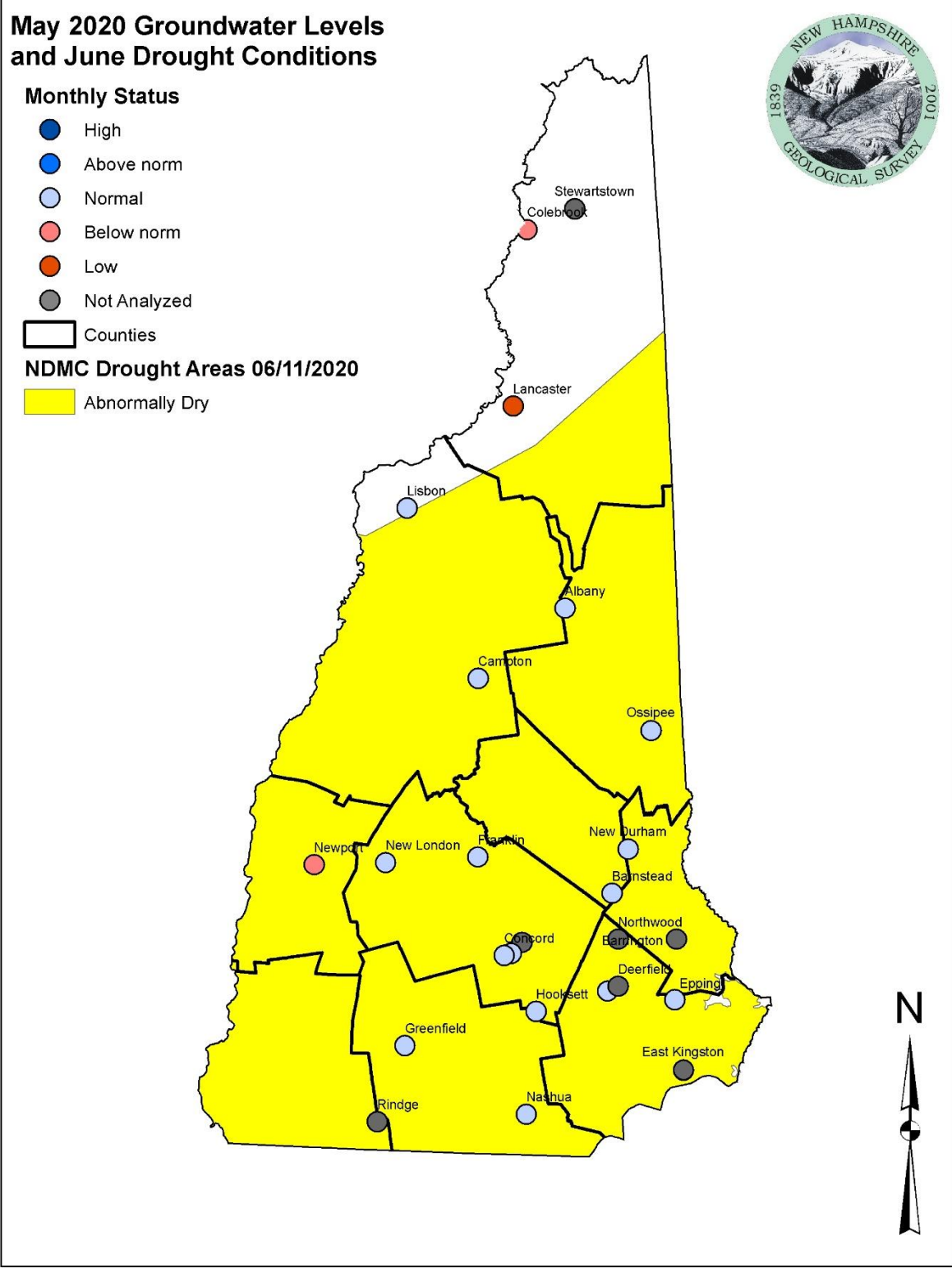
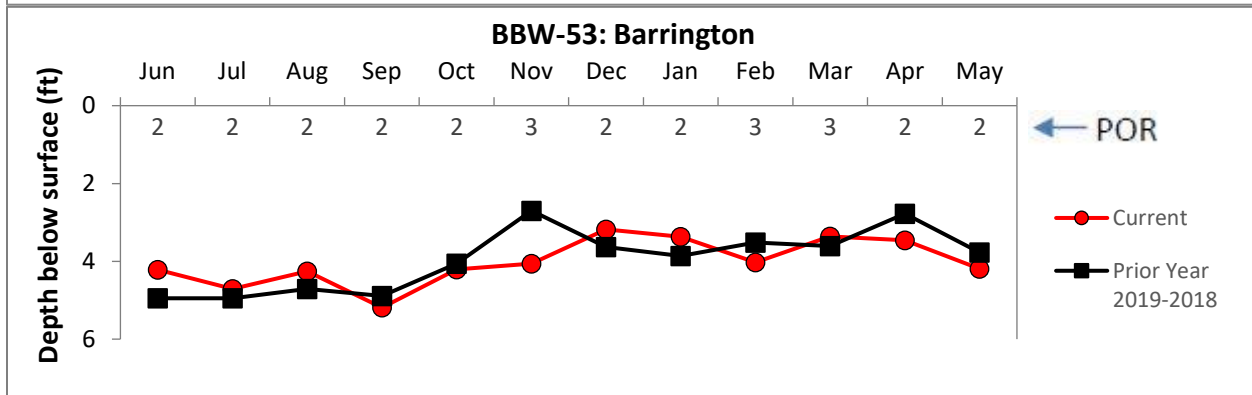
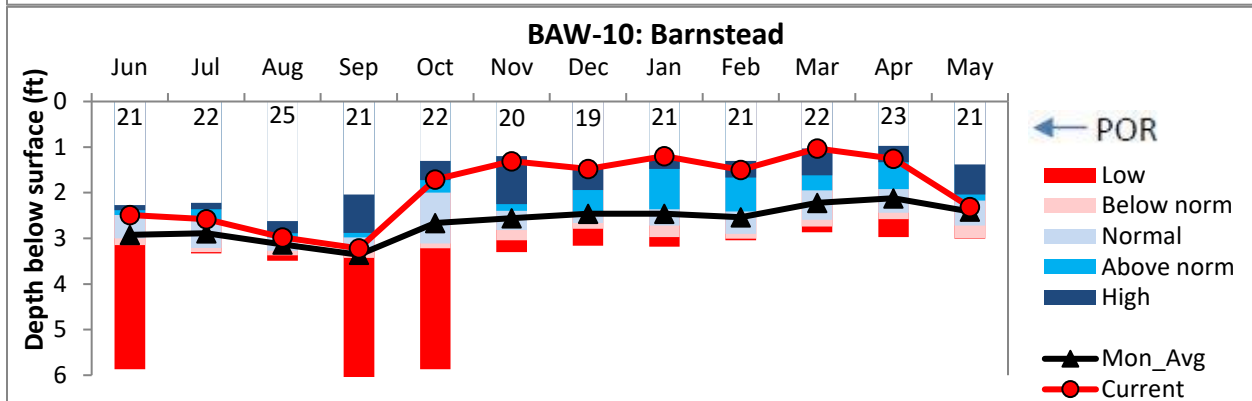
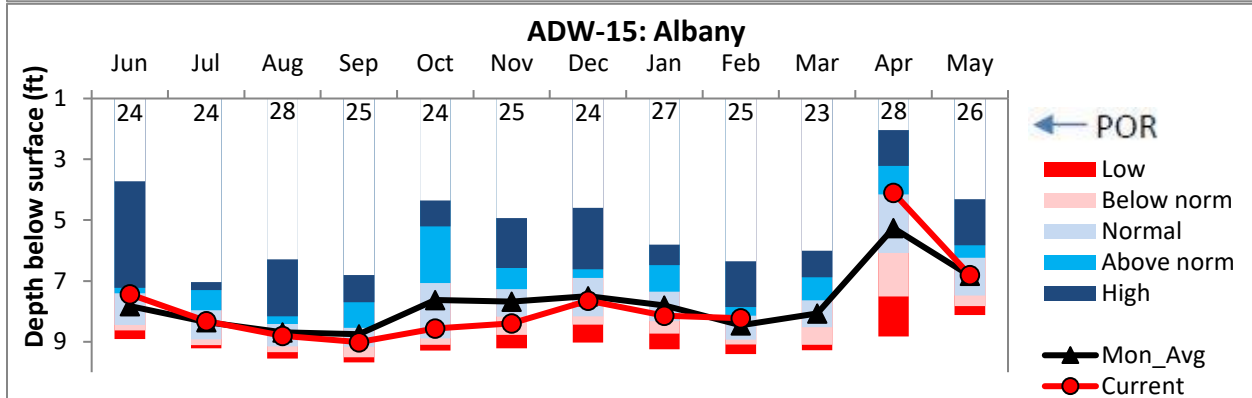
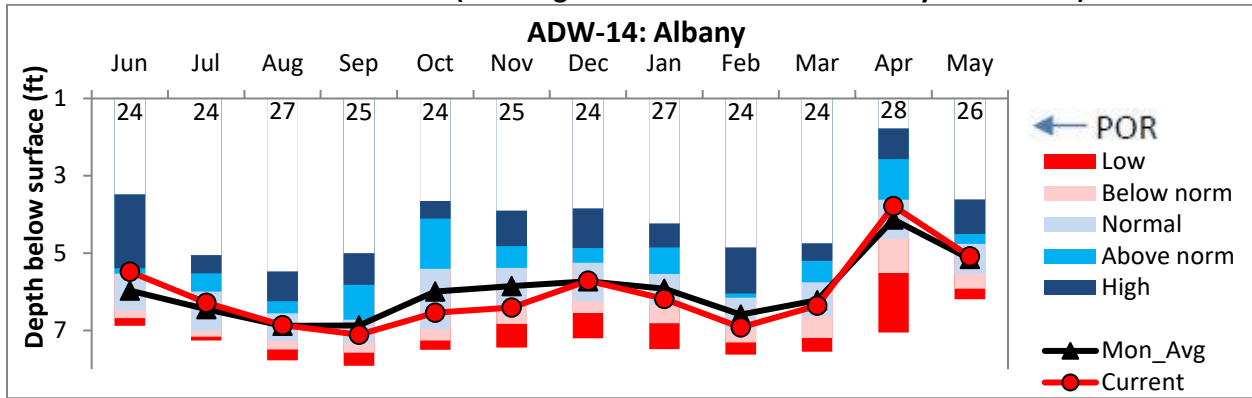
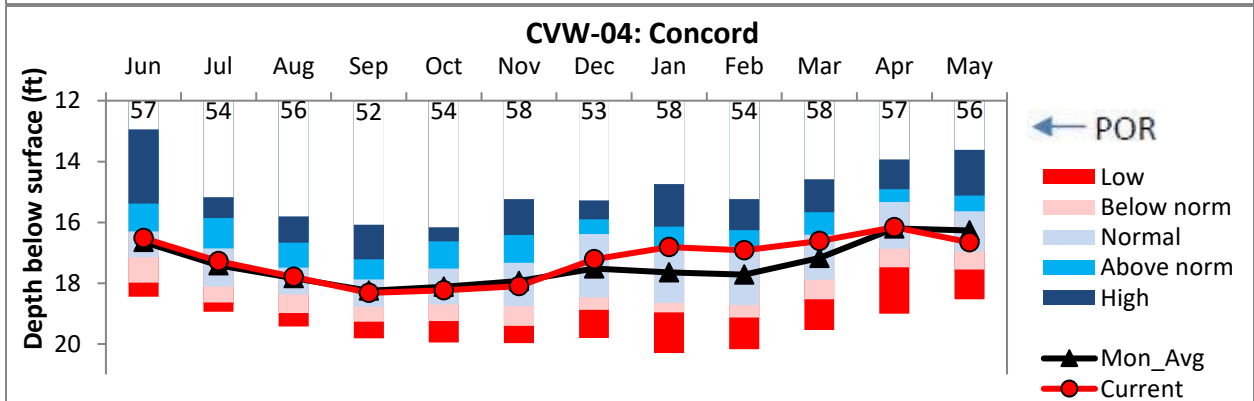
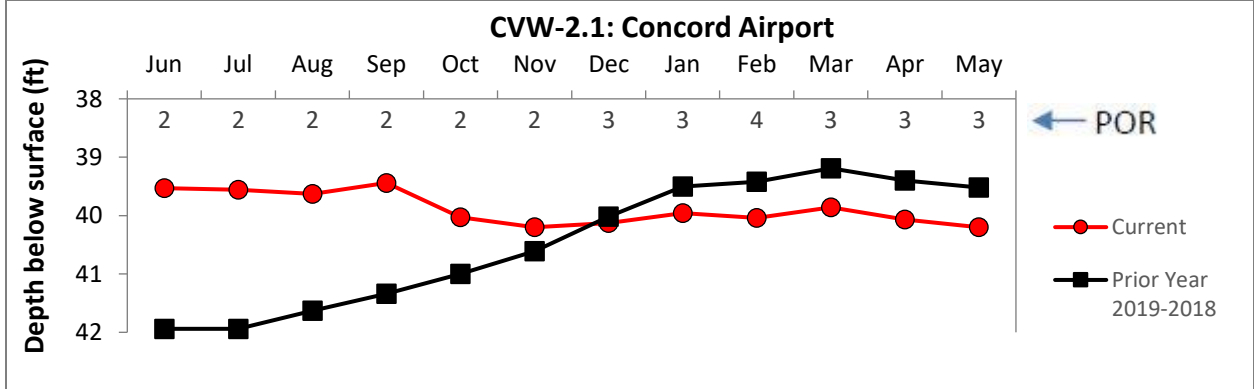
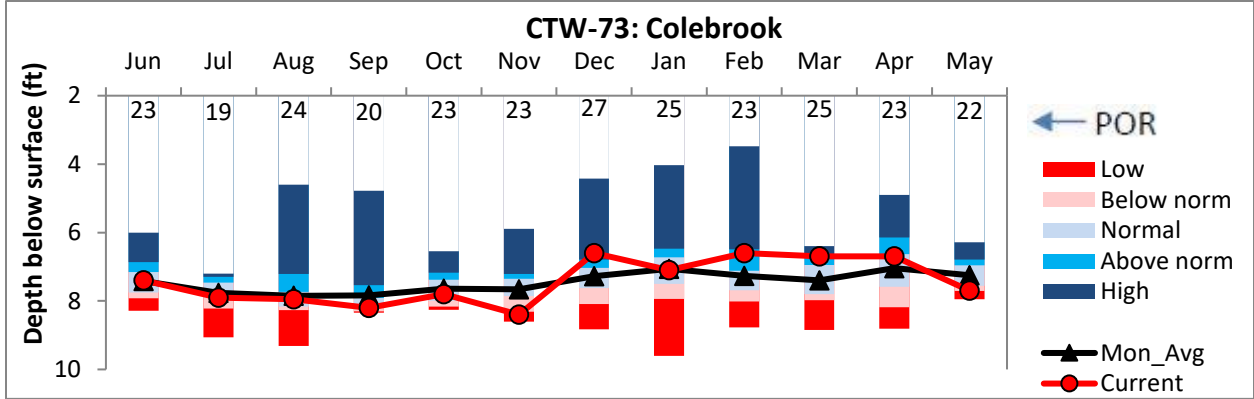
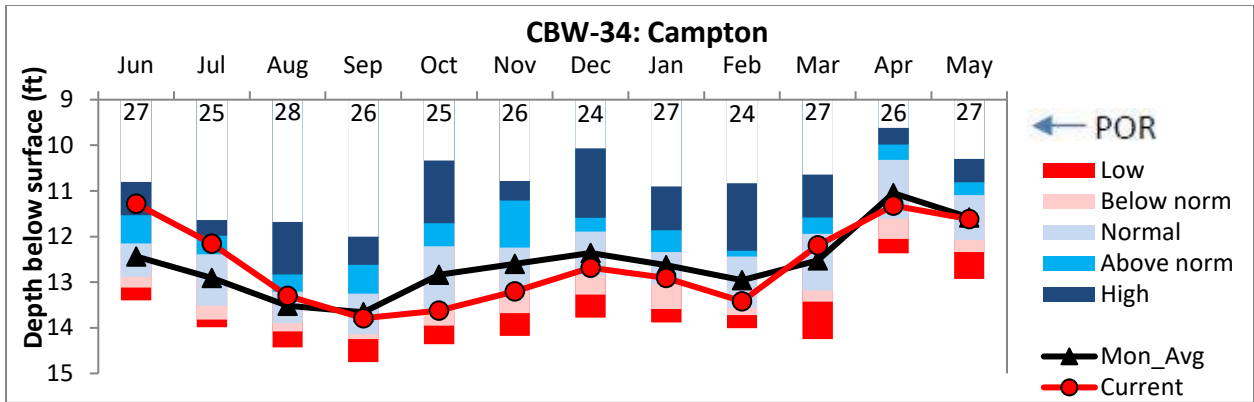
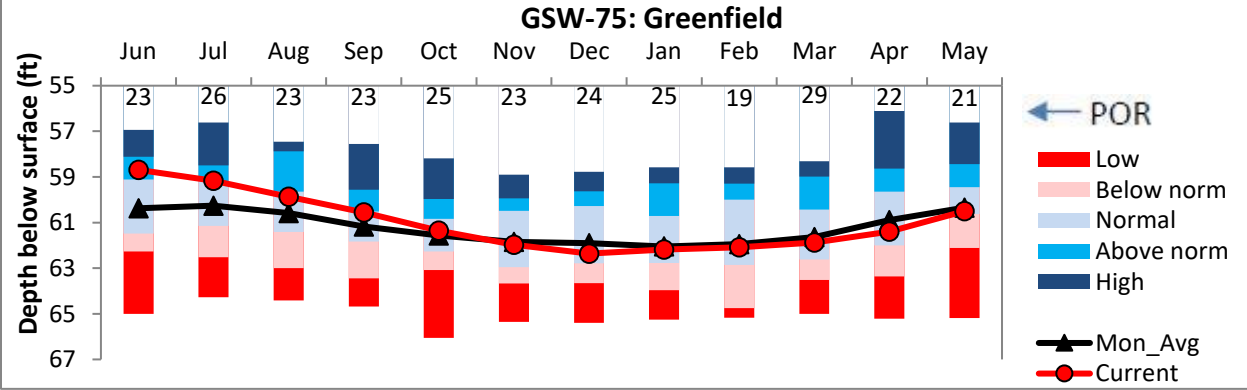
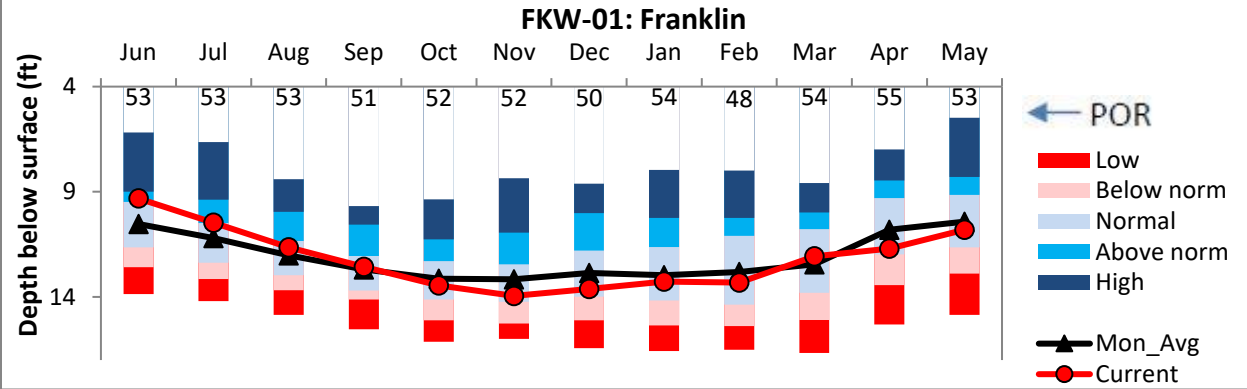
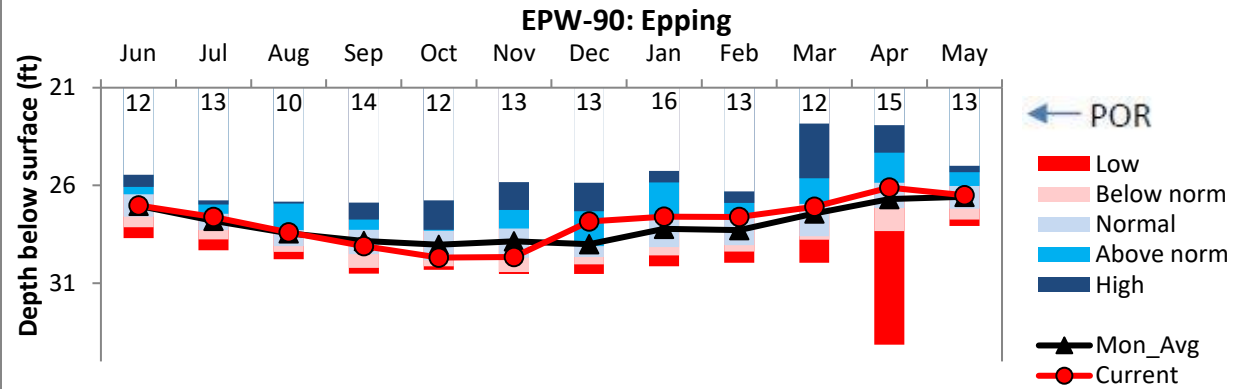
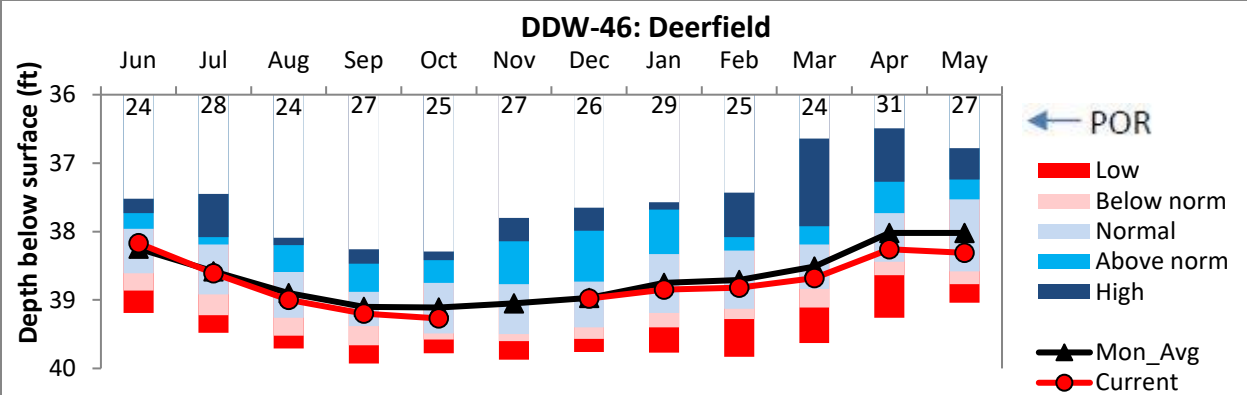


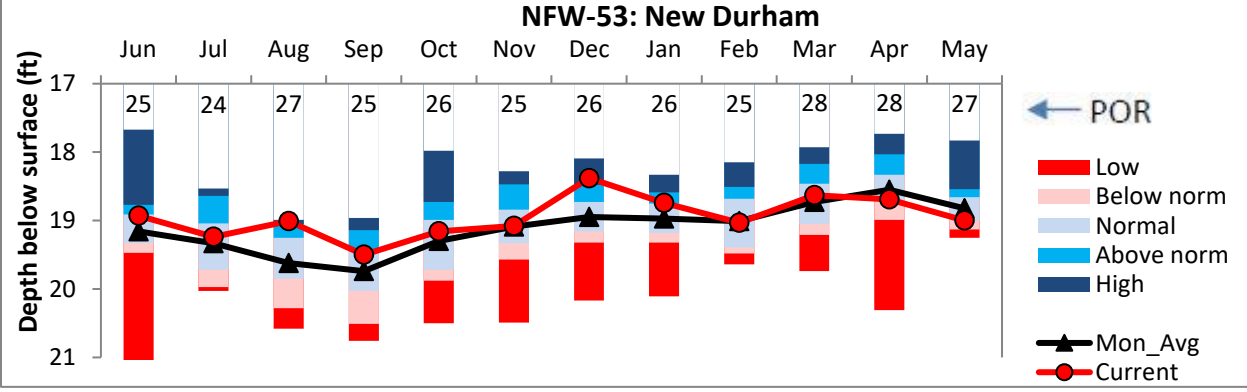
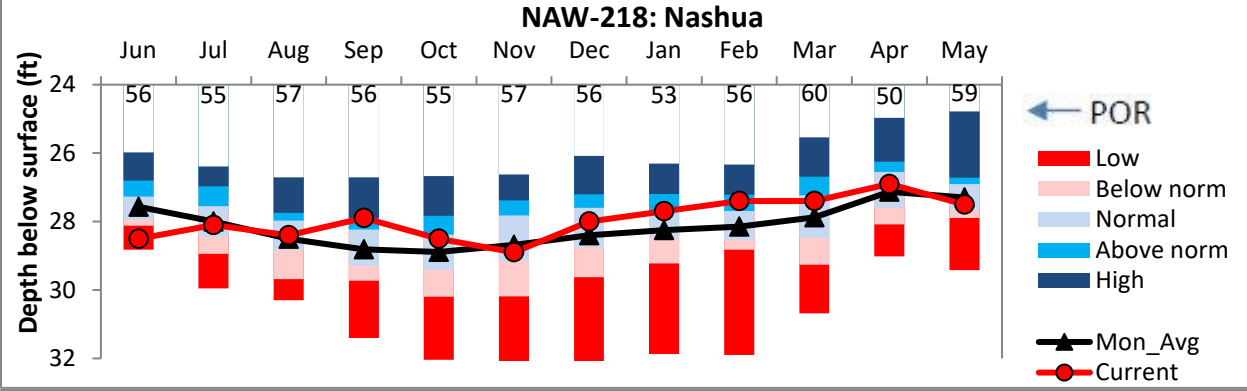
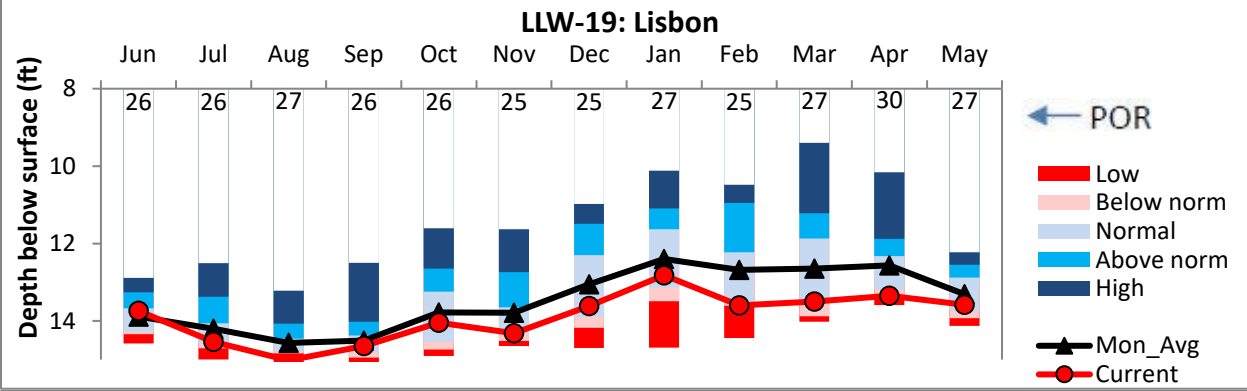
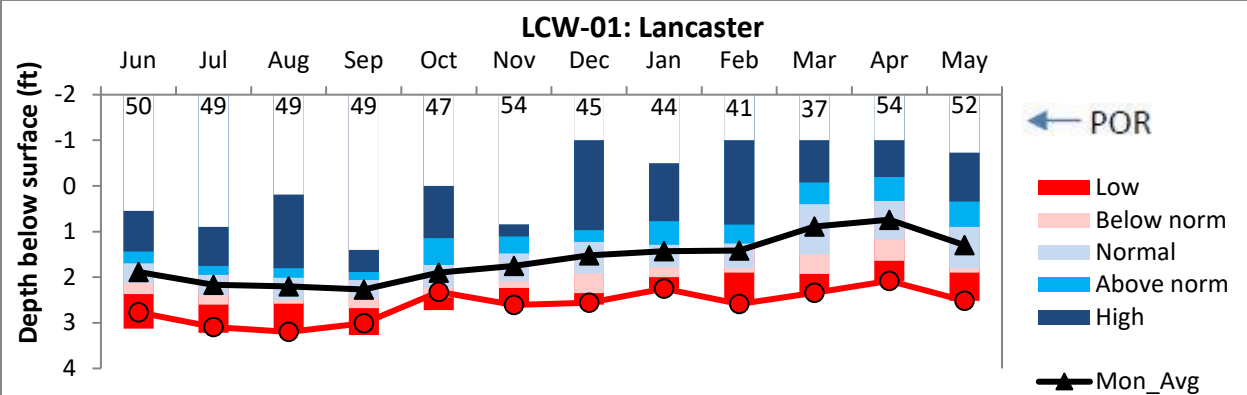
Figure 3. Groundwater Monitoring Network showing groundwater levels relative to statistical envelopes calculated over each well's period of record (POR) and abnormally dry areas according to National Drought Mitigation Center data from June 11th.

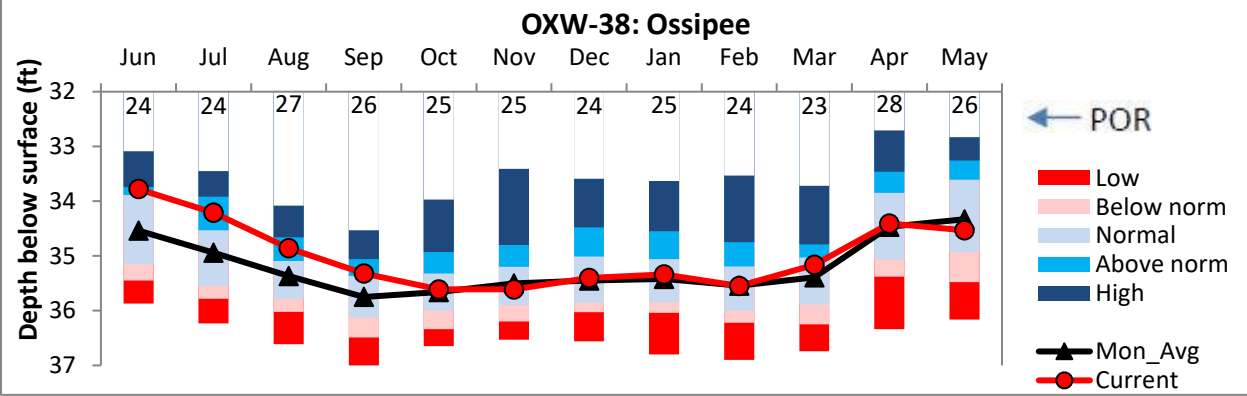
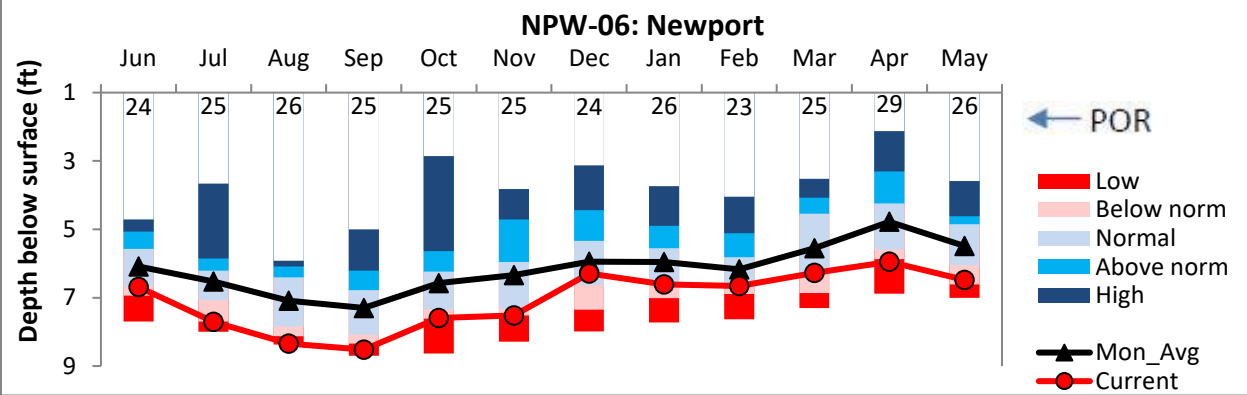
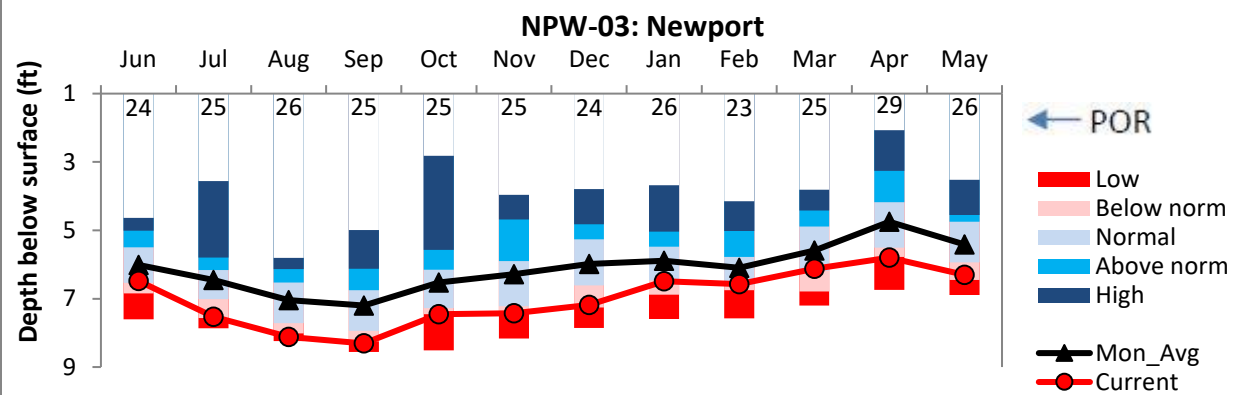
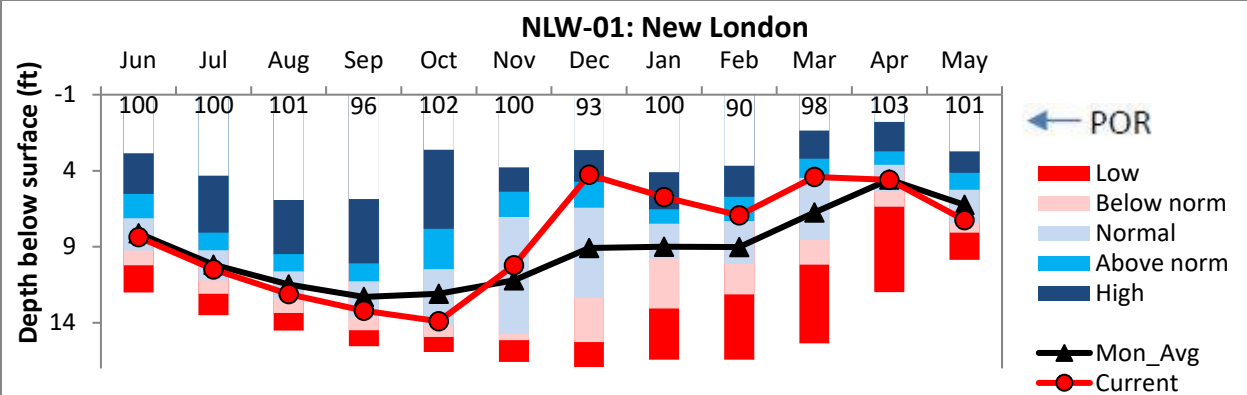
OVERBURDEN WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)



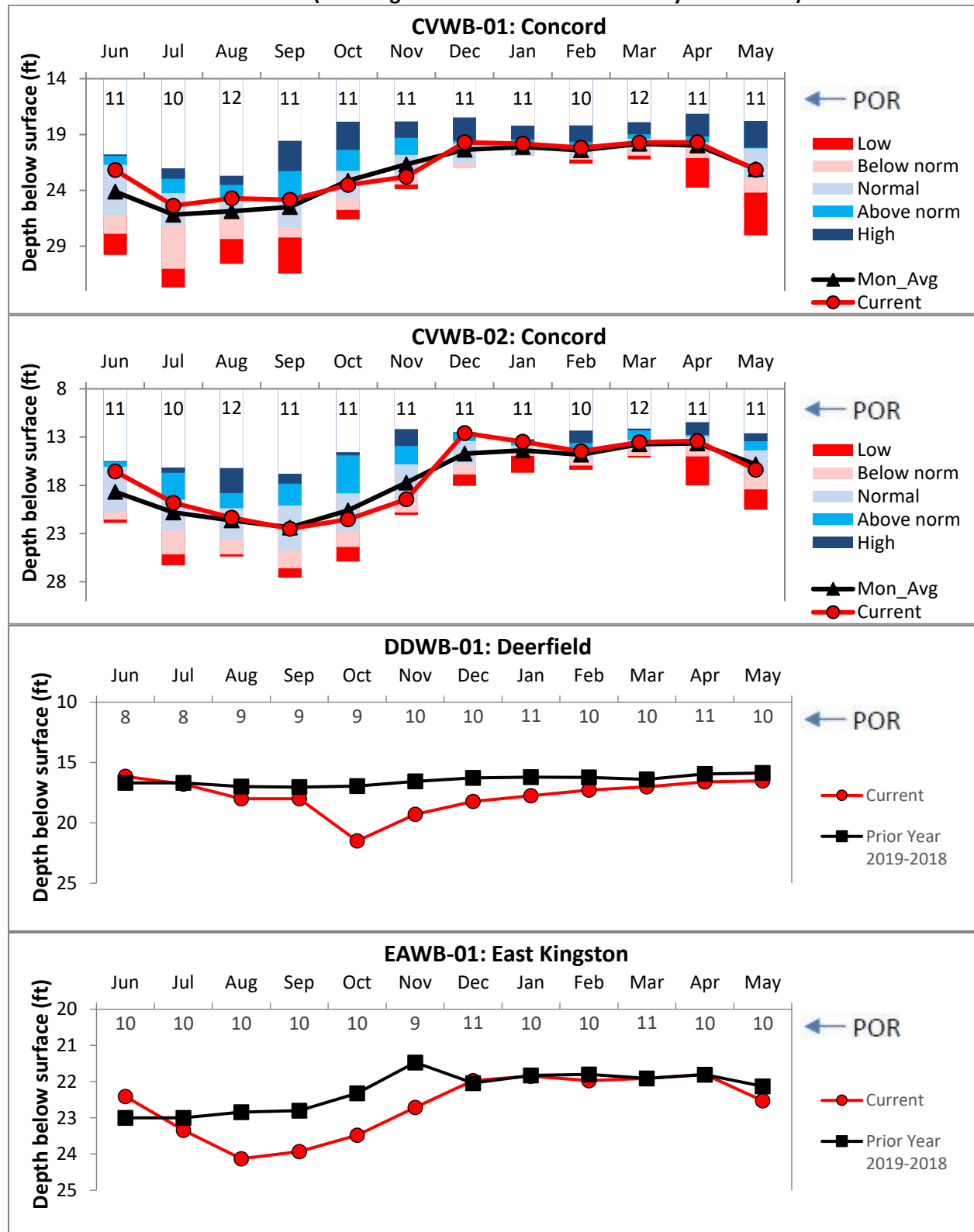


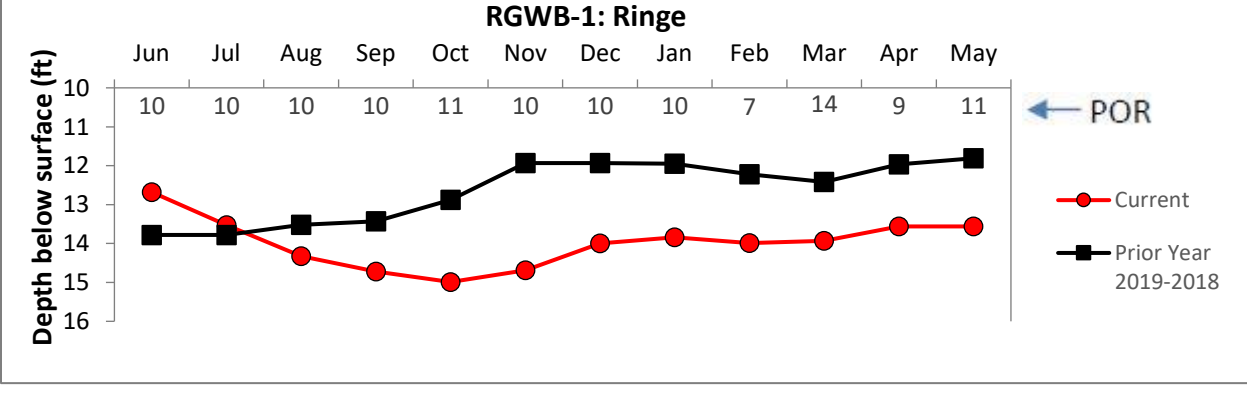
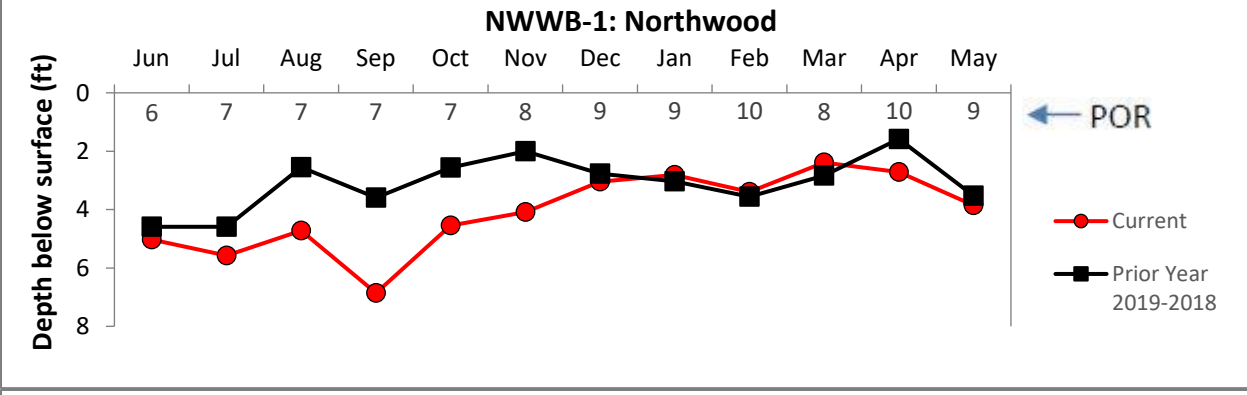
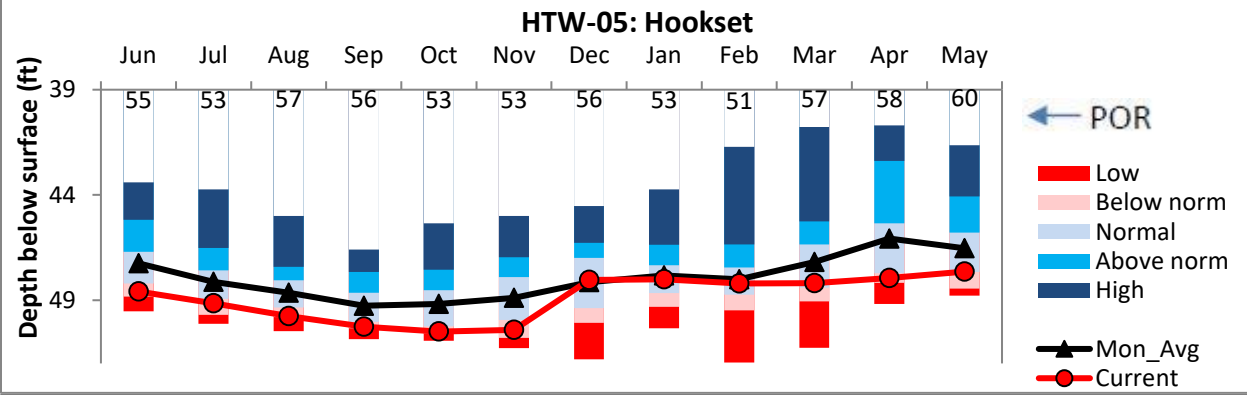
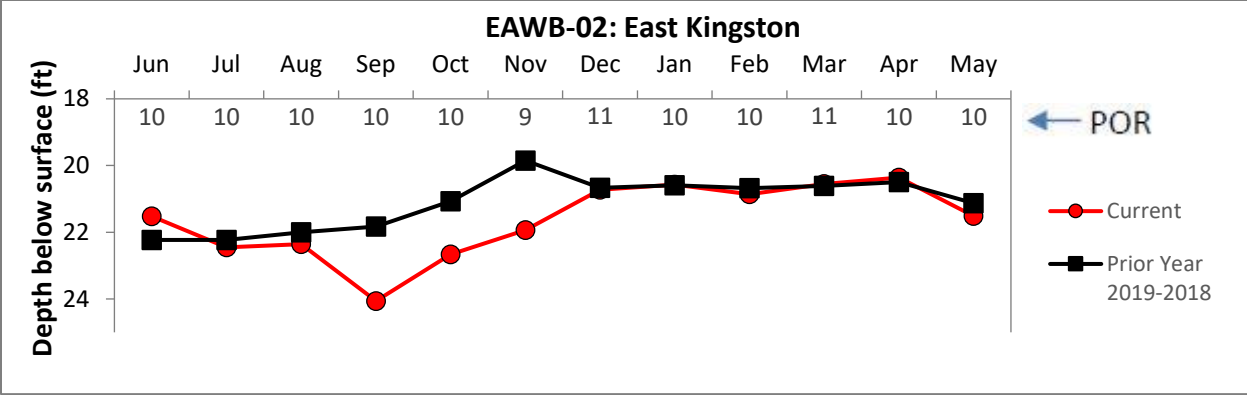






BEDROCK WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)





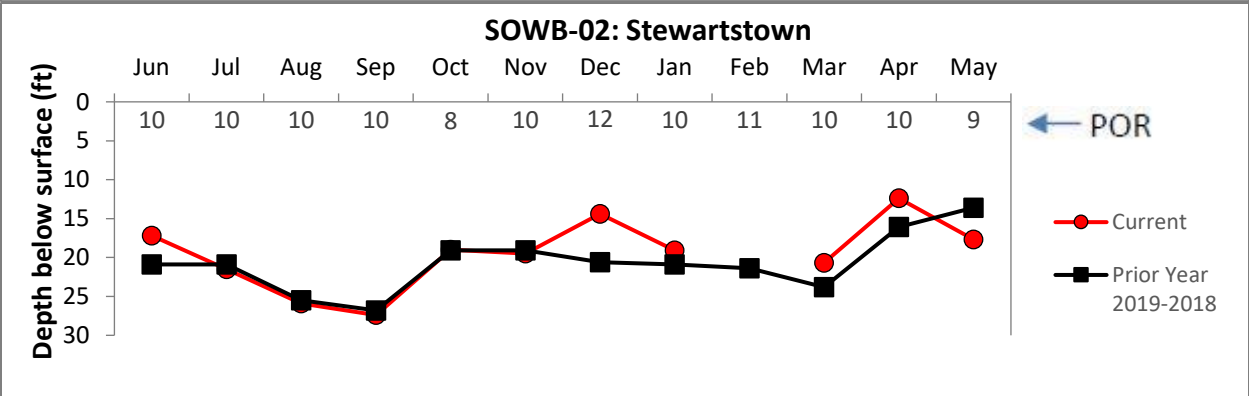
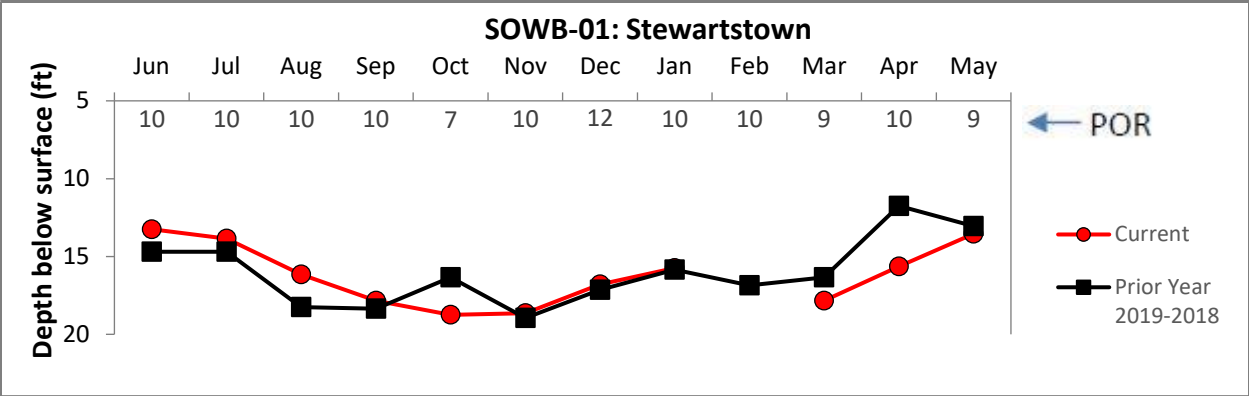
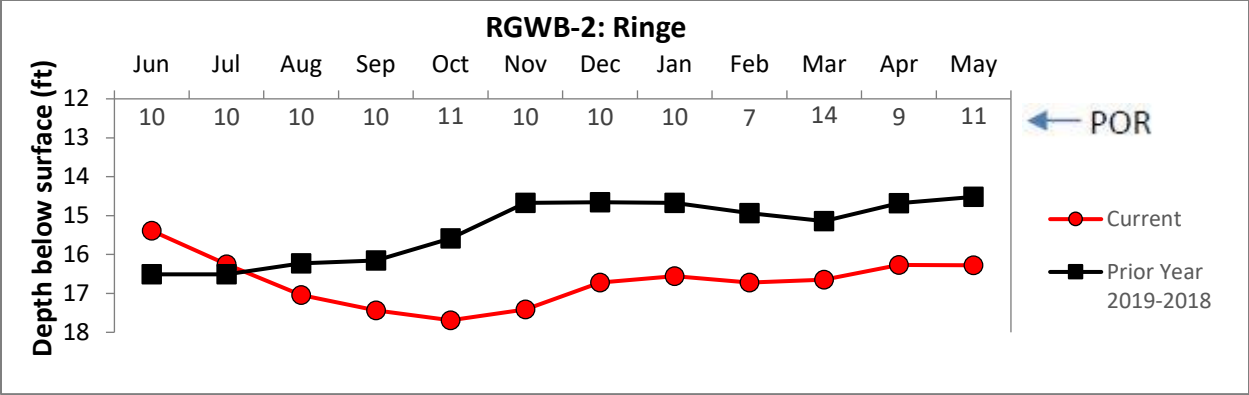


Table 1. Summary of groundwater levels sorted by region (dark blue – high, blue – above normal, light blue – normal, pink – below normal, red – low).

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	5.08	5.15	Normal	0.07	28
FKW-01	Lakes	Overburden	45.5-47.5	6.8	6.83	Normal	0.03	28
NFW-53	Lakes	Overburden	28-30	2.31	2.41	Normal	0.1	23
OXW-38	Lakes	Overburden	0-22.55	11.62	11.58	Normal	-0.04	26
CVW-02.1	Merrimack	Overburden	59.8-61.8	7.7	7.25	Below norm	-0.45	23
CVW-04	Merrimack	Overburden	25-27	40.2	-	Not Analyzed	-	3
DDW-46	Merrimack	Overburden	59.8-61.8	16.66	16.27	Normal	-0.39	57
NAW-218	Merrimack	Overburden	66-68	22.15	22.1	Normal	-0.05	11
CVWB-01	Merrimack	Bedrock	470-480	16.38	15.82	Normal	-0.56	11
CVWB-02	Merrimack	Bedrock	0-315	38.31	38.02	Normal	-0.29	31
DDWB-01	Merrimack	Bedrock	0-300	16.52	-	Not Analyzed	-	11
HTW-05	Merrimack	Bedrock	0-102.7	22.53	-	Not Analyzed	-	10
NWWB-01	Merrimack	Bedrock	0-130	21.51	-	Not Analyzed	-	10
GSW-75	Monadnock	Overburden	35.8-37.8	26.5	26.58	Normal	0.08	15
RGWB-01	Monadnock	Bedrock	391-401	10.8	10.42	Normal	-0.38	55
RGWB-02	Monadnock	Bedrock	0-285	60.5	60.34	Normal	-0.16	22
CTW-73	North Woods	Overburden	105-107	47.64	46.53	Normal	-1.11	58
LCW-01	North Woods	Overburden	28-30	13.58	13.31	Normal	-0.27	30
SOWB-01	North Woods	Bedrock	443-453	27.5	27.3	Normal	-0.2	50
SOWB-02	North Woods	Bedrock	0-303	19	18.82	Normal	-0.18	28
BBW-53	Seacoast	Overburden	21-23	7.25	6.24	Normal	-1.01	103
EPW-90	Seacoast	Overburden	39.45-40.7	6.3	5.41	Below norm	-0.89	29
EAWB-01	Seacoast	Bedrock	463-473	6.48	5.49	Below norm	-0.99	29
EAWB-02	Seacoast	Bedrock	0-323	3.85	-	Not Analyzed	-	10
NLW-01	Sunapee	Overburden	40-42	34.53	34.33	Normal	-0.2	28
NPW-03	Sunapee	Overburden	40.5-42.5	13.56	-	Not Analyzed	-	9
NPW-06	Sunapee	Overburden	58-60	16.28	-	Not Analyzed	-	9
ADW-14	White Mtns.	Overburden	77.5-79.5	13.55	-	Not Analyzed	-	10
ADW-15	White Mtns.	Overburden	16-18	17.7	-	Not Analyzed	-	10
CBW-34	White Mtns.	Overburden	21-23	4.19	-	Not Analyzed	-	2
LLW-19	White Mtns.	Overburden	49.8-52.3	2.52	1.3	Low	-1.22	54