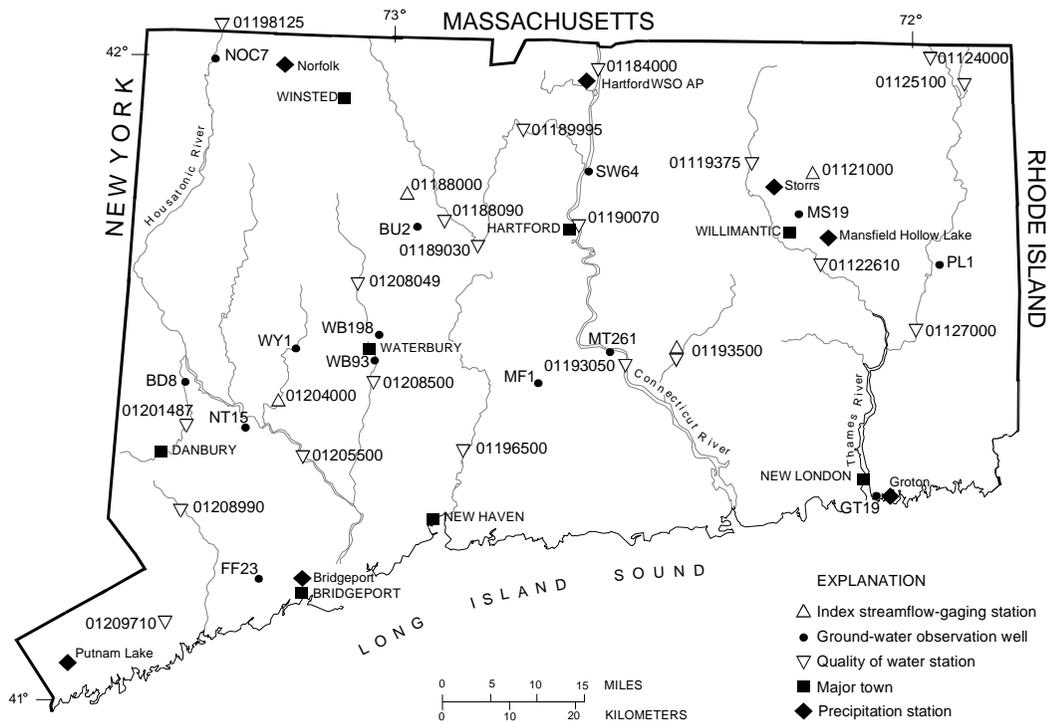


**U.S. Department of the Interior
U.S. Geological Survey**



**WATER-RESOURCES CONDITIONS
IN CONNECTICUT, OCTOBER 1998**

The USGS provides maps, reports, and information to help others manage, develop, and protect America's water, energy, mineral, land, and biological resources.



DATA-COLLECTION SITES USED IN THIS REPORT

This report contains a small part of the ground-water, surface-water, and water-quality data collected by the USGS at sites in Connecticut. More complete information may be found in the Water-Data Report (compiled annually). This report was prepared by the USGS in cooperation with the Connecticut Dept. of Environmental Protection.

For more information on USGS programs in Connecticut, please contact Virginia de Lima (District Chief); 101 Pitkin St., East Hartford, CT 06108; **phone (860) 291-6740**; fax (860) 291-6799; dc_ct@usgs.gov

Additional earth science information, including this document, is on the USGS Home Page on the World Wide Web at <http://www.usgs.gov> or the Connecticut District home page at <http://conn.er.usgs.gov> For more information on all USGS reports and products (including maps, images, and computerized data), call **1-800-USA-MAPS**.

INDEX TO INFORMATION

Data Sites	1	Streamflow	6
Precipitation	2	Reservoirs	7
Ground Water	4	Water Quality	8

PRECIPITATION

Precipitation during October ranged from a low of **3.46 inches** at Putnam Lake to a high of **5.66 inches** at Hartford WSO AP. Totals were in the above-normal range for all stations, except for Bridgeport, Groton, Mansfield Hollow Lake, and Putnam Lake which were in the normal range.

Precipitation totals for the year-to-date ranged from a low of **39.21 inches** at Hartford WSO AP to a high of **54.28 inches** at Mansfield Hollow Lake. All stations have year-to-date totals in the above-normal range except for Hartford WSO AP, Norfolk, and Putnam Lake which were in the normal range..

PRECIPITATION

(IN INCHES)

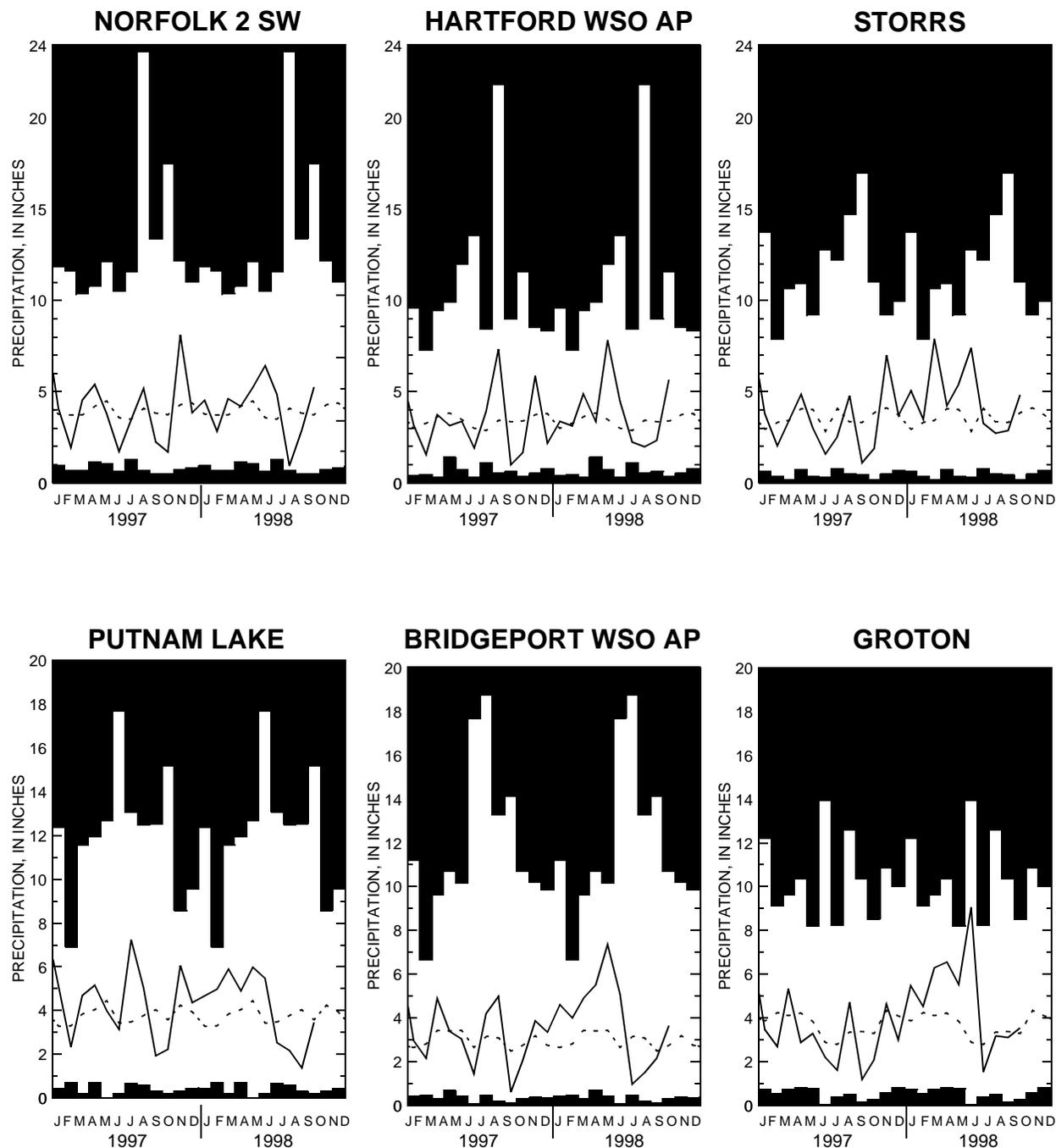
MEDIAN VALUES HAVE BEEN COMPUTED FOR 1961-90

PRECIPITATION STATION	OCTOBER 1998 PRECIPITATION	DEPARTURE FROM MONTHLY MEDIAN	1998 CUMULATIVE PRECIPITATION	1998 DEPARTURE FROM CUMULATIVE MEDIAN
BRIDGEPORT WSO	3.65	0.90	39.54	6.65
GROTON	3.55	0.26	48.82	9.19
HARTFORD WSO AP	5.66	2.27	39.21	4.03
MANSFIELD HOLLOW LAKE	3.98	0.49	54.28	16.23
NORFOLK	5.26	1.52	41.82	-0.65
PUTNAM LAKE	3.46	-0.12	41.43	-1.23
STORRS	4.83	0.98	47.20	7.40

(Monthly precipitation data collected by individual observers.)

PRECIPITATION

 Shaded area on graphs shows highest and lowest monthly precipitation for period of record
 Monthly median for the period (1961-90)
 Current precipitation



Medians obtained from "Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1961-90, Connecticut" (National Oceanic and Atmospheric Administration, 1992).

Highest and lowest monthly precipitation levels of record obtained from Connecticut Geological and Natural History Bulletin 99 and National Oceanic and Atmospheric Administration (Climatological Data, New England).

GROUND-WATER LEVELS

Ground-water levels increased in half the wells and decreased in the other half the wells during October. Most wells had levels in the normal range. Two wells—BD-8 (Brookfield) and FF-23 (Fairfield)—had levels below normal and four wells—MT-261 (Middletown), NT-15 (Newtown), PL-1 (Plainfield), and WY-1 (Woodbury) were above normal.

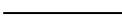
Ground-water levels are in feet below land surface. Statistics are based on period of record (through the end of the 1997 calendar year).

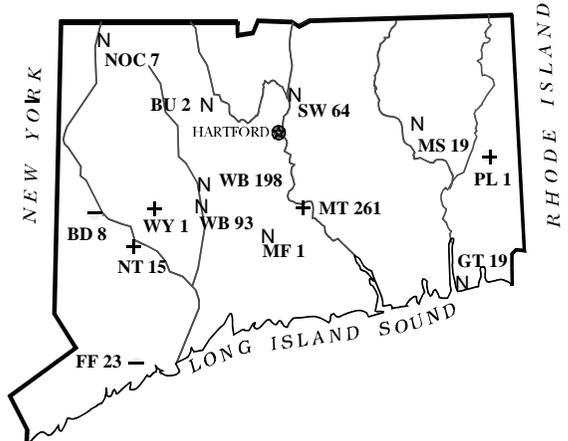
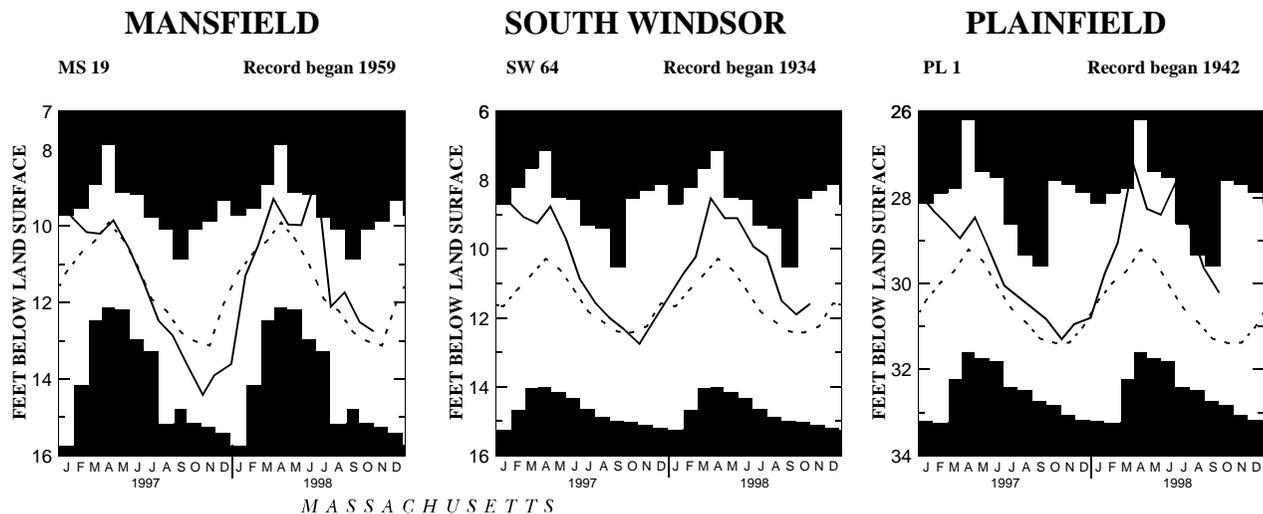
WELL NUMBER AND TOWN	OCTOBER 1998 GROUND-WATER LEVEL (date measured)		SEPT. 1998 GROUND- WATER LEVEL	OCT. 1997 GROUND- WATER LEVEL	OCT. MAXIMUM GROUND-WATER LEVEL (year recorded)		OCT. MINIMUM GROUND-WATER LEVEL (year recorded)		OCT. MEDIAN GROUND- WATER LEVEL
BD-8 (Brookfield)	32.60	10/30	31.89	32.19	27.61	1975	33.00	1981/88	31.97
BU-2 (Burlington)	32.69	10.29	NA	30.92	16.01	1955	35.28	1964	28.98
FF-23 (Fairfield)	8.34	10.29	8.52	9.12	7.03	1989	9.12	1997	8.02
GT-19 (Groton)	16.52	10.25	16.67	DRY	12.90	1977	17.97	1963	16.50
MF-1 (Middlefield)	11.83	10/30	11.51	11.47	3.70	1989	16.44	1964	11.37
MS-19 (Mansfield)	12.75	10/28	12.51	14.41	10.08	1977	15.12	1965/66	13.01
MT-261 (Middletown)	21.93	10/30	23.02	24.65	19.48	1989	26.92	1964	11.37
NOC-7 (North Canaan)	9.58	10/30	10.68	10.54	8.20	1983	10.65	1964/97	9.78
NT-15 (Newtown)	6.22	10/29	8.40	10.05	1.88	1975	11.14	1988	7.86
PL-1 (Plainfield)	30.30	10/29	30.22	31.30	27.59	1955	32.80	1965	31.38
SW-64 (S. Windsor)	11.59	10/28	11.91	12.75	8.53	1975	14.99	1966	12.44
WB-93 (Waterbury)	27.90	10/29	27.80	28.05	24.96	1955/89	28.53	1964	27.85
WB-198 (Waterbury)	18.85	10/29	18.78	20.35	9.04	1955	21.76	1988	17.37
WY-1 (Woodbury)	24.24	10/29	27.25	29.34	19.56	1955	30.08	1953	29.11

(Ground-water level data collected by USGS personnel and individual observers.)

GROUND-WATER LEVELS (CONTINUED)

(Status of ground-water storage as indicated by the water level changes in observation wells, as shown on hydrographs)

-  Shaded area on graphs show highest and lowest water levels of record through calendar year 1997.
-  Solid line shows current water levels.
-  Dashed line is monthly median for period of record through calendar year 1997.



ABOVE NORMAL

Within the highest 25% of record for this month.



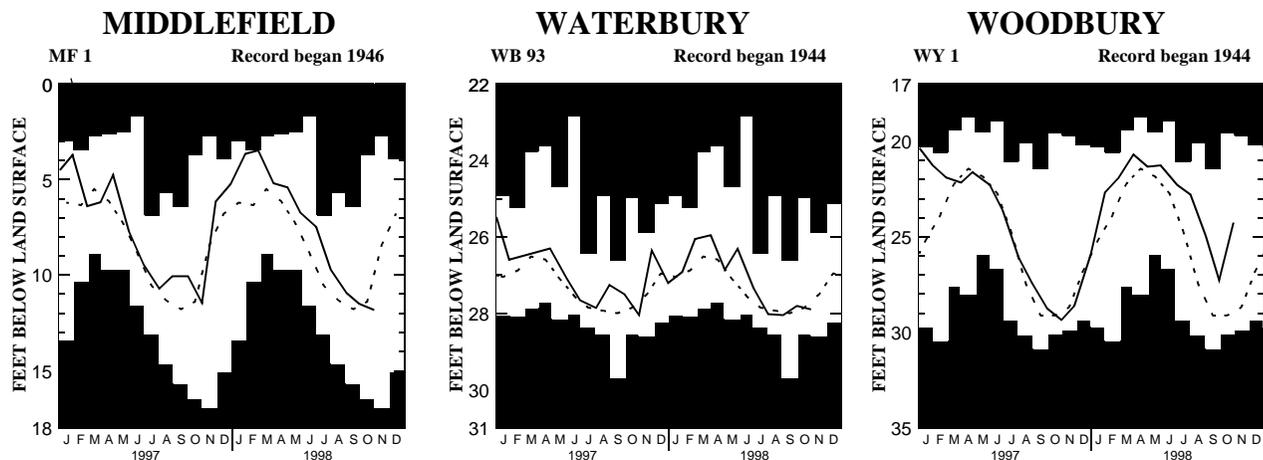
NORMAL RANGE

Between the highest and lowest 25% of record for this month.



BELOW NORMAL

Within the lowest 25% of record for this month.



STREAMFLOW (measured in cubic feet per second) → PROVISIONAL DATA ←

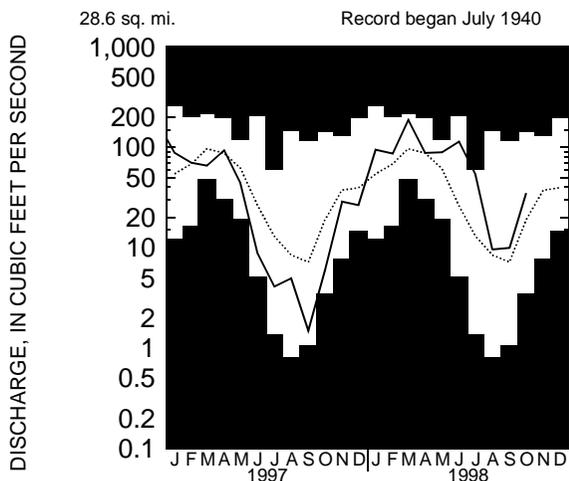
Streamflows in October were in the normal to above-normal range across the State. Mount Hope River (northeastern Connecticut) increased to the above-normal range after being in the normal range for two consecutive months. Burlington Brook (northwestern Connecticut) returned to the normal range after being in the below-normal range for one month. Salmon River (southeastern Connecticut) remained in the normal range for the third consecutive month. Pomperaug River (southwestern Connecticut) increased to the above-normal range after being in the normal range 2 consecutive months. Across the State, mean streamflow for October averaged 194 percent of the October long-term median value

USGS STREAMFLOW-GAGING STATION NAME AND NUMBER	OCT. 1998 MEAN	SEPT. 1998 MEAN	OCT. 1997 MEAN	OCTOBER MAXIMUM VALUE (year recorded)		OCTOBER MINIMUM VALUE (year recorded)		OCT. MEDIAN (1961-90)
				Value	Year	Value	Year	
MT HOPE RIVER (01121000)	34.8	9.91	5.90	144	1956	3.44	1958	18.8
BURLINGTON (01188000)	5.34	1.58	2.01	37.6	1956	1.02	1942	4.82
SALMON RIVER (01193500)	74.4	29.4	15.9	734	1956	12.4	1931	60.1
POMPERAUG (01204000)	129	35.2	24.6	625	1956	10.4	1936	36.3

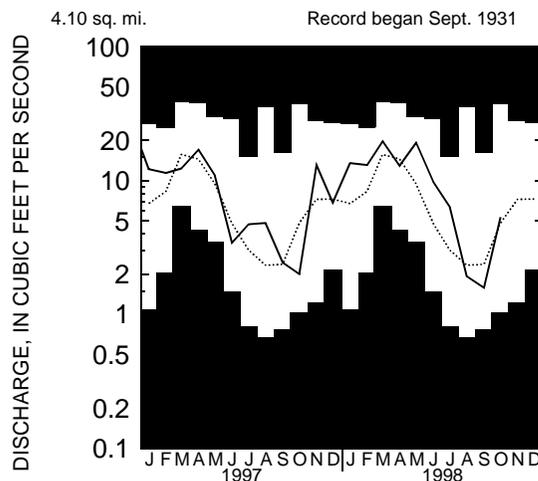
MONTHLY MEAN RUNOFF AT FOUR INDEX STATIONS

Shaded areas on graphs show highest and lowest monthly mean discharge of record.
 Current record Median (1961-1990)

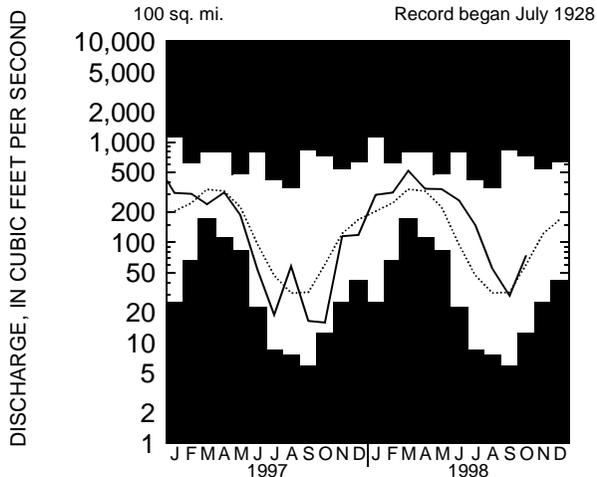
MOUNT HOPE RIVER NEAR WARRENVILLE



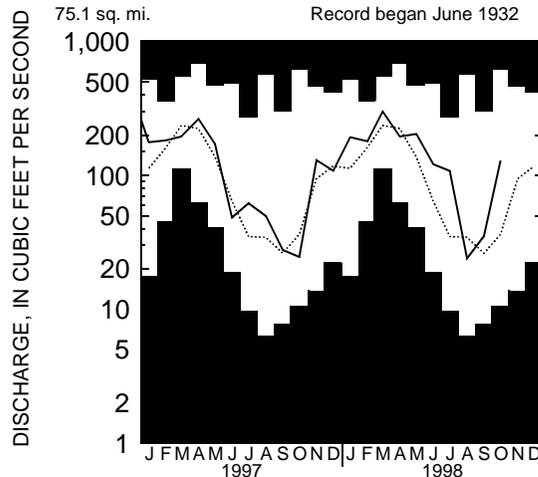
BURLINGTON BROOK NEAR BURLINGTON



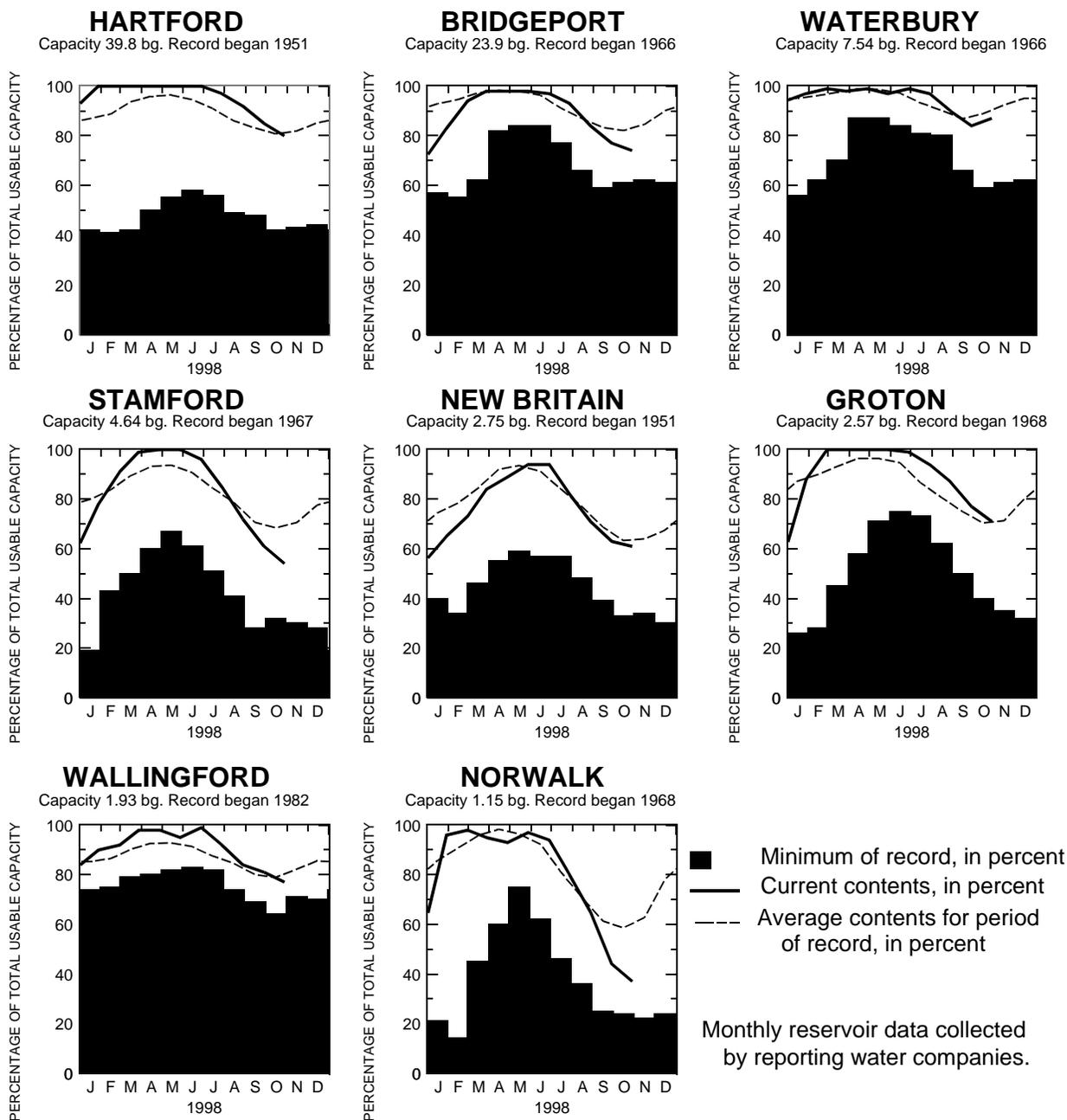
SALMON RIVER NEAR EAST HAMPTON



POMPERAUG RIVER AT SOUTHBURY



RESERVOIRS (Contents in billion gallons)



RESERVOIR SYSTEM (usable capacity, in billion gallons)	SEPT. CAPACITY (PERCENT)	OCTOBER CAPACITY (PERCENT)	LONG-TERM AVERAGE CAPACITY FOR OCTOBER (PERCENT)
Hartford (39.8 bg)	85	80	81
Bridgeport (23.9 bg)	77	74	82
Waterbury (7.54bg)	84	87	89
Stamford (4.64 bg)	61	54	68
New Britain (2.75 bg)	63	61	63
Groton (2.57 bg)	77	71	70
Wallingford (1.93 bg)	81	77	79
Norwalk (1.15 bg)	44	37	59

**U.S. Department of the Interior
 U.S. Geological Survey
 Water Resources Division
 101 Pitkin Street
 East Hartford, Connecticut 06108**

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CHEMICAL, PHYSICAL, AND BACTERIOLOGICAL QUALITY OF SELECTED STREAMS IN CONNECTICUT

[Station locations shown on front page; --, not applicable; **streamflow** measured in instantaneous cubic feet per second; **% flow duration** is that flow that was equaled or exceeded more than "X" percent of the time from 1961-90; **bacteriological analysis** reconnaissance data enumerated using membrane filter method with immediate incubation; **col/100 mL**, colonies per 100 milliliters; **K**, results based on colony count outside the acceptable range (non-ideal colony count; <, less than)]

PROVISIONAL DATA

USGS WATER-QUALITY STATION NAME AND NUMBER	SAMPLE DATE IN 1998	STREAMFLOW/ % FLOW DURATION	SPECIFIC CONDUCTANCE (in $\mu\text{S}/\text{cm}$ at 25°C)	WATER TEMPERATURE (°C)	DISSOLVED OXYGEN CONCENTRATION (mg/L)/%SATURATION	FIELD PH	FECAL COLIFORM (COL/100 mL)	ENTEROCOCCI (COL/100 mL)
01119375 Willimantic R. at Merrow								
01122610 Shetucket R. at South Windham	10/14	401/55	103	14.0	9.5/92	7.30	3,500	400
01124000 Quinebaug R. at Quinebaug								
01125100 French R. at North Grosvenordale								
01127000 Quinebaug R. at Jewett City								
01184000 Connecticut R. at Thompsonville	10/8	5,820/79	154	15.0	9.7/96	7.53	124	32
01188090 Farmington R. at Unionville	10/26	217/87	93	13.0	10.7/107	7.46	K12	K1
01189030 Pequabuck R. at Farmington	10/19	54.3/46	251	15.0	7.5/74	7.60	180	47
01189995 Farmington R. at Tariffville	10/19	701/57	144	14.5	9.0/88	7.18	440	30
01190070 Connecticut R. at Hartford	10/13	--	144	15.0	8.8/86	7.22	136	240
01193050 Connecticut R. at Middle Haddam	10/13	--	163	15.5	8.0/79	7.18	780	20
01193500 Salmon R. near East Hampton	10/15	167/37	100	12.0	10.7/99	7.37	288	88
01196500 Quinnipiac R. at Wallingford	10/23	86.4/76	358	10.5	10.4/91	7.53	680	96
01198125 Housatonic R. near Ashley Falls, MA								
01201487 Still R. at Rt. 7 at Brookfield Center								
01205500 Housatonic R. at Stevenson								
01208049 Naugatuck R. near Waterville								
01208500 Naugatuck R. at Beacon Falls								
01208990 Saugatuck R. near Redding	10/16	26.5/49	178	11.5	10.8/98	7.80	188	47
01209710 Norwalk R. near Winnipauk	10/7	3.24/95	340	13.5	11.1/105	8.16	208	60