



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

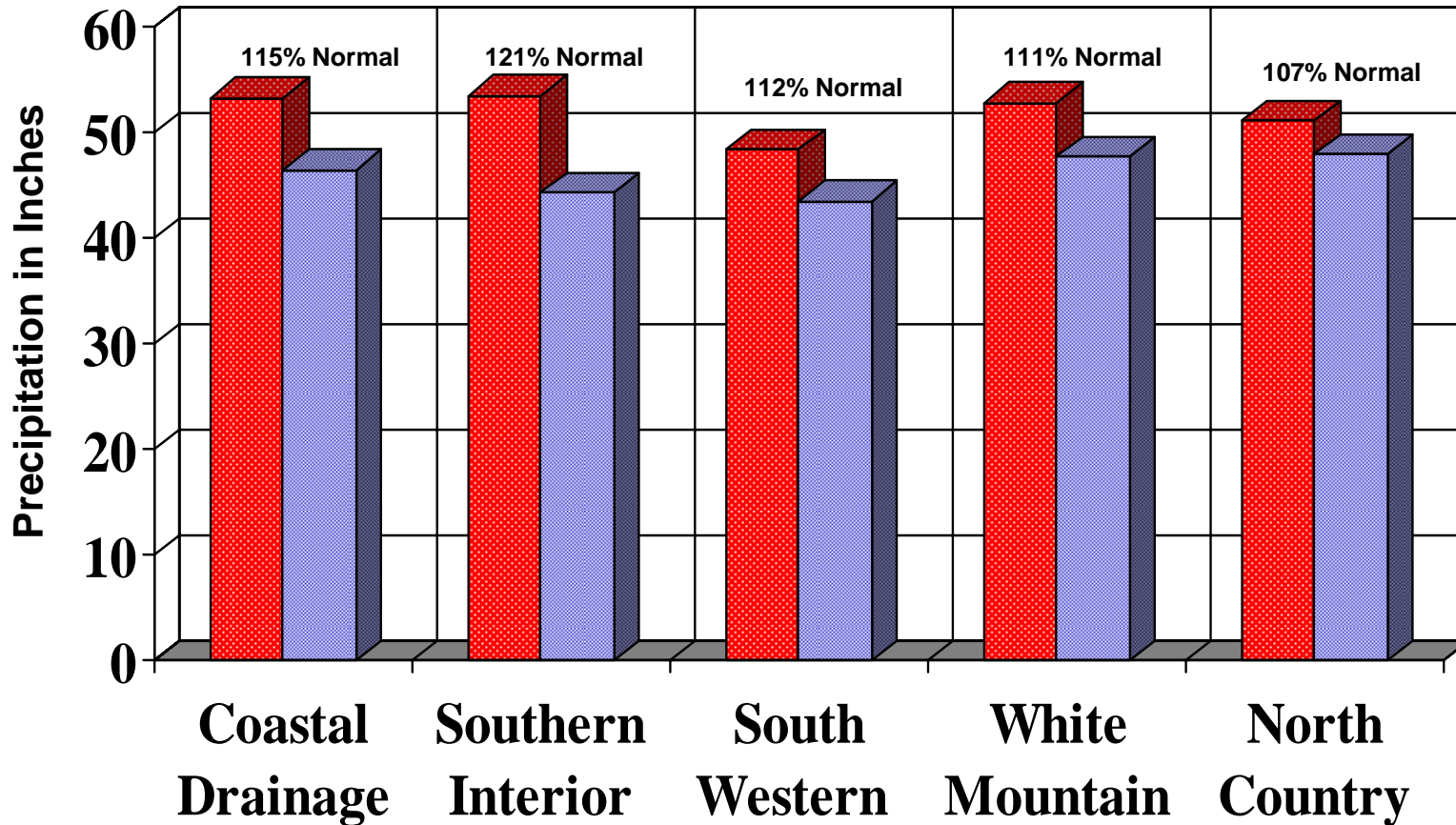
**AGGREGATED PRECIPITATION DATA for N.H.
 DROUGHT MANAGEMENT AREAS**

	Actual Rainfall (inches)	Normal Rainfall (inches)	Deviation from Normal (inches)	Percent of Normal
<u>Coastal Drainage:</u> Rockingham, Strafford counties				
four month	21.47	15.44	6.04	139%
six month	26.64	22.53	4.11	118%
nine month	38.20	34.78	3.42	110%
twelve month	53.21	46.46	6.76	115%
<u>Southern Interior:</u> Belknap, Hillsborough, Merrimack counties				
four month	22.21	15.17	7.04	146%
six month	27.03	21.65	5.38	125%
nine month	38.20	32.92	5.29	116%
twelve month	53.46	44.34	9.12	121%
<u>South Western:</u> Cheshire, Sullivan counties				
four month	20.91	15.31	5.60	137%
six month	24.88	21.52	3.36	116%
nine month	35.47	32.10	3.38	111%
twelve month	48.82	43.53	5.29	112%
<u>White Mountain:</u> Carroll, Grafton counties				
four month	21.87	16.48	5.39	133%
six month	26.46	23.20	3.26	114%
nine month	37.86	35.11	2.75	108%
twelve month	52.83	47.68	5.15	111%
<u>North Country:</u> Coos county				
four month	20.48	16.89	3.59	121%
six month	25.31	23.25	2.06	109%
nine month	37.50	34.85	2.65	108%
twelve month	51.11	47.93	3.18	107%

four month period : April 2009 - July 2009
 six month period : February 2009 - July 2009
 nine month period : November 2008 - July 2009
 twelve month period: August 2008 - July 2009

Source: Northeast River Forecast Center, NH Des Dam Bureau

TWELVE MONTH AGGREGATED PRECIPITATION DATA for N.H. DROUGHT MANAGEMENT AREAS from August 2008 through July 2009



Actual Normal



MONTHLY PRECIPITATION DATA FOR N.H COUNTIES

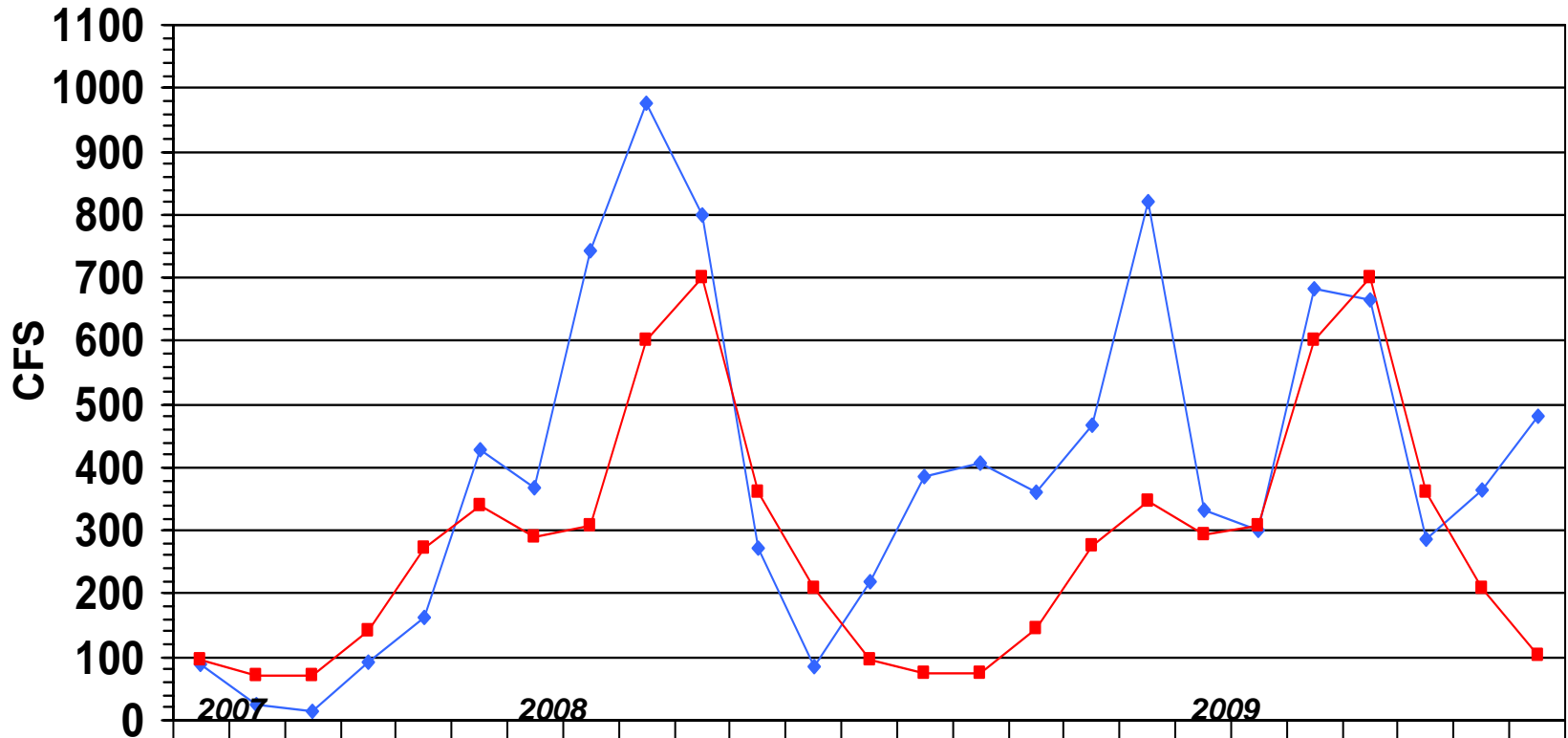
		2008					2009						
		AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY
<u>Coastal drainage</u>													
STRAFFORD	actual	3.58	8.00	2.54	4.62	3.76	2.33	2.39	2.71	3.94	3.52	5.66	6.99
	normal	3.69	3.77	4.39	4.71	3.99	3.68	3.21	4.02	4.39	3.88	3.77	3.75
	deviation	-0.11	4.23	-1.85	-0.09	-0.23	-1.35	-0.82	-1.31	-0.45	-0.36	1.89	3.24
ROCKINGHAM	actual	4.18	9.03	2.70	4.55	4.81	3.05	2.30	2.93	4.06	3.81	6.55	8.41
	normal	3.55	3.76	4.20	4.42	3.93	3.77	3.09	3.86	4.12	3.69	3.68	3.59
	deviation	0.63	5.27	-1.50	0.13	0.88	-0.72	-0.79	-0.93	-0.06	0.12	2.87	4.82
Average	actual	3.88	8.52	2.62	4.59	4.29	2.69	2.35	2.82	4.00	3.67	6.11	7.70
	normal	3.62	3.77	4.30	4.57	3.96	3.73	3.15	3.94	4.26	3.79	3.73	3.67
	deviation	0.26	4.75	-1.68	0.02	0.33	-1.04	-0.81	-1.12	-0.26	-0.12	2.38	4.03
<u>Southern Interior</u>													
HILLSBOROUGH	actual	3.90	7.94	2.60	4.28	5.36	2.77	1.72	2.95	3.65	4.16	7.10	8.96
	normal	3.78	3.67	4.16	4.18	3.84	3.80	3.07	3.88	3.89	3.81	3.75	3.75
	deviation	0.12	4.27	-1.56	0.10	1.52	-1.03	-1.35	-0.93	-0.24	0.35	3.35	5.21
MERRIMACK	actual	4.74	8.42	3.08	4.61	4.71	2.72	2.08	3.20	3.64	4.01	6.73	8.23
	normal	3.78	3.52	3.97	3.97	3.56	3.49	2.79	3.51	3.66	3.84	3.66	3.81
	deviation	0.96	4.90	-0.89	0.64	1.15	-0.77	-0.71	-0.31	-0.02	0.17	3.07	4.42
BELKNAP	actual	5.35	7.04	2.70	4.24	3.25	1.57	2.00	2.51	3.29	3.23	6.13	7.51
	normal	3.84	3.55	4.00	3.94	3.50	3.52	2.76	3.42	3.66	3.82	3.79	4.08
	deviation	1.51	3.49	-1.30	0.30	-0.25	-1.95	-0.76	-0.91	-0.37	-0.59	2.34	3.43
Average	actual	4.66	7.80	2.79	4.38	4.44	2.35	1.93	2.89	3.53	3.80	6.65	8.23
	normal	3.80	3.58	4.04	4.03	3.63	3.60	2.87	3.60	3.74	3.82	3.73	3.88
	deviation	0.86	4.22	-1.25	0.35	0.81	-1.25	-0.94	-0.72	-0.21	-0.02	2.92	4.35
<u>South Western</u>													
CHESHIRE	actual	3.47	6.13	3.04	3.15	4.87	2.16	1.21	2.67	2.89	3.86	5.28	9.52
	normal	4.05	3.57	3.82	3.80	3.51	3.64	2.82	3.60	3.64	3.97	3.81	4.03
	deviation	-0.58	2.56	-0.78	-0.65	1.36	-1.48	-1.61	-0.93	-0.75	-0.11	1.47	5.49
SULLIVAN	actual	4.33	5.78	3.95	3.27	5.24	2.50	1.51	2.55	2.77	3.90	5.19	8.40
	normal	3.93	3.63	3.87	3.67	3.26	3.27	2.67	3.33	3.52	3.90	3.75	4.00
	deviation	0.40	2.15	0.08	-0.40	1.98	-0.77	-1.16	-0.78	-0.75	0.00	1.44	4.40
Average	actual	3.90	5.96	3.50	3.21	5.06	2.33	1.36	2.61	2.83	3.88	5.24	8.96
	normal	3.99	3.60	3.85	3.74	3.39	3.46	2.75	3.47	3.58	3.94	3.78	4.02
	deviation	-0.09	2.36	-0.35	-0.53	1.67	-1.13	-1.39	-0.86	-0.75	-0.06	1.46	4.95
<u>White Mountain</u>													
GRAFTON	actual	6.18	4.63	4.12	3.49	4.66	1.84	1.88	2.27	3.20	4.88	4.71	7.51
	normal	4.43	4.05	4.19	4.21	3.66	3.64	2.79	3.60	3.72	4.01	4.26	4.34
	deviation	1.75	0.58	-0.07	-0.72	1.00	-1.80	-0.91	-1.33	-0.52	0.87	0.45	3.17
CARROLL	actual	5.54	6.51	2.96	5.62	4.99	2.20	2.59	2.45	3.64	4.15	6.89	8.75
	normal	4.21	3.88	4.38	4.33	3.97	4.01	3.05	4.00	4.05	4.19	4.14	4.25
	deviation	1.33	2.63	-1.42	1.29	1.02	-1.81	-0.46	-1.55	-0.41	-0.04	2.75	4.50
Average	actual	5.86	5.57	3.54	4.56	4.83	2.02	2.24	2.36	3.42	4.52	5.80	8.13
	normal	4.32	3.97	4.29	4.27	3.82	3.83	2.92	3.80	3.89	4.10	4.20	4.30
	deviation	1.54	1.61	-0.75	0.29	1.01	-1.81	-0.69	-1.44	-0.47	0.42	1.60	3.84
<u>North Country</u>													
COOS	actual	5.62	3.84	4.15	4.84	5.19	2.16	2.88	1.95	2.94	5.22	5.40	6.92
	normal	4.70	4.25	4.13	4.24	3.75	3.61	2.79	3.57	3.61	4.14	4.61	4.53
	deviation	0.92	-0.41	0.02	0.60	1.44	-1.45	0.09	-1.62	-0.67	1.08	0.79	2.39

LAMPREY RIVER near NEWMARKET NH

Gage# 01073500



MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



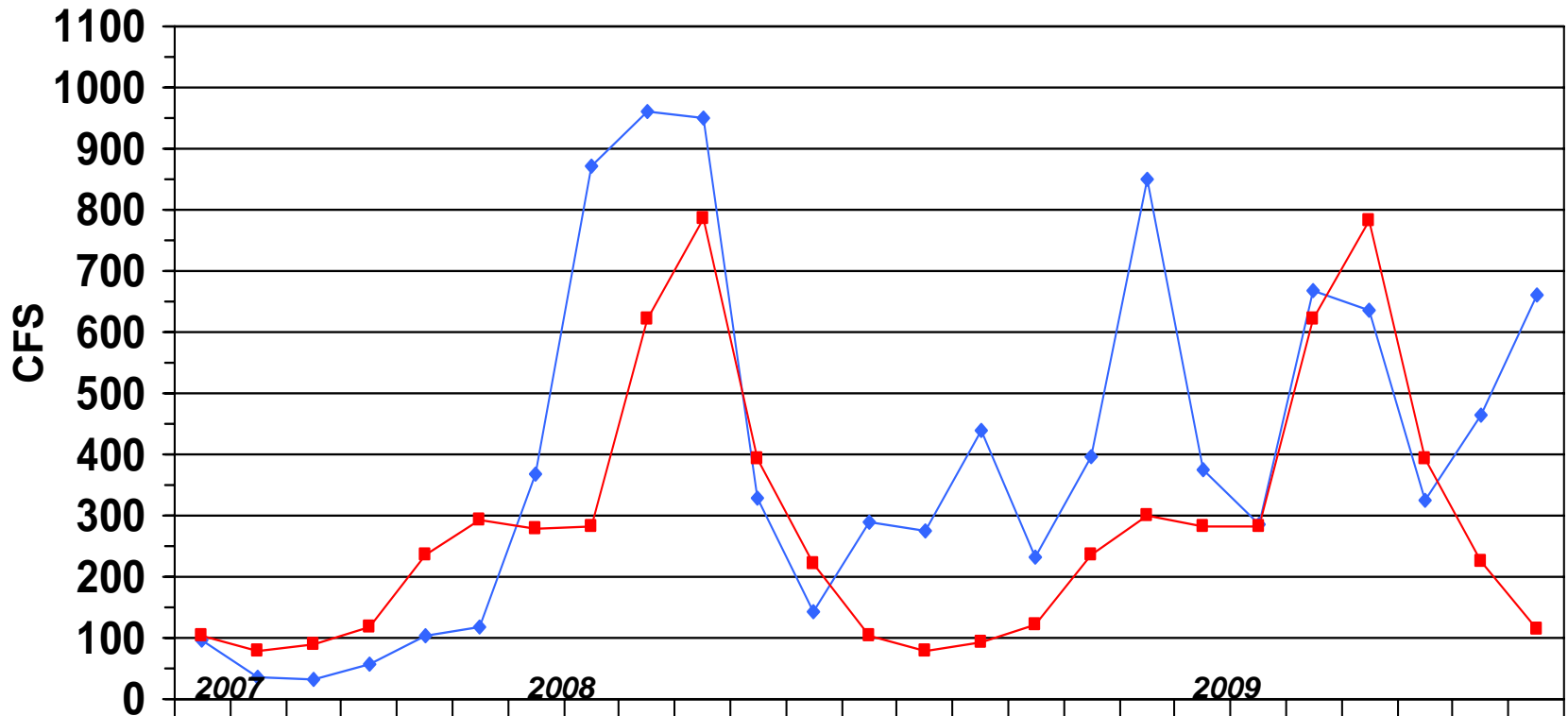
	2007			2008												2009									
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
◆ Monthly Mean Flow	89	24	13	91	164	427	367	743	977	798	272	85	218	387	406	361	466	822	332	301	681	664	286	363	482
■ Mean of Monthly Flow s	95	70	69	142	272	340	291	307	601	701	362	207	96	75	74	145	275	346	292	307	602	700	361	210	101
% of Normal	93%	34%	19%	64%	60%	126%	126%	242%	162%	114%	75%	41%	227%	516%	549%	249%	169%	237%	114%	98%	113%	95%	79%	173%	477%

SOUHEGAN RIVER at MERRIMACK NH

Gage# 01094000



MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS

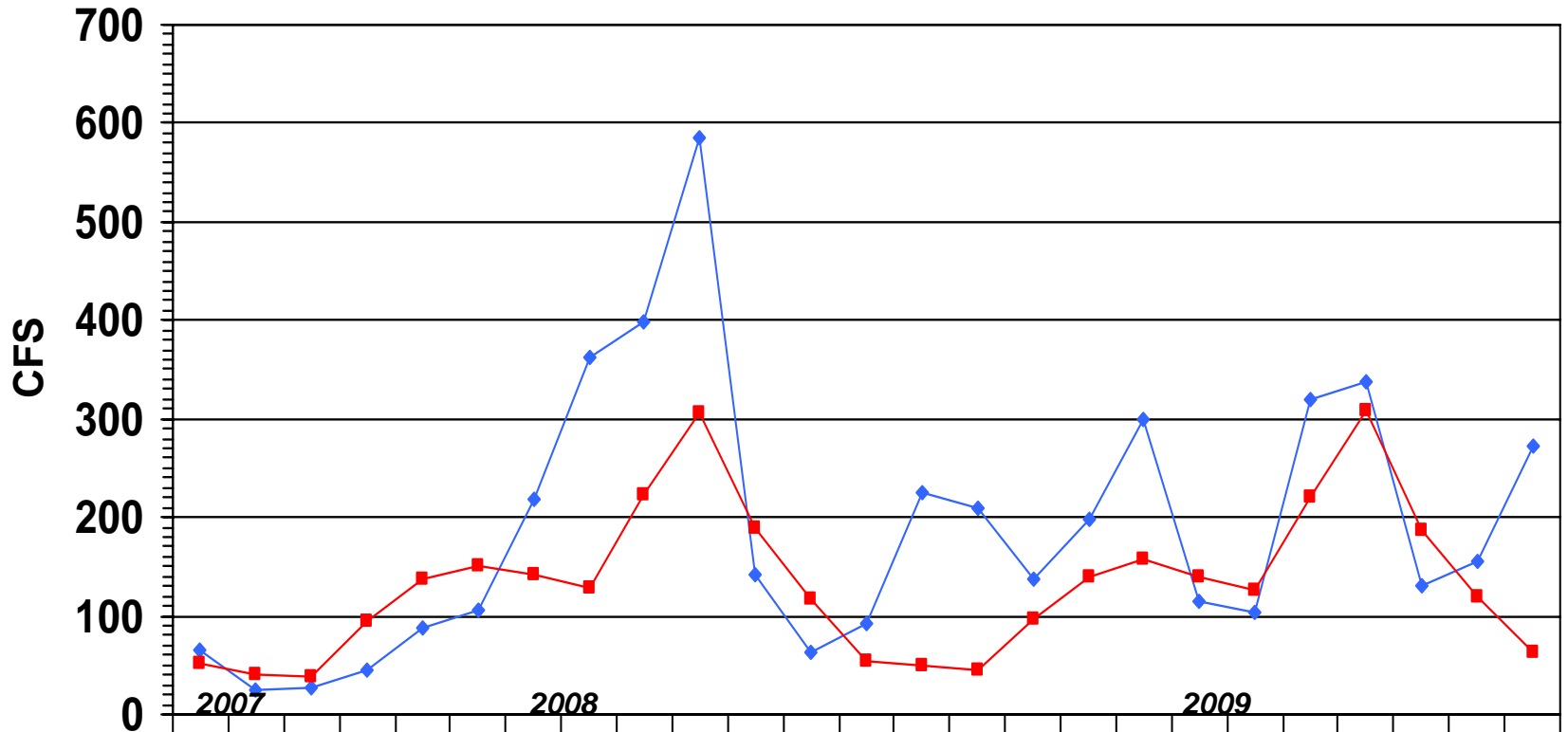


	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
Monthly Mean Flow	98	34	33	58	105	118	369	873	961	950	328	144	288	275	441	233	398	850	374	284	669	636	324	466	661
Mean of Monthly Flows	103	77	88	119	234	294	280	281	620	784	394	222	105	80	92	121	236	301	281	281	620	782	393	225	113
% of Normal	95%	44%	38%	48%	45%	40%	132%	311%	155%	121%	83%	65%	274%	344%	479%	192%	169%	282%	133%	101%	108%	81%	82%	207%	585%

SOUCOOK RIVER at PEMBROKE ROAD near CONCORD NH, Gage# 01089100



MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



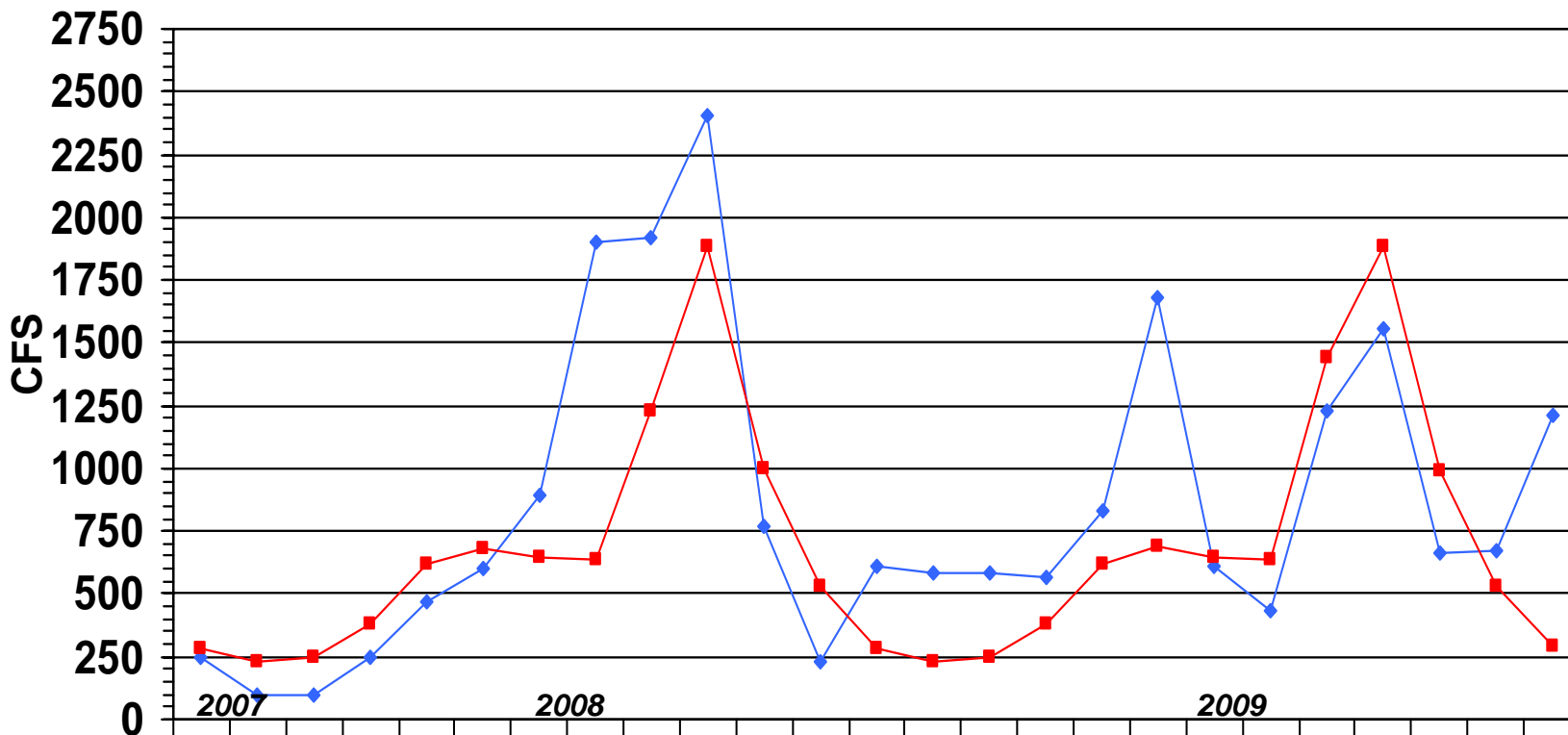
	2007	2008												2009											
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
◆ Monthly Mean Flow	66	25	26	45	87	105	219	363	398	586	142	64	92	226	210	138	198	300	114	104	320	338	131	156	272
■ Mean of Monthly Flows	51	40	38	94	137	150	141	128	222	307	189	117	53	49	46	96	140	157	139	127	220	309	187	119	63
% of Normal	129%	62%	68%	48%	64%	70%	155%	284%	179%	191%	75%	54%	174%	461%	456%	144%	141%	191%	82%	82%	145%	109%	70%	134%	432%

ASHUELOT RIVER at HINSDALE NH

Gage# 01161000



MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



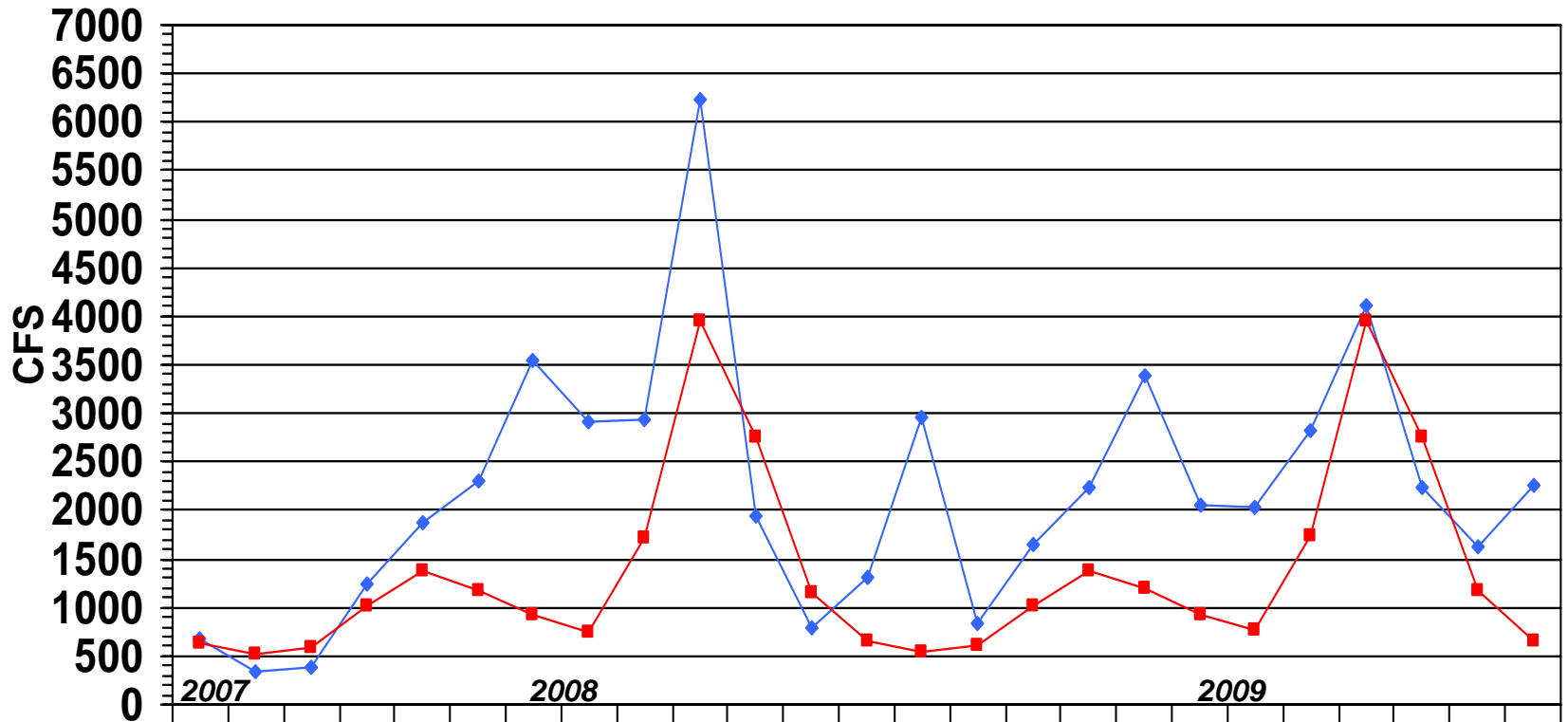
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
◆ Monthly Mean Flow	252	96	99	244	471	604	894	1900	1918	2407	765	226	608	585	582	568	829	1676	611	429	1233	1560	664	671	1214
■ Mean of Monthly Flow s	282	229	245	381	619	684	648	639	1231	1886	995	530	286	232	249	383	621	694	648	637	1444	1883	992	532	295
% of Normal	89%	42%	40%	62%	76%	88%	138%	297%	156%	128%	77%	43%	213%	252%	234%	148%	133%	241%	94%	67%	117%	83%	67%	126%	411%

PEMIGEWASSET RIVER at PLYMOUTH NH

Gage# 01076500



MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



	2007			2008												2009									
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
◆ Monthly Mean Flow	687	340	381	1251	1871	2298	3542	2909	2927	6221	1938	782	1304	2957	843	1642	2245	3378	2057	2022	2827	4115	2225	1624	2257
■ Mean of Monthly Flow s	643	512	598	1019	1377	1181	917	751	1720	3945	2755	1159	649	535	600	1025	1385	1202	928	763	1730	3946	2750	1164	664
% of Normal	107%	66%	64%	123%	136%	195%	386%	387%	170%	158%	70%	67%	201%	553%	140%	160%	162%	281%	222%	265%	163%	104%	81%	139%	340%

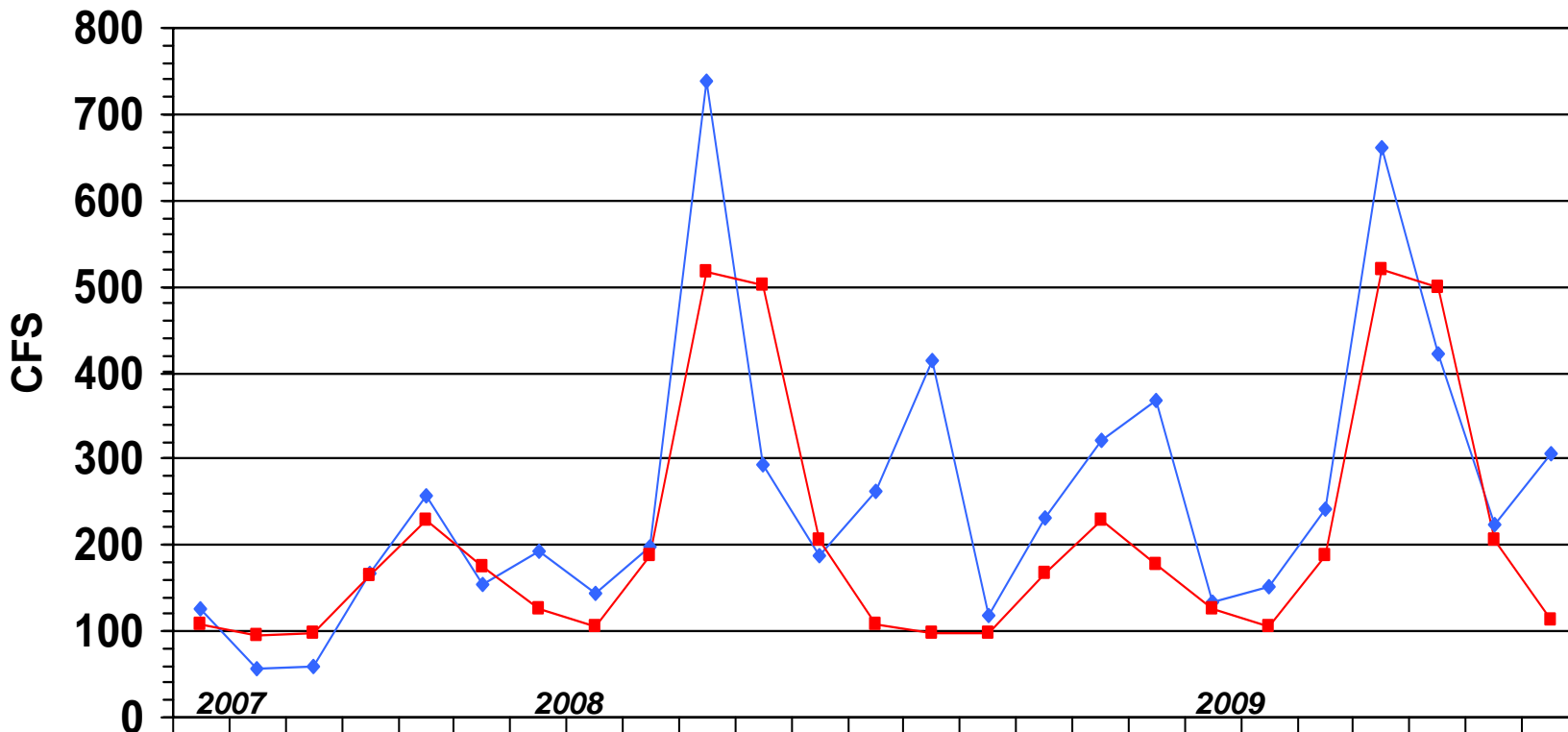
AMMONOOSUC RIVER at BETHLEHEM JUNCTION NH

Gage# 01137500



MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS

This station replaces gage# 01137000 which was discontinued by DES at the end of Sept 2004



	2007			2008							2009														
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
◆ Monthly Mean Flow	125	56	60	166	258	155	192	143	197	738	294	189	263	415	119	232	321	368	134	151	241	660	422	225	307
■ Mean of Monthly Flows	107	94	99	165	228	175	125	106	187	518	501	206	109	98	99	166	229	178	126	106	188	520	500	207	112
% of Normal	117%	59%	61%	101%	113%	89%	154%	135%	105%	142%	59%	92%	241%	423%	120%	140%	140%	207%	106%	142%	128%	127%	84%	109%	274%

STREAMFLOW DATA FOR SELECTED NH STATIONS AS OF AUGUST 11, 2009



Station number	Station name	Est. Mean Flow (cfs)	Long Term Median Flow	99% Flow (cfs)	7Q10 Flow (cfs)	Lowest Period of Record Daily Flow (cfs)	% of Median	Below 0.99 Flow?	Below 7Q10 Flow?	Below Record Flow?
Androscoggin River Basin										
01052500	Diamond River near Wentworth Location, NH	187	76	22	16	6.8	246%	FALSE	FALSE	FALSE
01053500	Androscoggin River at Errol, NH	2,550	1,680	500	451	0	152%	FALSE	FALSE	FALSE
01054000	Androscoggin River near Gorham, NH	2,640	1,930	1300	1310	795	137%	FALSE	FALSE	FALSE
Saco River Basin										
01064500	Saco River near Conway, NH	791	244	105	97	66	324%	FALSE	FALSE	FALSE
01064801	BEARCAMP RIVER AT SOUTH TAMWORTH, NH	81	20	6	4.8	4.5	405%	FALSE	FALSE	FALSE
Piscataqua River Basin										
01072800	COCHECO RIVER NEAR ROCHESTER, NH	85	20	--	--	2.2	425%	#VALUE!	#VALUE!	FALSE
01073500	LAMPREY RIVER NEAR NEWMARKET, NH	162	41	7	5	--	395%	FALSE	FALSE	#VALUE!
Merrimack River Basin										
01074520	EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN, NH	228	90		49	46	253%	FALSE	FALSE	FALSE
01075000	PEMIGEWASSET RIVER AT WOODSTOCK, NH	420	147		56	--	286%	FALSE	FALSE	
01076000	BAKER RIVER NEAR RUMNEY, NH	172	51		15	--	337%	FALSE	FALSE	
01076500	PEMIGEWASSET RIVER AT PLYMOUTH, NH	1,080	330		118	45	327%	FALSE	FALSE	FALSE
01078000	SMITH RIVER NEAR BRISTOL, NH	77	25		6.2	2.7	308%	FALSE	FALSE	FALSE
01081000	WINNIPESAUKEE RIVER AT TILTON, NH	1,610	312		136	48	516%	FALSE	FALSE	FALSE
01081500	MERRIMACK RIVER AT FRANKLIN JUNCTION, NH	3,410	1,270		551	--	269%		FALSE	
01082000	CONTOOCOOK RIVER AT PETERBOROUGH, NH	76	---		3	--		FALSE	FALSE	
01085000	CONTOOCOOK RIVER NEAR HENNIKER, NH	428	---		37	--		FALSE	FALSE	
01085500	CONTOOCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH	515	135		39	--	381%	FALSE	FALSE	
01086000	WARNER RIVER AT DAVISVILLE, NH	212	33		5.3	--	642%	FALSE	FALSE	
01087000	BLACKWATER RIVER NEAR WEBSTER, NH	155	---		13.7	--		FALSE	FALSE	
01090800	PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH	56	---		1.2	--		FALSE	FALSE	
01091500	PISCATAQUOG RIVER NEAR GOFFSTOWN, NH	190	---		8.8	--		FALSE	FALSE	
01092000	MERRIMACK R NR GOFFS FALLS, BELOW MANCHESTER, NH	4,940	1,670		644	98*	296%		FALSE	
01094000	SOUHEGAN RIVER AT MERRIMACK, NH	206	43		12.9	--	479%	FALSE	FALSE	
Connecticut River Basin										
01129200	CONNECTICUT R BELOW INDIAN STREAM NR PITTSBURG, NH	1,030	367		42	30	281%	FALSE	FALSE	FALSE
01129500	CONNECTICUT RIVER AT NORTH STRATFORD, NH	2,200	653		176	108	337%	FALSE	FALSE	FALSE
01131500	CONNECTICUT RIVER NEAR DALTON, NH	2,230	1,090		389	115	205%	FALSE	FALSE	FALSE
01137500	AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH	134	61		28	21	220%	FALSE	FALSE	FALSE
01138500	CONNECTICUT RIVER AT WELLS RIVER, VT	5,390	2,220		690	152*	243%		FALSE	
01144500	CONNECTICUT RIVER AT WEST LEBANON, NH	11,300	2,660	380*	902	82*	425%		FALSE	
01152500	SUGAR RIVER AT WEST CLAREMONT, NH	315	88	40	38	14	358%	FALSE	FALSE	FALSE
01154500	CONNECTICUT RIVER AT NORTH WALPOLE, NH	10,300	3,650	260*	1058	115*	282%		FALSE	
01158000	ASHUELOT RIVER BELOW SURRY MT DAM, NEAR KEENE, NH	628	20	4.5	2.7	0.4	3140%	FALSE	FALSE	FALSE
01158600	OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, NH	49	11	1.6	1.1	0.3	445%	FALSE	FALSE	FALSE
01160350	ASHUELOT RIVER AT WEST SWANZEY, NH	895	76	32	--	--	1178%	FALSE		

*Flow duration and record low mean daily flow significantly affected by reservoir operations

**Estimated

Source: USGS, NH DES

SUMMARY	Below 0.99 Flow?	Below 7Q10 Flow?	Below Record Flow?
FALSE =	28	32	17
TRUE =	0	0	0

New Hampshire Groundwater Levels for July 2009

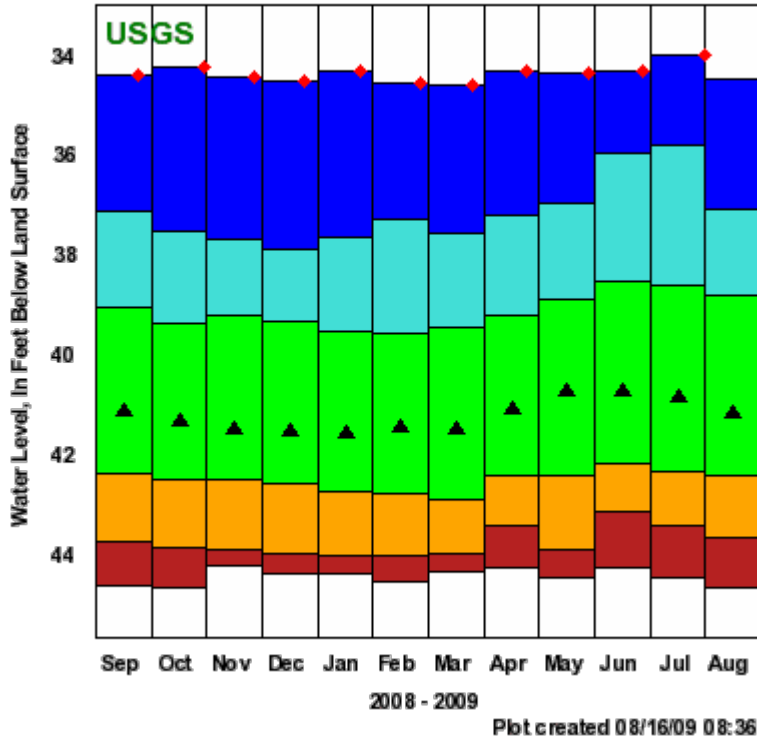


WELL	START OF WATER LEVEL BELOW		NET CHANGE		NET CHANGE		DEPARTURE FROM		PERCENT OF	
	RECORD	SURFACE DATUM (ft)	IN ONE MONTH (ft)	IN ONE YEAR (ft)	MEDIAN	RANGE (ft)	MONTHLY MEDIAN (FT)	RANGE	STATUS	
ALBANY 14	1995	5.31	+0.13	+1.09	6.91	1.86	+1.60	86.0	ABOVE NORMAL	
ALBANY 15	1995	7.12	+0.17	+1.14	8.70	2.41	+1.58	65.6	ABOVE NORMAL	
BARNSTEAD 10	1995	2.37	-0.08	-0.02	3.06	0.71	+0.69	97.2	ABOVE NORMAL	
CAMPTON 34	1988	12.02	-0.20	+0.47	13.22	1.58	+1.20	75.9	ABOVE NORMAL	
COLEBROOK 73	1995	7.20	+0.10	+0.23	7.78	0.55	+0.58	105.5	ABOVE NORMAL	
CONCORD 2	1963	33.97	+0.34	+0.70	41.10	6.43	+7.13	110.9	ABOVE NORMAL	
CONCORD 4	1966	15.45	+0.50	+1.31	17.47	2.02	+2.02	100.0	ABOVE NORMAL	
DEERFIELD 46	1984	38.03	-0.08	---	38.46	1.01	+0.43	42.6	ABOVE NORMAL	
ENFIELD 30	1990	2.93	+0.14	+35.45	5.68	3.69	+2.75	74.5	ABOVE NORMAL	
ERROL 1	1966	12.7	+0.2	-0.9	12.5	1.1	-0.2	-18.2	NORMAL	
FRANKLIN 1	1966	9.36	+0.30	+0.55	11.03	4.39	+1.67	38.0	ABOVE NORMAL	
GREENFIELD 75	1995	58.02	+0.27	---	59.50	2.89	+1.48	51.2	ABOVE NORMAL	
HOOKSETT 5	1965	46.84	+1.30	+12.47	48.26	4.52	+1.42	31.4	ABOVE NORMAL	
KEENE 2	1963	2.28	+1.12	+46.59	4.67	2.49	+2.39	96.0	ABOVE NORMAL	
LANCASTER 1	1966	2.31	-0.21	-0.13	2.25	0.45	-0.06	-13.30	NORMAL	
LEE 1	1953	30.16	-0.17	-28.56	31.22	1.65	+1.06	64.2	ABOVE NORMAL	
LISBON 19	1990	14.17	+0.02	+15.40	14.45	1.94	+0.28	14.4	NORMAL	
NASHUA 218	1964	27.18	+0.14	-14.24	27.97	1.58	+0.79	50.0	ABOVE NORMAL	
NEW DURHAM 53	1986	18.58	+0.20	---	19.50	0.97	+0.92	94.8	ABOVE NORMAL	
NEW LONDON 1	1947	7.79	+0.62	+19.44	10.78	4.03	+2.99	74.2	ABOVE NORMAL	
NEWPORT 3	1995	6.16	+0.15	+12.95	6.26	2.70	+0.10	3.7	NORMAL	
NEWPORT 6	1995	6.21	+0.21	+5.21	6.35	2.69	+0.14	5.2	NORMAL	
OSSIPEE 38	1995	33.77	+0.21	-27.36	34.92	1.47	+1.15	78.2	ABOVE NORMAL	
SHELBURNE 2	1995	5.01	+0.30	+1.44	4.95	0.68	-0.06	-8.8	NORMAL	
WARNER 1	1965	28.77	+0.10	+5.82	29.83	3.29	+1.06	32.2	ABOVE NORMAL	

Source: USGS, NH DES

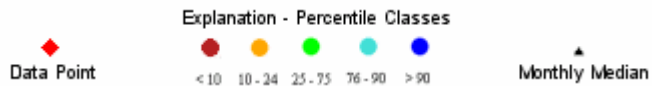
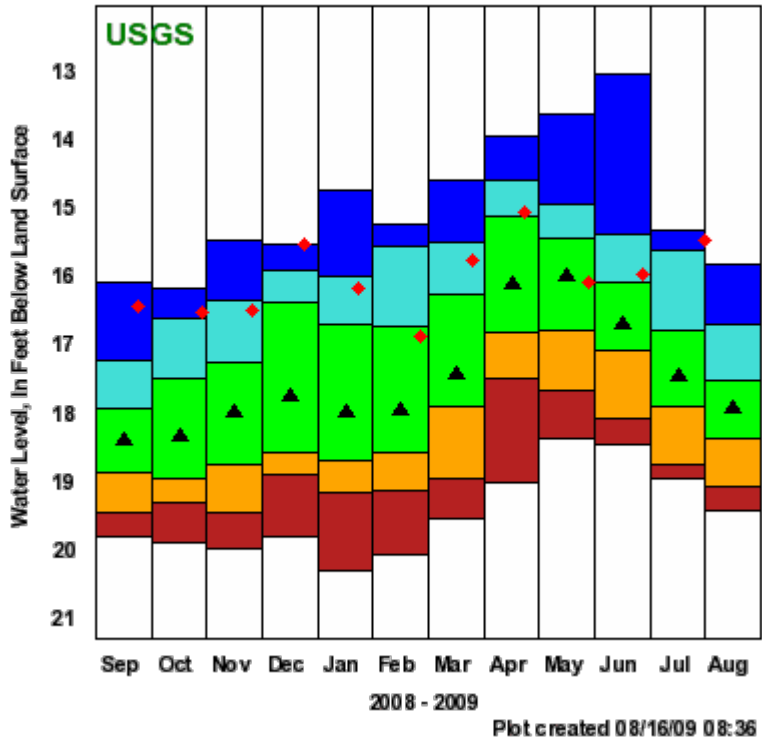
CONCORD 2

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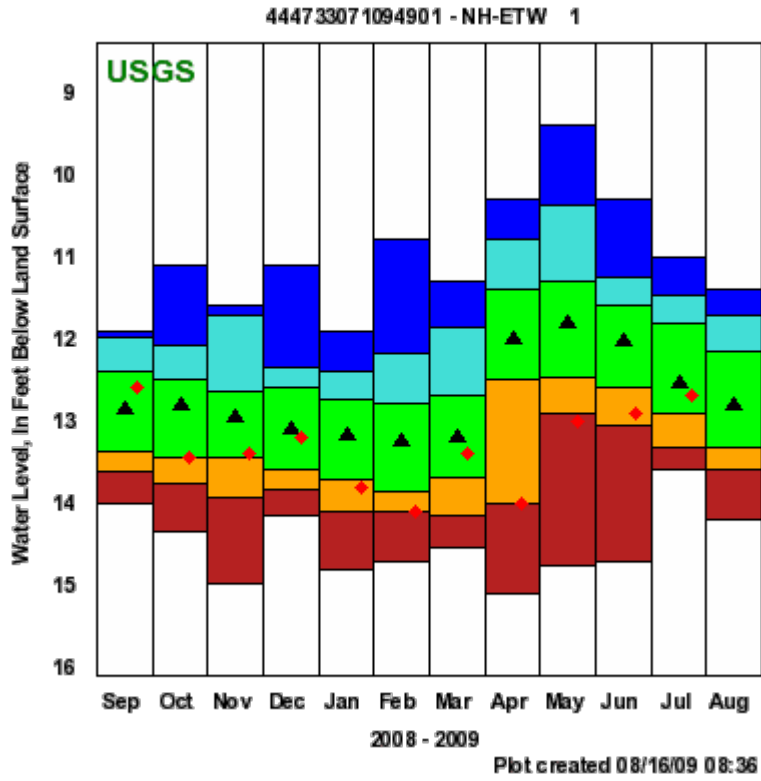


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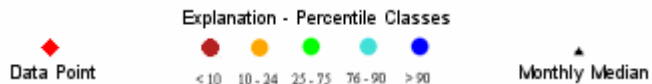
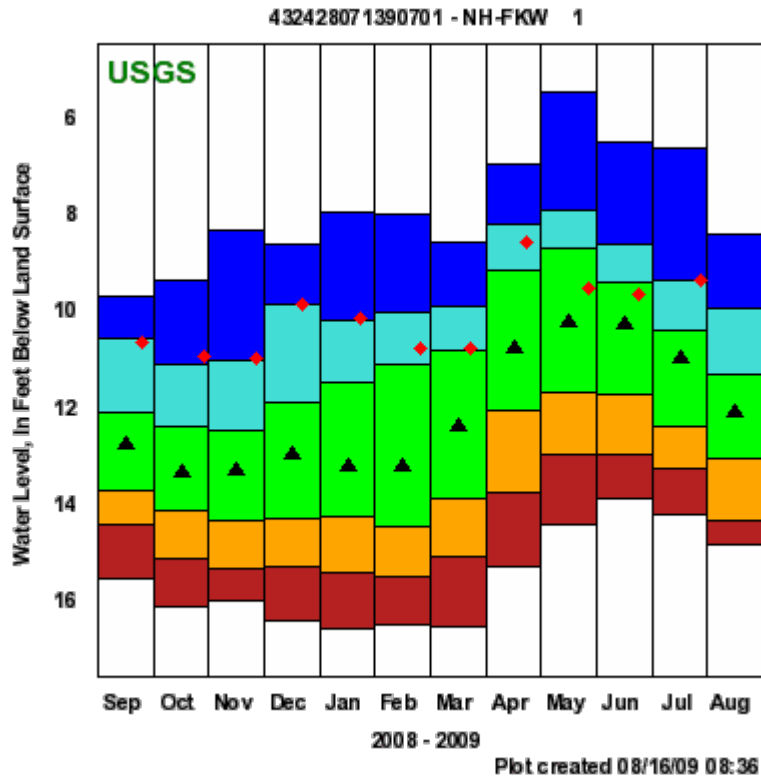
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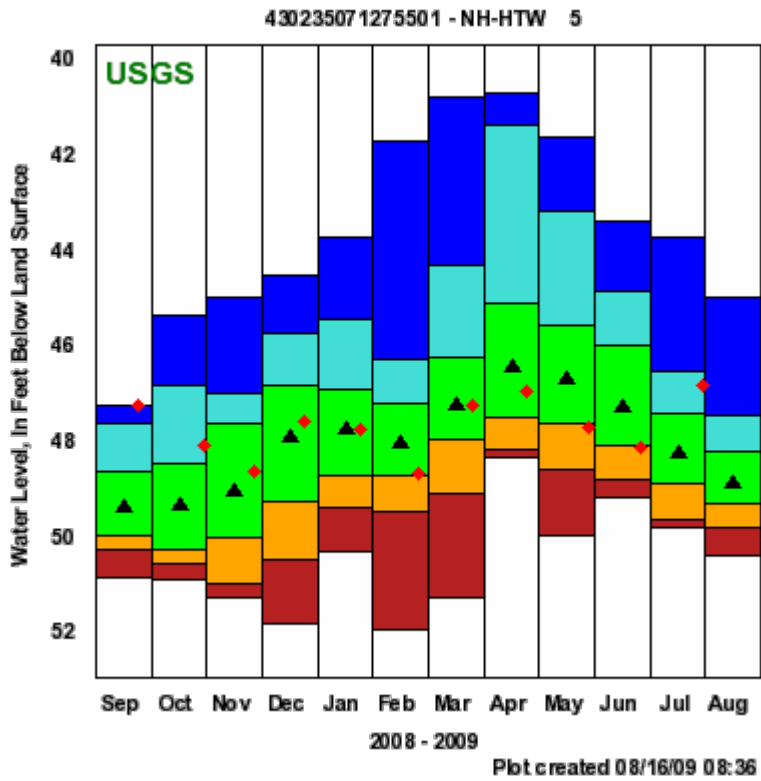
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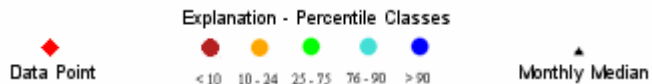
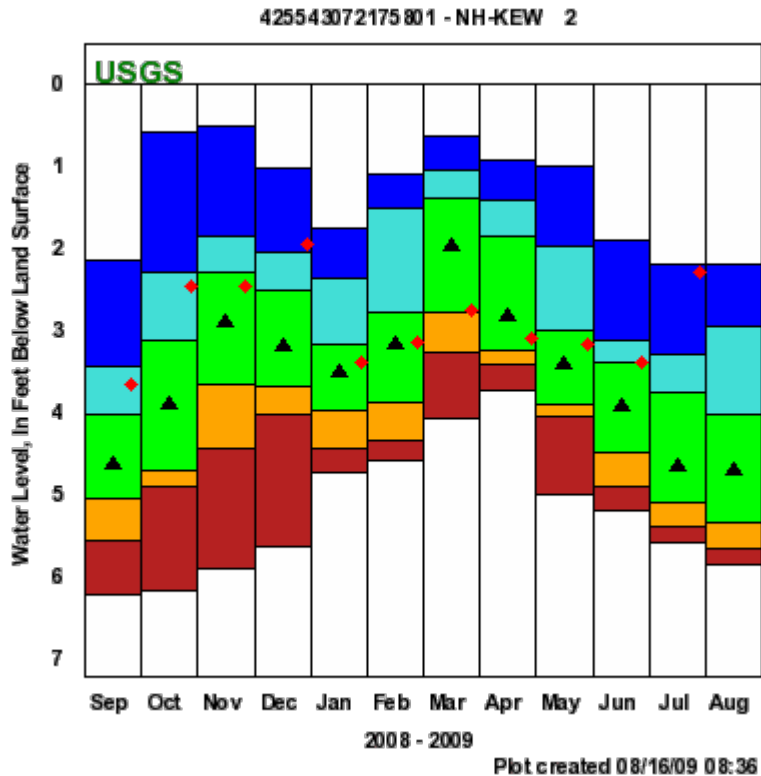
FRANKLIN 1



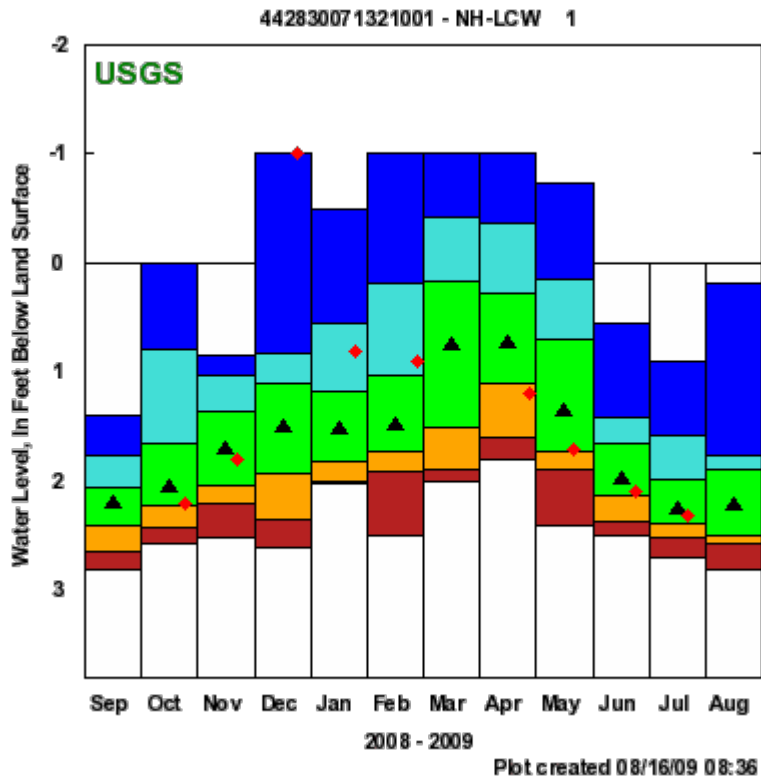
HOOKSETT 5



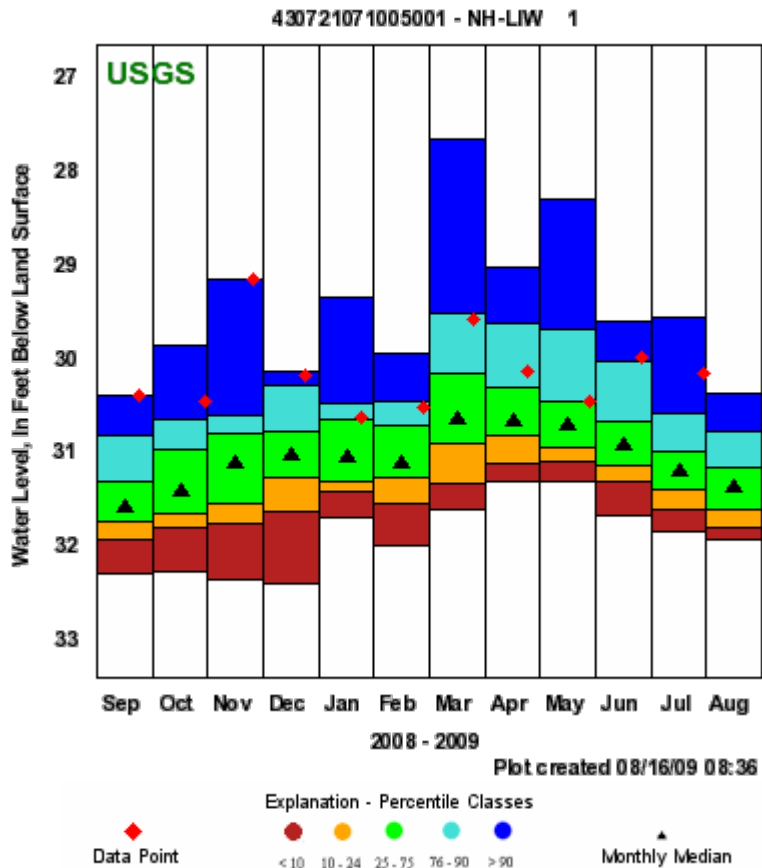
KEENE 2



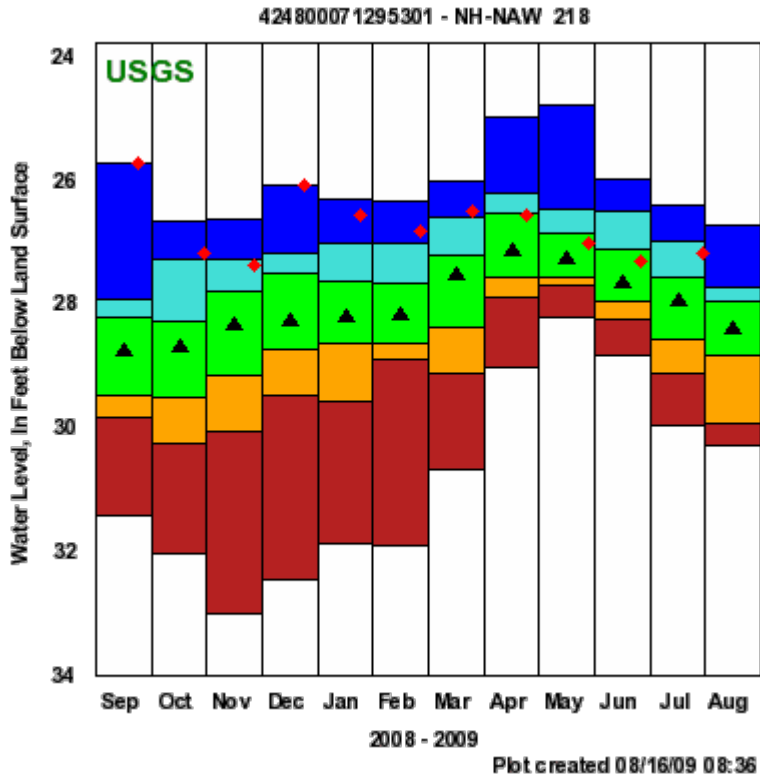
LANCASTER 1



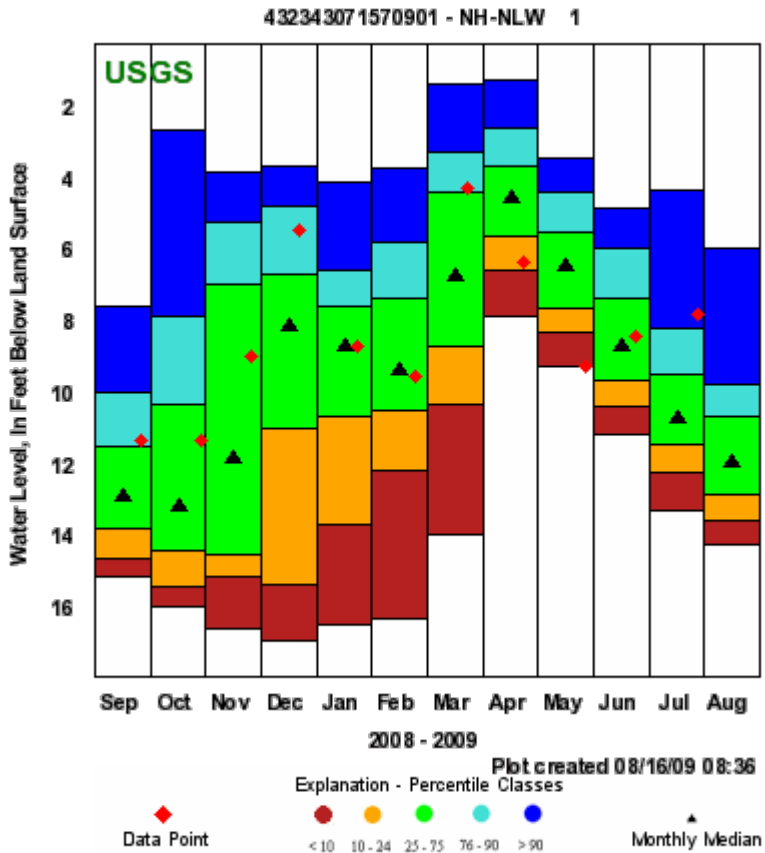
LEE 1



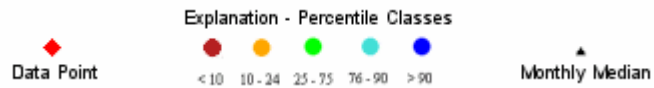
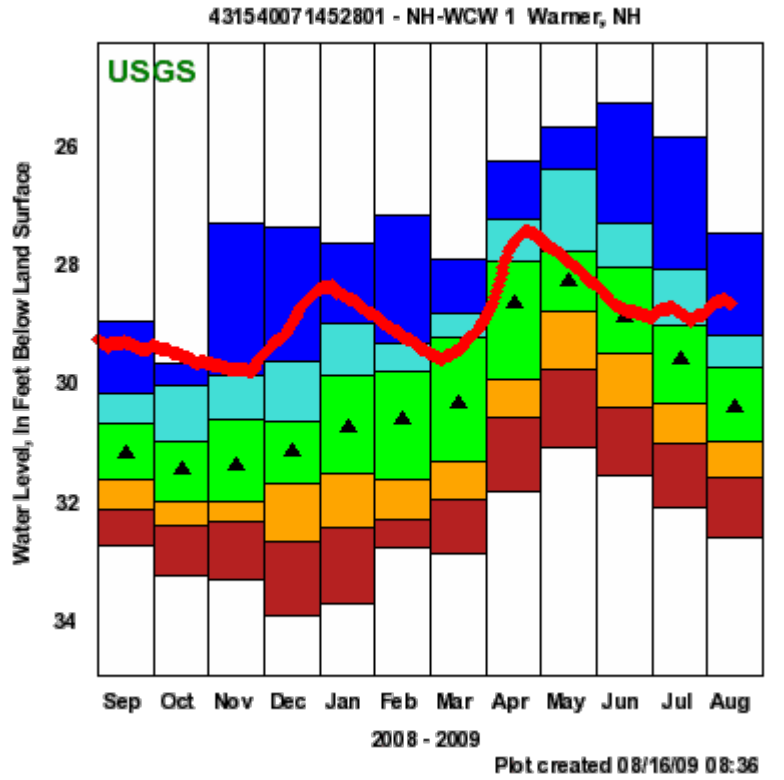
NASHUA 218



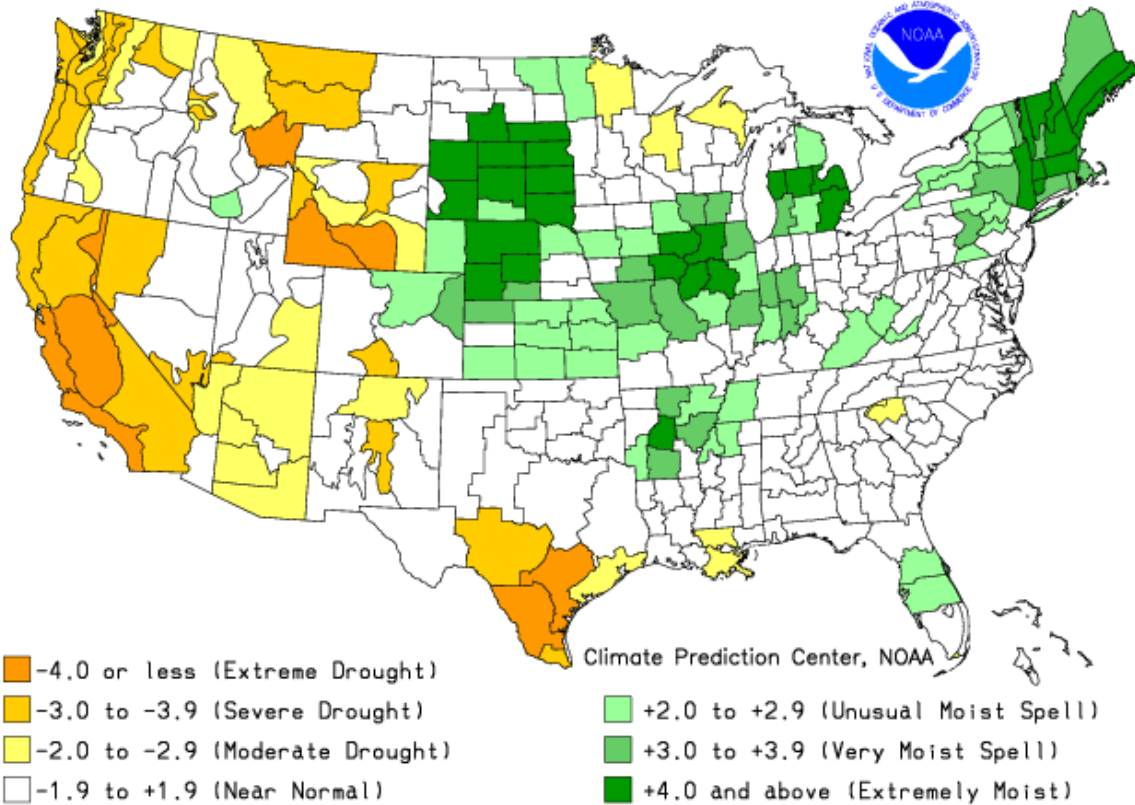
NEW LONDON 1



WARNER 1



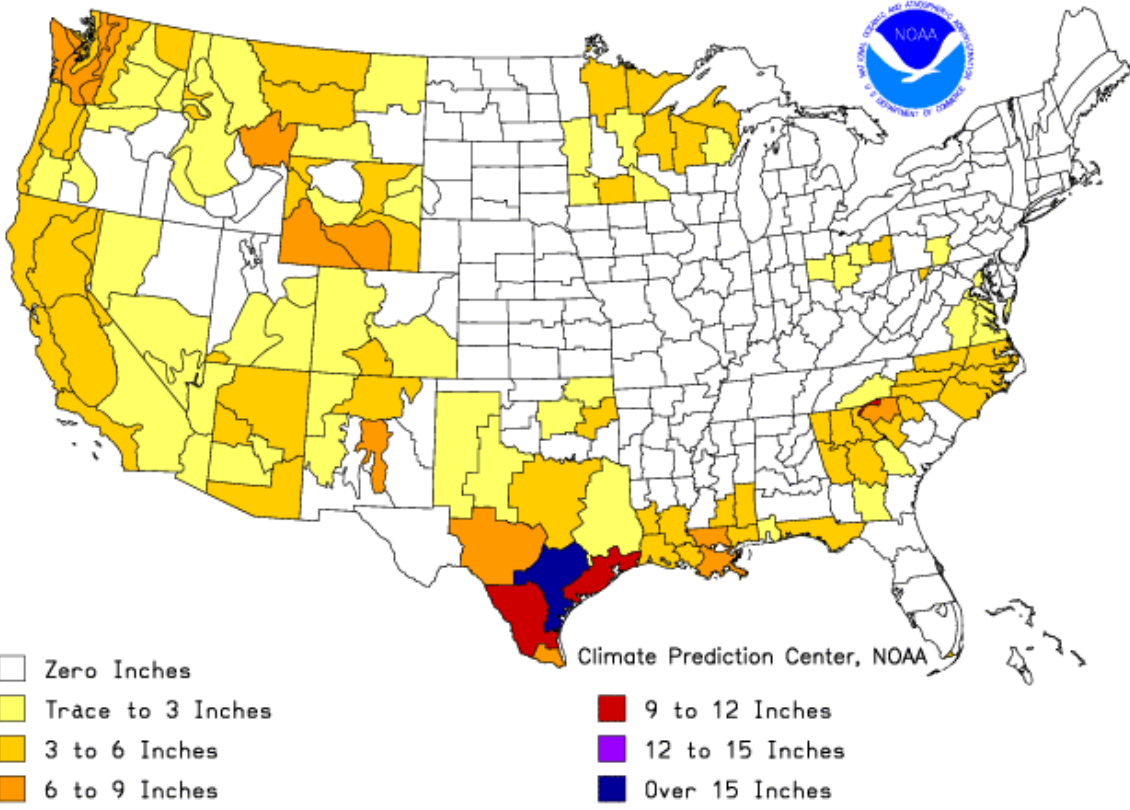
Drought Severity Index by Division
Weekly Value for Period Ending AUG 8, 2009
Long Term Palmer



THE PALMER DROUGHT SEVERITY INDEX

The Palmer Index uses temperature and rainfall information in a formula to determine dryness. The advantage of the Palmer Index is that it is standardized to local climate.

Additional Precip. Needed (In.) to Bring PDI to -0.5
Weekly Value for Period Ending AUG 8, 2009
Long Term Palmer Drought Severity Index (PDI)



This is the amount of rainfall required in a week's time to bring the index back to zero inches required.