The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

AGGREGATED PRECIPITATION DATA for N.H. DROUGHT MANAGEMENT AREAS

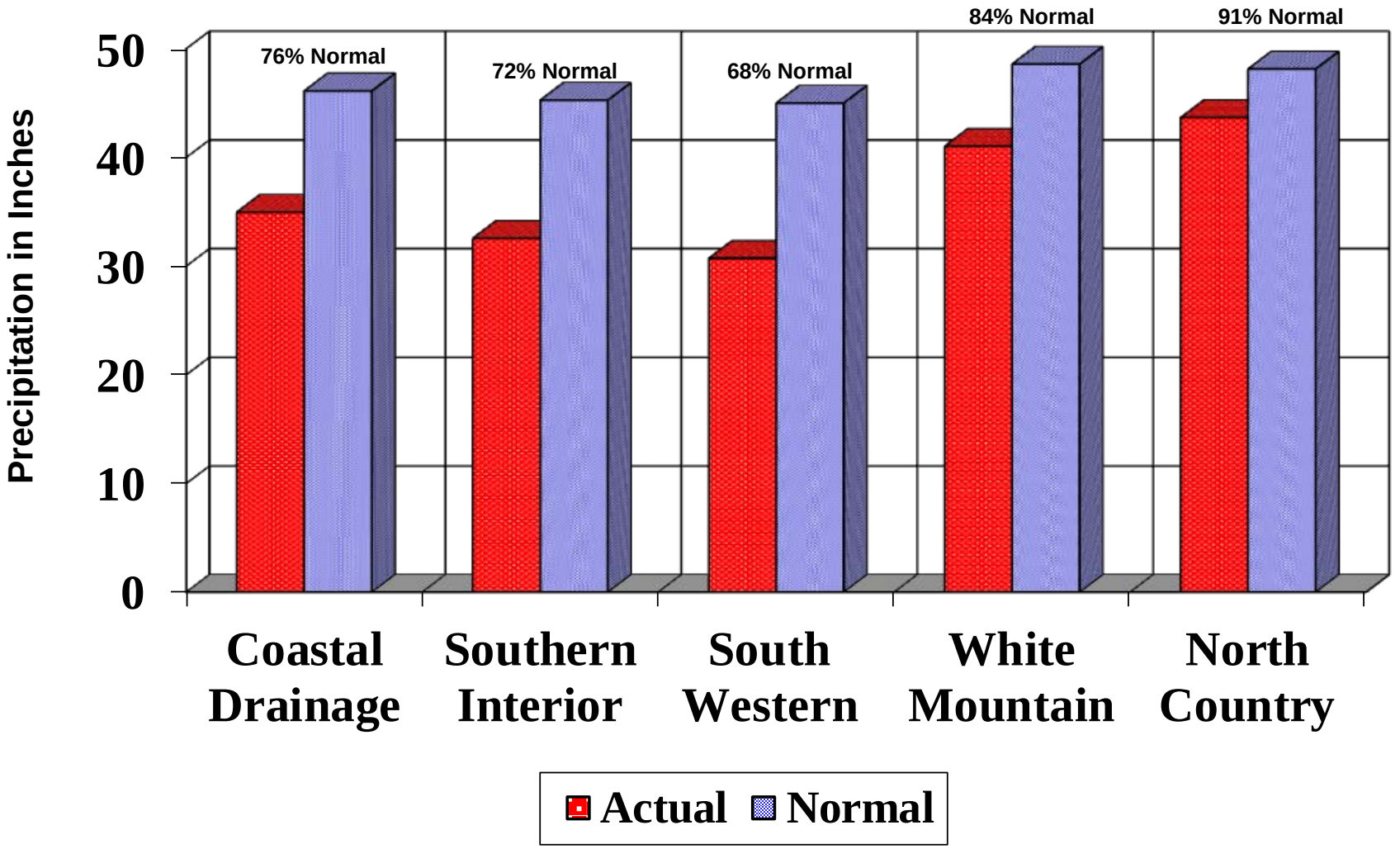
	Actual Rainfall (inches)	Normal Rainfall (inches)	Deviation from Normal (inches)	Percent of Normal
Coastal Drainage: Rockingham, Strafford counties				
four month	10.62	15.04	-4.42	71%
six month	17.19	23.18	-5.99	74%
nine month	26.66	34.93	-8.27	76%
twelve month	34.96	46.11	-11.15	76%
Southern Interior: Belknap, Hillsborough, Merrimack counties				
four month	9.40	14.18	-4.79	66%
six month	15.31	21.99	-6.69	70%
nine month	24.10	33.83	-9.73	71%
twelve month	32.55	45.26	-12.71	72%
South Western: Cheshire, Sullivan counties				
four month	7.10	13.61	-4.94	52%
six month	12.25	21.11	-7.28	58%
nine month	21.58	33.26	-10.11	65%
twelve month	30.71	44.99	-12.71	68%
White Mountain: Carroll, Grafton counties				
four month	11.23	14.41	-3.18	78%
six month	18.02	22.88	-4.87	79%
nine month	29.45	35.98	-6.53	82%
twelve month	41.02	48.58	-7.56	84%
North Country: Coos county				
four month	10.69	12.75	-2.06	84%
six month	16.88	21.37	-4.49	79%
nine month	28.99	34.85	-5.86	83%
twelve month	43.66	48.13	-4.47	91%

four month period : January 2016 - April 2016
six month period : November 2015 - April 2016
nine month period : August 2015 - April 2016
twelve month period: May 2015 - April 2016

Source: Northeast River Forecast Center, NH Des Dam Bureau

DES Web site: **www.des.nh.gov**
P.O. Box 95, 29 Hazen Drive, Concord, New Hampshire 03302-0095
Telephone: (603) 271-3503 • Fax: (603) 271-6120 • TDD Access: Relay NH 1-800-735-2964

TWELVE MONTH AGGREGATED PRECIPITATION DATA for N.H. DROUGHT MANAGEMENT AREAS from May 2015 through April 2016



NH DES Dam Bureau, Northeast River Forecast Center

MONTHLY PRECIPITATION DATA FOR N.H COUNTIES

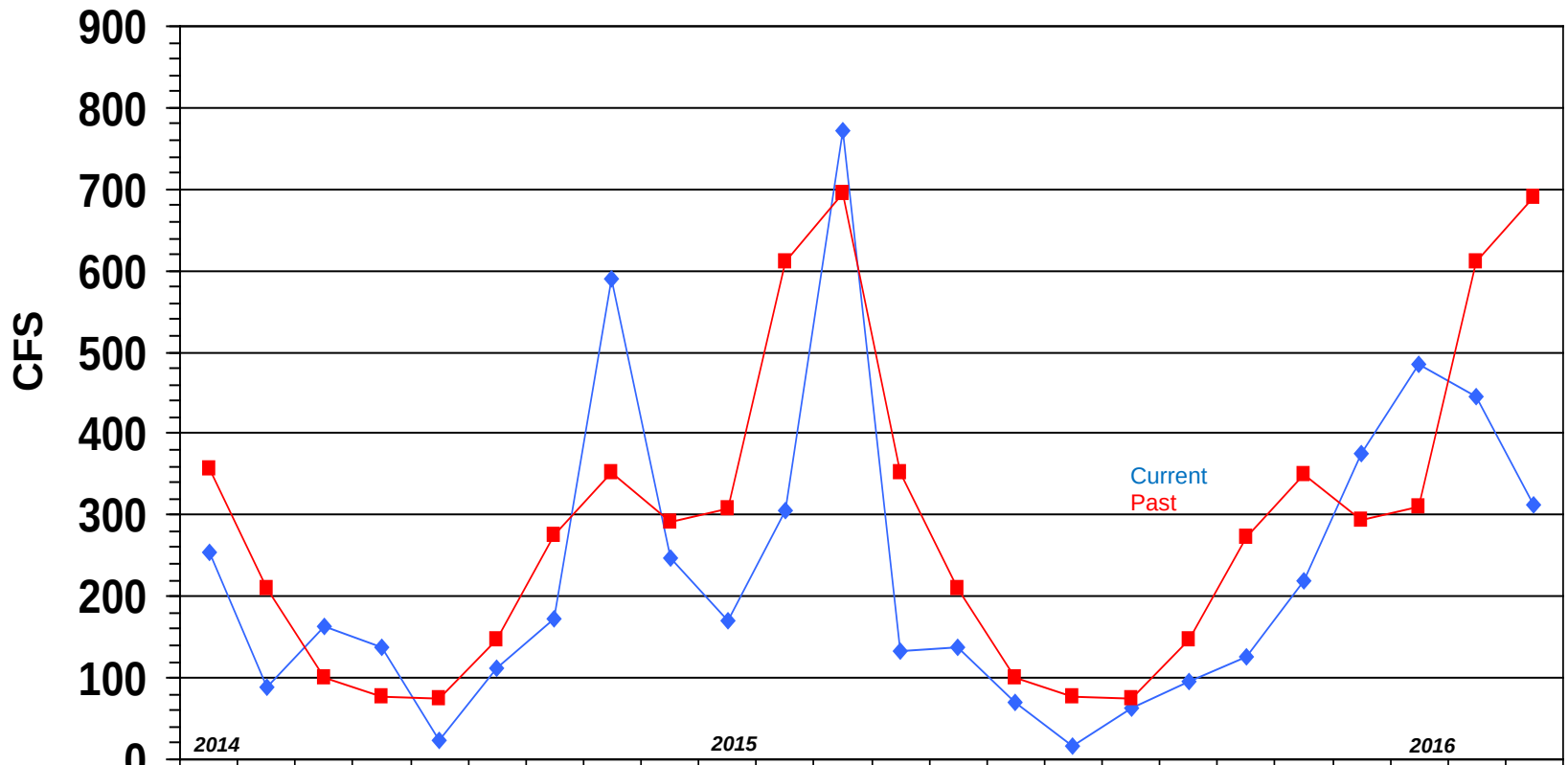
		2015 MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	2016 JAN	FEB	MARCH	APRIL
Coastal drainage													
STRAFFORD	actual	1.65	4.79	1.97	2.69	5.23	2.47	2.18	4.42	1.68	4.51	2.72	2.09
	normal	3.88	3.77	3.75	3.69	3.76	4.38	4.50	3.76	3.21	3.41	4.16	4.22
	deviation	-2.23	1.02	-1.78	-1.00	1.47	-1.91	-2.32	0.66	-1.53	1.10	-1.44	-2.13
ROCKINGHAM	actual	1.33	5.09	1.77	2.09	4.30	2.16	2.15	4.39	1.71	3.98	2.45	2.10
	normal	3.69	3.68	3.59	3.55	3.76	4.35	4.30	3.73	3.27	3.41	4.19	4.20
	deviation	-2.36	1.41	-1.82	-1.46	0.54	-2.19	-2.15	0.66	-1.56	0.57	-1.74	-2.10
Average	actual	1.49	4.94	1.87	2.39	4.77	2.32	2.17	4.41	1.70	4.25	2.59	2.10
	normal	3.79	3.73	3.67	3.62	3.76	4.37	4.40	3.75	3.24	3.41	4.18	4.21
	deviation	-2.30	1.22	-1.80	-1.23	1.01	-2.05	-2.24	0.66	-1.55	0.84	-1.59	-2.12
Southern Interior													
HILLSBOROUGH	actual	1.31	4.93	2.33	1.97	4.35	2.11	1.75	4.10	1.39	3.75	2.39	1.91
	normal	3.81	3.74	3.75	3.78	3.67	4.46	4.22	3.80	3.38	3.40	3.95	4.14
	deviation	-2.50	1.19	-1.42	-1.81	0.68	-2.35	-2.47	0.30	-1.99	0.35	-1.56	-2.23
MERRIMACK	actual	1.42	4.57	2.31	2.52	4.02	2.12	1.80	4.14	1.27	4.05	2.31	1.78
	normal	3.84	3.66	3.81	3.78	3.52	4.43	4.15	3.65	3.26	3.20	3.73	3.95
	deviation	-2.42	0.91	-1.50	-1.26	0.50	-2.31	-2.35	0.49	-1.99	0.85	-1.42	-2.17
BELKNAP	actual	1.71	4.50	2.29	2.57	4.60	2.11	1.74	4.20	1.41	3.87	2.25	1.81
	normal	3.81	3.79	4.08	3.84	3.55	4.48	4.03	3.58	3.07	3.14	3.58	3.75
	deviation	-2.10	0.71	-1.79	-1.27	1.05	-2.37	-2.29	0.62	-1.66	0.73	-1.33	-1.94
Average	actual	1.48	4.67	2.31	2.35	4.32	2.11	1.76	4.15	1.36	3.89	2.32	1.83
	normal	3.82	3.73	3.88	3.80	3.58	4.46	4.13	3.68	3.24	3.25	3.75	3.95
	deviation	-2.34	0.94	-1.57	-1.45	0.74	-2.34	-2.37	0.47	-1.88	0.64	-1.44	-2.11
South Western													
CHESHIRE	actual	1.54	5.17	2.52	2.21	4.65	2.10	1.42	3.86	1.23	3.62	2.21	1.83
	normal	3.97	3.81	4.03	4.05	3.57	4.61	3.97	3.68	3.42	3.28	3.73	3.78
	deviation	-2.43	1.36	-1.51	-1.84	1.08	-2.51	-2.55	0.18	-2.19	0.34	-1.52	-1.95
SULLIVAN	actual	1.93	5.18	1.93	2.60	5.01	2.08	1.34	3.68	1.17	3.93	2.07	1.64
	normal	3.91	3.75	4.00	3.93	3.63	4.51	3.85	3.49	2.72	3.11	3.51	3.67
	deviation	-1.98	1.43	-2.07	-1.33	1.38	-2.43	-2.51	0.19	-1.90	0.82	-1.44	-2.03
Average	actual	1.74	5.18	2.23	2.41	4.83	2.09	1.38	3.77	-0.55	3.78	2.14	1.74
	normal	3.94	3.78	4.02	3.99	3.60	4.56	3.91	3.59	3.07	3.20	3.62	3.73
	deviation	-2.21	1.40	-1.79	-1.59	1.23	-2.47	-2.53	0.19	-2.05	0.58	-1.48	-1.99
White Mountain													
GRAFTON	actual	3.21	5.98	2.87	2.84	5.83	2.30	1.68	4.75	1.50	4.34	2.45	2.34
	normal	4.01	4.26	4.34	4.42	4.05	4.68	4.36	3.70	3.19	2.94	3.45	3.76
	deviation	-0.80	1.72	-1.47	-1.58	1.78	-2.38	-2.68	1.05	-1.69	1.40	-1.00	-1.42
CARROLL	actual	2.39	5.87	2.82	3.01	6.47	2.42	2.06	5.08	1.78	4.65	3.00	2.40
	normal	4.19	4.14	4.25	4.21	3.88	4.96	4.72	4.16	3.57	3.43	4.02	4.46
	deviation	-1.80	1.73	-1.43	-1.20	2.59	-2.54	-2.66	0.92	-1.79	1.22	-1.02	-2.06
Average	actual	2.80	5.93	2.85	2.93	6.15	2.36	1.87	4.92	1.64	4.50	2.73	2.37
	normal	4.10	4.20	4.30	4.32	3.97	4.82	4.54	3.93	3.38	3.19	3.74	4.11
	deviation	-1.30	1.73	-1.45	-1.39	2.19	-2.46	-2.67	0.99	-1.74	1.31	-1.01	-1.74
North Country													
COOS	actual	4.05	7.35	3.27	3.41	6.54	2.16	1.80	4.39	1.56	3.98	2.38	2.77
	normal	4.14	4.61	4.53	4.70	4.25	4.53	4.24	4.38	3.10	2.82	3.21	3.62
	deviation	-0.09	2.74	-1.26	-1.29	2.29	-2.37	-2.44	0.01	-1.54	1.16	-0.83	-0.85

Source: Northeast River Forecast Center, NH DES Dam Bureau

LAMPREY RIVER near NEWMARKET NH
Gage# 01073500

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



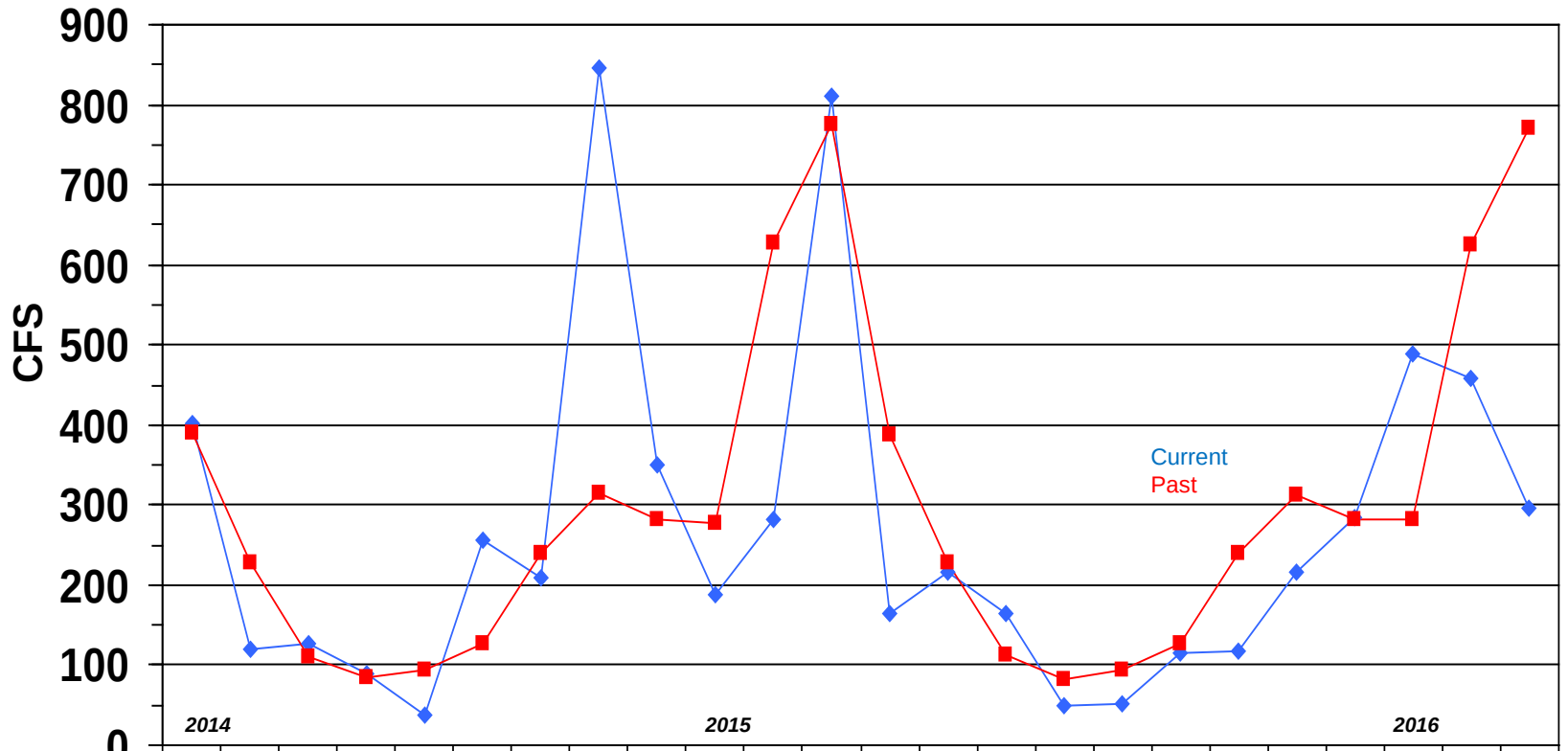
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monthly Mean Flow	255	88	163	138	24	111	173	590	248	170	305	771	132	137	70	17	63	95	127	219	376	485	446	312
Mean of Monthly Flows	356	210	101	77	75	147	275	351	292	307	611	695	353	209	101	76	75	146	273	349	293	309	610	691
% of Normal	72%	42%	161%	179%	31%	75%	63%	168%	85%	55%	50%	111%	37%	66%	70%	23%	84%	65%	46%	63%	128%	157%	75%	45%

NH DES, Dam Bureau, Source: USGS

Start of record 1934

SOUHEGAN RIVER at MERRIMACK NH
Gage# 01094000

MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



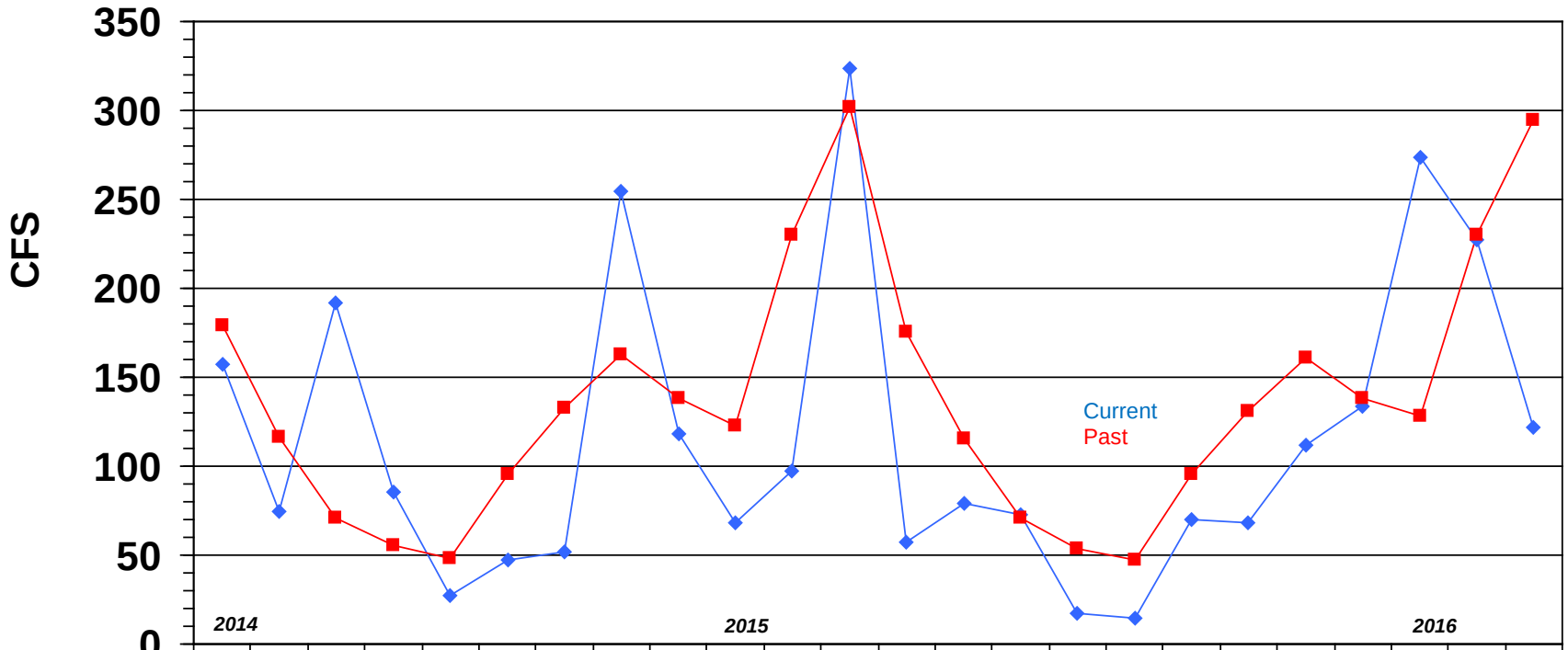
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monthly Mean Flow	401	121	127	89	38	255	210	847	350	189	283	811	164	216	165	50	52	116	118	216	285	489	458	297
Mean of Monthly Flows	389	227	111	84	94	128	240	315	283	278	628	776	387	227	112	83	94	128	239	313	283	281	626	770
% of Normal	103%	53%	114%	105%	41%	199%	87%	269%	124%	68%	45%	104%	42%	95%	147%	61%	55%	91%	49%	69%	101%	174%	73%	39%

NH DES, Dam Bureau, Source: USGS

Start of record 1909

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

MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



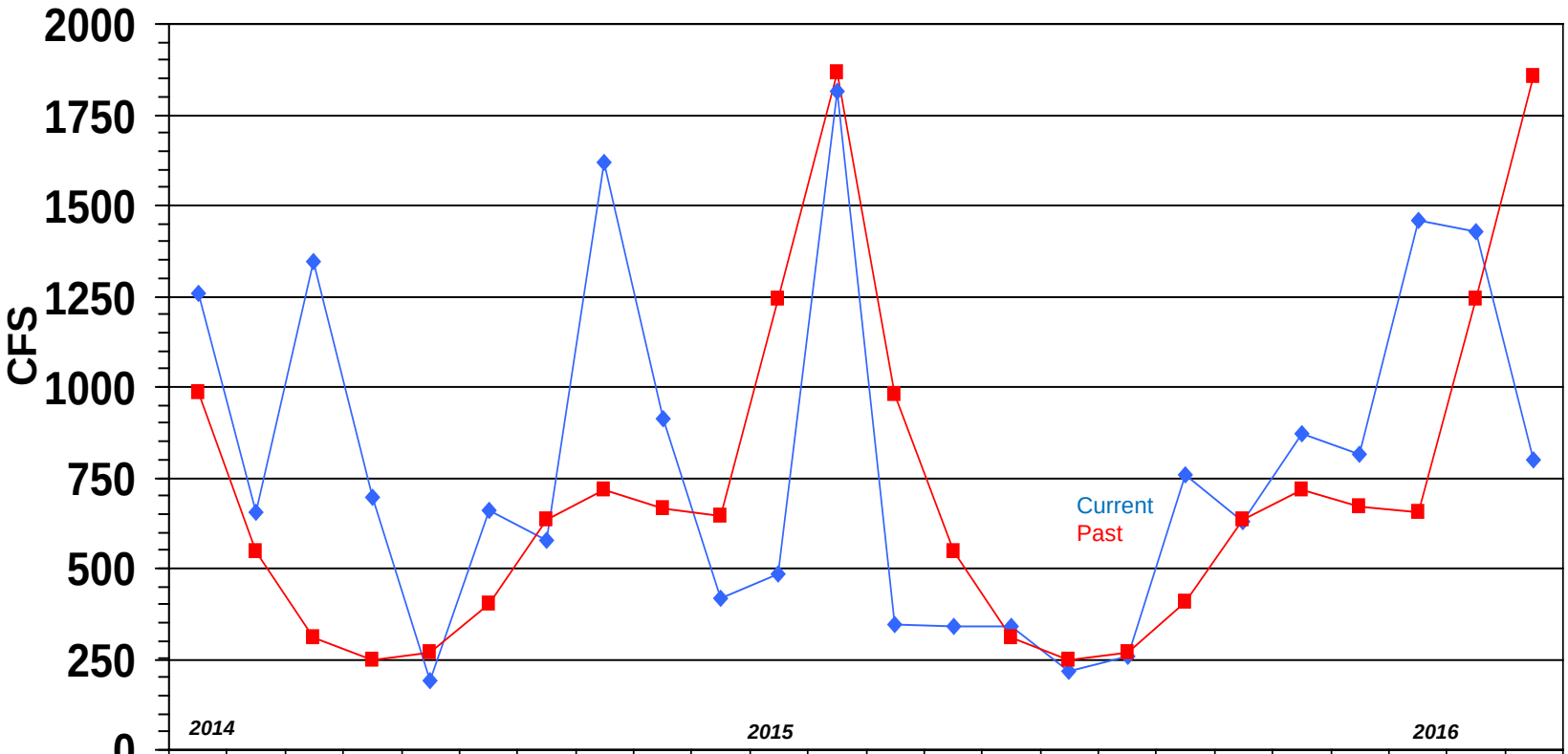
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monthly Mean Flow	157	75	192	85	27	47	52	255	118	68	97	324	57	79	73	17	15	70	68	112	134	274	227	122
Mean of Monthly Flows	179	116	71	55	48	95	133	163	138	123	230	302	175	115	71	54	47	95	131	161	138	128	230	295
% of Normal	88%	64%	270%	154%	56%	49%	39%	156%	85%	56%	42%	107%	32%	69%	103%	32%	32%	74%	52%	69%	97%	214%	99%	41%

NH DES, Dam Bureau, Source: USGS

Start of record 1988

ASHUELOT RIVER at HINSDALE NH
Gage# 01161000

MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



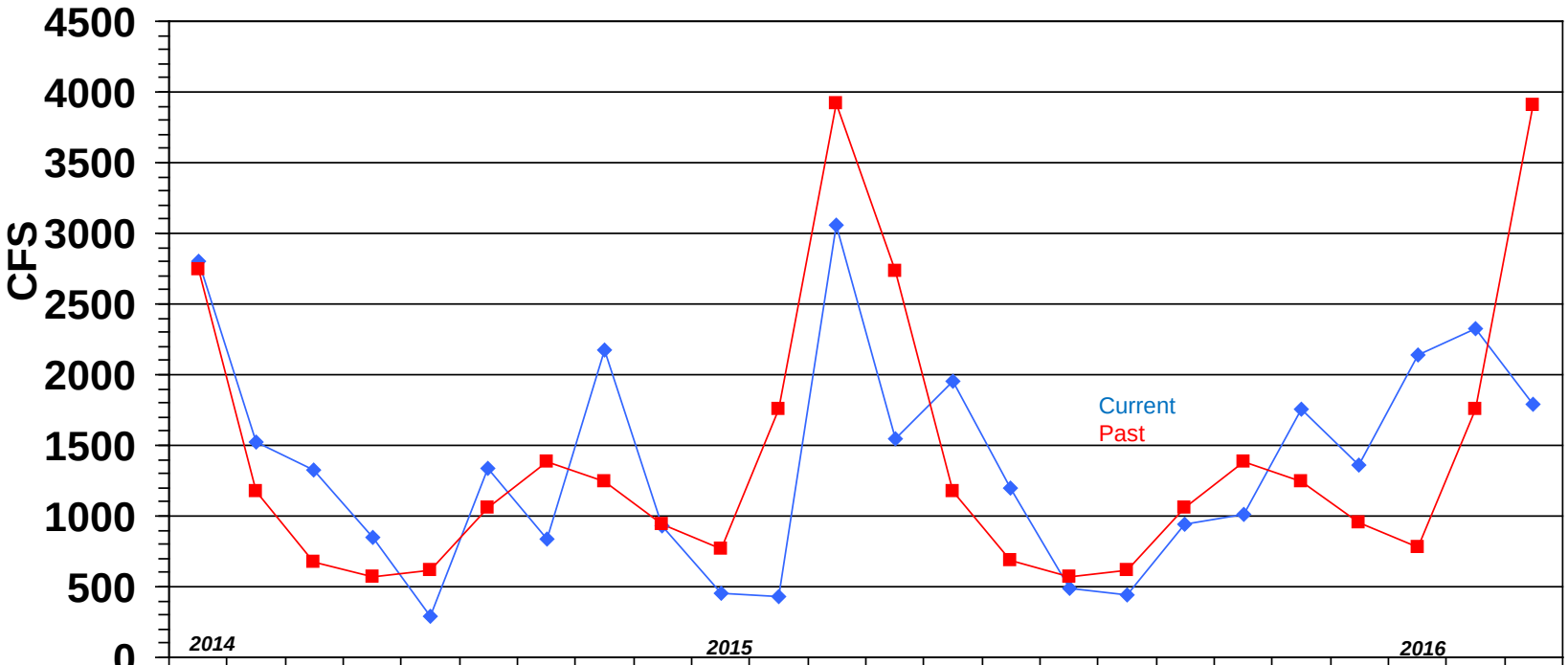
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monthly Mean Flow	1259	657	1345	696	193	658	577	1618	912	418	484	1815	344	340	341	216	257	757	629	870	814	1457	1430	799
Mean of Monthly Flows	987	546	310	246	266	404	632	718	667	645	1240	1865	981	544	310	246	266	407	632	719	668	653	1242	1855
% of Normal	127%	120%	434%	282%	72%	163%	91%	225%	137%	65%	39%	97%	35%	62%	110%	88%	97%	186%	99%	121%	122%	223%	115%	43%

NH DES, Dam Bureau, Source: USGS

Start of record 1907

PEMIGEWASSET RIVER at PLYMOUTH NH
Gage# 01076500

MONTHLY MEAN FLOW COMPARED TO MEAN OF MONTHLY FLOWS



	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monthly Mean Flow	2800	1519	1330	850	290	1343	839	2169	934	456	431	3059	1543	1952	1201	491	443	943	1016	1759	1357	2142	2329	1786
Mean of Monthly Flows	2741	1171	677	568	614	1063	1384	1242	946	766	1755	3921	2730	1178	682	567	612	1062	1381	1247	949	778	1760	3902
% of Normal	102%	130%	196%	150%	47%	126%	61%	175%	99%	54%	25%	78%	56%	166%	176%	87%	72%	89%	74%	141%	143%	275%	132%	46%

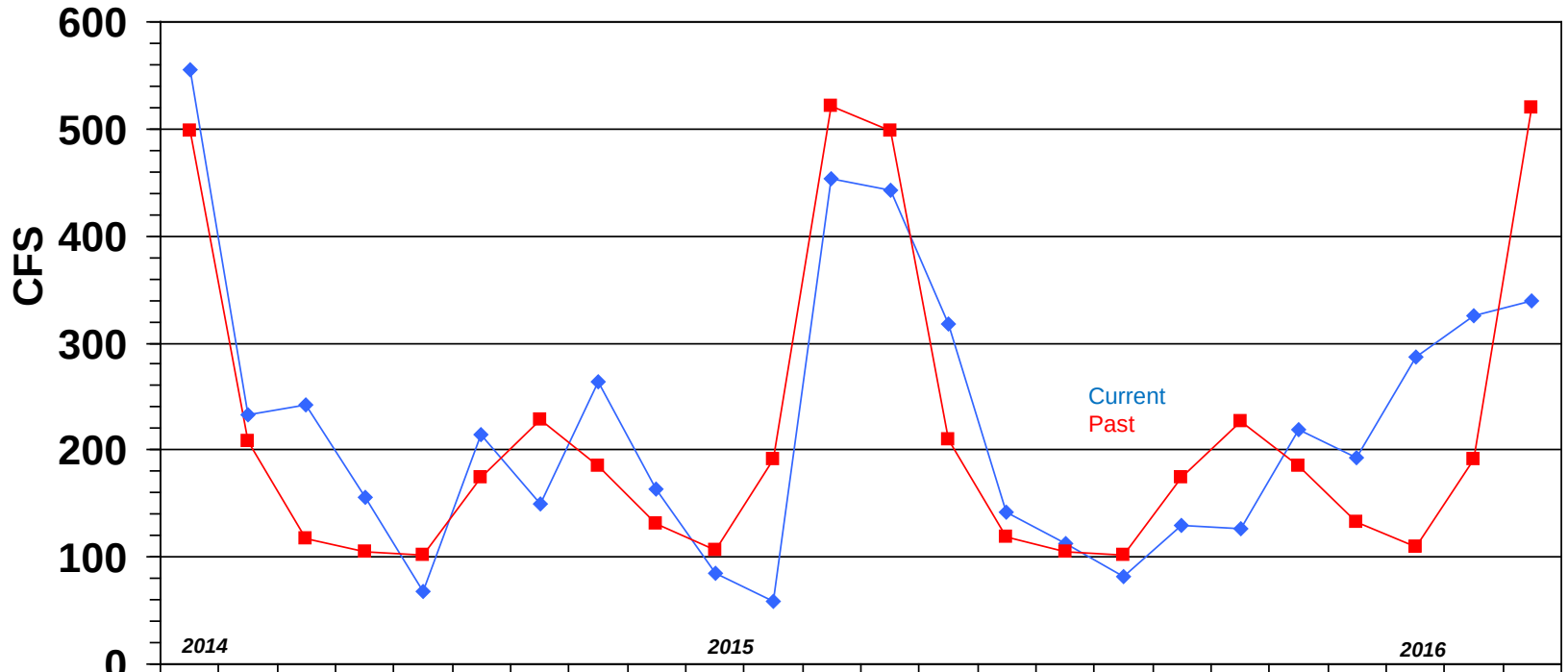
NH DES, Dam Bureau, Source: USGS

Start of record 1903

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



	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Monthly Mean Flow	556	233	242	156	68	215	150	263	163	85	59	453	443	317	142	112	81	129	126	219	193	287	325	340
Mean of Monthly Flows	498	208	117	105	102	175	228	185	131	106	191	522	498	210	118	105	102	174	227	185	132	109	192	520
% of Normal	112%	112%	207%	149%	67%	123%	66%	142%	124%	80%	31%	87%	89%	151%	120%	107%	79%	74%	55%	118%	146%	263%	169%	65%

NH DES, Dam Bureau, Source: USGS

Start of record 1939

Streamflow data for selected NH stations as of May 2, 2016

Station number	Station name	Est Mean flow (ft3/s)	Long term median flow (ft3/s)	99% flow (ft3/s)	7Q10 flow (ft3/s)	Lowest Period of Record daily flow(ft3/s)	% of Median flow	Below 0.99 Flow?	Below 7Q10 Flow?	Below Record Flow?
Androscoggin River Basin										
01052500	Diamond River near Wentworth Location, NH	282	1280	22	16	6.8	22%	FALSE	FALSE	FALSE
01053500	Androscoggin River at Errol, NH	1810	2570	500	451	0	70%	FALSE	FALSE	FALSE
01054000	Androscoggin River near Gorham, NH	2200	4550	1300	1310	795	48%	FALSE	FALSE	FALSE
Saco River Basin										
01064500	Saco River near Conway, NH	828	2920	105	97	66	28%	FALSE	FALSE	FALSE
01064801	BEARCAMP RIVER AT SOUTH TAMWORTH, NH	109	251	6	4.8	4.5	43%	FALSE	FALSE	FALSE
Piscataqua River Basin										
01072800	COCHECO RIVER NEAR ROCHESTER, NH	83	172	--	--	2.2	48%			FALSE
01073500	LAMPREY RIVER NEAR NEWMARKET, NH	141	354	7	5	--	40%	FALSE	FALSE	#VALUE!
Merrimack River Basin										
01074520	EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN, NH	300	1010		49	46	30%	FALSE	FALSE	FALSE
01075000	PEMIGEWASSET RIVER AT WOODSTOCK, NH	476	1510		56	--	32%	FALSE	FALSE	
01076000	BAKER RIVER NEAR RUMNEY, NH	248	575		15	--	43%	FALSE	FALSE	
01076500	PEMIGEWASSET RIVER AT PLYMOUTH, NH	1140	3510		118	45	32%	FALSE	FALSE	FALSE
01078000	SMITH RIVER NEAR BRISTOL, NH	100	246		6.2	2.7	41%	FALSE	FALSE	FALSE
01081000	WINNIPESAUKEE RIVER AT TILTON, NH	412	971		136	48	42%	FALSE	FALSE	FALSE
01081500	MERRIMACK RIVER AT FRANKLIN JUNCTION, NH	2100	5880		551	--	36%		FALSE	
01082000	CONTOOCOOK RIVER AT PETERBOROUGH, NH	56	159		6.3	--	35%	FALSE	FALSE	
01085000	CONTOOCOOK RIVER NEAR HENNIKER, NH	268			37	--		FALSE	FALSE	
01085500	CONTOOCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH	265	1080		39	--	25%	FALSE	FALSE	
01086000	WARNER RIVER AT DAVISVILLE, NH	145	415		5.3	--	35%	FALSE	FALSE	
01087000	BLACKWATER RIVER NEAR WEBSTER, NH	140			13.7	--		FALSE	FALSE	
01090800	PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH	44			1.2	--		FALSE	FALSE	
01091500	PISCATAQUOG RIVER NEAR GOFFSTOWN, NH	180			8.8	--		FALSE	FALSE	
01092000	MERRIMACK R NR GOFFS FALLS, BELOW MANCHESTER, NH	3200	10400		644	98*	31%		FALSE	
01094000	SOUHEGAN RIVER AT MERRIMACK, NH	171	419		12.9	--	41%	FALSE	FALSE	
Connecticut River Basin										
01129200	CONNECTICUT R BELOW INDIAN STREAM NR PITTSBURG, NH	401	567		42	30	71%	FALSE	FALSE	FALSE
01129500	CONNECTICUT RIVER AT NORTH STRATFORD, NH	1380	3160		176	108	44%	FALSE	FALSE	FALSE
01131500	CONNECTICUT RIVER NEAR DALTON, NH	2400	6580		389	115	36%	FALSE	FALSE	FALSE
01137500	AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH	200	534		28	21	37%	FALSE	FALSE	FALSE
01138500	CONNECTICUT RIVER AT WELLS RIVER, VT	3470	10700		690	152*	32%		FALSE	
01144500	CONNECTICUT RIVER AT WEST LEBANON, NH	3130	16800	380*	902	82*	19%		FALSE	
01152500	SUGAR RIVER AT WEST CLAREMONT, NH	251	729	40	38	14	34%	FALSE	FALSE	FALSE
01154500	CONNECTICUT RIVER AT NORTH WALPOLE, NH	4270	19500	260*	1058	115*	22%		FALSE	
01158000	ASHUELOT RIVER BELOW SURRY MT DAM, NEAR KEENE, NH	79	287	4.5	2.7	0.4	28%	FALSE	FALSE	FALSE
01158600	OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, NH	67	130	1.6	1.1	0.3	52%	FALSE	FALSE	FALSE
01160350	ASHUELOT RIVER AT WEST SWANZEY, NH	363	792	32	--	--	46%	FALSE		

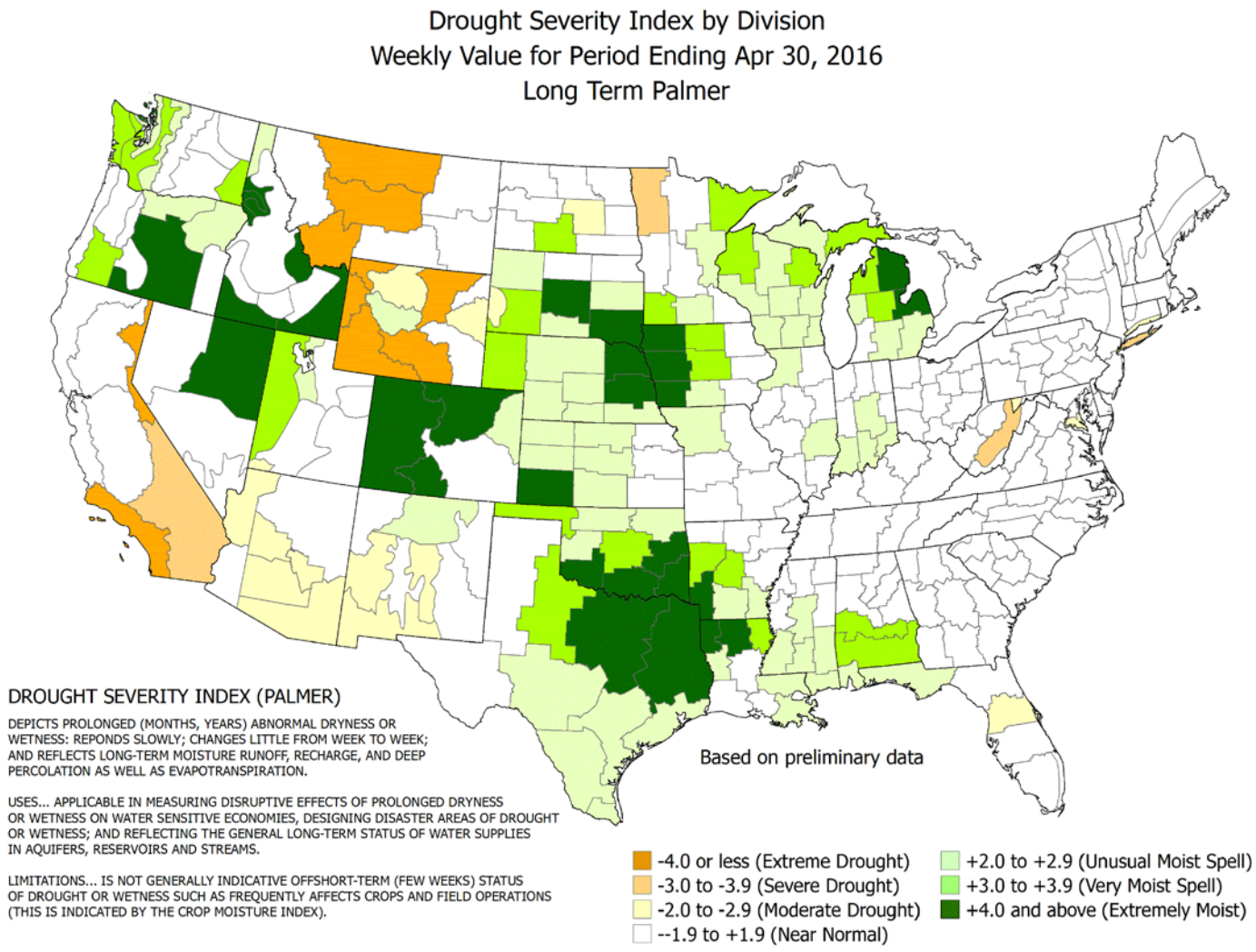
*Flow duration and record low mean daily flow significantly affected by reservoir operations

**Estimated

Average % of median for all basins **38%**

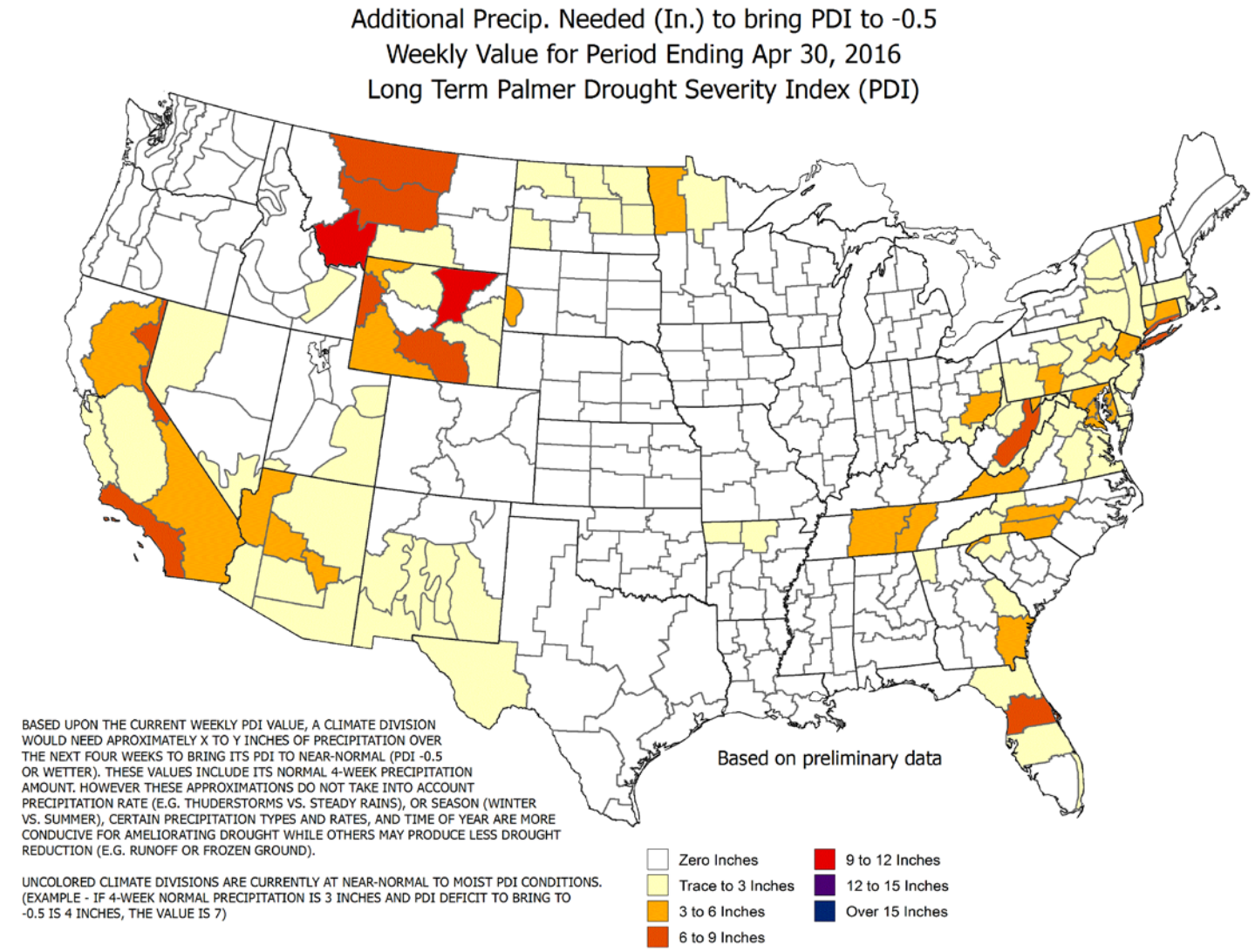
SUMMARY

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



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.



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