DRAFT

ANNUAL

WATER QUALITY ASSESSMENT

JANUARY - DECEMBER 1975

REGION I

U. S. ENVIRONMENTAL PROTECTION AGENCY

Surveillance Branch
Lexington, Massachusetts
and
Systems Analysis Branch
Boston, Massachusetts

June 1976

PREFACE

The Annual Water Quality Assessment summarizes the condition of the waters in Region I for calendar year 1975. The programs for evaluating the water quality of Region I are the individual state Primary Monitoring Networks (P.M.N.) and the National Water Quality Surveillance System (N.W.Q.S.S.). Data from selected stations of these networks has been compared to the present, federally approved, state water quality standards. Non-standards parameters have also been discussed in various basins if they were thought to be particularly informative.

The N.W.Q.S.S. concept is to monitor a wide range of physical, chemical and biological variables in surface waters, stream bottoms, groundwaters, and the ocean at locations representative of typical and unique waters in the region. At the present state of development, the system monitors waters of the states which represent one or more of the important water quality problems in each state. Also, the system monitors waters which do not receive point source discharges of pollutants to compare these background conditions with polluted waters.

The purpose of state water quality standards is to protect and enhance the quality and productivity of the state's waters to serve a variety of beneficial uses such as public water supply, recreation and protection of aquatic life, and industrial agricultural uses. Public Law 92-500 (Federal Water Pollution Control Act Amendments of 1972) has as a goal "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provide for recreation in and on the water be achieved by July 1, 1983"[1/]. In discussing non-standards parameters, the recommendations of Volume I of the "Proposed Criteria for Water Quality" were used for comparison.

Whether water bodies in the region are complying with the state standards is determined by measuring chemical and biological constituents and properties. Four parameters will be observed in every basin: dissolved oxygen, fecal coliform bacteria, total coliform bacteria, and pH. Additional parameters such as metals or nutrients will be discussed if they point out problems which exist in particular areas.

When reading this report the following factors should be taken into consideration. Natural conditions may cause some parameters to vary from standards or recommendations. This will be noted if it is known or suspected. This Second Annual Assessment is intended to be compared with first and future annual assessments in the hope that trends may be established for each basin's key parameters.

1/ Section 101 (a) (2), Title I, Public Law 52-500

TABLE OF CONTENTS

Section	Title	Page
1.0	Overview	1
1.1	Measures of Water Quality	1
2.0	Background	3
3.0	Individual Drainage Basin Assessments	6
	Connecticut	
3.1	Western Connecticut Coastal Drainage Area	9
3.2	Housatonic River Basin	20
3.3	Quinnipiac River Basin	41
3.4	Connecticut River Basin (Connecticut)	56
3.5	Farmington River Basin	72
3.6	Thames River Basin	88
	Rhode Island	
3.7	Pawcatuck River Basin (Rhode Island and Connecticut)	102
3.8	Blackstone River Basin	119
3.9	Pawtuxet River Basin	128
3.10	Narragansett Bay Drainage Area	138
	Massachusetts	
3.11	Massachusetts Coastal Drainage Area	147
3.12	Merrimack River Basin (Massachusetts)	157
3.13	Nashua River Basin	168
3.14	Connecticut River Basin (Massachusetts)	181

Section	Title	Page
	Vermont	
3.15	Lake Champlain Basin	194
3.16	Winooski River Basin	208
3.17	Lake Memphremagog Basin	221
3.18	Connecticut River Basin (Vermont)	232
3.19	Upper Hudson River Basin	248
	New Hampshire	
3.20	Androscoggin River Basin (New Hampshire)	258
3.21	Merrimack River Basin (New Hampshire)	268
3.22	Connecticut River Basin (New Hampshire)	282
	Maine	
3.23	Androscoggin River Basin (Maine)	295
3.24	Presumpscot River Basin	309
3.25	Kennebec River Basin	320
3.26	Penobscot River Basin	334
3.27	St. Croix River Basin	344
3.28	St. John River Basin	355

SECTION I

1.0 OVERVIEW

This report is an evaluation of the water quality in Region I during 1975. The quality of the water in a particular water body is determined by measuring certain chemical and biological constituents and properties. These measurements are then compared, when possible, to the existing state standard for that particular water body.

1.1 MEASURES OF WATER QUALITY

Below is a list and description of the water quality parameters used in this report.

Dissolved Oxygen (D.O.) refers to the uncombined oxygen in water which is available to aquatic life. Since this oxygen is consumed more rapidly in the decomposition of wastes, the D.O. gives an instantaneous picture of the condition of a water body. Time of day and temperature of the water are important in interpreting D.O. levels. Temperature affects the amount of oxygen which water can contain - high temperature, low D.O. capacity; low temperature, high D.O. capacity. During daylight hours algae add oxygen to the water through photosynthesis. Therefore, D.O. levels are generally highest during the afternoon and lowest just before sunrise.

Coliform bacteria are found in abundance in the intestinal tract of warm-blooded animals. They are not harmful in themselves but their presence indicates that pathogenic bacteria may also be present. Since they can be detected by relatively simple test procedures, coliforms are used to indicate the extent of bacterial pollution from sewage. Bacterial tests usually measure

the fecal coliform and the total coliform. Fecal coliform make up about ninety percent of the coliforms discharged in fecal matter. Non-fecal coliform may originate in soil, grain or decaying vegetation.

Phosphorus appears in water bodies in combined forms known as ortho and poly phosphates and organic phosphorus. The majority of the phosphorus contained in domestic sewage and industrial wastes comes from detergents. Additional phosphorus may enter a water body in agricultural runoff where fertilizers are used.

Ammonia nitrogen is present in sewage, industrial wastes, and is also generated from the decomposition of organic nitrogen. It can also be formed when nitrites and nitrates are reduced. Ammonia is particularly important since it has high oxygen and chemical demands and is also toxic to fish.

Turbidity is the measure of the clarity of a water sample. It is expressed in Jackson Standard Units which are related to the scattering and absorption of light by the water sample.

SECTION II

2.0 BACKGROUND

Section 104 (a)(5) of the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500) requires the Administrator to establish national programs for the prevention, reduction and elimination of pollution and as part of such programs shall - "in cooperation with the states and their political subdivisions and other Federal agencies establish, equip and maintain a water quality surveillance system for the purpose of monitoring the quality of the navigable waters and ground waters and the contiguous zone and the oceans and the Administrator shall, to the extent practicable, conduct such surveillance by utilizing the resources of NASA, NOAA, the Geological Survey, and the Coast Guard, and shall report on such quality.....".

The above provision is the legislative direction to EPA to determine what is happening to the waters of the nation in terms of physical condition, including appearance, chemical quality and of supporting a balanced population of shellfish, fish and wildlife and recreation in and on the water.

Further, the Act in Sections 106 (e)(1) and 305(b) directs the states through EPA to - "establish and operate appropriate devices, methods, systems and procedures necessary to monitor and to complete and analyze data on (including classification according to eutrophic condition), the quality of navigable waters and to the extent practicable groundwaters.....". Utilizing this analysis, the states are to "identify specifically those navigable waters, the quality of which -

a. is adequate to provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allow recreational activities in and on the water;

b. can reasonably be expected to attain such a level by 1977 or 1983; and

c. can reasonably be expected to attain such a level at any later date".

In Region I the cooperative monitoring program between EPA and other agencies at the Federal and State level consists of the National Water Quality Surveillance System (NWQSS) and the individual state programs comprised of Primary Monitoring Network (PMN) sampling, intensive surveys, lake study surveys and biological studies. The findings of the state programs are presented in state Water Quality Assessment reports, pursuant to Section 305(b) of P.L. 92-500, by the individual states, submitted to EPA in April every year as part of the State Program Grant process.

The objective of the NWQSS is to develop a system of monitoring and reporting on the quality of the hydrosphere and its resident biota at representative locations throughout Region I for input to the water pollution control program. A wide range of physical, chemical and biological parameters are measured at locations chosen to conform to these site characteristics:

- Most critical stream areas in terms of water use and natural resources

- Upstream and downstream of major municipal and industrial land use areas
- High water quality use areas
- Within each state - cover waters in mountain piedmont and coastal land areas

The system will record trends in the traditional pollutants; will uncover new emerging pollutants; and will track levels of exotic pollutants.

SECTION III

3.0 INDIVIDUAL DRAINAGE BASIN ASSESSMENTS

This section of the report discusses and displays the water quality data for 1975. Each drainage area or river basin is presented with the following:

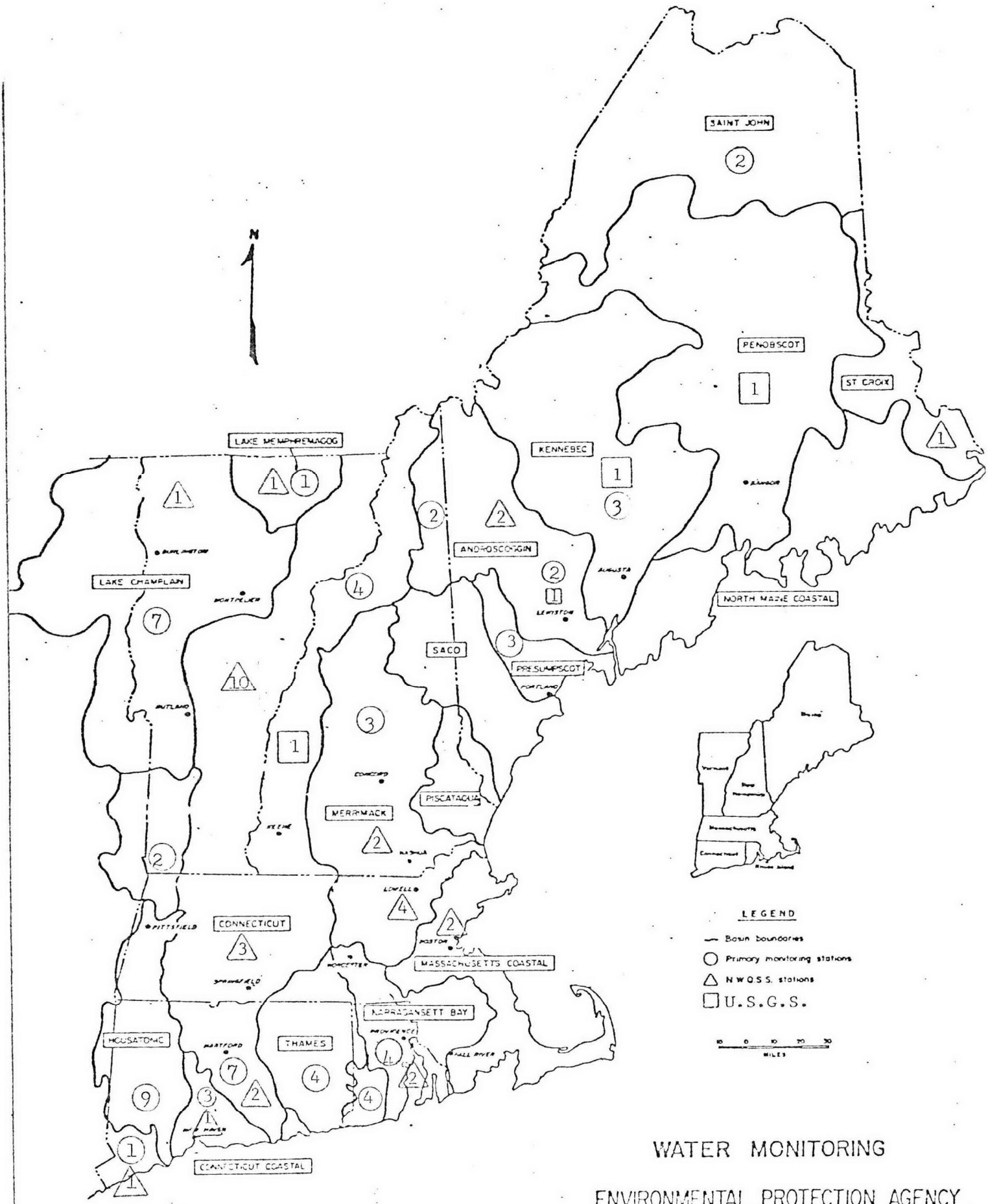
a. Discussion of monitoring results for 1975

b. River basin or drainage area map with the location of NWQSS and PMN monitoring stations used in this report.

c. Summary of Water Quality Standards Violations January through December 1975

d. Plots of selected water quality parameters

The following map of New England shows the distribution of the monitoring stations which contributed data included in this report.



WATER MONITORING

ENVIRONMENTAL PROTECTION AGENCY
REGION I

PLOT LEGEND

Minimum Criteria	↑
Maximum Criteria	↓
Minimum Value	▽
Maximum Value	△
Arithmetic Mean {Geometric Mean for Coliform Bacteria}	+
Discharge Location	⊸
Station Location	△

Plots
D.O + Tot Phos

3.1 WESTERN CONNECTICUT COASTAL DRAINAGE AREA

The two stations in this drainage area are located on the Saugatuck River near Redding (Plot Station No. 1) and in Stamford Harbor (Plot Station No. 2).

Although the Saugatuck River station does violate Class "A" standards for total coliform bacteria in the summer months, the river at this location is considered to be pristine.

The Stamford Harbor station violates Connecticut's Class "SB" standards for total coliform (6 of 12 samples) and dissolved oxygen (2 of 13 samples). Copper levels at, or exceeding, the EPA recommended maximum of .05 mg/l for marine waters and high phosphorus levels were also recorded at this station.

Inadequate sewage treatment is believed responsible for the numerous coliform bacteria violations and the high phosphorus content in the harbor. The high copper levels are probably caused by industrial discharges located within the greater Stamford area.

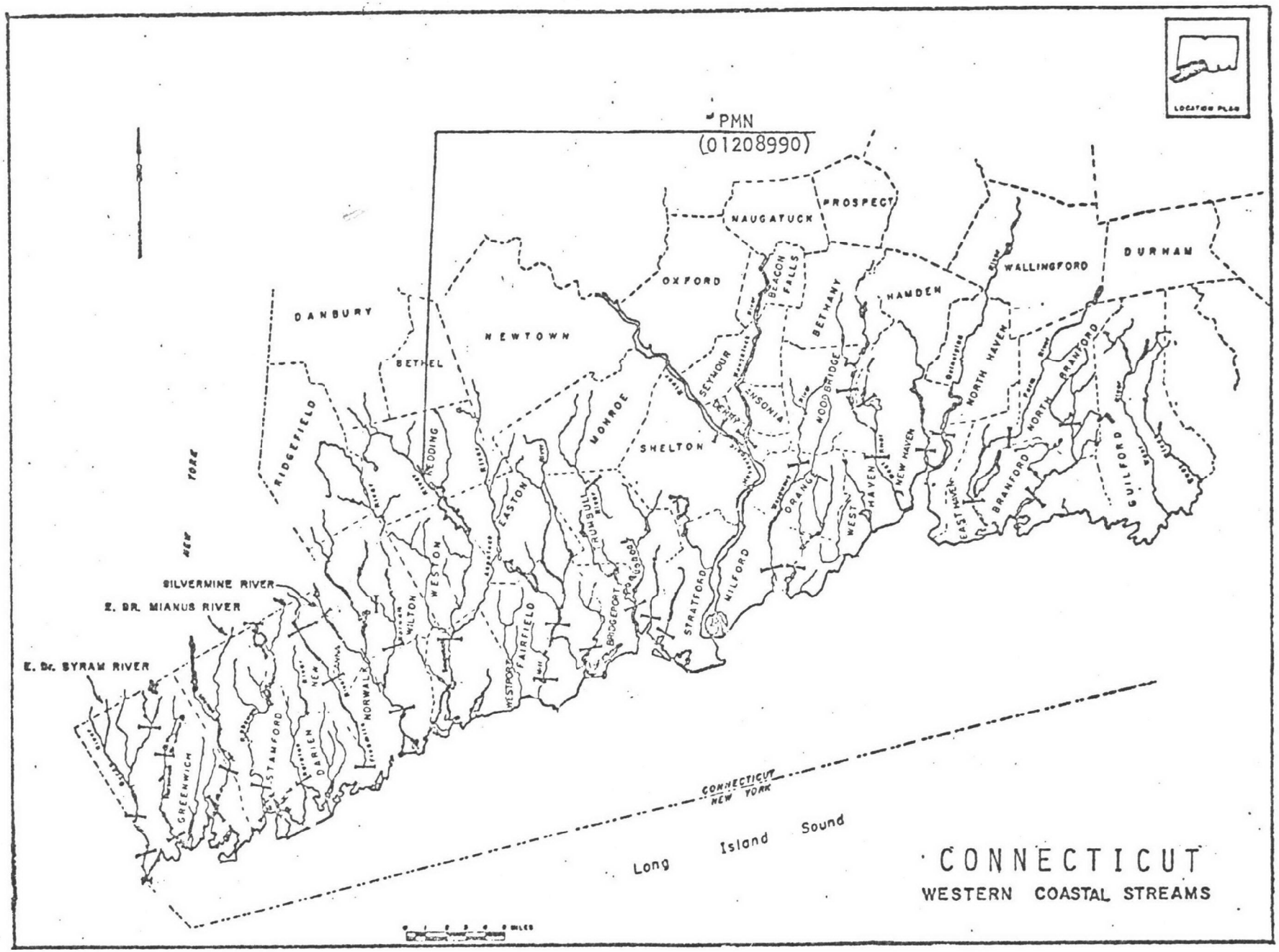
WESTERN CONNECTICUT DRAINAGE

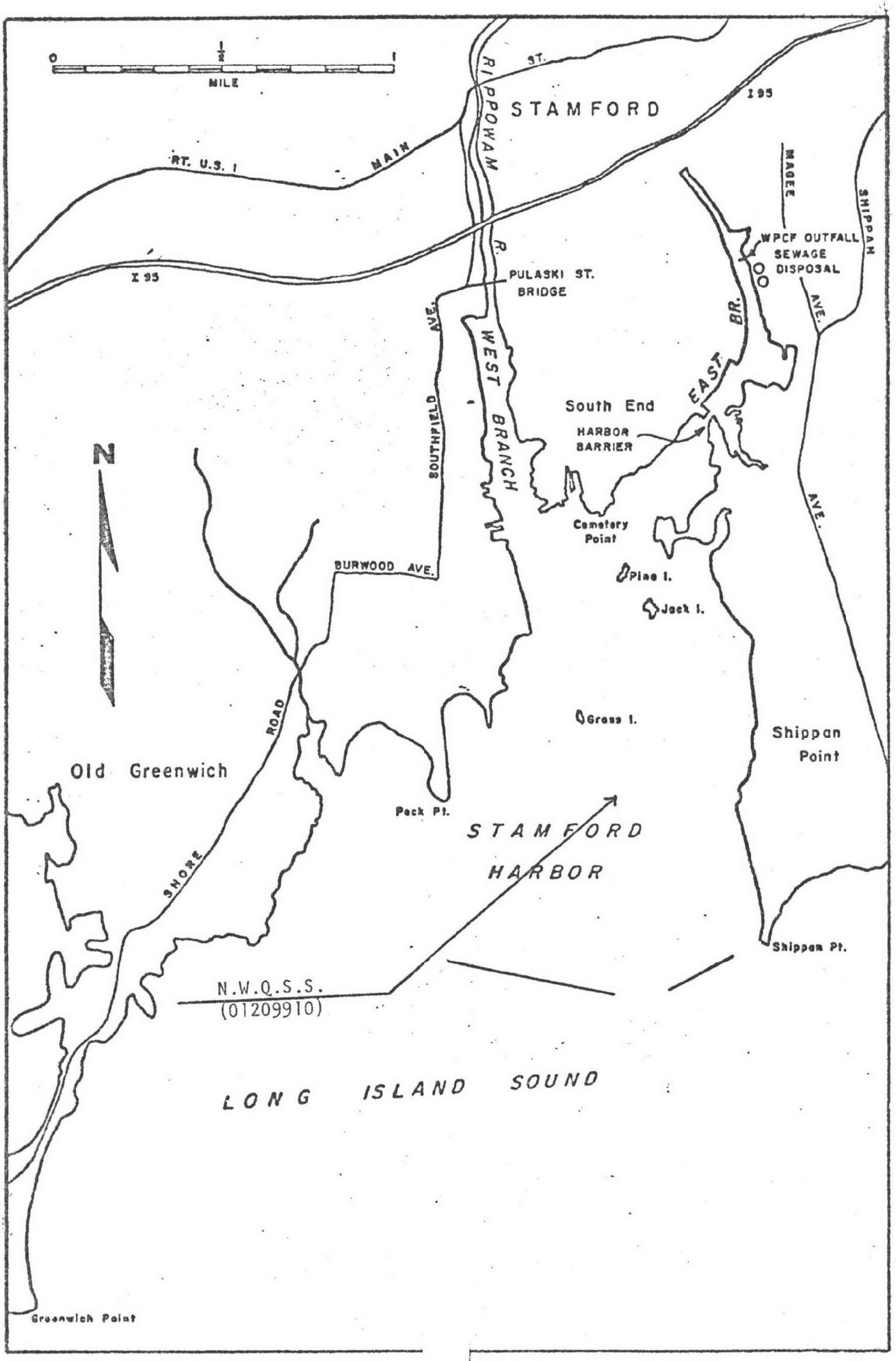
{CONNECTICUT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Saugatuck River near Redding, CT	PMN 01208990
2.	Stamford Harbor	NWQSS 01209910


PMN
(01208990)
LOCATION PLAN
NAUGATUCK
PROSPECT
WALLINGFORD
DURHAM
OXFORD
BEACON FALLS
BETHANY
HAMDEN
DANBURY
NEWTOWN
BETHEL
SEYMOUR
ANSONIA
DERBY
WOODBRIDGE
NORTH HAVEN
NORTH BRANFORD
MONROE
SHELTON
RIDGEFIELD
REDDING
EASTON
TRUMBULL
ORANGE
WEST HAVEN
NEW HAVEN
EAST HAVEN
BRANFORD
GUILFORD
NEW YORK
WESTON
WILTON
BRIDGEPORT
STRATFORD
MILFORD
FAIRFIELD
WESTPORT
NORWALK
NEW CANAAN
DARIEN
STAMFORD
GREENWICH
SILVERMINE RIVER
E. DR. MIANUS RIVER
E. Dr. BYRAM RIVER
CONNECTICUT
NEW YORK
Long Island Sound
CONNECTICUT
WESTERN COASTAL STREAMS


0
1/2
1
MILE
STAMFORD
RIPPOWAM
ST.
I 95
RT. U.S. 1
MAIN
I 95
PULASKI ST.
BRIDGE
WEST BRANCH
R.
SOUTHFIELD AVE.
BURWOOD AVE.
EAST BR.
WPCF OUTFALL
SEWAGE
DISPOSAL
MAGEE
SHIPPAN
AVE.
South End
HARBOR
BARRIER
Cemetery
Point
Pine I.
Jack I.
Grass I.
N
Old Greenwich
SHORE ROAD
Peck Pt.
STAMFORD
HARBOR
Shippan
Point
Shippan Pt.
N.W.Q.S.S.
(01209910)
LONG ISLAND SOUND
Greenwich Point

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01208990 WEST. CONN. COASTAL (CT)

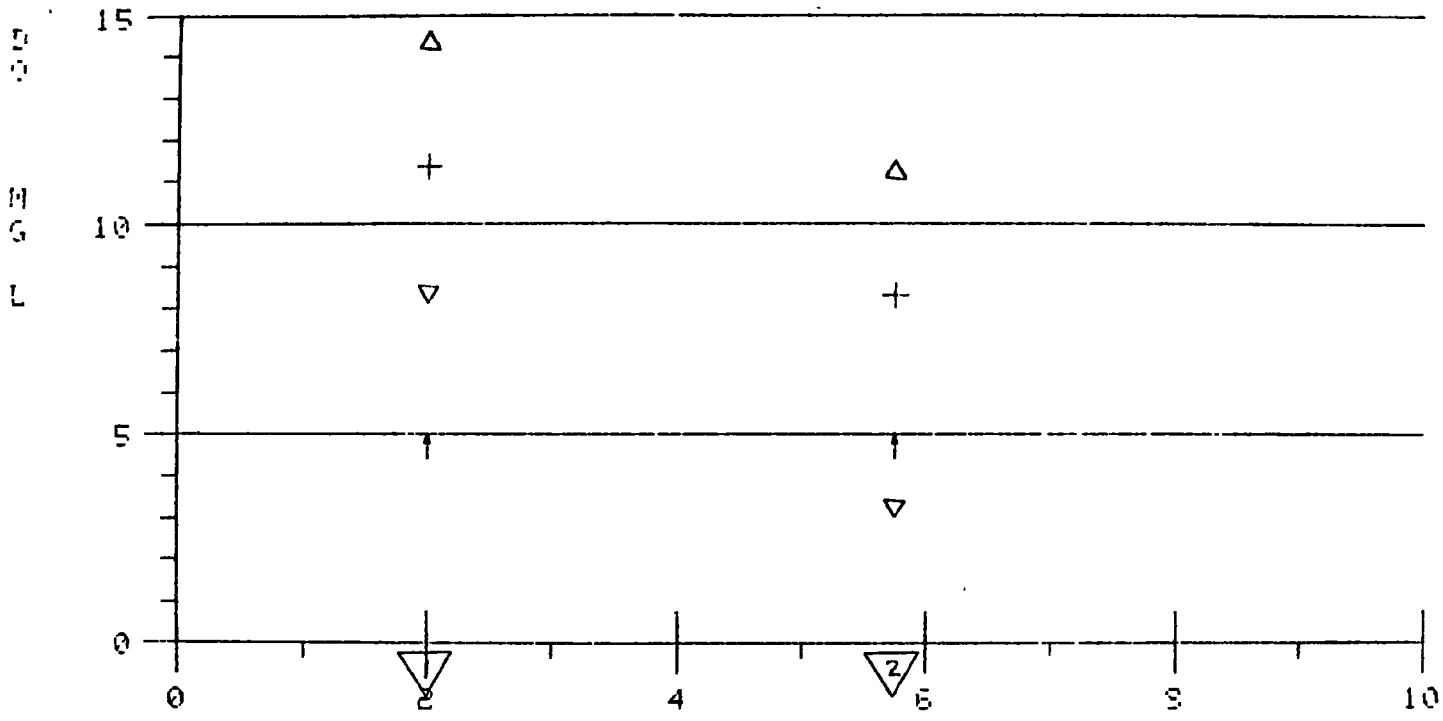
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.36
DISS. OXYGEN SATUR %	12	0.	0.0	75.00	NONE	100.08
COLIFORM TOT MFIM/100ML	12	4.	33.33	NONE	100.00	102.34

STATION 01209910 WEST. CONN. COASTAL (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	28.30	12.29
DISS. OXYGEN MG/L	13	2.	15.38	5.00	NONE	8.31
PH SU	12	0.	0.0	6.80	8.50	7.59
COLIFORM TOT MFIM/100ML	12	6.	50.00	NONE	700.00	1710.31

* GEOMETRIC MEAN FOR COLIFORMS

REGION I WQ ASSESSMENT REPORT - WEST. CONN. COASTAL (CT)



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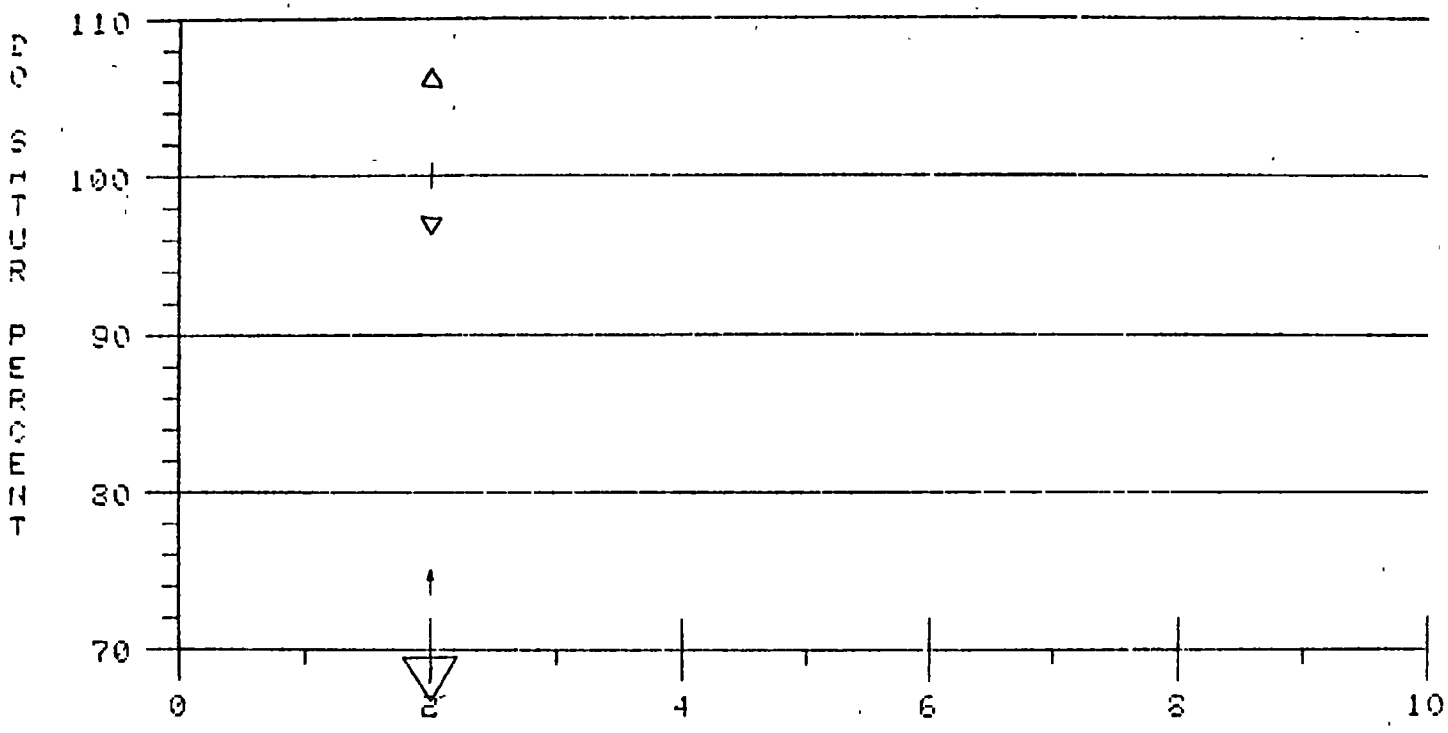
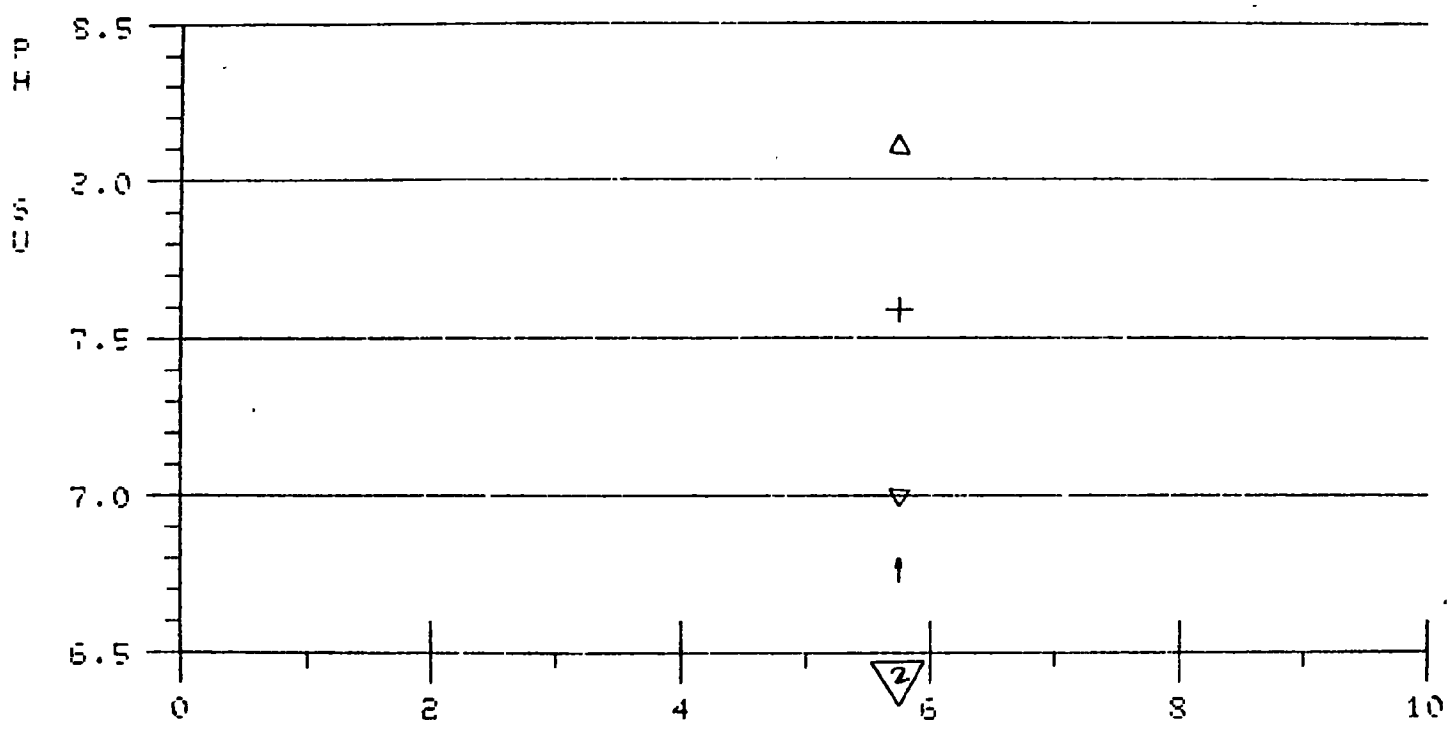
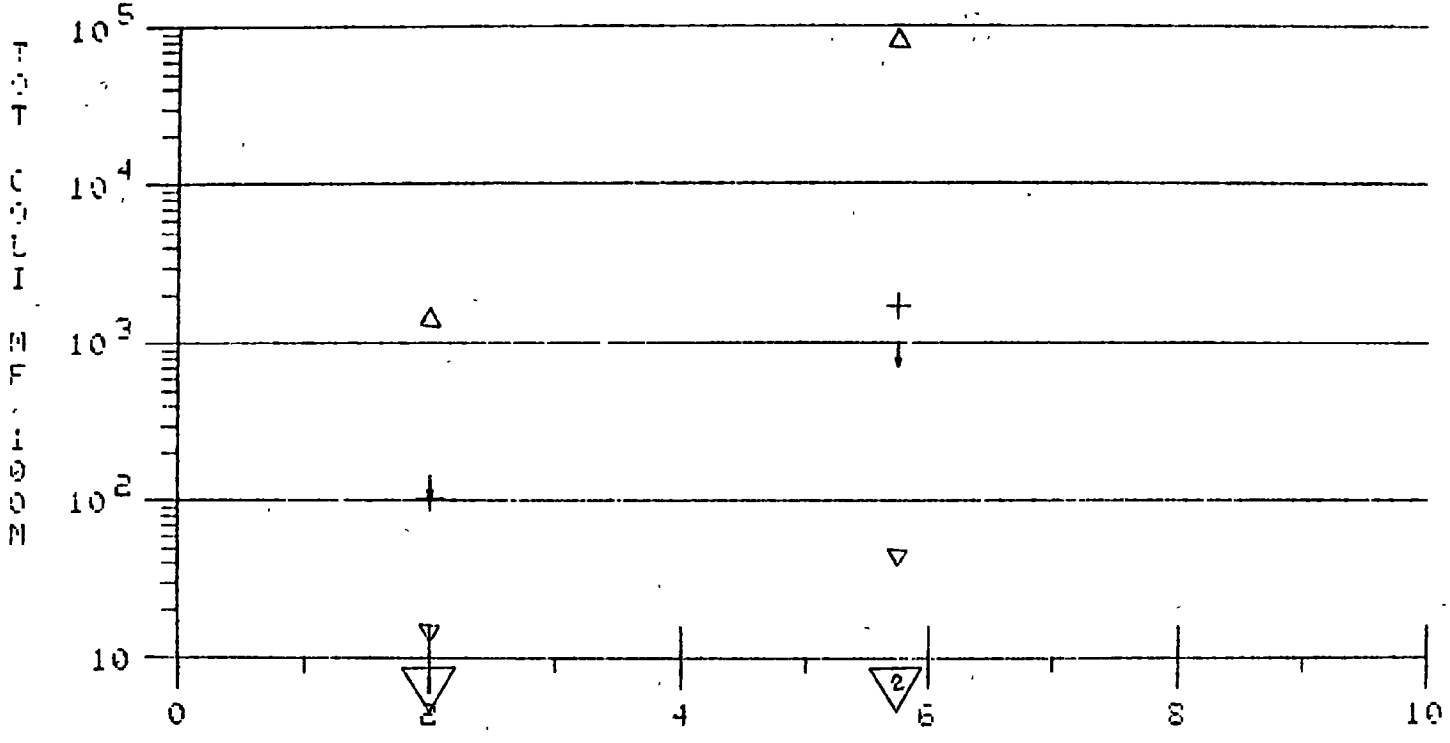


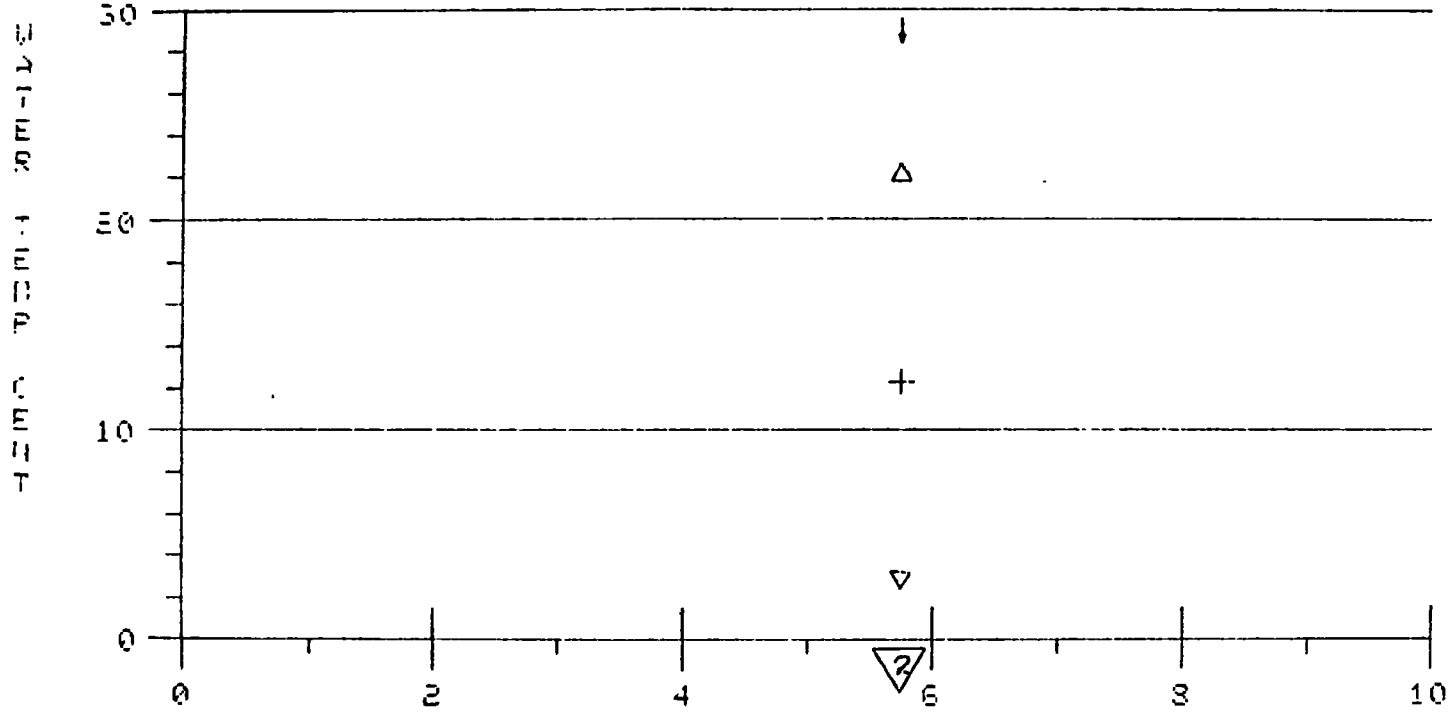
REGION I WQ ASSESSMENT REPORT - WEST. CONN. COASTAL (CT)



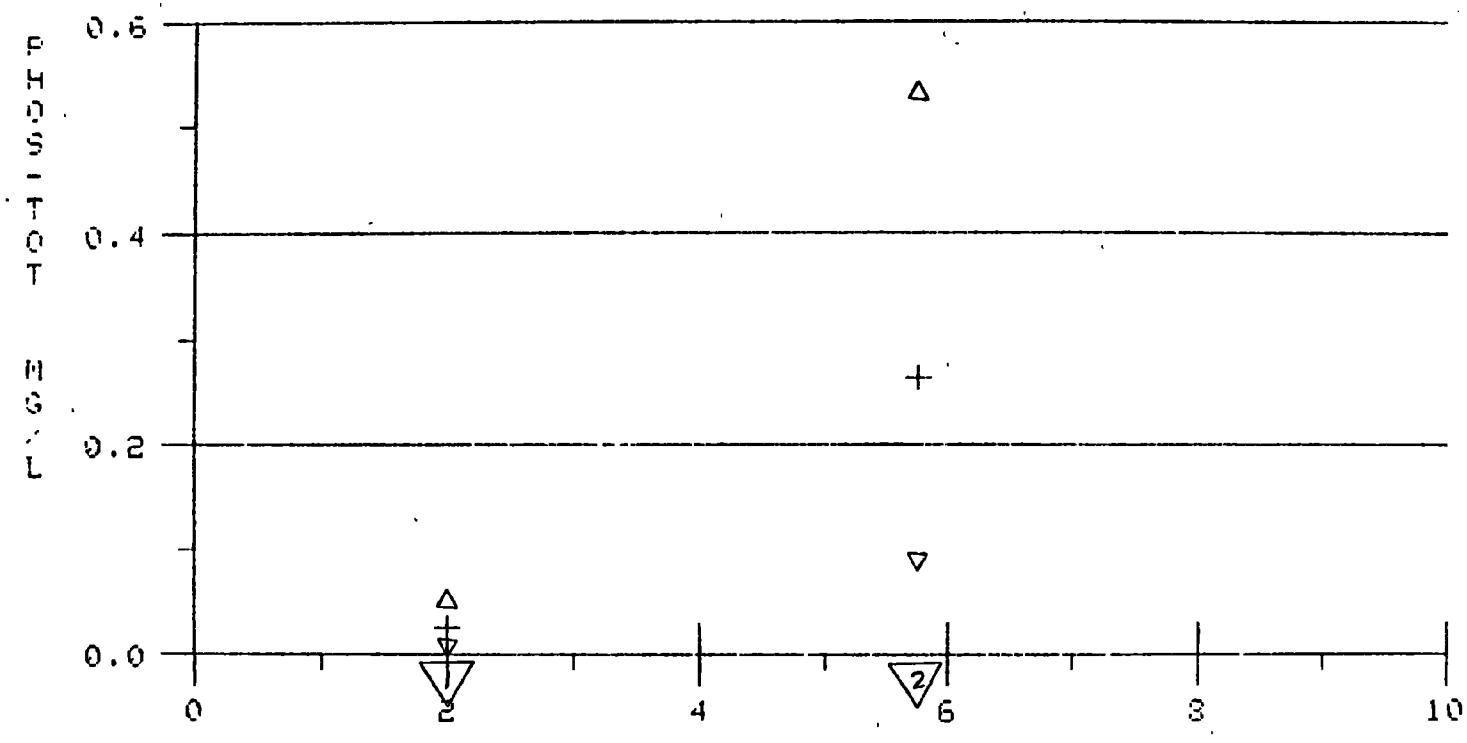
REGION I WQ ASSESSMENT REPORT - WEST: CONN. COASTAL (CT)



REGION I WQ ASSESSMENT REPORT - WEST. CONN. COASTAL (CT)



REGION I WQ ASSESSMENT PEPORT - WEST. CONN. COASTAL (CT)



Plots
DO
Tot Phos
Cyanide

3.2 HOUSATONIC RIVER BASIN

The Housatonic River Basin drains a large part of western Massachusetts, a small portion of east central New York, most of western Connecticut and empties into Long Island Sound at Stratford, Connecticut. The Housatonic River, though flowing through rural land for most of its length, drains highly industrialized areas along its upper and lower reaches.

High phosphorus levels and total coliform bacteria standards violations from June through November are observed at Canaan, Connecticut (Plot Station No. 1). These problems can be traced back to paper industry and domestic sewage discharges to the river in Pittsfield, Massachusetts. These levels decline as the river reaches New Milford (Plot Station No. 2) which, however, still reports standards violations for total coliform in June, July, and October and for pH in January. Dissolved oxygen, pH and total coliform violations are reported at the Lake Lillinonah station (Plot Station No. 3) particularly in the warm weather months. The Lake Zoar station (Plot Station No. 4) reports severe DO problems in June, July, August and September and total coliform violations in July and December. DO saturated percent violations

are recorded in June and September at Stevenson (Plot Station No. 5) as well as a total coliform violation in July. The rest of the stations on the Housatonic and Naugatuck Rivers report violations of the Connecticut standards for total coliform bacteria.

Combined sewer discharges in Derby and Shelton, as well as municipal discharges in Waterbury, Beacon Falls, Torrington, Seymour, Ansonia and Stratford, are thought responsible for these high total coliform levels. Industrial discharges particularly from metal finishing industries are thought responsible for the high zinc and copper levels found at the stations on the Naugatuck River and the station at Stratford on the Housatonic. Zinc levels as high as .35 mg/l were reported at Stratford, greatly exceeding the recommended EPA maximum of.1 mg/l for marine waters.

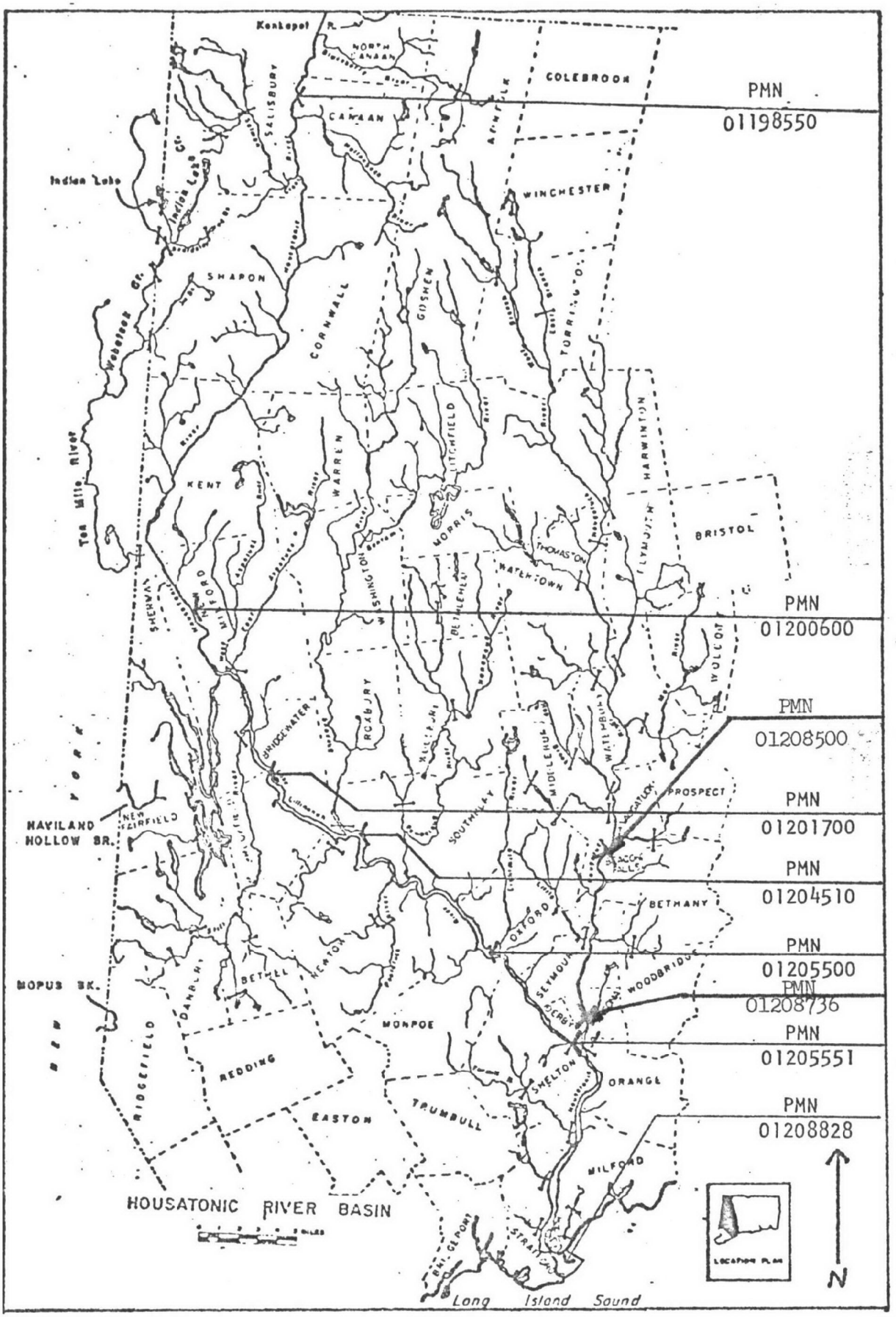
HOUSATONIC RIVER BASIN

{CONNECTICUT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Housatonic River near Canaan, CT	PMN 01198550
2.	Housatonic River near New Milford, CT	PMN 01200600
3.	Lake Lillinonah-Housatonic River near Brookfield, CT	PMN 01201700
4.	Lake Zoar-Housatonic River near Riverside, CT	PMN 01204510
5.	Housatonic River near Stevenson, CT	PMN 01205500
6.	Housatonic River near Shelton, CT	PMN 01205551
7.	Naugatuck River at Beacon Falls, CT	PMN 01208500
8.	Naugatuck River at Ansonia, CT	PMN 01208736
9.	Housatonic River near Stratford, CT	PMN 01208828


PMN
01198550
PMN
01200600
PMN
01208500
PMN
01201700
PMN
01204510
PMN
01205500
PMN
01208736
PMN
01205551
PMN
01208828
Kent
Kent Pt.
NORTH CANAAN
CANAAN
COLEBROOK
WINCHESTER
SALISBURY
Indian Lake
Indian Lake Cr.
Housatonic Cr.
SHARON
CORNWALL
GOSHEN
TORRINGTON
Tom Mills River
KENT
WARREN
LITCHFIELD
HARWINTON
MORRIS
THOMASTON
WATERTOWN
PLYMOUTH
BRISTOL
SHERMAN
NEW MILFORD
WASHINGTON
BETHLEHEM
WOLCOTT
BRIDGEWATER
ROXBURY
KILLINGWORTH
WATERBURY
MIDDLEBURY
PROSPECT
NAVILAND HOLLOW BR.
NEW FAIRFIELD
SOUTHBURY
BEACON FALLS
BETHANY
OXFORD
SEYMOUR
WOODBRIDGE
MOPUS BK.
DANBURY
BETHEL
NEWTOWN
DERBY
MONROE
RIDGEFIELD
REDDING
SHELTON
ORANGE
EASTON
TRUMBULL
MILFORD
HOUSATONIC RIVER BASIN
Bar. Gerport
STRATFORD
Long Island Sound
LOCATION PLAN
N

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01198550 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	9.58
TURBIDITY JKSN JTU	12	0.	0.0	NONE	10.00	2.92
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.51
DISS. OXYGEN SATUR %	12	0.	0.0	75.00	NONE	97.17
PH SU	12	0.	0.0	6.50	8.00	7.49
COLIFORM TOT MFIM/100ML	12	5.	41.67	NONE	1000.00	1110.83

STATION 01200600 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	9.92
TURBIDITY JKSN JTU	12	0.	0.0	NONE	10.00	2.92
DISS. OXYGEN MG/L	13	0.	0.0	5.00	NONE	11.48
DISS. OXYGEN SATUR %	13	0.	0.0	75.00	NONE	98.92
PH SU	12	1.	8.33	6.50	8.00	7.85
COLIFORM TOT MFIM/100ML	13	3.	23.08	NONE	1000.00	239.74

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01201700 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	13	0.	0.0	NONE	29.40	12.65
TURBIDITY JKSN JTU	11	0.	0.0	NONE	10.00	2.55
DISS. OXYGEN MG/L	15	0.	0.0	5.00	NONE	9.80
DISS. OXYGEN SATUR %	14	6.	42.86	75.00	NONE	86.36
PH SU	11	3.	27.27	6.50	8.00	7.87
COLIFORM TOT MFIM/100ML	11	2.	18.18	NONE	1000.00	136.37

STATION 01204510 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	10.92
TURBIDITY JKSN JTU	12	0.	0.0	NONE	10.00	2.67
DISS. OXYGEN MG/L	13	2.	15.38	5.00	NONE	9.58
DISS. OXYGEN SATUR %	13	5.	38.46	75.00	NONE	81.23
PH SU	12	0.	0.0	6.50	8.00	7.43
COLIFORM TOT MFIM/100ML	12	2.	16.67	NONE	1000.00	154.50

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01205500 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	11.50
TURBIDITY JKSN JTU	12	0.	0.0	NONE	10.00	2.42
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	10.87
DISS. OXYGEN SATUR %	12	2.	16.67	75.00	NONE	93.17
PH SU	12	0.	0.0	6.50	8.00	7.49
COLIFORM TOT MFIM/100ML	12	1.	8.33	NONE	1000.00	56.48

STATION 01205551 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	28.30	11.67
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.28
PH SU	12	0.	0.0	6.80	8.50	7.48
COLIFORM TOT MFIM/100ML	12	6.	50.00	NONE	700.00	610.47

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01208500 NAUGATUCK R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	12.25
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	7.92
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.32
PH SU	12	0.	0.0	6.00	8.50	7.17
COLIFORM TOT MFIM/100ML	12	4.	33.33	NONE	5000.00	1508.44

STATION 01208736 NAUGATUCK R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	12.88
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	5.83
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.02
PH SU	12	0.	0.0	6.00	8.50	7.05
COLIFORM TOT MFIM/100ML	12	3.	25.00	NONE	5000.00	1556.44

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01208828 HOUSATONIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	18	0.	0.0	NONE	28.30	11.92
DISS. OXYGEN MG/L	18	0.	0.0	5.00	NONE	9.37
PH SU	18	0.	0.0	6.80	8.50	7.68
COLIFORM TOT MFIM/100ML	18	8.	44.44	NONE	700.00	580.19

* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

HOUSATONIC RIVER BASIN (MA.)

Crane Paper Company	Dalton	East Branch Housatonic River	0000671
General Electric Co.	Pittsfield	East Branch Housatonic River	0003891
Pittsfield WTP	Pittsfield	Housatonic River	0101681
North Lenox STP	Lenox	Housatonic River	0100951
Lenox STP	Lenox	Housatonic River	0100935
Lenoxdale STP	Lenox	Housatonic River	0100943
Kimberly Clark - P.J.Schweitzer Paper Div.	Lee	Housatonic River	0005371
Westfield Paper Co.	East Lee	Goose Pond Brook	0001031
Hurlbut Paper Co. (Laurel Mill)	Lee	Housatonic River	0001716
Hurlbut Paper Co. (Willow Mill)	Lee	Housatonic River	0001848
Stockbridge STP	Stockbridge	Housatonic River	0101087
Rising Paper Co.	Great Barrington	Housatonic River	0000850

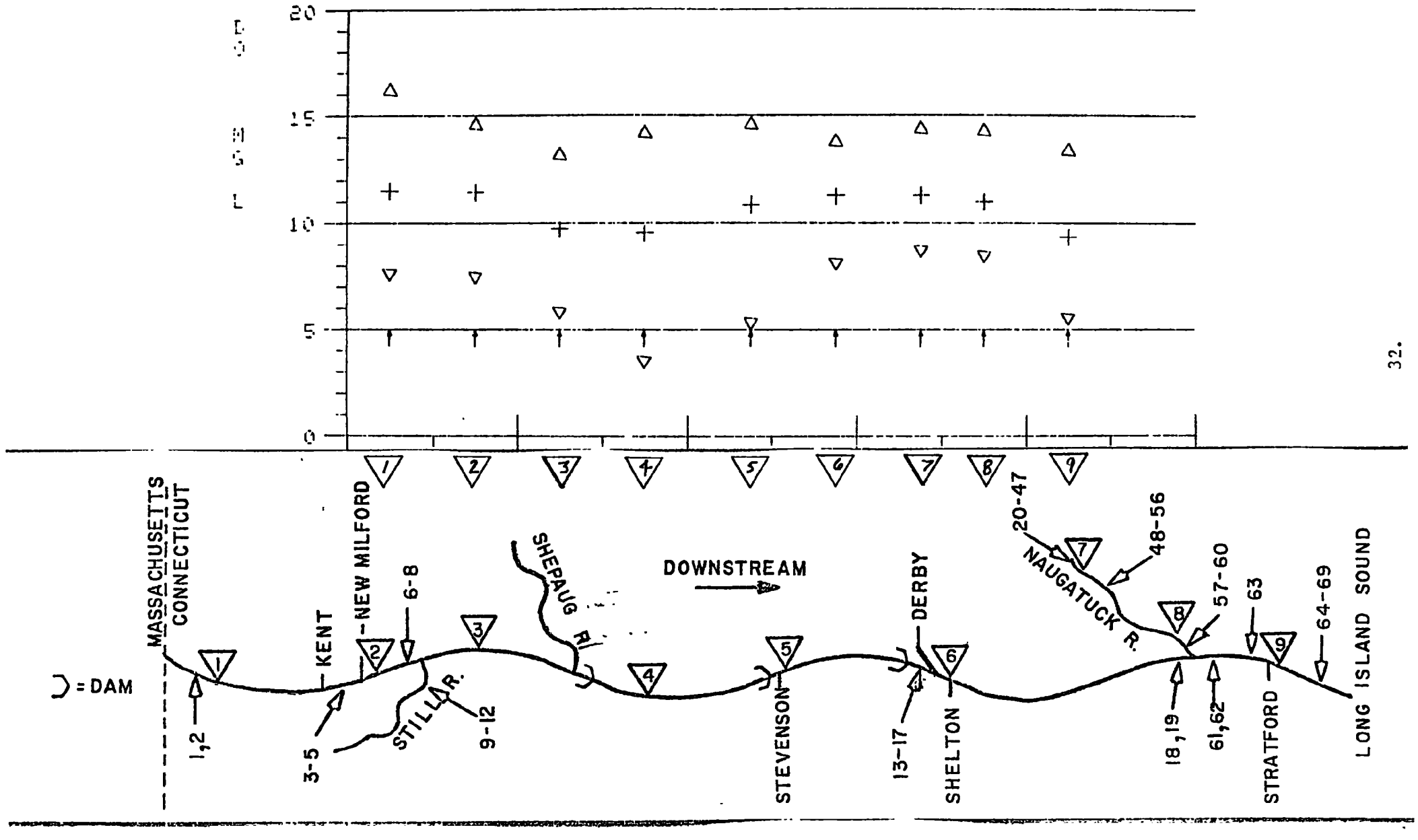
SIGNIFICANT DISCHARGERS

HOUSATONIC RIVER BASIN (CT.)

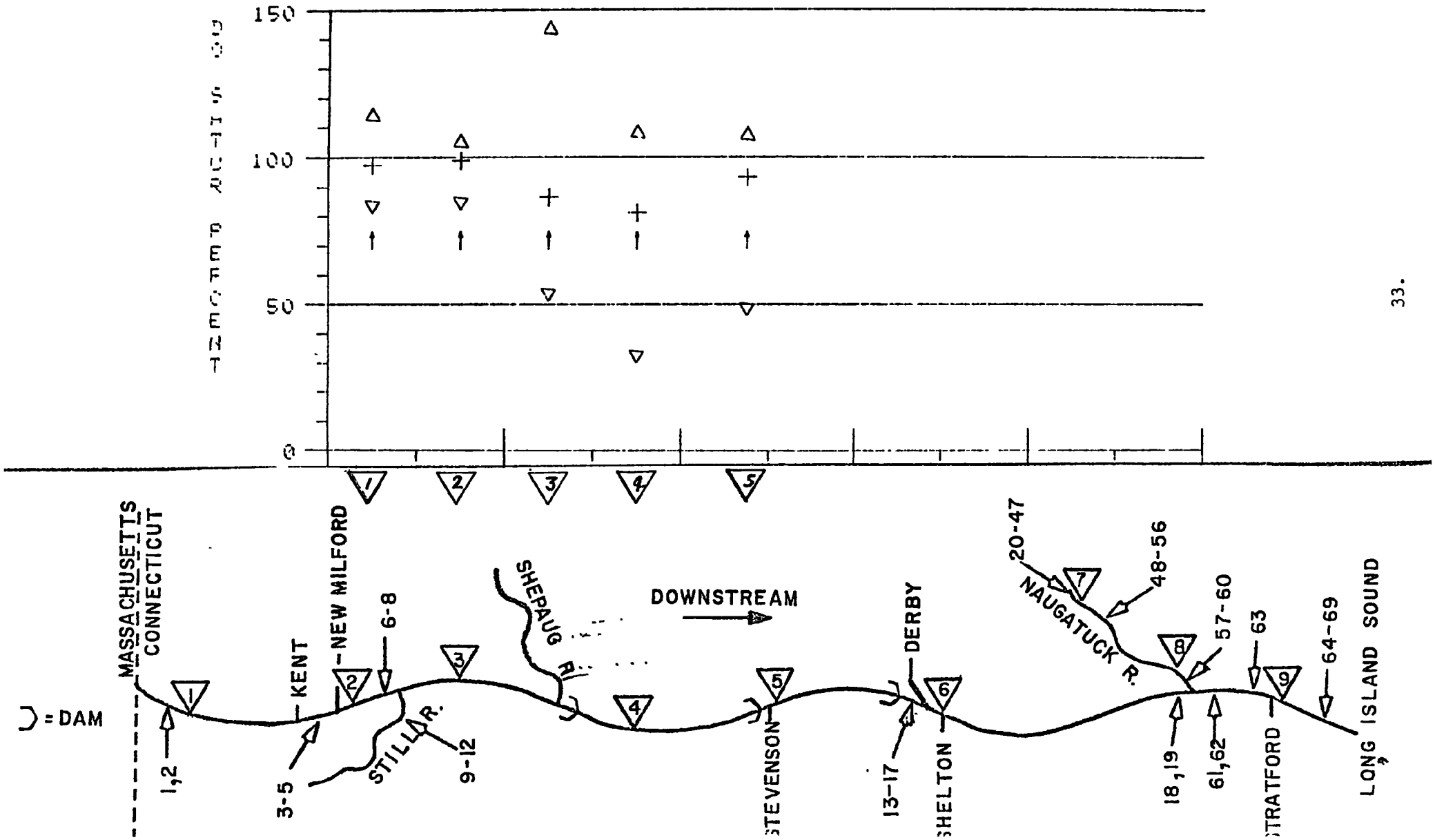
	Discharger	Location	Receiving Water	NPDES No.
1.	North Canaan STP	North Canaan	Blackberry R.	0100064
2.	Norfolk STP	Norfolk	Blackberry R.	0101231
3.	Diventco, Inc.	New Milford	Housatonic R.	0002607
4.	Scovill Mfg.	New Milford	Housatonic R.	0003930
5.	Nestle Co., Inc. Maggi Division	New Milford	Housatonic R.	0000850
6.	New Milford STP	New Milford	Housatonic R.	0100391
7.	Kimberly-Clark	New Milford	Housatonic R.	0003212
8.	Burndy Corp.	New Milford	Housatonic R.	0001546
9.	Danbury STP	Danbury	Still R.	0100145
10.	Bethel STP	Bethel	Sympaug R.	0100021
11.	Risdon Mfg.	Danbury	Still R.	0002623
12.	Electronic Metal Finishing	Danbury	Still R.	0001619
13.	Empire State Novelty	Shelton	Housatonic R.	0001732
14.	The Chromium Process	Shelton	Housatonic R.	0000744
15.	Star Pin Co.	Shelton	Housatonic R.	0001163
16.	Hull Dye & Print Works	Derby	Housatonic R.	0000639
17.	W. E. Bassett Co.	Derby	Housatonic R.	0002992
18.	Shelton STP	Shelton	Housatonic R.	0100714
19.	Derby STP	Derby	Housatonic R.	0100161
20.	Torrington STP	Torrington	Naugatuck R.	0100579
21.	Thomaston STP	Thomaston	Naugatuck R.	0100781
22.	Watertown STP	Watertown	Steel Brook	0100633
23.	Waterbury STP	Waterbury	Naugatuck R.	0100625
24.	American Chains & Cable	Waterbury	Naugatuck R.	0000035
25.	Risdon Mfg.	Waterbury	Smugg Brook	0002364
26.	Harper-Leader	Waterbury	Naugatuck	0001791
27.	Mattatuck Mfg.	Waterbury	Mad R.	0020478
28.	Scovill Mfg.	Waterbury	Mad R.	0003948
29.	Waterbury Buckle	Waterbury	Mad R.	0003671
30.	Somers Thin Strip	Waterbury	Naugatuck R.	0021043
31.	Anaconda American Brass	Waterbury	Naugatuck R.	0002976
32.	Chase Brass & Copper Forgings	Waterbury	Great Brook	0000281
33.	Anaconda American Brass	Waterbury	Naugatuck R.	0021717
34.	All-Brite Chemical Co.	Watertown	Steel Brook	0002071
35.	Sherwood Medical Ind.	Waterbury	Steel Brook	0003417
36.	Anchor Fasteners	Waterbury	Steel Brook	0002241
37.	Electrochemical Proc.	Watertown	Turkey Brook	0020591
38.	Scovill Mfg., Sewing Notions Div.	Watertown	Echo Lake Brook	0001074
39.	Winchester Electronic	Watertown	Steel Brook	0021270
40.	Chase Copper & Brass Copper Metals Div.	Waterbury	Naugatuck R.	0003051
41.	Summity Finishing	Thomaston	Naugatuck R.	0001180

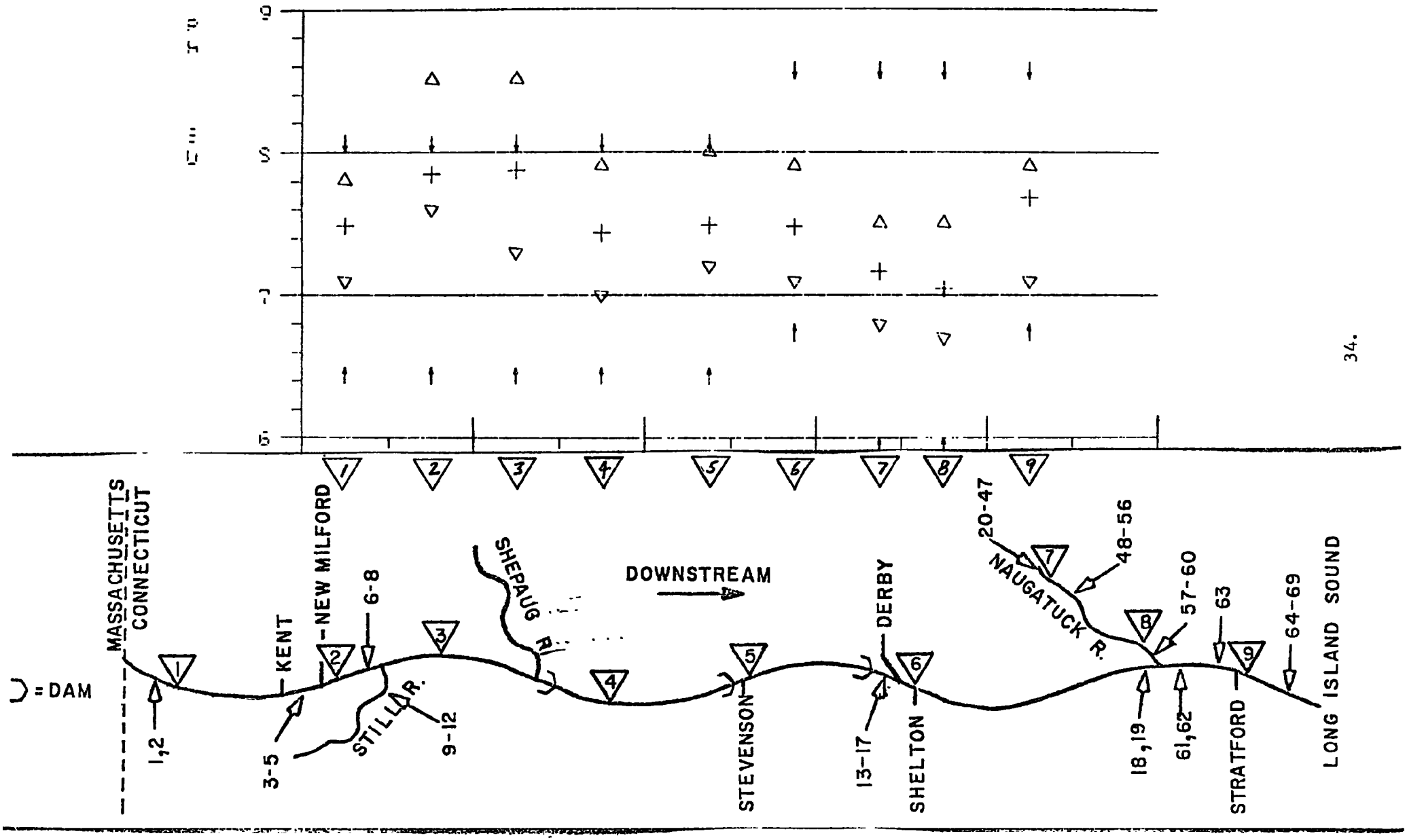
	Discharger	Location	Receiving Water	NPDES No.
42.	Whyco Chromium	Thomaston	Naugatuck R.	0001457
43.	Drawn Metal Tube	Thomaston	Naugatuck R.	0001601
44.	Plume and Atwood	Thomaston	Naugatuck R.	0004065
45.	Turner & Seymour Co.	Torrington	Gulf Stream Brook	0001970
46.	Colonial Bronze Co.	Torrington	Troy Brook	0000357
47.	Brunswick Corp.	Torrington	Naugatuck R.	0002909
48.	Naugatuck STP	Naugatuck	Naugatuck R.	0100641
49.	Beacon Falls STP	Beacon Falls	Naugatuck R.	0101061
50.	Ideal Mfg.	Beacon Falls	Hemp Swamp Brook	0000671
51.	Homer D. Bronson	Beacon Falls	Lebanon Brook	0002518
52.	Uniroyal Co. Footwear Division	Naugatuck	Naugatuck R.	0001309
53.	Douval Tool & Mfg.	Naugatuck	Long Meadow Brook	0001597
54.	Risdon Mfg. FMP Div.	Naugatuck	Long Meadow Brook	0002194
55.	Timex Corp.	Middlebury	Long Swamp Bk.	0002828
56.	Donham Craft	Naugatuck	Falling Mill Brook	0004057
57.	Seymour STP	Seymour	Naugatuck R.	0100501
58.	Ansonia STP	Ansonia	Naugatuck R.	0100013
59.	U.S.M. Corp. Farrel Co.	Ansonia	Naugatuck R.	0003646
60.	Bridgeport Brass	Seymour	Naugatuck R.	0000191
61.	Auto Swage Div.	Shelton	Housatonic R.	0020826
62.	USM Corp. Fastener Division	Shelton	Housatonic R.	0003630
63.	Sikorsky Aircraft	Stratford	Housatonic R.	0001716
64.	Stratford STP	Stratford	Housatonic R.	0101036
65.	Milford STP	Milford	Housatonic R.	0100765
66.	Avco Lycoming	Stratford	Housatonic R.	0002984
67.	Raybestos Manhattan	Stratford	Housatonic R.	0001881
68.	Dresser Industries	Stratford	Housatonic R.	0000400
69.	Contract Plating	Stratford	Long Brook	0000370

REGION I WQ ASSESSMENT REPORT - HOUSATONIC R. (CT)



REGION I WQ ASSESSMENT REPORT - HOUSATONIC R. (CT)

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KENT
NEW MILFORD
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SHEPAUG R.
DOWNSTREAM
DERBY
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NAUGATUCK R.
48-56
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64-69
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STEVENSON
13-17
SHELTON
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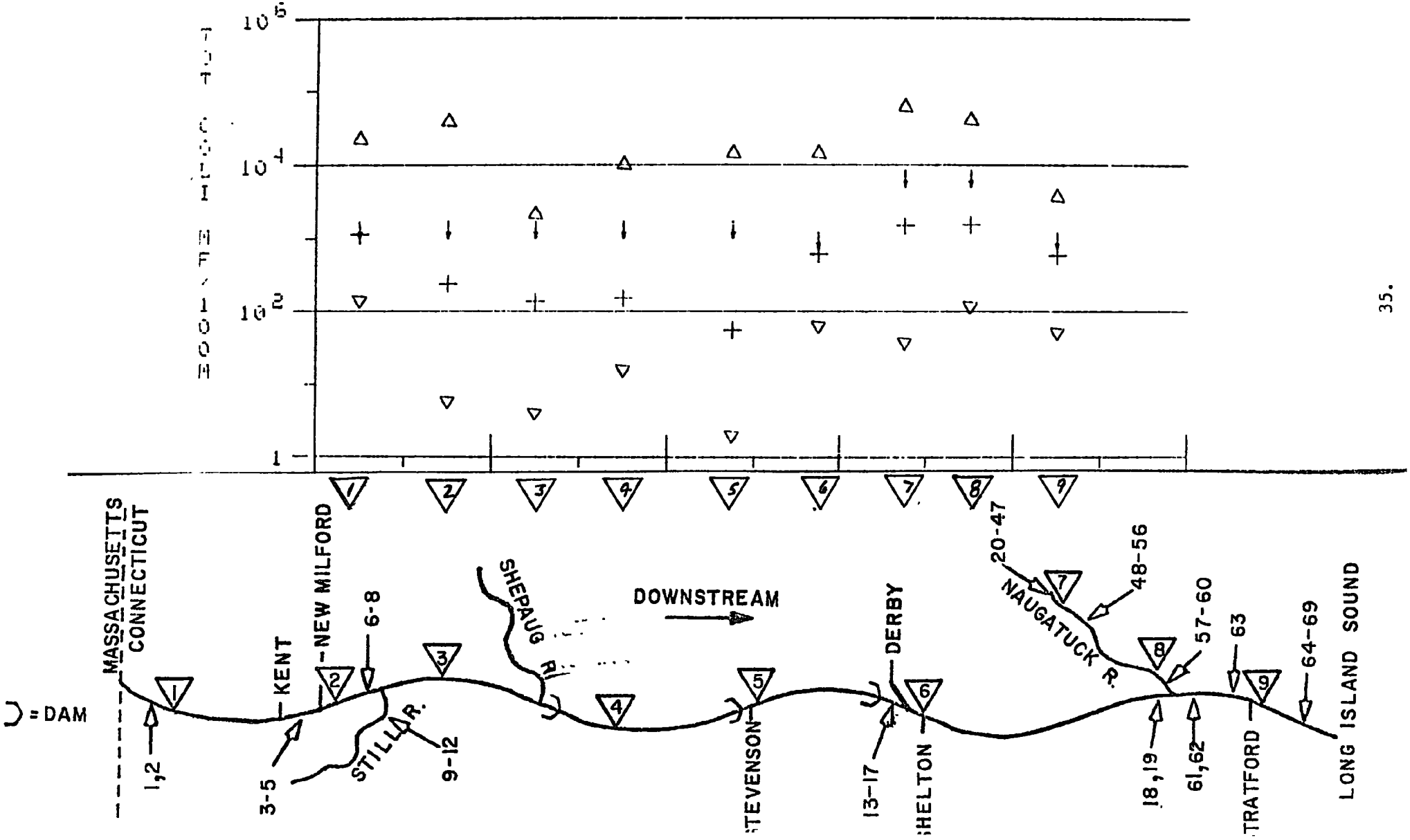
61,62
STRATFORD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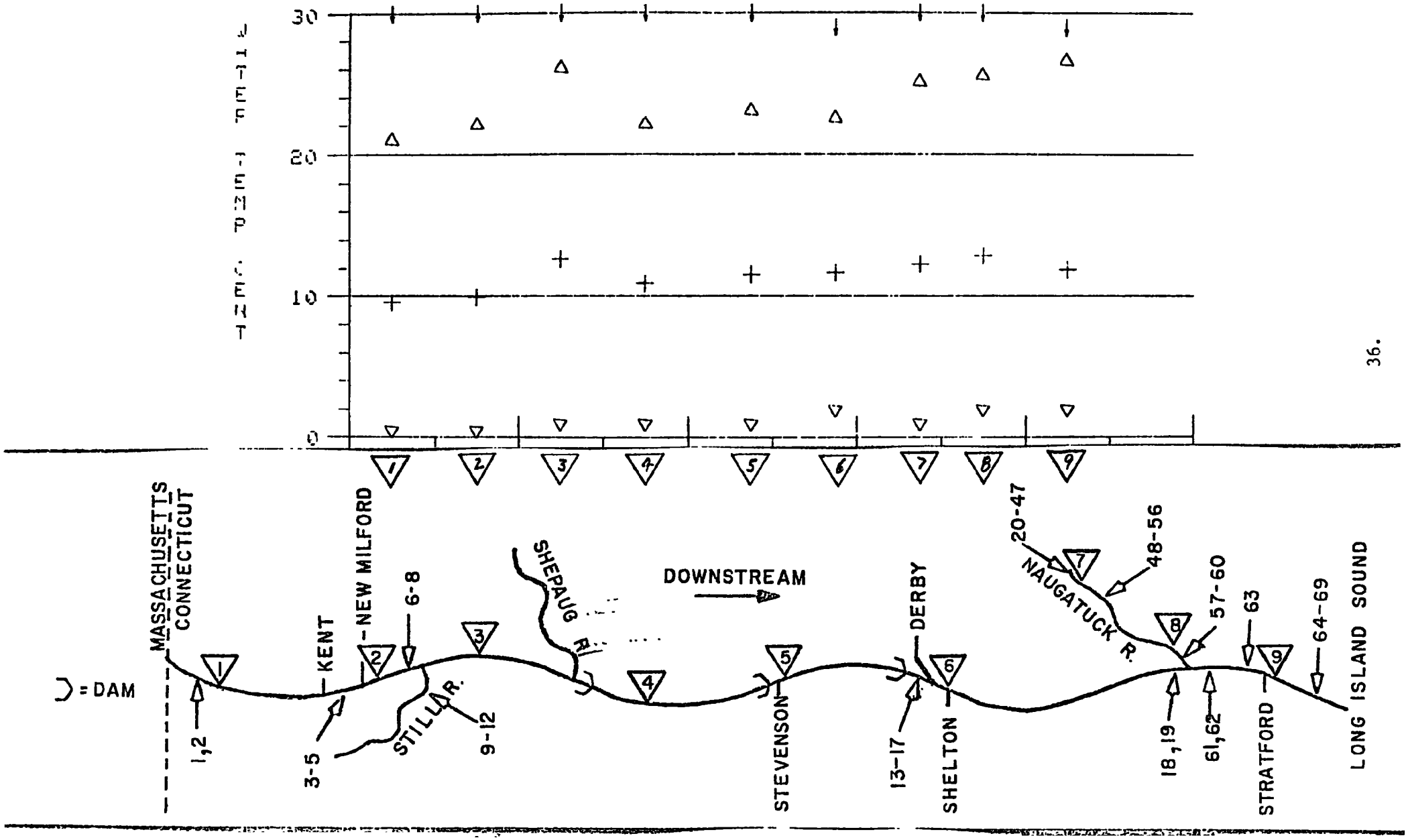
STRATFORD

REGION I WQ ASSESSMENT REPORT - HOUSATONIC R. (CT)



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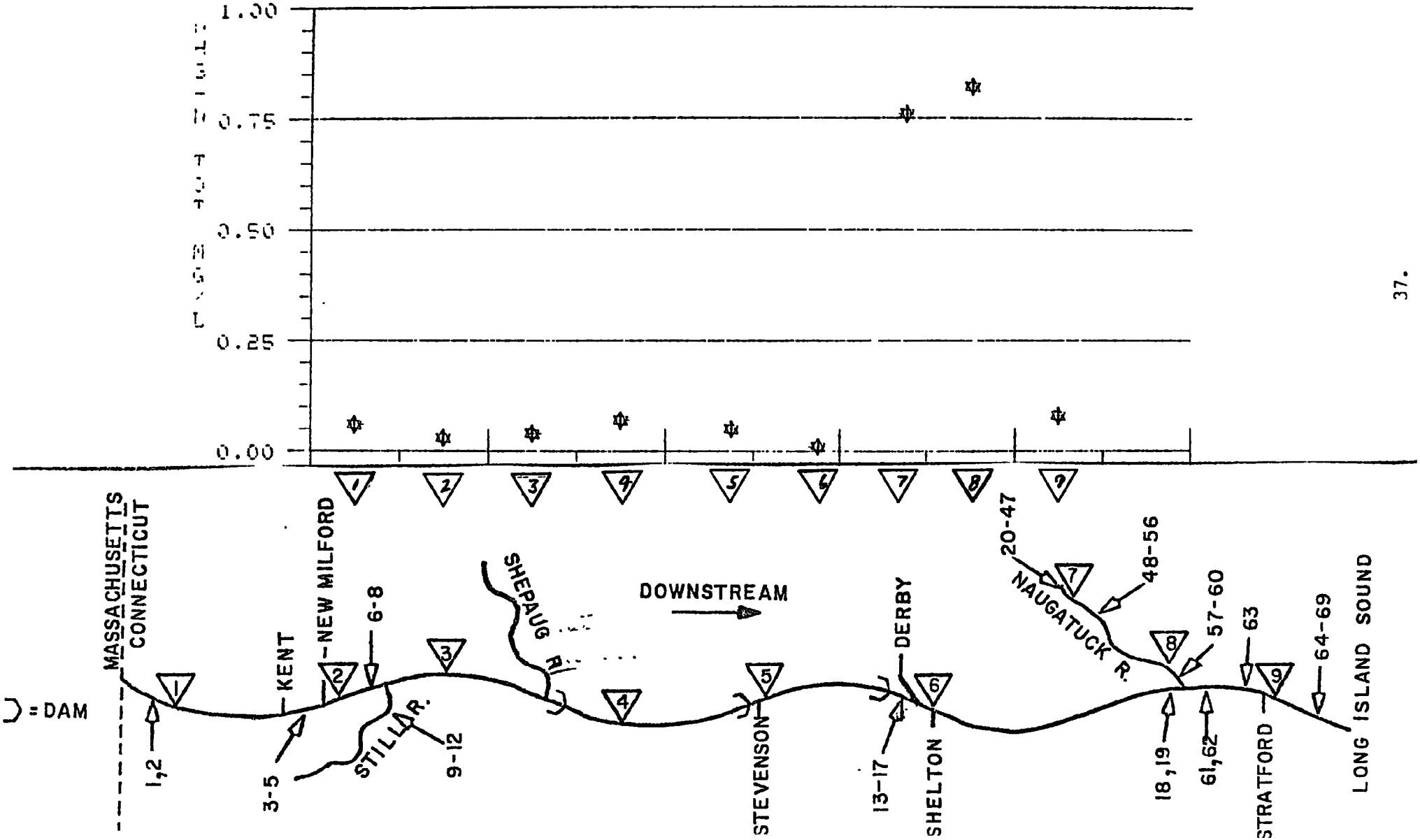

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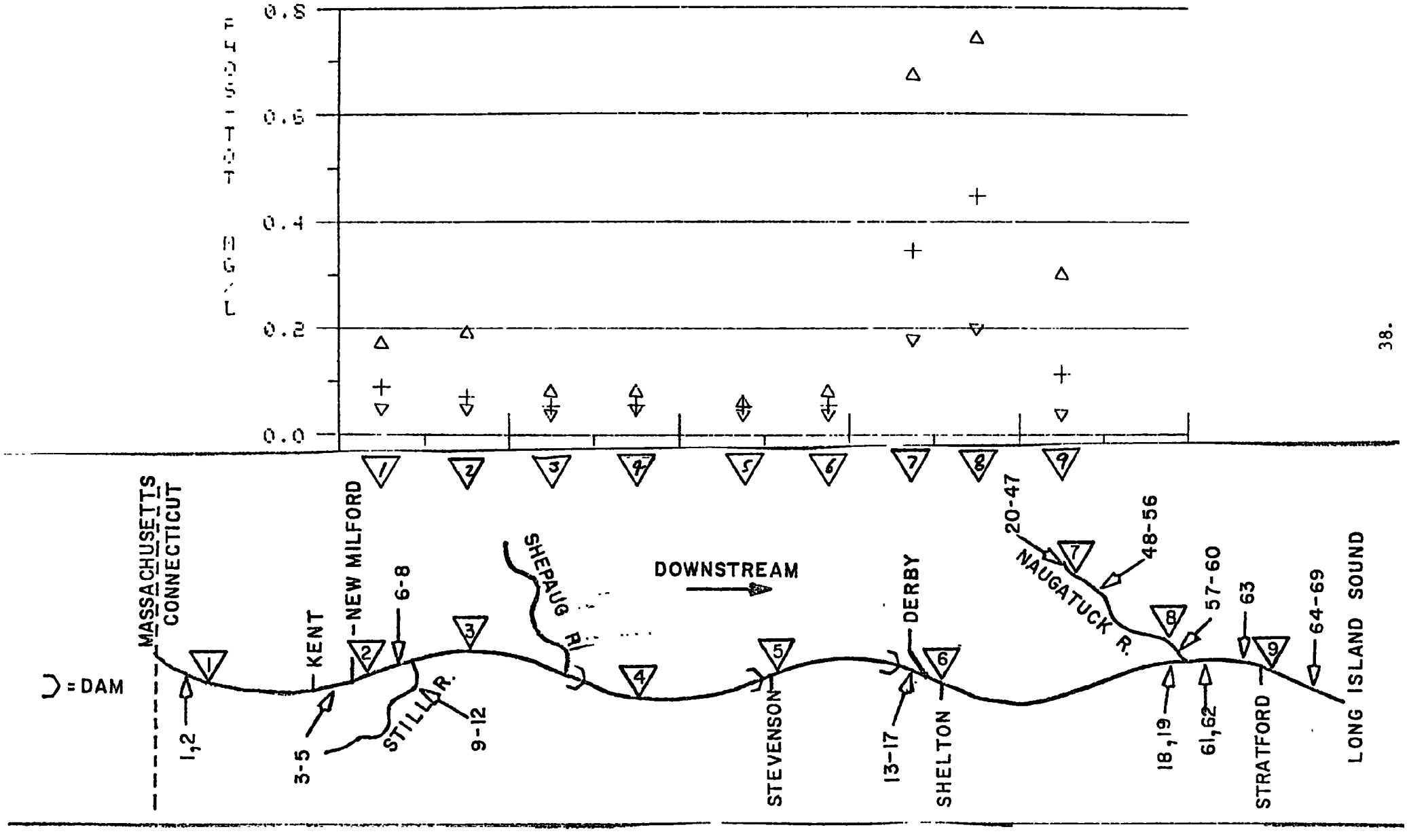

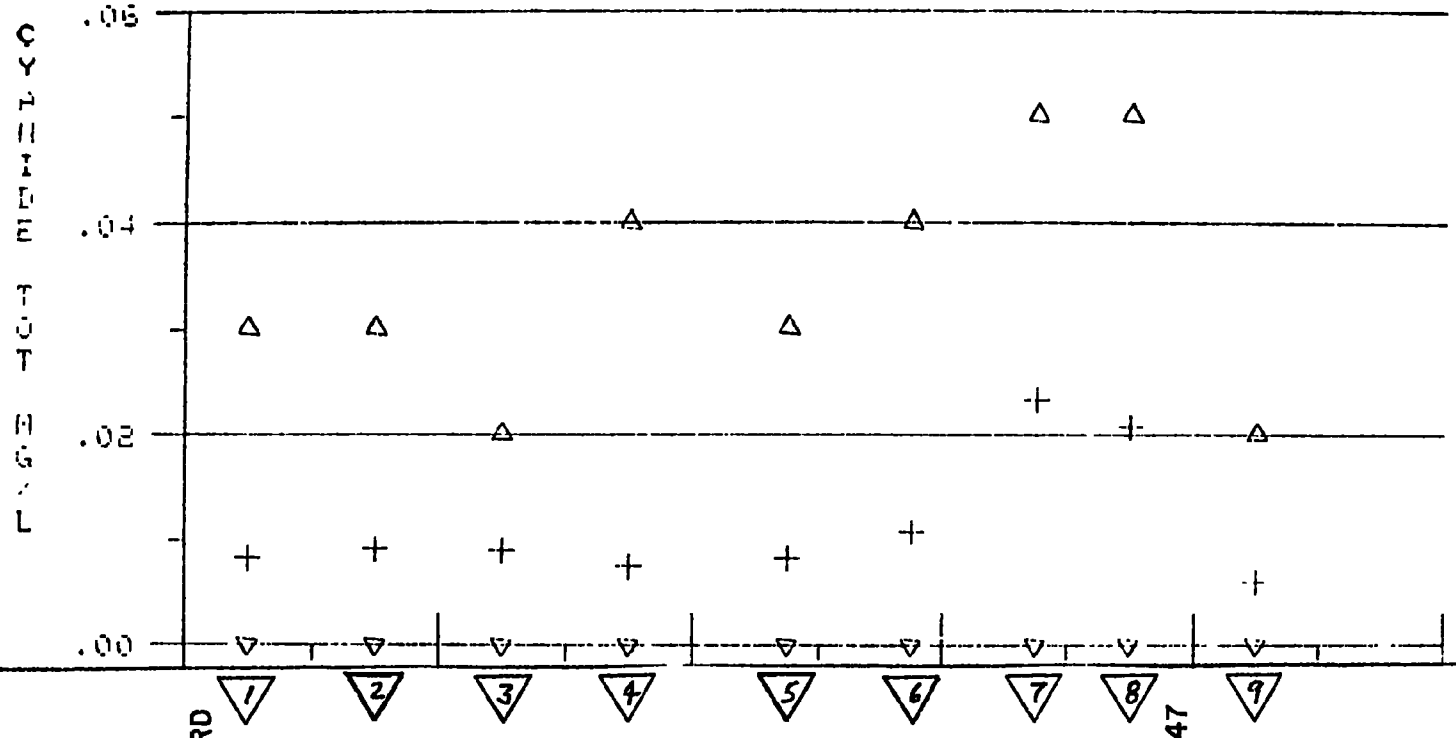
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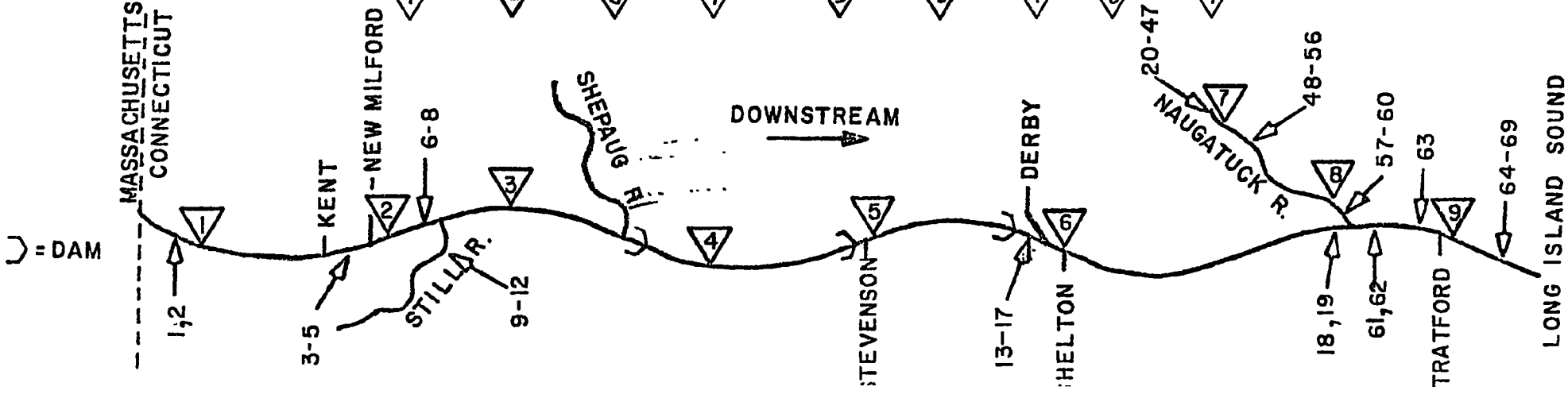
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SHEPAUG R.
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STEVENSON
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TRATFORD
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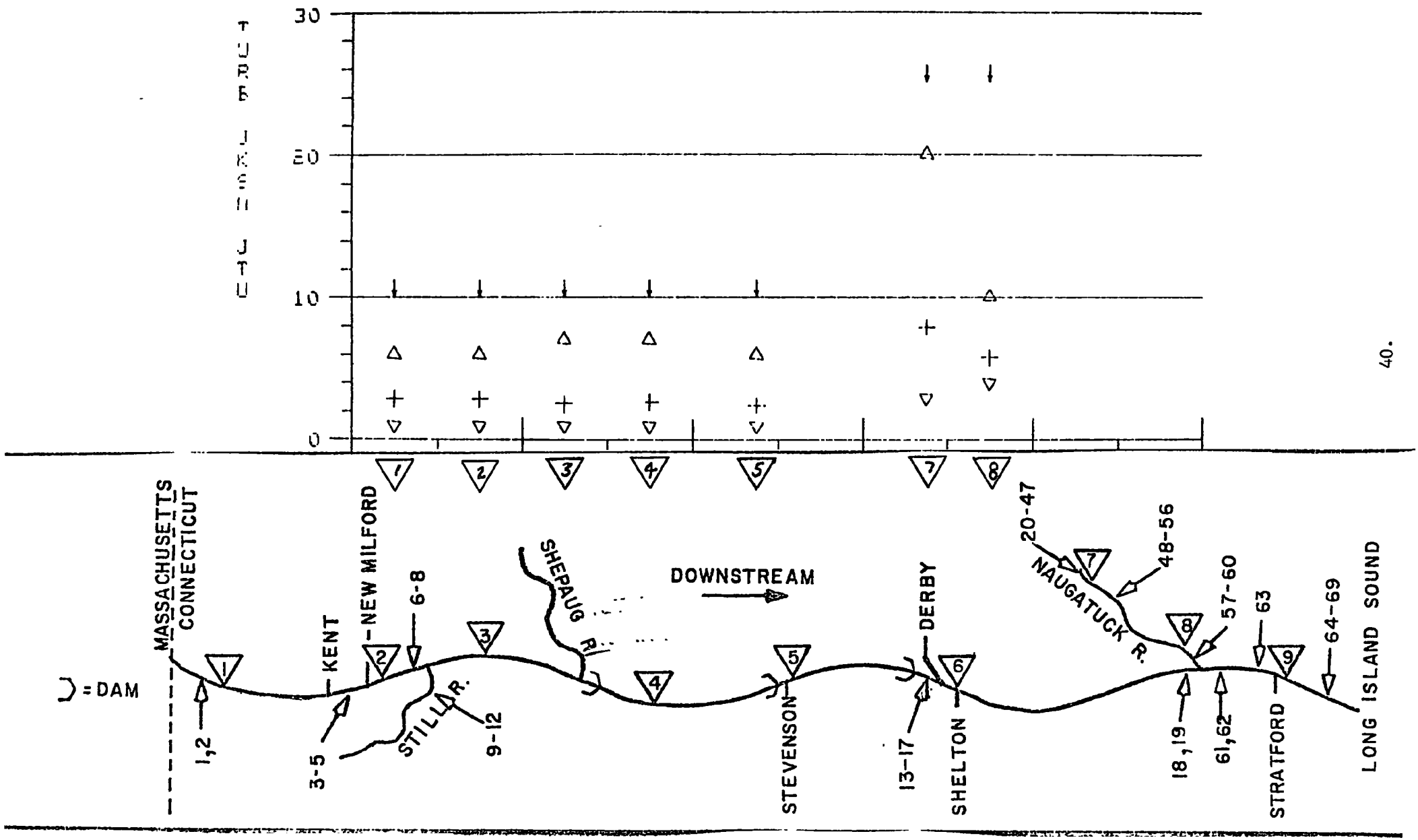
LONG ISLAND SOUND

REGION I WQ ASSESSMENT REPORT - HOUSATONIC R. (CT)



Plots
DO
Tot Phos

3.3 QUINNIPIAC RIVER

The Quinnipiac River Basin lies between the Housatonic and Connecticut River basins and drains an area of south central Connecticut. The mainstem of the Quinnipiac River flows from the New Britain - Plainville, Connecticut area to New Haven Harbor and into Long Island Sound.

High phosphorus levels and coliform bacteria violations are reported along the entire length of the Quinnipiac River. The station at Meriden (Plot Station No. 1) reports violations of Class "B" standards for dissolved oxygen (2 of 12) and dissolved oxygen saturated percent (4 of 12). The North Haven station also reports violations of the Connecticut Class "B" standards for dissolved oxygen (2 of 12) and dissolved oxygen saturated percent (5 of 12).

Inadequate sewage treatment at Southampton, Meriden, Wallingford, North Haven, and New Haven, as well as combined sewer discharges in Wallingford and New Haven, are thought to be responsible for the coliform bacteria and DO problems. Work is scheduled for all of the above areas in FY-76 and FY-77 according to the Connecticut FY-76 Program Plan.

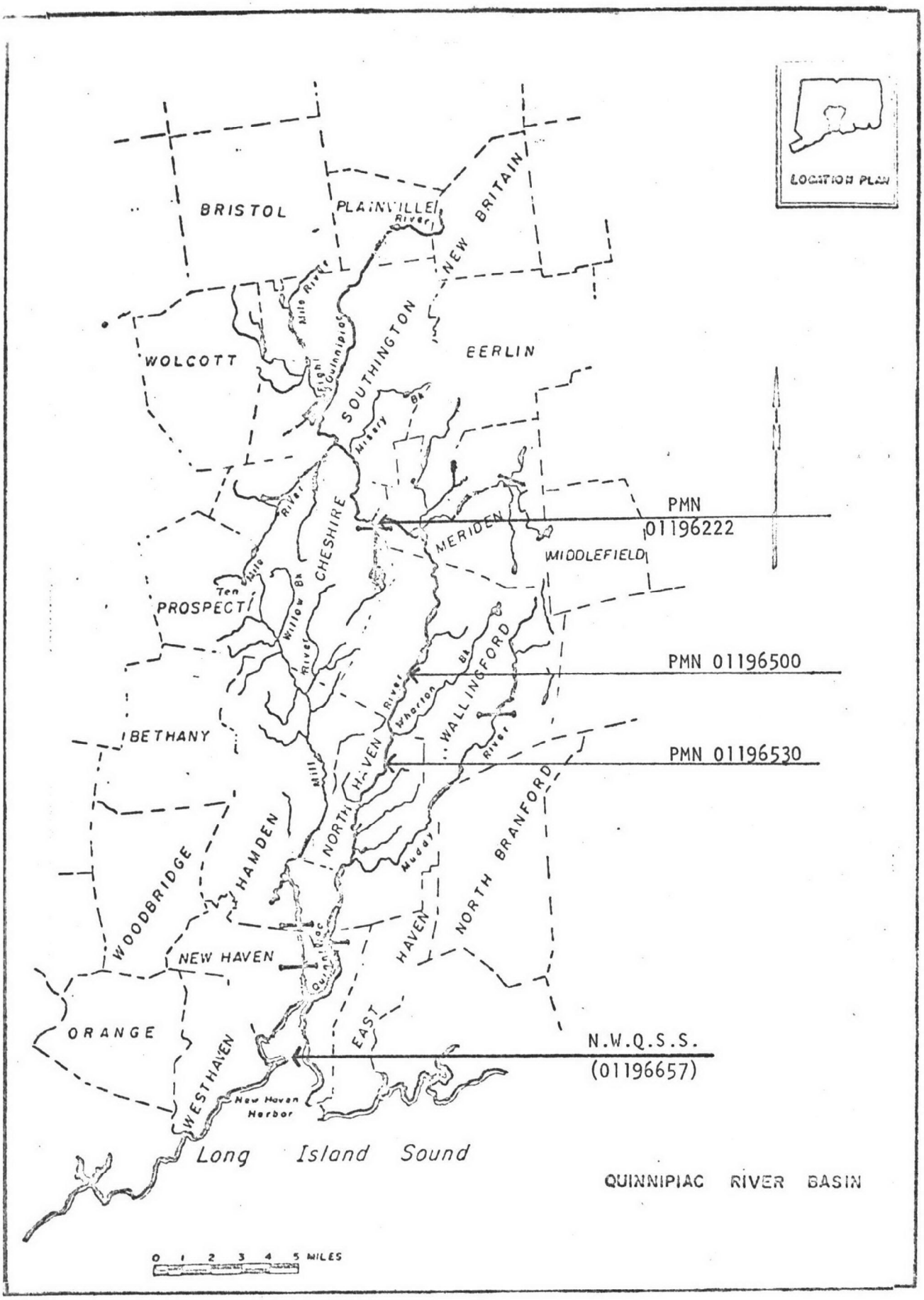
QUINNIPIAC RIVER BASIN

{CONNECTICUT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Quinnipiac River near Meriden, CT	PMN 01196222
2.	Quinnipiac River near Wallingford, CT	PMN 01196500
3.	Quinnipiac River near North Haven	PMN 01196530
4.	New Haven Harbor	PMN 01196657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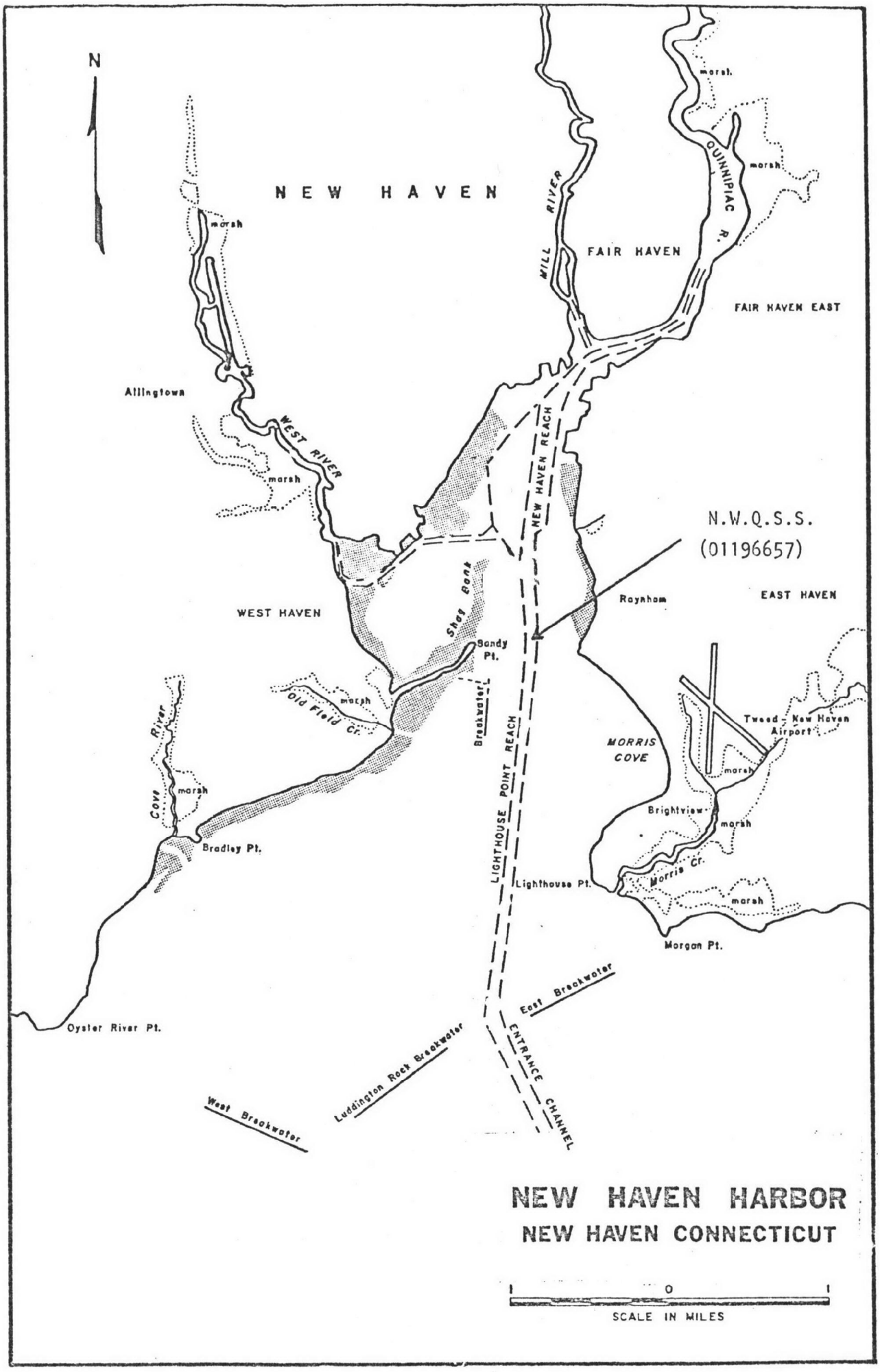
PLAINVILLE
NEW BRITAIN
WOLCOTT
SOUTHINGTON
BERLIN
CHESHIRE
MERIDEN
MIDDLEFIELD
PROSPECT
WALLINGFORD
BETHANY
NORTH HAVEN
NORTH BRANFORD
HAMDEN
WOODBRIDGE
NEW HAVEN
EAST HAVEN
ORANGE
WESTHAVEN
New Haven Harbor
Long Island Sound
PMN 01196222
PMN 01196500
PMN 01196530
N.W.Q.S.S. (01196657)
QUINNIPIAC RIVER BASIN
0 1 2 3 4 5 MILES



NEW HAVEN HARBOR
NEW HAVEN CONNECTICUT

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01196222 QUINNIPIAC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	11.75
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	4.67
DISS. OXYGEN MG/L	12	2.	16.67	5.00	NONE	9.34
DISS. OXYGEN SATUR %	12	4.	33.33	75.00	NONE	81.17
PH SU	12	0.	0.0	6.50	8.00	7.12
COLIFORM TOT MFIM/100ML	12	9.	75.00	NONE	1000.00	1874.30

STATION 01196500 QUINNIPIAC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	12.54
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	6.42
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	10.43
DISS. OXYGEN SATUR %	12	0.	0.0	75.00	NONE	93.75
PH SU	12	0.	0.0	6.50	8.00	7.21
COLIFORM TOT MFIM/100ML	12	9.	75.00	NONE	1000.00	5668.27

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01196530 QUINNIPIAC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	12.92
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	5.67
DISS. OXYGEN MG/L	12	2.	16.67	5.00	NONE	8.44
DISS. OXYGEN SATUR %	12	5.	41.67	75.00	NONE	74.75
PH SU	12	0.	0.0	6.50	8.00	7.24
COLIFORM TOT MFIM/100ML	12	10.	83.33	NONE	1000.00	7460.10

STATION 01196656 QUINNIPIAC R. (CT)

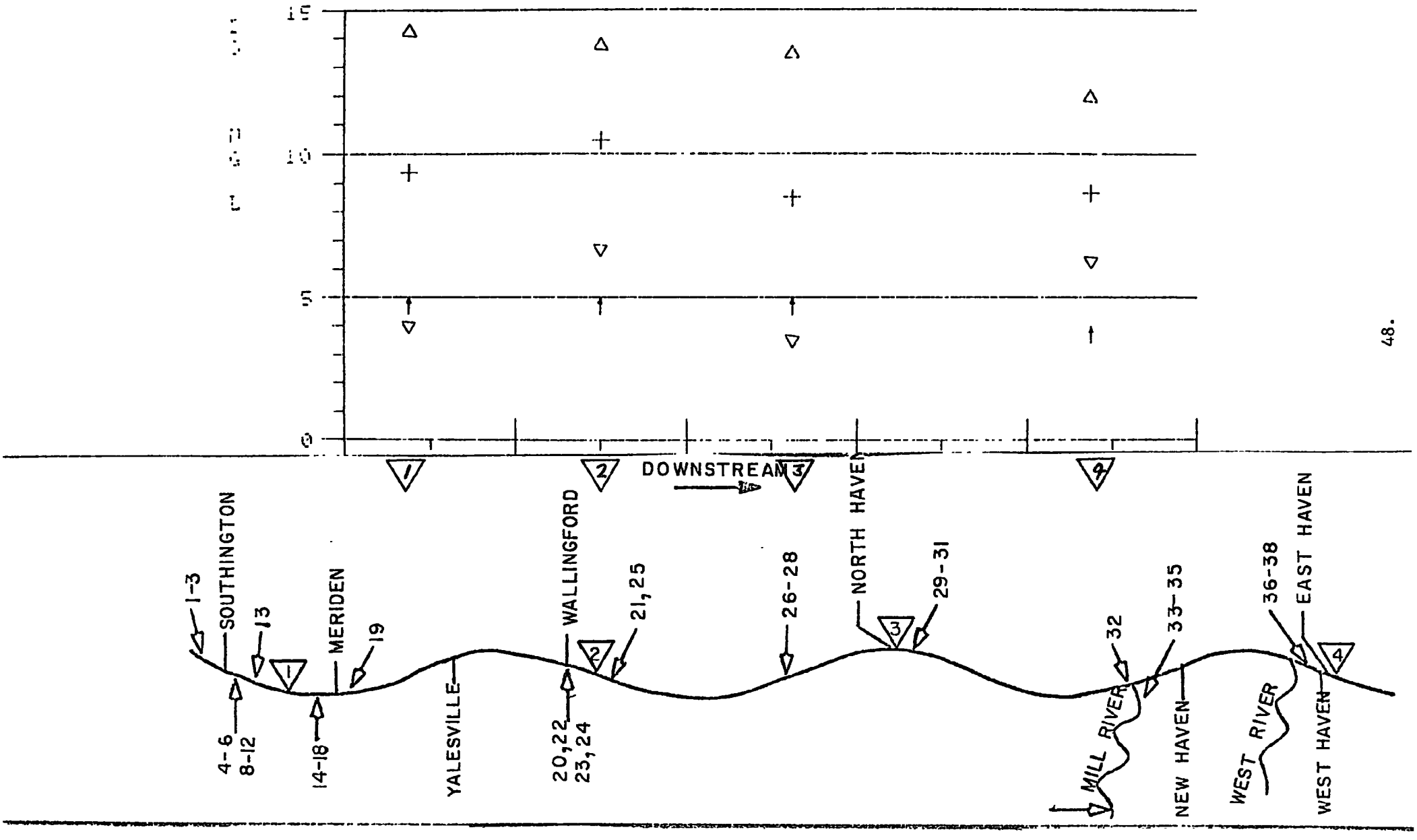
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	26.30	11.92
DISS. OXYGEN MG/L	13	0.	0.0	4.00	NONE	8.65
PH SU	12	0.	0.0	6.50	8.50	7.82
COLIFORM TOT MFIM/100ML	12	7.	58.33	NONE	5000.00	5134.12

* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

QUINNIPIAC RIVER BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	Angelo Tomasso, Inc.	Plainville	Quinnipiac R.	0020656
2.	General Electric Circuit Devices	Plainville	Quinnipiac R.	0001708
3.	Bristol Spring Mfg.	Plainville	Quinnipiac R.	0002603
4.	Waterbury Farrel-Textron Co.	Cheshire	Ten Mile R.	0021814
5.	Consolidated Industries	Cheshire	Tem Mile R.	0020427
6.	Dot Fastener Co.	Cheshire	Ten Mile R.	0001694
7.	Balland Socket Mfg. Co.	Cheshire	Willow Brook	0020877
8.	Beaton & Corbin Mfg. Co.	Southington	Quinnipiac R.	0001635
9.	Light Metals Coloring Co.	Southington	Quinnipiac R.	0003913
10.	Pratt & Whitney Co.	Southington	Quinnipiac R.	0001392
11.	Conrex Corp.	Southington	Quinnipiac R.	0001902
12.	Southington STP	Southington	Quinnipiac R.	0100536
13.	Cheshire STP	Cheshire	Quinnipiac R.	0100081
14.	The Miller Co.	Meriden	Harbor Brook	0003247
15.	Union Nfg.	Meriden	Harbor Brook	0001252
16.	MRM Industries	Meriden	Sodam Brook	0000752
17.	J. B. Coggins Mfg.	Meriden	Clark Brook	0000027
18.	The Napier Co.	Meriden	Quinnipiac R.	0000825
19.	Meriden STP	Meriden	Quinnipiac R.	0100315
20.	Times Wire & Cable Co.	Wallingford	Quinnipiac R.	0003514
21.	American Cyanamid Co.	Wallingford	Quinnipiac R.	0000086
22.	Eyelet Specialty Co.	Wallingford	Quinnipiac R.	0000469
23.	Wallace Silversmiths	Wallingford	Quinnipiac R.	0002437
24.	Wallingford Steel	Wallingford	Quinnipiac R.	0003701
25.	Wallingford STP	Wallingford	Quinnipiac R.	0100617
26.	Pratt & Whitney	NorthHaven	Quinnipiac R.	0001384
27.	Burndy Corp.	NorthHaven	Quinnipiac R.	0001554
28.	NorthHaven STP	NorthHaven	Quinnipiac R.	0100404
29.	Humphrey Chemical Co.	NorthHaven	Quinnipiac R.	0003891
30.	Marlin Firearms Co.	NorthHaven	Watermans Brook	0003221
31.	Upjohn Company	NorthHaven	Quinnipiac R.	0001341
32.	Sargent and Co.	New Haven	New Haven Harbor	0001066
33.	United Illuminating English Station	New Haven	Mill R.	0003794
34.	Cerro Wire & Cable Co.	New Haven	Mill R.	0000256
35.	Simkins Industries, Inc.	New Haven	Mill R.	0003425
36.	New Haven East St. STP	New Haven	New Haven Harbor	0100358
37.	New Haven East Shore STP	New Haven	New Haven Harbor	0100366
38.	New Haven Boulevard STP	New Haven	New Haven Harbor	0100340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MERIDEN
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YALESVILLE
WALLINGFORD
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NORTH HAVEN
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MILL RIVER
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EAST HAVEN
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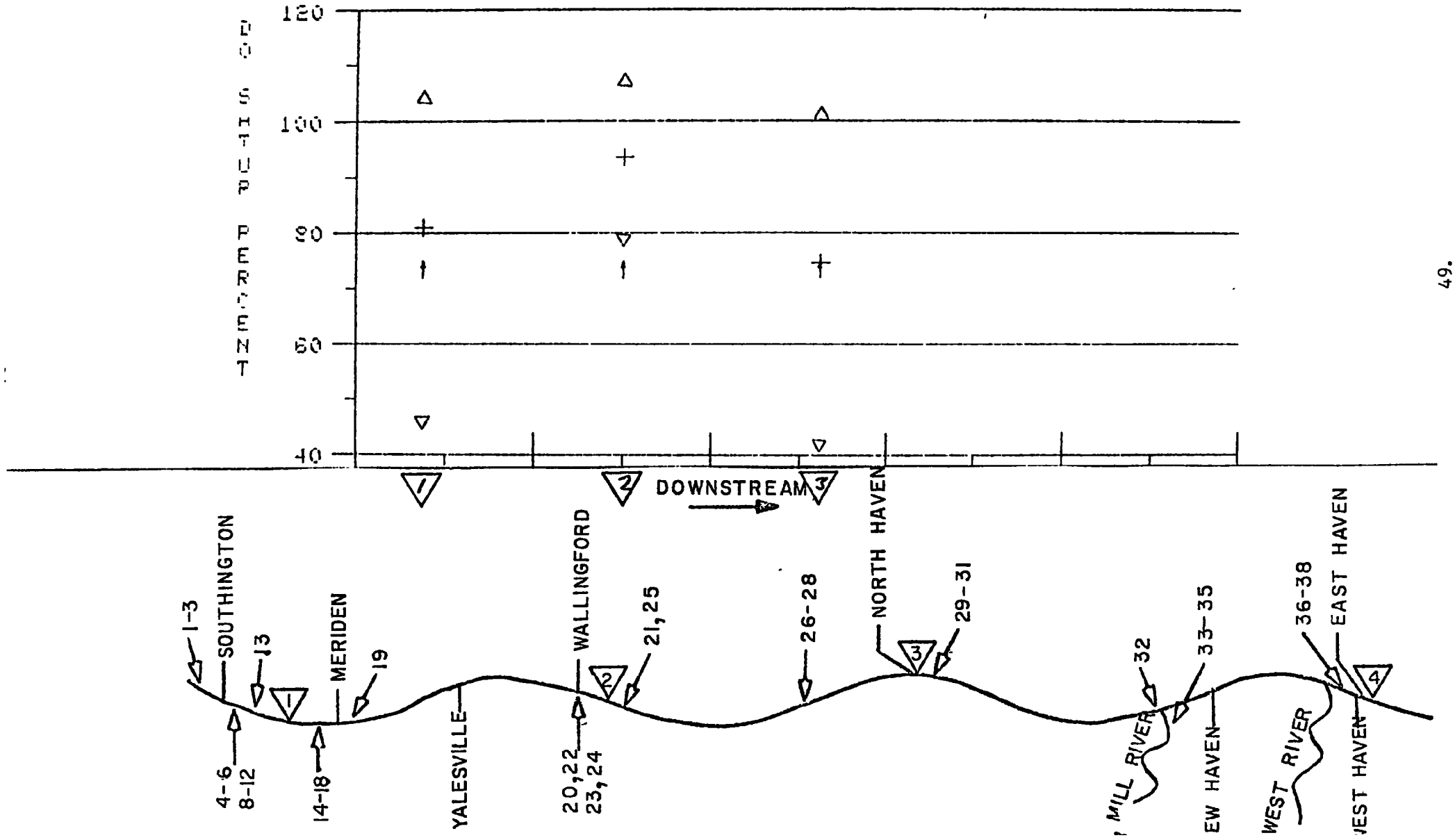
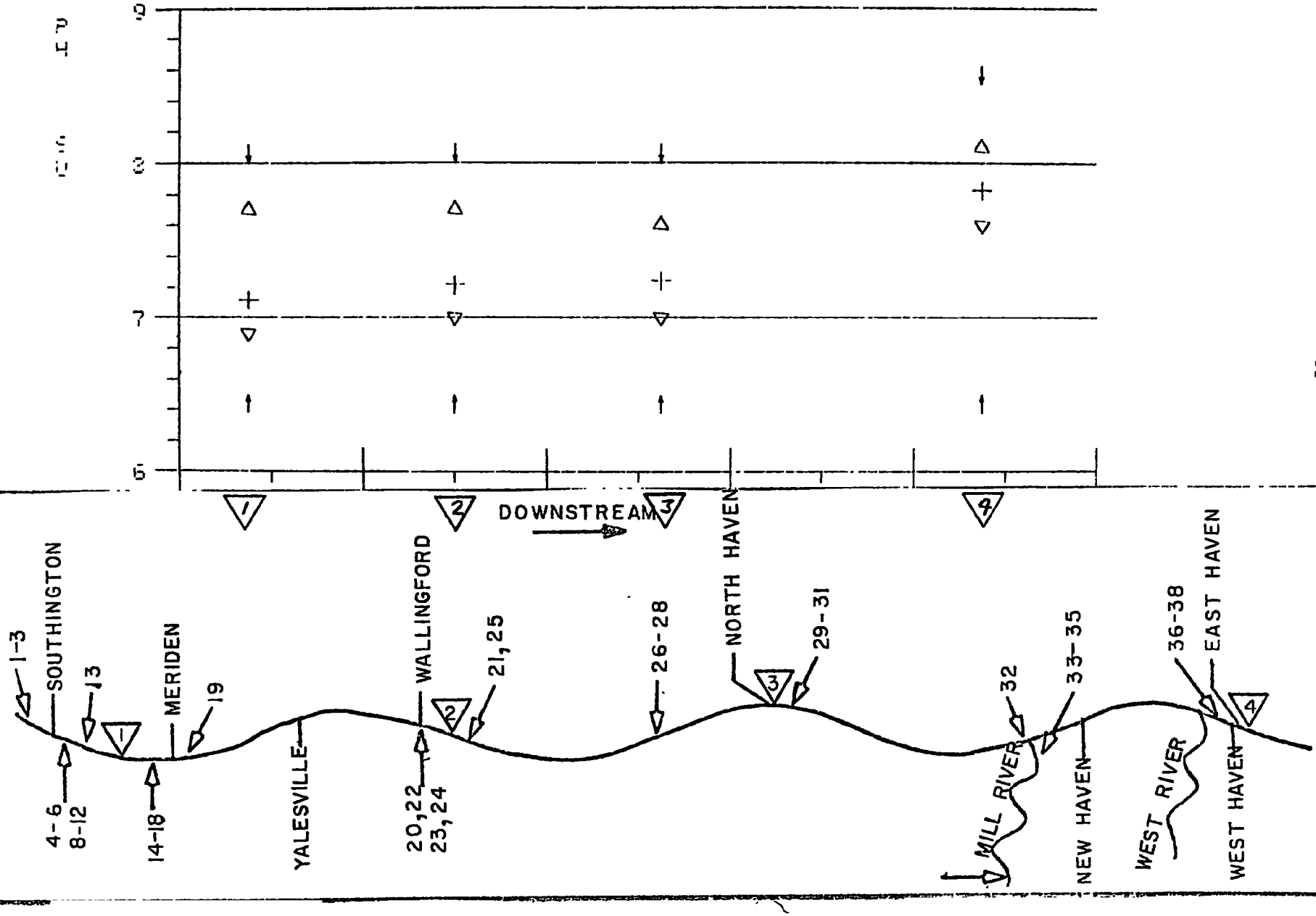
REGION I WQ ASSESSMENT REPORT - QUINNIPIAC R. (CT)

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MERIDEN
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WALLINGFORD
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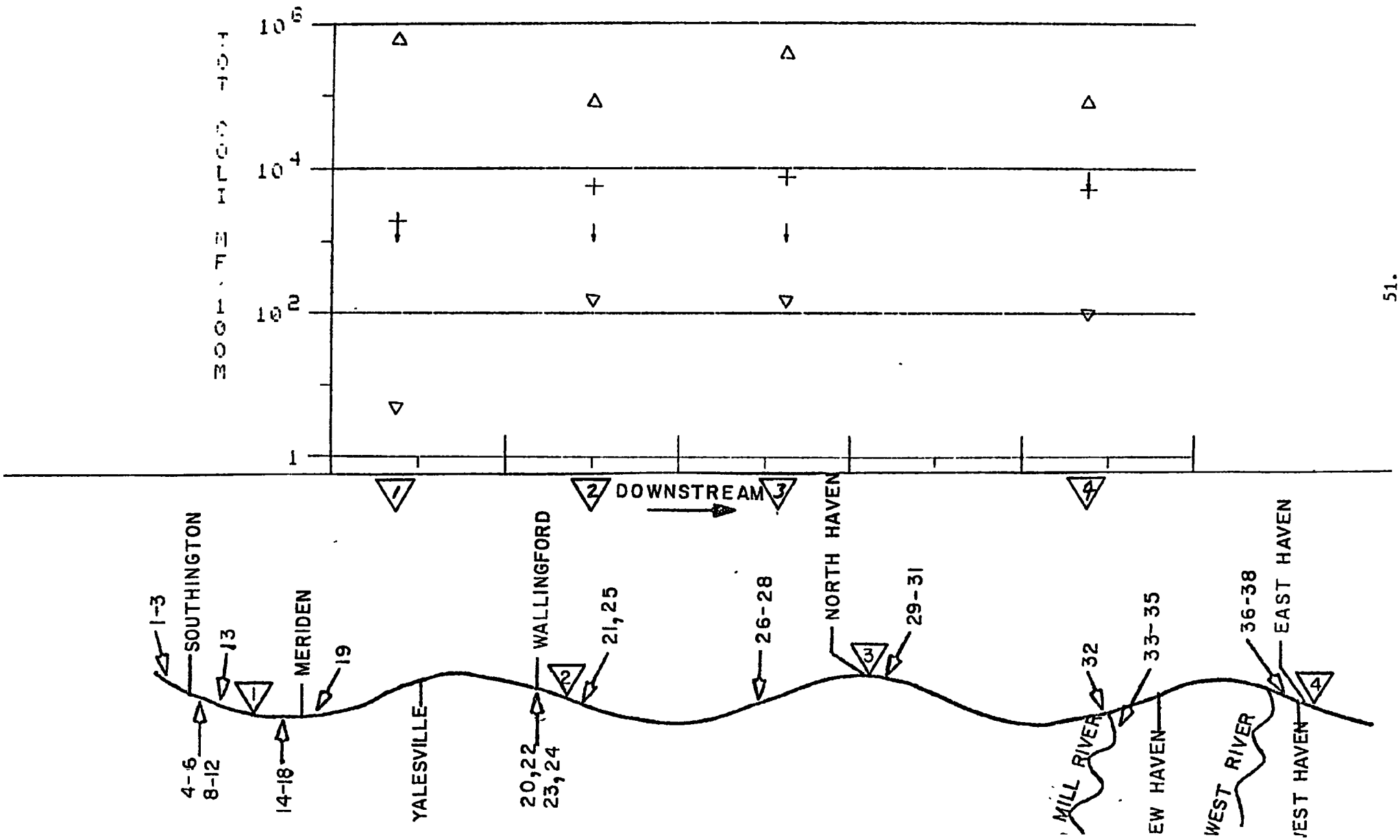
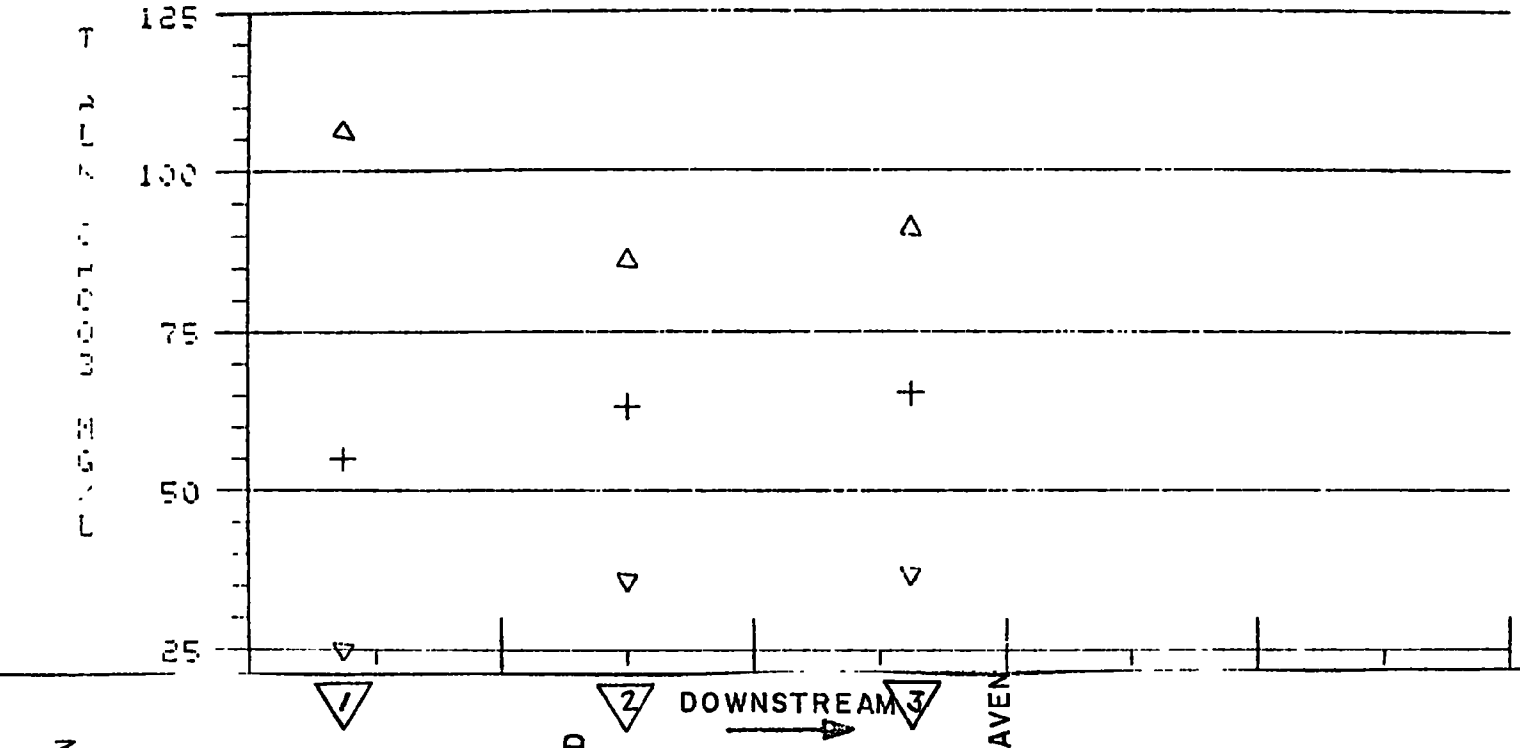
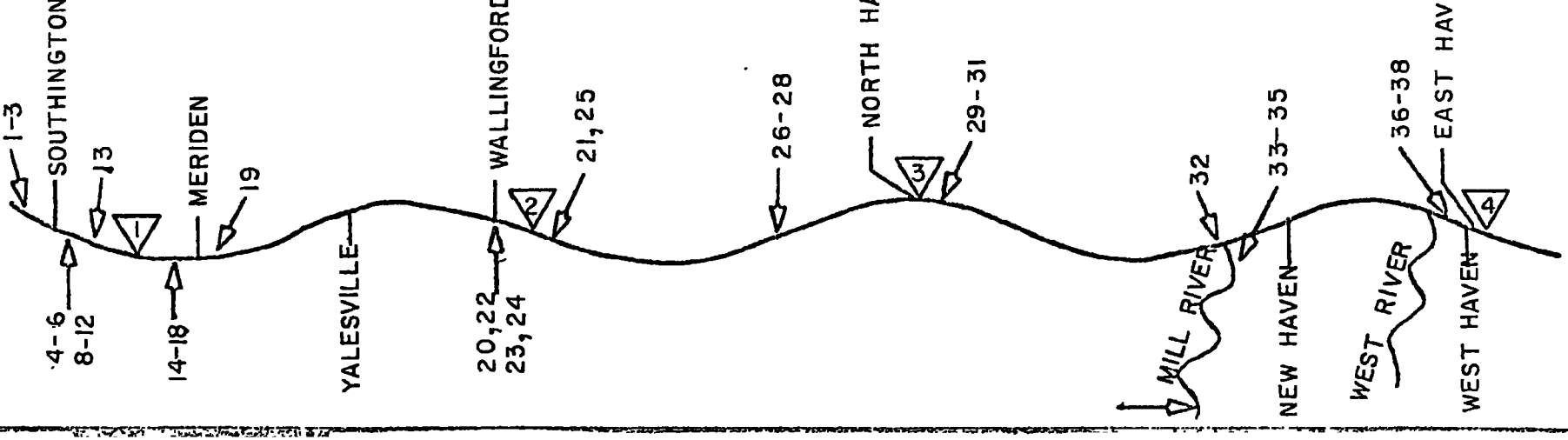
23,24
21,25
26-28
NORTH HAVEN
29-31
MILL RIVER
32
33-35
NEW HAVEN
WEST RIVER
36-38
EAST HAVEN
WEST HAVEN

REGION 1 WQ ASSESSMENT REPORT - QUINNIPIAC R. (CT)



REGION I WQ ASSESSMENT REPORT - QUINNIPIAC R. (CT)





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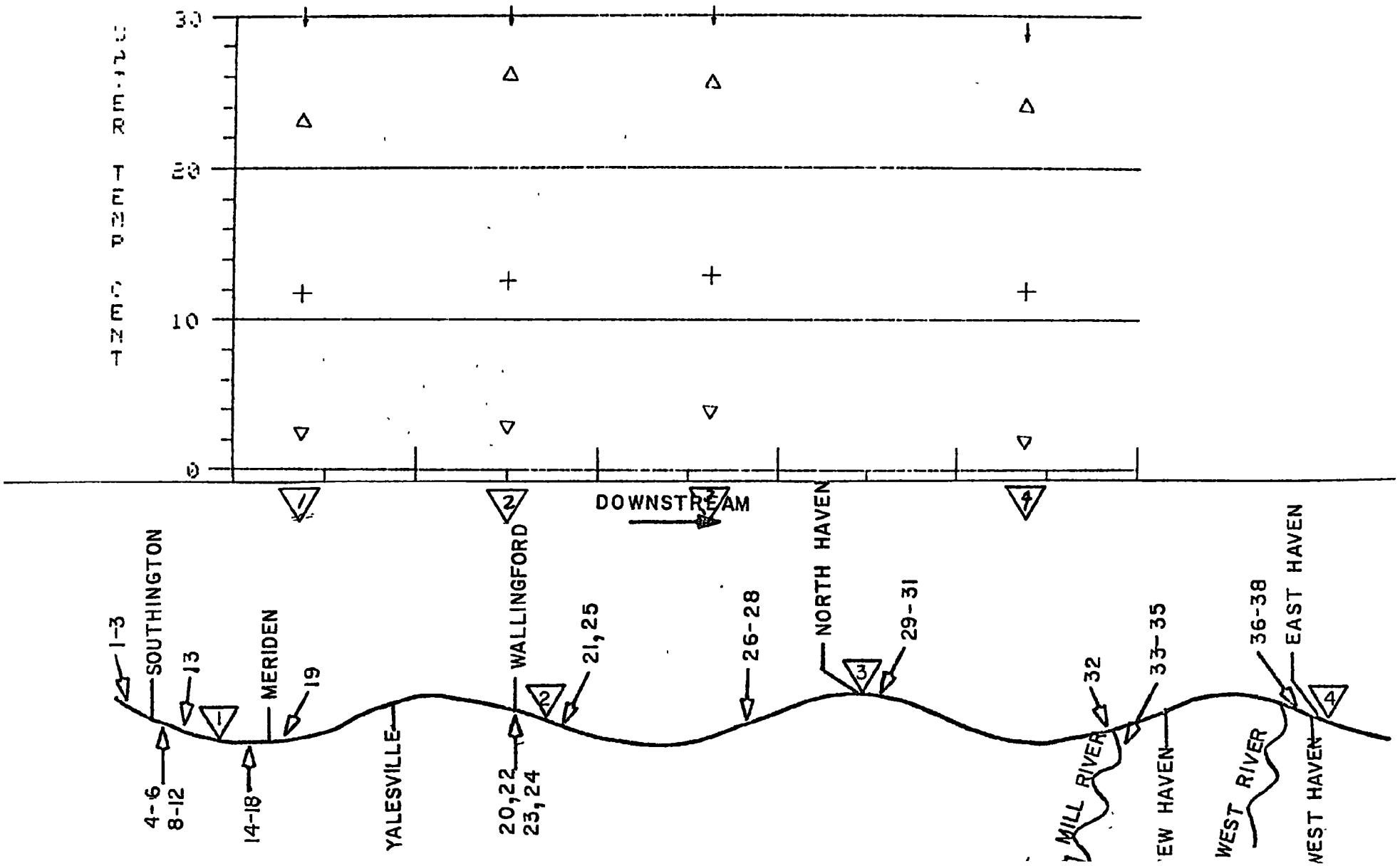

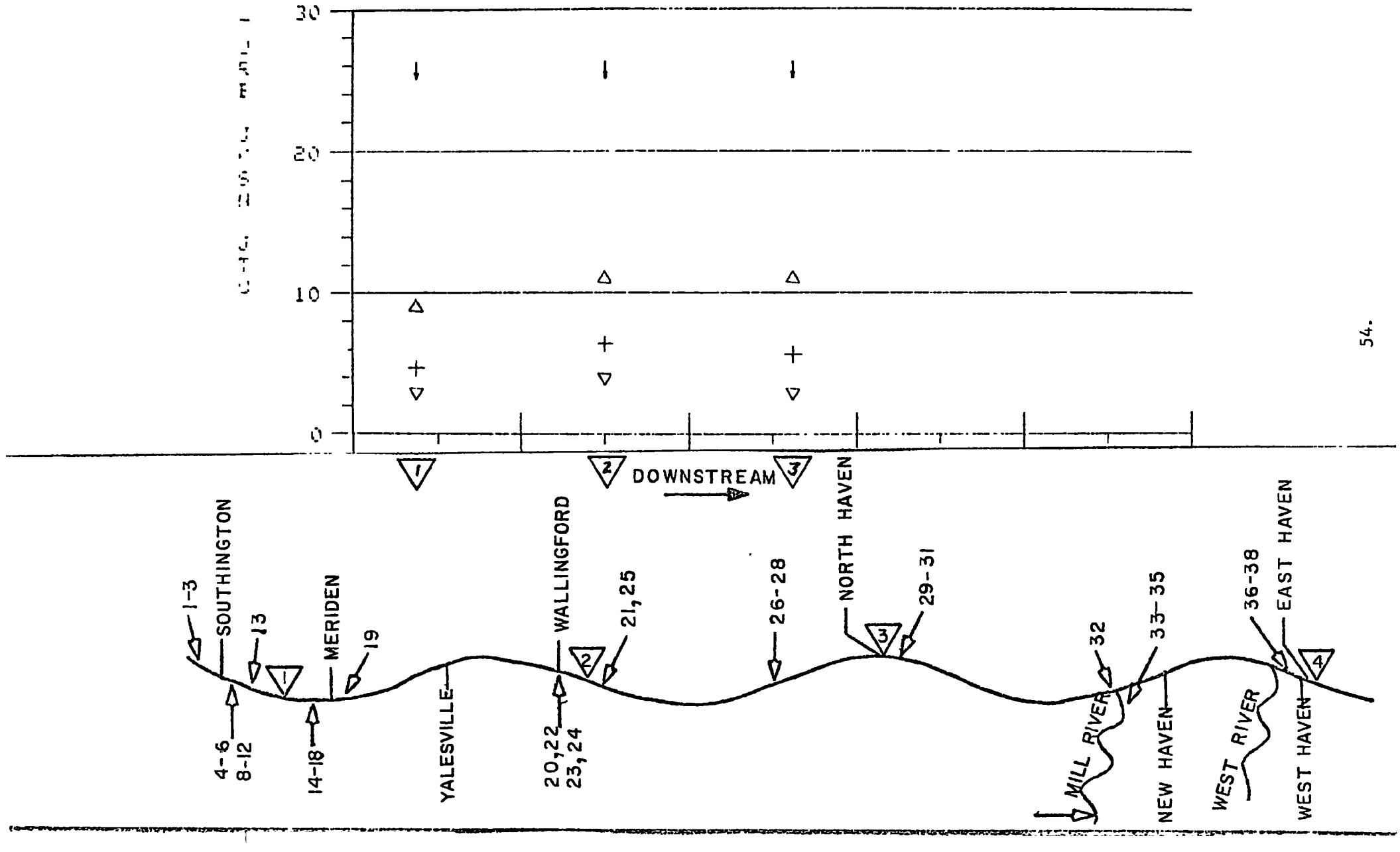
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MERIDEN
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NORTH HAVEN
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MILL RIVER
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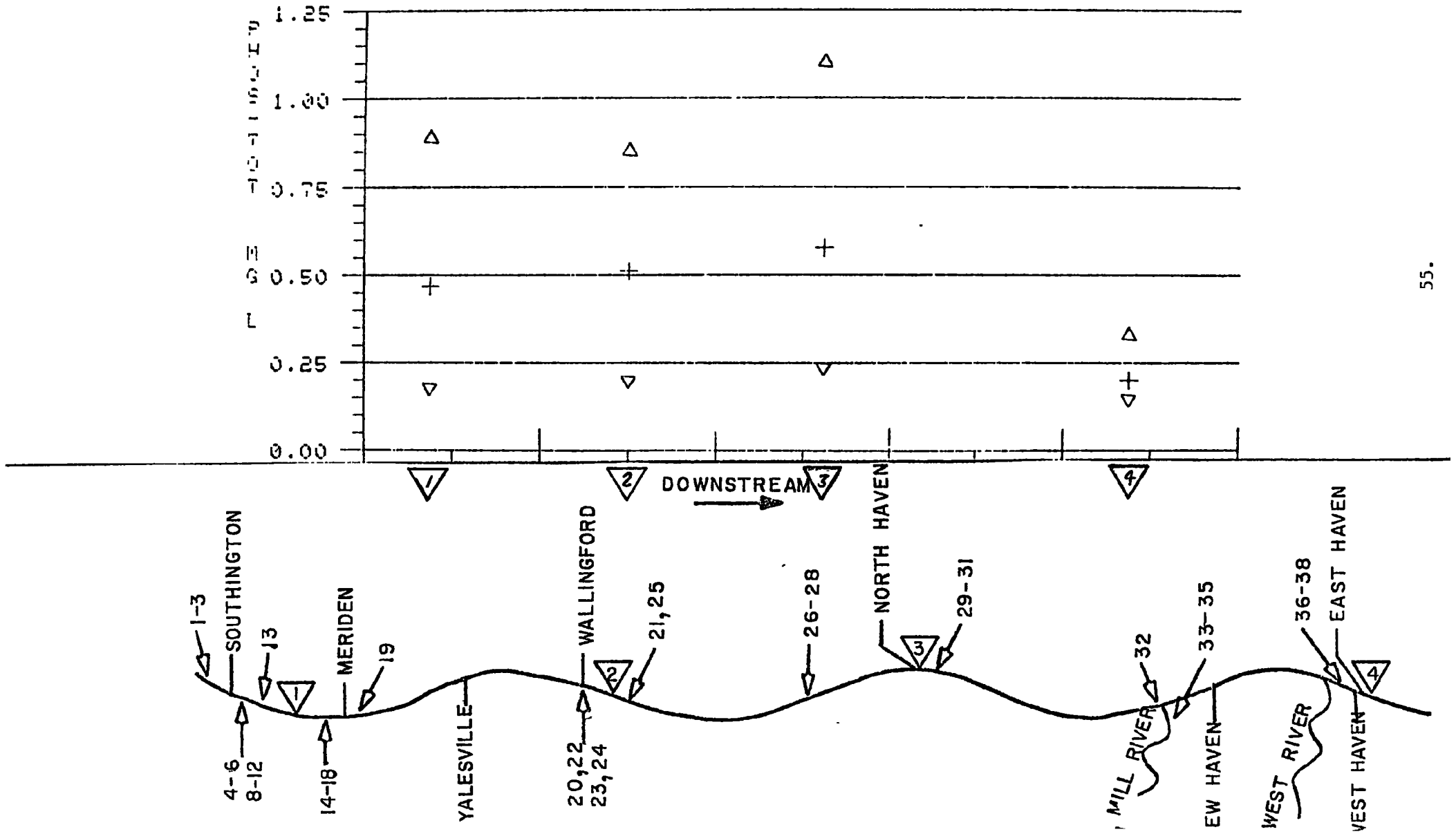
NEW HAVEN
36-38
WEST RIVER
EAST HAVEN
WEST HAVEN
4

REGION I WQ ASSESSMENT REPORT - QUINNIPIAC R. (CT)



Pl 0-1s
DO

3.4 CONNECTICUT RIVER BASIN (IN CONNECTICUT)

The Connecticut River Basin, which drains the greater portion of central Connecticut, is primarily woodland and agricultural land with industrial and residential areas at Enfield-Windsor Locks, Greater Hartford, and Middletown-Portland.

The mainstem of the Connecticut River enters the state at Enfield and flows through Hartford to Middletown where it turns sharply east and then southeast to Old Lyme where it enters Long Island Sound.

Connecticut's coliform bacteria standards are violated at all the stations monitored at least ninety percent of the time. Municipal and industrial discharges in the Springfield (Massachusetts) area; those on the Farmington, Hockanum, and Mattabassett Rivers; and combined sewer overflows in Hartford, Middletown, and Portland are thought responsible for the coliform bacteria problems. The standard for pH is also violated at the Middletown and Middle Haddam stations.

According to Connecticut's FY-76 Program Plan, sewage treatment plants in Windsor Locks and Deep River are scheduled for construction or upgrading; and Hartford, Middletown, Portland and Thompsonville plan combined sewer separation.

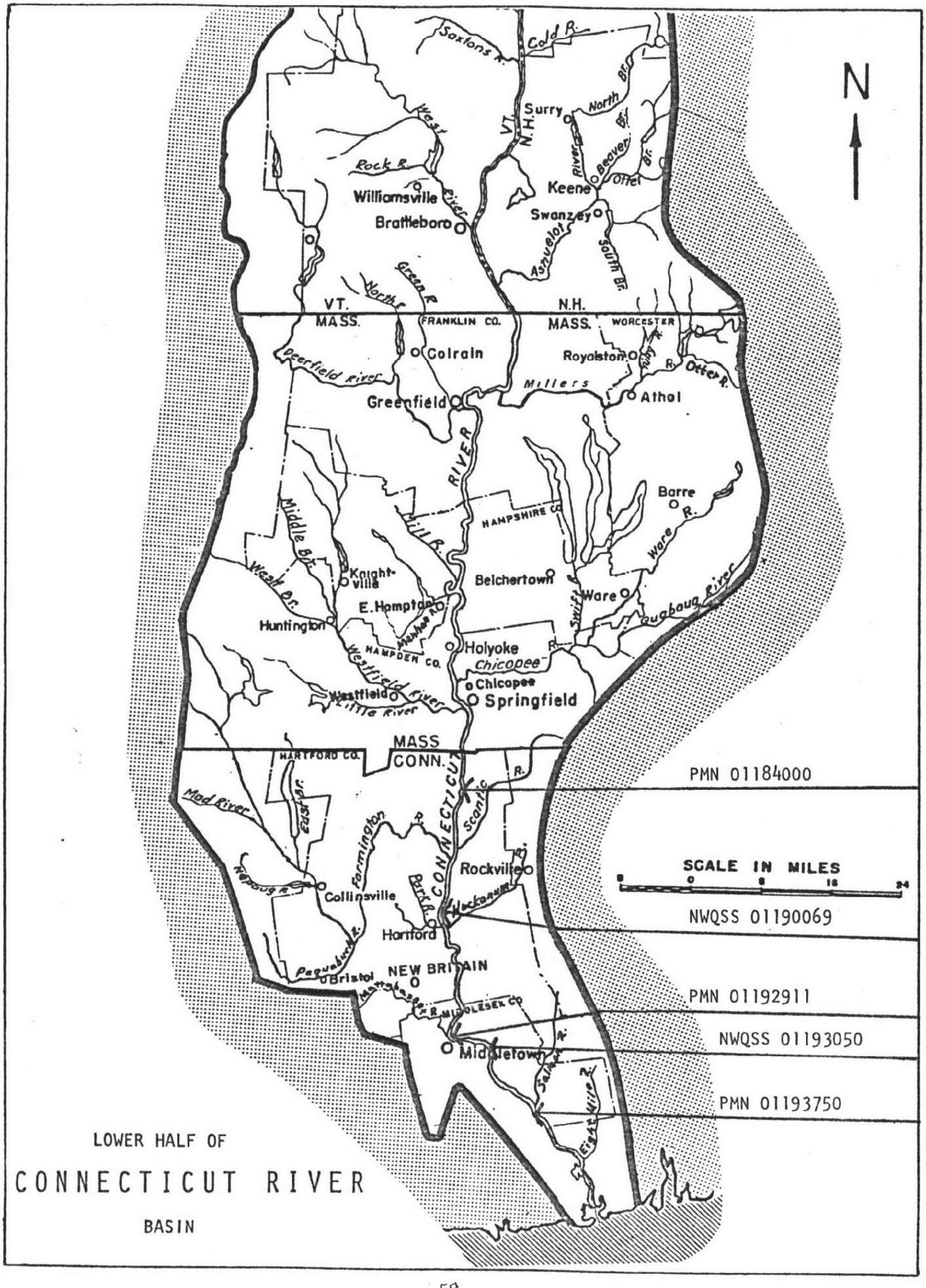
CONNECTICUT RIVER BASIN

{CONNECTICUT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Connecticut River at Thompsonville, CT	PMN 01184000
2.	Connecticut River at Hartford, CT	PMN 01190069
3.	Connecticut River at Middletown, CT	PMN 01192911
4.	Connecticut River at Middle Haddam, CT	PMN 01193050
5.	Connecticut River at East Haddam, CT	PMN 01193750



LOWER HALF OF

CONNECTICUT RIVER

BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01184000 CONNECTICUT RIVER (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	11.25
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	3.83
DISS. OXYGEN MG/L	12	0.	0.0	4.00	NONE	10.78
PH SU	12	0.	0.0	6.50	8.50	6.94
COLIFORM TOT MFIM/100ML	12	12.	100.00	NONE	5000.00	20104.37

STATION 01190069 CONNECTICUT RIVER (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	28.30	12.04
DISS. OXYGEN MG/L	13	0.	0.0	5.00	NONE	10.70
PH SU	12	0.	0.0	6.50	8.50	7.02
COLIFORM TOT MFIM/100ML	12	11.	91.67	NONE	5000.00	24018.31

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01192911 CONNECTICUT RIVER (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	28.30	12.46
DISS. OXYGEN MG/L	13	0.	0.0	5.00	NONE	10.13
PH SU	12	1.	8.33	6.50	8.50	7.06
COLIFORM TOT MFIM/100ML	12	11.	91.67	NONE	5000.00	9382.10

STATION 01193050 CONNECTICUT RIVER (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	1.	8.33	NONE	28.30	12.29
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	10.49
PH SU	12	3.	25.00	6.80	8.50	7.04
COLIFORM TOT MFIM/100ML	12	12.	100.00	NONE	700.00	22919.30

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01193750 CONNECTICUT RIVER (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	13	1.	7.69	NONE	28.30	12.12
DISS. OXYGEN MG/L	14	0.	0.0	5.00	NONE	10.36
PH SU	13	0.	0.0	6.80	8.50	7.14
COLIFORM TOT MFIM/100ML	12	11.	91.67	NONE	700.00	4857.10

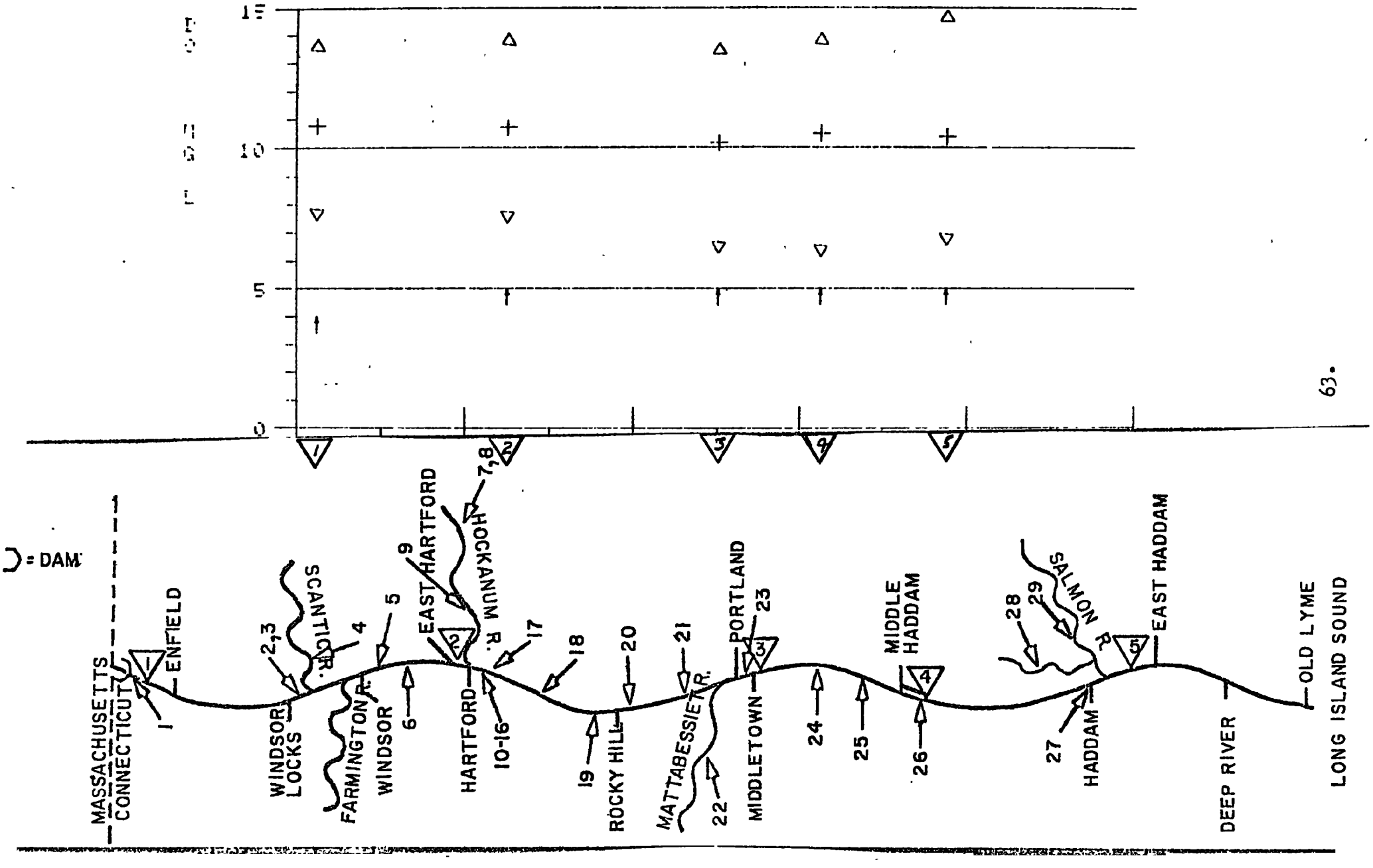
* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

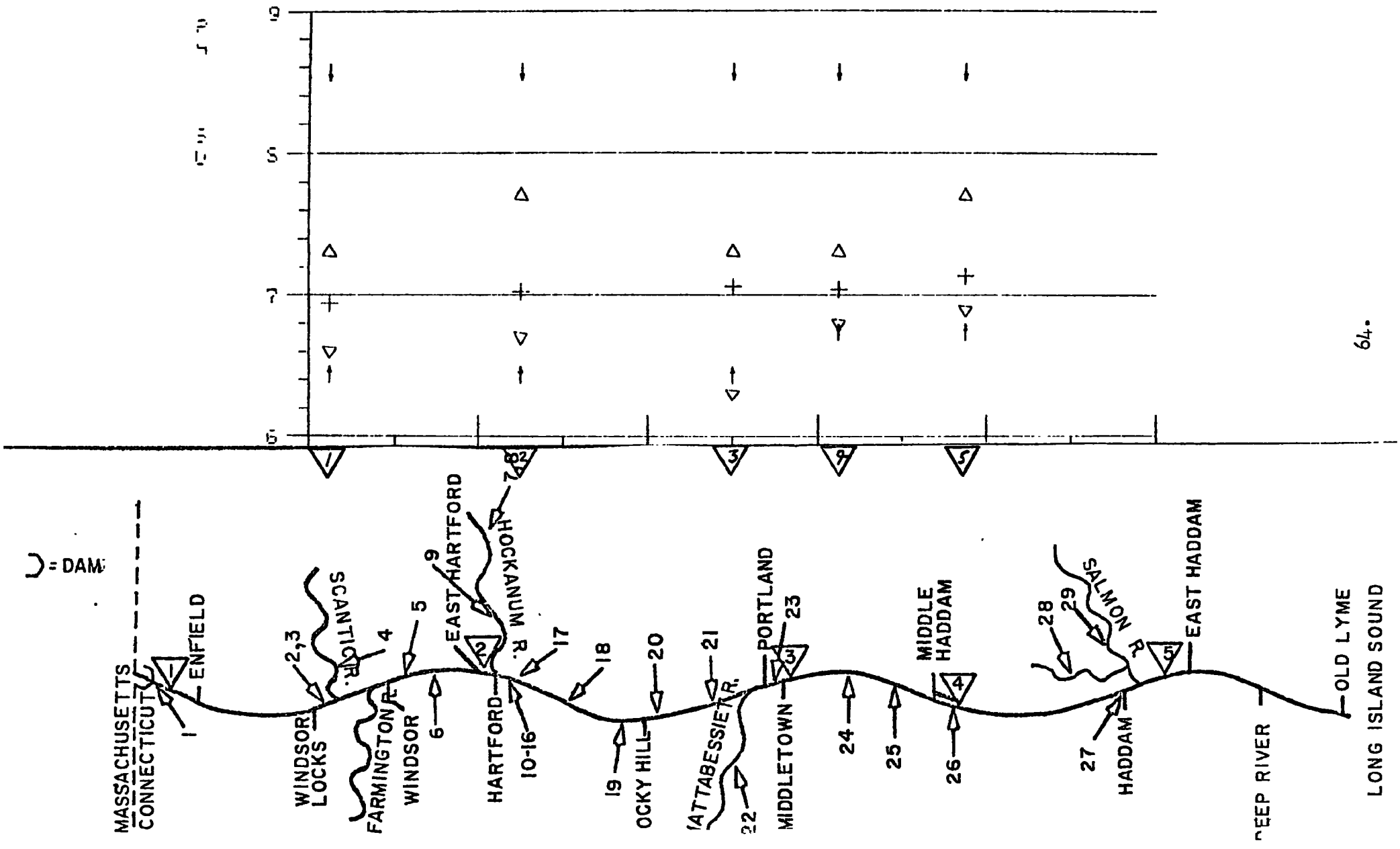
CONNECTICUT RIVER BASIN (CONN.)

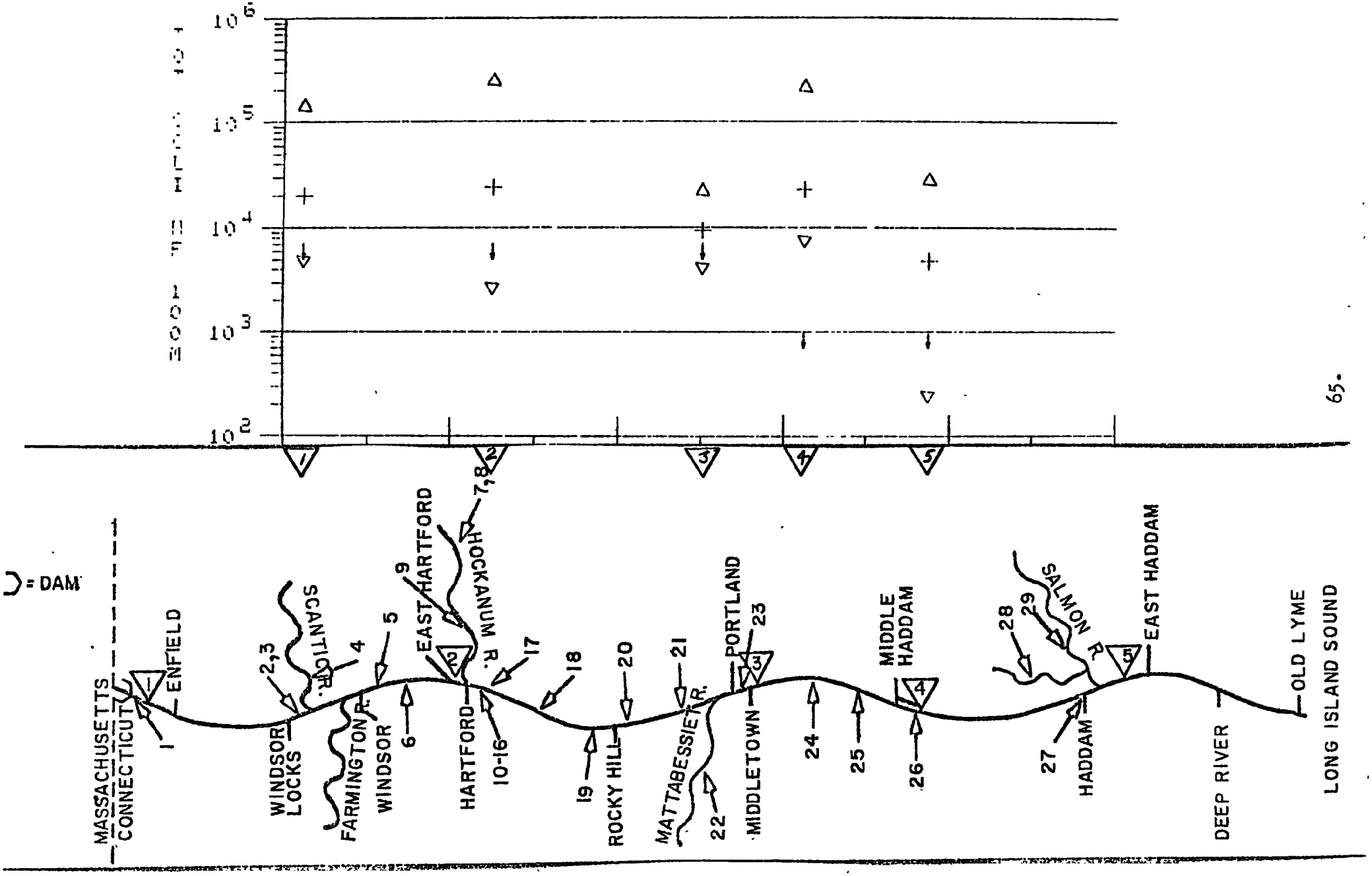
	Discharger	Location	Receiving Water	NPDES No.
1.	Enfield WPCP	Enfield	Connecticut R.	0100200
2.	C.H.Dexter Div. Dexter Corp.	Windsor Locks	Connecticut R.	0000434
3.	Montgomery Co.	Windsor Locks	Connecticut R.	0000809
4.	East Windsor STP	East Windsor	Connecticut R.	0100196 & 0100188
5.	Standyne, Inc.	Windsor	Connecticut R.	0003433
6.	South Windsor PCF	S.Windsor	Connecticut R.	0100510
7.	Manchester STP	Manchester	Hockanum R.	0100293
8.	Vernon WTP	Vernon	Hockanum R.	0100609
9.	East Hartford WPCP	East Hartford	Hockanum R.	0100170
10.	Superior Steel Ball Co.	Hartford	So.Branch Park R.	0003468
11.	Hartford WPCP	Hartford	Connecticut R.	0100251
12.	Atlantic Machine Tool Works, Inc.	Newington	Piper Brook to So.Branch Park R.	0001503
13.	United Tool & Die	West Hartford	Piper Brook to So.Branch Park R.	0001287
14.	Wiremold Co.	West Hartford	Storm Drain	0001473
15.	Hartford MDC	West Hartford	Spillway	0002259
16.	Colt Industries	West Hartford	Trout Brook	0020648
17.	Pratt & Whitney	East Hartford	Connecticut R.	0001376
18.	Glastonbury WPCF	Glastonbury	Connecticut R.	0100216
19.	Rocky Hill WPCF	Rocky Hill	Connecticut R.	0100480
20.	Colt Industries	Rocky Hill	Divident Brook to Connecticut R.	0000345
21.	Mattabasset District STP	Cromwell	Connecticut R.	0100307
22.	Skinner Precision, Inc.	Berlin	Mattabesset R.	0001759
23.	Portland STP	Portland	Connecticut R.	0101150
24.	Feldspar Corp.	Middletown	Connecticut R.	0000485
25.	Hartford Electric	Middletown	Connecticut R.	0003883
26.	Pratt & Whitney	Middletown	Connecticut R.	0001406
27.	Connecticut Yankee Power	Haddam Neck	Connecticut R.	0003123
28.	Bevin Bros. Mfg. Co.	East Hampton	Pocotopous to Salmon R.	0002691
29.	Burndy Corp.	Moodus	Connecticut R.	0020524

REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (CT)



REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (CT)

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FARMINGTON R.
WINDSOR
EAST HARTFORD
HOCKANUM R.
HARTFORD
ROCKY HILL
MATTABESSIC R.
PORTLAND
MIDDLETOWN
MIDDLE HADDAM
SALMON R.
HADDAM
EAST HADDAM
DEEP RIVER
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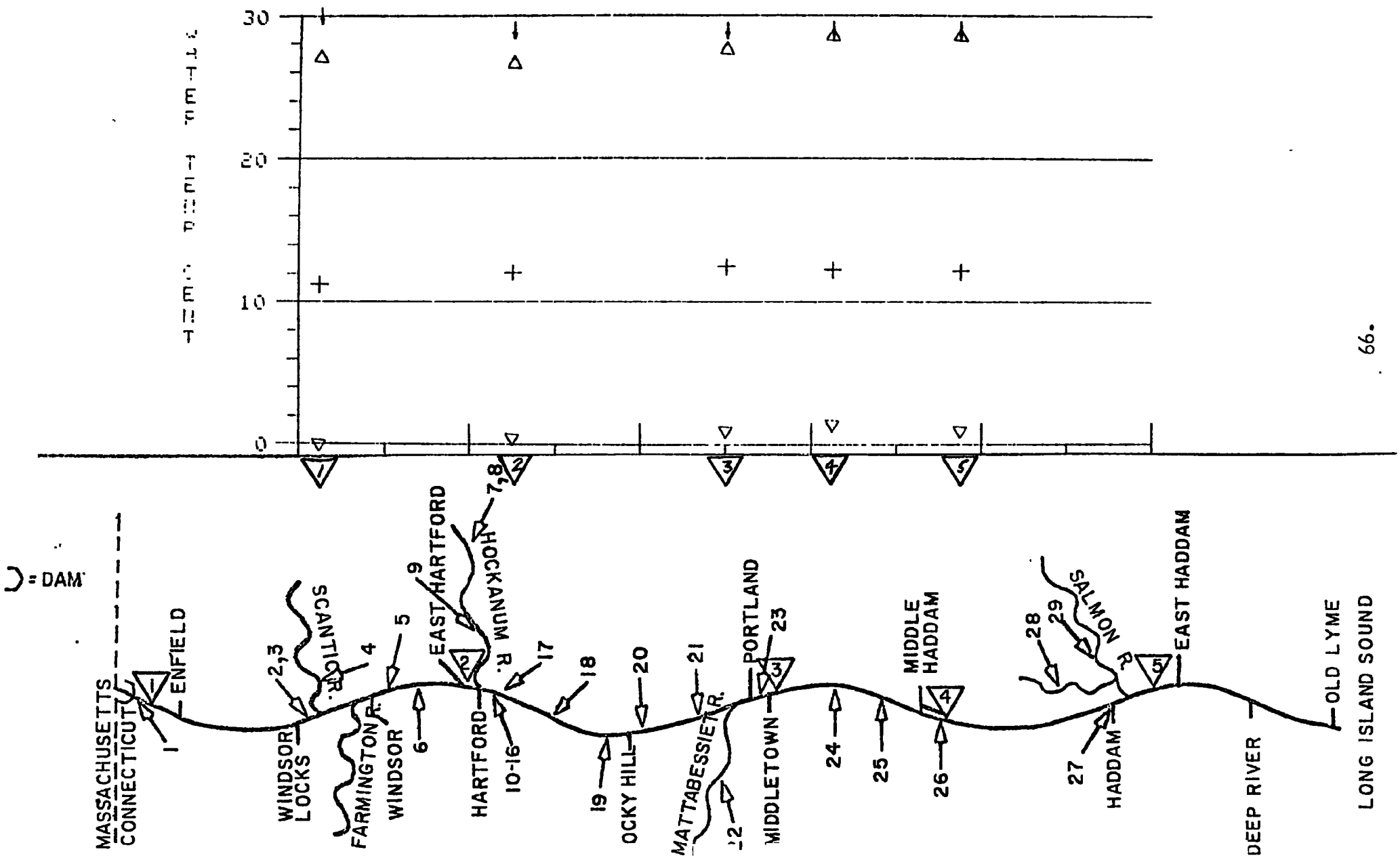
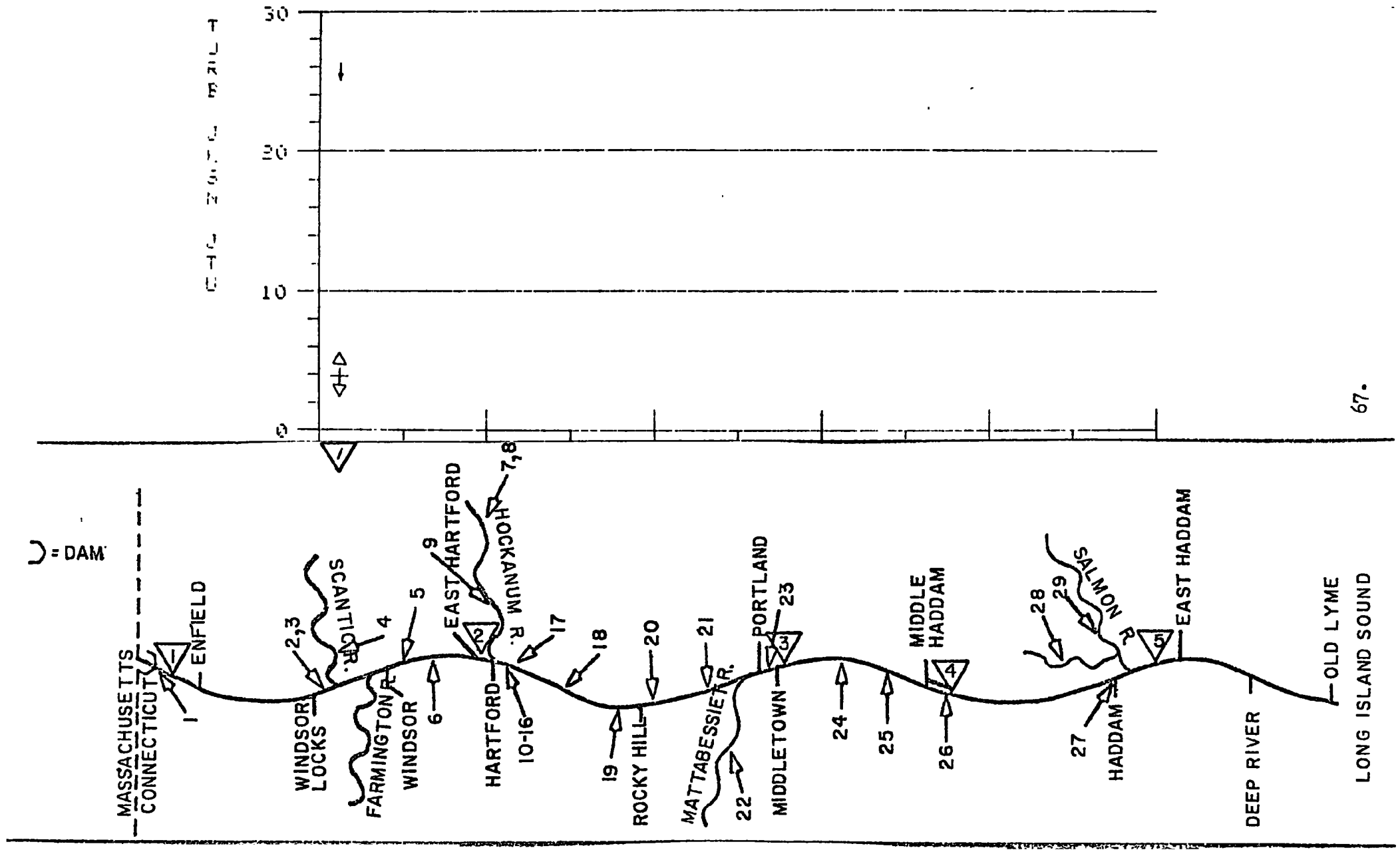
REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (CT)

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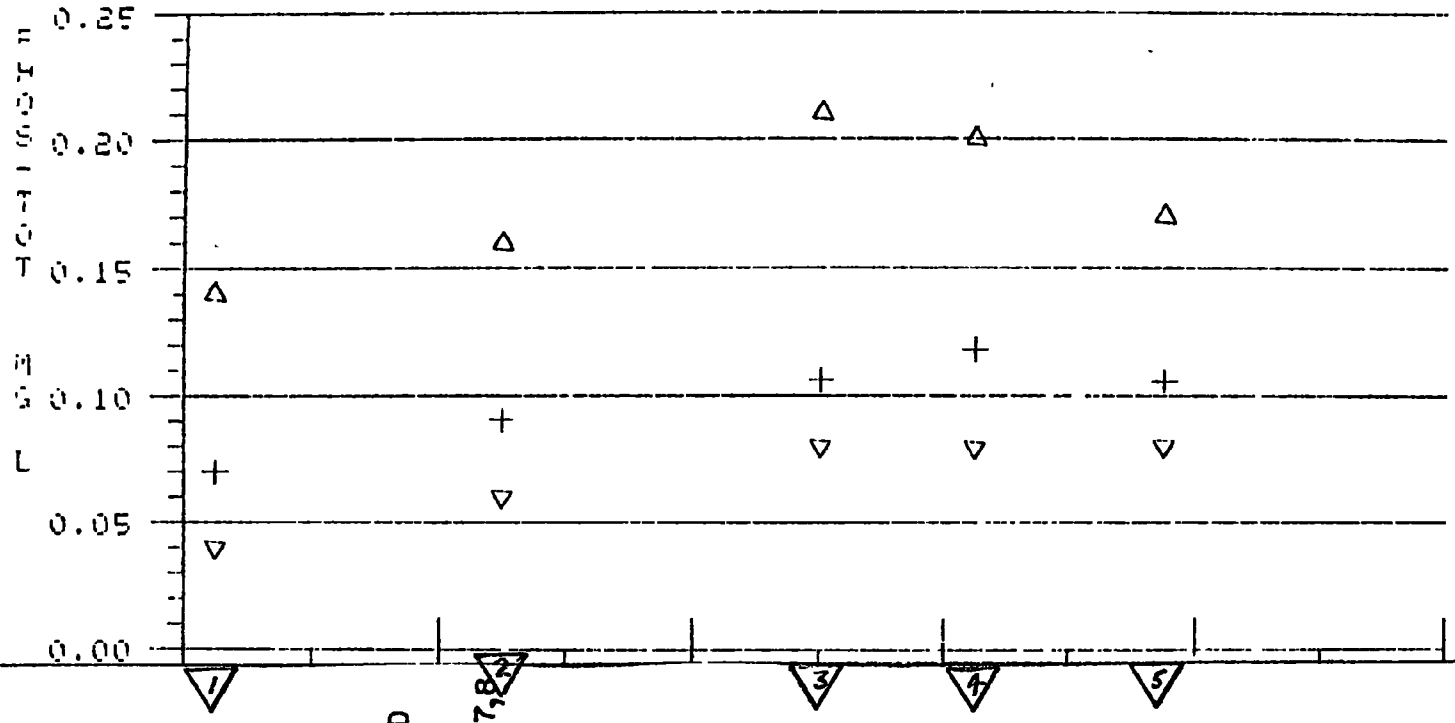
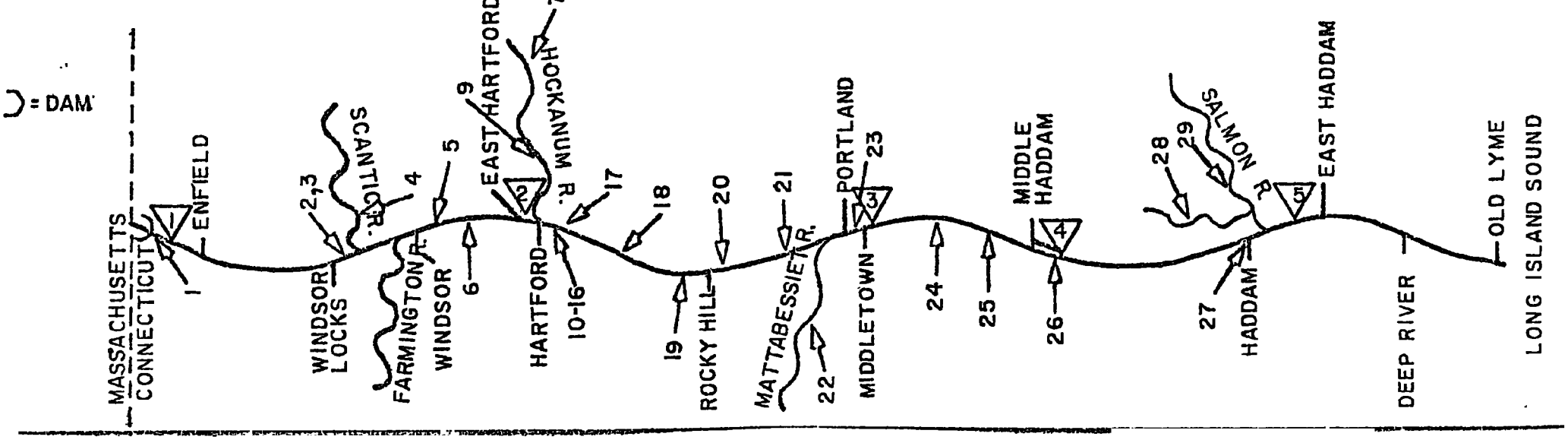
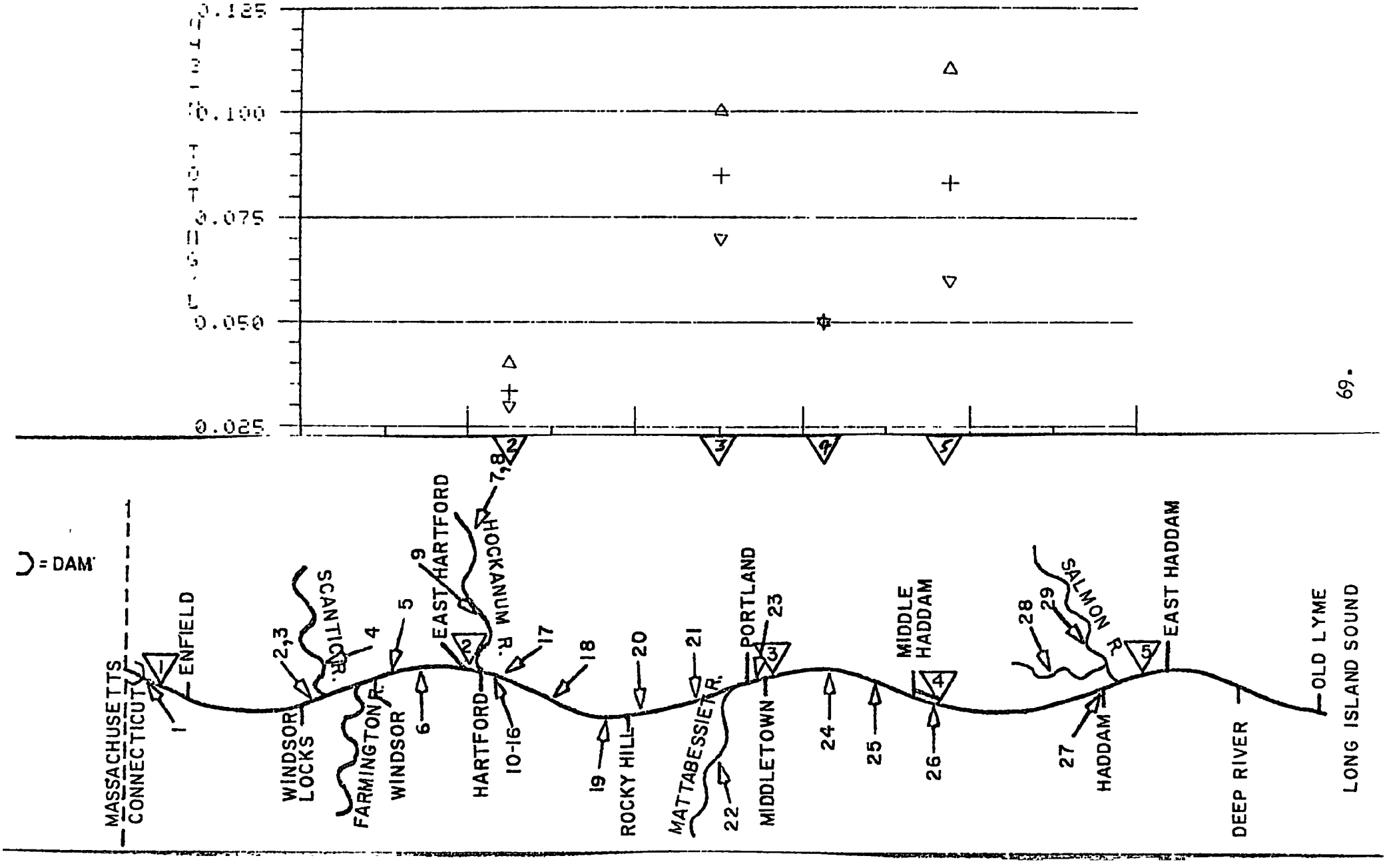
REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (CT)



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HARTFORD
ROCKY HILL
MATTABESSIET R.
PORTLAND
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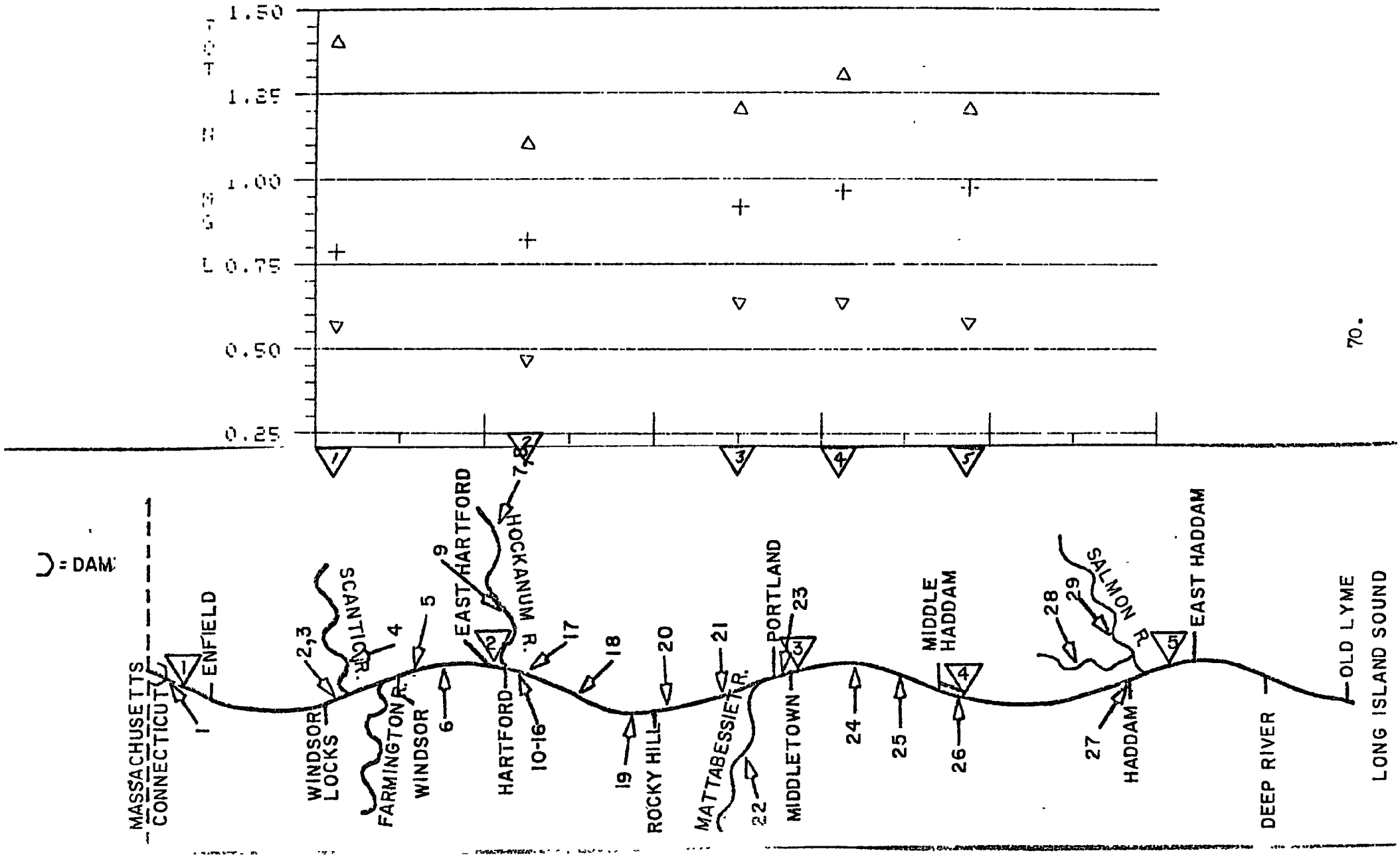
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FARMINGTON R.
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HOCKANUM R.
HARTFORD
ROCKY HILL
MATTABESSIET R.
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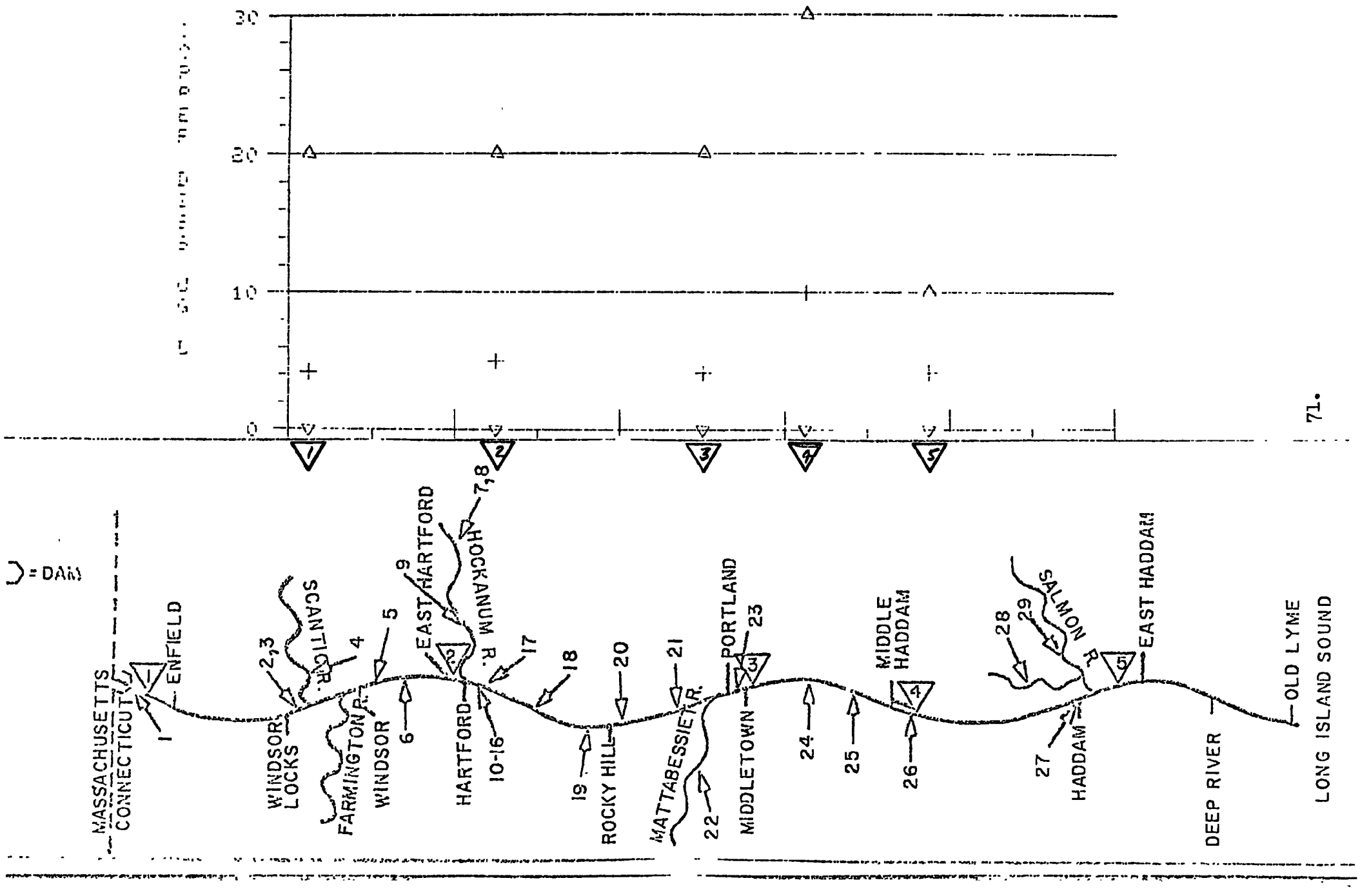
MIDDLE HADDAM
SALMON R.
HADDAM
EAST HADDAM
DEEP RIVER
OLD LYME
LONG ISLAND SOUND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ROCKY HILL
MATTABESSIET R.
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3.5 FARMINGTON RIVER BASIN

The Farmington River Basin drains a small area of southwestern Massachusetts and most of northcentral Connecticut. The basin is predominantly woodlands and agricultural lands with some industrial and urban residential areas in Bristol, Plainville, Farmington, Avon, and Simsbury, Connecticut.

The mainstem of the Farmington flows southeast from Riverton, Connecticut to Farmington, where it turns abruptly north to East Granby, then east to Windsor and into the Connecticut River. The Pequabuck, a major tributary of the Farmington River, flows through the highly settled and industrialized Bristol-Plainville area and has a major effect on the water quality of the Farmington below their confluence.

The Pequabuck River station (Plot Station No. 2) violates Connecticut's dissolved oxygen standard in 4 of 11 samples and the total coliform standard in 7 of 12 samples. High phosphorus levels (12-month mean .73) are also reported at this station, far above the EPA recommendation of .1 mg/l. The total coliform (11 violations in 12 samples), and phosphorus levels remain high at the Avon station (Plot Station No. 3). These levels decrease greatly, however, by the time the Farmington reaches Windsor. The bulk of the total coliform, dissolved oxygen, and phosphorus problems are due to municipal dischargers to the Pequabuck River in Bristol and Plainville, Connecticut. According to Connecticut's FY-76 Program Plan, both of these systems are scheduled for improvement in FY-76.

FARMINGTON RIVER

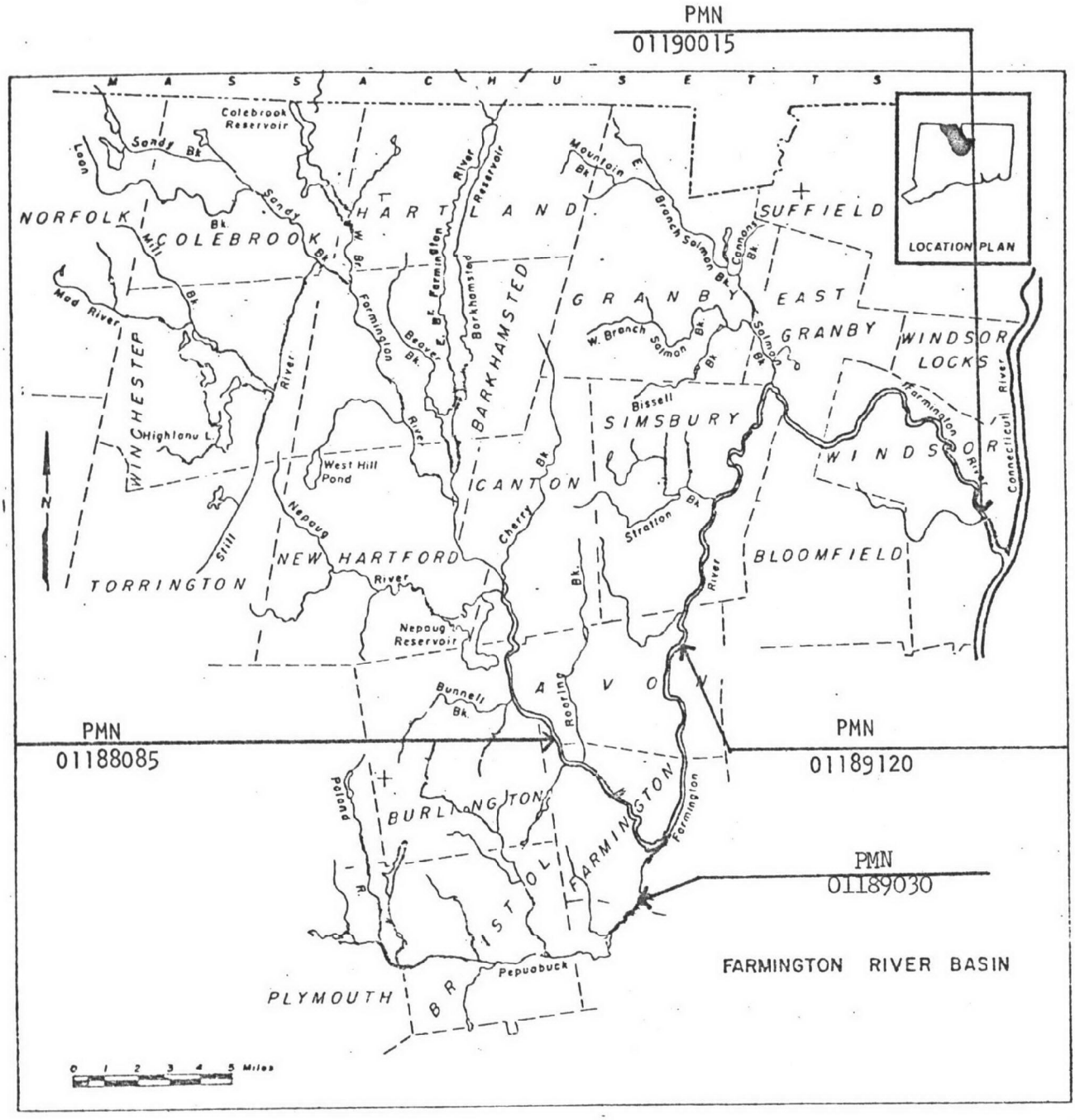
{CT. RIVER BASIN}

{CONNECTICUT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Farmington River near Unionville, CT	PMN 01188085
2.	Pequabuck River at Farmington, CT	PMN 01189030
3.	Farmington River near Avon, CT	PMN 01189120
4.	Farmington River near Windsor, CT	PMN 01190015


PMN
01190015
PMN
01188085
PMN
01189120
PMN
01189030
M A S S A C H U S E T T S
LOCATION PLAN
NORFOLK
COLEBROOK
HARTLAND
SUFFIELD
GRANBY
EAST GRANBY
WINDSOR LOCKS
WINCHESTER
BARKHAMSTED
SIMSBURY
WINDSOR
ICANTON
NEW HARTFORD
TORRINGTON
BLOOMFIELD
AVON
BURLINGTON
BRISTOL
FARMINGTON
PLYMOUTH
Colebrook Reservoir
Sandy Bk
Leon
Mill Bk
Mad River
Highland L.
West Hill Pond
Nepaug River
Still
Nepaug Reservoir
Bunnell Bk.
Farmington River
Beaver Bk.
E. Br. Farmington
Barkhamsted Reservoir
Mountain Bk
E. Branch Salmon Bk.
Cannons Bk.
W. Branch Salmon Bk.
Salmon Bk
Bissell
Cherry Bk
Stratton Bk
Roaring Bk.
Pequabuck R.
Pequabuck
Connecticut River
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FARMINGTON RIVER BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01188085 FARMINGTON R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	10.38
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	1.33
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	11.65
DISS. OXYGEN SATUR %	11	0.	0.0	75.00	NONE	102.64
PH SU	12	0.	0.0	6.50	8.00	7.02
COLIFORM TOT MFIM/100ML	12	2.	16.67	NONE	1000.00	154.45

STATION 01189030 PEQUABUCK R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	11.83
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	5.83
DISS. OXYGEN MG/L	11	4.	36.36	4.00	NONE	6.59
PH SU	12	0.	0.0	6.00	8.50	6.74
COLIFORM TOT MFIM/100ML	12	7.	58.33	NONE	5000.00	9455.68

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01189120 FARMINGTON R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	10.08
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	2.67
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.04
DISS. OXYGEN SATUR %	12	0.	0.0	75.00	NONE	94.67
PH SU	12	1.	8.33	6.50	8.00	6.83
COLIFORM TOT MFIM/100ML	12	11.	91.67	NONE	1000.00	4656.93

STATION 01190015 FARMINGTON R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	10.96
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	4.75
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	11.62
DISS. OXYGEN SATUR %	12	0.	0.0	75.00	NONE	102.08
PH SU	12	0.	0.0	6.50	8.00	7.09
COLIFORM TOT MFIM/100ML	12	3.	25.00	NONE	1000.00	690.21

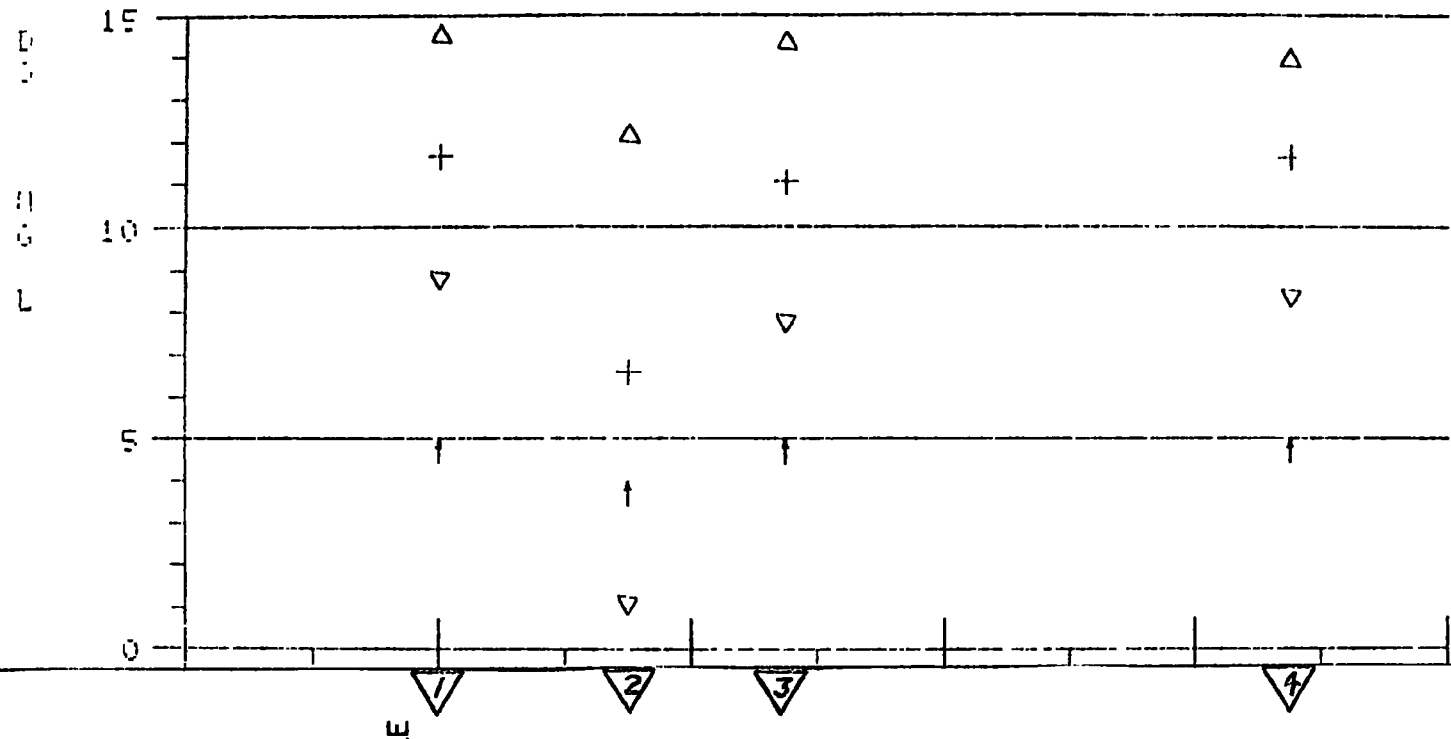
* GEOMETRIC MEAN FOR COLIFORMS

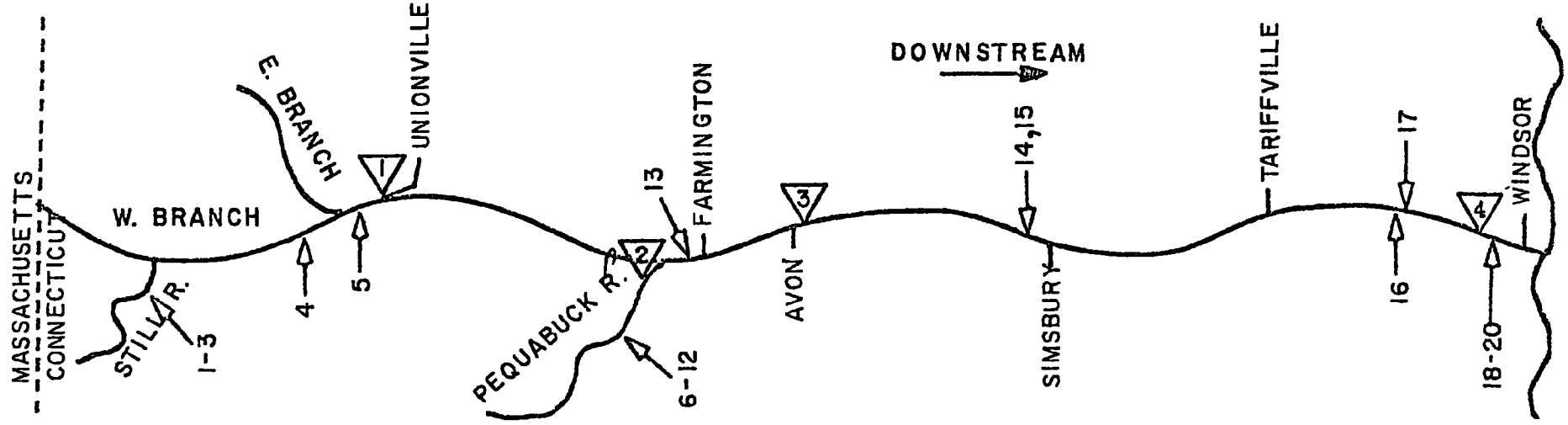
SIGNIFICANT DISCHARGERS

FARMINGTON RIVER (CONN. RIVER BASIN)

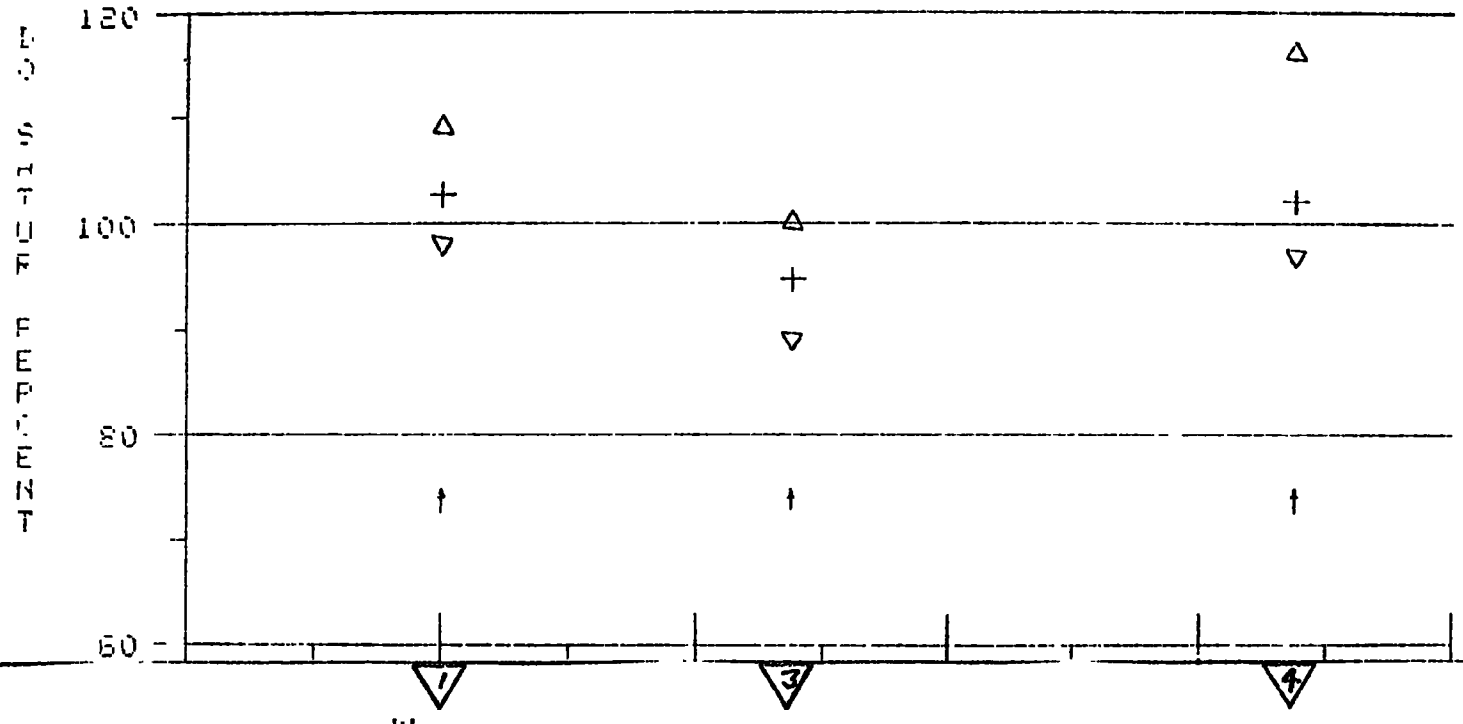
	Discharger	Location	Receiving Water	NPDES No.
1.	Capitol Products Co.	Winsted	Mad R. to Still R.	0021750
2.	Lambert Co.	Winsted	Mad R. to Still R.	0021547
3.	Son-Chief Electrics, Inc	Winsted	Highland Lake to Mad R.	0001104
4.	Waring Products Div.	New Hartford	Farmington R.	0003964
5.	Canton STP	Collinsville	Farmington R.	0100072
6.	Accurate Brass Corp.	Bristol	Pequabuck R.	0021687
7.	Bristol Water Dept.	Bristol	Pequabuck R.	0000665
8.	Associated Spring Corp.	Bristol	Pequabuck R.	0000141
9.	Superior Electric Co.	Bristol	Pequabuck R.	0003956
10.	Bristol Brass Corp.	Bristol	Pequabuck R.	0003034
11.	Stanley Plating Co.	Forrestville	Pequabuck R.	0001139
12.	Lenko Finishing, Inc.	Plainville	Pequabuck R.	0021831
13.	Farmington MTP	Farmington	Farmington R.	0100218
14.	Drake Hill Housing Area	Simsbury	Hop Brook	0100862
15.	Simsbury Wastewater TP	Simsbury	Hop Brook	0100919
16.	Windsor Poquonock WPCF	Windsor	Farmington R.	0100994
17.	Hamilton Standard - United Aircraft	Windsor Locks	Seymour Brook	0000582
18.	Brass Plating Co.	Bloomfield	Mill Brook	0001643
19.	Allen Mfg. Co.	Bloomfield	Mill Brook	0000078
20.	Stevens Paper Co.	Windsor	Mill Brook	0003441

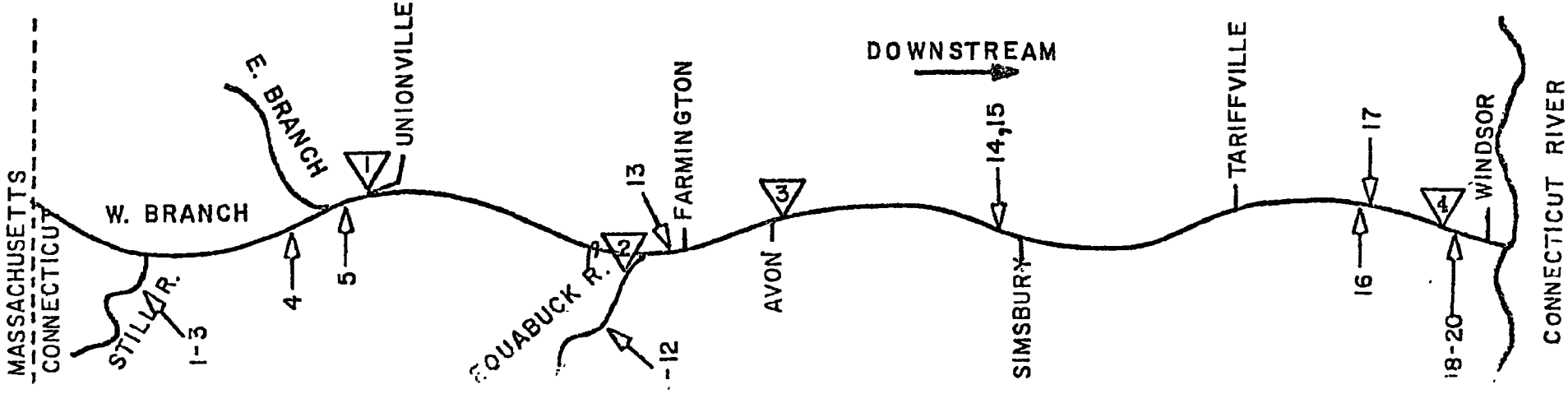
REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)

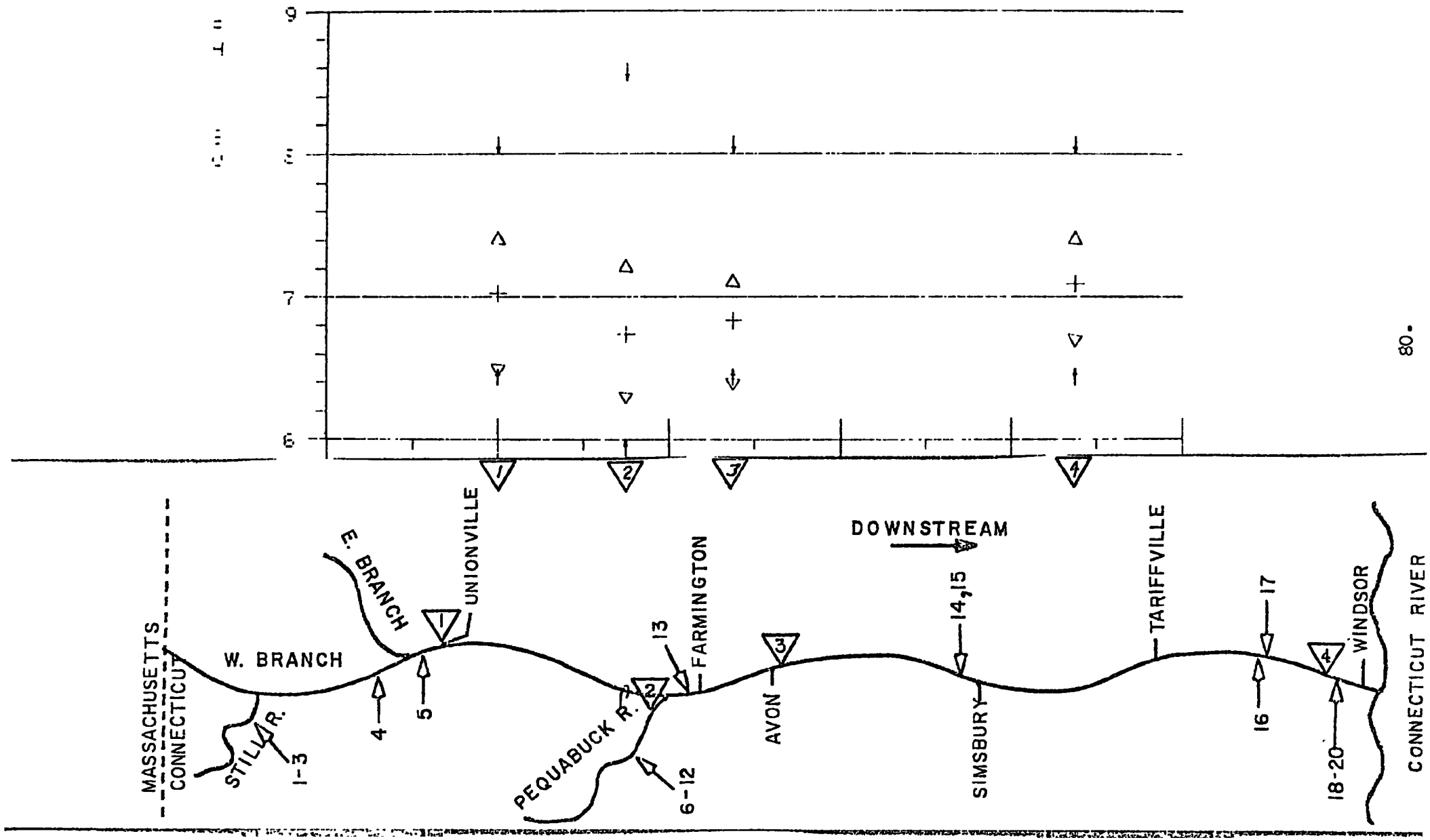




REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)



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UNIONVILLE
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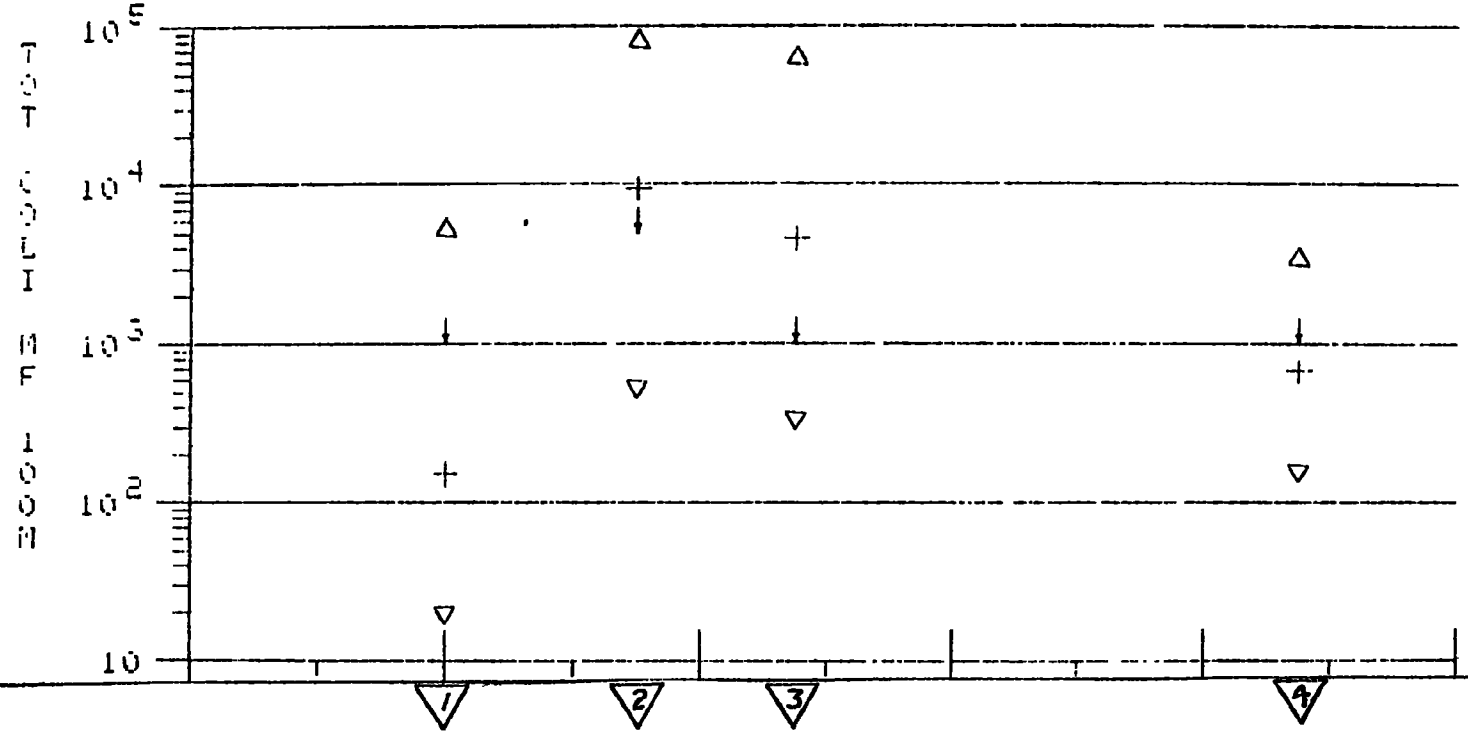
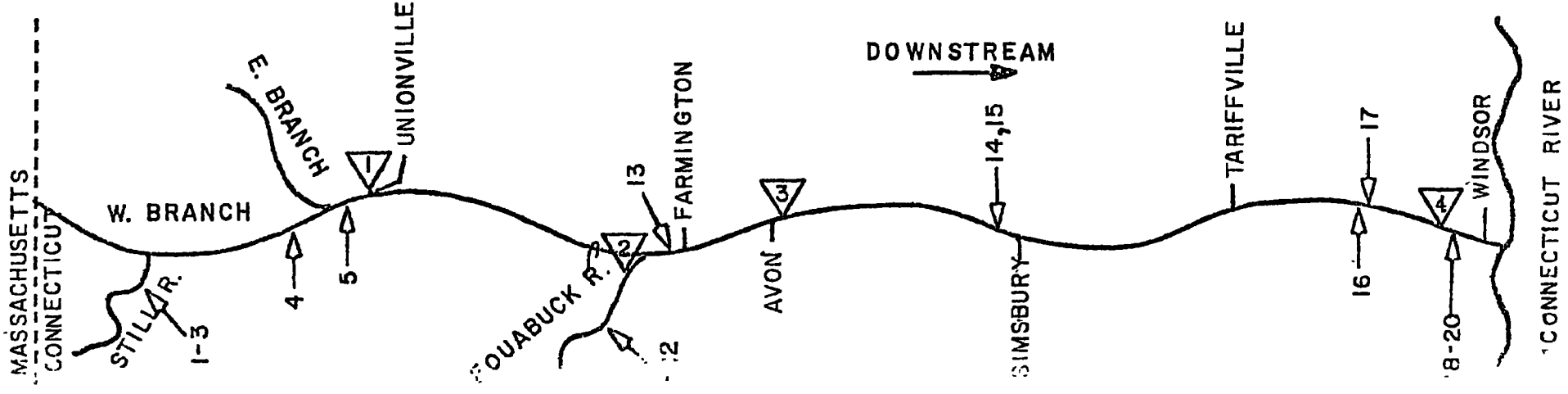
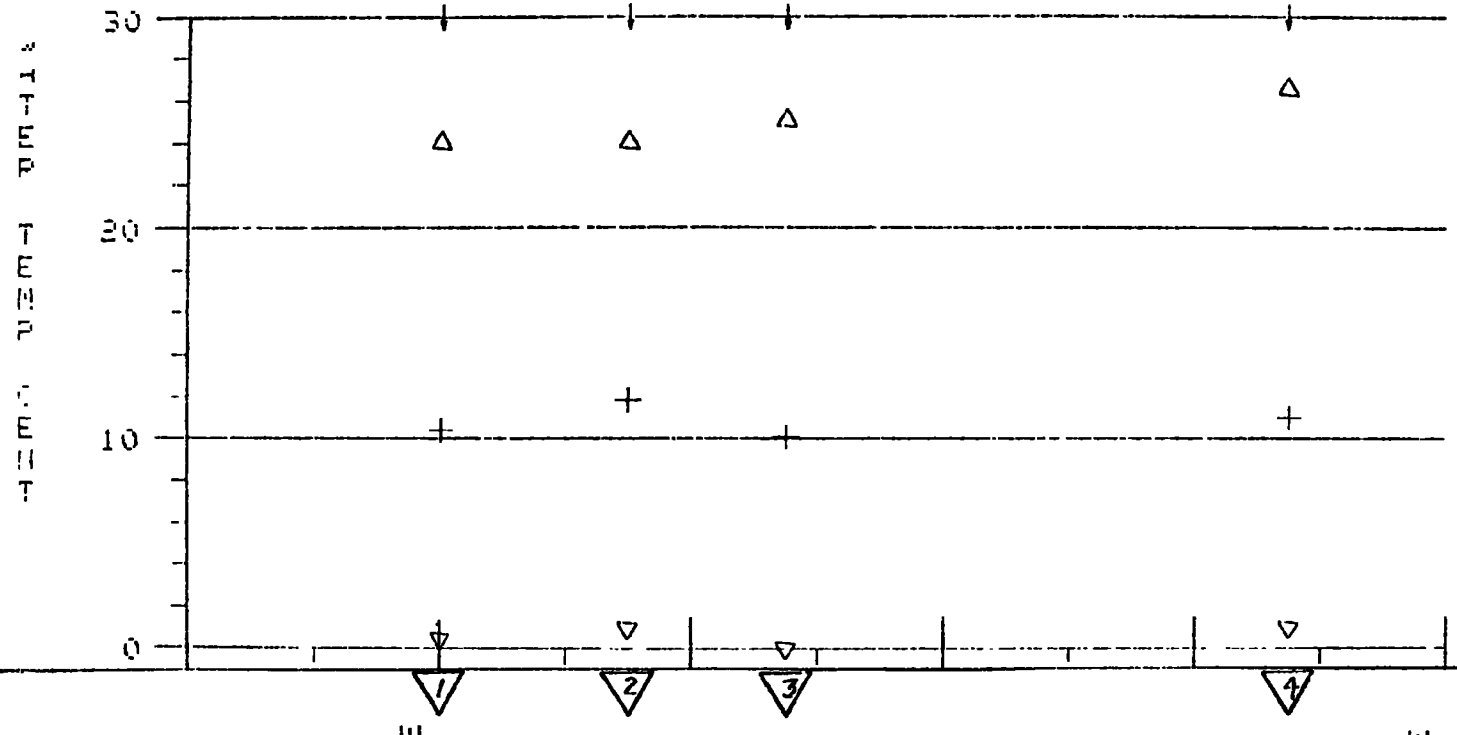
CONNECTICUT RIVER

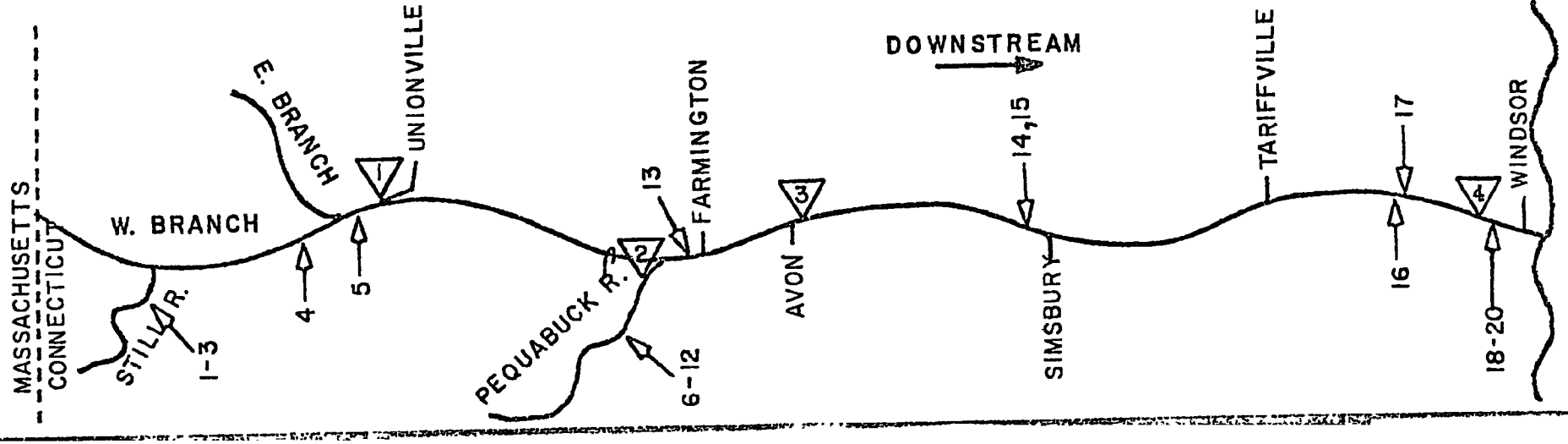
REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)



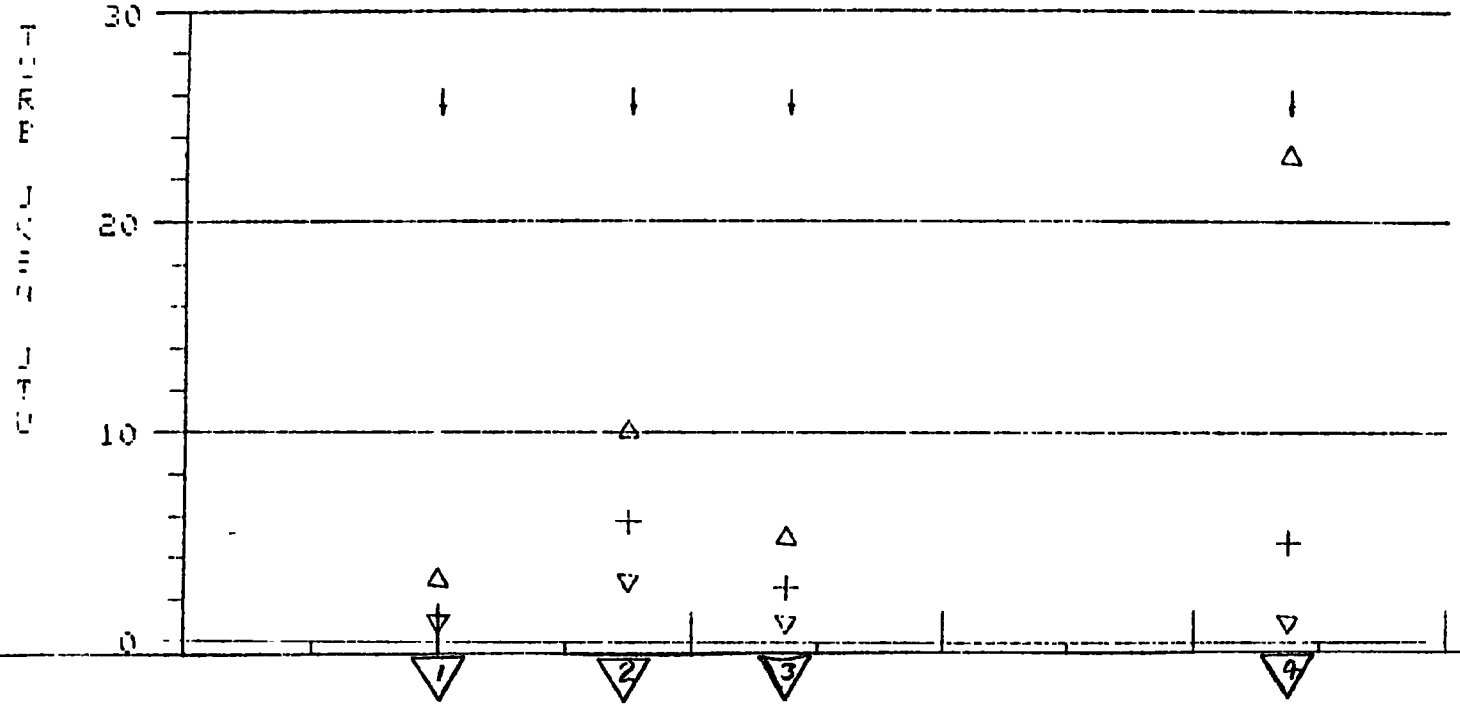


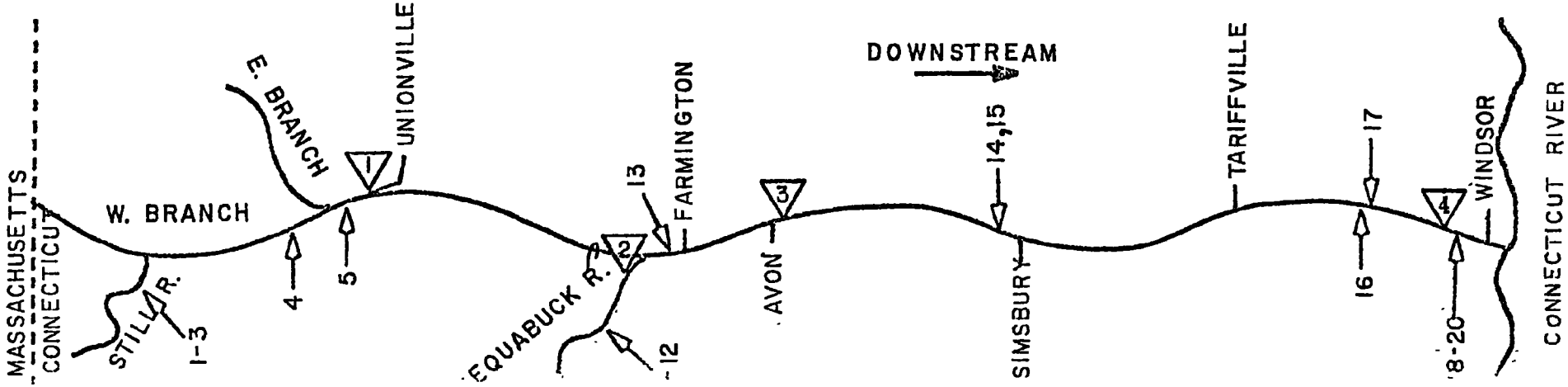
REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)

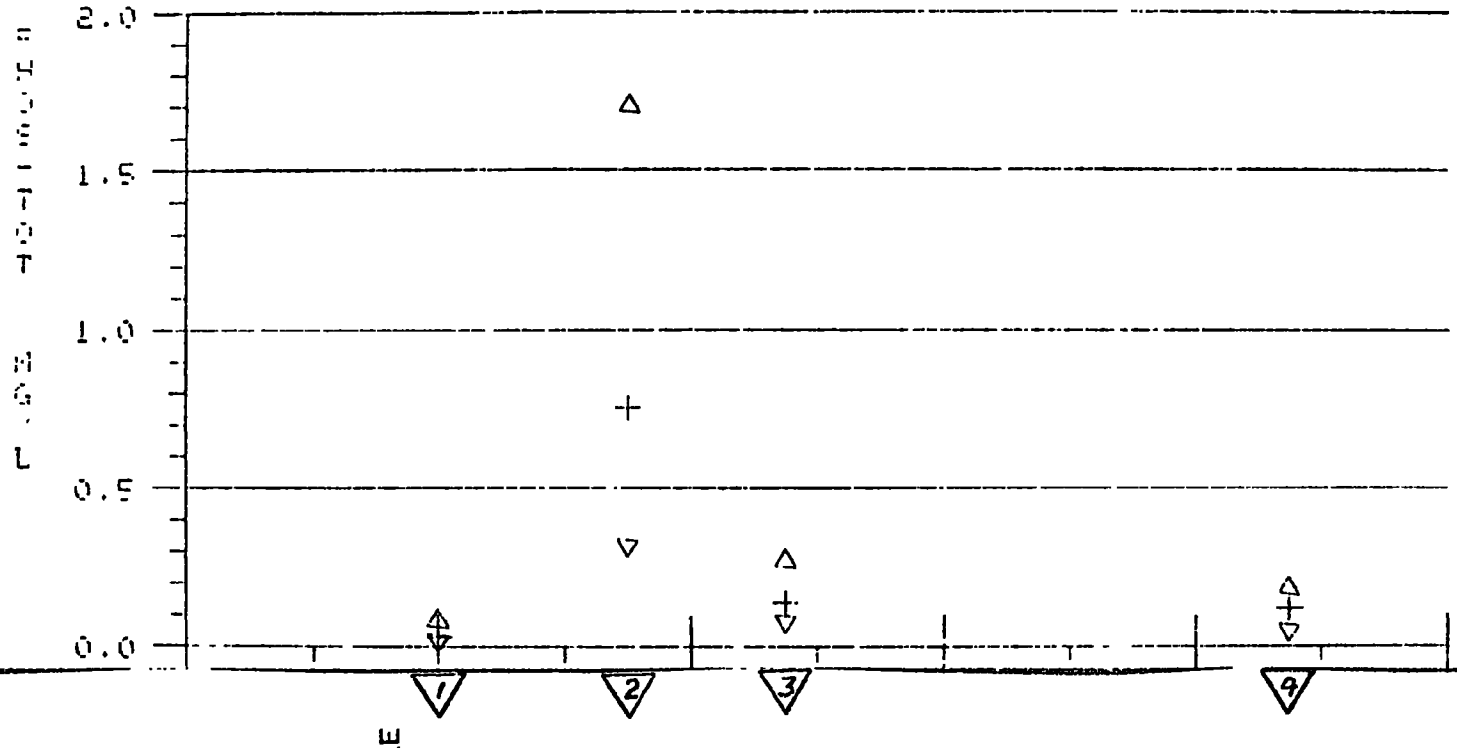




REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)



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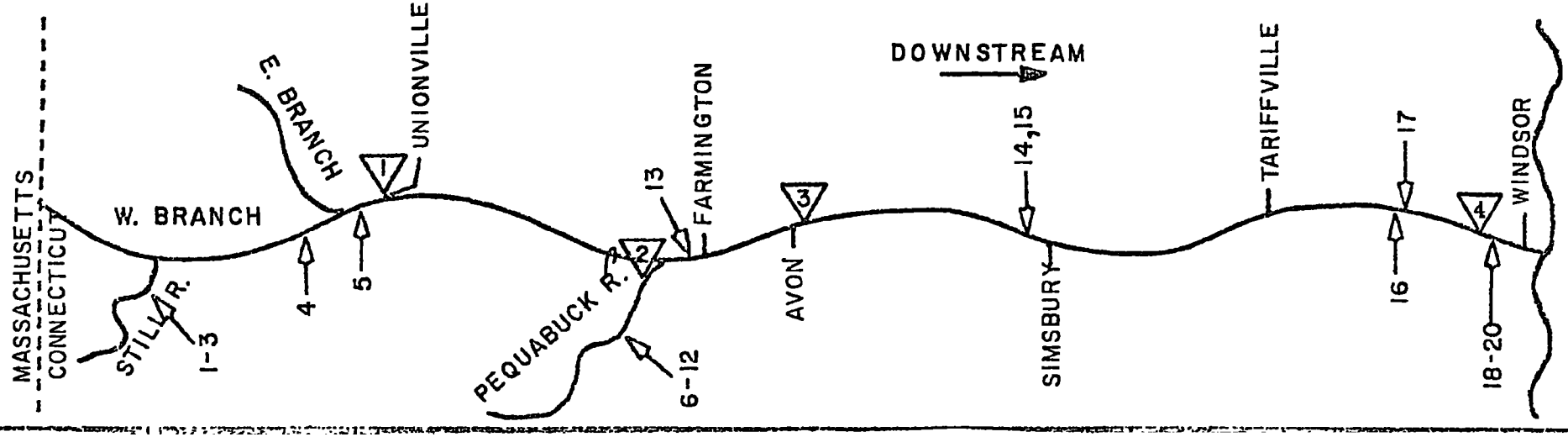
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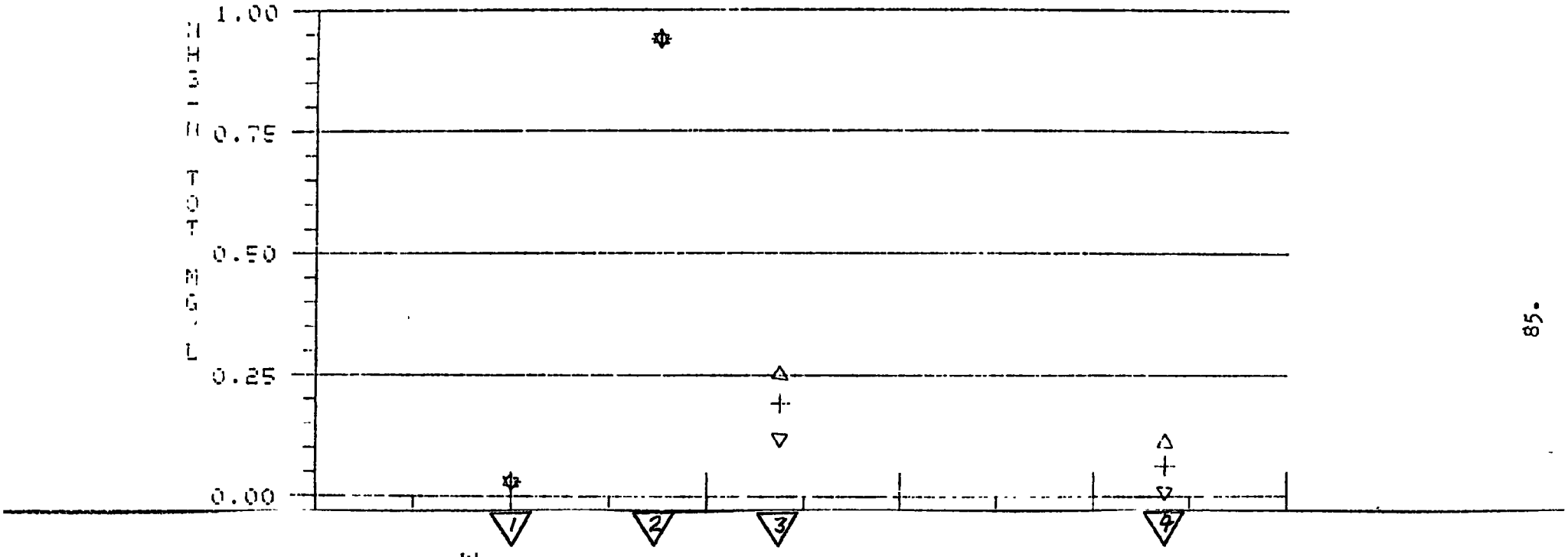
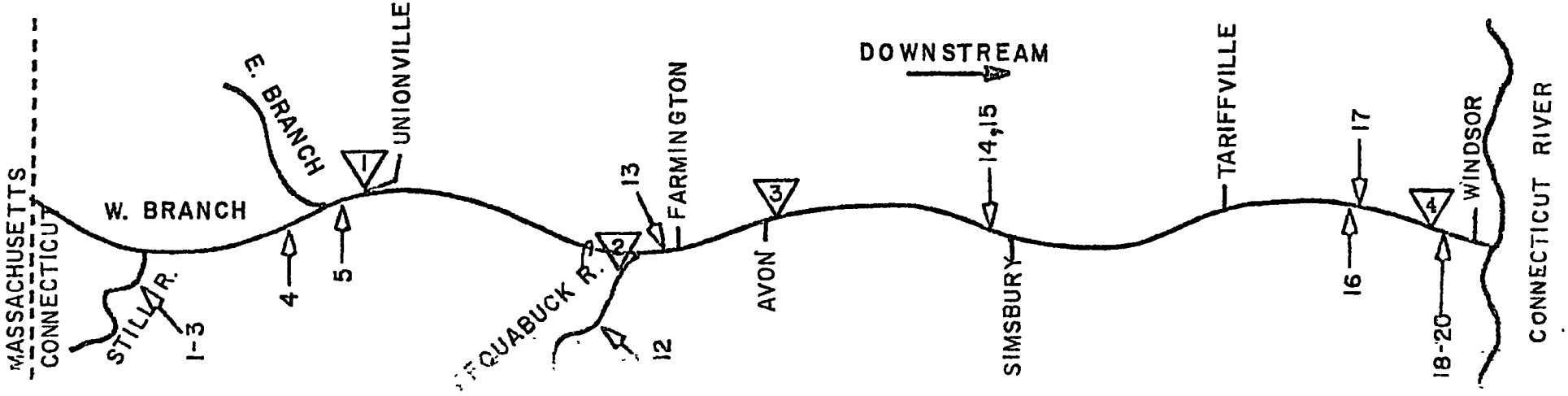
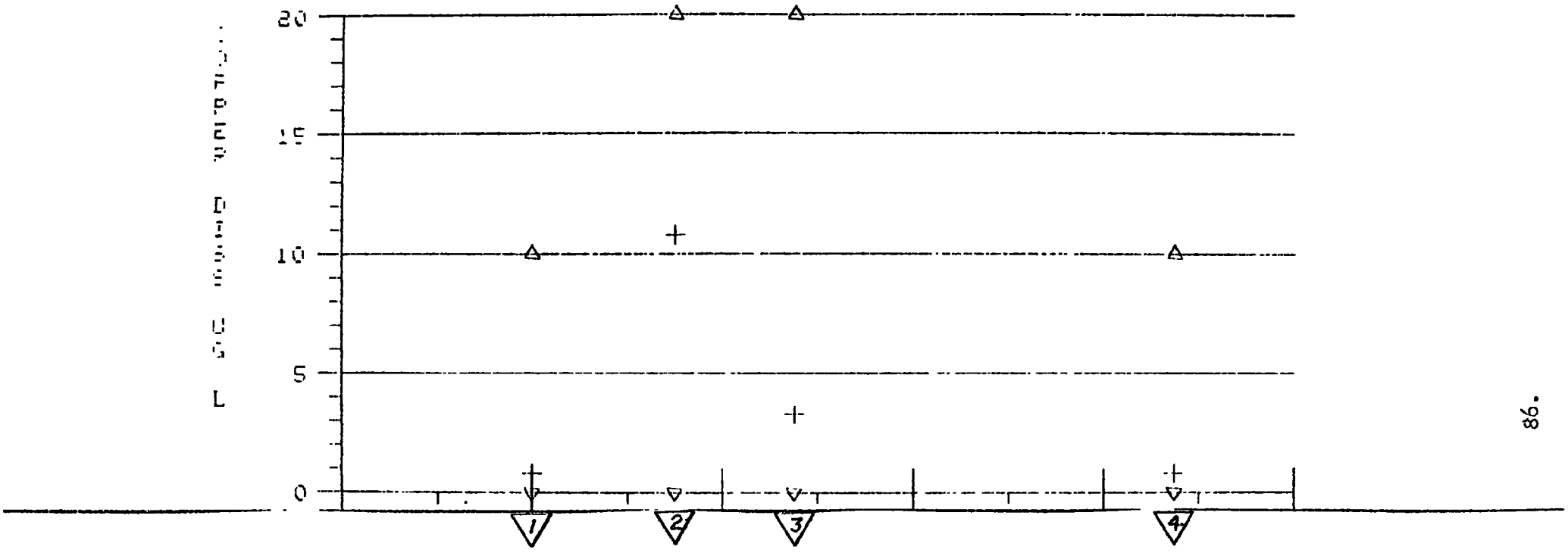
CONNECTICUT RIVER

REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)



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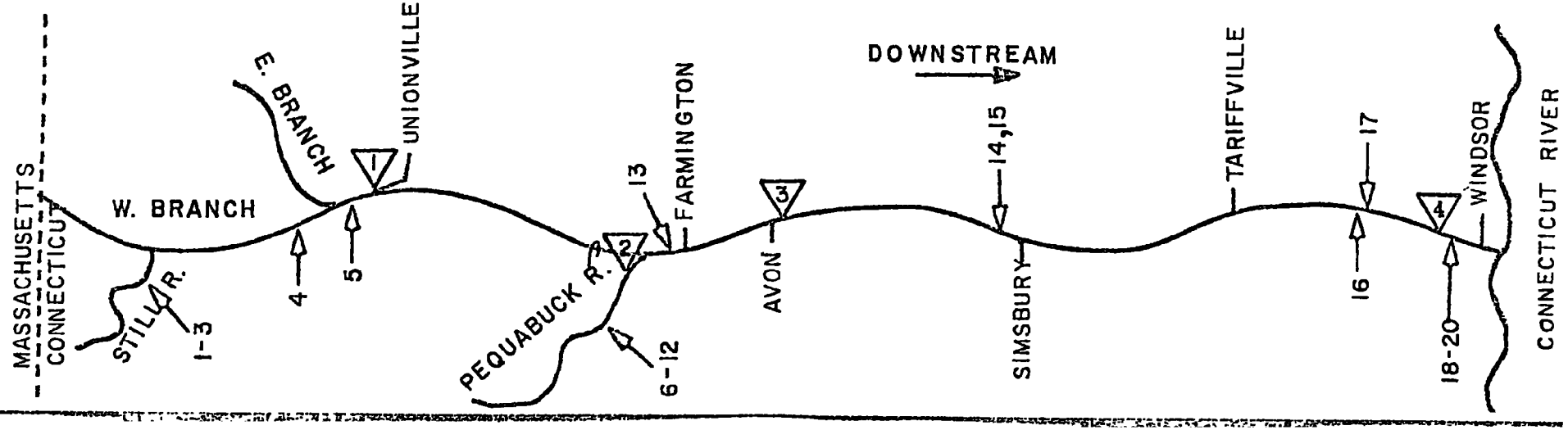
MASSACHUSETTS
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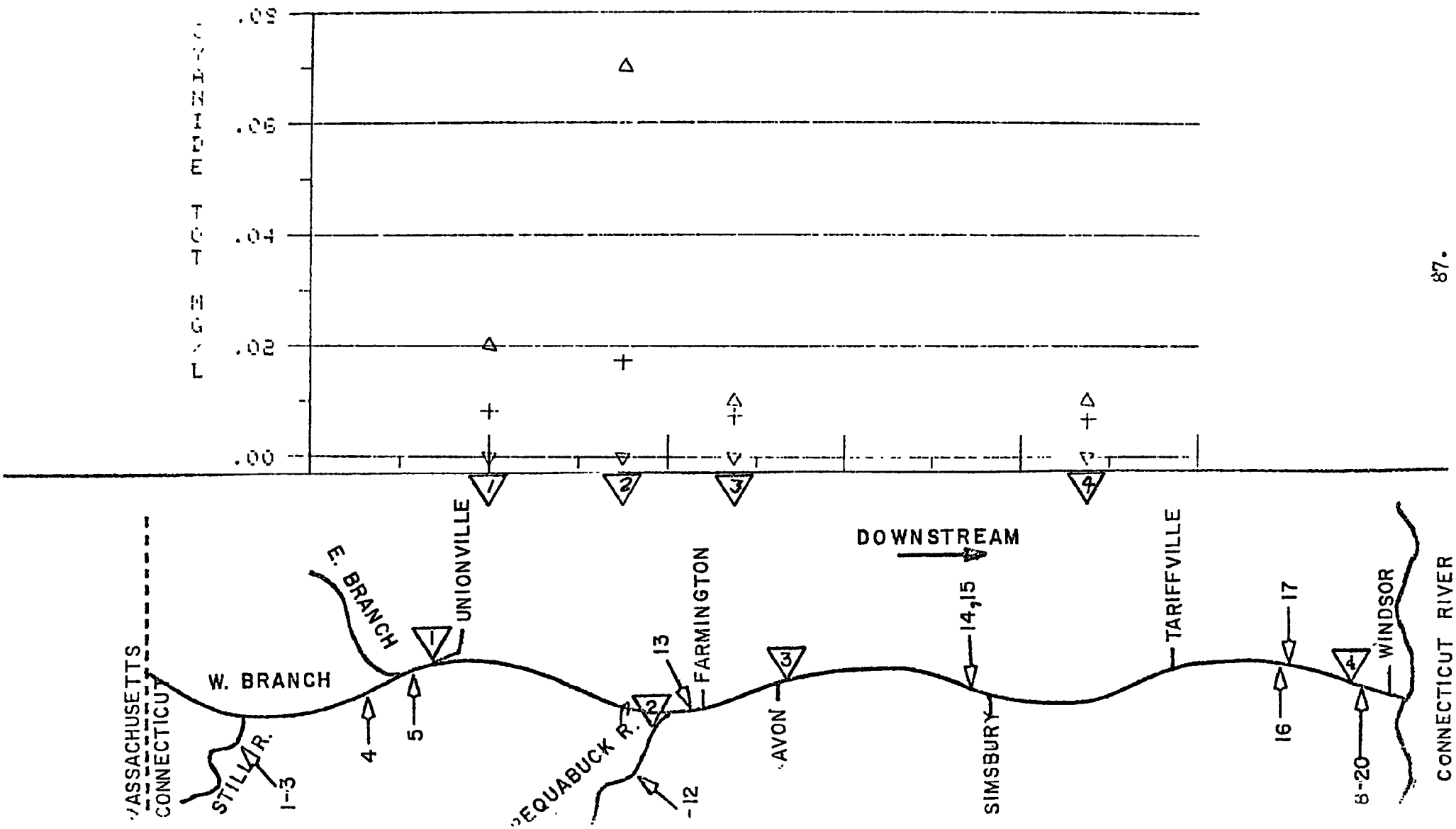
CONNECTICUT RIVER

REGION I WQ ASSESSMENT REPORT - FARMINGTON R. (CT)



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3.6 THAMES RIVER BASIN

The Thames River Basin drains a small portion of south central Massachusetts and most of eastern Connecticut. The basin is primarily woodland and agricultural with some highly developed and industrialized areas at Willimantic, Putnam, Killingly, Norwich, New London and Groton.

The mainstem of the Thames, formed by the confluence of the Yantic, Shetucket, and Quinebaug Rivers, is completely tidal. For the purpose of this report one station on each of the tributaries listed above and one on the mainstem will be discussed.

The Shetucket River at South Windham (Plot Station No. 1) reports violations of Connecticut's total coliform bacteria standards in eight of the twelve months. Inadequate sewage treatment upstream of this station is the probable cause of these violations. The Yantic River station (Plot Station No. 3) reports total coliform bacteria violations in 6 of 12 samples while the station on the Thames River at Mohegan (Plot Station No. 4) violates this standard in 18 of 23 samples, and DO in 4 of 21 samples. Combined sewer discharges at Norwich are thought responsible for the problems on the Thames River. The combined sewer discharges at Norwich are scheduled for separation in FY 76-77 according to Connecticut's FY-76 Program Plan.

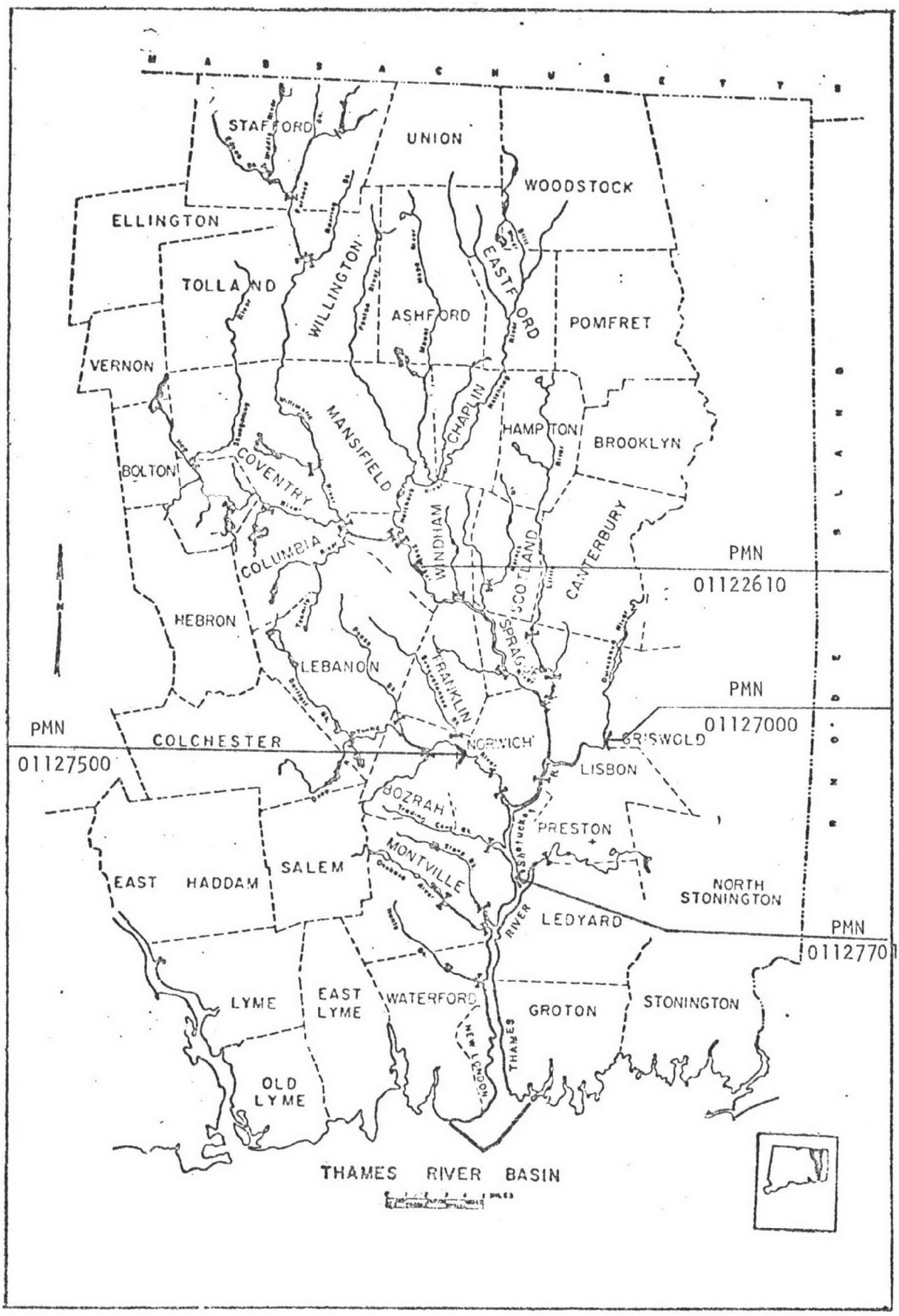
THAMES RIVER BASIN

{CONNECTICUT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Shetucket River near Windham, CT	PMN 01122610
2.	Quinebaug River near Jewett City, CT	PMN 01127000
3.	Yantic River near Yantic, CT	PMN 01127500
4.	Thames River near Montville, CT	PMN 01127701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STAFFORD
UNION
WOODSTOCK
ELLINGTON
TOLLAND
WILLINGTON
ASHFORD
EASTFORD
POMFRET
VERNON
MANSFIELD
CHAPLIN
HAMPTON
BROOKLYN
BOLTON
COVENTRY
WINDHAM
SCOTLAND
CANTERBURY
COLUMBIA
PMN
01122610
HEBRON
SPRAGUE
LEBANON
FRANKLIN
PMN
01127000
PMN
COLCHESTER
NORWICH
GRISWOLD
01127500
LISBON
BOZRAH
PRESTON
MONTVILLE
SALEM
EAST HADDAM
NORTH STONINGTON
LEDYARD
PMN
01127701
LYME
EAST LYME
WATERFORD
GROTON
STONINGTON
OLD LYME
THAMES RIVER BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01122610 SHETUCKET R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	11.63
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	1.8[illegible]
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	12.[illegible]
DISS. OXYGEN SATUR %	11	0.	0.0	75.00	NONE	106.[illegible]
PH SU	12	2.	16.67	6.50	8.00	6.[illegible]
COLIFORM TOT MFIM/100ML	12	8.	66.67	NONE	1000.00	2302.[illegible]

STATION 01127000 QUINEBAUG R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	11.6[illegible]
TURBIDITY JKSN JTU	12	1.	8.33	NONE	10.00	3.9[illegible]
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	11.65
PH SU	12	0.	0.0	6.00	8.50	6.87
COLIFORM TOT MFIM/100ML	11	1.	9.09	NONE	5000.00	790.6[illegible]

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01127500 YANTIC R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	29.40	12.08
TURBIDITY JKSN JTU	12	0.	0.0	NONE	25.00	1.42
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	11.62
DISS. OXYGEN SATUR %	11	0.	0.0	75.00	NONE	102.18
PH SU	12	0.	0.0	6.50	8.00	6.97
COLIFORM TOT MFIM/100ML	12	6.	50.00	NONE	1000.00	860.73

STATION 01127701 THAMES R. (CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	23	0.	0.0	NONE	28.30	13.65
DISS. OXYGEN MG/L	21	4.	19.05	5.00	NONE	7.96
PH SU	23	0.	0.0	6.80	8.50	7.44
COLIFORM TOT MFIM/100ML	23	18.	78.26	NONE	700.00	3633.41

* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

THAMES RIVER BASIN (MASS.)

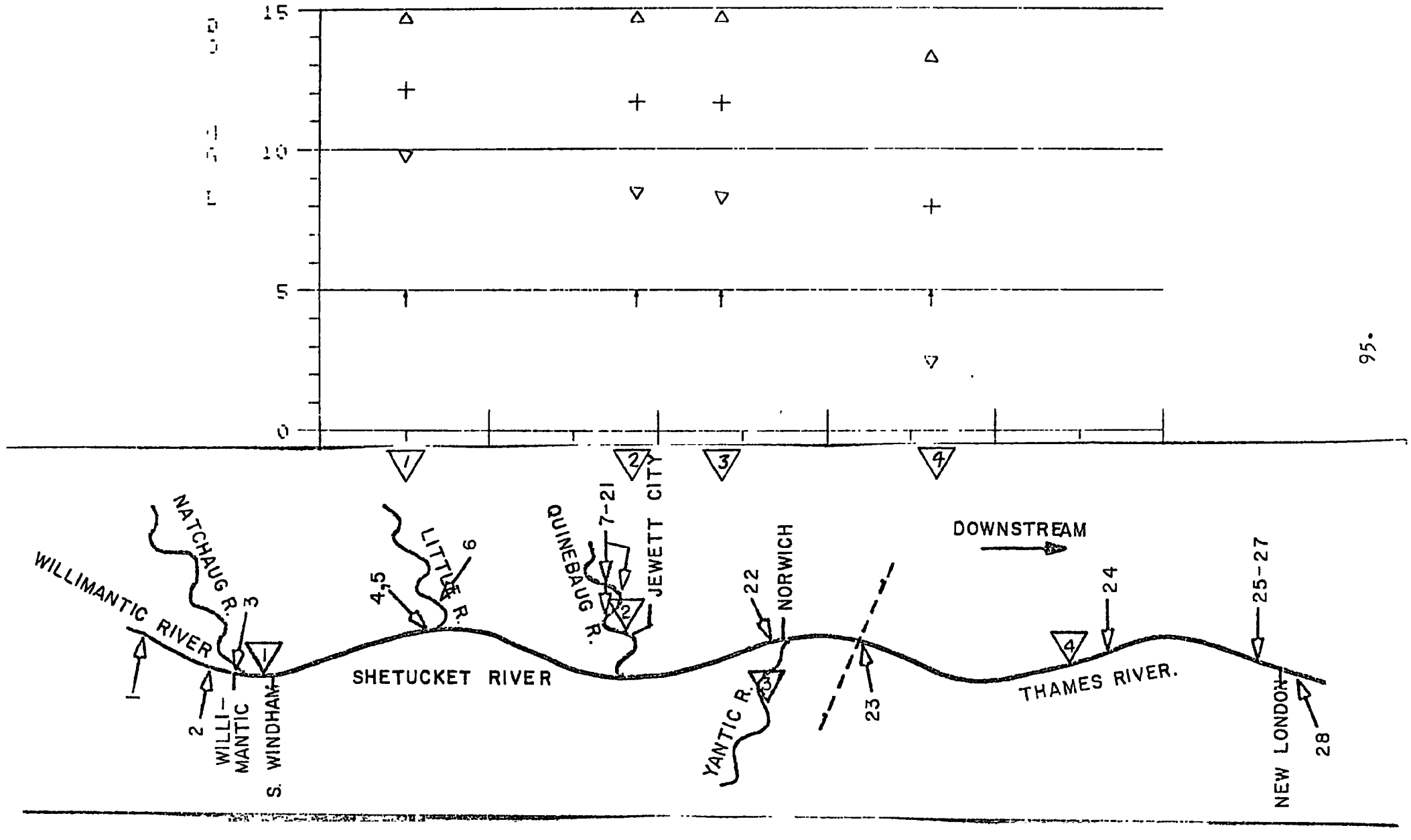
Discharger	Location	Receiving Water	NPDES No.
Leicester STP	Leicester	French R.	0101796
Carleton Woolen Mills	Leicester	French R.	0004839
Oxford-Rochdale STP	Oxford	French R.	0100170
Cranston Print Works Co.	Webster	Mill Brook	0000329
Tied in ~~Anglo Fabrics~~	~~Dudley~~	~~French R.~~	~~0000060~~
Dudley STP	Dudley	French R.	0100706
Webster STP	Webster	French R.	0100439
Sturbridge STP	Sturbridge	Quinebaug R.	0100421
Charlton Wool	Charlton	Cady Brook	0003565
Charlton City STP	Charlton	Cady Brook	0101141
American Optical	Southbridge	Quinebaug R.	0003361
Southbridge STP	Southbridge	Quinebaug R.	0100901
West Dudley Paper	West Dudley	Quinebaug R.	0001023

SIGNIFICANT DISCHARGERS

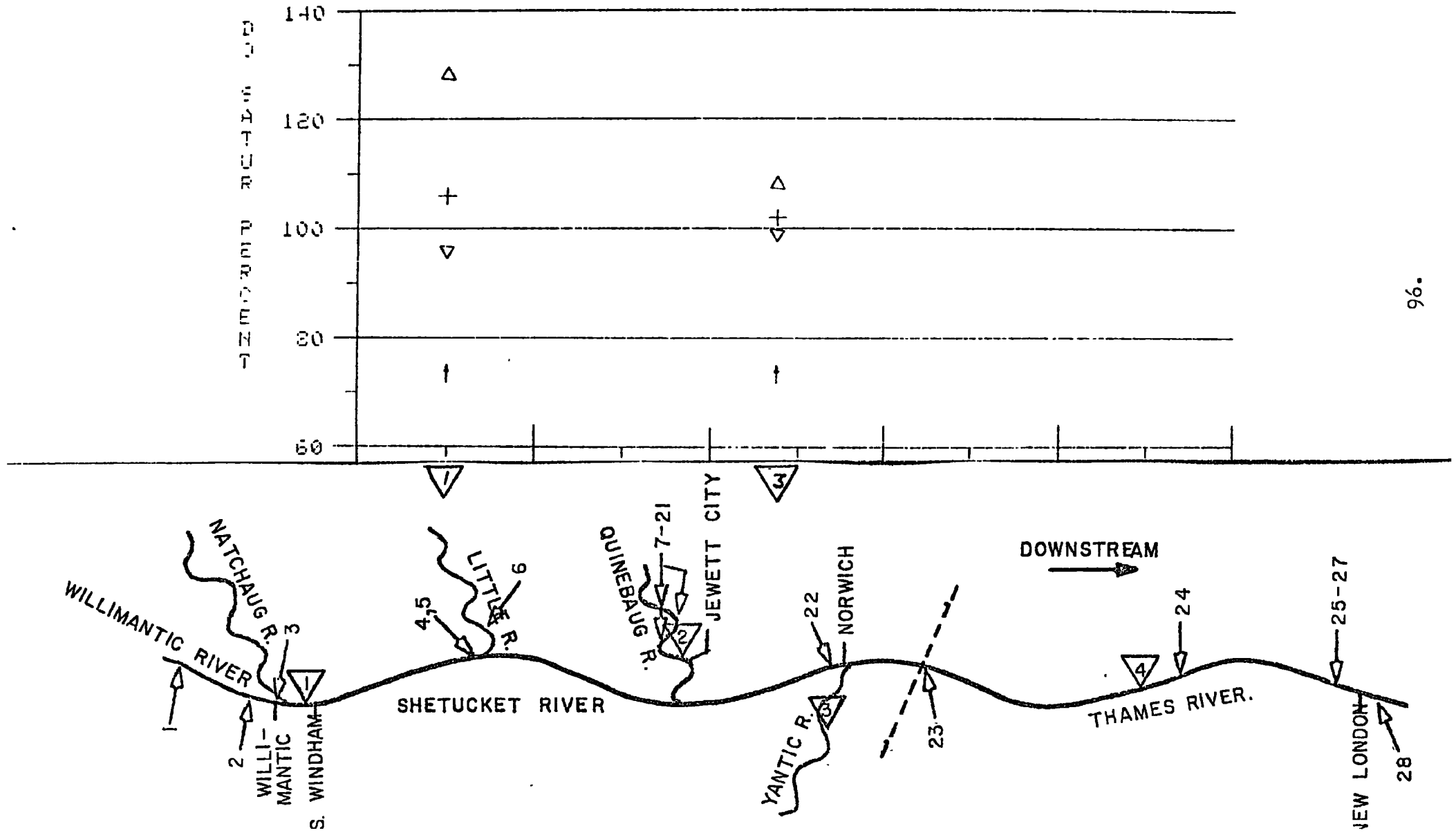
THAMES RIVER BASIN (CONN.)

	Discharger	Location	Receiving Water	NPDES No.
1.	Stafford MTP	Stafford	Willimantic R.	0101214
2.	Electro-Motive Mfg. Plant #1	Willimantic	Willimantic R.	0003140
3.	Willimantic WPCF	Willimantic	Willimantic R.	0101001
4.	M.S.Chambers & Son, Inc.	Sprague	Beaver Brook	0002186
5.	Sprague STP	Baltic	Shetucket R.	0100978
6.	Federal Paper Beard Co. Inc.	Versailles	Little R.	0003751
7.	Danielson WTP	Danielson	Quinebaug R.	0100153
8.	William Pryn, Inc.	Dayville	Five Mile R.	0002101
9.	Acme Cotton Products	East Killingly	Whetstone Brook	0000043
10.	Jewett City WTP	Jewett City	Quinebaug R.	0100269
11.	Rogers Corp.-Main Plant	Killingly	Quinebaug R.	0003972
12.	Glass Containers Corp.	Killingly	Five Mile R.	0000523
13.	CEM Company	Killingly	Five Mile R.	0000736
14.	Hale Mfg. Company	Killingly	Five Mile R.	0000574
15.	Kaman Corp. - Kaman Aerospace	Moosup	Moosup R.	0000710
16.	Interroyal Corp.	Plainfield	Horse Brook	0000701
17.	Plainfield MTP	Plainfield	Mill Brook	0100439
18.	Plainfield-North WPCF	Plainfield	Moosup R.	0100447
19.	Putnam WPCF	Putnam	Quinebaug R.	0100960
20.	Sanitary Dash Mfg. Co.	Thompson	French R.	0001058
21.	Thompson STP	Thompson	Quinebaug R.	0100706
22.	Chambers-Storck Co.	Norwich	Shetucket R.	0000264
23.	Norwich MTP	Norwich	Thames R.	0100412
24.	Robertson Paperbox - Paperboard	Montville	Oxoboxo R.	0001015
25.	Pfizer, Inc.	Groton	Thames R.	0000957
26.	General Dynamics - Electric Boat	Groton	Thames R.	0003824
27.	Groton MTP	Groton	Thames R.	0100242
28.	New London Riverside STP	New London	Thames R.	0100374

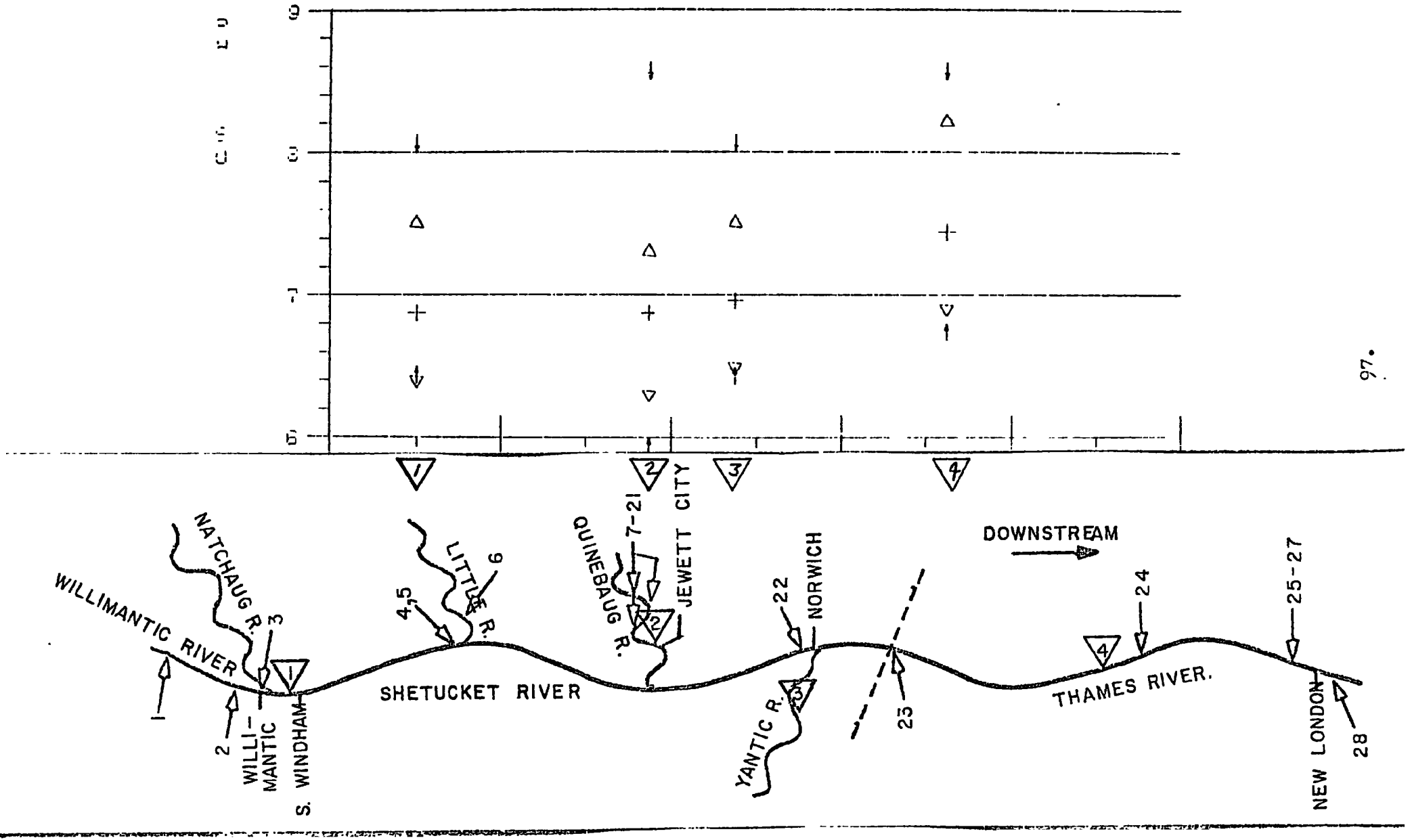
REGION I WQ ASSESSMENT REPORT - THAMES R. (CT)

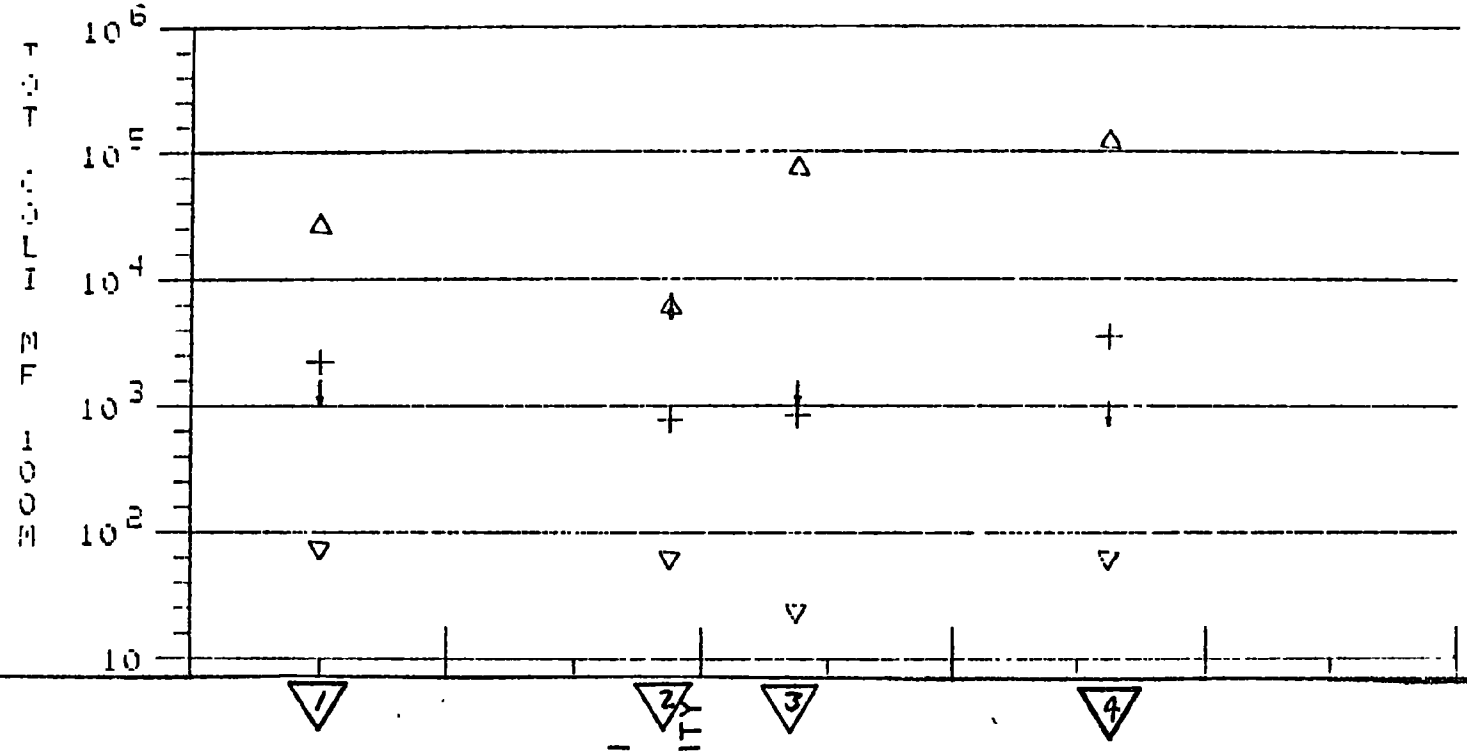


REGION I WQ ASSESSMENT REPORT - THAMES R. (CT)



REGION I WQ ASSESSMENT REPORT - THAMES R. (CT)

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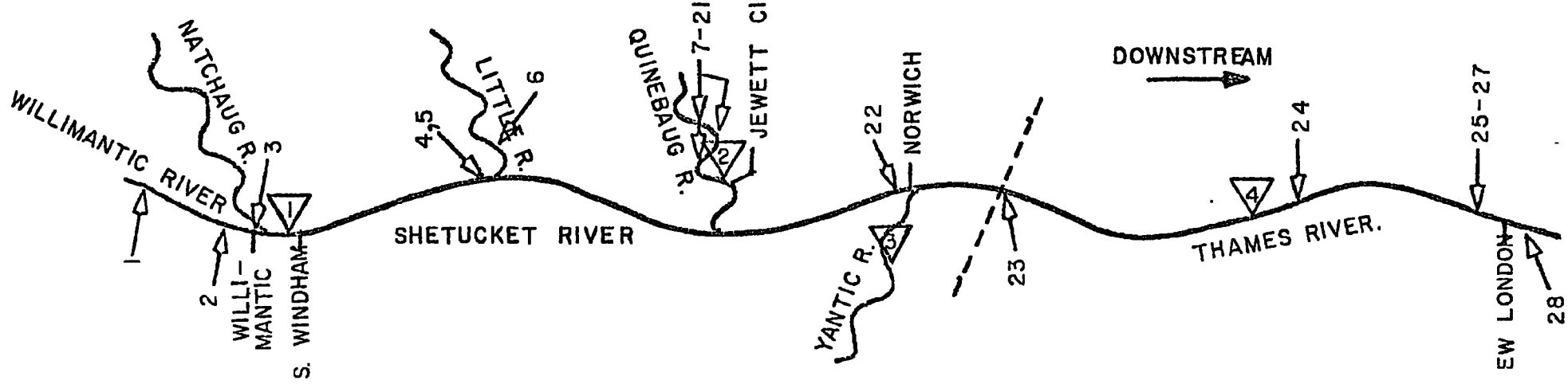
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LITTLE R.
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SHETUCKET RIVER
QUINEBAUG R.
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JEWETT CITY
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NORWICH
YANTIC R.
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DOWNSTREAM
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THAMES RIVER.
25-27
EW LONDON
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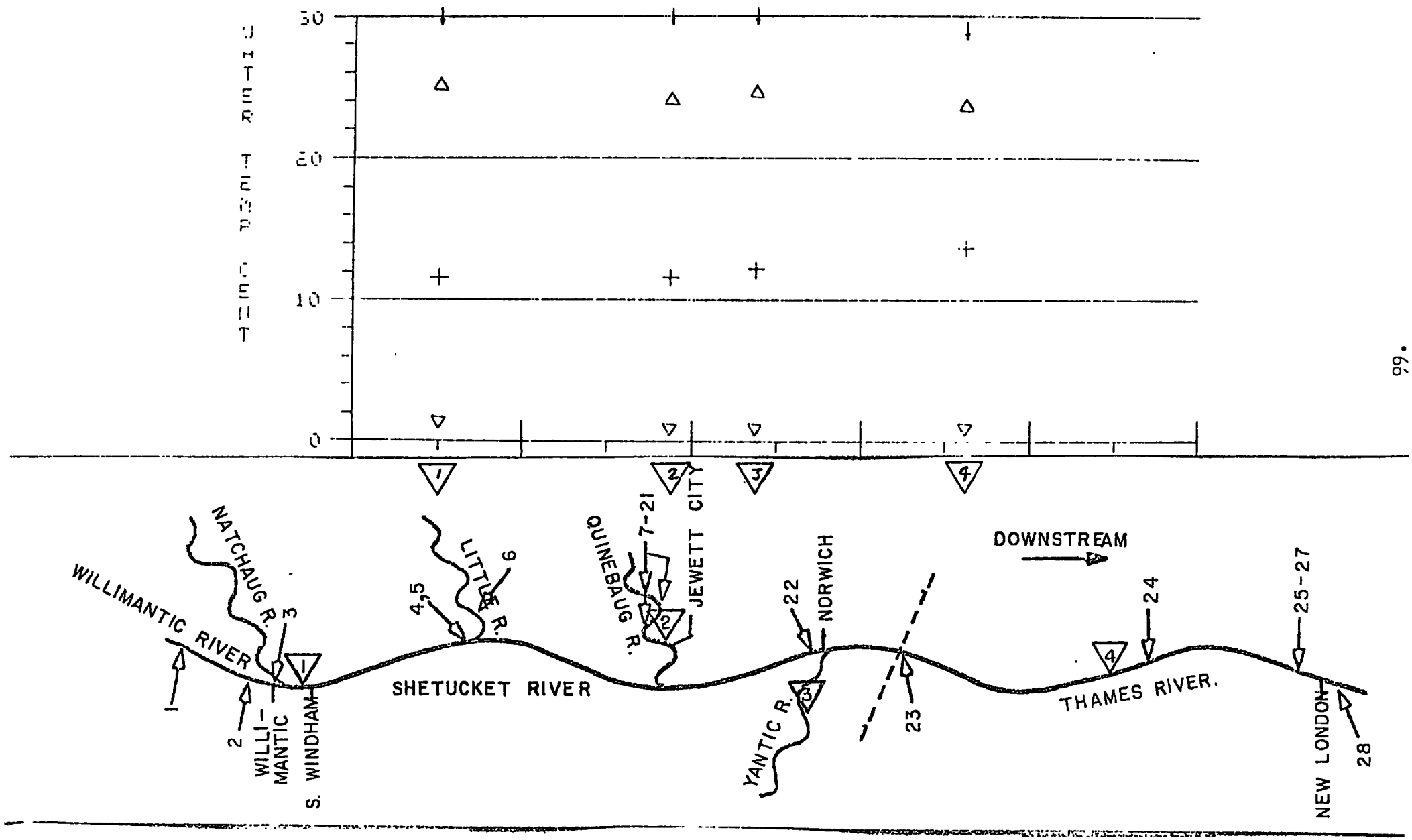
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S. WINDHAM
SHETUCKET RIVER
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QUINEBAUG R.
JEWETT CITY
YANTIC R.
NORWICH
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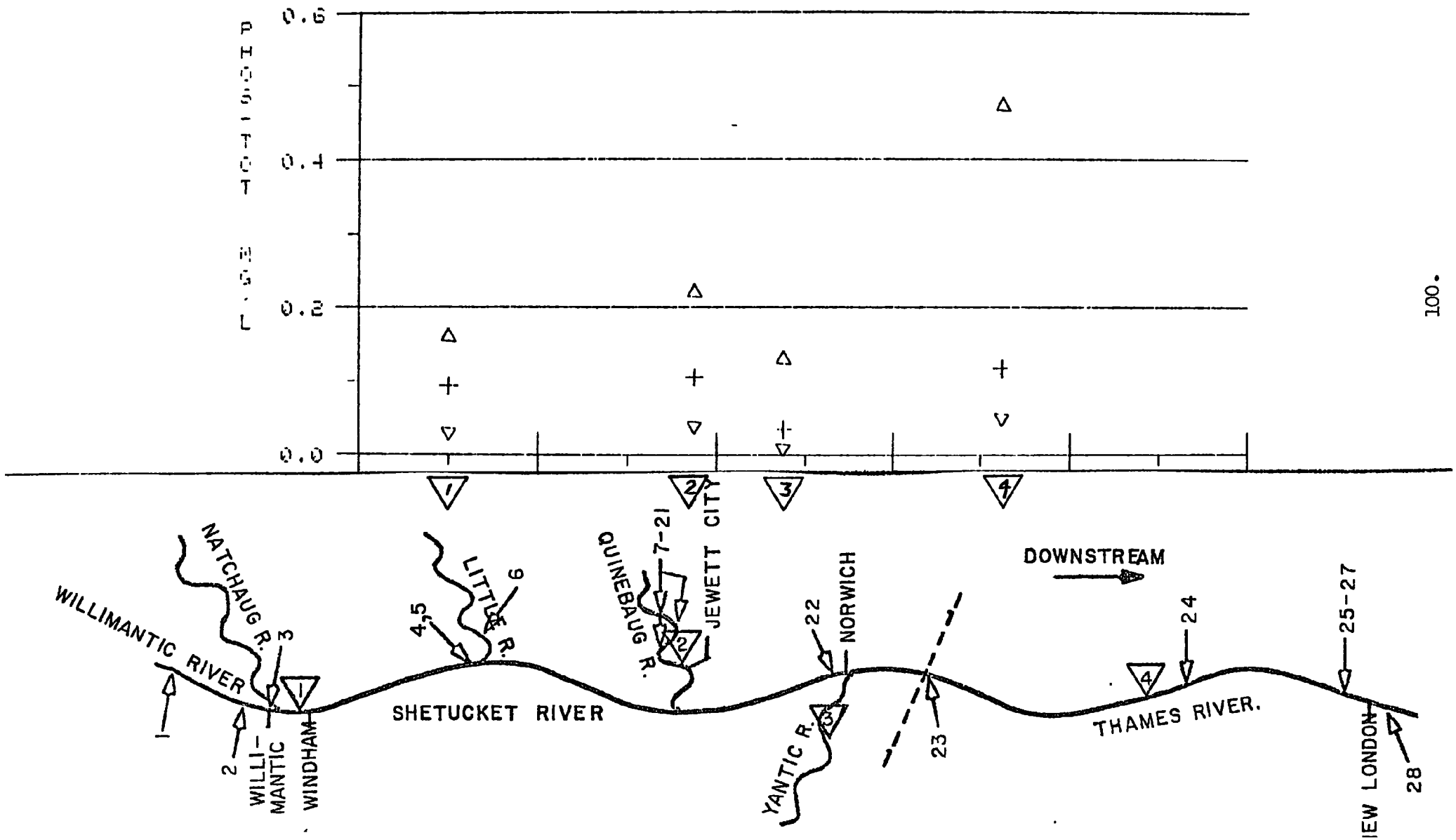
REGION I WQ ASSESSMENT REPORT - THAMES R. (CT)



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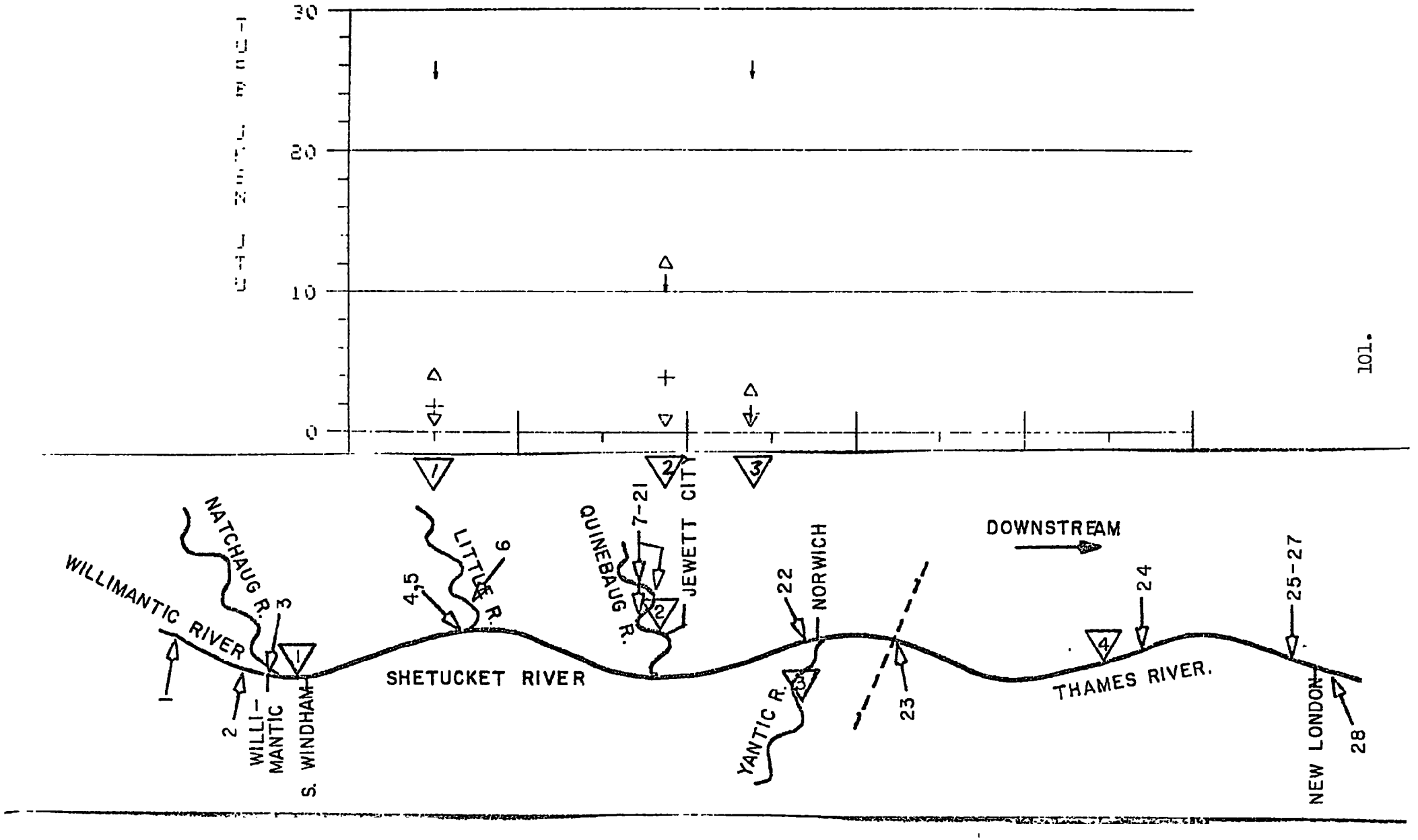


Pawcatuck
D O
pH

3.7 PAWCATUCK RIVER BASIN (RHODE ISLAND AND CONNECTICUT)

The Pawcatuck River Basin lies in the southwest corner of Rhode Island with two small portions in southeastern Connecticut. The mainstem of the Pawcatuck begins at Worden Pond above Kenyon and flows through Carolina and is joined by the Wood River at Alton. The river continues through Bradford into Westerly where it forms the Rhode Island-Connecticut state line until it reaches Long Island Sound.

Three of the stations on the Pawcatuck are located in Rhode Island (Plot Stations 1-3) and were sampled six times during 1975. A high percentage of the samples taken at these stations violated Rhode Island's total and fecal coliform standard for Class "B" waters. Plot stations 2 (1 of 6) and 3 (3 of 6) also violated the state standard for dissolved oxygen percent saturation. Natural conditions are believed responsible for the large number of pH violations reported at all the Rhode Island stations. The fourth station is located off Stonington, Connecticut and it recorded four violations of Connecticut's total coliform standard in the 23 samples taken.

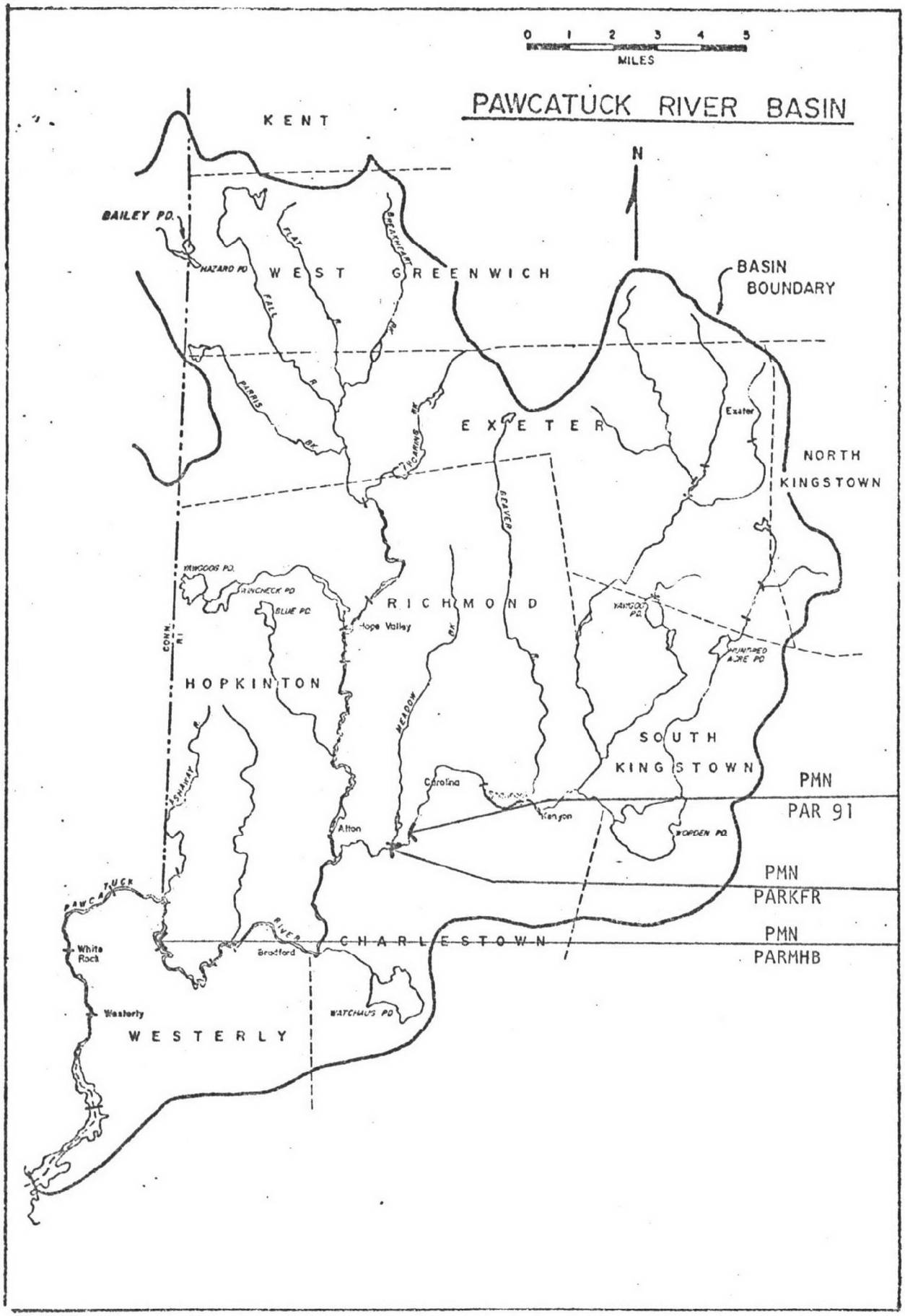
The high coliform bacteria counts at the Rhode Island stations are believed to be caused by textile discharges, while those in the tidal portions of the Pawcatuck are thought due to insufficient treatment of domestic sewage at Westerly, Rhode Island and Pawcatuck, Connecticut. Most of the shellfish areas of the Pawcatuck River are closed to shell fishing for market purposes due to the bacterial pollution in the river.

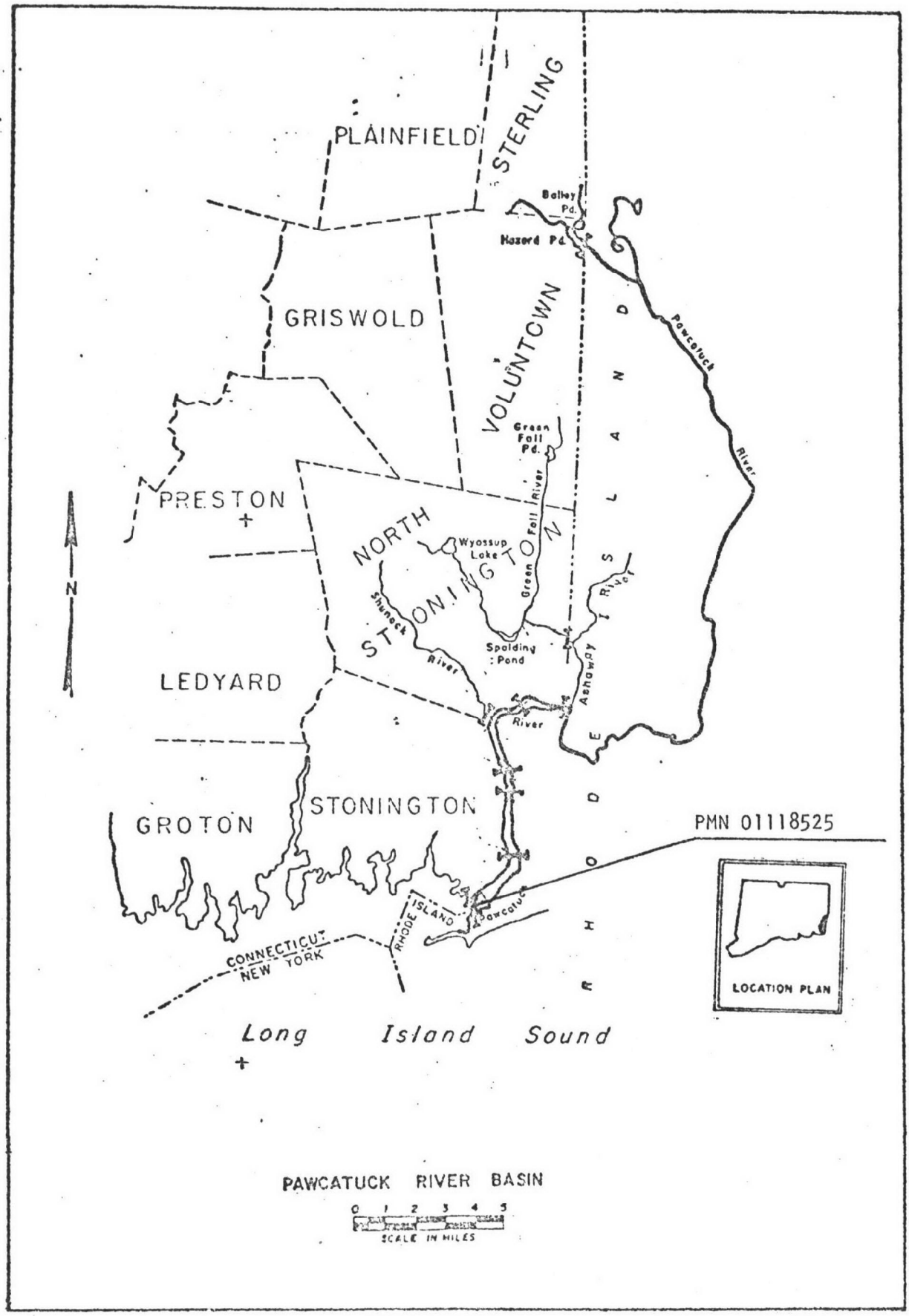
PAWCATUCK RIVER STATIONS

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Pawcatuck River at Rt. 91 Bridge, Charlestown, Rhode Island	PMN PAR91
2.	Pawcatuck River at Kings Factory Road Bridge, Wood River Junction, Rhode Island	PMN PARKFR
3.	Pawcatuck River at Meeting House Bridge, Hopkinton, Rhode Island	PMN PARMHB
4.	Pawcatuck River at Stonington, Conn.	PMN 01118525


PAWCATUCK RIVER BASIN
0 1 2 3 4 5
MILES
N
KENT
BAILEY PO.
HAZARD PO
WEST GREENWICH
BASIN BOUNDARY
EXETER
Exeter
NORTH KINGSTOWN
YAWGOOG PO.
HANCHECK PO
BLUE PO
RICHMOND
Hope Valley
YAWGOO PO.
WINFRED ACRE PO
HOPKINTON
CONN.
RI
SOUTH KINGSTOWN
Carolina
Kenyon
WORDEN PO.
Alton
PMN
PAR 91
PMN
PARKFR
PMN
PARMHB
PAWCATUCK
RIVER
CHARLESTOWN
White Rock
Bradford
Westerly
WATCHUS PO
WESTERLY


PLAINFIELD
STERLING
Bailey Pd.
Hazard Pd.
GRISWOLD
VOLUNTOWN
Green Fall Pd.
Green Fall River
Pawcatuck River
PRESTON
NORTH STONINGTON
Wyossup Lake
Shunock River
Spalding Pond
Ashaway River
LEDYARD
River
GROTON
STONINGTON
RHODE ISLAND
Pawcatuck
CONNECTICUT
NEW YORK
Long Island Sound
N
PMN 01118525
LOCATION PLAN
PAWCATUCK RIVER BASIN
0 1 2 3 4 5
SCALE IN MILES

SUMMARY OF WATER QUALITY VIOLATIONS

STATION PAR91 PAWCATUCK R. (RI-CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	55.58
TURBIDITY JKSN JTU	6	0.	0.0	NONE	10.00	1.52
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	9.30
DISS. OXYGEN SATUR %	6	0.	0.0	75.00	NONE	85.02
LAB PH SU	6	6.	100.00	6.80	8.00	6.17
COLIFORM TOT MPN TUBE	6	6.	100.00	NONE	1000.00	15057.46
COLIFORM FEC MPN/100ML	6	5.	83.33	NONE	200.00	1703.18

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION PARKFR PAWCATUCK R. (RI-CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	54.83
TURBIDITY JKSN JTU	6	0.	0.0	NONE	10.00	1.[illegible]
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	9.
DISS. OXYGEN SATUR %	6	1.	16.67	75.00	NONE	83.
LAB PH SU	6	6.	100.00	6.80	8.00	6.
COLIFORM TOT MPN TUBE	6	6.	100.00	NONE	1000.00	6796.
COLIFORM FEC MPN/100ML	6	6.	100.00	NONE	200.00	1819.

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION PARMHB PAWCATUCK R. (RI-CT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	56.00
TURBIDITY JKSN JTU	6	0.	0.0	NONE	10.00	1.28
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	8.42
DISS. OXYGEN SATUR %	6	3.	50.00	75.00	NONE	76.33
LAB PH SU	6	4.	66.67	6.80	8.00	6.55
COLIFORM TOT MPN TUBE	6	3.	50.00	NONE	1000.00	1758.48
COLIFORM FEC MPN/100ML	6	5.	83.33	NONE	200.00	462.04

STATION 01118525 PAWCATUCK R. (RI-CT)

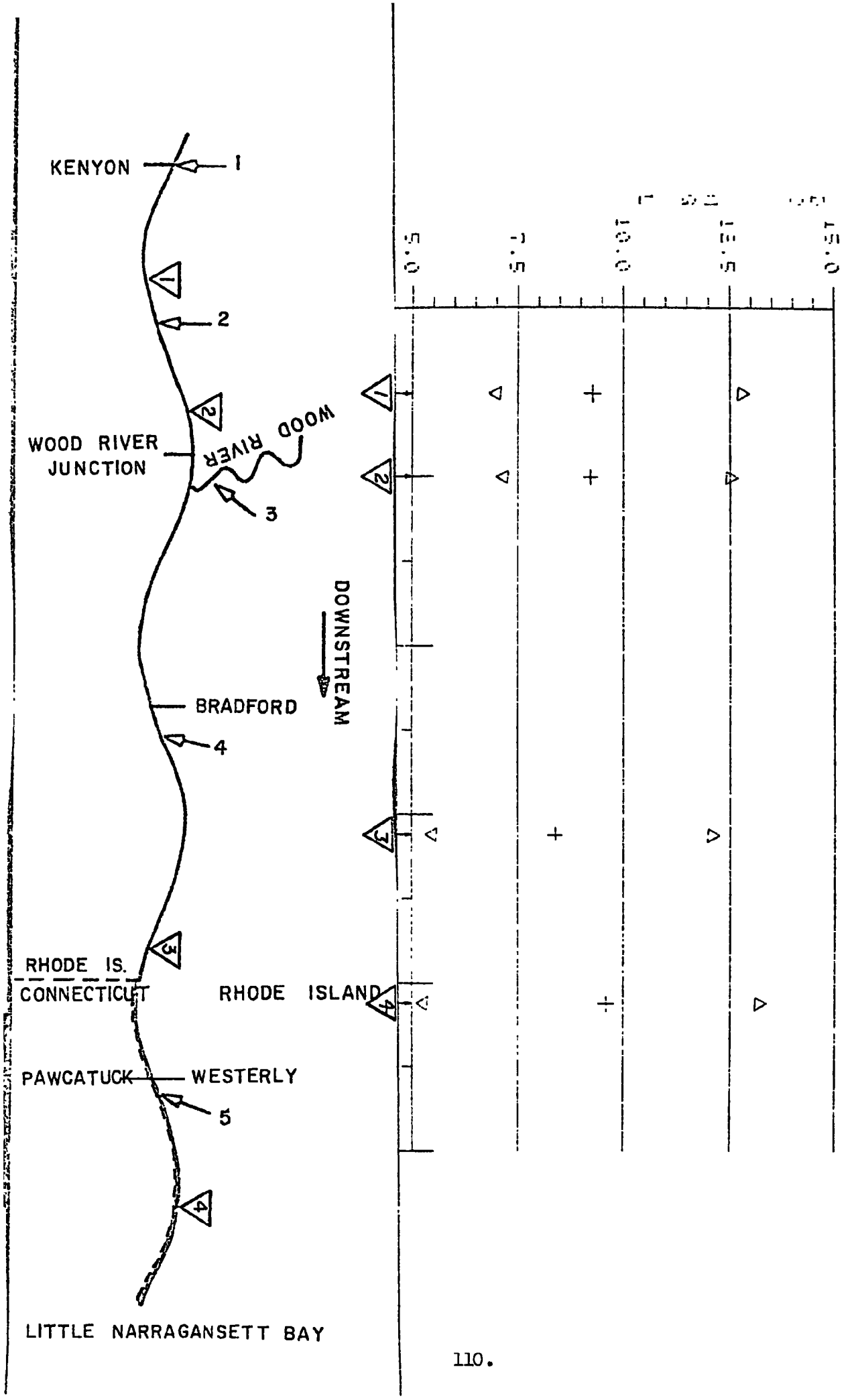
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN MG/L	21	0.	0.0	5.00	NONE	9.60
PH SU	23	0.	0.0	6.80	8.50	7.92
COLIFORM TOT MFIM/100ML	23	4.	17.39	NONE	700.00	100.18

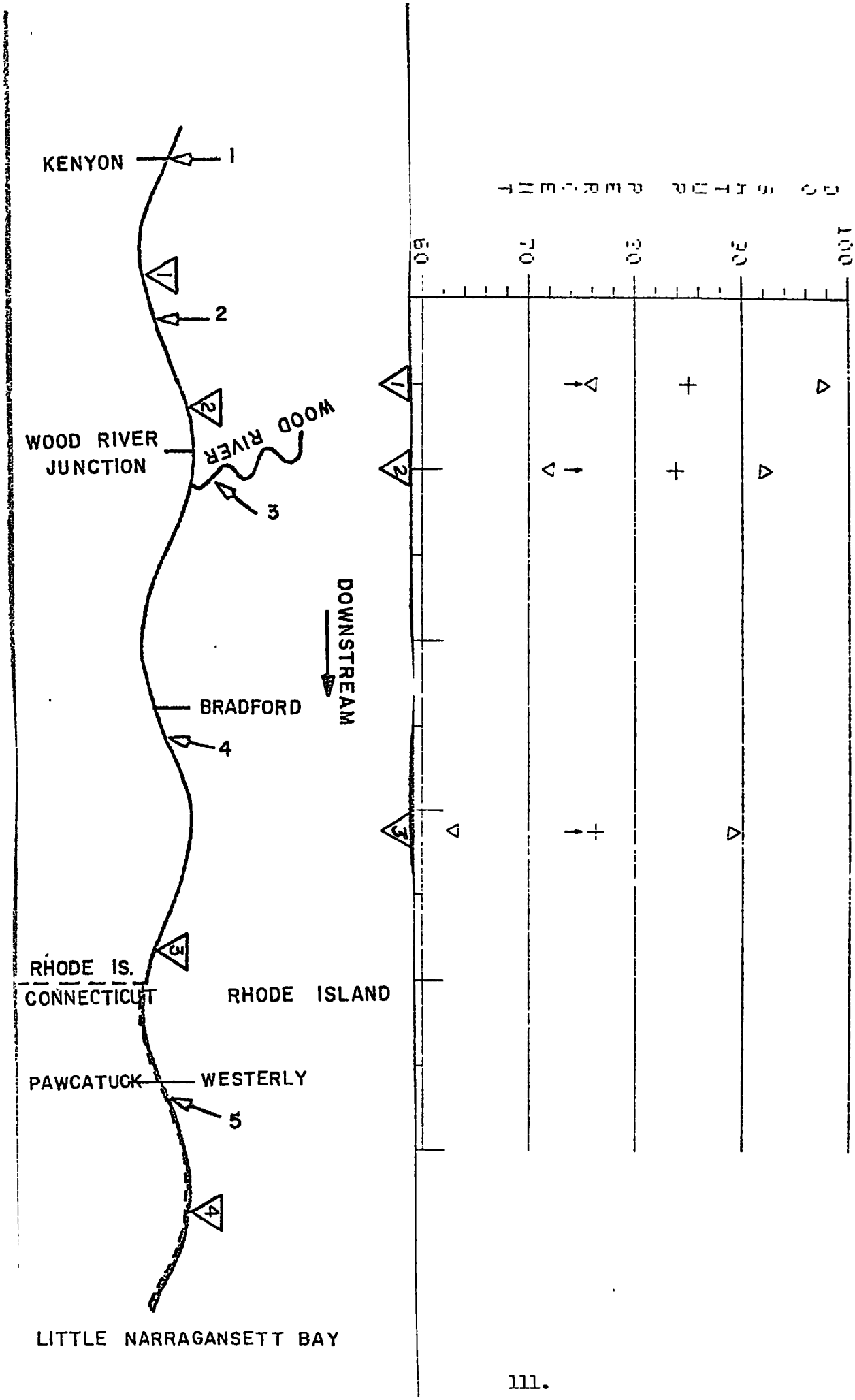
* GEOMETRIC MEAN FOR COLIFORMS

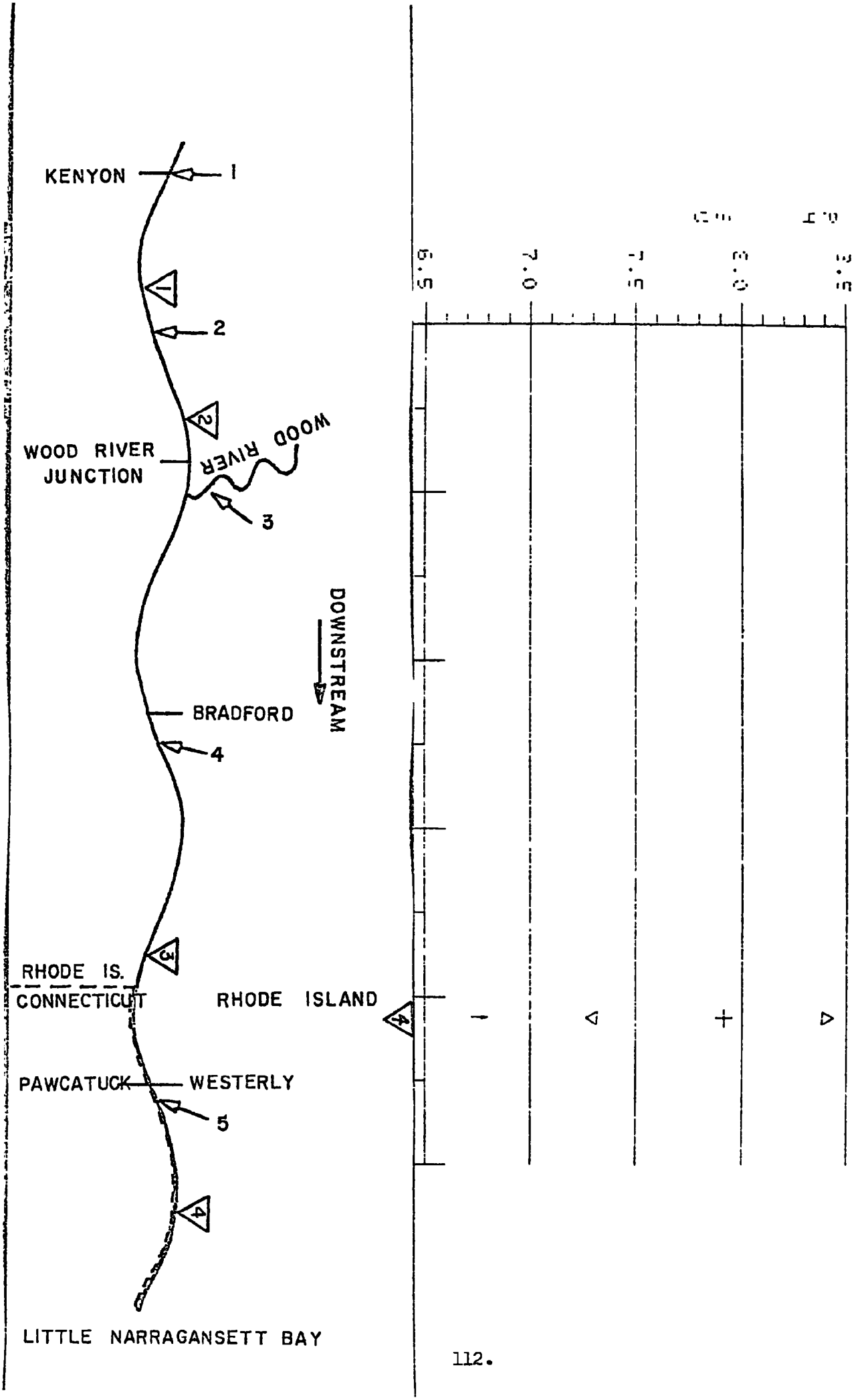
SIGNIFICANT DISCHARGERS

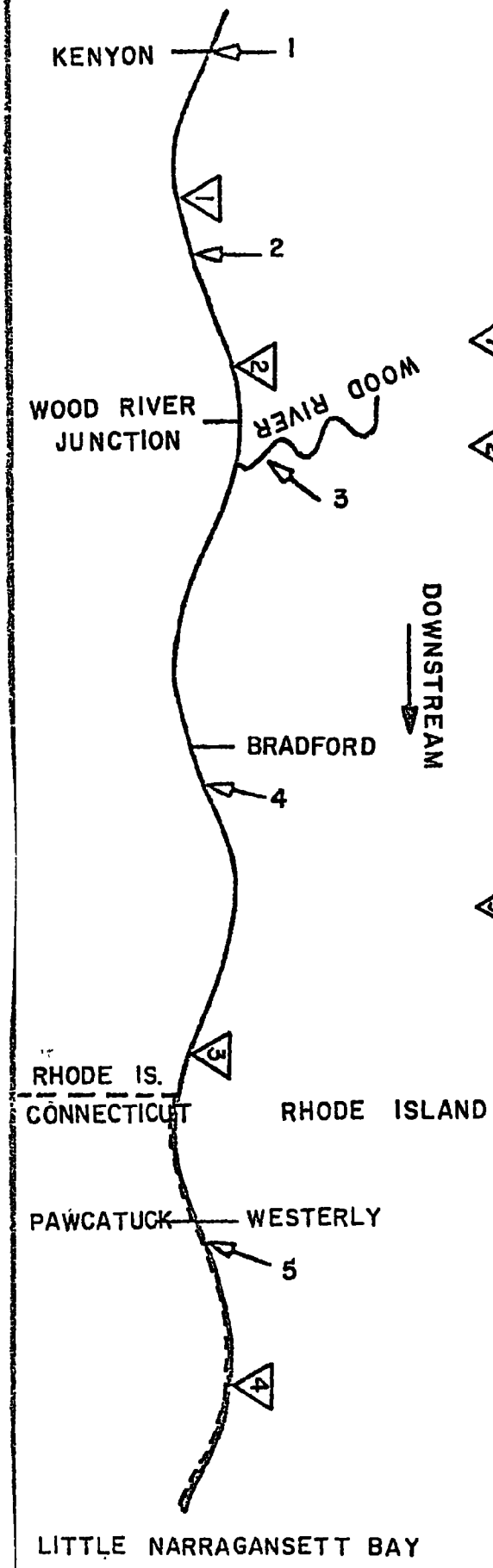
PAWCATUCK RIVER BASIN

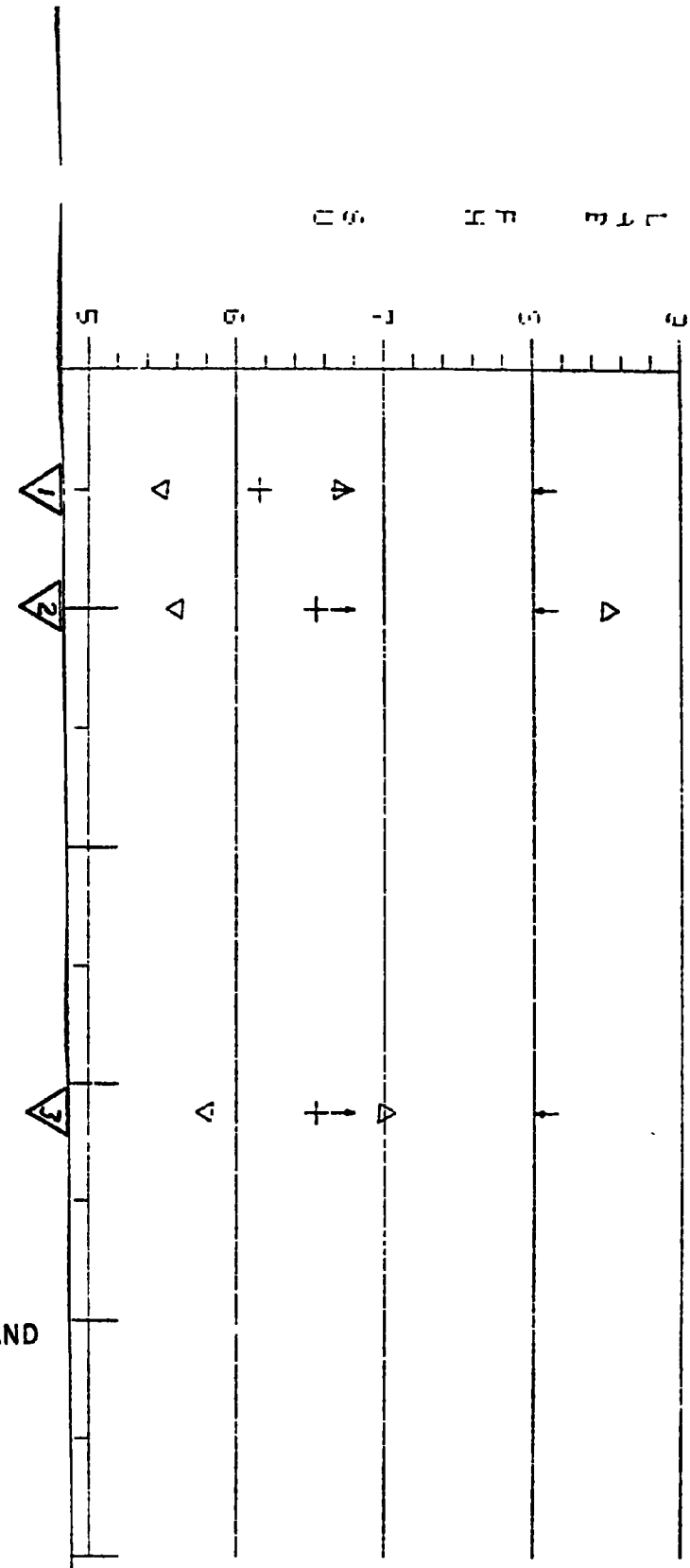
	Discharger	Location	Receiving Water	NPDES No.
1.	Kenyon Piece Dye works Inc.	Charlestown	Pawcatuck River	0000191
2.	United Nuclear Corp.	Charlestown	Pawcatuck River	0000477
3.	Charbert Inc.	Alton	Wood River	0000108
4.	New Bradford Dyeing Assoc.	Bradford	Pawcatuck River	0000043
5.	Westerly STP	Westerly	Pawcatuck River	0100064

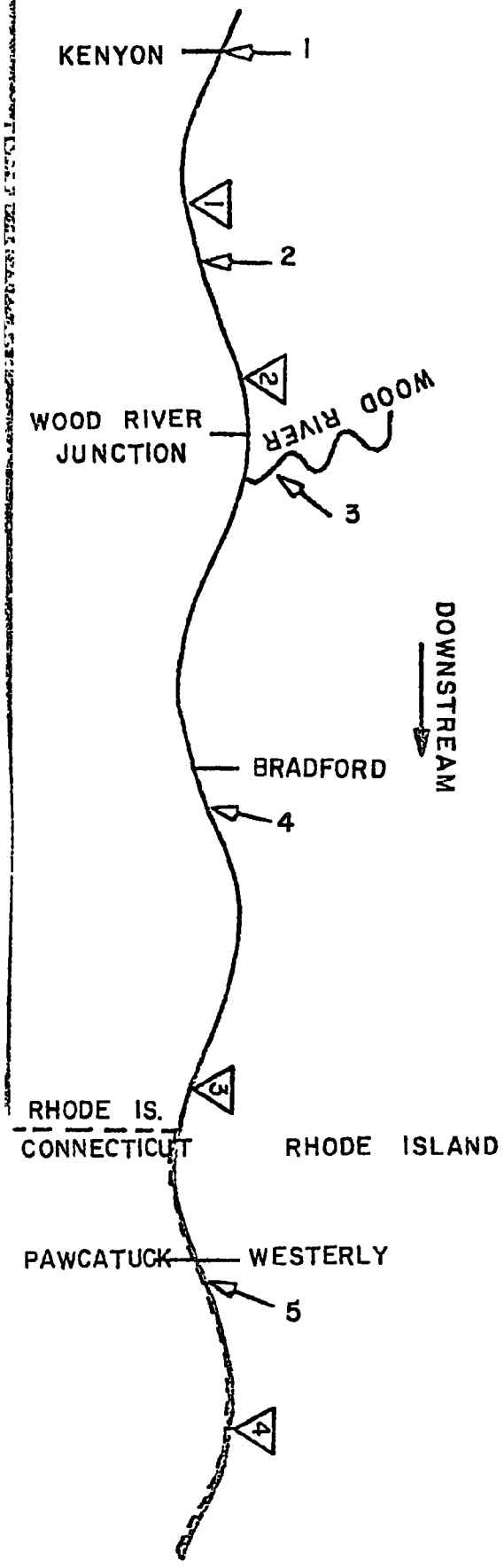

KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY
15.0
12.5
10.0
7.5
5.0

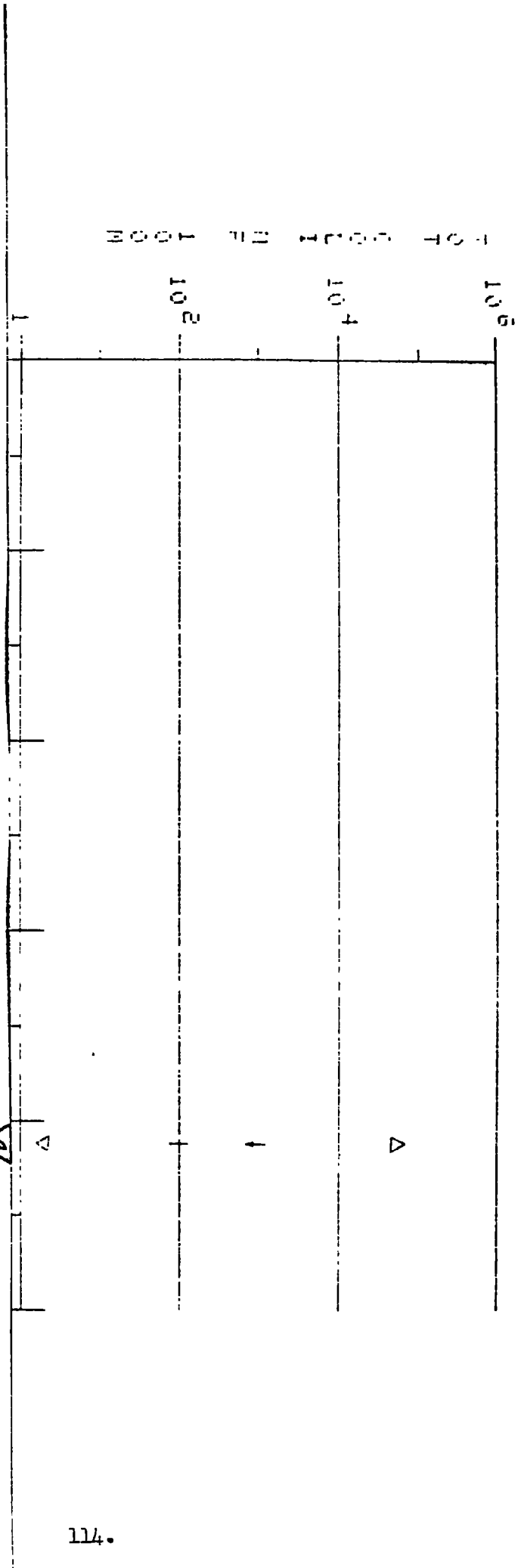

REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY
100
80
60
40
20
0

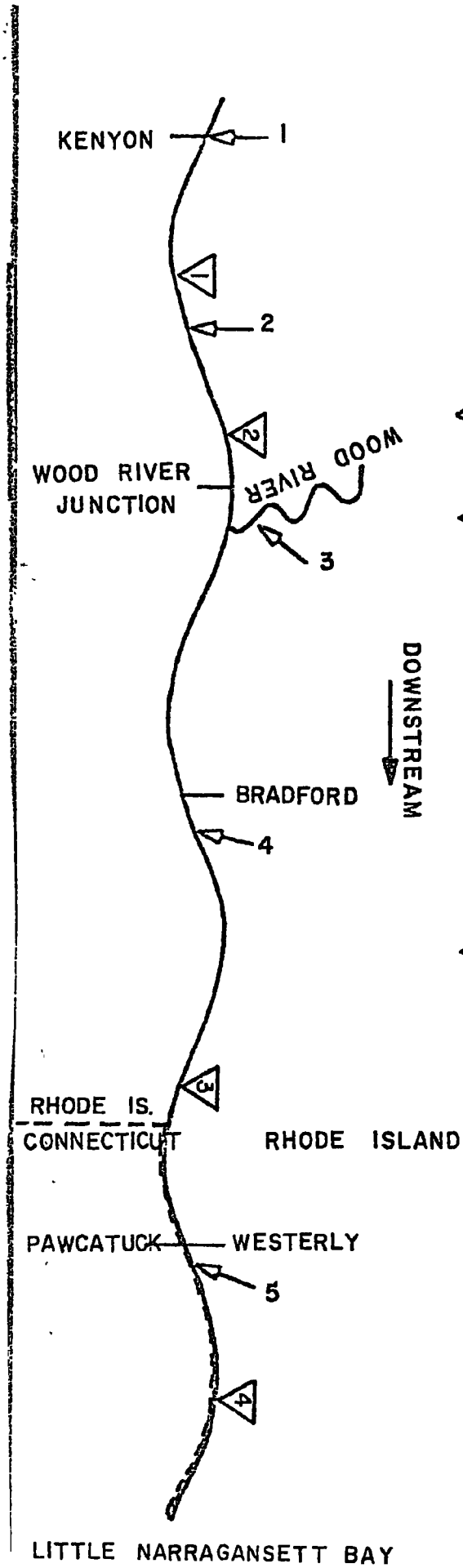

REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY
3.5
3.0
2.5
2.0
1.5

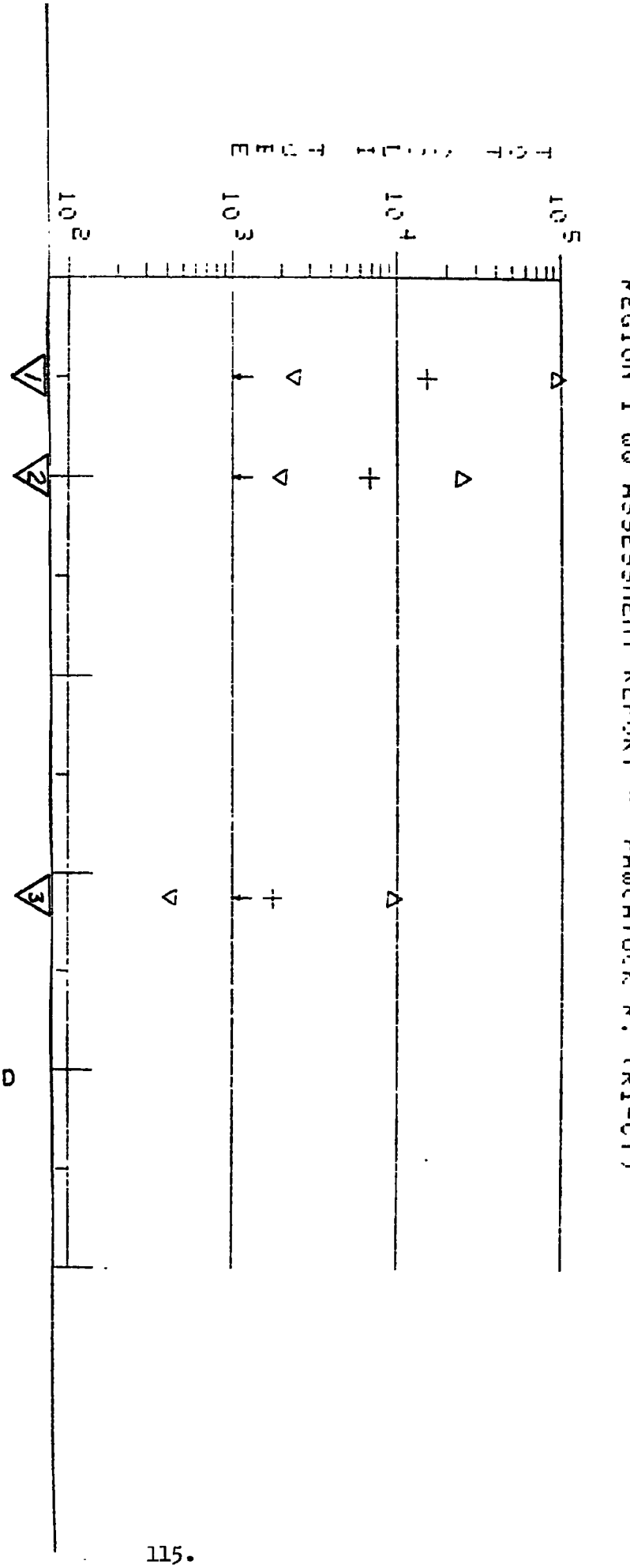

KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY

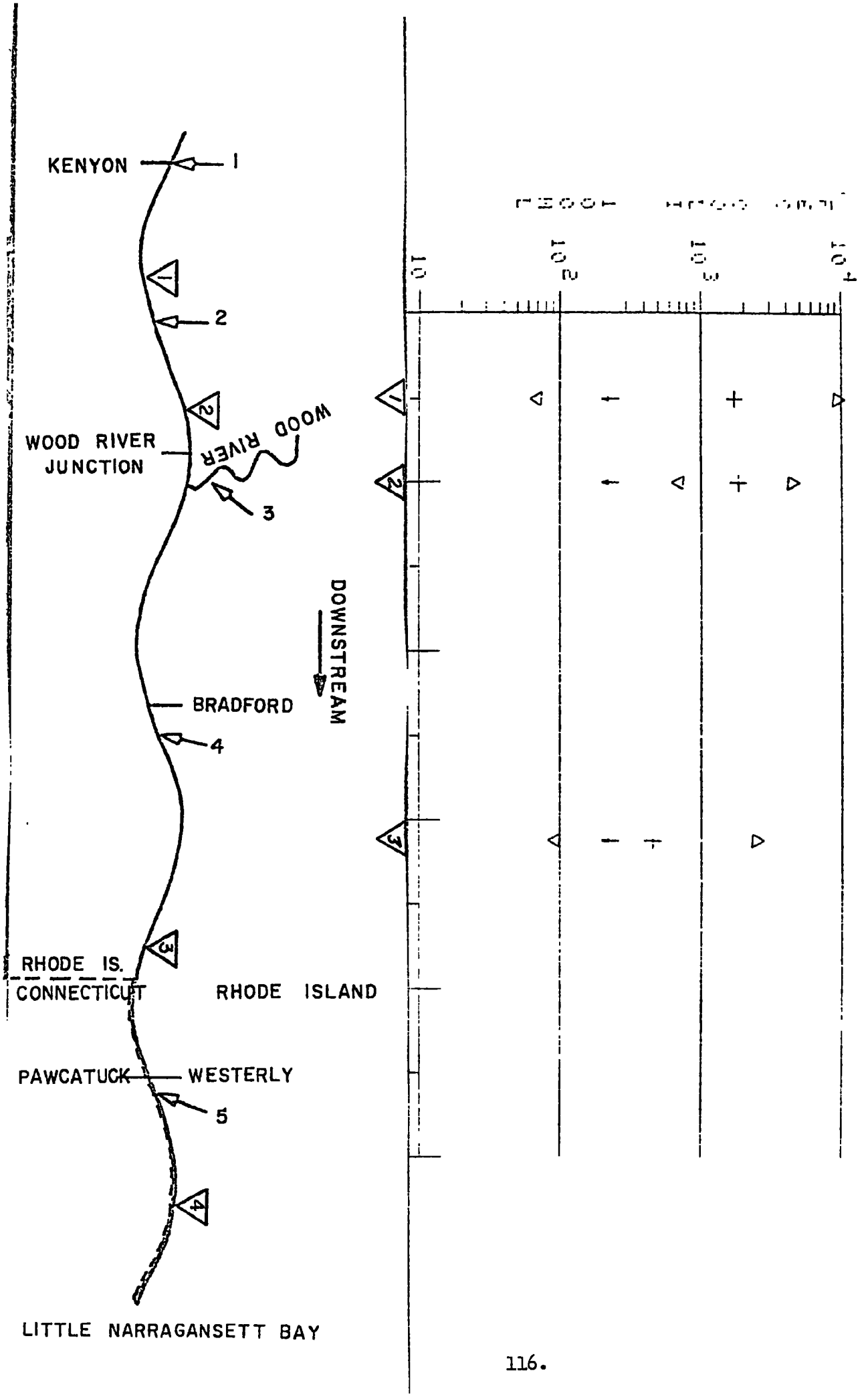

REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)

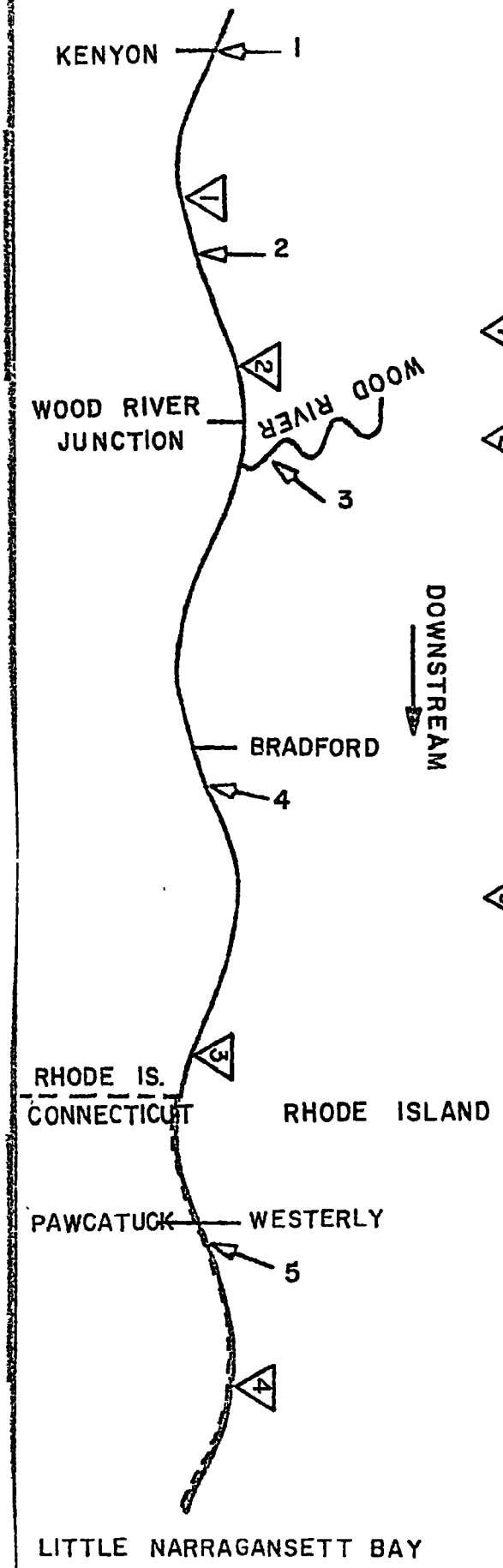

KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY

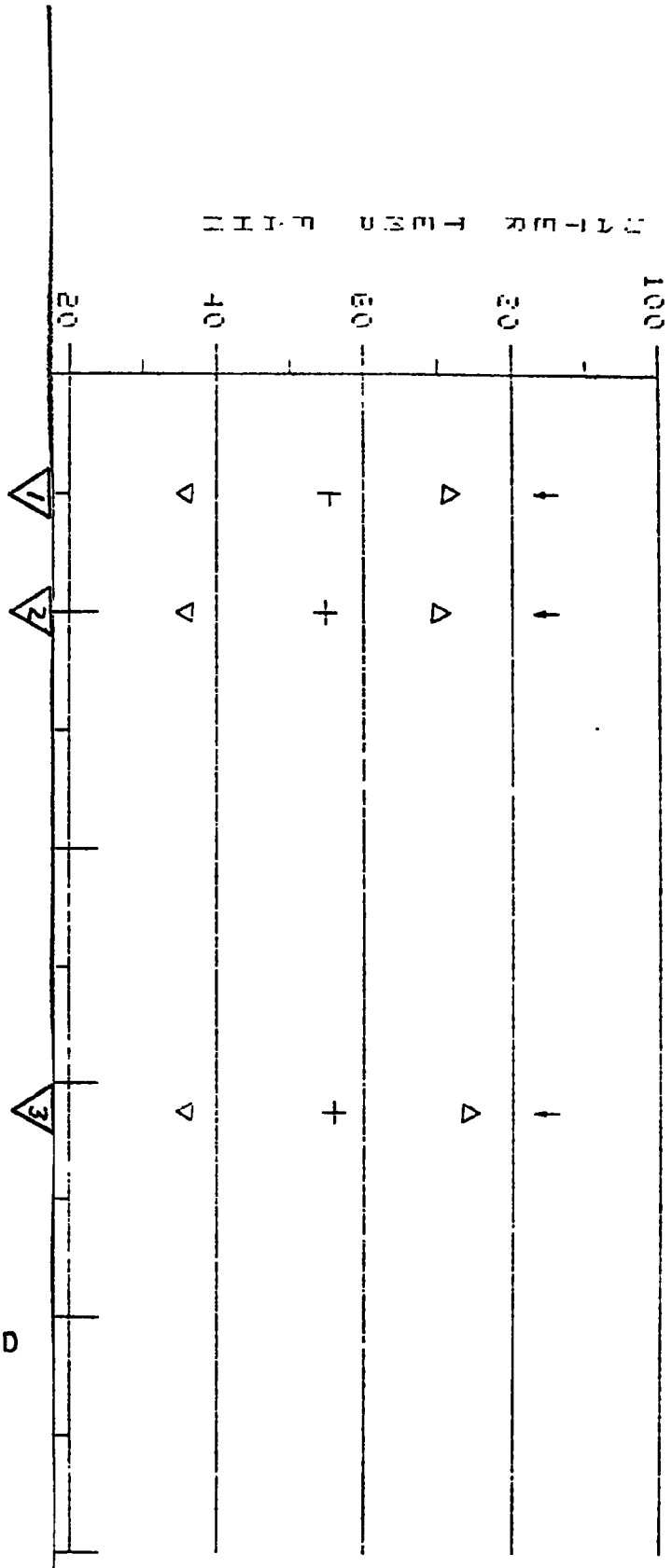

REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
1
10^2
10^4
10^6

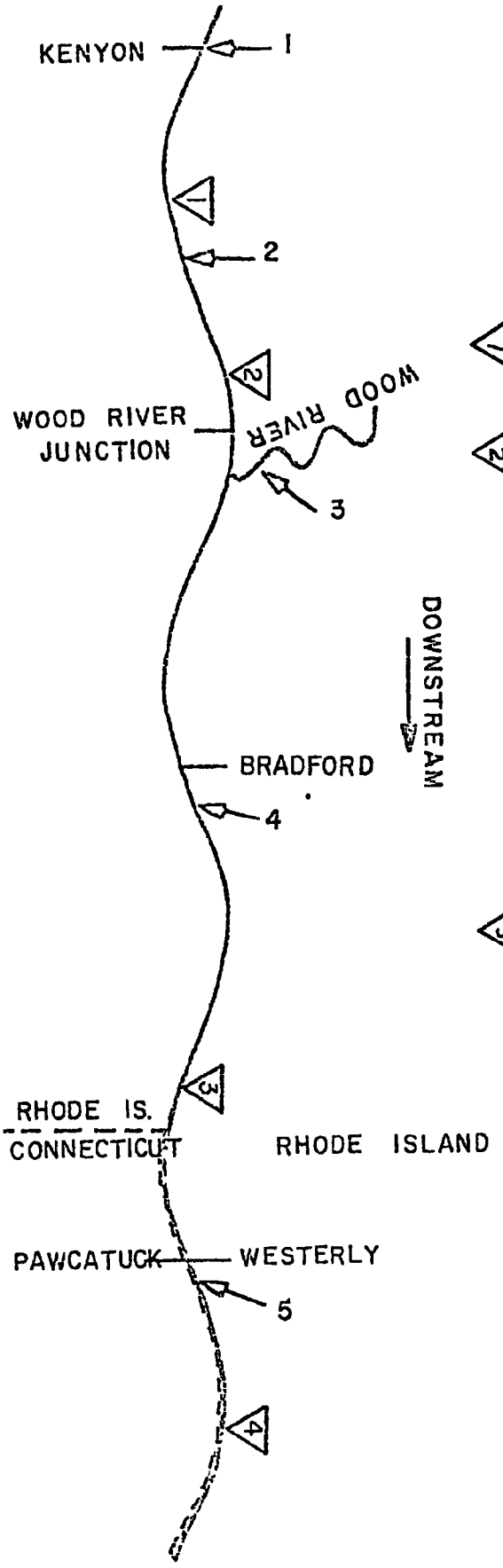

KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY

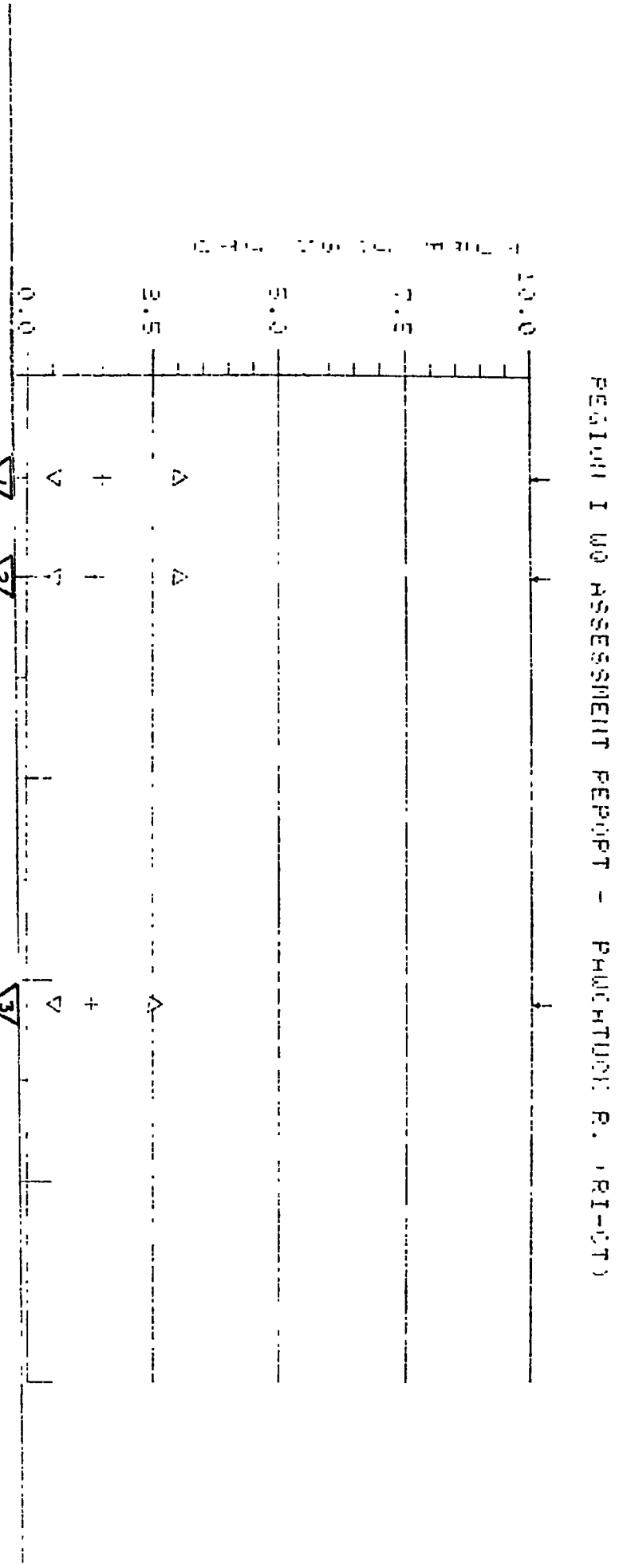

REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
10 5
10 4
10 3
10 2


KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY
REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
10
10^2
10^3
10^4


KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY


REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
FLOW FUSED LIST
100
80
60
40
20
1
2
3


KENYON
1
2
WOOD RIVER JUNCTION
WOOD RIVER
3
DOWNSTREAM
BRADFORD
4
RHODE IS.
CONNECTICUT
RHODE ISLAND
PAWCATUCK
WESTERLY
5
LITTLE NARRAGANSETT BAY


REGION I WQ ASSESSMENT REPORT - PAWCATUCK R. (RI-CT)
0.0
3.5
5.0
7.5
10.0

P/o 75
D 0

3.8 BLACKSTONE RIVER BASIN

The Blackstone River Basin drains southcentral Massachusetts and northern Rhode Island. The mainstem of the Blackstone flows from Worcester, Massachusetts through Woonsocket and Cumberland, Rhode Island and into the Seekonk River at Pawtucket, Rhode Island.

Total coliform levels in all samples taken on the Blackstone River exceed the EPA recommended maximum of 1,000 colonies per 100 ml at both stations. The geometric mean for the bimonthly total coliform samples was 7,430 per 100 ml at the Singleton Street Bridge station and 23,662 per 100 ml at the Manville Dam station. There was also one DO violation reported at the Manville Dam station.

Urban runoff, inadequately treated industrial and municipal wastes in the Worcester and Woonsocket areas, and combined sewer discharges in Worcester are responsible for the high bacteria levels.

According to the Massachusetts and Rhode Island FY-76 Program Plans, separation of combined sewers at Manville, Central Falls, Rhode Island and Worcester, Massachusetts are planned.

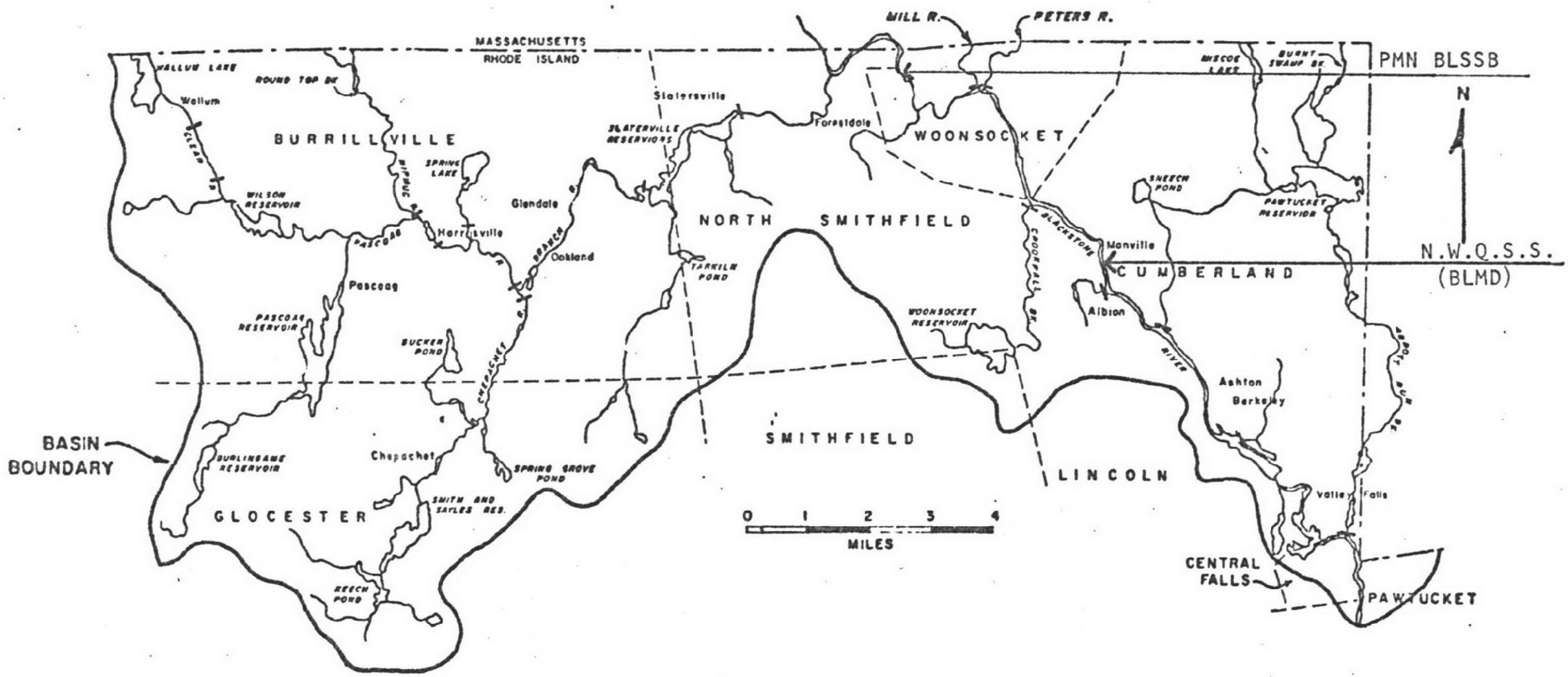
BLACKSTONE RIVER BASIN

{RHODE ISLAND}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Blackstone River near Woonsocket, R.I.	PMN BLSSB
2.	Blackstone River near Manville, R.I.	N.W.Q.S.S. BLMD



BLACKSTONE RIVER BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION BLSSB BLACKSTONE R. (RI)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	54.[illegible]
TURBIDITY JKSN JTU	6	0.	0.0	NONE	15.00	3.[illegible]
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	10.[illegible]
LAB PH SU	6	0.	0.0	6.00	8.50	6.[illegible]

STATION BLMD BLACKSTONE R. (RI)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	54.[illegible]
TURBIDITY JKSN JTU	6	0.	0.0	NONE	15.00	5.[illegible]
DISS. OXYGEN MG/L	6	1.	16.67	5.00	NONE	9.25
LAB PH SU	6	0.	0.0	6.00	8.50	6.75

* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

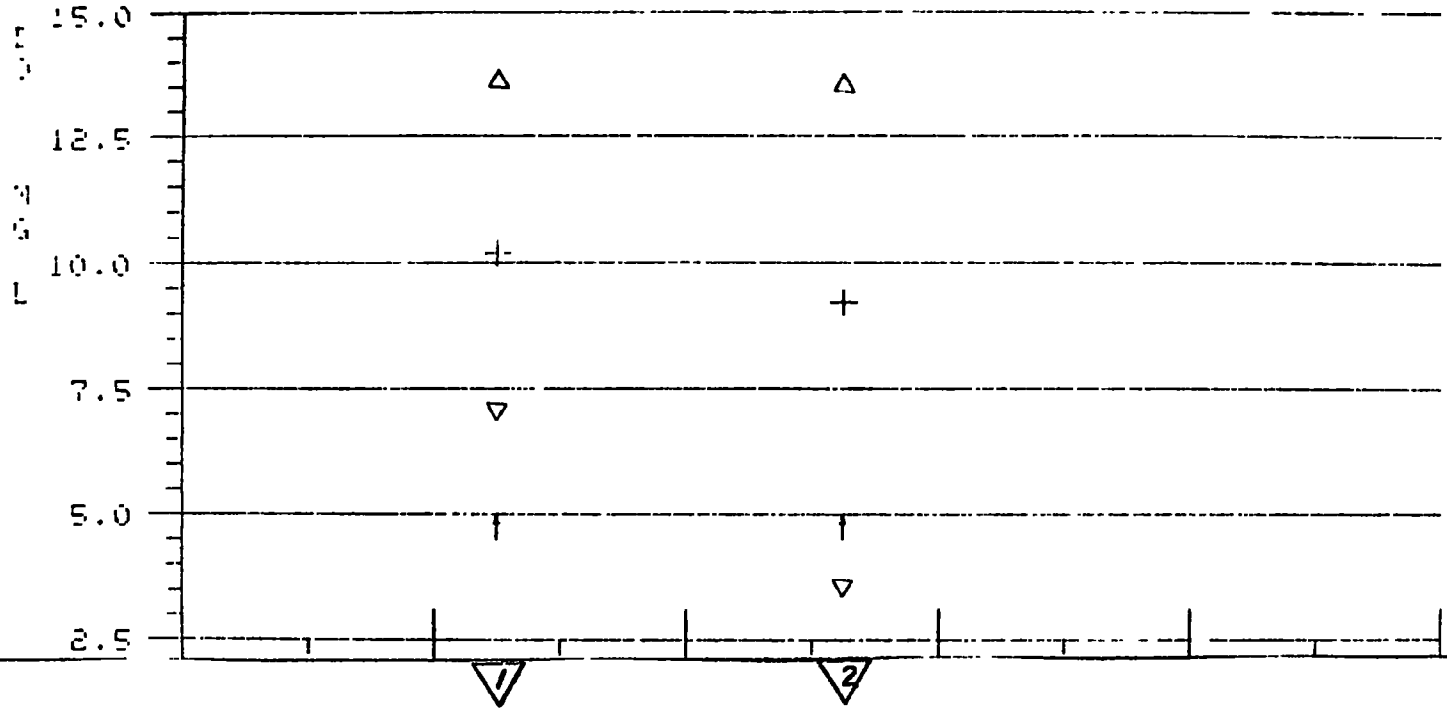
BLACKSTONE RIVER BASIN {RI}

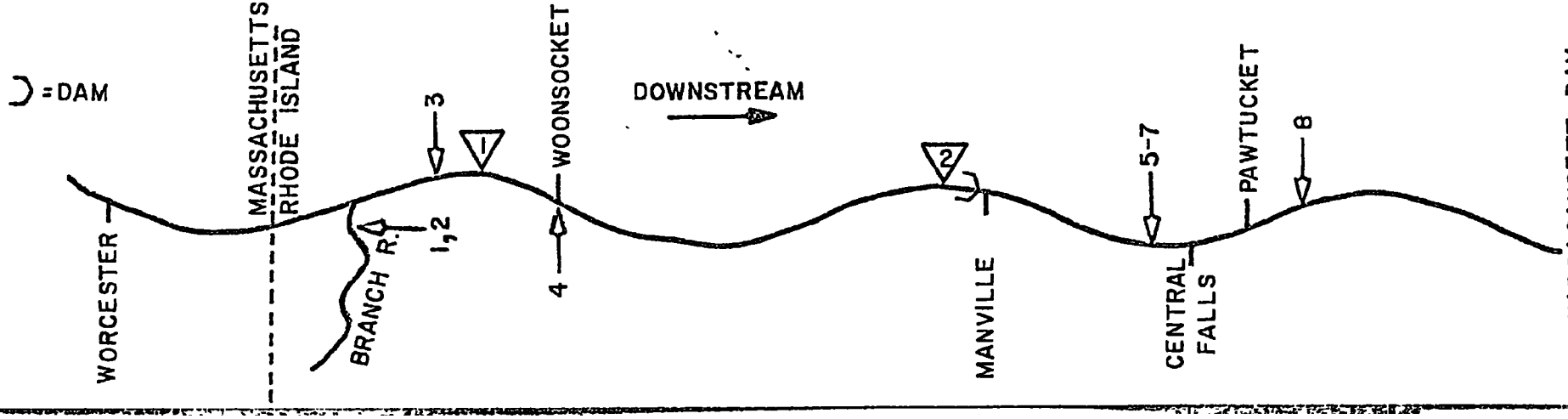
	Discharger	Location	Receiving Water	NPDES No.
1.	Woonsocket Industrial Park STP	N. Smithfield	Branch River	
2.	Tupperware Co. {Lab}	N. Smithfield	Branch River	0000566
3.	Tupperware Co. {Plant}	N. Smithfield	Blackstone River	0000485
4.	Woonsocket STP	Woonsocket	Blackstone River	0100111
5.	Cumberland Combined Sewer Overflow	Cumberland	Blackstone River	0100391
6.	Central Falls Combined Sewer Overflow	Central Falls	Blackstone River	0100145
7.	Corning Glass Works	Central Falls	Blackstone River	0001180
8.	Pawtucket MTP	Pawtucket	Blackstone River	0100382

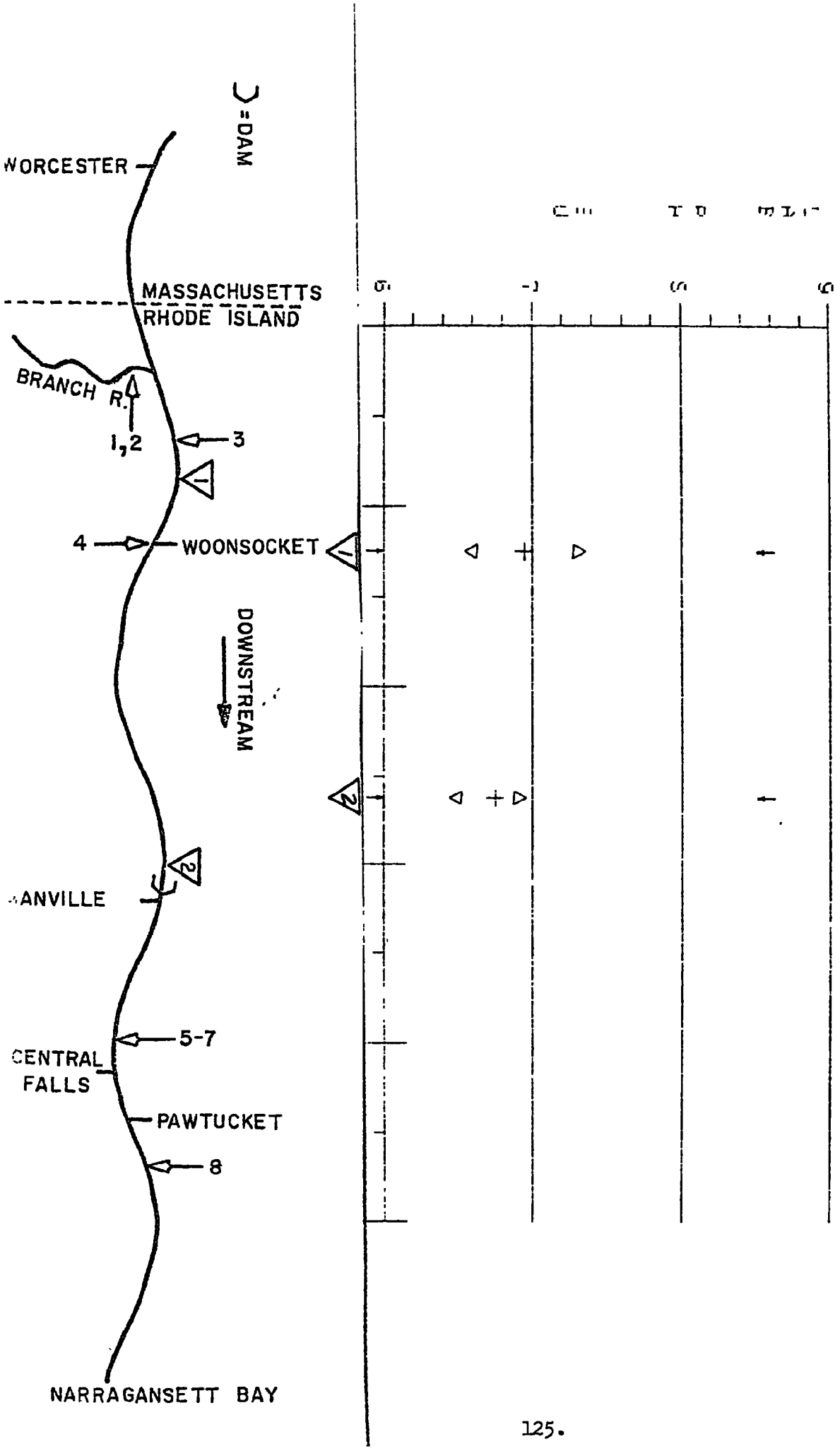
BLACKSTONE RIVER BASIN {MA}

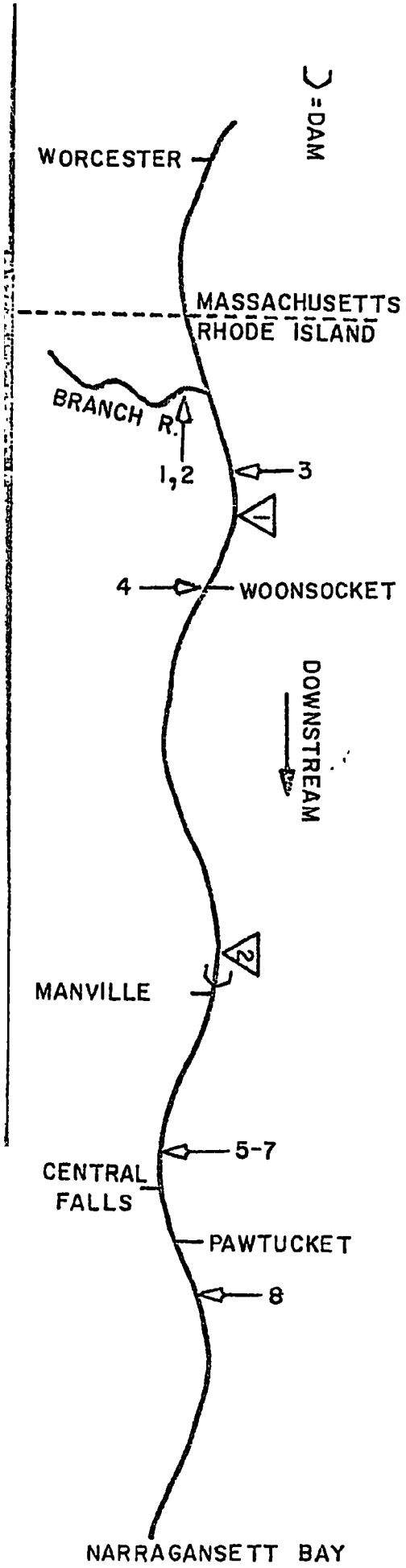
Worcester STP	Worcester	Blackstone River	0100463
Millbury STP	Millbury	Blackstone River	0100650
Snider Bros. Beef	Sutton	Blackstone River	0005690
Northbridge STP	Northbridge	Blackstone River	0100722
Stanley Woolen	Uxbridge	Blackstone River	0001210
Hayward Schuster Woolen	Douglas	Mumford River	0001538
Emil Bernat	Uxbridge	Mumford River	0000019
Hopedale STP	Hopedale	Mill River	

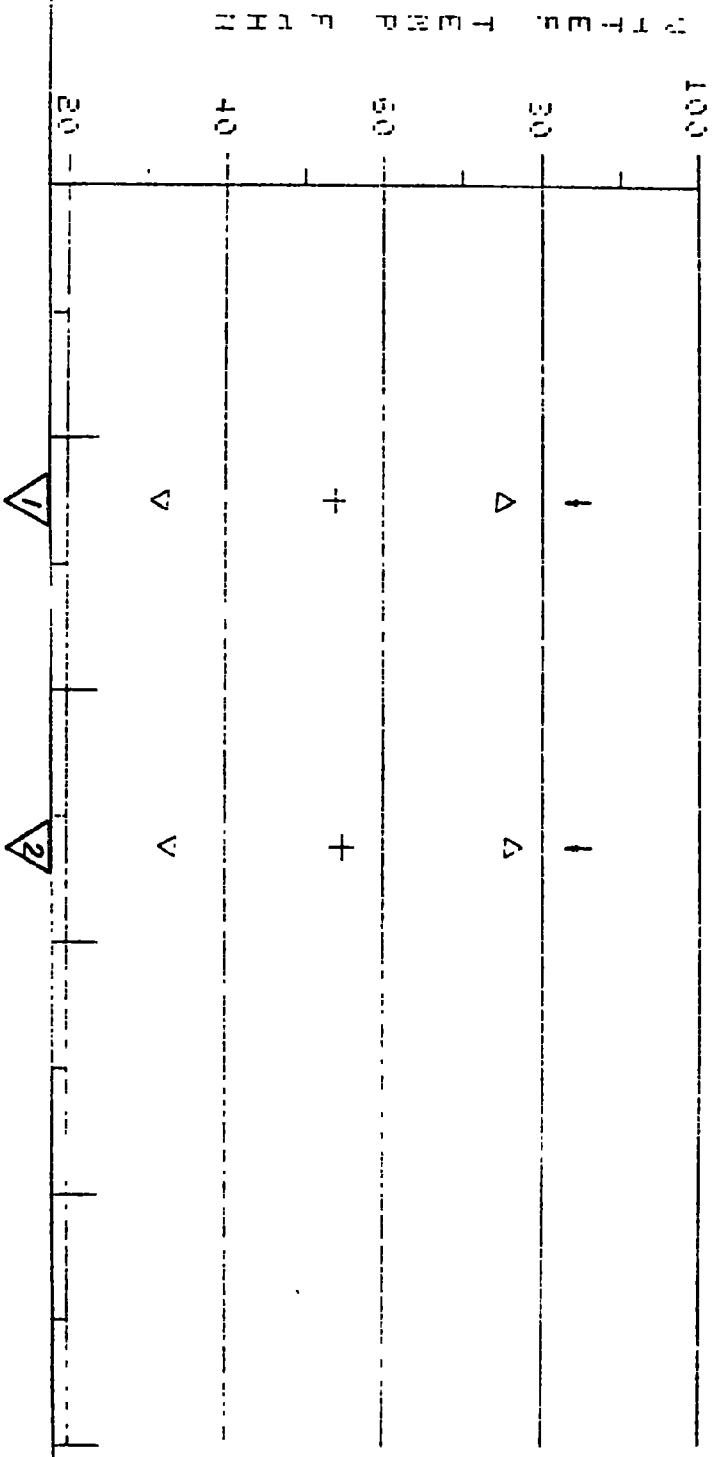
PEGION I WQ ASSESSMENT REPORT - BLACKSTONE R. (PI)

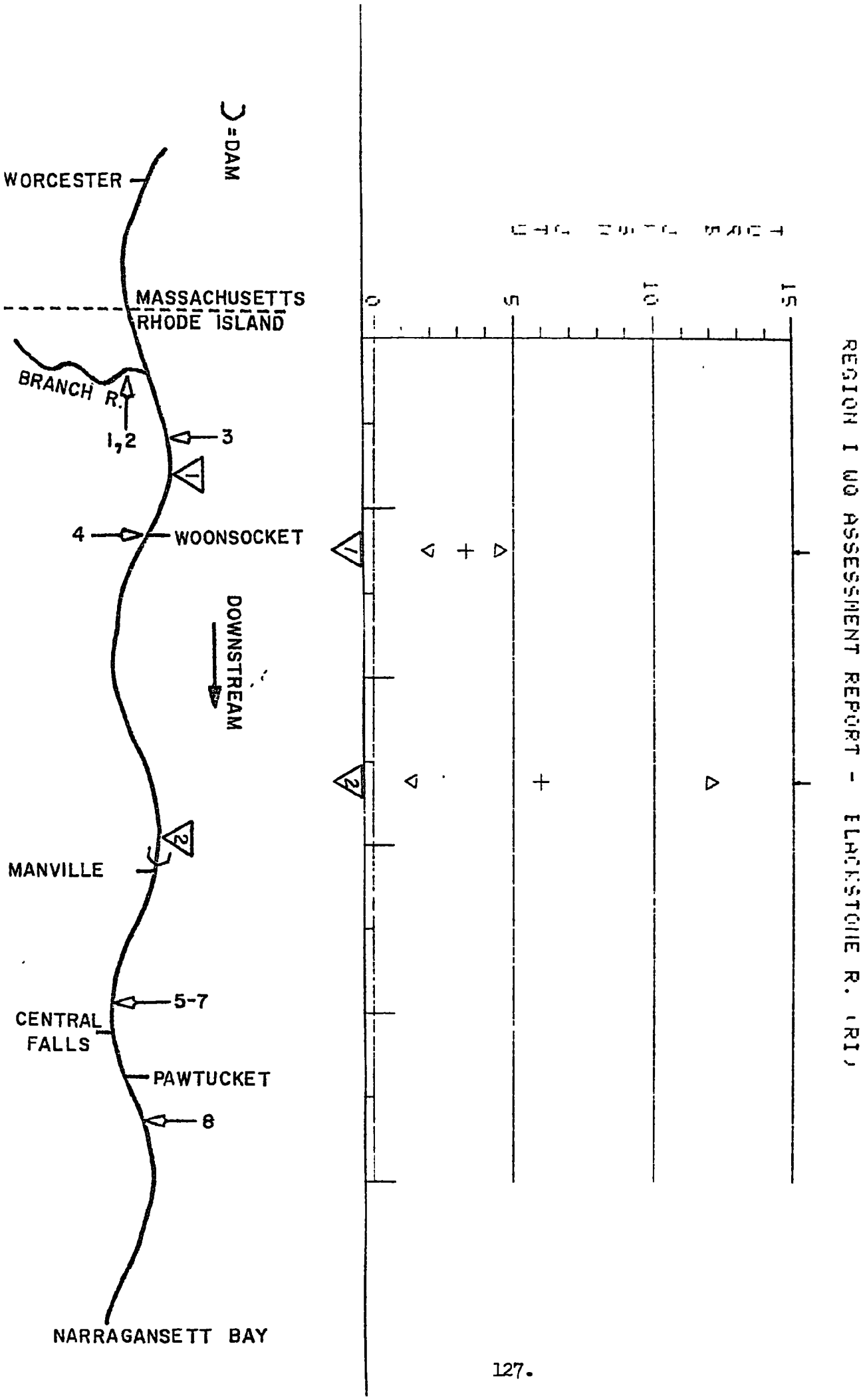





REGION I WQ ASSESSMENT REPORT - BLACKSTONE R. (RI)
WORCESTER
MASSACHUSETTS
RHODE ISLAND
BRANCH R.
1,2
3
4
WOONSOCKET
DOWNSTREAM
ANVILLE
5-7
CENTRAL FALLS
PAWTUCKET
8
NARRAGANSETT BAY
DAM


WORCESTER
MASSACHUSETTS
RHODE ISLAND
BRANCH R.
1,2
3
4
WOONSOCKET
DOWNSTREAM
MANVILLE
5-7
CENTRAL FALLS
PAWTUCKET
8
NARRAGANSETT BAY


REGION I WQ ASSESSMENT REPORT - BLACKSTONE R. (RI)
PTHEM THEM LIKE
100
80
60
40
20
1
2


REGION I WQ ASSESSMENT REPORT - BLACKSTONE R. (RI)
0
5
10
15
WORCESTER
MASSACHUSETTS
RHODE ISLAND
BRANCH R.
1,2
3
4
WOONSOCKET
DOWNSTREAM
MANVILLE
5-7
CENTRAL FALLS
PAWTUCKET
8
NARRAGANSETT BAY
=DAM

Plot
00

3.9 PAWTUXET RIVER BASIN

The Pawtuxet River is formed by the confluence of its north and south branches at West Warwick. The North Branch of the Pawtuxet originates at the outlet of the Scituate Reservoir, while the South Branch originates at the outlet of the Flat River Reservoir in Coventry. Flow on the Pawtuxet is controlled by the two reservoir dams as well as 20 mill dams along both branches and the main stem, and the Pawtuxet Cove Dam at the river's mouth.

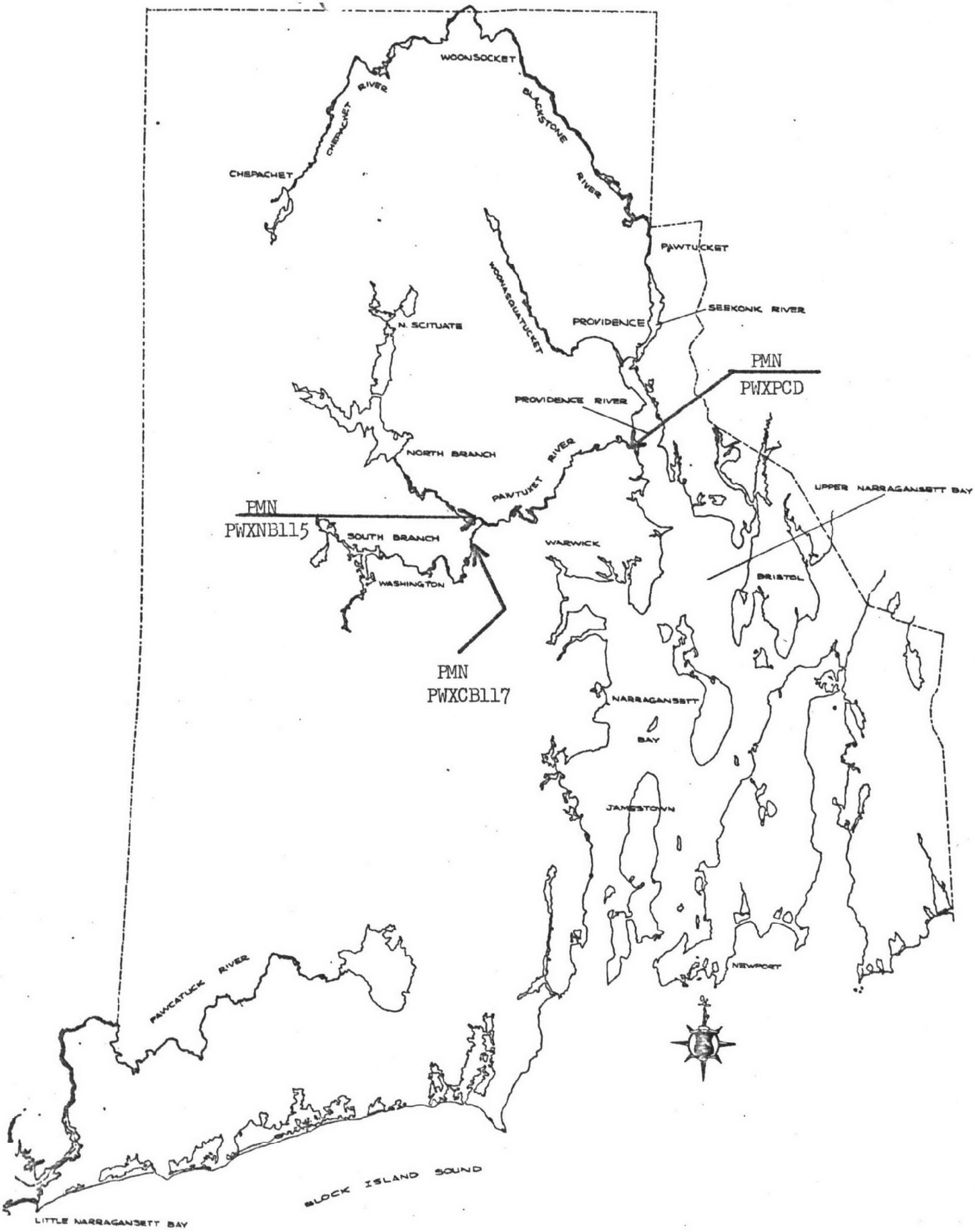
The lower reaches of the river will only meet Class "C" standards by 1983 (see R. I. 305B-1976). In 1975 the Class "C" standard for dissolved oxygen was violated in 33% of the samples taken at plot station #3. High coliform and ammonia-nitrogen levels are also reported at all stations. High organic loading from both industrial and municipal sources are responsible for low quality of the river's waters. A waste load allocation study has been performed by the state of Rhode Island and this study should reveal the degree of treatment needed to improve the Pawtuxet's quality.

PAWTUXET RIVER BASIN

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Pawtuxet River at Rte 117 Bridge, Providence, RI	PMN PWXCB117
2.	Pawtuxet River near Rte 115 Bridge, RI	PMN PWXNB115
3.	Pawtuxet River Pawtuxet Cove Dam, RI	PMN PWXPCD


WOONSOCKET
CHEPACHET RIVER
BLACKSTONE RIVER
CHEPACHET
PAWTUCKET
WOONASQUATUCKET
SESKONK RIVER
N. SCITUATE
PROVIDENCE
PMN
PWXPCD
PROVIDENCE RIVER
NORTH BRANCH
PAWTUXET RIVER
UPPER NARRAGANSETT BAY
PMN
PWXNB115
SOUTH BRANCH
WARWICK
WASHINGTON
BRISTOL
PMN
PWXCB117
NARRAGANSETT
BAY
JAMESTOWN
NEWPORT
PAWCATUCK RIVER
BLOCK ISLAND SOUND
LITTLE NARRAGANSETT BAY

SUMMARY OF WATER QUALITY VIOLATIONS

STATION PWXCB117 PAWTUXET R. (RI)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	53.5[illegible]
TURBIDITY JKSN JTU	6	0.	0.0	NONE	15.00	1.[illegible]
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	10.[illegible]
LAB PH SU	6	0.	0.0	6.00	8.50	6.

STATION PWXNB115 PAWTUXET R. (RI)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	54.[illegible]
TURBIDITY JKSN JTU	6	0.	0.0	NONE	15.00	1.[illegible]
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	10.7[illegible]
LAB PH SU	6	0.	0.0	6.00	8.50	6.82

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION PWXPCD PAWTUXET R. (RI)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG FAHN	6	0.	0.0	NONE	83.00	55.00
TURBIDITY JKSN JTU	6	0.	0.0	NONE	15.00	2.63
DISS. OXYGEN MG/L	6	2.	33.33	5.00	NONE	6.93
LAB PH SU	6	0.	0.0	6.00	8.50	6.70

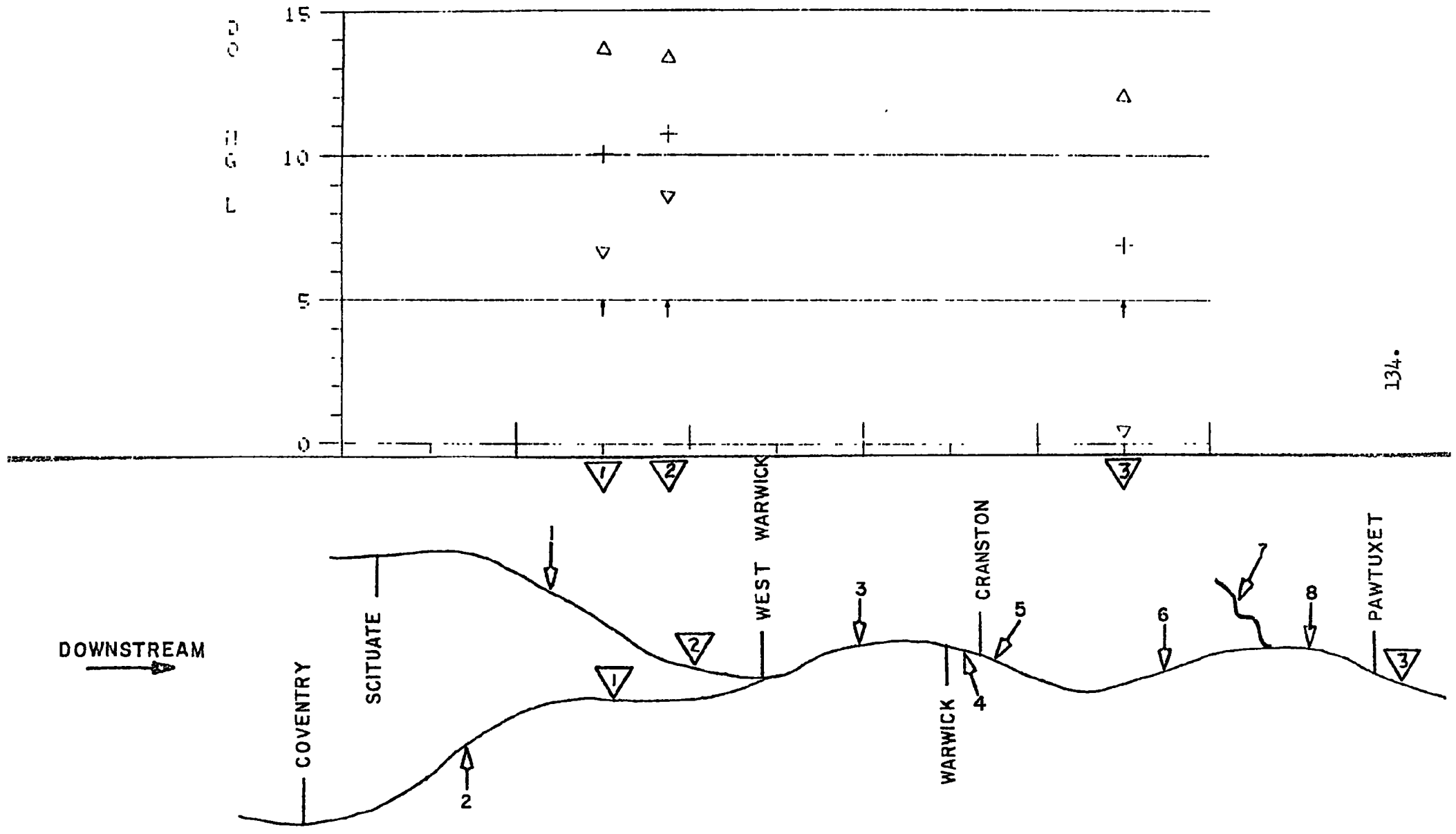
* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

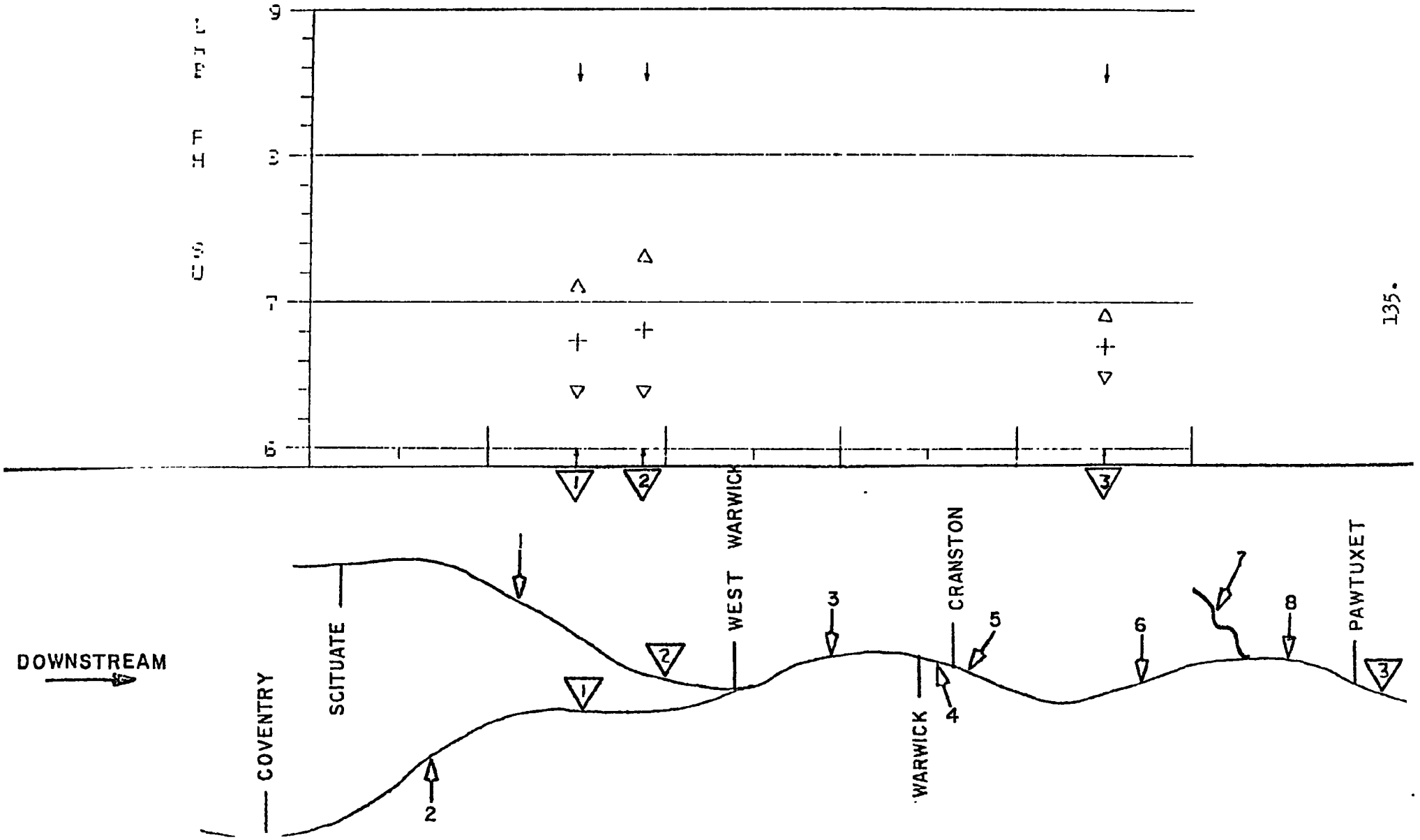
PAWTUXET RIVER BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	Falvey Linen Supply	Scituate	Pawtuxet River	0001228
2.	American Hoechst Corporation	Coventry	Pawtuxet River	0000132
3.	West Warwick STP	West Warwick	Pawtuxet River	0100153
4.	Warwick STP	Warwick	Pawtuxet River	0100234
5.	Cranston WTP	Cranston	Pawtuxet River	0100013
6.	United Wire Supply Corporation	Cranston	Pawtuxet River	0001414
7.	Falstaff Brewing Company	Providence	Tributary to Pawtuxet River	0001236
8.	Ciba-Geigy Corporation	Cranston	Pawtuxet River	0001171

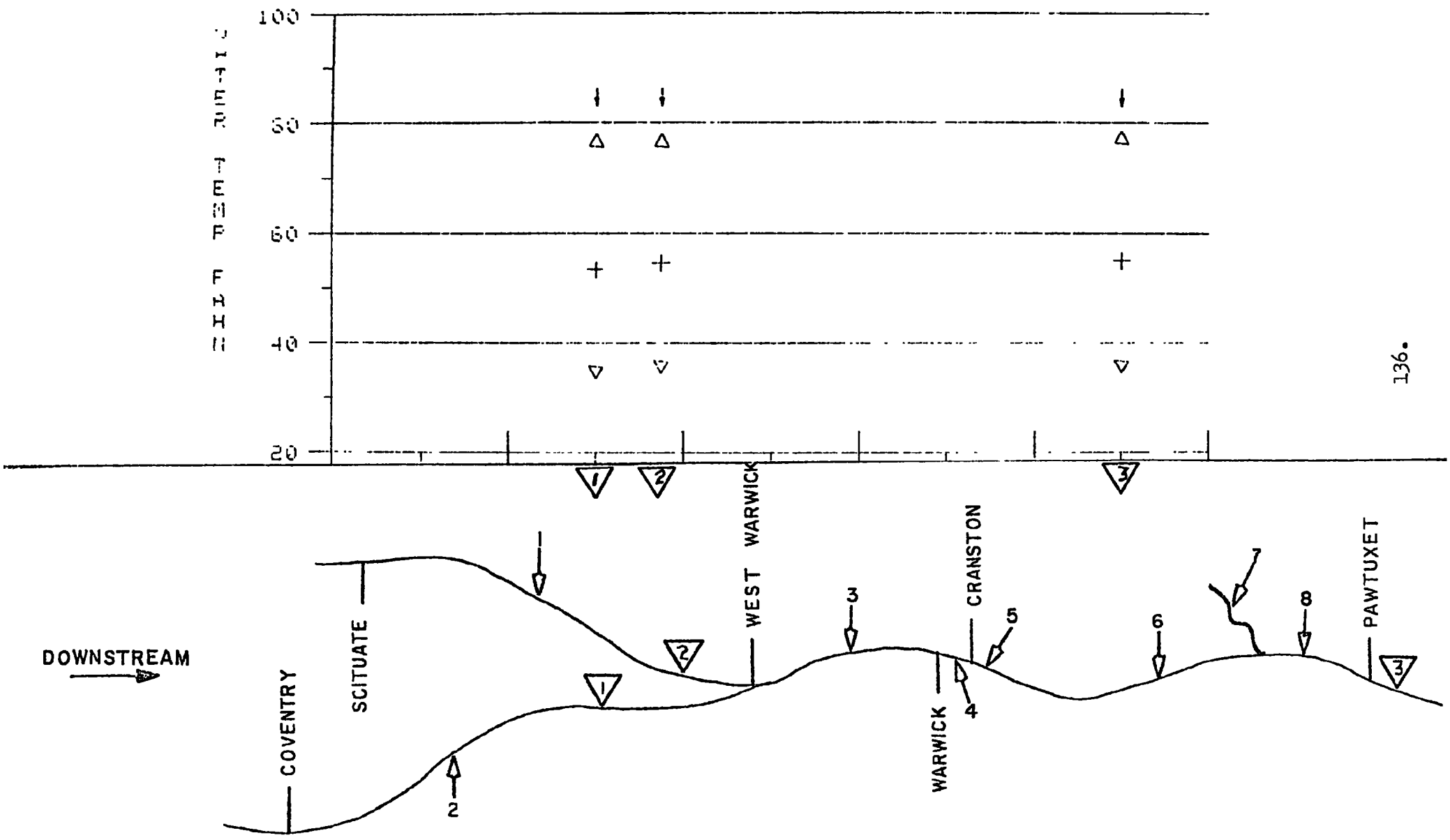
REGION I WQ ASSESSMENT REPORT - PAWTUXET R. (RI)



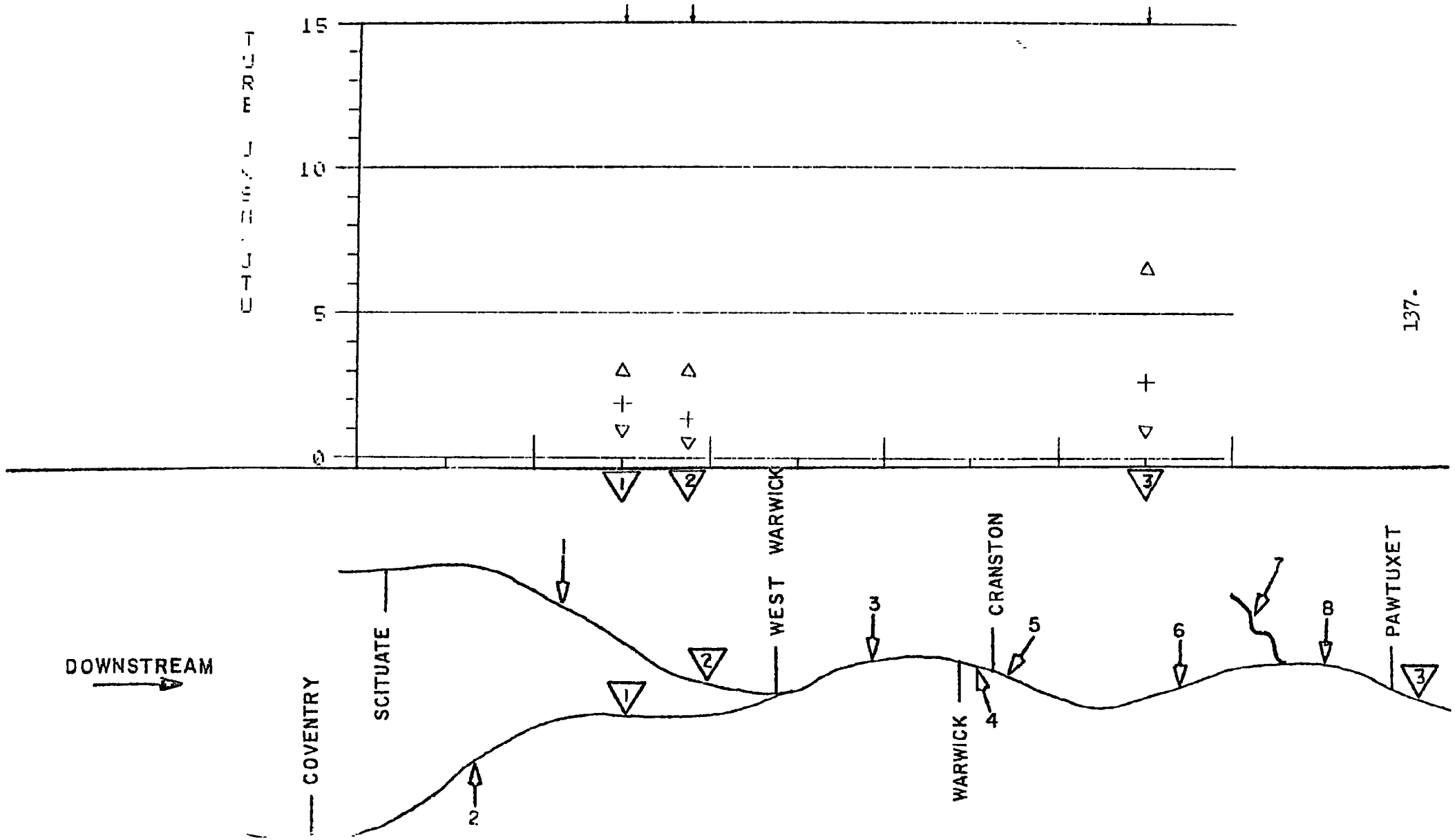
REGION I WQ ASSESSMENT REPORT - PAWTUXET R. (RI)



PEGION I WQ ASSESSMENT REPORT - PAWTUXET R. (RI)



REGION I WQ ASSESSMENT REPORT - PAWTUXET R. (RI)



No graphs

Drop this section

3.10 NARRAGANSETT BAY

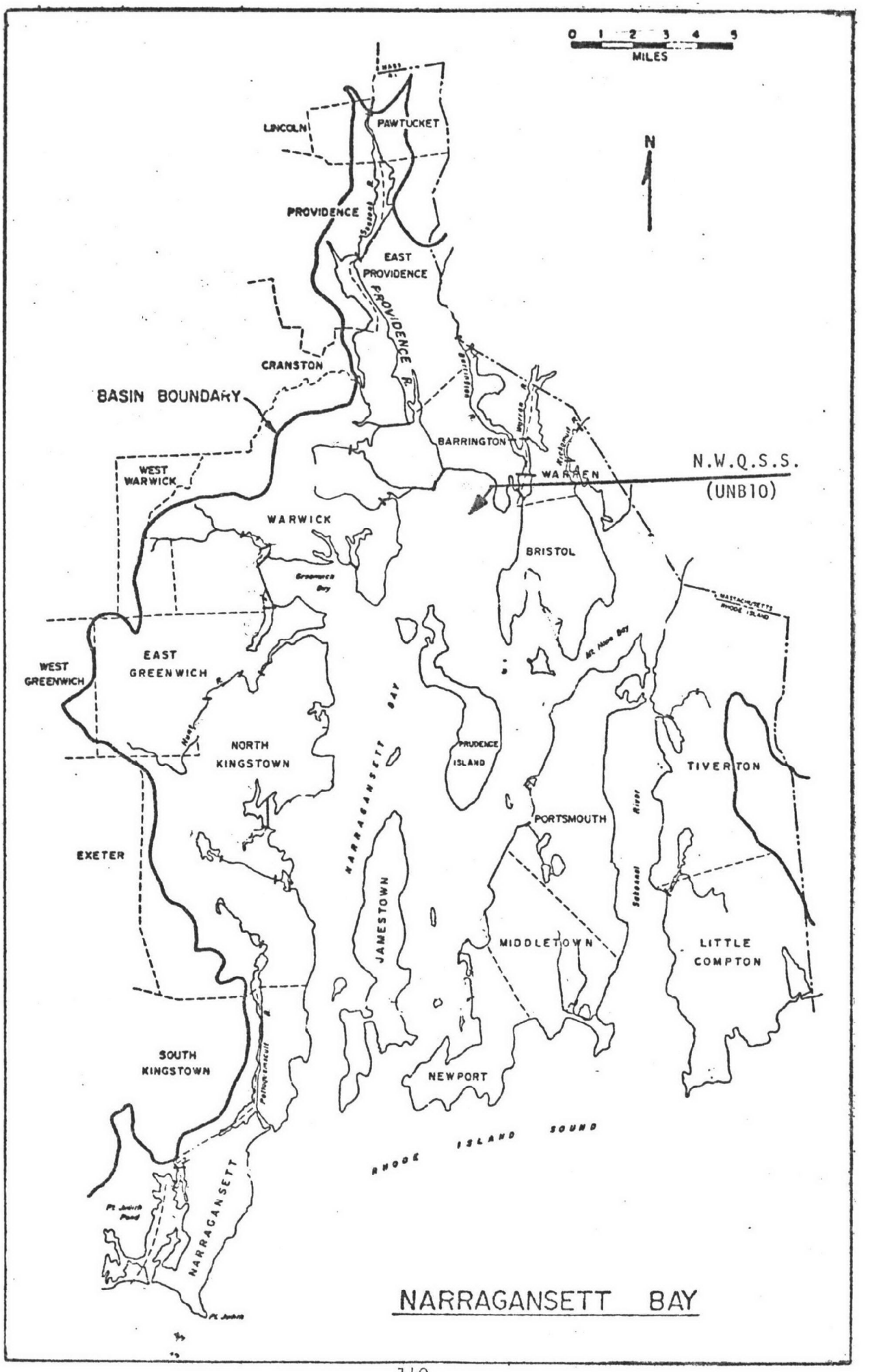
Narragansett Bay has a total surface area of 140 square miles of which 93% lies within the borders of Rhode Island. The Blackstone, Pawtuxet and Taunton Rivers, as well as numerous minor streams, flow into the bay.

The Rhode Island SA standard for total coliform bacteria was violated at the Upper Narragansett Bay station in 9 of the 16 samples taken. Municipal wastes and combined sewer overflows from Providence, Rhode Island and waste loads from the bay's tributaries are responsible for the violations. The combined sewer overflows into the bay cause periodic closing of shellfish beds because of bacterial contamination. Separation of combined sewers in Providence is planned according to the Rhode Island FY-76 Program Plans.

NARRAGANSETT BAY

{RHODE ISLAND}

Plot Station Number	Station Location	Map Station Number
1.	Upper Narragansett Bay	N.W.Q.S.S. UNB10



NARRAGANSETT BAY

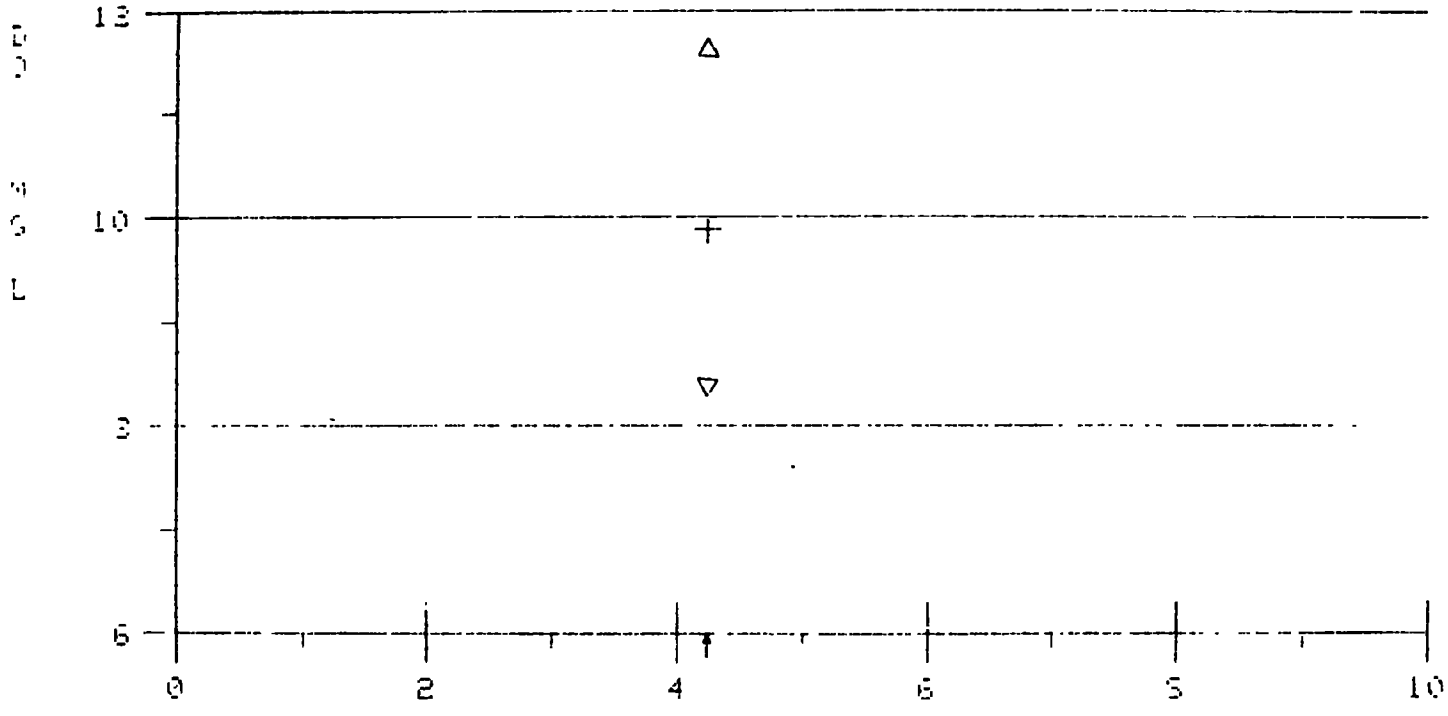
SUMMARY OF WATER QUALITY VIOLATIONS

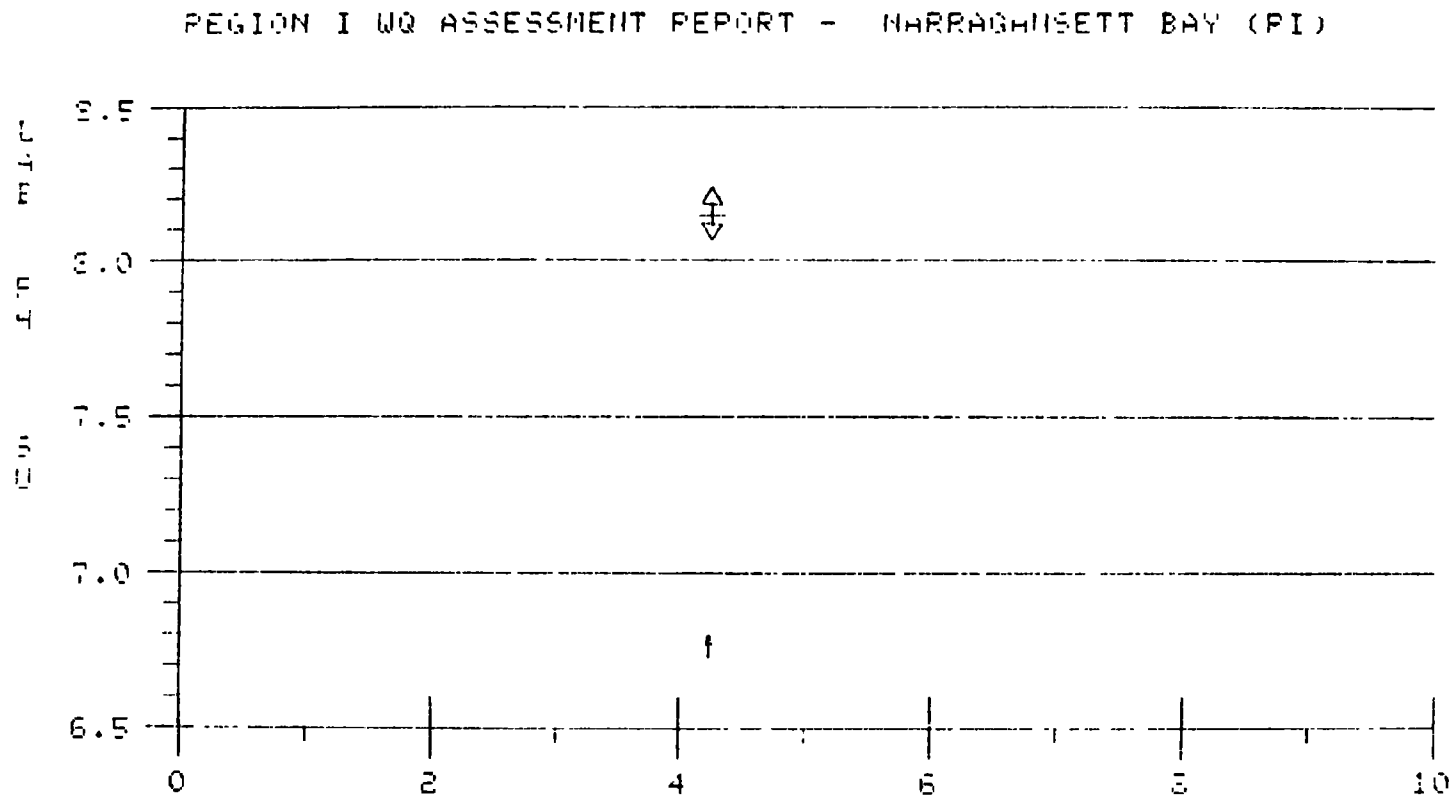
STATION UNB10 NARRAGANSETT BAY (RI)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
WATER TEMP DEG FAHN	16	0.	0.0	NONE	83.00	55.53
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	9.6
LAB PH SU	2	0.	0.0	6.80	8.50	8.
COLIFORM TOT MPN TUBE	16	9.	56.25	NONE	70.00	82.
COLIFORM FEC MPN/100ML	17	0.	0.0	NONE	50.00	14.

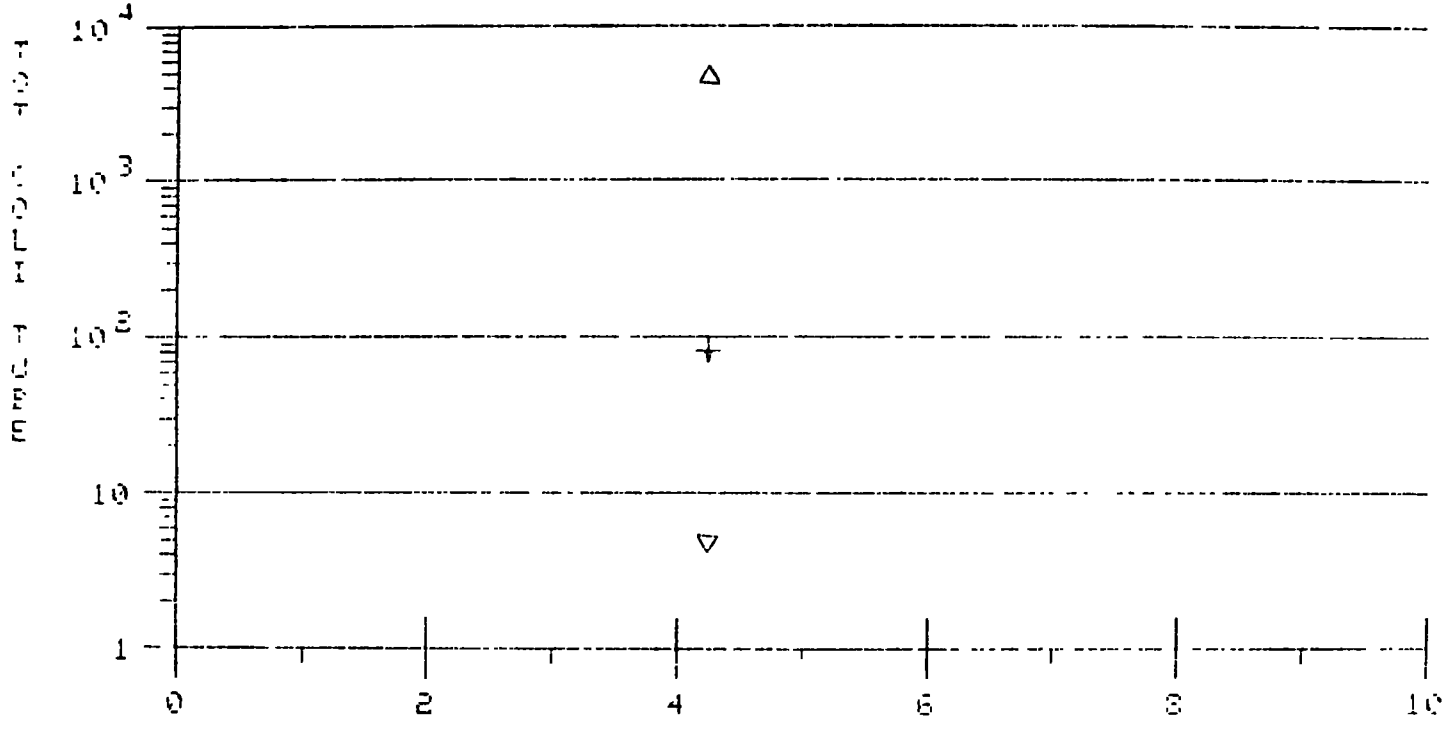
* GEOMETRIC MEAN FOR COLIFORMS

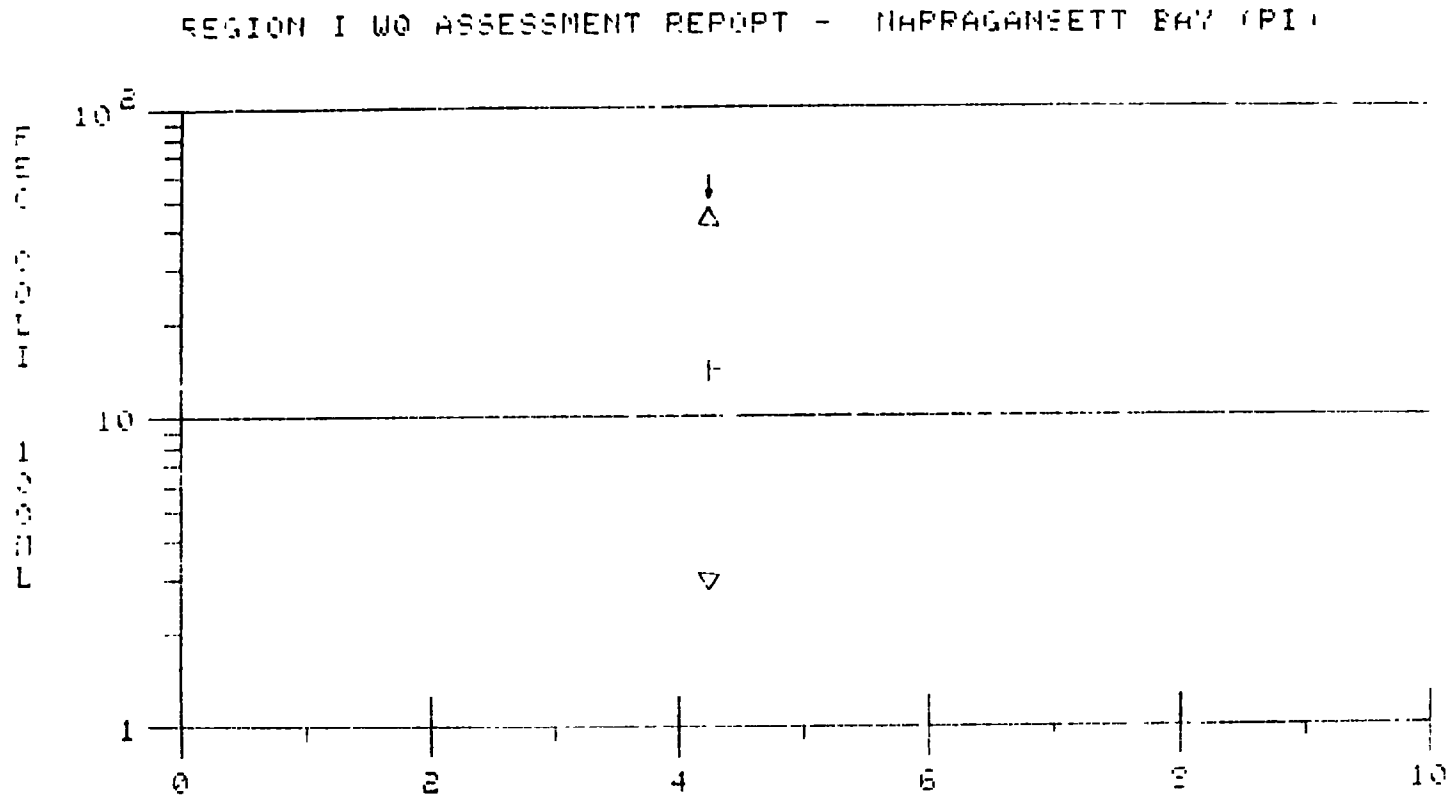
REGION I WQ ASSESSMENT REPORT - NARRAGANSETT BAY (RI)



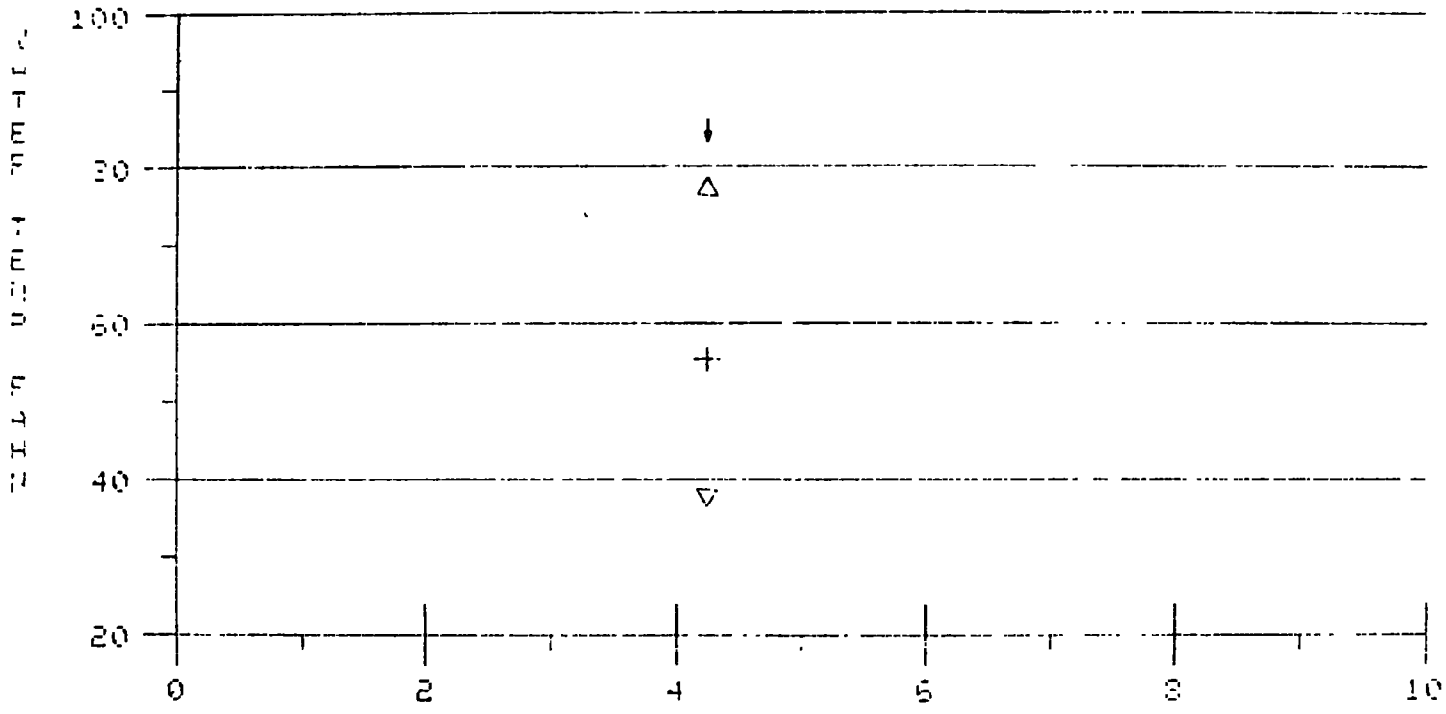

REGION I WQ ASSESSMENT REPORT - NARRAGANSETT BAY (RI)
DO MG/L
8.5
8.0
7.5
7.0
6.5
0
2
4
6
8
10

REGION I WQ ASSESSMENT REPORT - NARRAGANSETT BAY (RI)




REGION I WQ ASSESSMENT REPORT - NARRAGANSETT BAY (RI)
FECAL COLIFORM
10^2
10
1
0
2
4
6
8
10

REGION I WQ ASSESSMENT REPORT - NARRAGANSETT BAY (RI)



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3.11 MASSACHUSETTS COASTAL DRAINAGE AREA

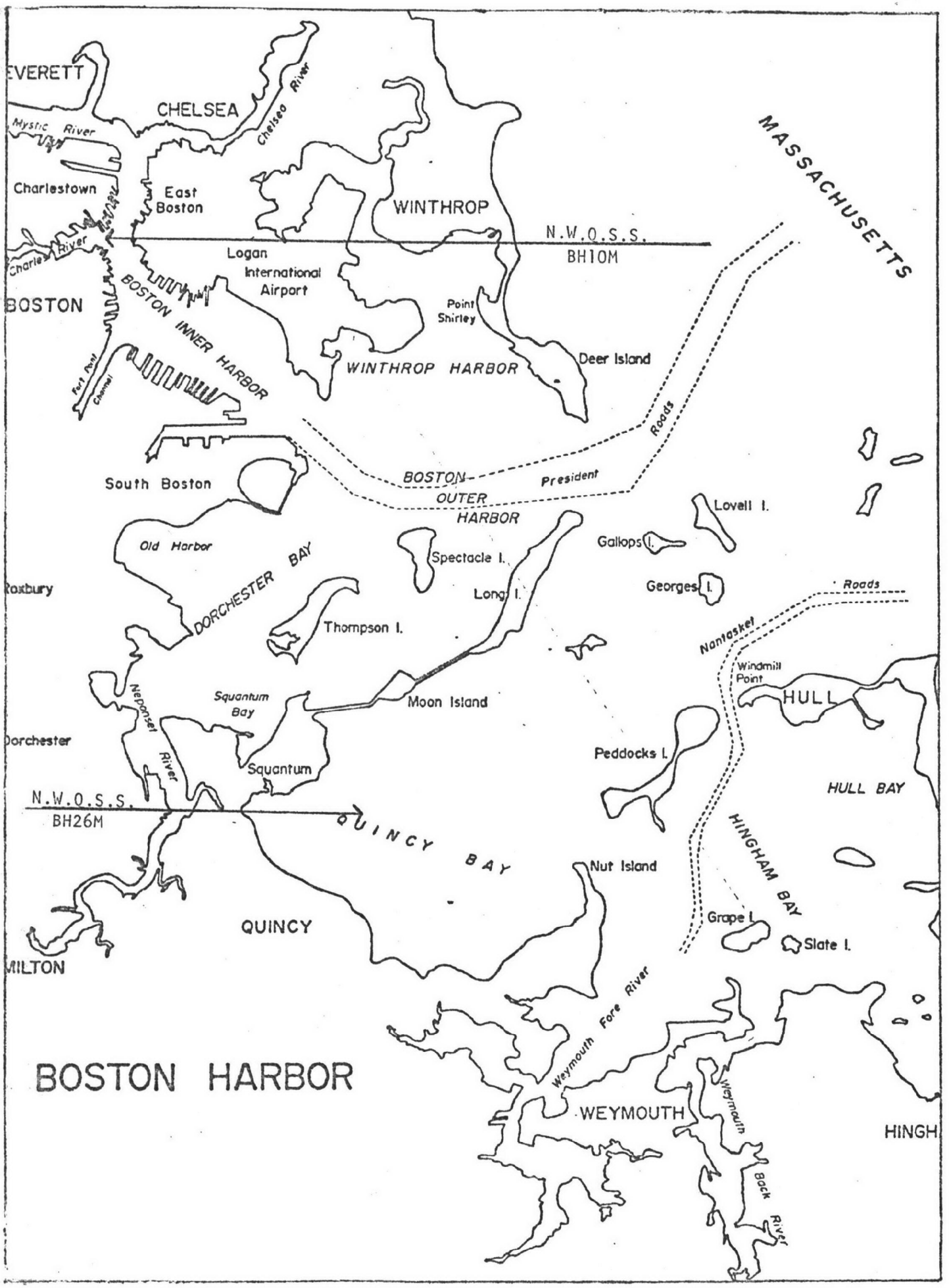
Two stations are sampled in this drainage area, Boston Inner Harbor off the Coast Guard Station (Plot Station No. 1) and Boston Outer Harbor in Quincy Bay (Plot Station No. 2). The principal water quality problems in this area are high total coliform bacteria levels at the inner harbor station (Geometric Mean of 40,290 for 8 samples) and high nutrient levels at both the inner harbor and outer harbor stations (see plots).

The greatest source of pollution in the harbor is the discharge of municipal waste through the Metropolitan District Commission sewerage system. Raw or partially treated sewage and sludge is discharged by the Nut Island and Deer Island sewage treatment plants (both primary treatment) and over ninety combined sewer overflows which empty directly into the Charles River and Boston Harbor. Restriction of shellfish harvesting, recreational bathing, boating and sport fishing, as well as aesthetic value, are the results of the discharges to the waters of Boston Harbor.

Separation of the combined sewers is planned according to Massachusetts FY-76 Program Plan. When completed, the elimination of the combined sewers should substantially improve the quality of the waters in Boston Harbor.

BOSTON HARBOR STATIONS

Plot Station Number	Station Location	Map Station Number
1.	Boston Inner Harbor	BH10M
2.	Boston Outer Harbor	BH26M


EVERETT
CHELSEA
Chelsea River
Mystic River
Charlestown
East Boston
WINTHROP
MASSACHUSETTS
N.W.O.S.S.
BH10M
Logan International Airport
Charles River
BOSTON
BOSTON INNER HARBOR
Point Shirley
WINTHROP HARBOR
Deer Island
Fort Point Channel
Roads
BOSTON-OUTER HARBOR
President
South Boston
Lovell I.
Gallops I.
Old Harbor
DORCHESTER BAY
Spectacle I.
Roxbury
Long I.
Georges I.
Roads
Thompson I.
Nantasket
Windmill Point
HULL
Neponset River
Squantum Bay
Moon Island
Dorchester
Peddocks I.
Squantum
HULL BAY
N.W.O.S.S.
BH26M
QUINCY BAY
HINGHAM BAY
Nut Island
Grape I.
QUINCY
Slate I.
MILTON
Weymouth Fore River
BOSTON HARBOR
WEYMOUTH
Weymouth Back River
HINGH

SUMMARY OF WATER QUALITY VIOLATIONS

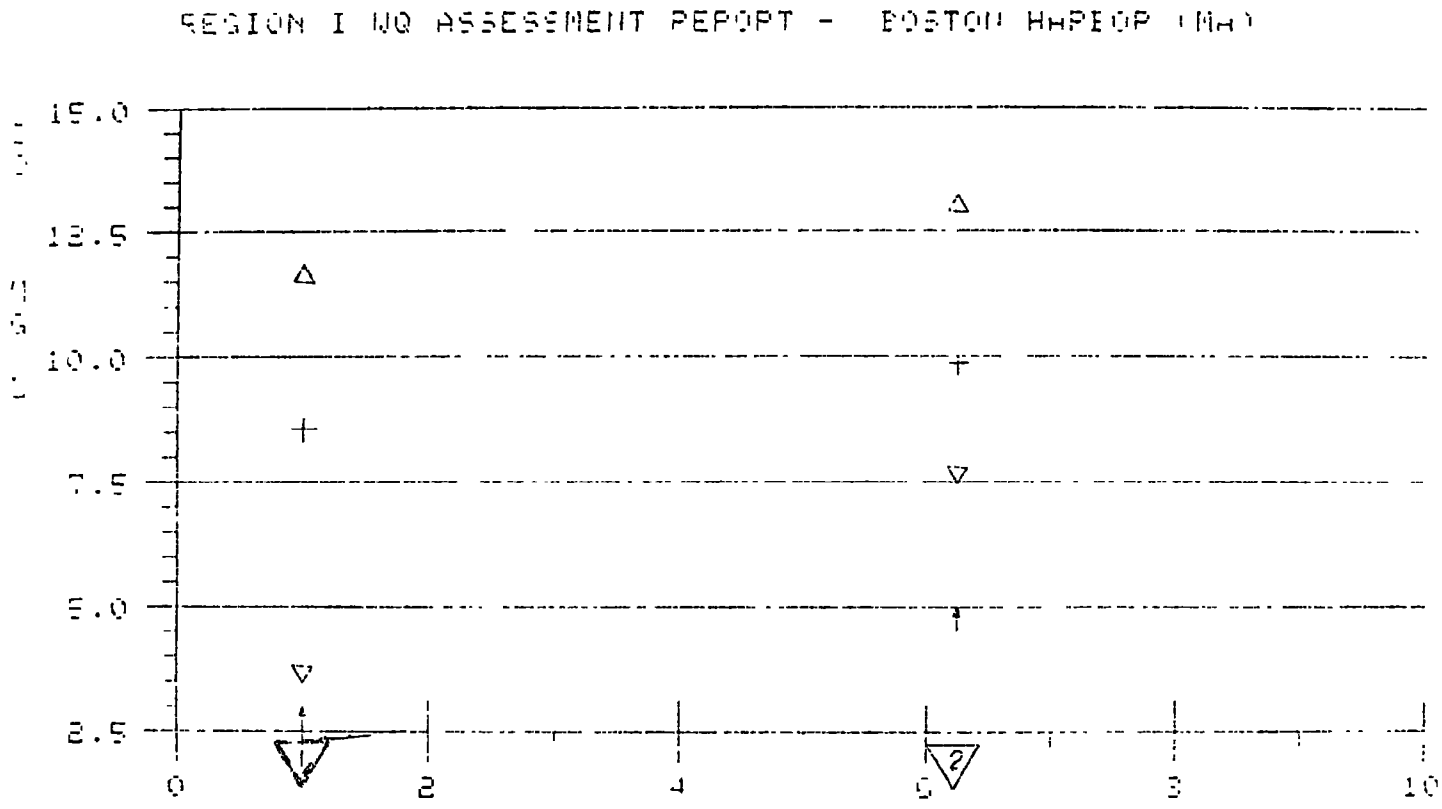
STATION BH10M BOSTON HARBOR (MA)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN MG/L	8	0.	0.0	3.00	NONE	8.54
LAB PH SU	7	0.	0.0	6.50	8.50	7.99

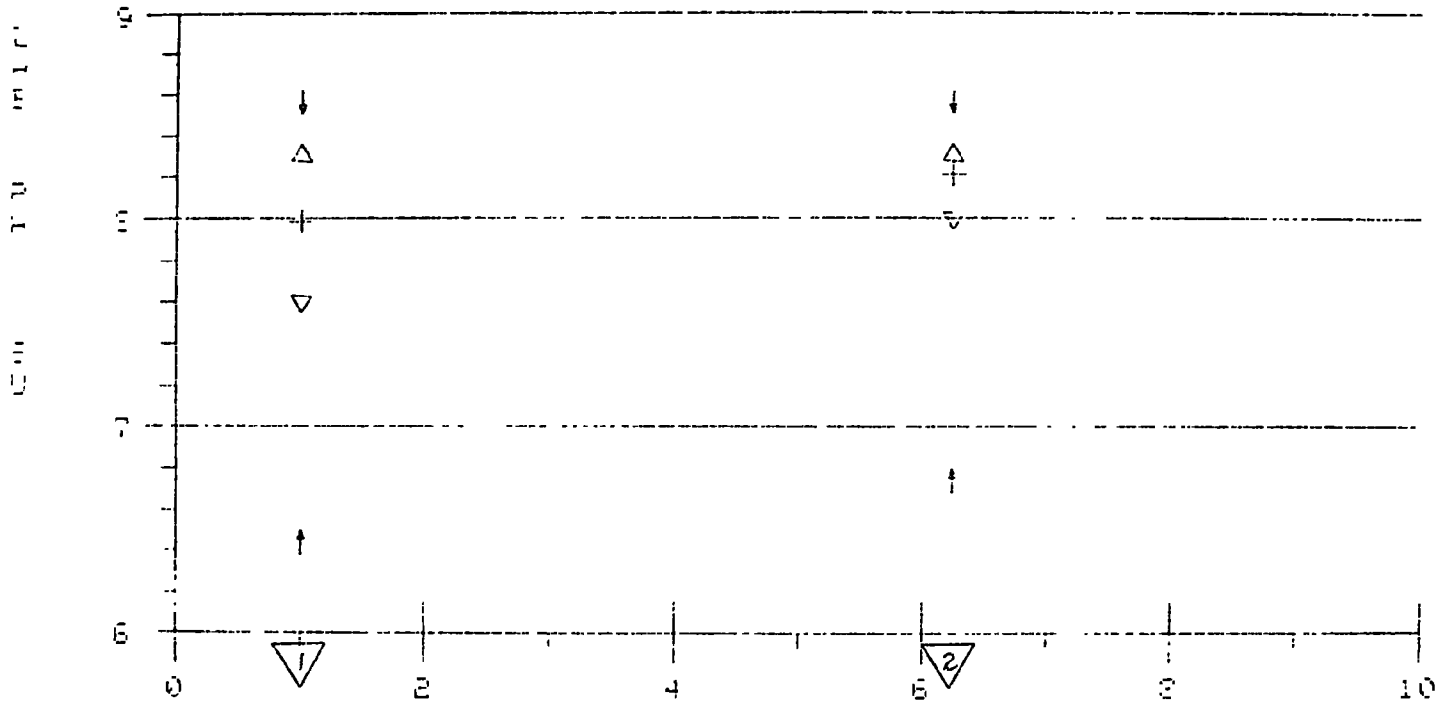
STATION BH26M BOSTON HARBOR (MA)

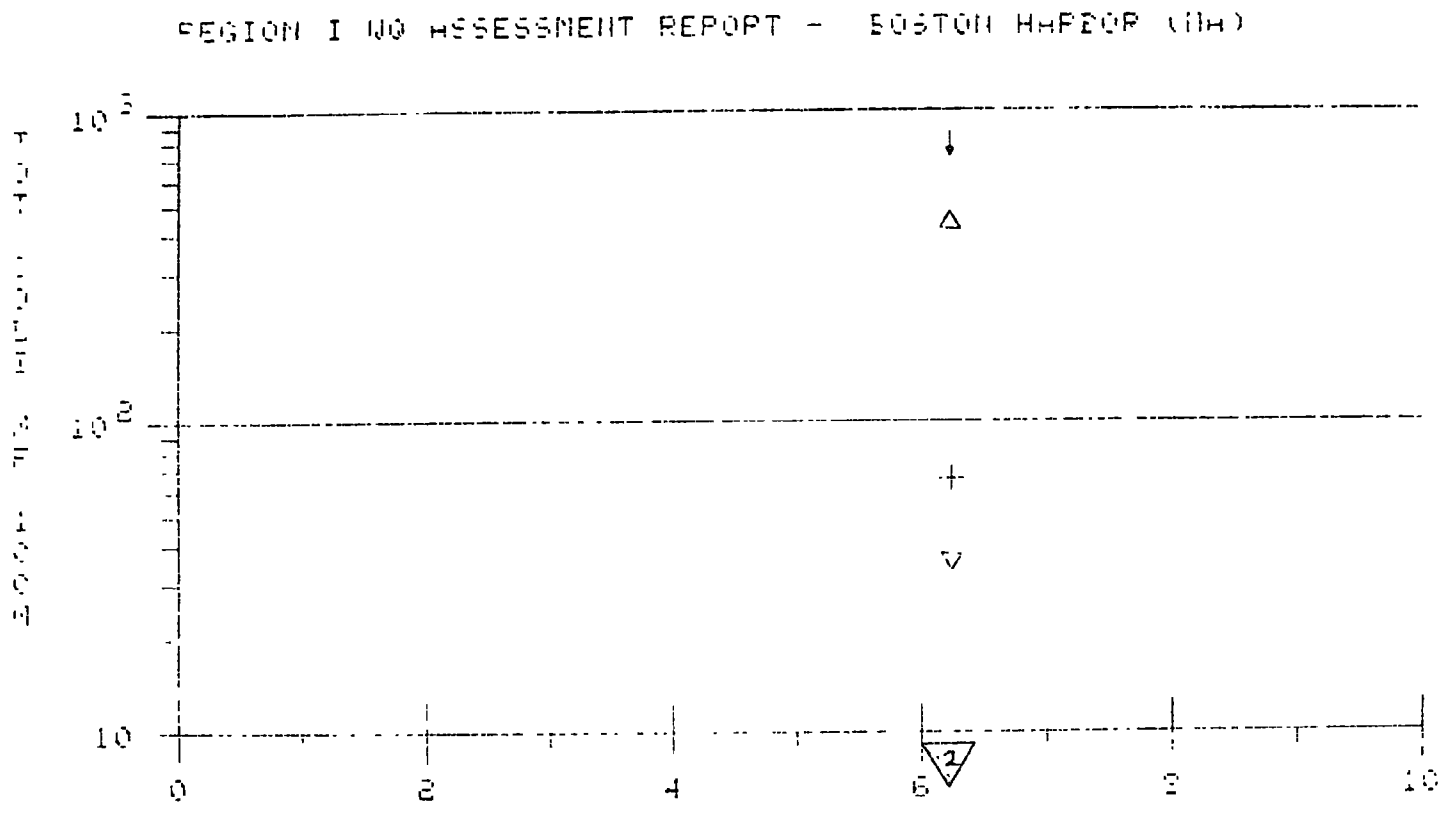
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	9.90
LAB PH SU	8	0.	0.0	6.80	8.50	8.21
COLIFORM TOT MFIM/100ML	8	0.	0.0	NONE	700.00	65.46

* GEOMETRIC MEAN FOR COLIFORMS

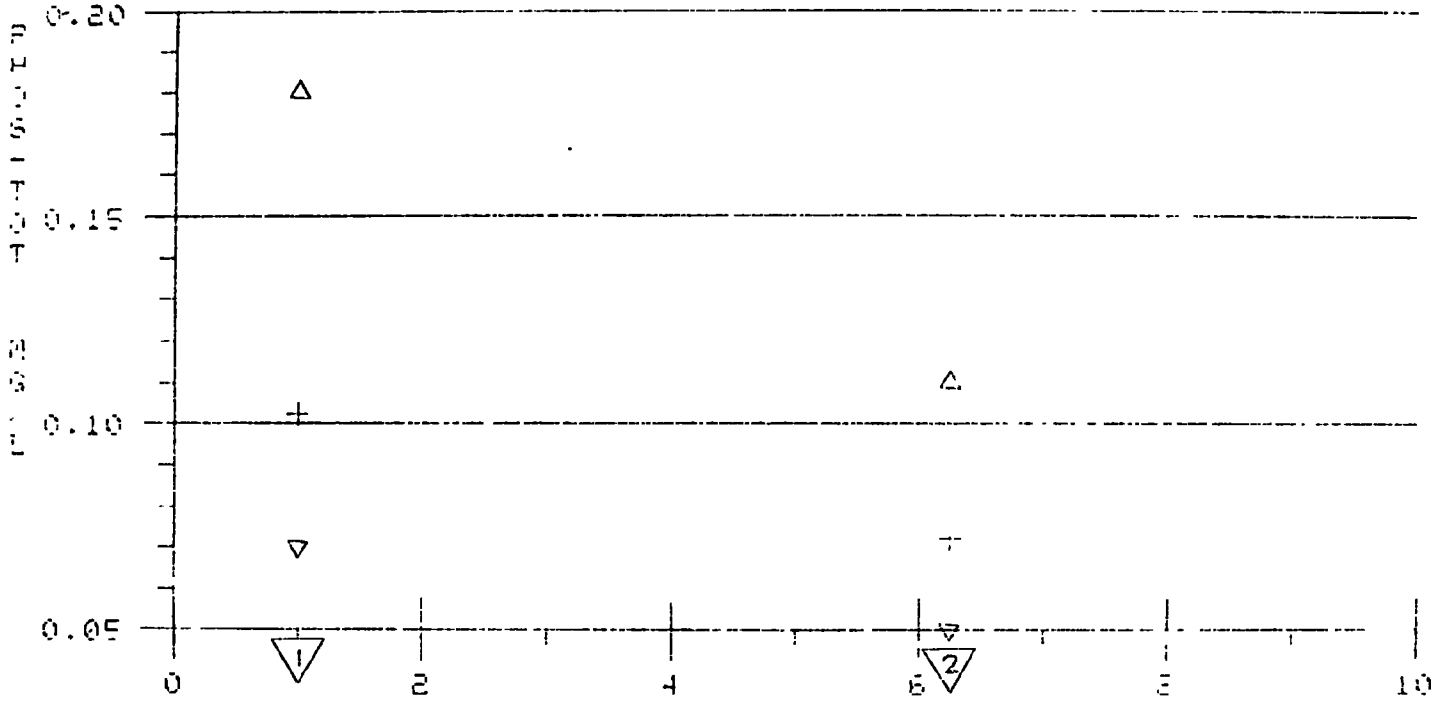

REGION I WQ ASSESSMENT REPORT - BOSTON HARBOR (MA)
15.0
13.5
10.0
7.5
5.0
2.5
0
2
4
6
8
10
1
2

REGION I WQ ASSESSMENT REPORT - BOSTON HARBOR (MA)




REGION I WQ ASSESSMENT REPORT - BOSTON HARBOR (HH)
10 3
10 2
10
0
2
4
6
8
10
2

REGION I WQ ASSESSMENT REPORT - BOSTON HARBOR (MA)



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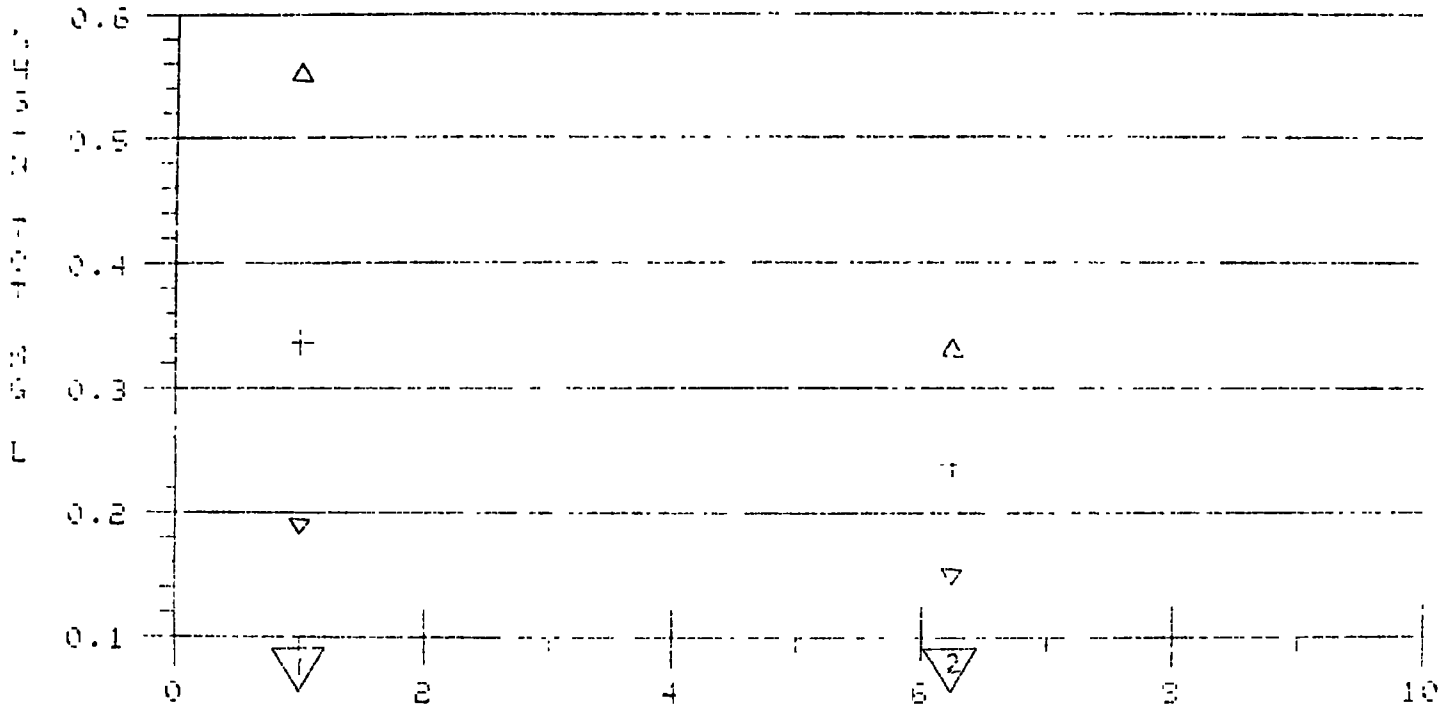
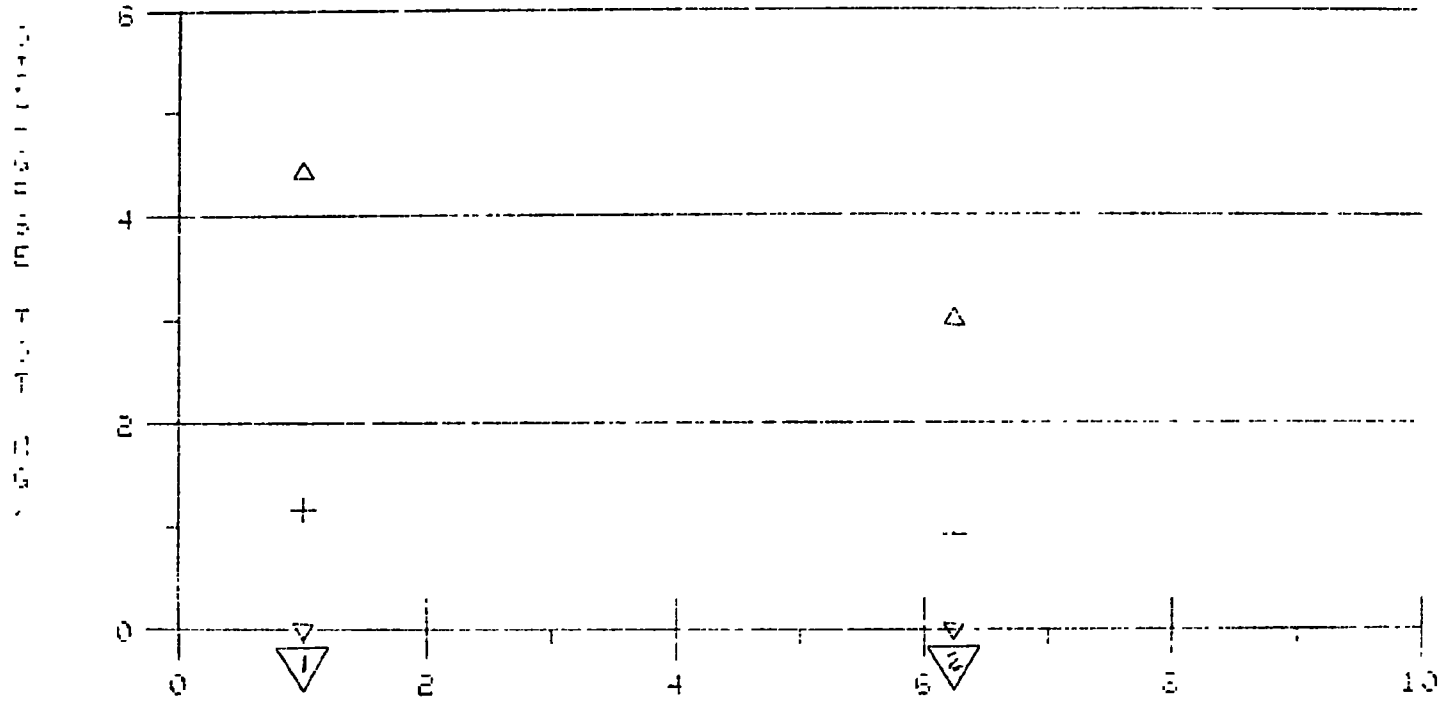


REGION I WQ ASSESSMENT REPORT - BOSTON HARBOR (MA)



Plots
DO
pH

3.12 MERRIMACK RIVER BASIN (MASSACHUSETTS)

In Massachusetts the Merrimack River Basin drains a large portion of the northeastern part of the state. The mainstem of the Merrimack enters Massachusetts at Tyngsboro and flows through the metropolitan areas of Lowell, Lawrence and Haverhill and into the Atlantic Ocean at Newburyport.

Ninety percent of the samples taken at the station above Lowell (Plot Station No. 1) violated total coliform standards for Class "B" waters while 2 of 10 samples violated the pH standards for this classification. The bulk of these problems are thought due to municipal and industrial dischargers in Nashua, New Hampshire. The West Newbury station (Plot Station No. 2) reports violations of "SB" standards for coliform bacteria in all 11 samples taken and pH in 8 of 11 samples. Municipal, industrial and combined sewer discharges in Lowell, Lawrence and Haverhill are believed responsible for these problems.

The levels of nutrients are also very high at both of these stations and can also be traced to the discharges upstream of each station.

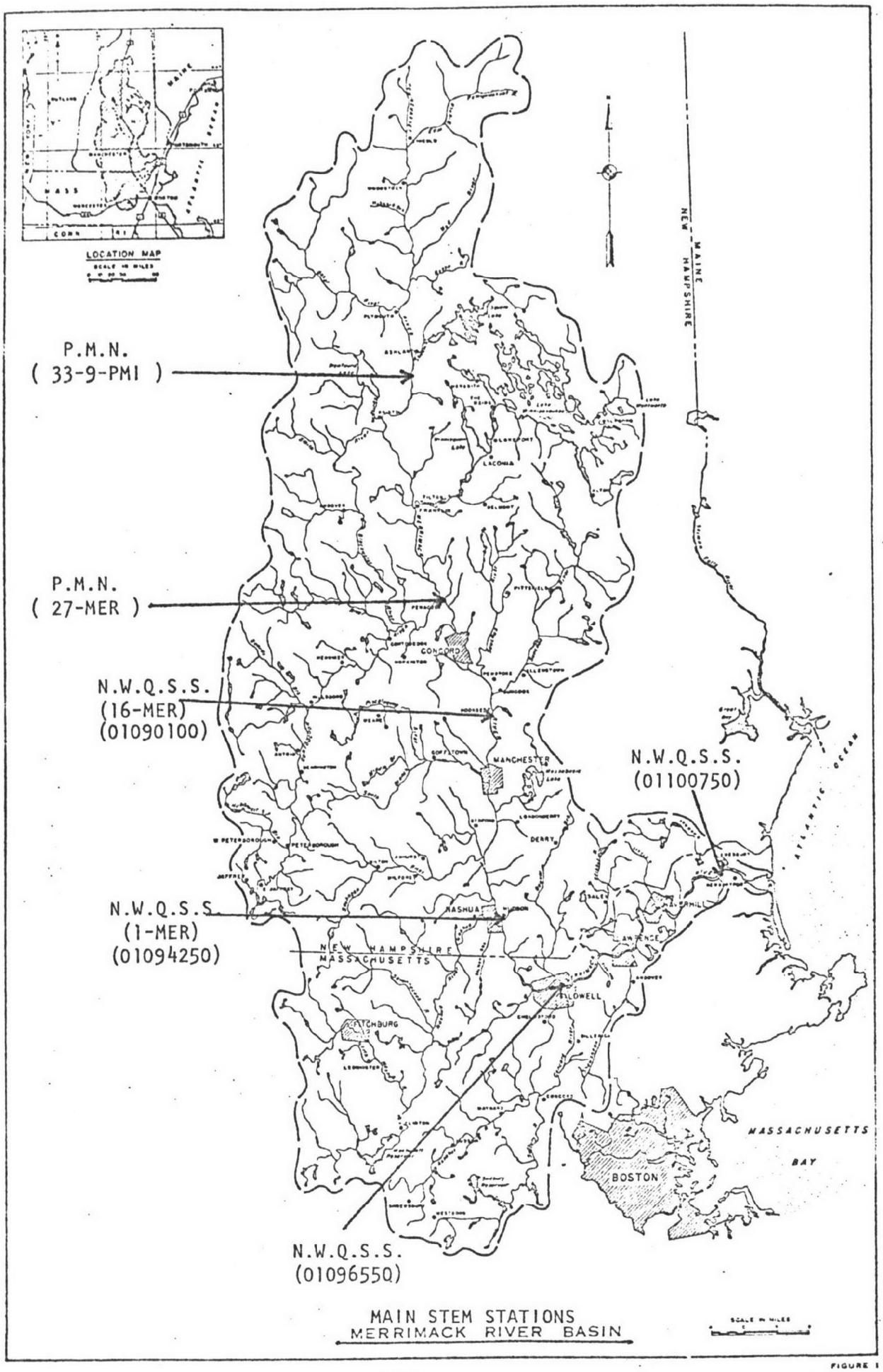
MERRIMACK RIVER

{MASSACHUSETTS}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Merrimack River above Lowell, MA	N.W.Q.S.S. 01096550
2.	Merrimack River near West Newbury, MA	N.W.Q.S.S. 01100750



MAIN STEM STATIONS
MERRIMACK RIVER BASIN

FIGURE 1

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01096550 MERRIMACK R. (MA)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	11	0.	0.0	NONE	28.30	11.36
DISS. OXYGEN MG/L	9	0.	0.0	5.00	NONE	9.3
PH SU	10	2.	20.00	6.50	8.00	6.9
COLIFORM TOT MFIM/100ML	10	9.	90.00	NONE	1000.00	12825.4

STATION 01100750 MERRIMACK R. (MA)

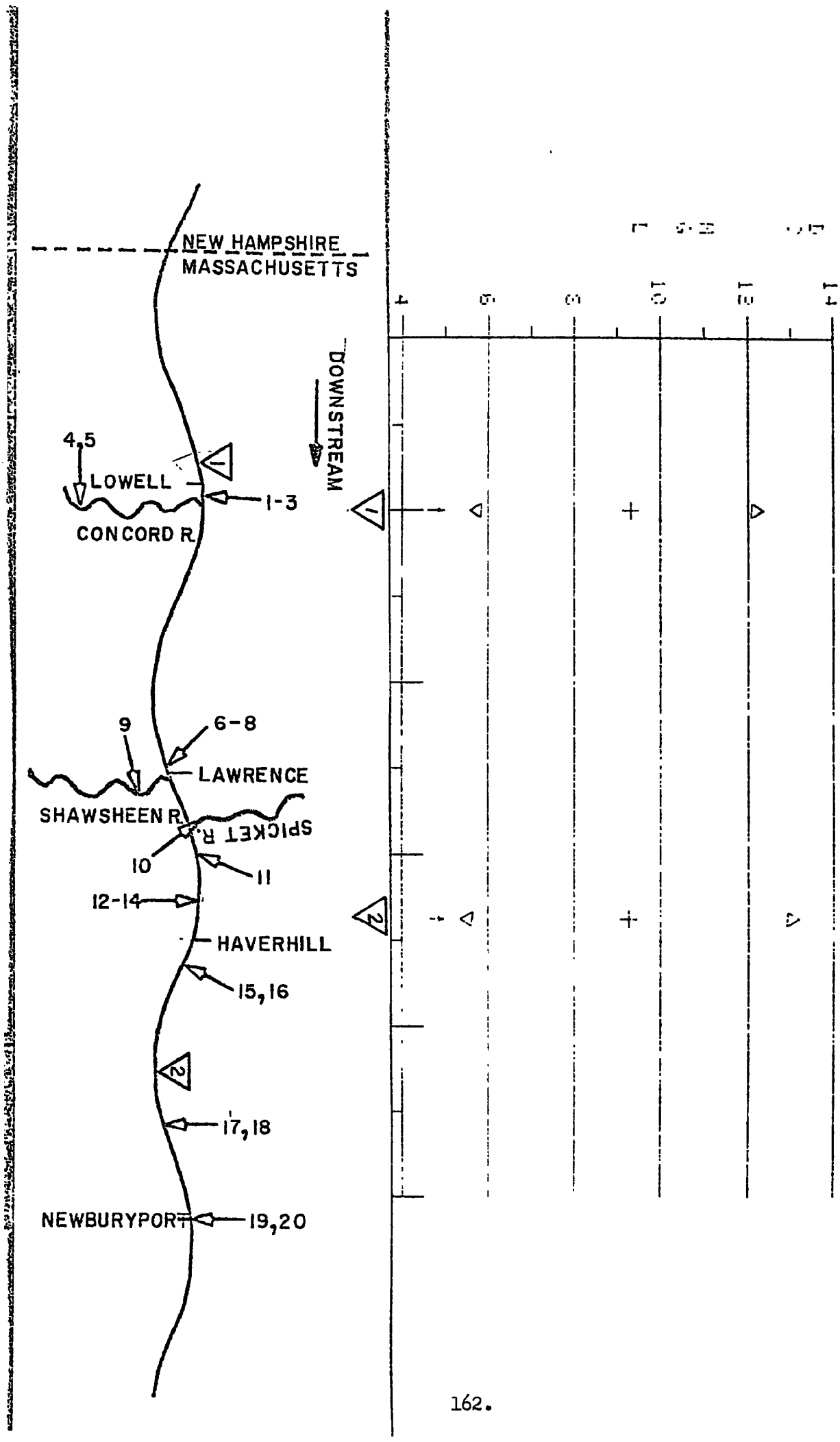
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	9.2
PH SU	11	8.	72.73	6.80	8.00	6.7
COLIFORM TOT MFIM/100ML	11	11.	100.00	NONE	700.00	23728.3

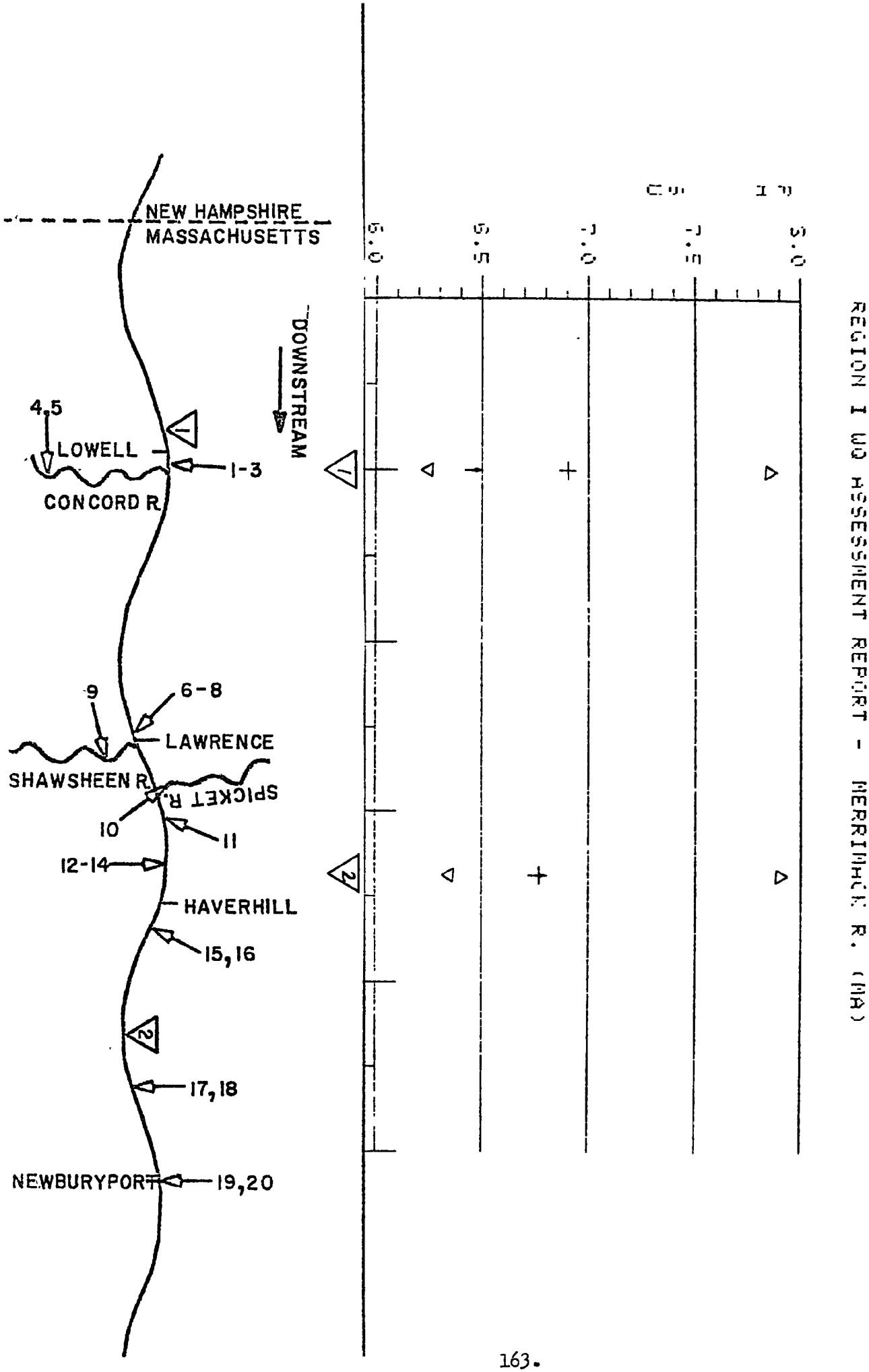
* GEOMETRIC MEAN FOR COLIFORMS

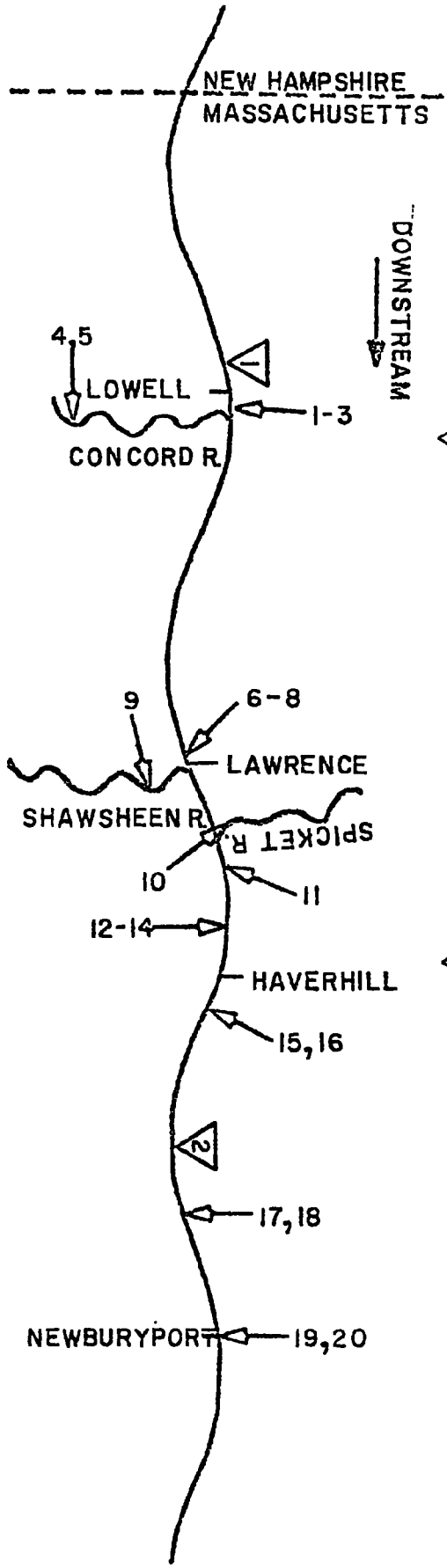
SIGNIFICANT DISCHARGERS

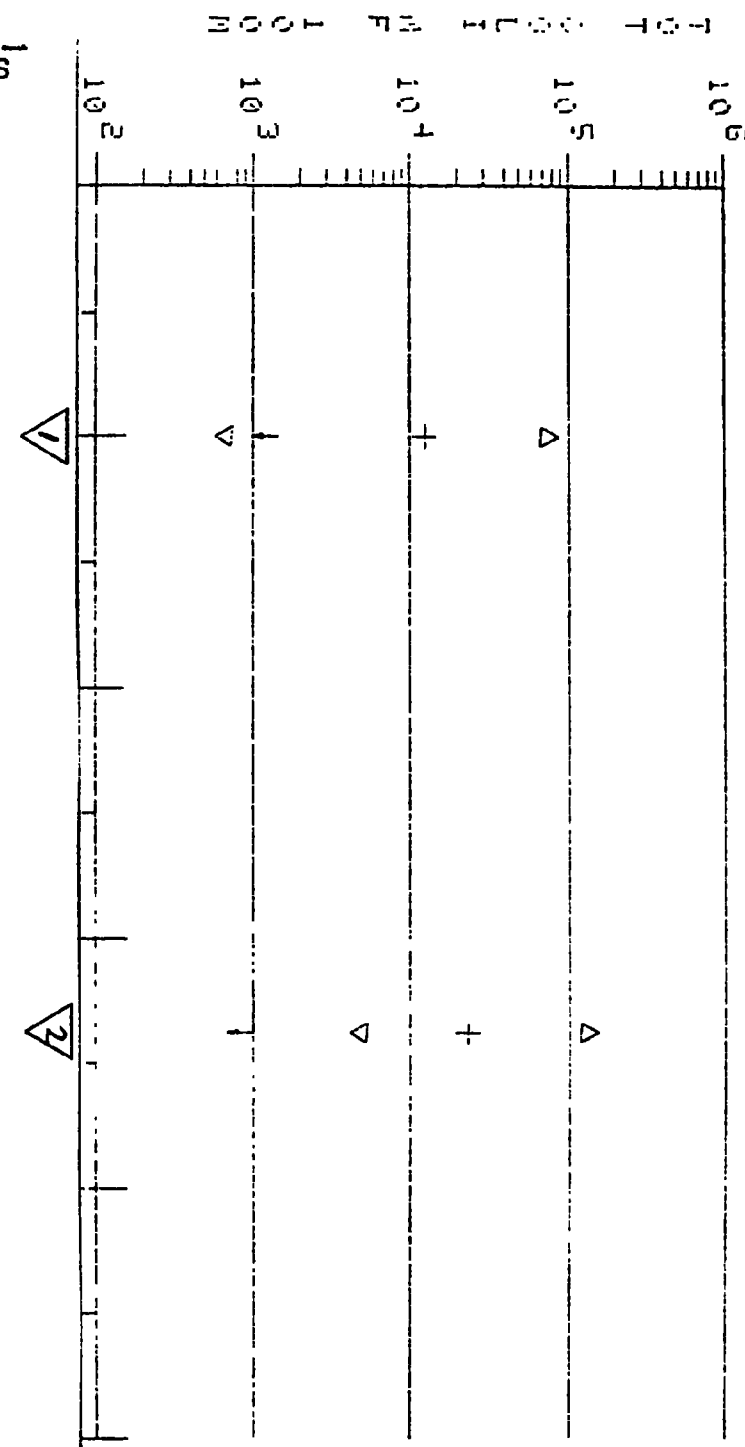
MERRIMACK RIVER BASIN (MASS.)

	Discharger	Location	Receiving Water	NPDES No.
1.	Lawrence Mfg. Co.	Lowell	Merrimack R.	0000426
2.	Pellon Corporation	Lowell	Merrimack R.	0002216
3.	Lowell MSS	Lowell	Merrimack R.	0100633
4.	Billerica-Letchworth WTP	Billerica	Concord R.	0101711
5.	North Billerica Co.	Billerica	Concord R.	0004189
6.	Lawrence MTP	Lawrence	Merrimack R.	0102041
7.	Lawrence Paperboard	Lawrence	Merrimack R.	0005029
8.	Merrimack Paper Co.	Lawrence	Merrimack R.	0001945
9.	Andover STP	Andover	Shawsheen R.	0101435
10.	Essex Chrome Plating Co.	Methuen	Spicket R.	0004642
11.	Methuen STP	Methuen	Merrimack R.	0100790
12.	Greater Lawrence S.D.	No.Andover	Merrimack R.	0100447
13.	Western Electric	No.Andover	Merrimack R.	0001261
14.	No.Andover STP	No.Andover	Merrimack R.	0101966
15.	Haverhill MTP	Haverhill	Merrimack R.	0101621
16.	Haverhill Paperboard	Haverhill	Merrimack R.	0004049
17.	Microfab, Inc.	Amesbury	Merrimack R.	0002208
18.	Amesbury STP	Amesbury	Merrimack R.	0101745
19.	Newburyport WPCF	Newburyport	Merrimack R.	0101427
20.	Chase & Shawmut Co.	Newburyport	Merrimack R.	0000281

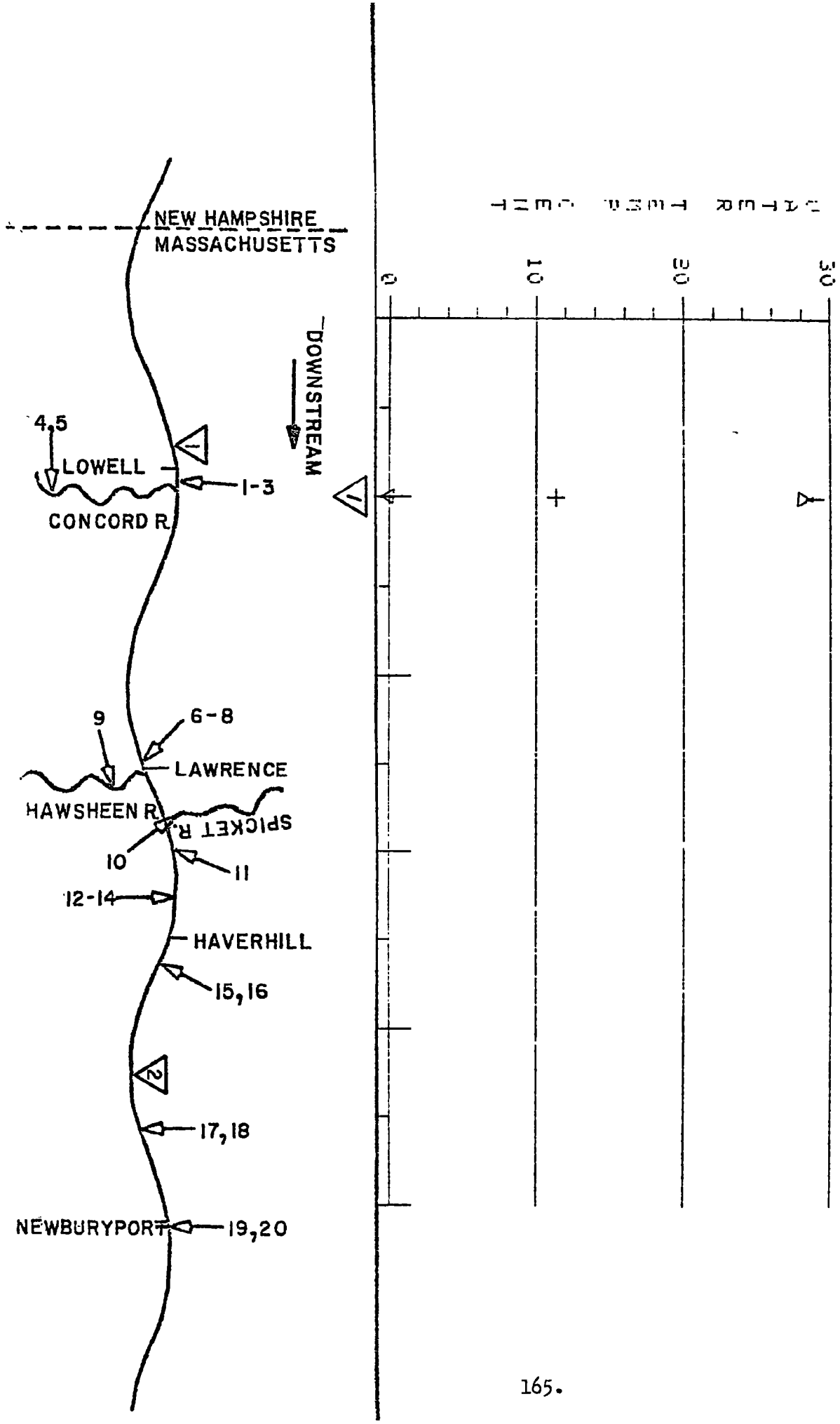

NEW HAMPSHIRE
MASSACHUSETTS
DOWNSTREAM
4,5
LOWELL
1-3
CONCORD R.
9
6-8
LAWRENCE
SHAWSHEEN R.
SPICKET R.
10
11
12-14
HAVERHILL
15,16
17,18
NEWBURYPORT
19,20
1
2
4
6
8
10
12
14


REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (MA)
NEW HAMPSHIRE
MASSACHUSETTS
DOWNSTREAM
4,5
LOWELL
1-3
CONCORD R.
9
6-8
LAWRENCE
SHAWSHEEN R.
SPICKET R.
10
11
12-14
HAVERHILL
15,16
17,18
NEWBURYPORT
19,20
1
2
5.0
5.5
6.0
6.5
7.0
7.5
8.0

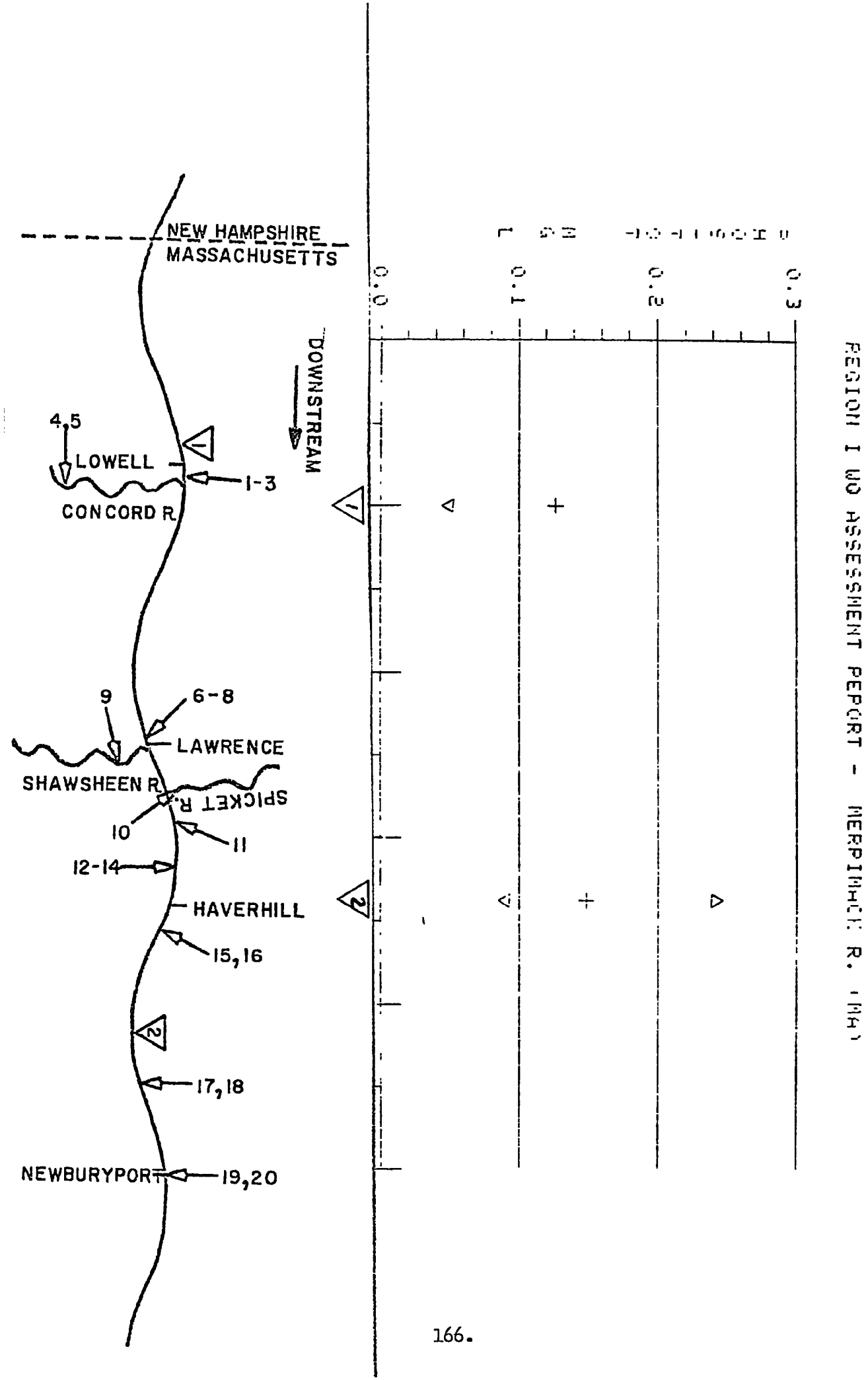


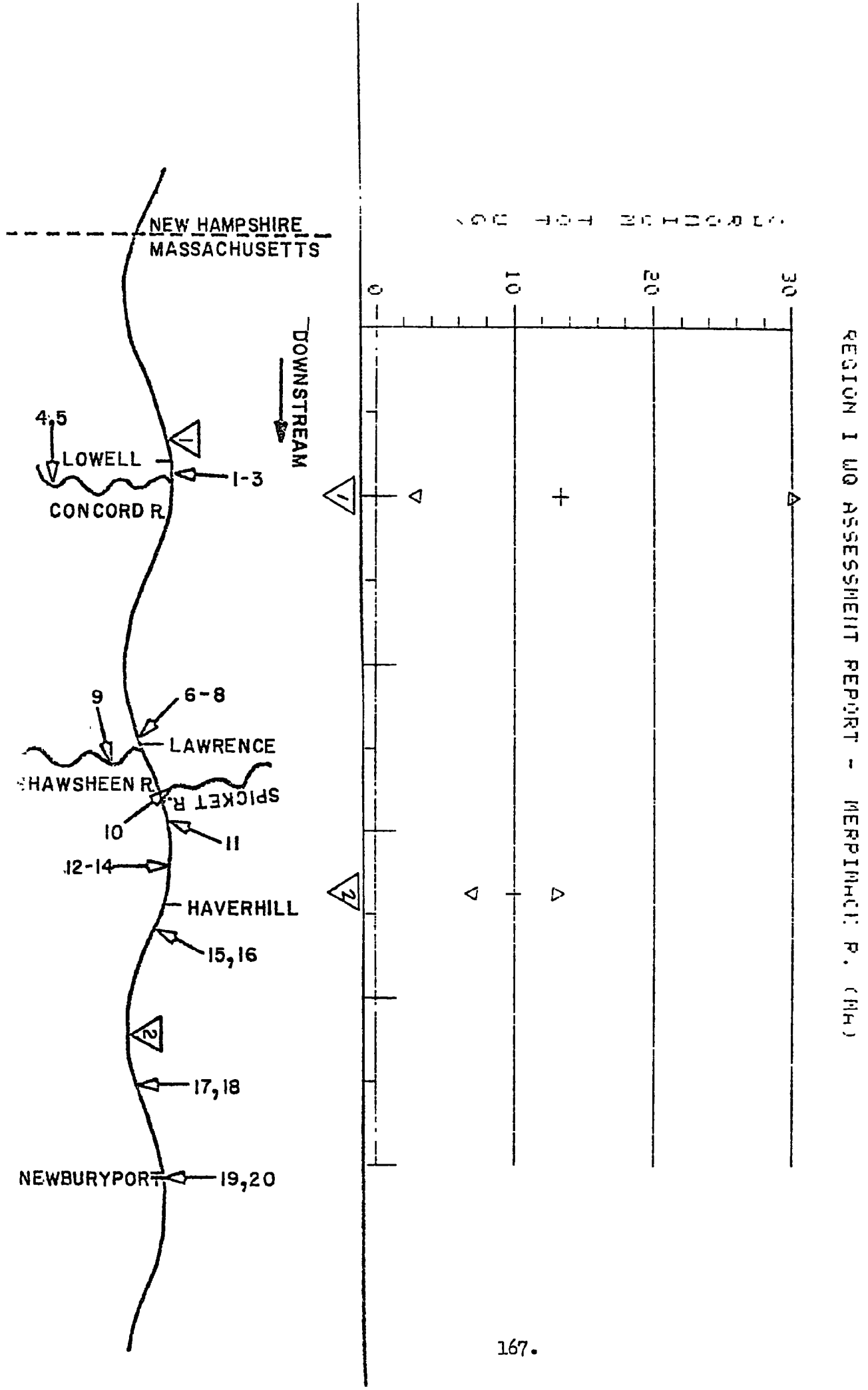


REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (MA)



REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (MA)


NEW HAMPSHIRE
MASSACHUSETTS
DOWNSTREAM
4,5
LOWELL
1-3
CONCORD R.
9
6-8
LAWRENCE
SHAWSHEEN R.
SPICKET R.
10
11
12-14
HAVERHILL
15,16
17,18
NEWBURYPORT
19,20
0.0
0.1
0.2
0.3


REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (MA)
NEW HAMPSHIRE
MASSACHUSETTS
DOWNSTREAM
4,5
LOWELL
1-3
CONCORD R.
9
6-8
LAWRENCE
SHAWSHEEN R.
SPICKET R.
10
11
12-14
HAVERHILL
15,16
17,18
NEWBURYPORT
19,20
0
10
20
30

Plots
DO
Tot N
Tot NH3-N
Tot Phos

3.13 NASHUA RIVER BASIN (MASSACHUSETTS)

The Nashua River Basin is part of and a significant contributor to the degradation of the Merrimack Basin.

The Whitman River station (Plot Station No. 1) reports numerous pH violations but this is believed a natural condition in the stream. This station is at an unpolluted location in the basin and used to show the deterioration of water quality between it and the station on the Nashua River at Fort Devens (Plot Station No. 2).

The station on the Nashua at Fort Devens violates the Massachusetts standards for dissolved oxygen (3 mg/l) in 3 of 9 samples taken and total coliform bacteria (1000/100 ml) in 9 of 10 samples. The nutrient and total chromium levels are also very high at this station.

Combined sewer, municipal and industrial waste discharges in Fitchburg and Leominster and insufficient sewage treatment in Ayer are responsible for the above problems.

Separation of combined sewers at Leominster and advanced treatment of sewage at Ayer are planned according to the Massachusetts FY-76 Program Plan.

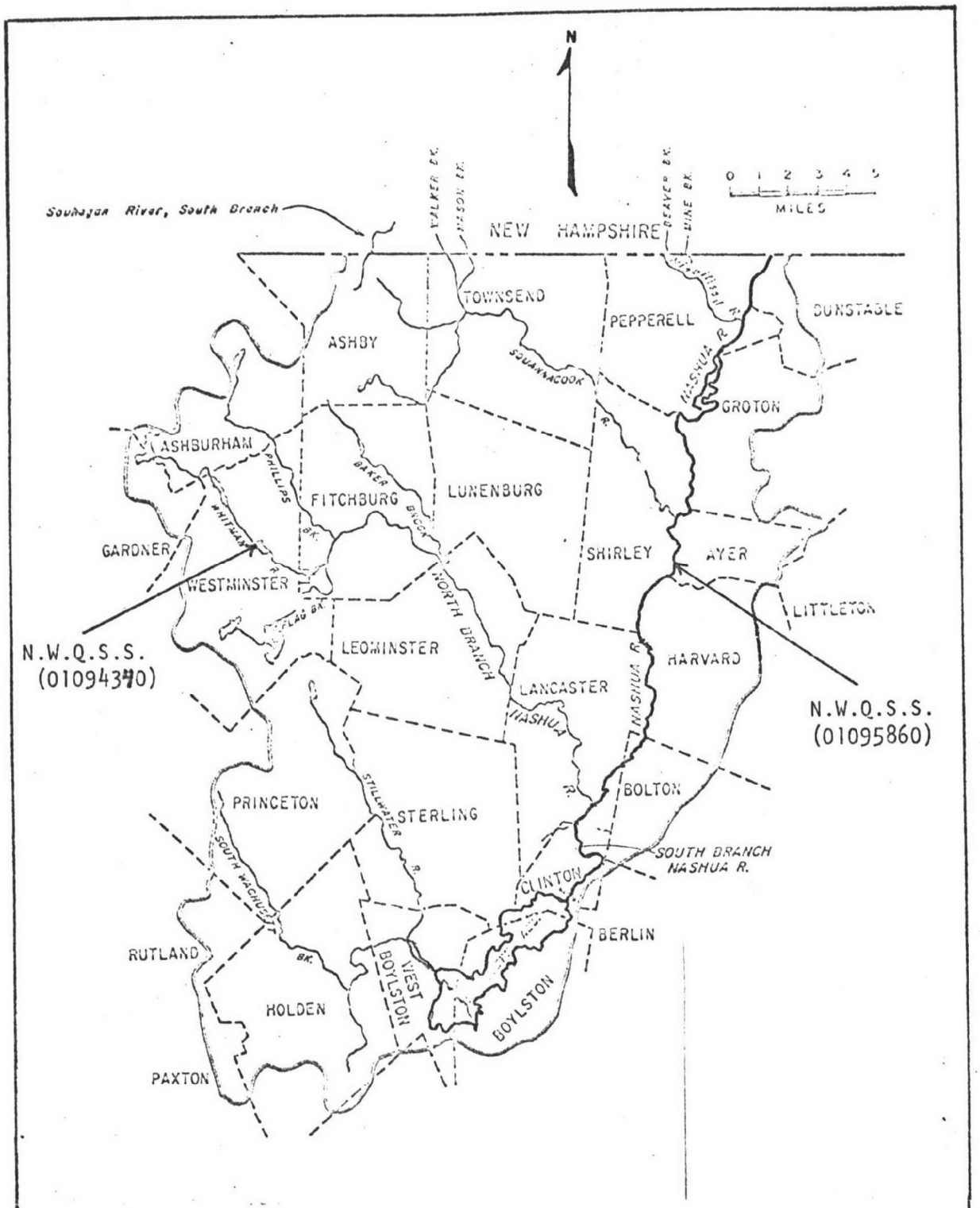
NASHUA RIVER BASIN

{MASSACHUSETTS}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Whitman River near Westminster, MA	N.W.Q.S.S. 01094340
2.	Nashua River near FT. Devens, MA	N.W.Q.S.S. 01095860



NASHUA RIVER BASIN

IN

MASSACHUSETTS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01094340 NASHUA R. (MA-NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	11	0.	0.0	NONE	28.30	10.5
DISS. OXYGEN MG/L	9	0.	0.0	5.00	NONE	10.0
PH SU	11	8.	72.73	6.80	8.00	6.7
COLIFORM TOT MFIM/100ML	11	1.	9.09	NONE	1000.00	58.6

STATION 01095860 NASHUA R. (NH-MA)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	11	0.	0.0	NONE	28.30	11.6
DISS. OXYGEN MG/L	9	3.	33.33	3.00	NONE	5.5
PH SU	11	0.	0.0	6.00	8.50	6.54
COLIFORM TOT MFIM/100ML	10	9.	90.00	NONE	1000.00	5207.61

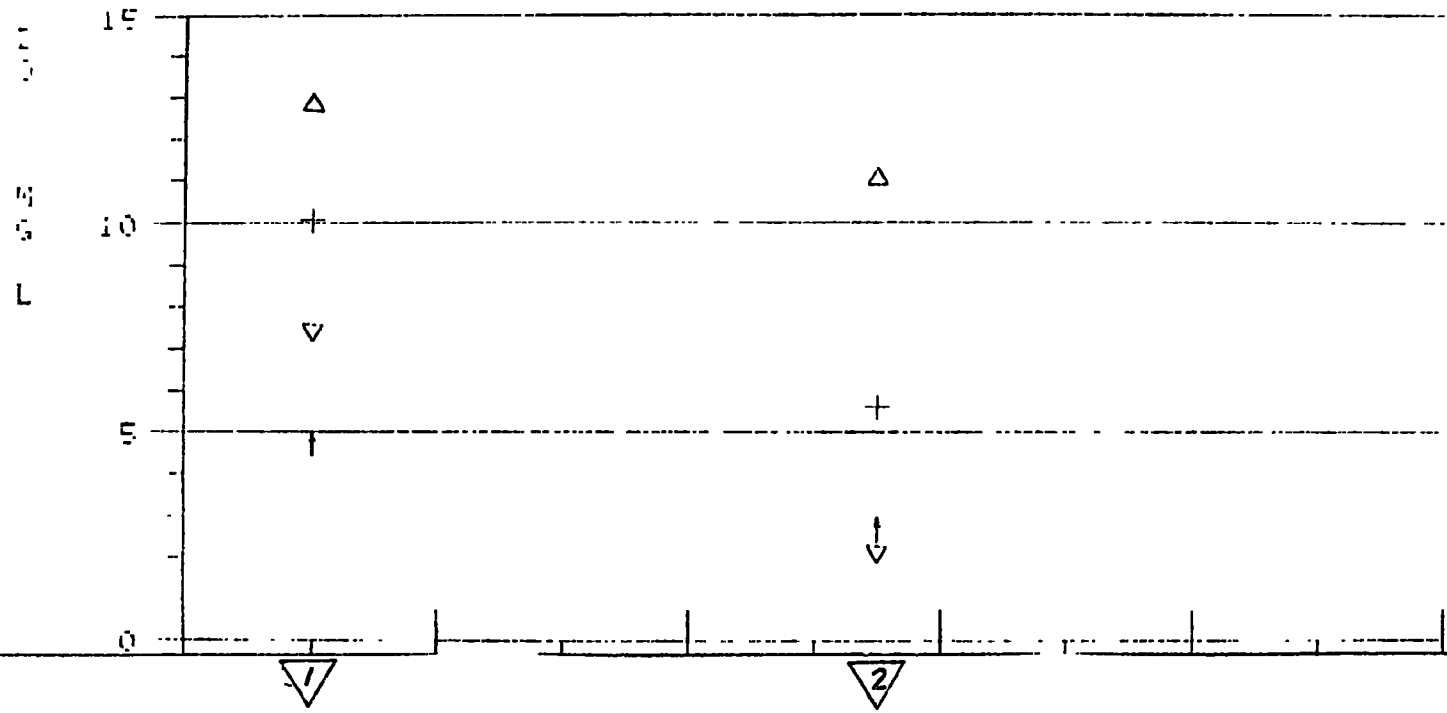
* GEOMETRIC MEAN FOR COLIFORMS

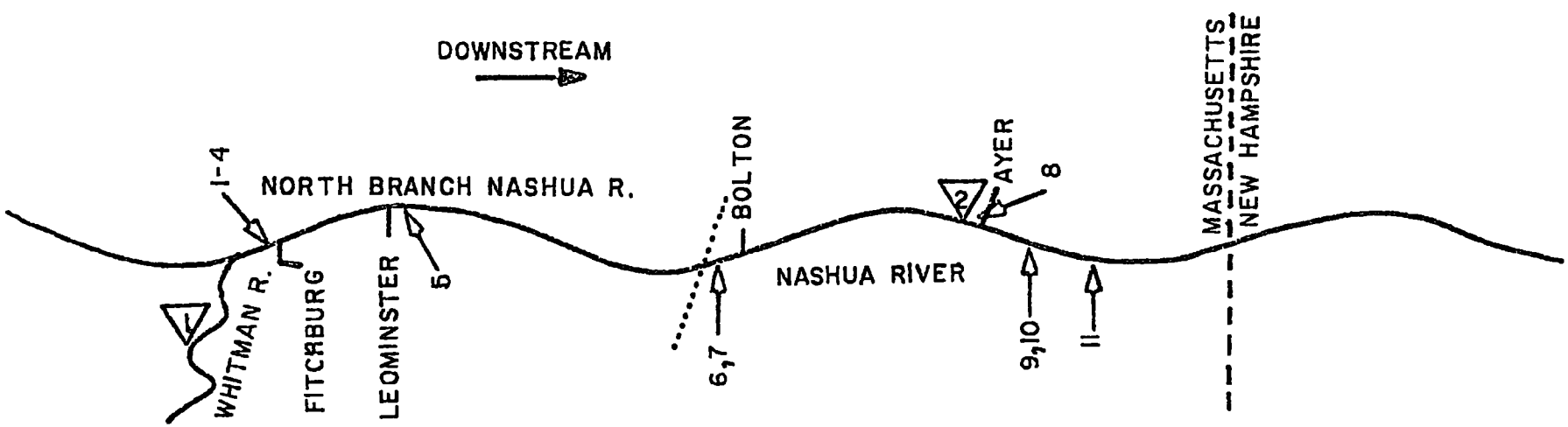
SIGNIFICANT DISCHARGERS

NASHUA RIVER BASIN (MASS.)

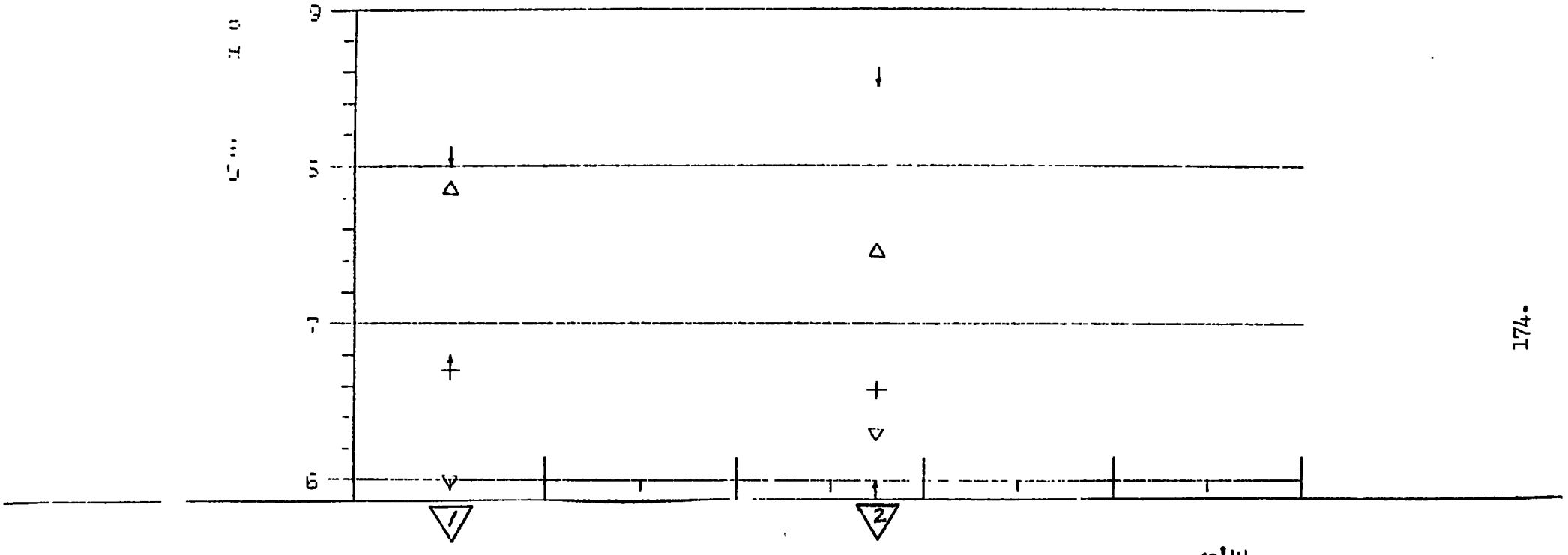
	Discharger	Location	Receiving Water	NPDES No.
1.	Fitchburg MTP	Fitchburg	Nashua R.	0100986
2.	W.Fitchburg WTF	Fitchburg	Nashua R.	0101281
3.	E.Fitchburg WTF	Fitchburg	Nashua R.	0101273
4.	Fitchburg Paper Co.	Fitchburg	Nashua R.	0004243
5.	Leominster STP	Leominster	Nashua R. North Branch	0100617
6.	E.S.B., Inc.	Clinton	Nashua R.	0002976
7.	Clinton STP	Clinton	Nashua R. South Branch	0100404
8.	Ayer STP	Ayer	Nashua R.	0100013
9.	Hollingsworth & Vose Company	Shirley	Nashua-Squannac R.	0004561
10.	Groton Leather Bond	W.Groton	Nashua-Squannac R.	0000744
11.	Pepperell Paper Co.	Pepperell	Nashua R.	0005185

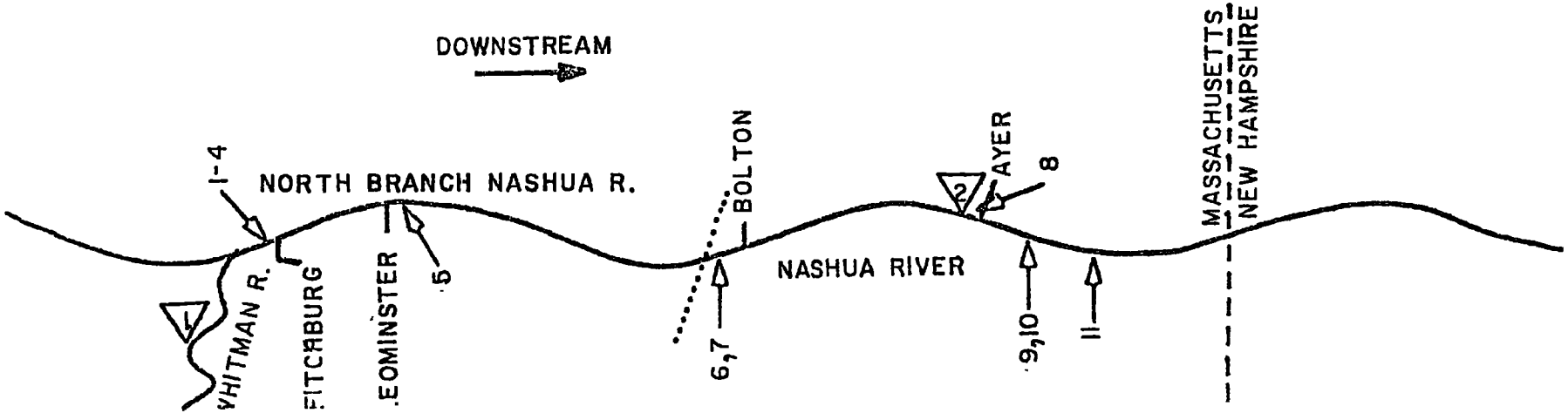
REGION I WQ ASSESSMENT REPORT - NASHUA R. TRIB. (NH-MA)

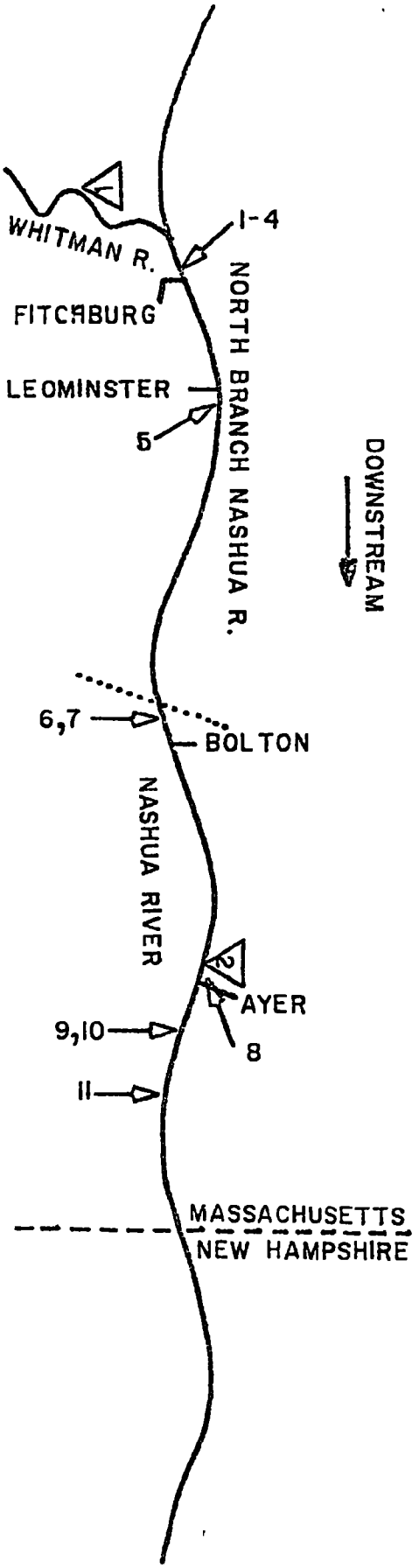


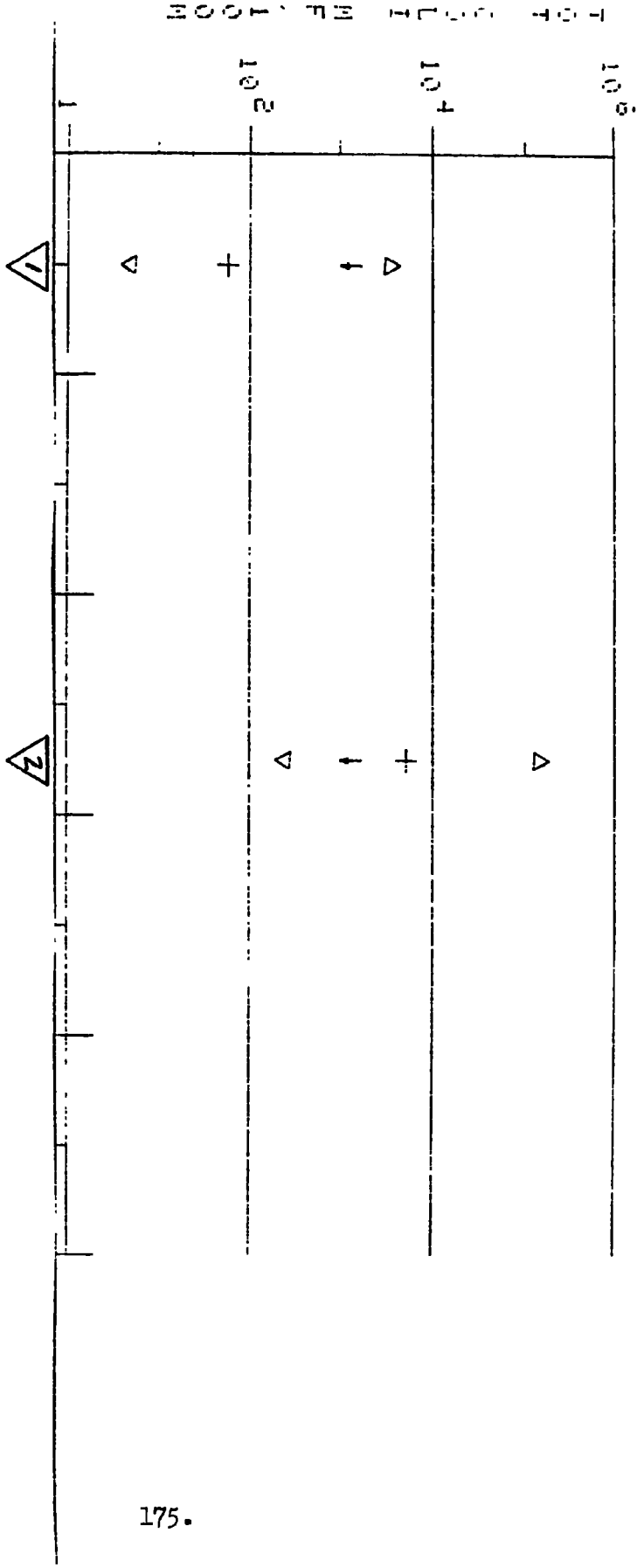


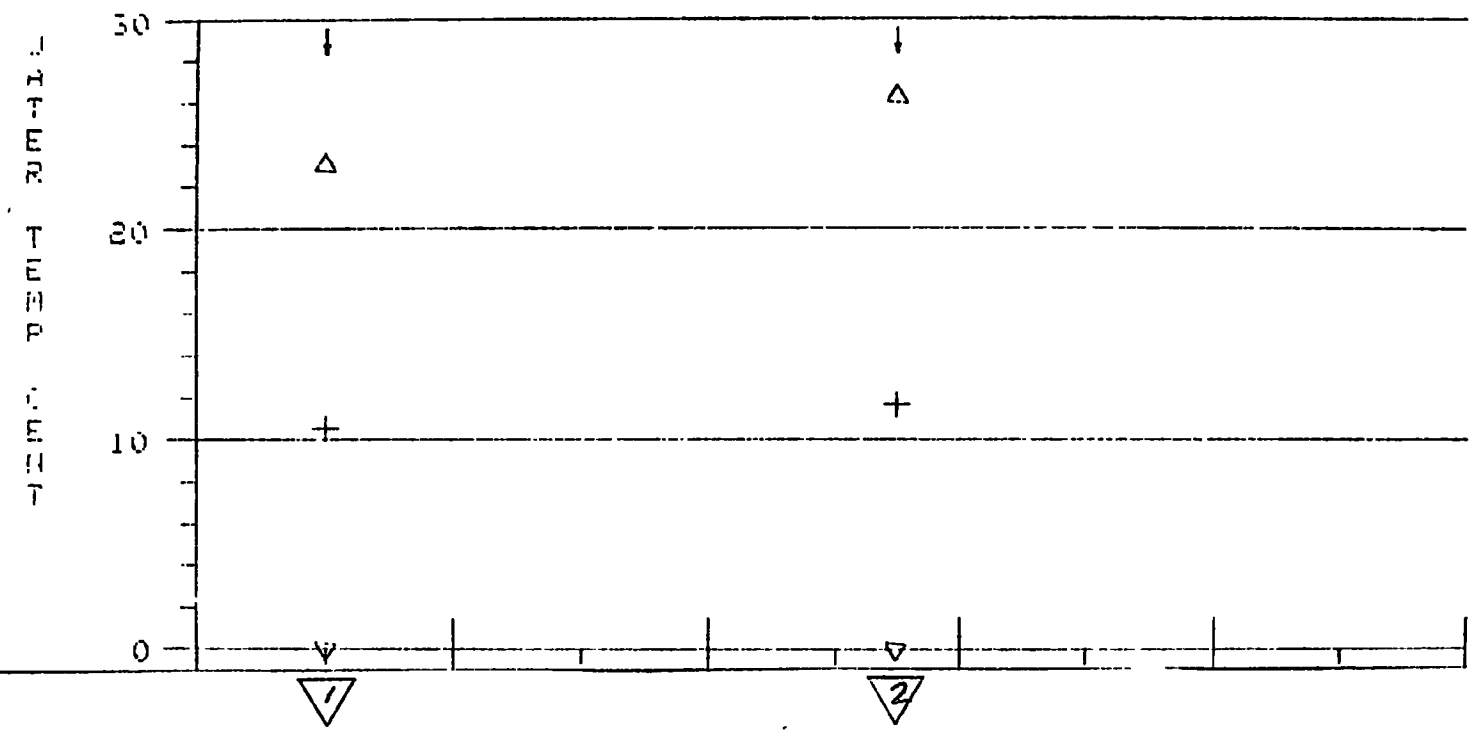
REGION I WQ ASSESSMENT REPORT - NASHUA R. TRIB. (NH-MA)

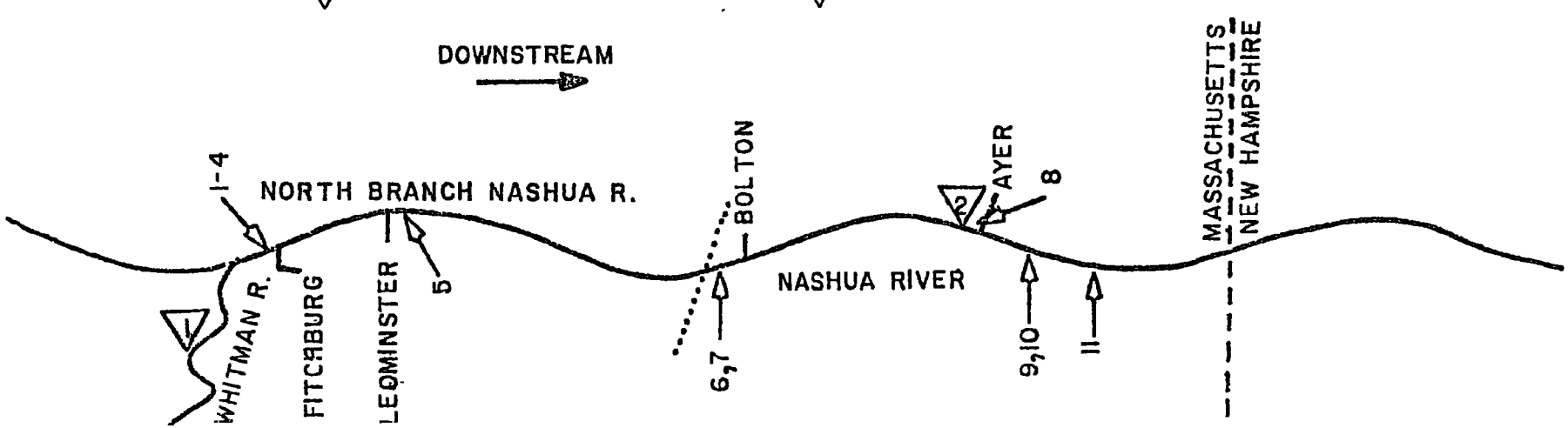


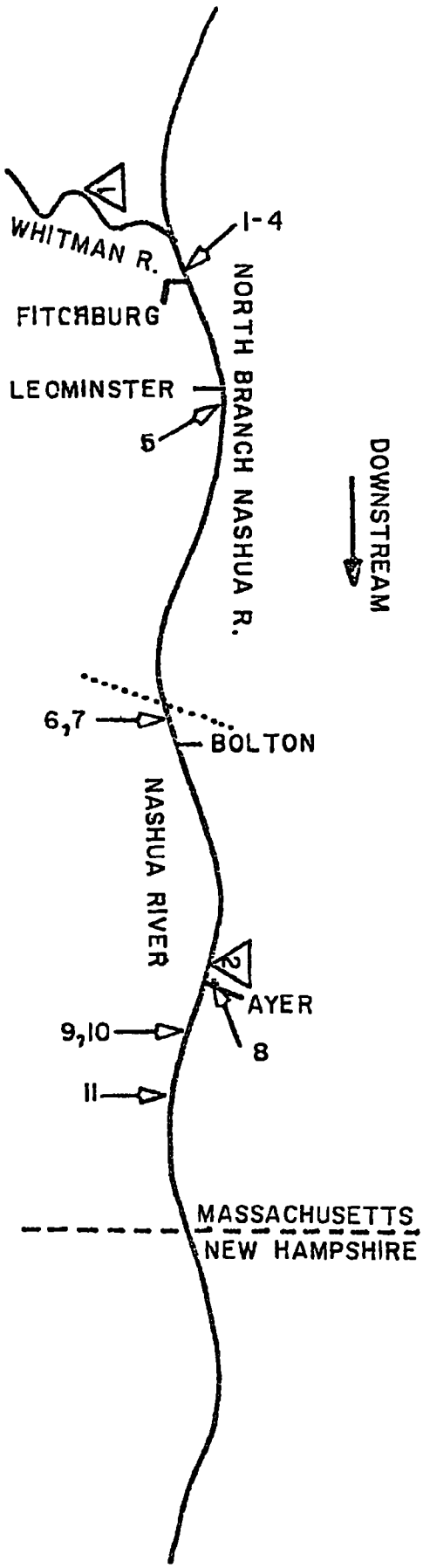


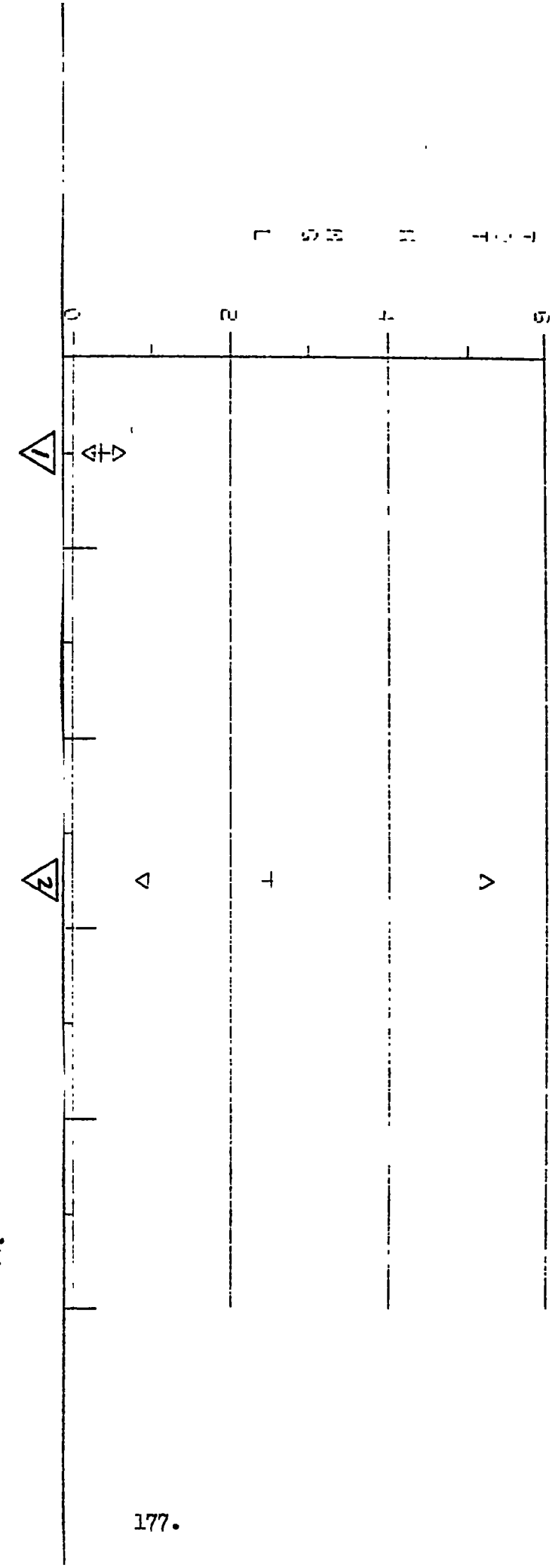

WHITMAN R.
1-4
FITCHBURG
NORTH BRANCH NASHUA R.
LEOMINSTER
5
DOWNSTREAM
6,7
BOLTON
NASHUA RIVER
AYER
9,10
8
11
MASSACHUSETTS
NEW HAMPSHIRE

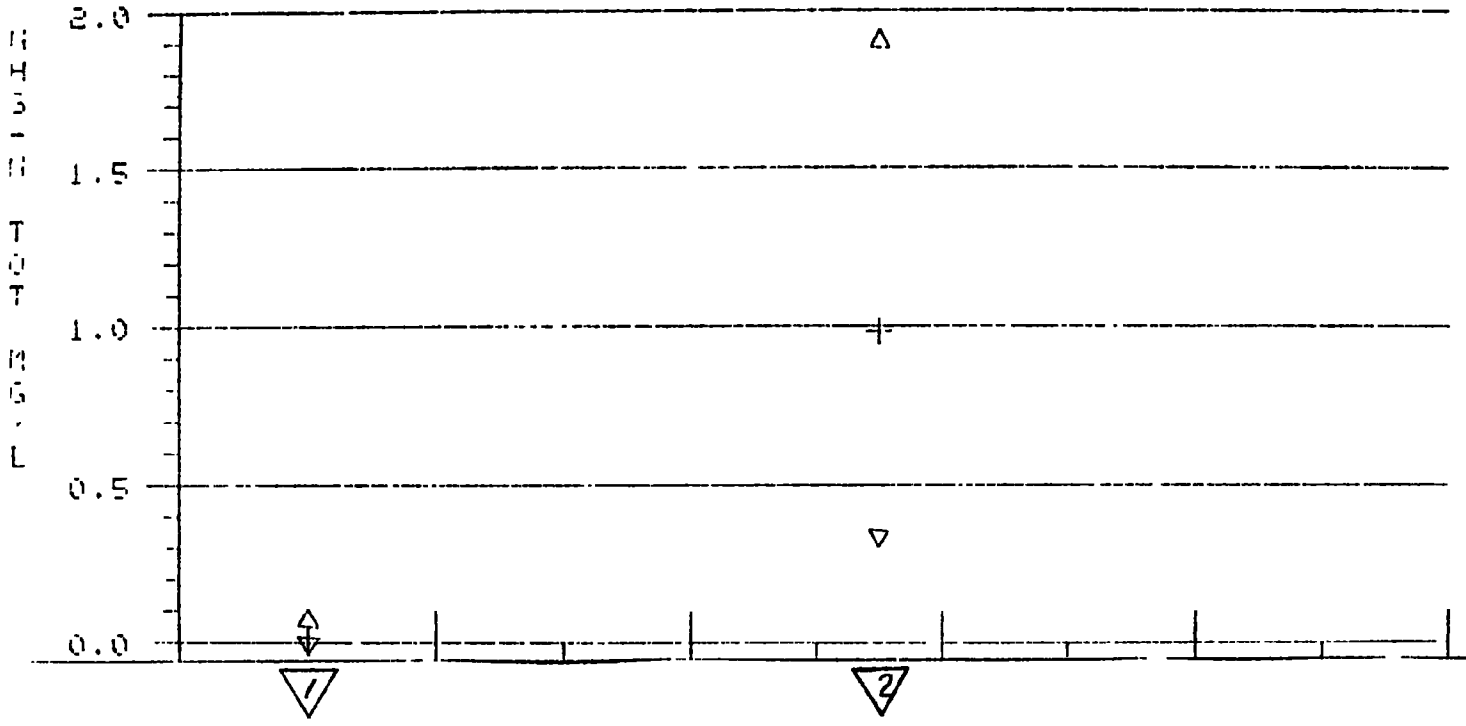

REGION I WQ ASSESSMENT REPORT - NASHUA R. TRIB. (NH-MA)
FECAL COLIFORM
1
2

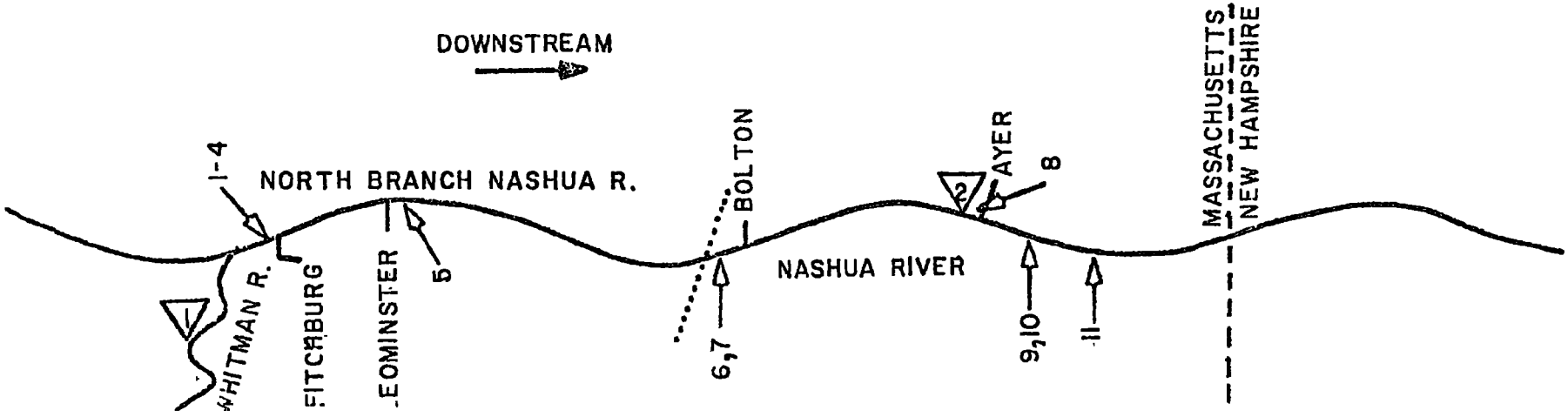

30
20
10
0
1
2

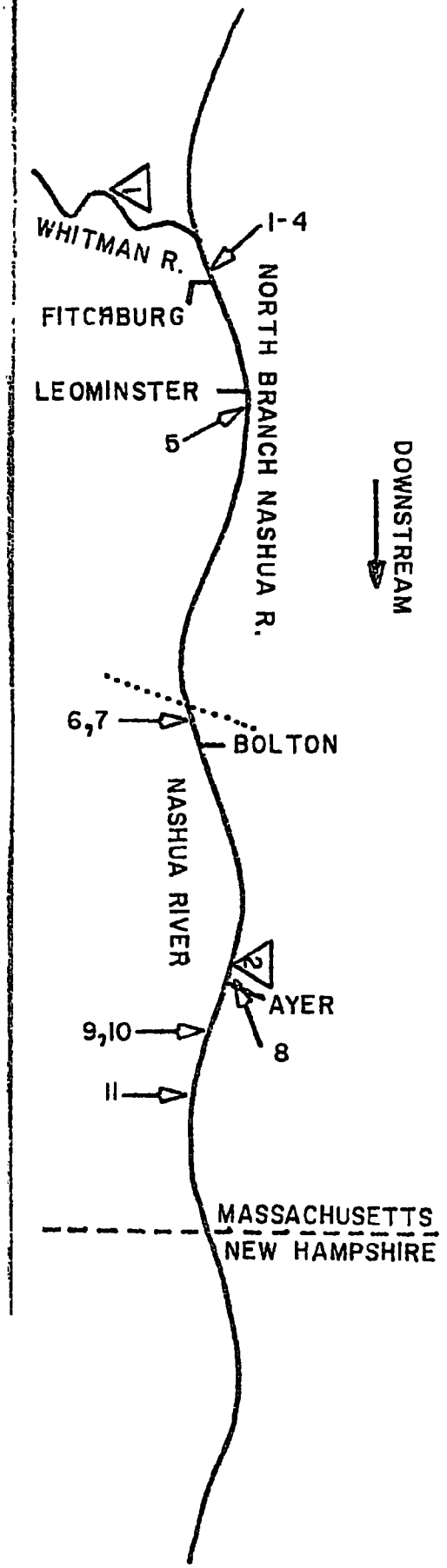

DOWNSTREAM
1-4
NORTH BRANCH NASHUA R.
WHITMAN R.
FITCHBURG
LEOMINSTER
5
BOLTON
6,7
NASHUA RIVER
AYER
8
9,10
11
MASSACHUSETTS
NEW HAMPSHIRE

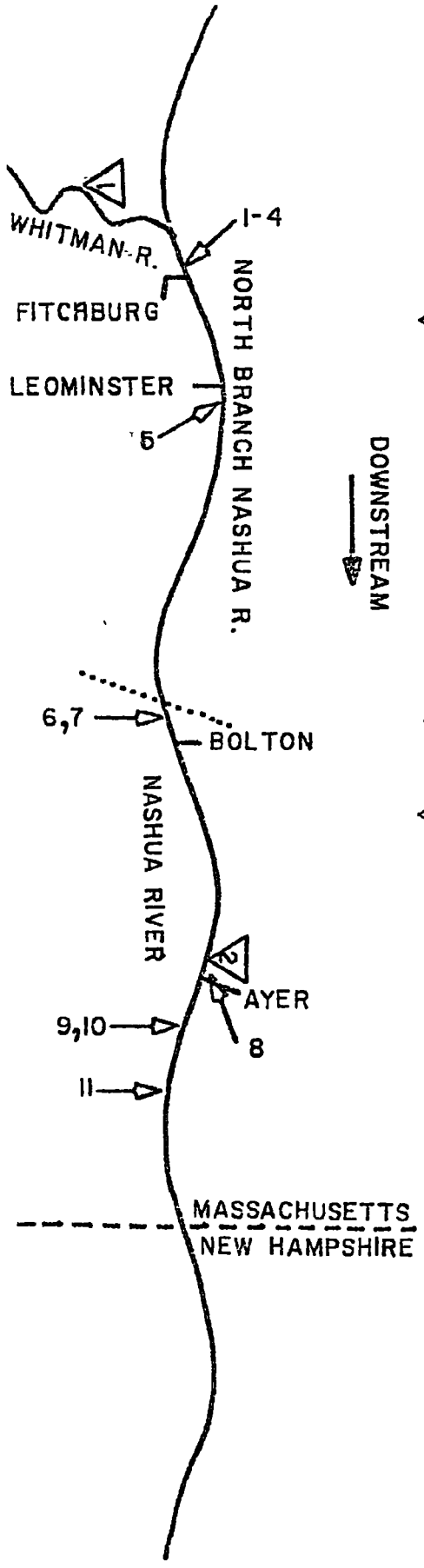

WHITMAN R.
1-4
FITCHBURG
LEOMINSTER
5
NORTH BRANCH NASHUA R.
DOWNSTREAM
6,7
BOLTON
NASHUA RIVER
AYER
9,10
8
11
MASSACHUSETTS
NEW HAMPSHIRE

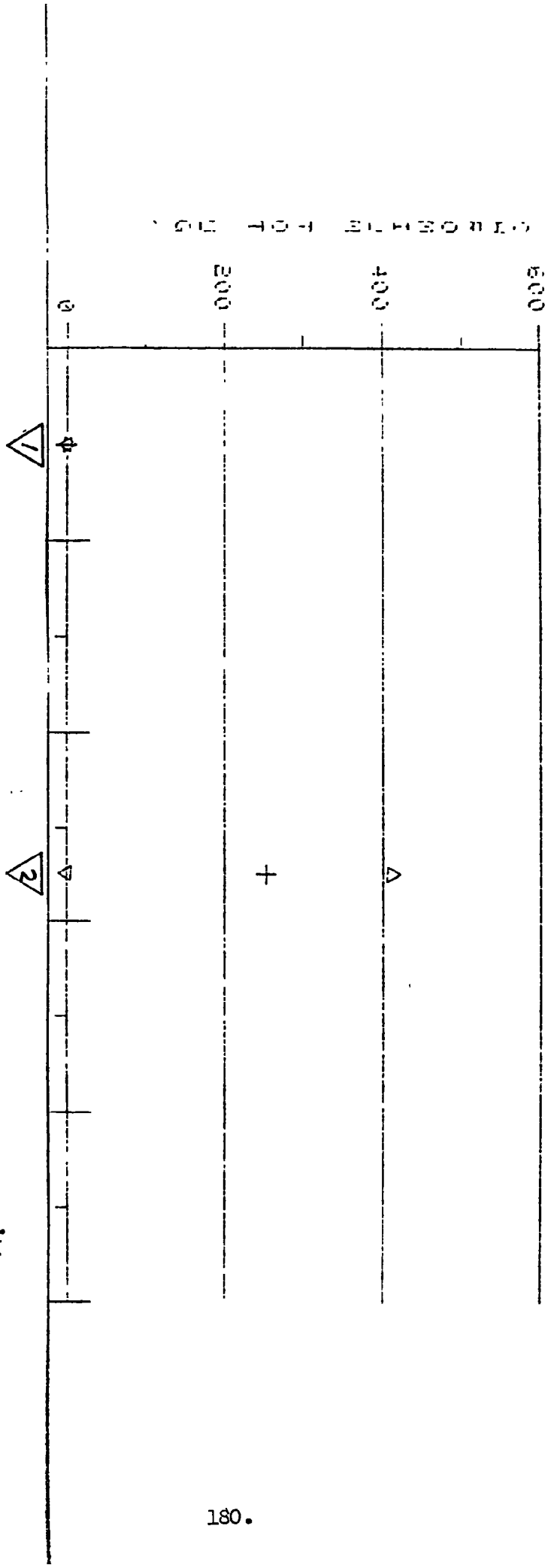

REGION I WQ ASSESSMENT REPORT - NASHUA R. TRIB. (NH-MA)
5
4
3
2
1
0


2.0
1.5
1.0
0.5
0.0
1
2


DOWNSTREAM
1-4
NORTH BRANCH NASHUA R.
WHITMAN R.
FITCHBURG
LEOMINSTER
5
BOLTON
6,7
NASHUA RIVER
AYER
8
9,10
11
MASSACHUSETTS
NEW HAMPSHIRE


WHITMAN R.
1-4
FITCHBURG
NORTH BRANCH NASHUA R.
LEOMINSTER
5
DOWNSTREAM
6,7
BOLTON
NASHUA RIVER
AYER
9,10
8
11
MASSACHUSETTS
NEW HAMPSHIRE


WHITMAN R.
1-4
FITCHBURG
NORTH BRANCH NASHUA R.
LEOMINSTER
5
DOWNSTREAM
6,7
BOLTON
NASHUA RIVER
AYER
9,10
8
11
MASSACHUSETTS
NEW HAMPSHIRE


REGION I WQ ASSESSMENT REPORT - NASHUA R. TRIP. (NH-MA)
CHLORIDE FOR 10
0
200
400
600

Plots
DO

3.14 CONNECTICUT RIVER BASIN (MASSACHUSETTS)

The Connecticut River Basin drains the major portion of central and western Massachusetts. The mainstem enters the state at Northfield and flows through Greenfield, Holyoke, Springfield and Agawam before entering the state of Connecticut. Major tributaries to the mainstem in Massachusetts are the Millers, Deerfield, Chicopee and Westfield Rivers.

The stations at Northfield (Plot Station No. 1) and Holyoke (Plot Station No. 2) report coliform bacteria levels which exceed the Massachusetts maximum standard for Class "B" in ninety percent of the samples taken. Class B pH standards are also exceeded in 3 of the 11 samples taken at the Northfield station. The Agawam station (Plot Station No. 3) reports very high coliform bacteria and nutrient levels in all samples.

The high bacteria levels are attributable to discharges from four area-wide waste treatment facilities, combined sewer overflows, discharges from paper and textile industries in Holyoke, Chicopee, Springfield and Westfield areas as well as discharges to the major tributaries of the Connecticut River.

Separation of combined sewers in Springfield, West Springfield, Westfield, Warren and Erving is planned according to the Massachusetts FY-76 Program Plan.

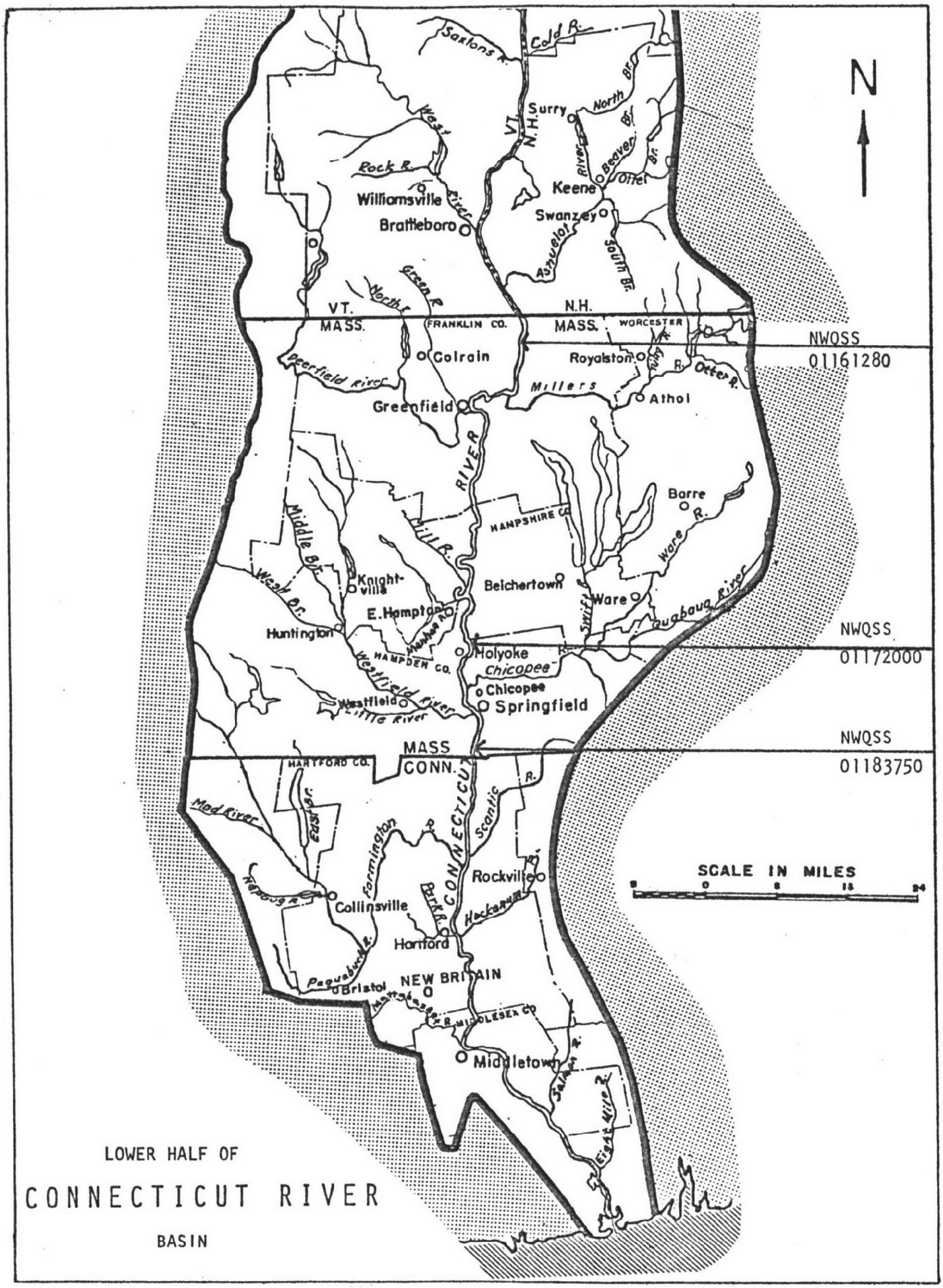
CONNECTICUT RIVER BASIN

{MASSACHUSETTS}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Connecticut River at Northfield, MA	NWQSS 01161280
2.	Connecticut River at Holyoke, MA	NWQSS 01172000
3.	Connecticut River at Agawam, MA	NWQSS 01183750



LOWER HALF OF

CONNECTICUT RIVER

BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01161280 CONNECTICUT RIVER (MA)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	11	0.	0.0	NONE	28.30	11.35
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	10.6[illegible]
PH SU	11	3.	27.27	6.80	8.00	6.9
COLIFORM TOT MFIM/100ML	11	10.	90.91	NONE	1000.00	4174.[illegible]

STATION 01172000 CONNECTICUT RIVER (MA)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	28.30	11.7
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	10.4
PH SU	12	0.	0.0	0.80	8.06	7.0
COLIFORM TOT MFIM/100ML	12	11.	91.67	NONE	1000.00	4009.1[illegible]

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01183750 CONNECTICUT RIVER (MA)

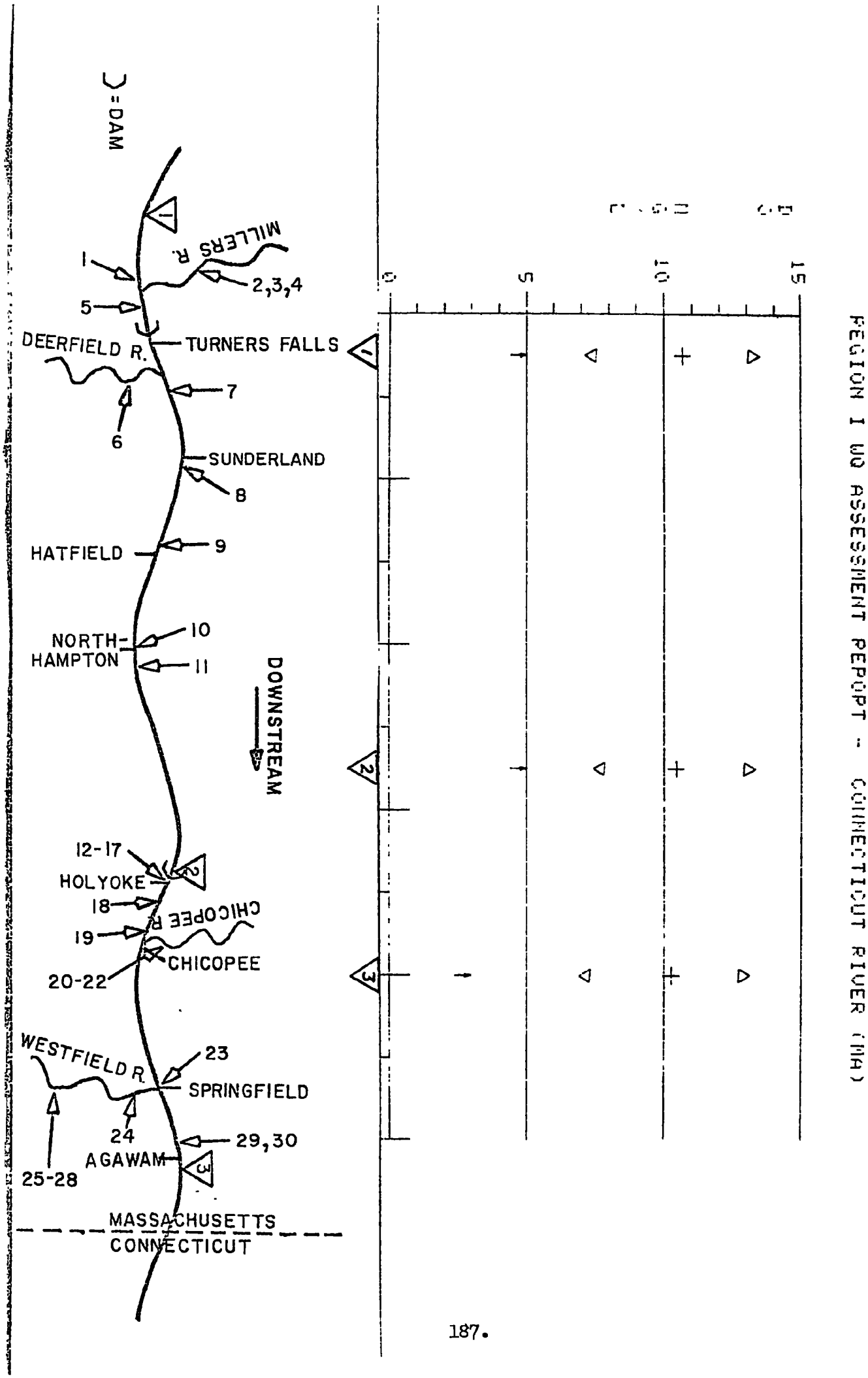
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
WATER TEMP DEG CENT	12	0.	0.0	NONE	28.30	12.74
DISS. OXYGEN MG/L	12	0.	0.0	3.00	NONE	10.27
PH SU	12	0.	0.0	6.00	8.50	6.86

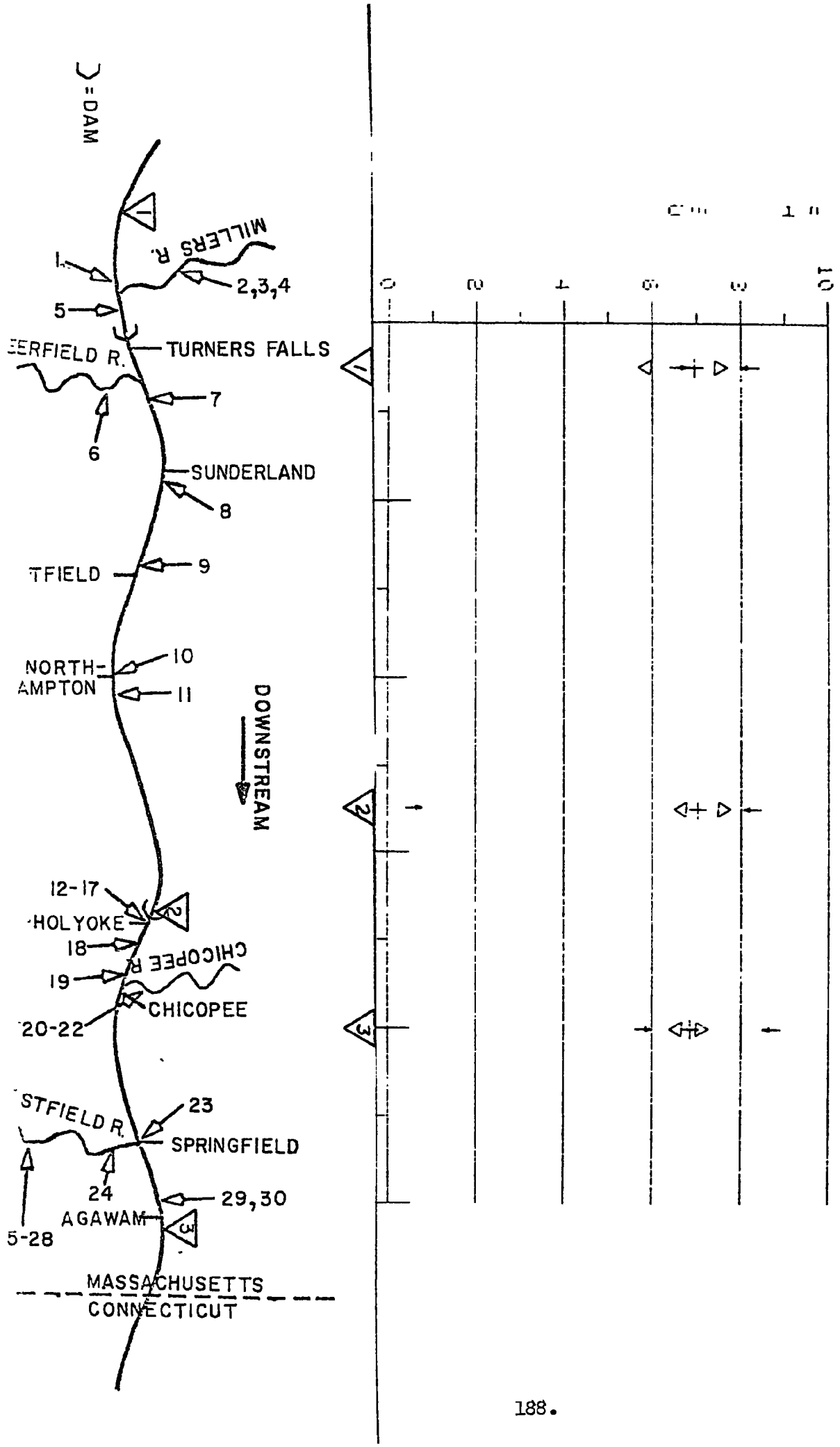
* GEOMETRIC MEAN FOR COLIFORMS

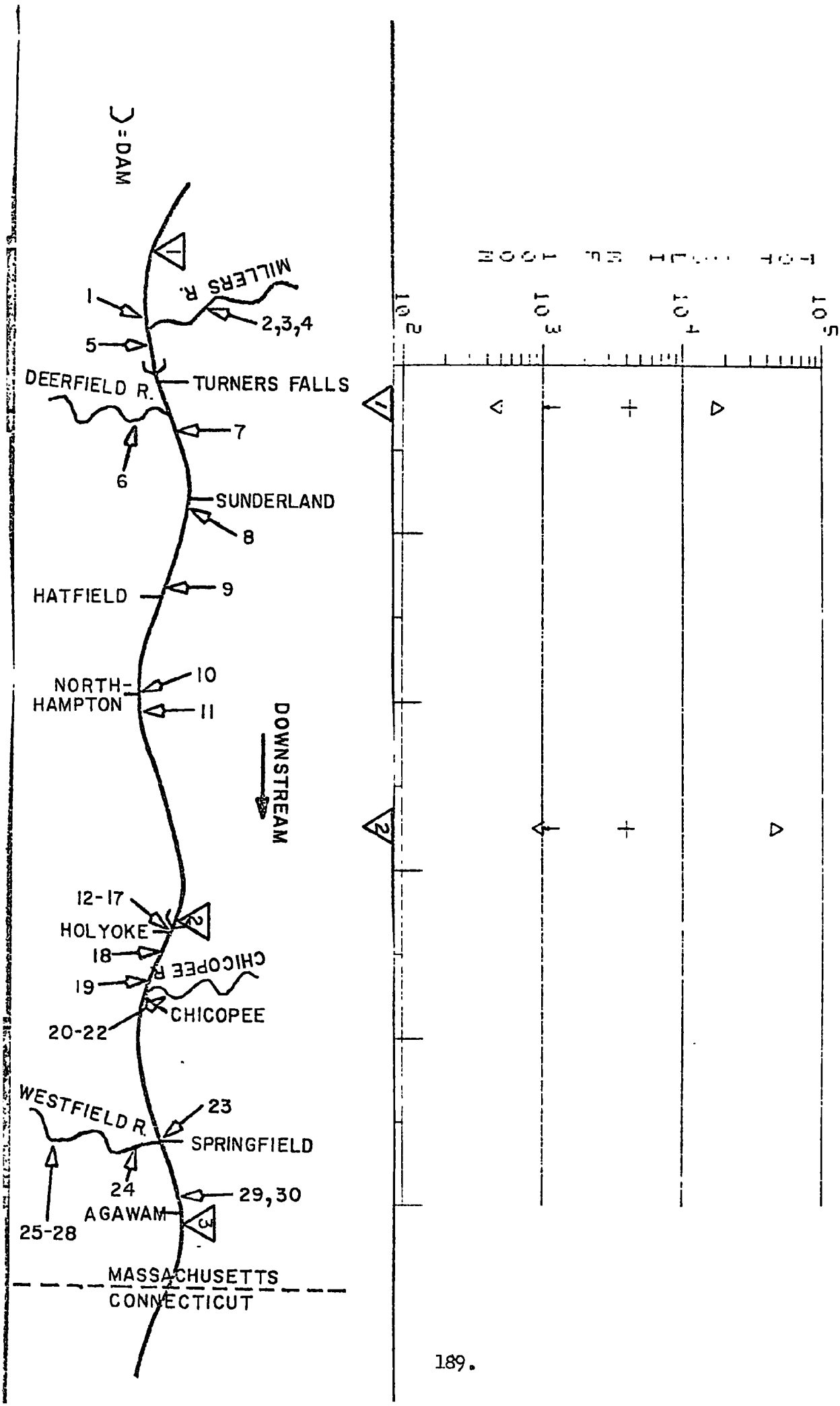
SIGNIFICANT DISCHARGERS

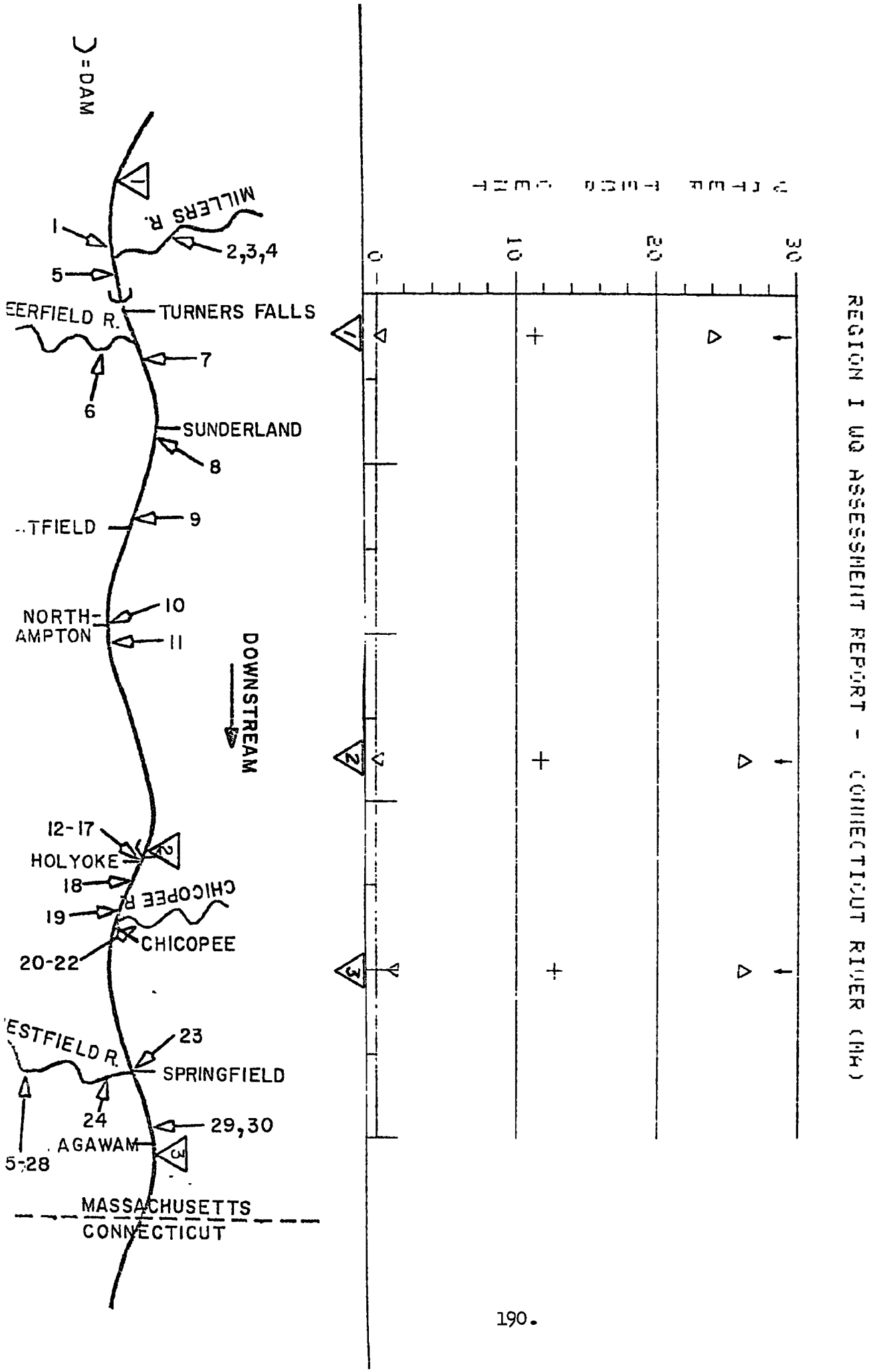
CONNECTICUT RIVER BASIN (MASSACHUSETTS)

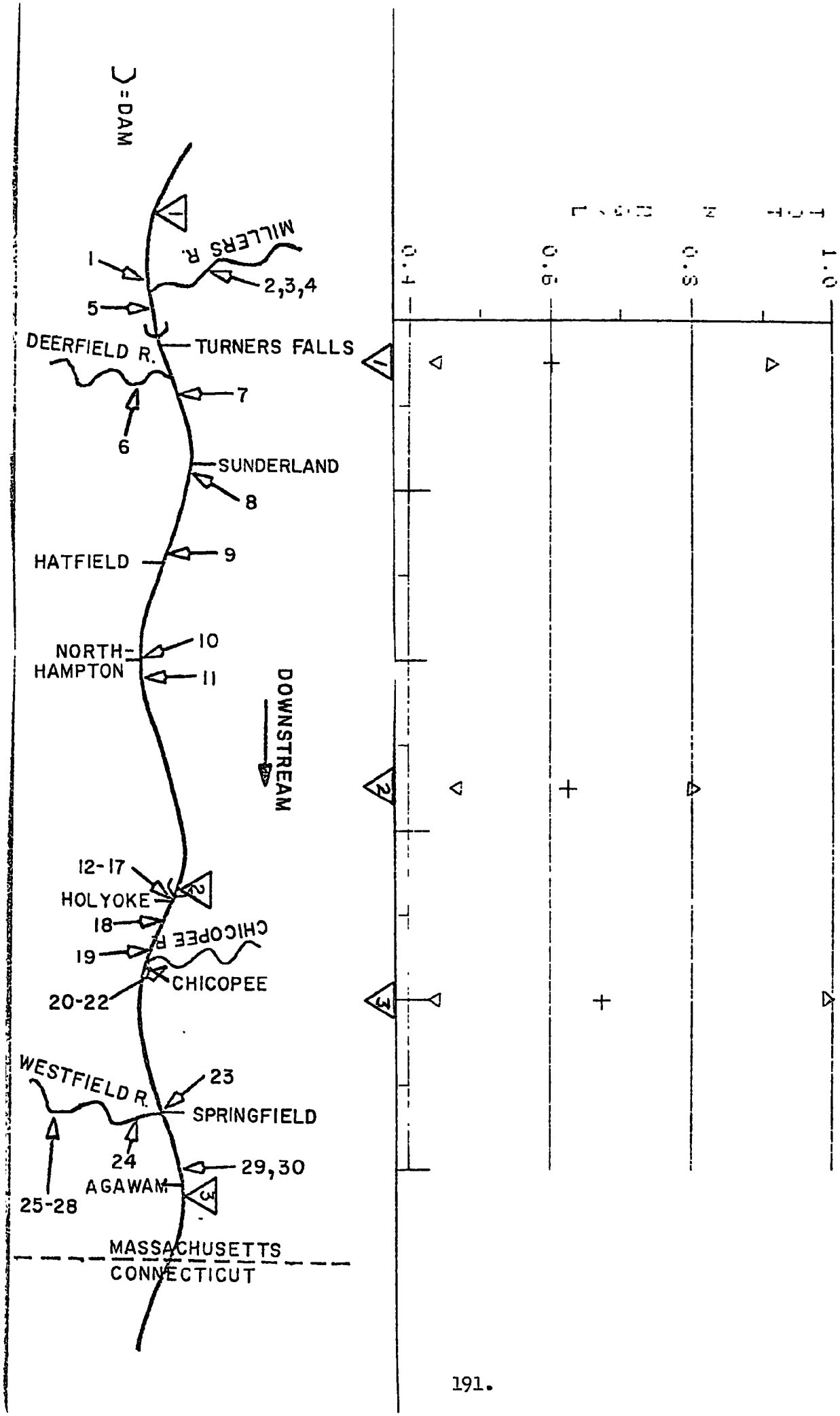
	Discharger	Location	Receiving Water	NPDES No.
1.	Strathmore Paper	Montague	Connecticut River	0005011
2.	Erving MTP	Erving	Millers River	0101052
3.	Millers Falls Paper Company	Erving	Millers River	0000914
4.	Erving Paper Mills	Erving	Millers River	0000621
5.	Greenfield WPCP	Greenfield	Connecticut River	0101214
6.	Old Deerfield WTP	Deerfield	Deerfield River	0101940
7.	Deerfield MTP	Deerfield	Connecticut River	0101648
8.	Sunderland WTP	Sunderland	Connecticut River	0101079
9.	Hadley MTP	Hadley	Connecticut River	0100099
10.	Northampton MTP	Northampton	Connecticut River	0101818
11.	Easthampton MTP	Easthampton	Connecticut River	0101478
12.	South Hadley MTP	Chicopee	Connecticut River	0100455
13.	National Blank Book	Holyoke	Connecticut River	0002011
14.	Brown Company - Eagle A Division	Holyoke	Connecticut River	0003921
15.	Sunoco	Holyoke	Connecticut River	0003760
16.	Texon, Inc.	South Hadley	Connecticut River	0005266
17.	Parsons Paper Company	Holyoke	Connecticut River	0005193
18.	Holyoke MTP	Holyoke	Connecticut River	0101630
19.	Chicopee MTP	Chicopee	Connecticut River	0101508
20.	Moore Drop Forging	Chicopee	Chicopee River	0004855
21.	Monsanto Company - Bircham Bend Plant	Springfield	Chicopee River	0004961
22.	Monsanto Company - Springfield Plant	Springfield	Chicopee River	0001147
23.	Springfield MTP	Springfield	Connecticut River	0101613
24.	West Springfield MTP	West Springfield	Westfield River	0101389
25.	Westfield River Paper Company	Russell	Westfield River	0004316
26.	Texon, Inc.	Russell	Westfield River	0005282
27.	Strathmore Paper - Hammermill #2	Russell	Westfield River	0004995
28.	Strathmore Paper - Hammermill #1	Russell	Westfield River	0004987
29.	Longmeadow MTP	Longmeadow	Connecticut River	0101397
30.	East Longmeadow MTP	Longmeadow	Connecticut River	0100684

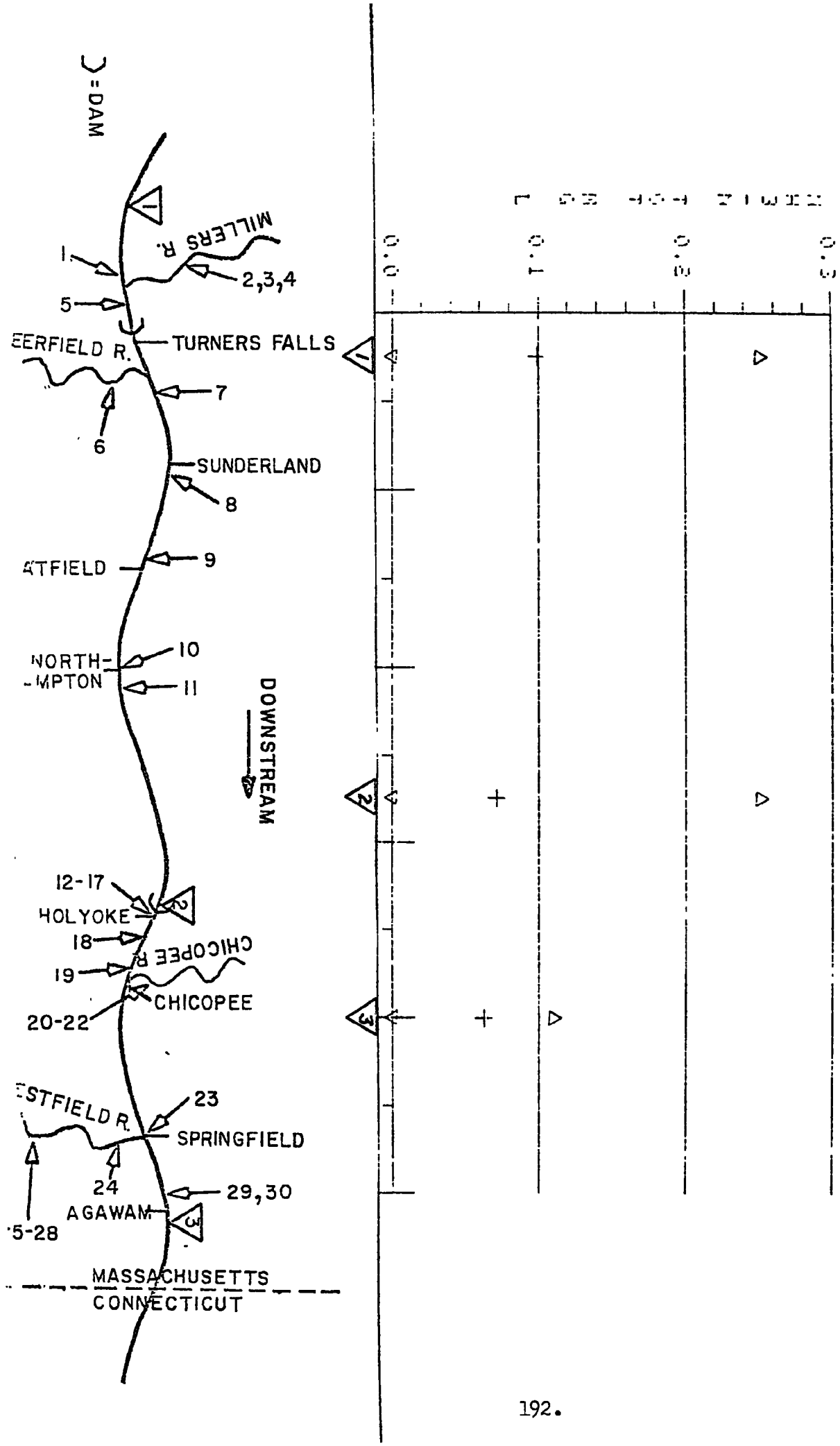

REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
15
10
5
0
1
2
3
MILLERS R.
2,3,4
TURNERS FALLS
DEERFIELD R.
7
6
SUNDERLAND
8
HATFIELD
9
NORTH-
HAMPTON
10
11
DOWNSTREAM
12-17
HOLYOKE
18
CHICOPEE R.
19
CHICOPEE
20-22
WESTFIELD R.
23
SPRINGFIELD
24
29,30
AGAWAM
25-28
MASSACHUSETTS
CONNECTICUT
=DAM

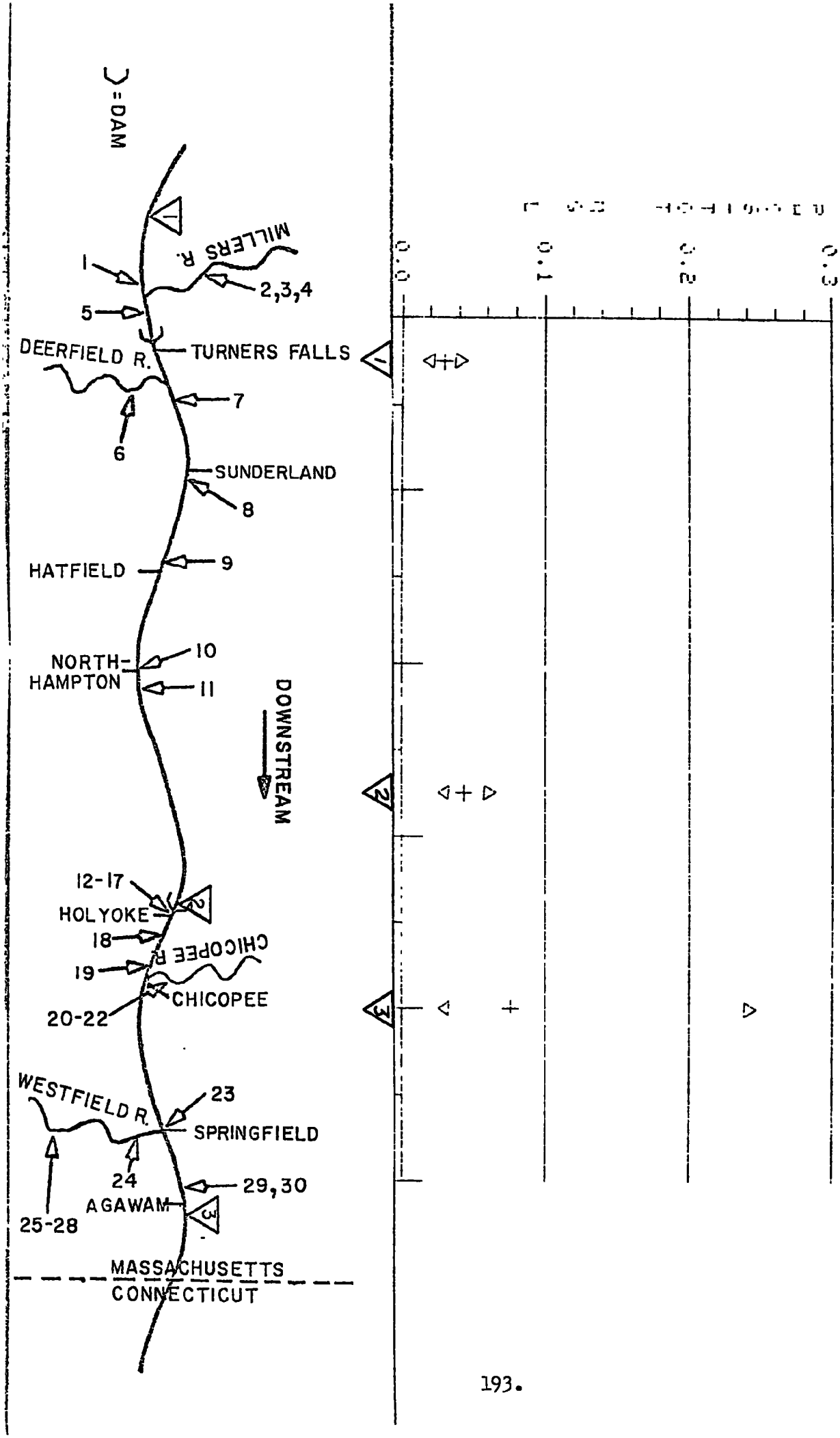

REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
DAM
MILLERS R.
TURNERS FALLS
SUNDERLAND
NORTH-AMPTON
DOWNSTREAM
HOLYOKE
CHICOPEE R.
CHICOPEE
SPRINGFIELD
AGAWAM
MASSACHUSETTS
CONNECTICUT
1
2,3,4
5
6
7
8
9
10
11
12-17
18
19
20-22
23
24
29,30
5-28


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
10^5
10^4
10^3
10^2
1
2
3
MILLERS R.
2,3,4
TURNERS FALLS
DEERFIELD R.
SUNDERLAND
HATFIELD
NORTH-HAMPTON
DOWNSTREAM
HOLYOKE
CHICOPEE R.
CHICOPEE
WESTFIELD R.
SPRINGFIELD
AGAWAM
MASSACHUSETTS
CONNECTICUT
DAM


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
0
10
20
30
1
2
3
MILLERS R.
2,3,4
5
TURNERS FALLS
EERFIELD R.
7
6
SUNDERLAND
8
..TFIELD
9
NORTH-
AMPTON
10
11
DOWNSTREAM
12-17
HOLYOKE
18
CHICOPEE R.
19
CHICOPEE
20-22
ESTFIELD R.
23
SPRINGFIELD
24
29,30
AGAWAM
5-28
MASSACHUSETTS
CONNECTICUT
DAM


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
1.0
0.5
0.0
0.1
DAM
MILLERS R.
1
2,3,4
5
DEERFIELD R.
TURNERS FALLS
7
6
SUNDERLAND
8
HATFIELD
9
NORTH-
HAMPTON
10
11
DOWNSTREAM
12-17
HOLYOKE
18
CHICOPEE R.
19
CHICOPEE
20-22
WESTFIELD R.
23
SPRINGFIELD
24
29,30
AGAWAM
25-28
MASSACHUSETTS
CONNECTICUT


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
0.0
0.1
0.2
0.3
1
2
3
MILLERS R.
2,3,4
5
TURNERS FALLS
EERFIELD R.
7
6
SUNDERLAND
8
ATFIELD
9
NORTH-
-MPTON
10
11
DOWNSTREAM
12-17
HOLYOKE
18
CHICOPEE R.
19
CHICOPEE
20-22
ESTFIELD R.
23
SPRINGFIELD
24
29,30
AGAWAM
5-28
MASSACHUSETTS
CONNECTICUT
DAM


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (MA)
0.0
0.1
0.2
0.3
DAM
MILLERS R.
1
2,3,4
5
DEERFIELD R.
TURNERS FALLS
7
6
SUNDERLAND
8
HATFIELD
9
NORTH-
HAMPTON
10
11
DOWNSTREAM
12-17
HOLYOKE
18
CHICOPEE R.
19
CHICOPEE
20-22
WESTFIELD R.
23
SPRINGFIELD
24
29,30
AGAWAM
25-28
MASSACHUSETTS
CONNECTICUT

P/072
DD
P/635

3.15 LAKE CHAMPLAIN BASIN

The Lake Champlain Basin drains a portion of northeastern New York, all of northwestern Vermont, and a small area in Canada. The lake is 107 miles long (north to south) and has a maximum width of 12 miles. In Vermont the major tributaries to the lake are Otter Creek and the Mettawee, Poultney, Winooski, Lamoille and Missisquoi Rivers.

The majority of the significant discharges on the Vermont side of the basin are from municipal treatment facilities. These discharges and runoff from the surrounding agricultural land are primarily responsible for the high nutrient levels seen in this basin.

Natural conditions are responsible for the large number of pH violations reported within this basin. Natural conditions along with agricultural runoff bring about the high percentage of turbidity violations reported at the Otter Creek and Lamoille River stations.

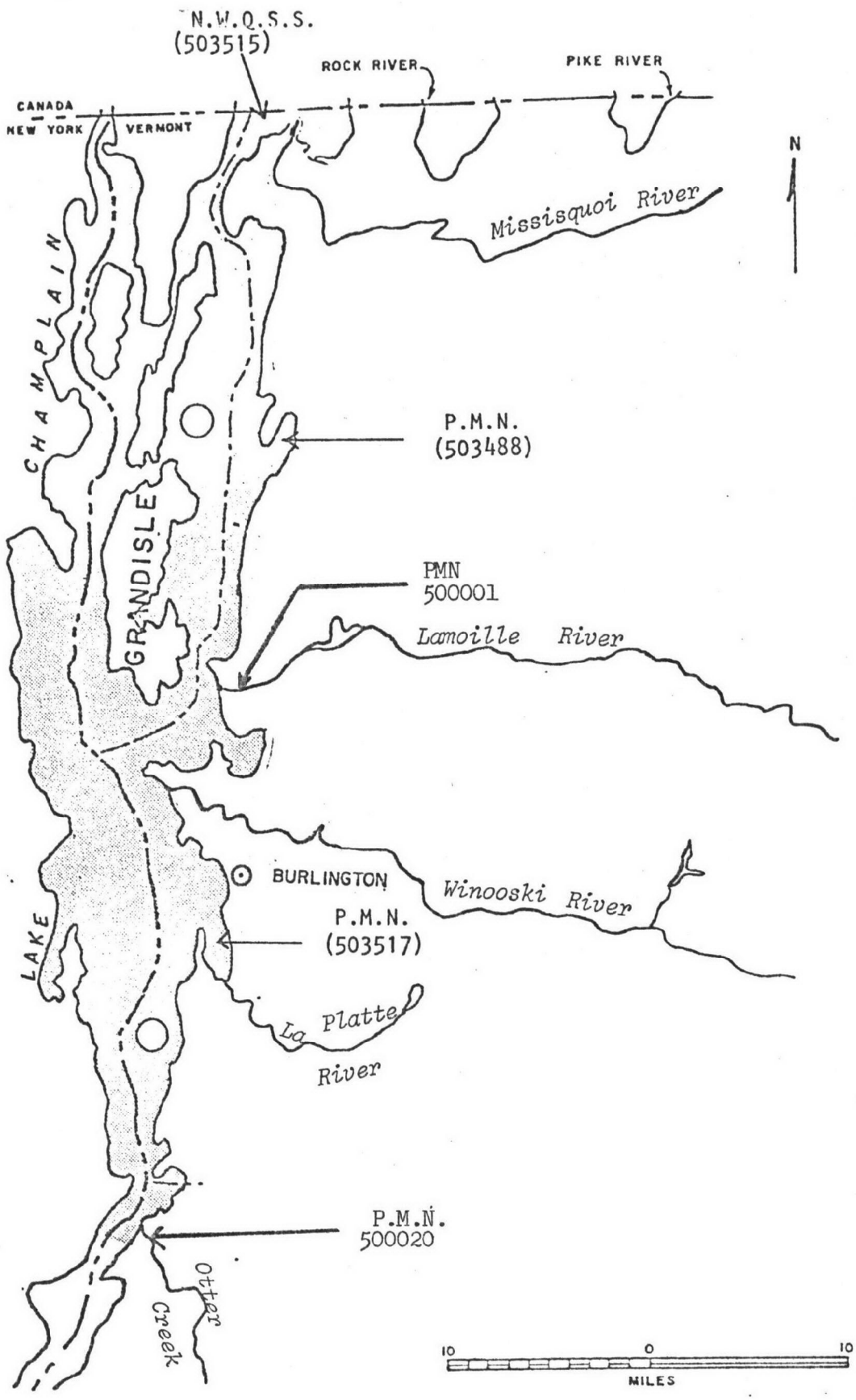
LAKE CHAMPLAIN BASIN {EXCEPT WINOOSKI}

{VERMONT}

in

DOWNSTREAM ORDER

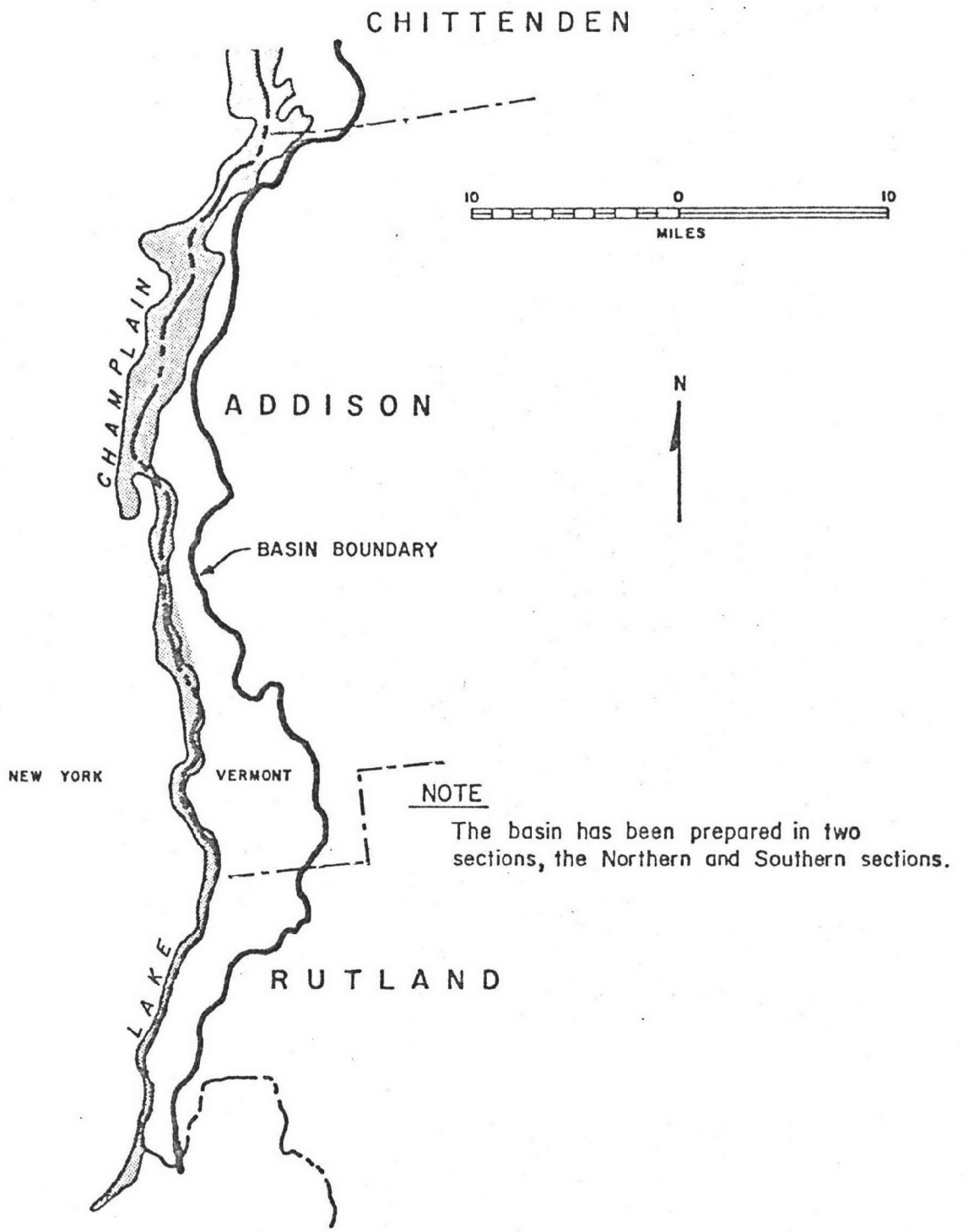
Plot Station Number	Station Location	Map Station Number
1.	Lake Champlain at Missisquoi Bay, VT	N.W.Q.S.S. 503515
2.	Lake Champlain at St. Albans Bay, VT	PMN 503488
3.	Lamoille River Chimney Corner, VT	PMN 500001
4.	Lamoille River at Shelburne Bay, VT	PMN 503517
5.	Otter Creek at Ferrisburg	PMN 500020



NORTHERN SECTION

LAKE CHAMPLAIN BASIN

VERMONT



SOUTHERN SECTION

LAKE CHAMPLAIN BASIN CLASSIFICATION

SIGNIFICANT DISCHARGERS

LAKE CHAMPLAIN BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	Swanton Village STP	Swanton	Missisquoi R.	0100501
2.	Standard Packing	Sheldon Springs	Missisquoi R.	0000969
3.	Richford STP	Richford	Missisquoi R.	0100790
4.	St. Albans STP	St. Albans	Lake Champlain	0100323
5.	Morrisville MTP	Morrisville	Lamoille R.	0100480
6.	Burlington Main STP	Burlington	Lake Champlain	0100153
7.	S.Burlington STP	S.Burlington	Lake Champlain	0100358
8.	Shelburne STP	Shelburne	Lake Champlain	0100331
9.	Hinesburg WTF	Hinesburg	LaPlatte R.	0101028
10.	Rutland WPCP	Rutland	Otter Creek	0100871
11.	Middlebury MTP	Middlebury	Otter Creek	0100188
12.	Vergennes STP	Vergennes	Otter Creek	0100404
13.	Poultney MTP	Poultney	Poultney R.	0100269

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 503515 LAKE CHAMPLAIN (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	14	1.	7.14	NONE	25.00	7.9
DISS. OXYGEN MG/L	12	0.	0.0	5.00	NONE	10.2
PH SU	14	2.	14.29	6.50	8.00	7.6

STATION 503488 LAKE CHAMPLAIN (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	13	0.	0.0	NONE	25.00	3.2
DISS. OXYGEN MG/L	14	0.	0.0	5.00	NONE	9.9
PH SU	13	8.	61.54	6.50	8.00	8.2
COLIFORM TOT MFIM/100ML	1	1.	100.00	NONE	500.00	630.0
COLIFORM FEC MF/100ML	1	0.	0.0	NONE	200.00	1.00

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500001 LAMOILLE R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	2.	33.33	NONE	10.00	15.67
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.43
PH SU	6	2.	33.33	6.50	8.00	7.30
COLIFORM TOT MFIM/100ML	4	1.	25.00	NONE	500.00	525.33
COLIFORM FEC MF/100ML	4	1.	25.00	NONE	200.00	100.50

STATION 503517 LAKE CHAMPLAIN (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	9	0.	0.0	NONE	25.00	2.00
DISS. OXYGEN MG/L	9	0.	0.0	5.00	NONE	10.21
PH SU	9	6.	66.67	6.50	8.00	8.45

* GEOMETRIC MEAN FOR COLIFORMS

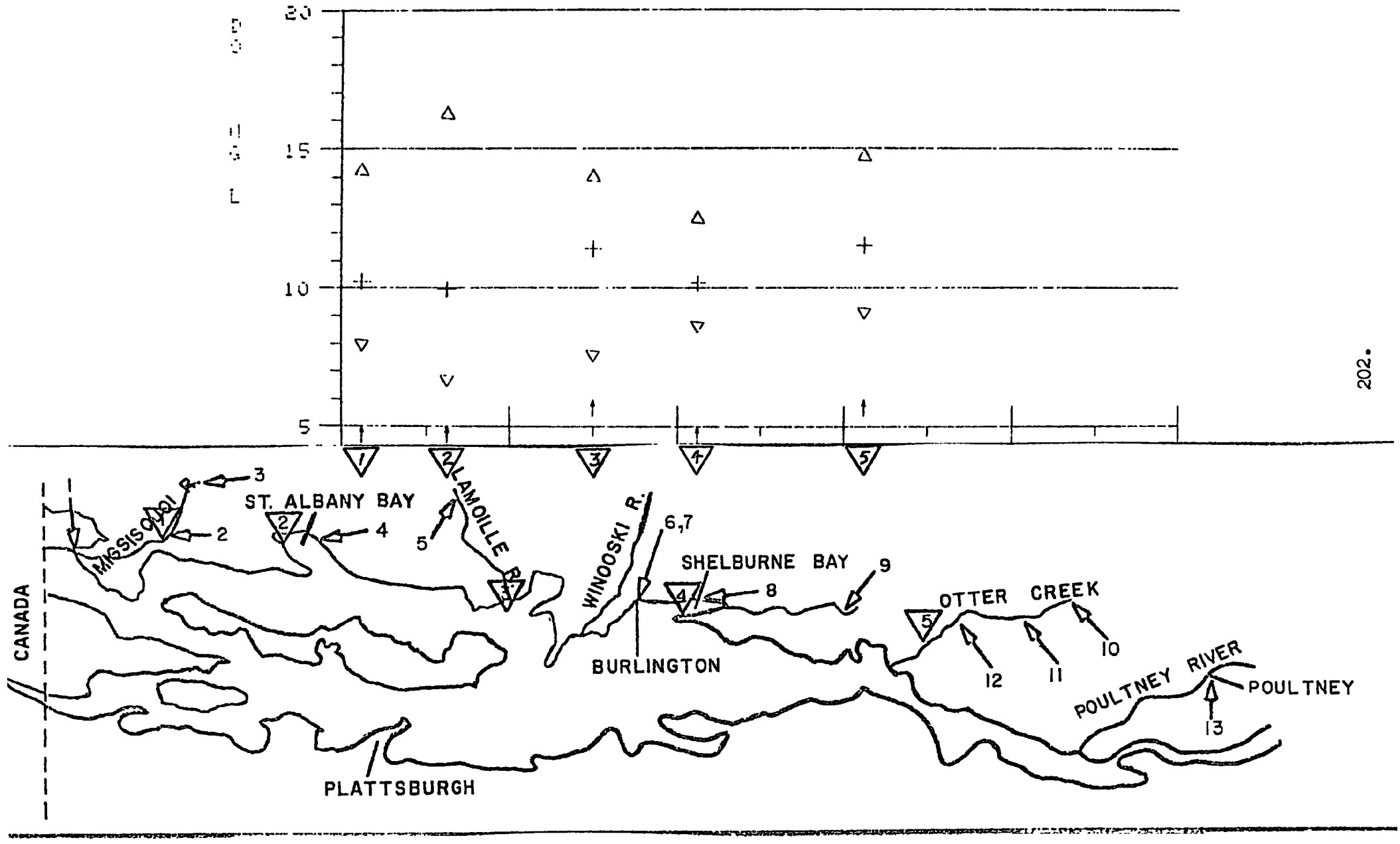
SUMMARY OF WATER QUALITY VIOLATIONS

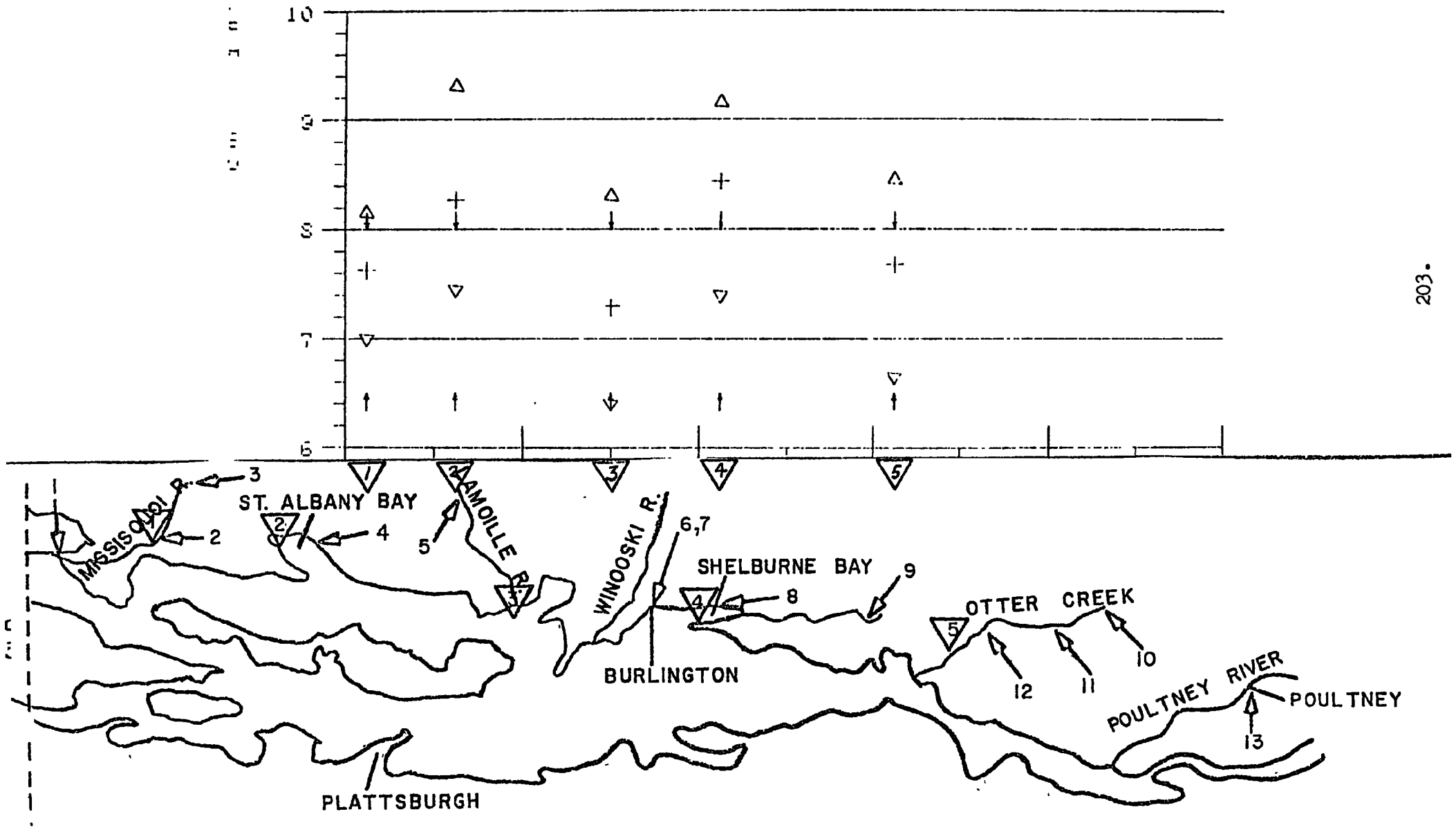
STATION 500020 OTTER CREEK (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	6.	100.00	NONE	10.00	37.5
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.5
PH SU	6	2.	33.33	6.50	8.00	7.6
COLIFORM TOT MFIM/100ML	3	3.	100.00	NONE	500.00	1515.0
COLIFORM FEC MF/100ML	3	0.	0.0	NONE	200.00	55.1

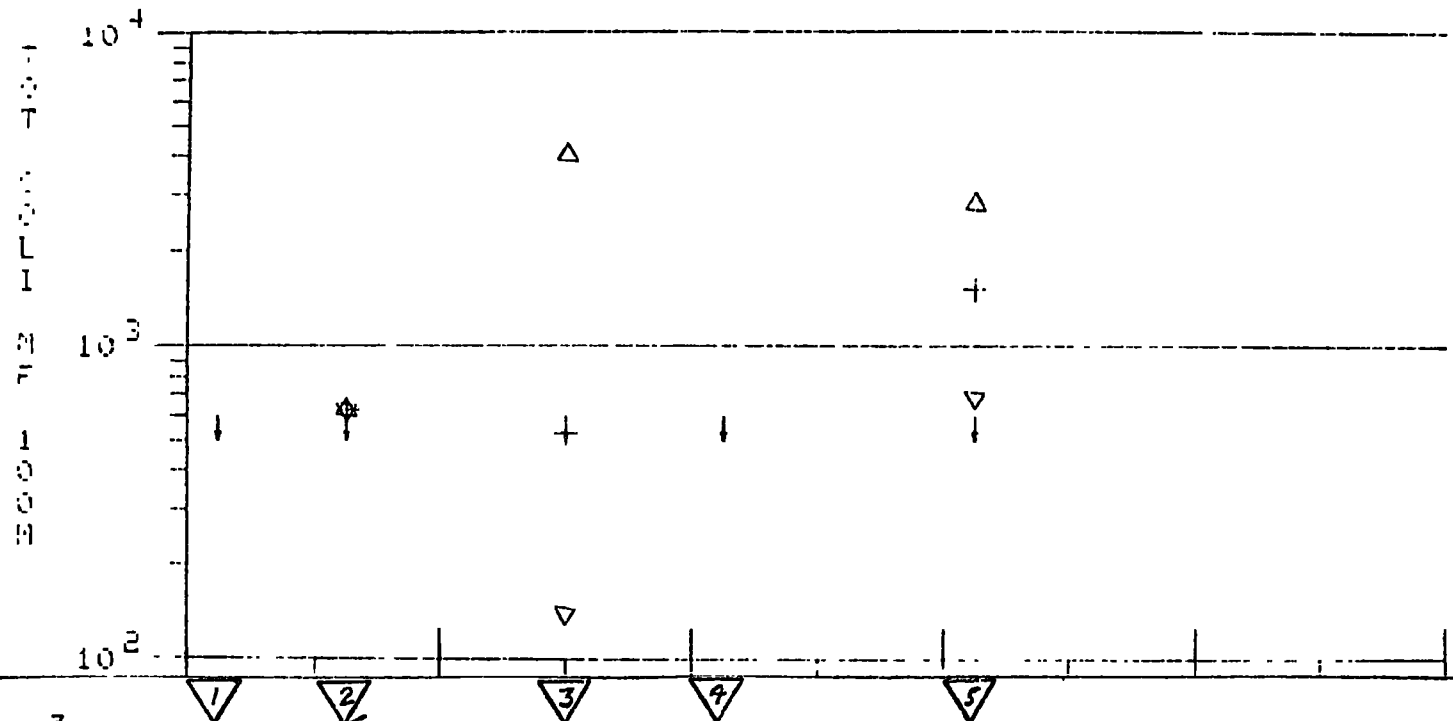
* GEOMETRIC MEAN FOR COLIFORMS

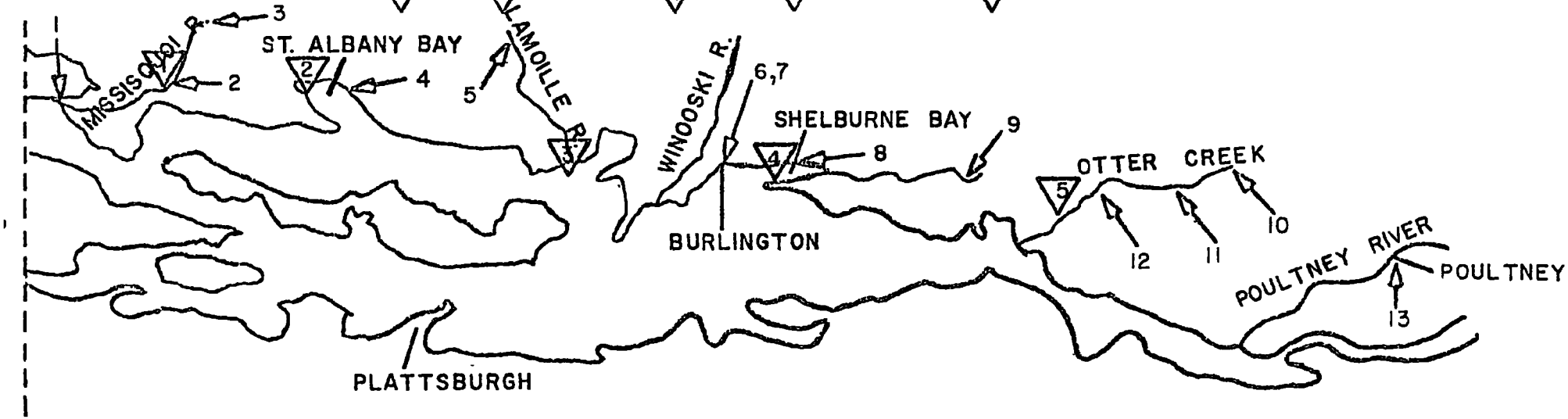
REGION I WQ ASSESSMENT REPORT - LAKE CHAMPLAIN (VT)



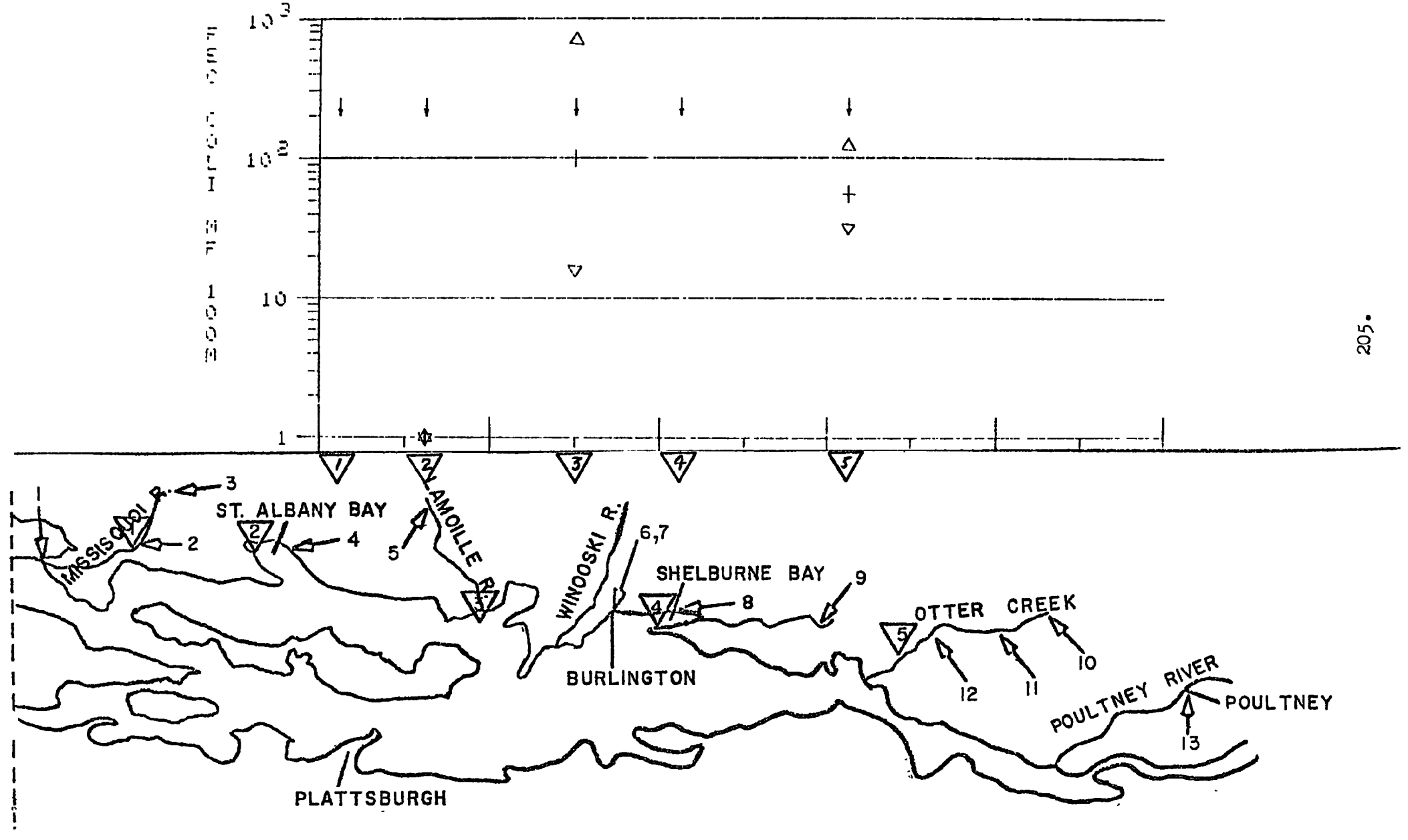

10
9
8
7
6
1
2
3
4
5
MISSISQUOI R.
ST. ALBANY BAY
AMOILLE R.
WINOOSKI R.
SHELBURNE BAY
OTTER CREEK
POULTNEY RIVER
POULTNEY
BURLINGTON
PLATTSBURGH
6,7
8
9
10
11
12
13

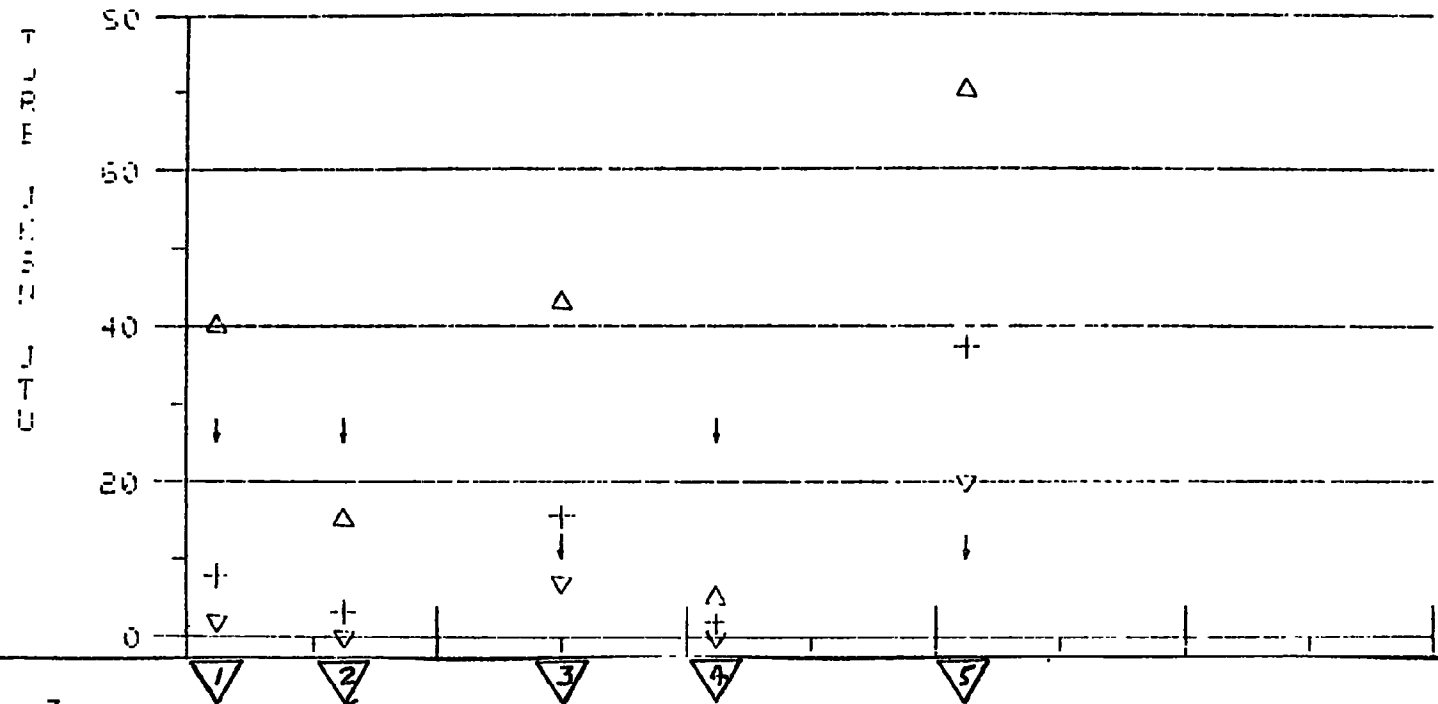
REGION I WQ ASSESSMENT REPORT - LAKE CHAMPLAIN (VT)

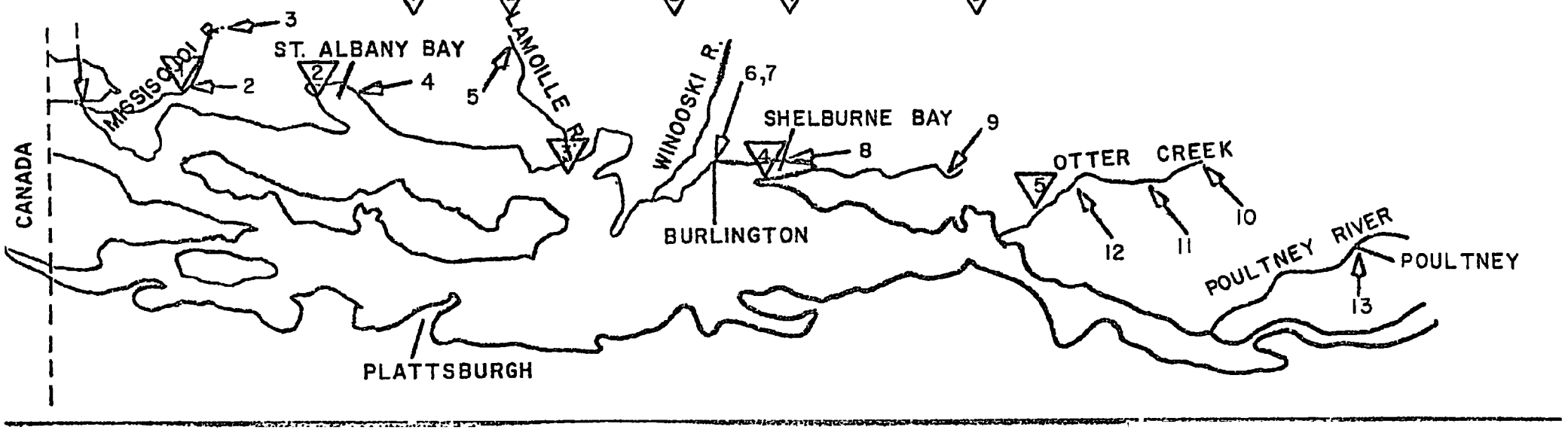




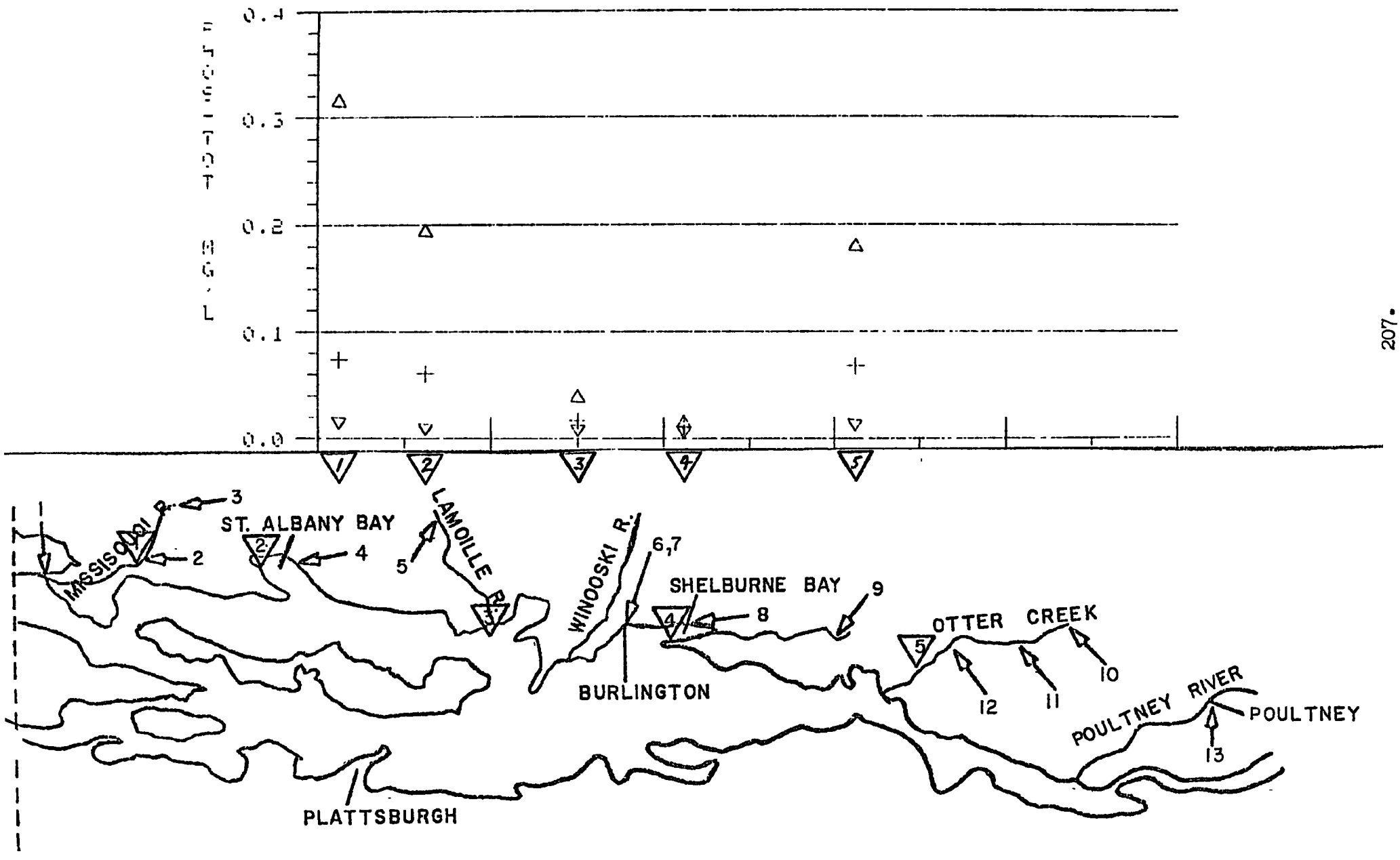
REGION I WQ ASSESSMENT REPORT - LAKE CHAMPLAIN (VT)




TURBIDITY
50
40
30
20
10
0
1
2
3
4
5


CANADA
MISSISQUOI R.
ST. ALBANY BAY
LAMOILLE R.
WINOOSKI R.
BURLINGTON
SHELBURNE BAY
OTTER CREEK
POULTNEY RIVER
POULTNEY
PLATTSBURGH
1
2
3
4
5
6,7
8
9
10
11
12
13

REGION I WQ ASSESSMENT REPORT - LAKE CHAMPLAIN (VT)



Plots
pd
phos

3.16 WINOOSKI RIVER BASIN

The Winooski River has a total drainage area of 1065 miles, the largest in the Lake Champlain Basin. It flows from Lower Cabot 90 miles before it empties into Lake Champlain at Burlington.

Much like the rest of the Lake Champlain Basin, the Winooski River violates state standards for pH and turbidity. These violations are due to natural conditions in this basin. Coliform violations are reported at plot stations number 1 and 2, and probably due to municipal discharges in Barre, Berlin and Montpelier. Municipal discharges in Essex Junction, Burlington, Winooski and Colchester are believed responsible for the total and fecal coliform violation seen at plot station number 3.

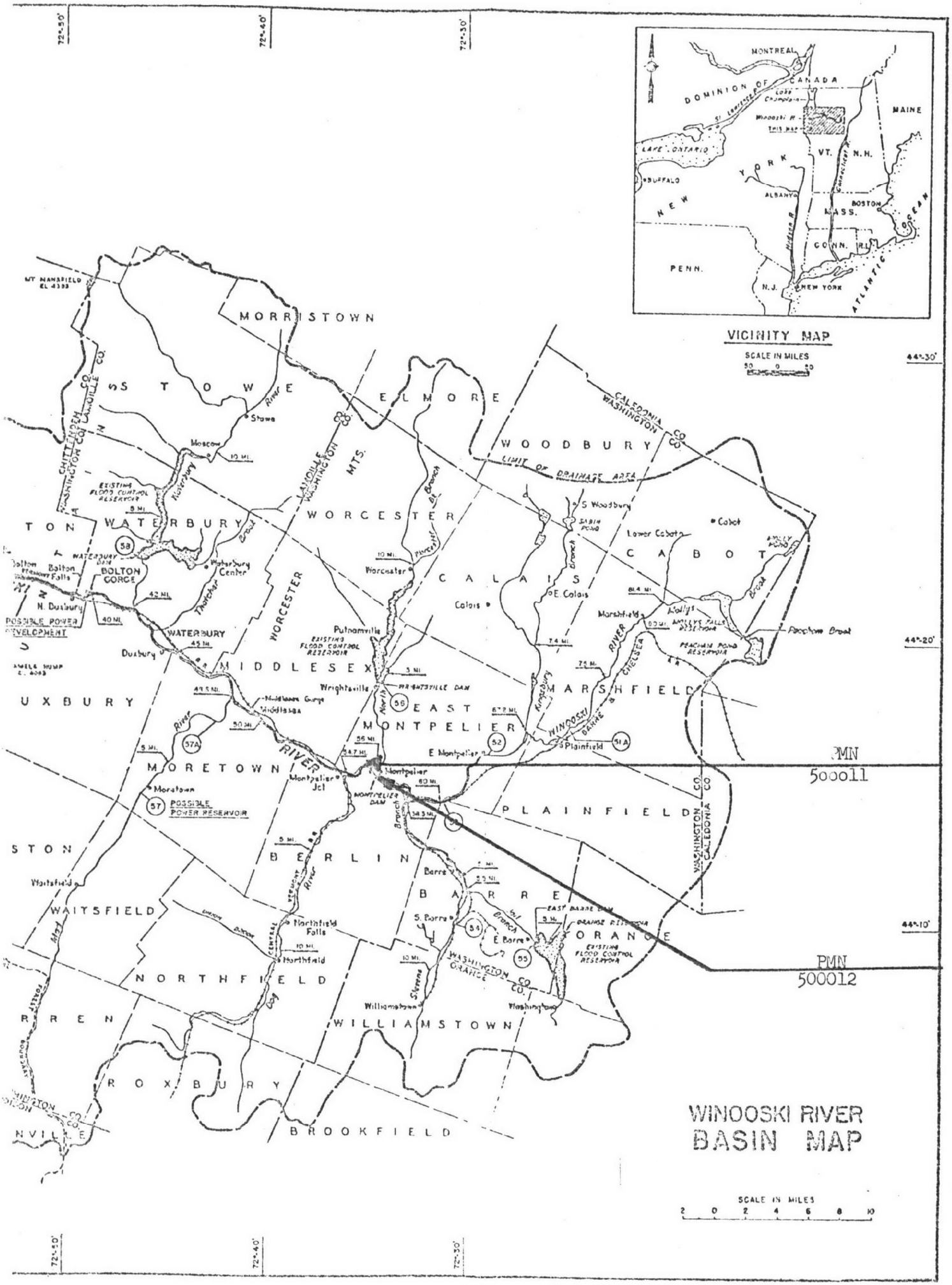
WINOOSKI RIVER
{LAKE CHAMPLAIN BASIN}

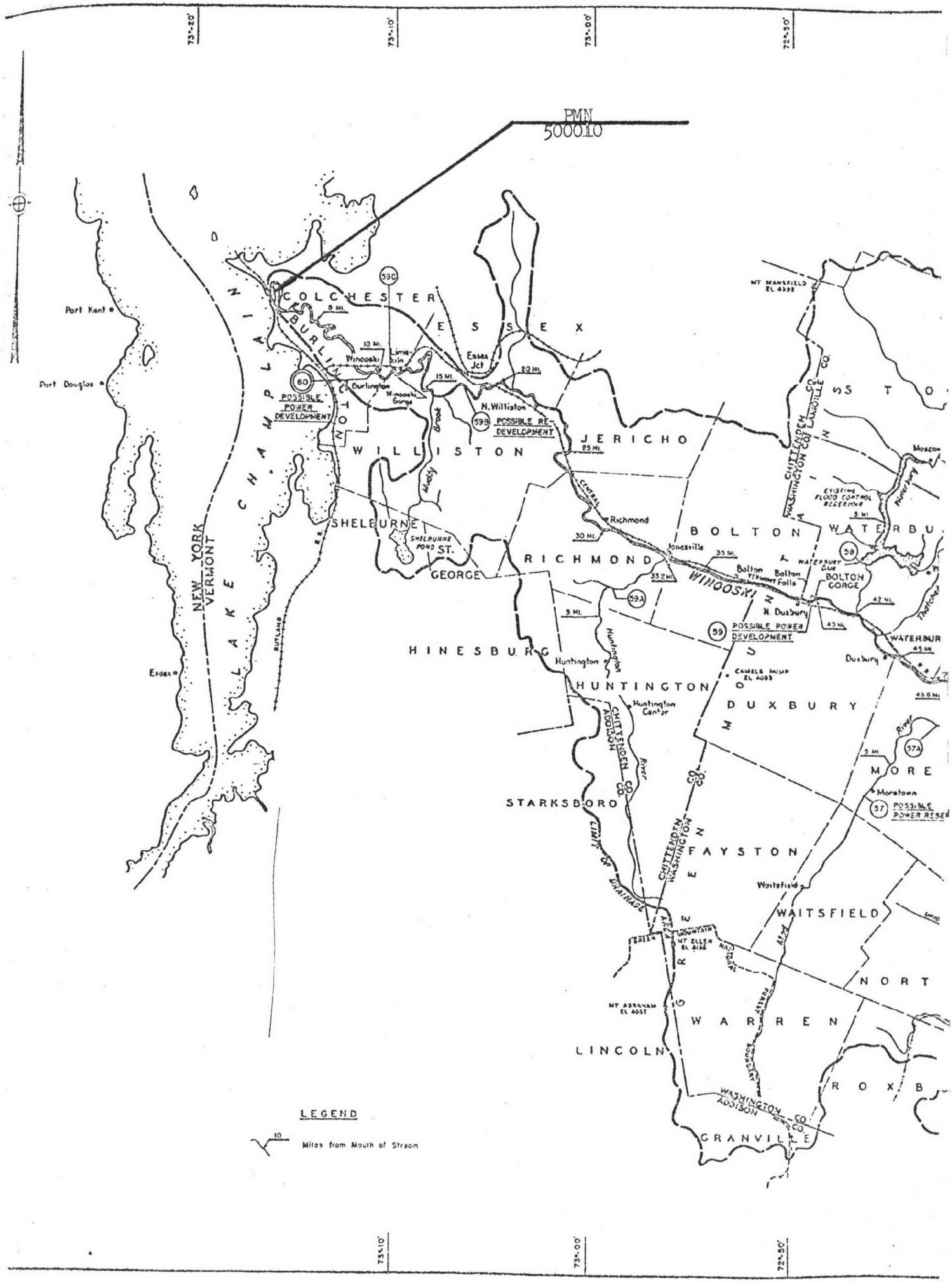
{VERMONT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Winooski River Jct. Rte. 2 and 302, VT	PMN 500012
2.	Winooski River Barre St. Montpelier, VT	PMN 500011
3.	Winooski River at Oxbow Loop, Colchester, VT	PMN 500010


VICINITY MAP
SCALE IN MILES
MONTREAL
DOMINION OF CANADA
MAINE
LAKE ONTARIO
BUFFALO
NEW YORK
ALBANY
VT.
N.H.
BOSTON
MASS.
CONN.
R.I.
PENN.
N.J.
NEW YORK
ATLANTIC OCEAN
MORRISTOWN
STOWE
ELMORE
WOODBURY
WATERBURY
WORCESTER
CALAIS
CABOT
MIDDLESEX
MARSHFIELD
EAST MONTPELIER
MORETOWN
PLAINFIELD
BERLIN
BARRE
ORANGE
WAITSFIELD
NORTHFIELD
WILLIAMSTOWN
ROXBURY
BROOKFIELD
BOLTON GORGE
POSSIBLE POWER DEVELOPMENT
POSSIBLE POWER RESERVOIR
EXISTING FLOOD CONTROL RESERVOIR
LIMIT OF DRAINAGE AREA
WINOOSKI RIVER
PMN 500011
PMN 500012
WINOOSKI RIVER BASIN MAP
SCALE IN MILES


PMN
500010
73°-20'
73°-10'
73°-00'
72°-50'
COLCHESTER
ESSEX
BURLINGTON
WILLISTON
JERICHO
SHELBURNE
ST. GEORGE
RICHMOND
BOLTON
WATERBURY
HINESBURG
HUNTINGTON
DUXBURY
STARKSBORO
FAYSTON
WAITSFIELD
MORE
WARREN
LINCOLN
GRANVILLE
LAKE CHAMPLAIN
NEW YORK
VERMONT
Port Kent
Port Douglas
Essex
Burlington
Winooski
Essex Jct
N. Williston
Richmond
Jonesville
Bolton Vermont
Bolton Falls
N. Duxbury
Duxbury
Huntington
Huntington Center
Waitsfield
Moretown
Moscow
POSSIBLE POWER DEVELOPMENT
POSSIBLE RE-DEVELOPMENT
BOLTON GORGE
EXISTING FLOOD CONTROL RESERVOIR
WINOOSKI RIVER
LIMIT OF DRAINAGE
CHITTENDEN CO.
WASHINGTON CO.
ADDISON CO.
LAMOILLE CO.
MT MANSFIELD EL 4393
MT ELLEN EL 4135
MT ABRAHAM EL 4017
CAMELS HUMP EL 4083
LEGEND
10 Miles from Mouth of Stream

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500012 WINOOSKI R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	6.	100.00	NONE	10.00	29.33
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.46
PH SU	6	2.	33.33	6.50	8.00	7.95
COLIFORM TOT MFIM/100ML	2	2.	100.00	NONE	500.00	1122.50
COLIFORM FEC MF/100ML	2	1.	50.00	NONE	200.00	176.64

STATION 500011 WINOOSKI R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	5.	83.33	NONE	10.00	49.00
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.27
PH SU	6	2.	33.33	6.50	8.00	7.93
COLIFORM TOT MFIM/100ML	2	1.	50.00	NONE	500.00	961.25
COLIFORM FEC MF/100ML	2	0.	0.0	NONE	200.00	97.98

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500010 WINOOSKI R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
TURBIDITY JKSN JTU	6	5.	83.33	NONE	10.00	21.83
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.95
PH SU	6	2.	33.33	6.50	8.00	7. J
COLIFORM TOT MFIM/100ML	3	2.	66.67	NONE	500.00	1040.)
COLIFORM FEC MF/100ML	4	2.	50.00	NONE	200.00	2.)

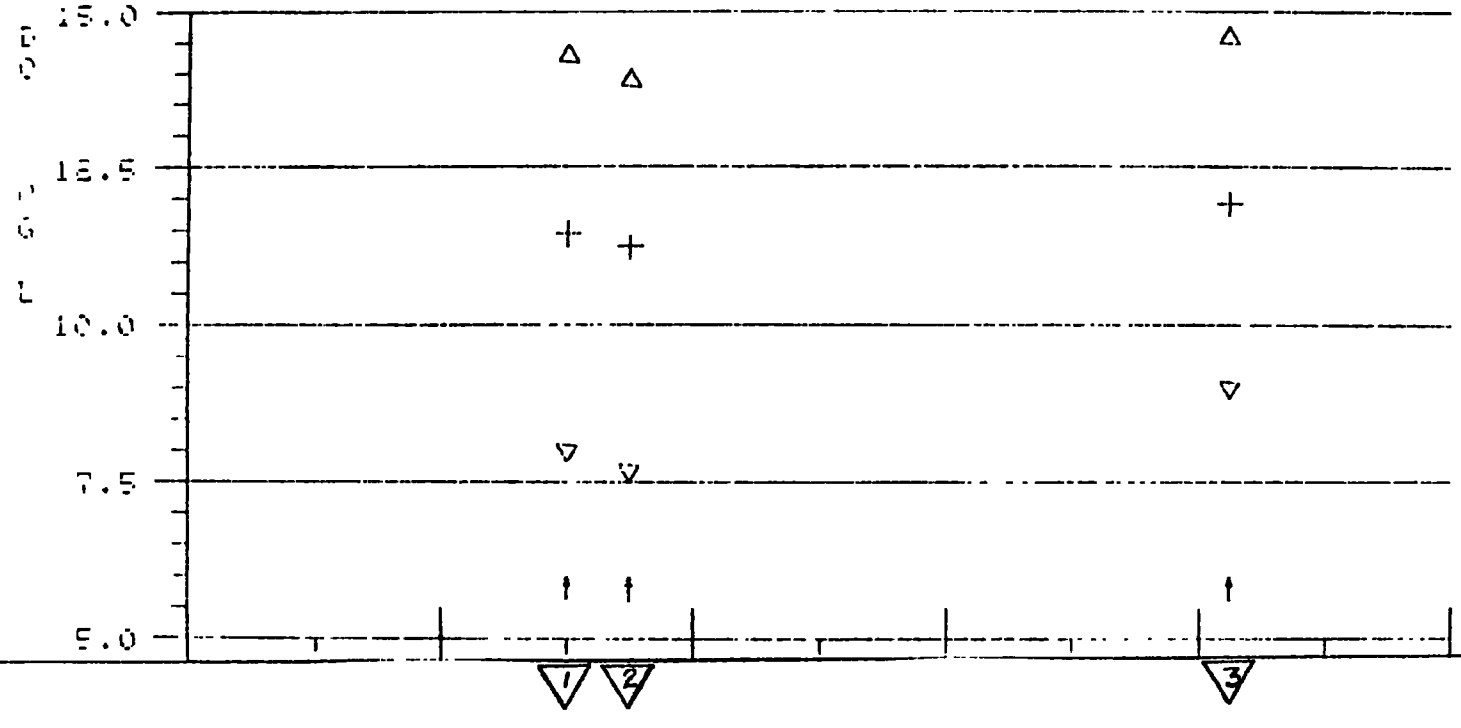
* GEOMETRIC MEAN FOR COLIFORMS

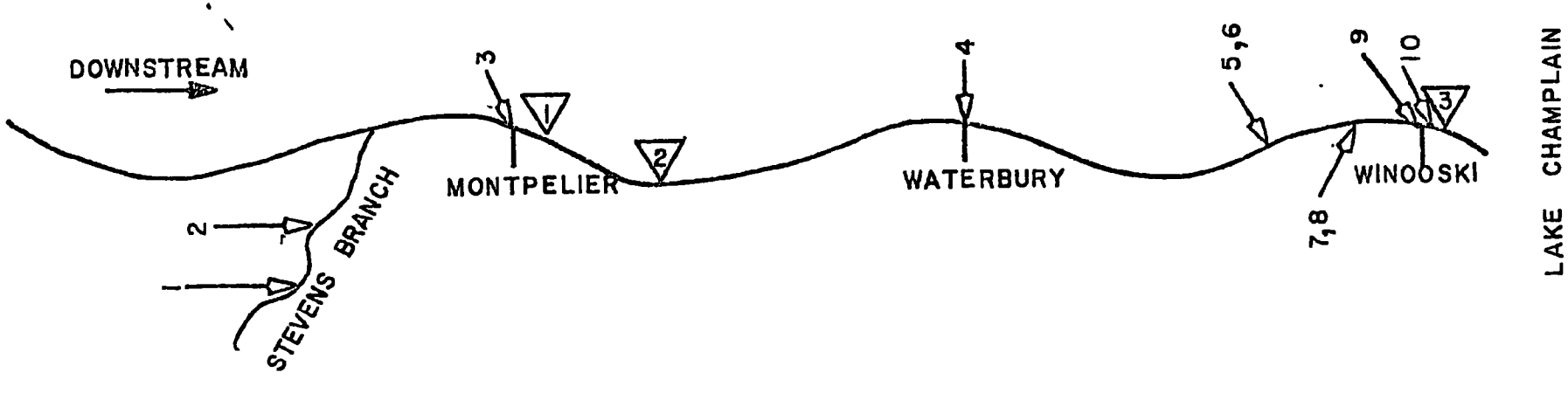
SIGNIFICANT DISCHARGERS

WINOOSKI RIVER (LAKE CHAMPLAIN BASIN)

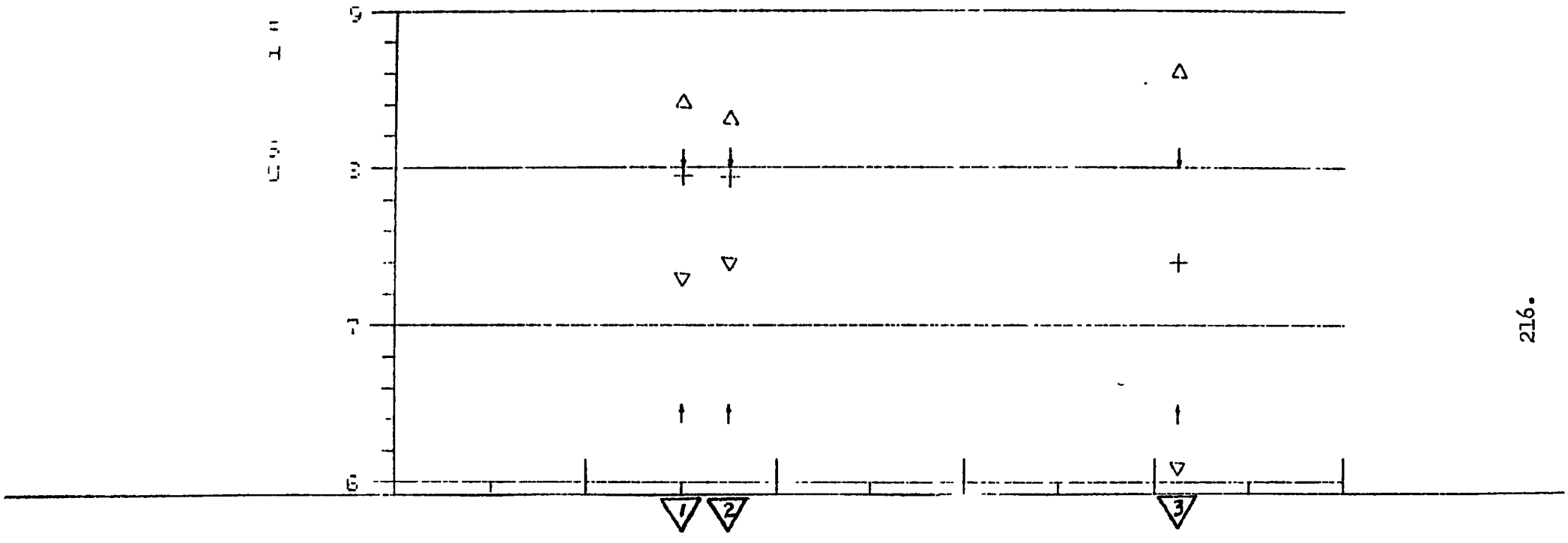
	Discharger	Location	Receiving Water	NPDES No.
1.	Barre City STP	Barre	Stevens Branch	0100889
2.	Berlin STP	Berlin	Winooski River Stevens Branch	0100030
3.	Montpelier MTP	Montpelier	Winooski River	0100196
4.	Waterbury MTP	Waterbury	Winooski River	0100463
5.	IBM Components Division	Essex Junction	Winooski River	0000400
6.	Essex Junction MTP	Essex Junction	Winooski River	0100111
7.	Burlington Riverside STP	Burlington	Winooski River	0100307
8.	Burlington North End STP	Burlington	Winooski River	0100226
9.	Winooski WPCF	Winooski	Winooski River	0100510
10.	Colchester STP	Colchester	Winooski River	0100960

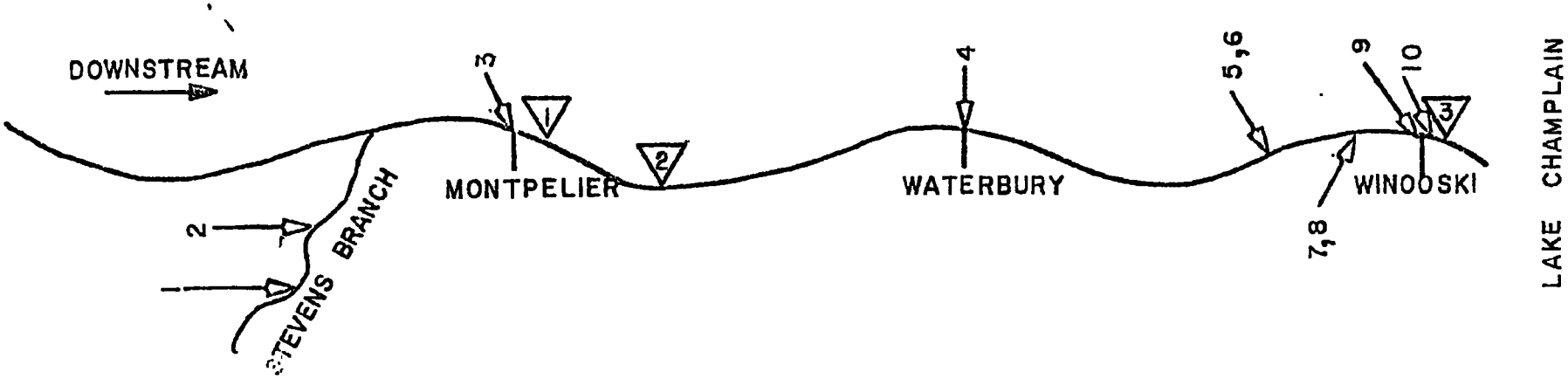
REGION 1 WQ ASSESSMENT REPORT - WINOOSKI R. (VT)



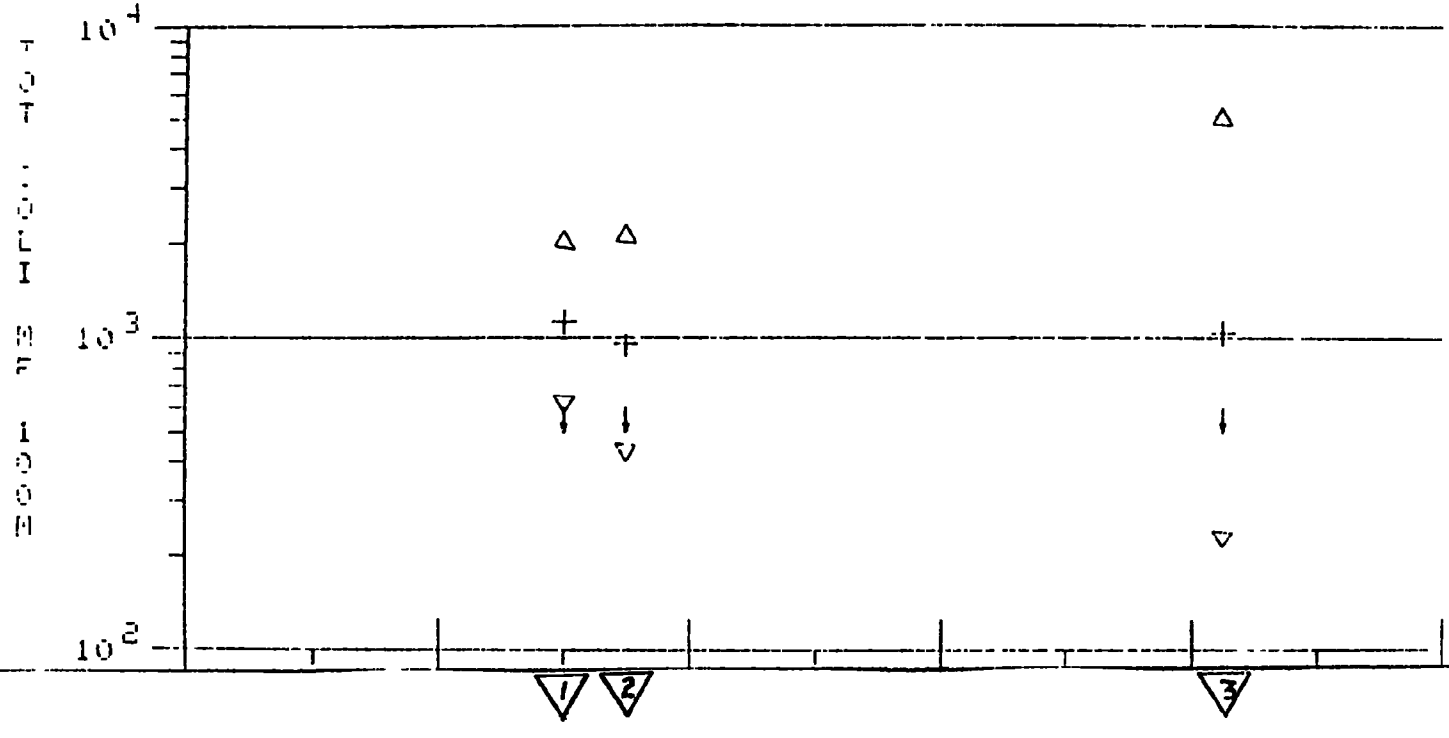


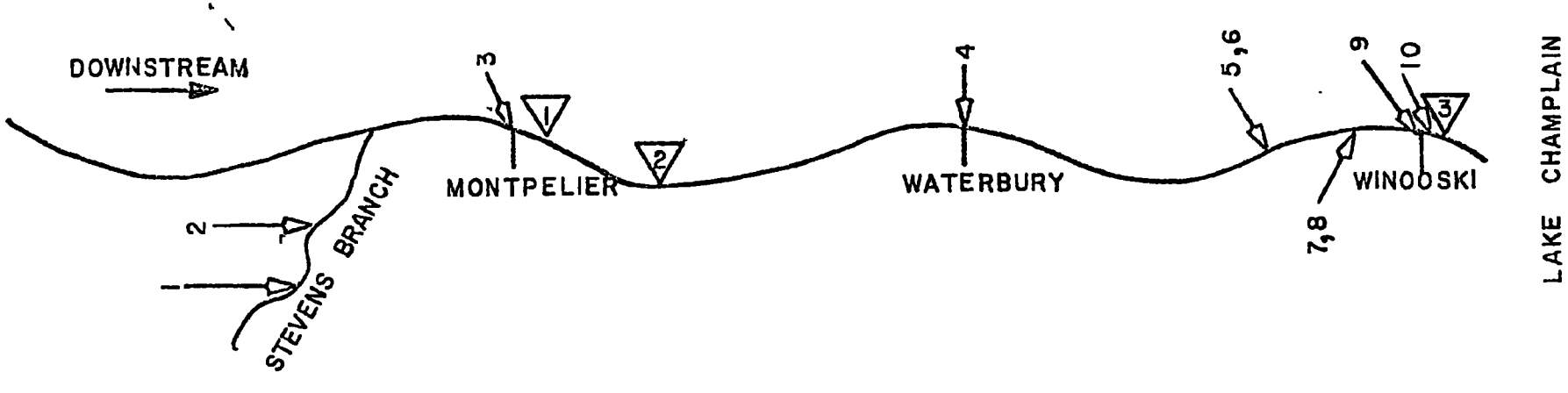
REGION I WQ ASSESSMENT REPORT - WINOOSKI R. (UT)



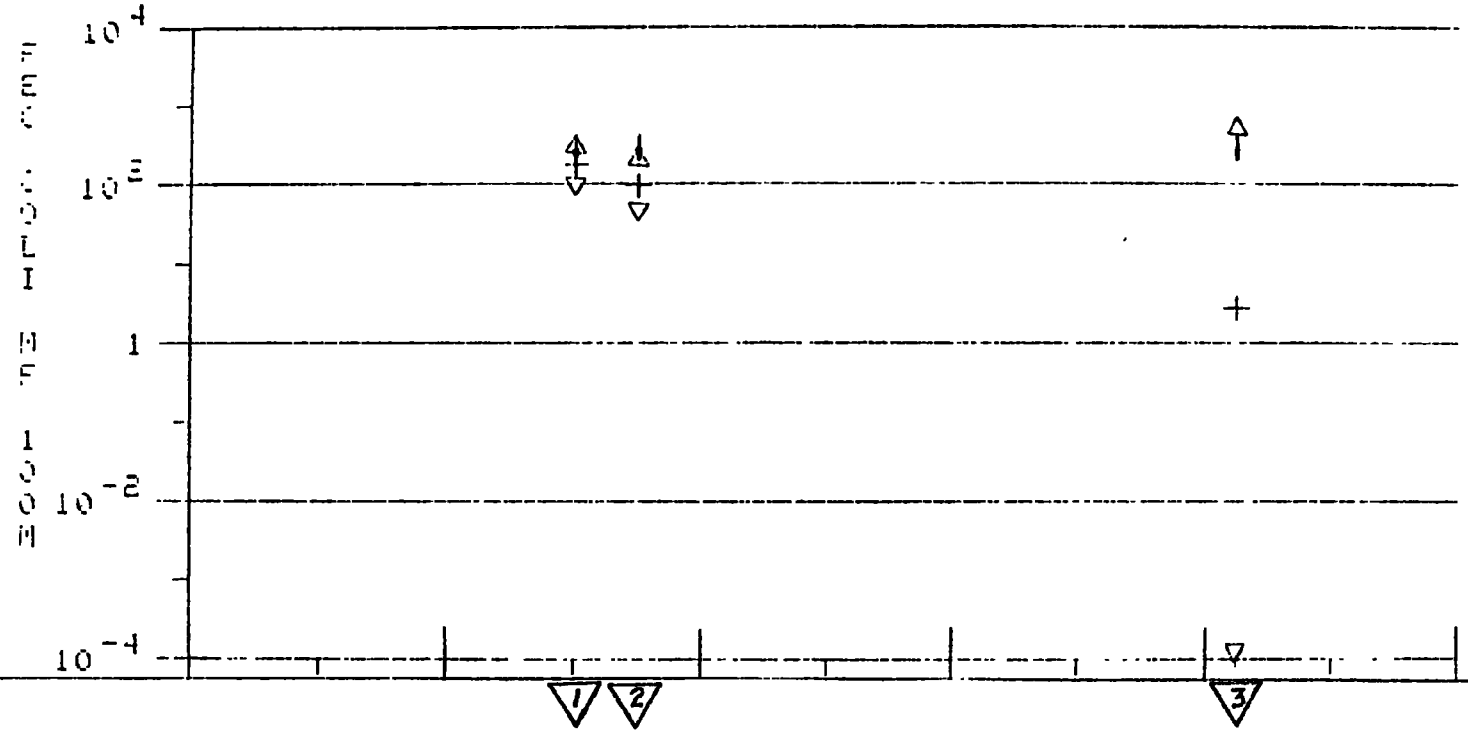


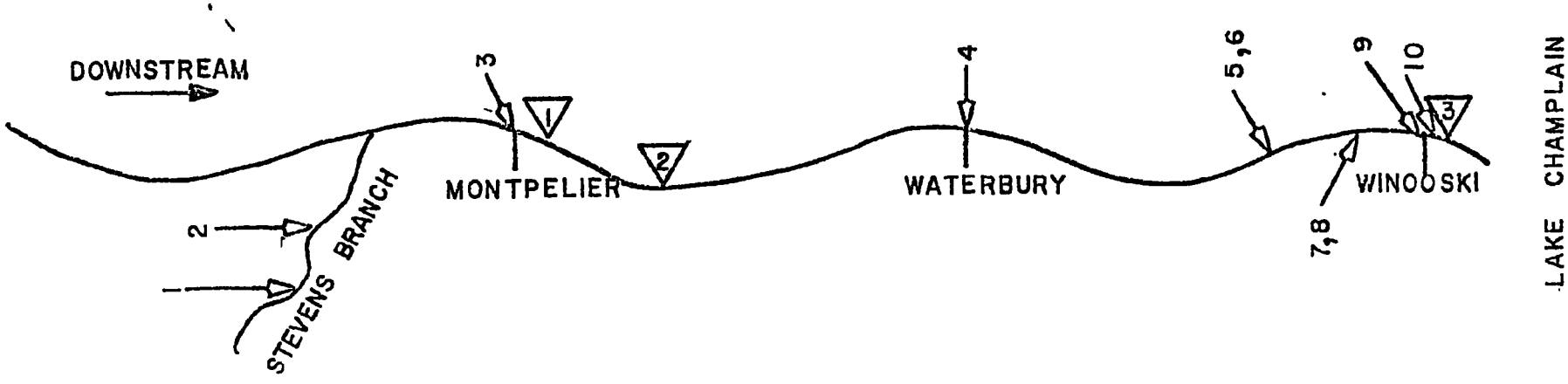
REGION I WQ ASSESSMENT REPORT - WINOOSKI R. (VT)



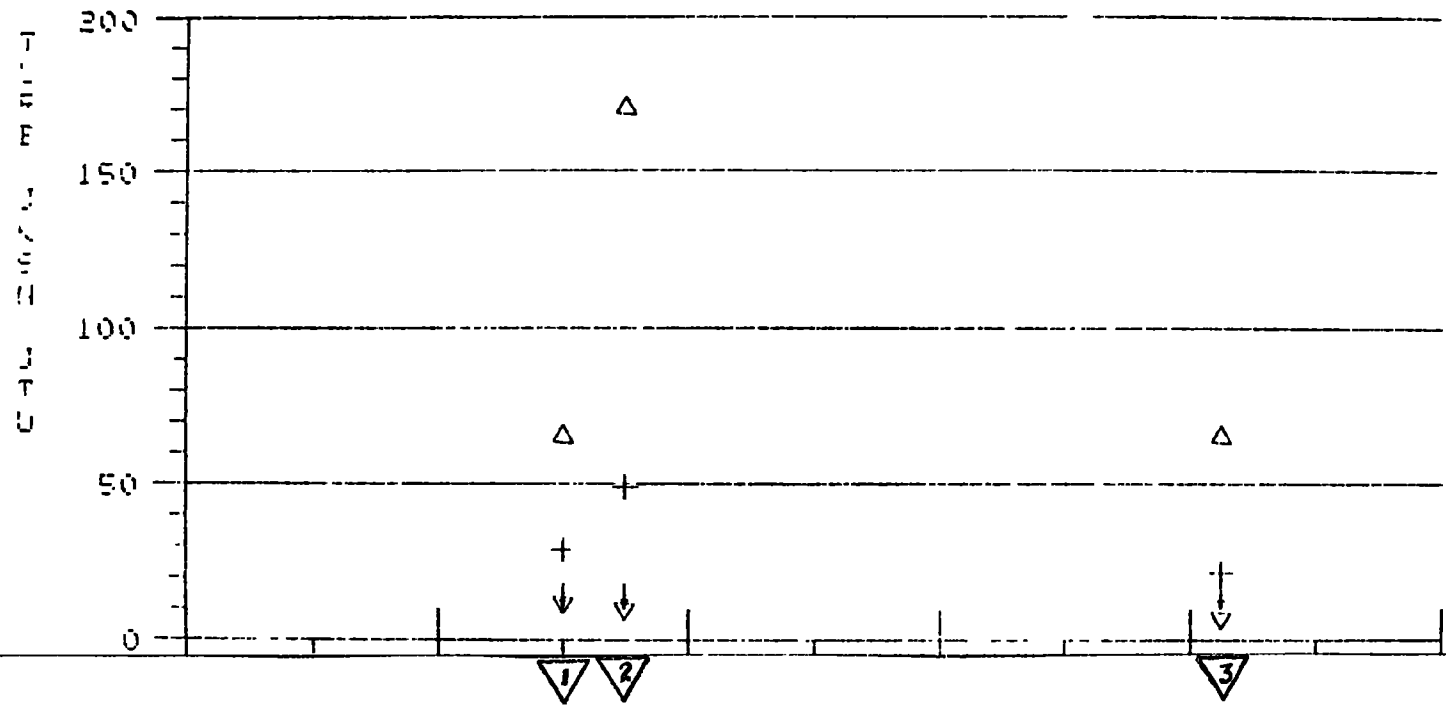


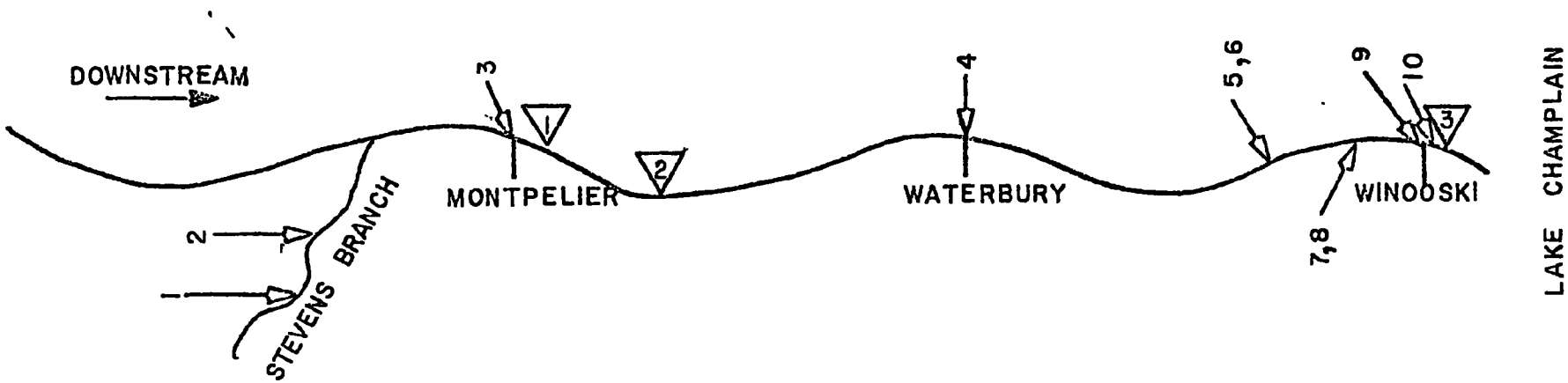
REGION I WQ ASSESSMENT REPORT - WINOOSKI R. (VT)



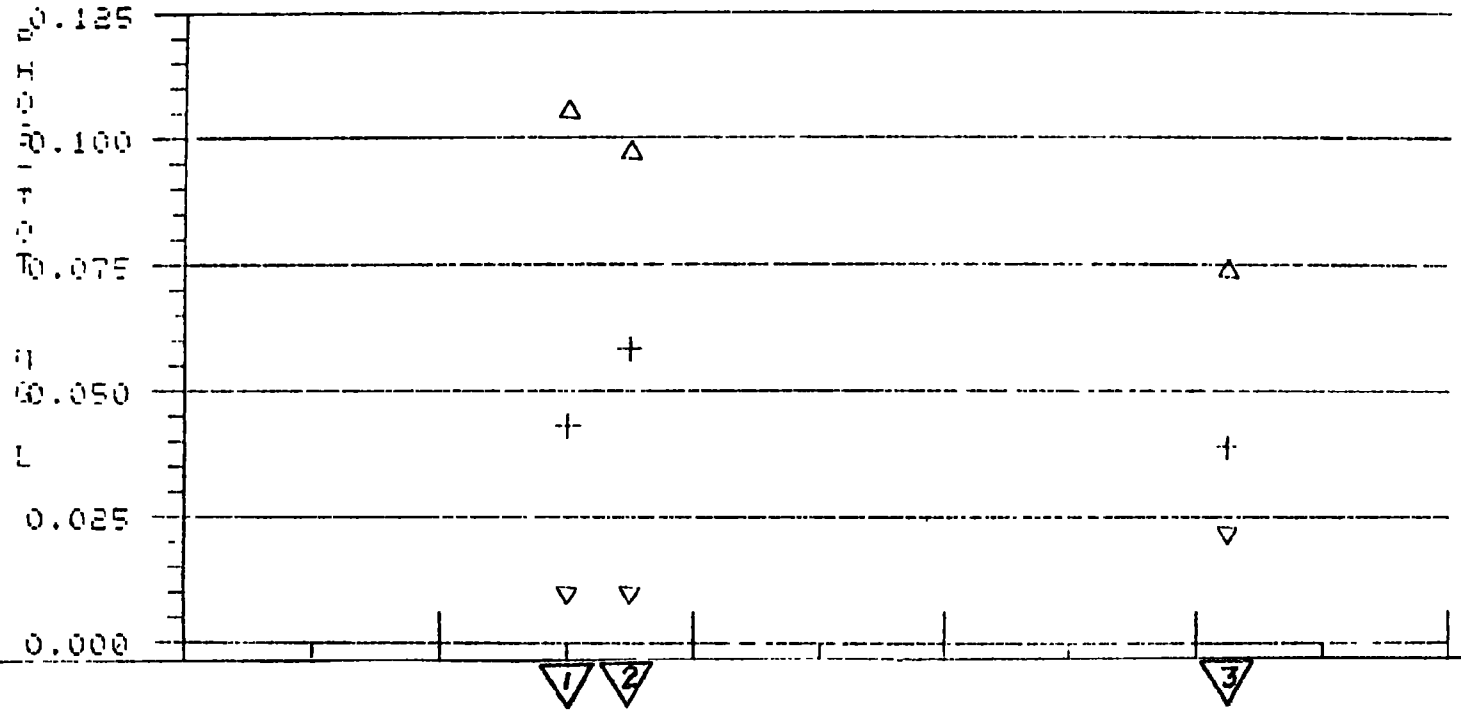


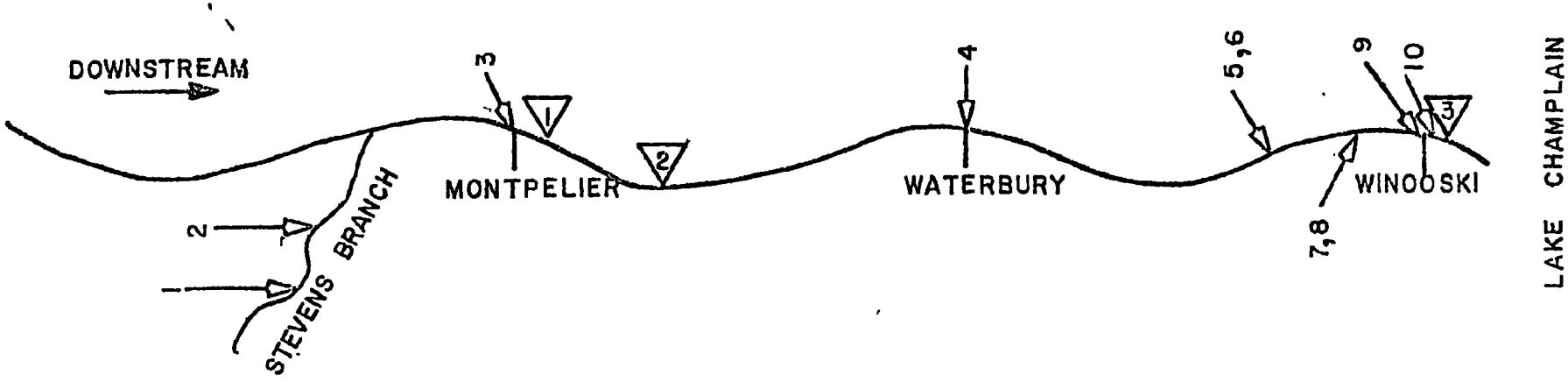
REGION I WQ ASSESSMENT REPORT - WINOOSKI R. (VT)





REGION I WQ ASSESSMENT REPORT - WINOOSKI R. (VT)





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3.17 LAKE MEMPHREMAGOG DRAINAGE AREA

Lake Memphremagog is located on the border between Vermont and Canada. It has a surface area of 36.4 square miles, a mean depth of 51 feet, and a drainage area of 650.5 square miles. Within the United States the surface area is 9.7 square miles with a mean depth of 21 feet and a drainage area of 477.1 square miles. Its major tributaries in the United States are the Black, Barton and Clyde Rivers, all of which are Class B waters.

The two stations in this drainage area used in this report are located at the Canadian-United States borders and in South Bay near Newport, Vermont. Both stations report turbidity and pH violations, while the station at the United States-Canadian border reported DO violations (2 out of 20 samples) in July at a depth of 23 feet.

The only major discharger in the drainage area is the Newport, Vermont municipal treatment plant.

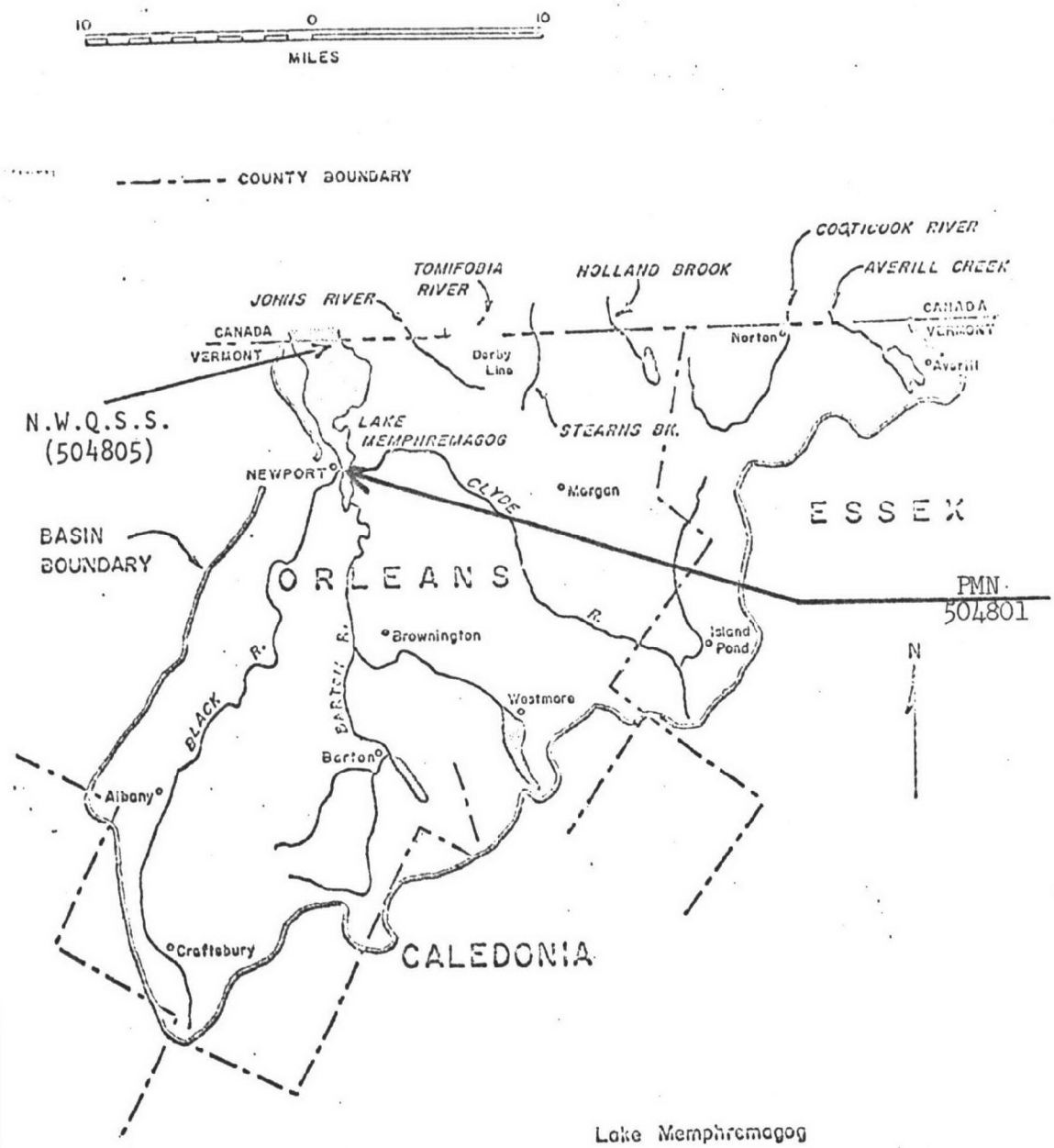
LAKE MEMPHREMAGOG BASIN

(VERMONT)

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Lake Memphremagog at International Border	N.W.Q.S.S. 504805
2.	Mouth of Southbay, Newport, Vermont	PMN 504801



Lake Memphremagog
Averill Creek
Coaticook River
Holland Brook
Johns River
Stearns Brook
Tomifobia River

LAKE MEMPHREMAGOG

VERMONT

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 504801 LAKE MEMPHREMAGOG (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
TURBIDITY JKSN JTU	4	1.	25.00	NONE	10.00	9.00
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	9.[illegible]
PH SU	5	3.	60.00	6.50	8.00	8.[illegible]
COLIFORM TOT MFIM/100ML	1	0.	0.0	NONE	500.00	21.[illegible]
COLIFORM FEC MF/100ML	1	0.	0.0	NONE	200.00	1.[illegible]

STATION 504805 LAKE MEMPHREMAGOG (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN -
TURBIDITY JKSN JTU	16	3.	18.75	NONE	10.00	6.[illegible]
DISS. OXYGEN MG/L	20	2.	10.00	6.00	NONE	9.[illegible]
PH SU	18	6.	33.33	6.50	8.00	7.[illegible]
COLIFORM TOT MFIM/100ML	1	0.	0.0	NONE	500.00	44.00
COLIFORM FEC MF/100ML	1	0.	0.0	NONE	200.00	14.00

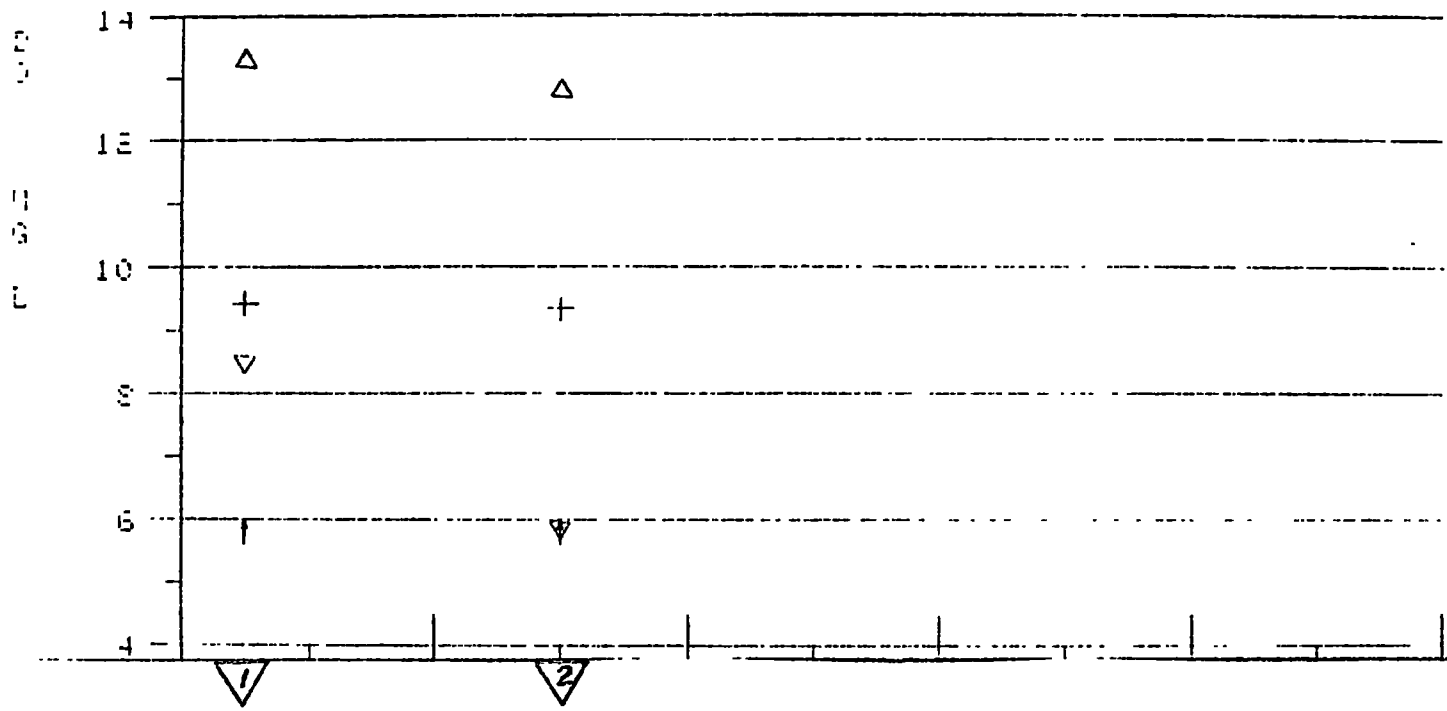
* GEOMETRIC MEAN FOR COLIFORMS

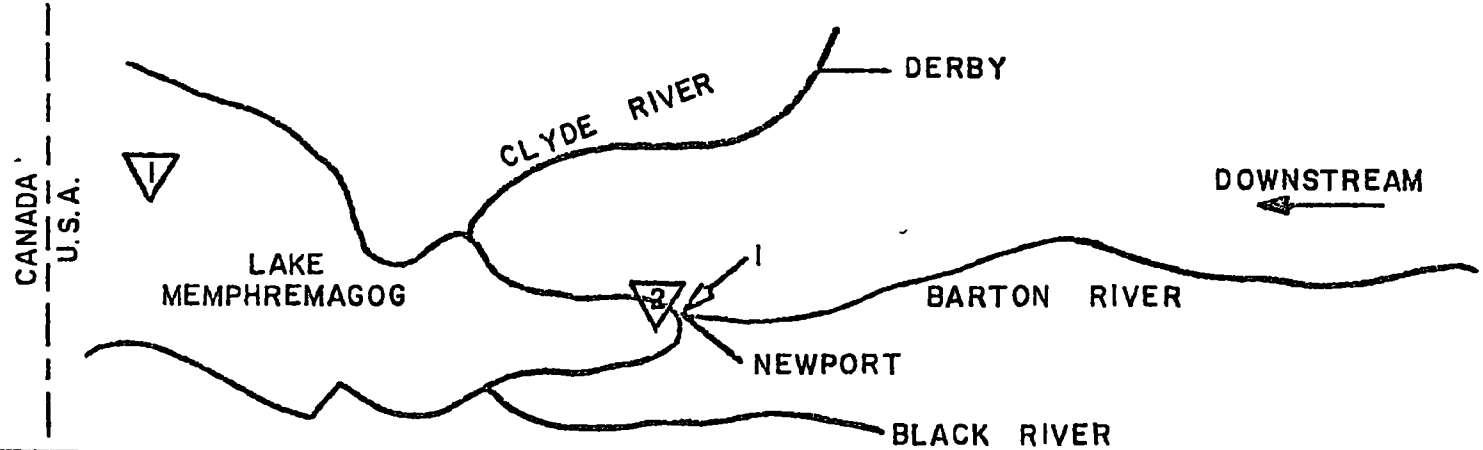
SIGNIFICANT DISCHARGERS

LAKE MEMPHREMAGOG BASIN

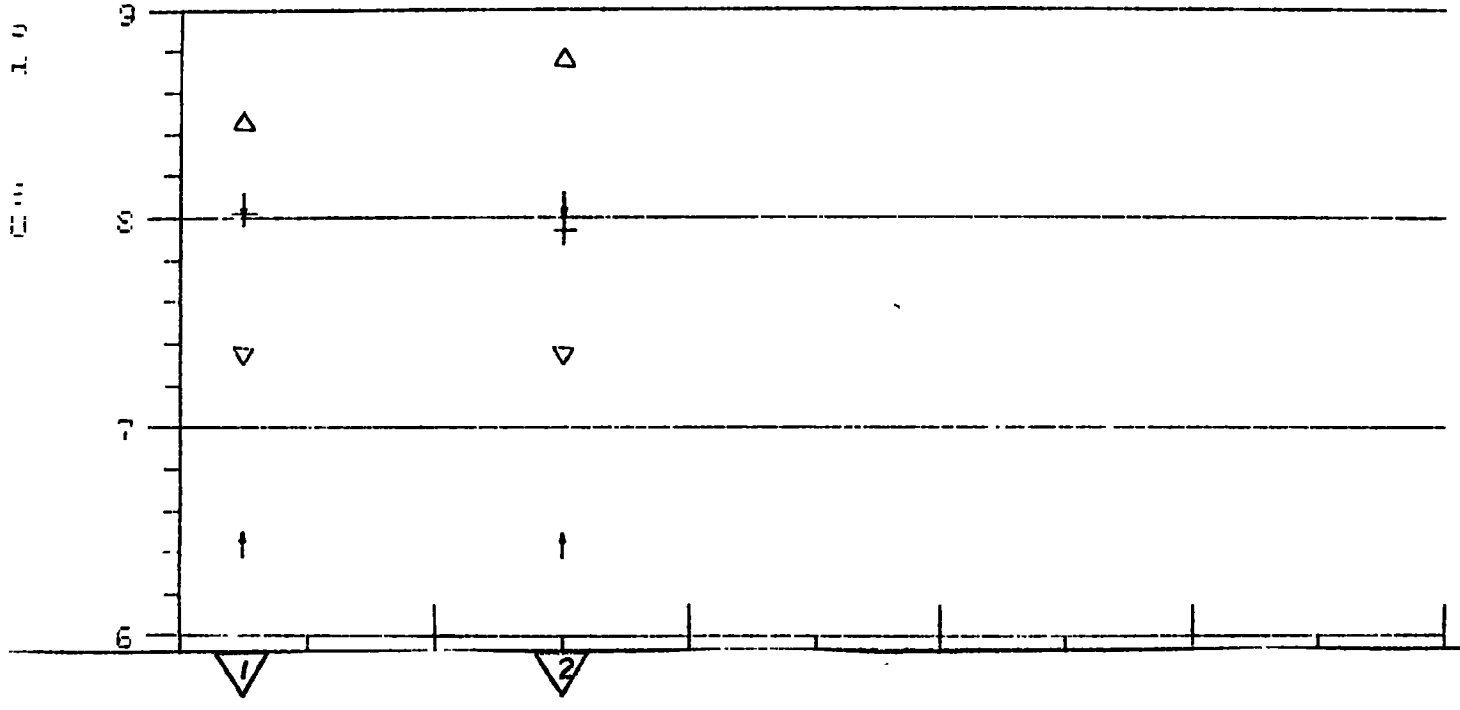
1.	Newport MTP	Newport	Clyde River	0100200

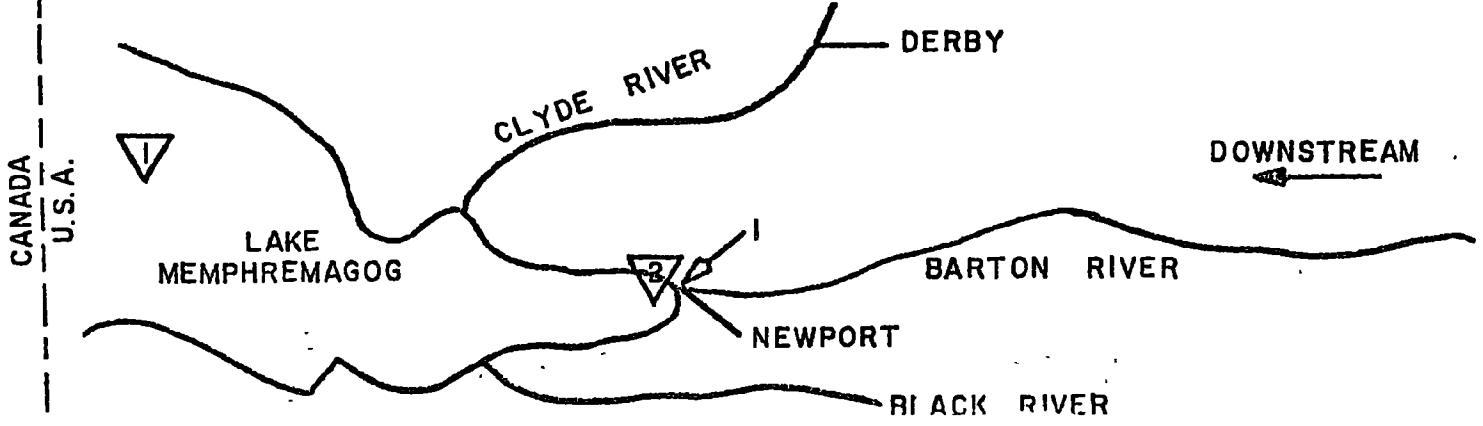
REGION I WQ ASSESSMENT REPORT - LAKE MEMPHREMAGOG (VT)



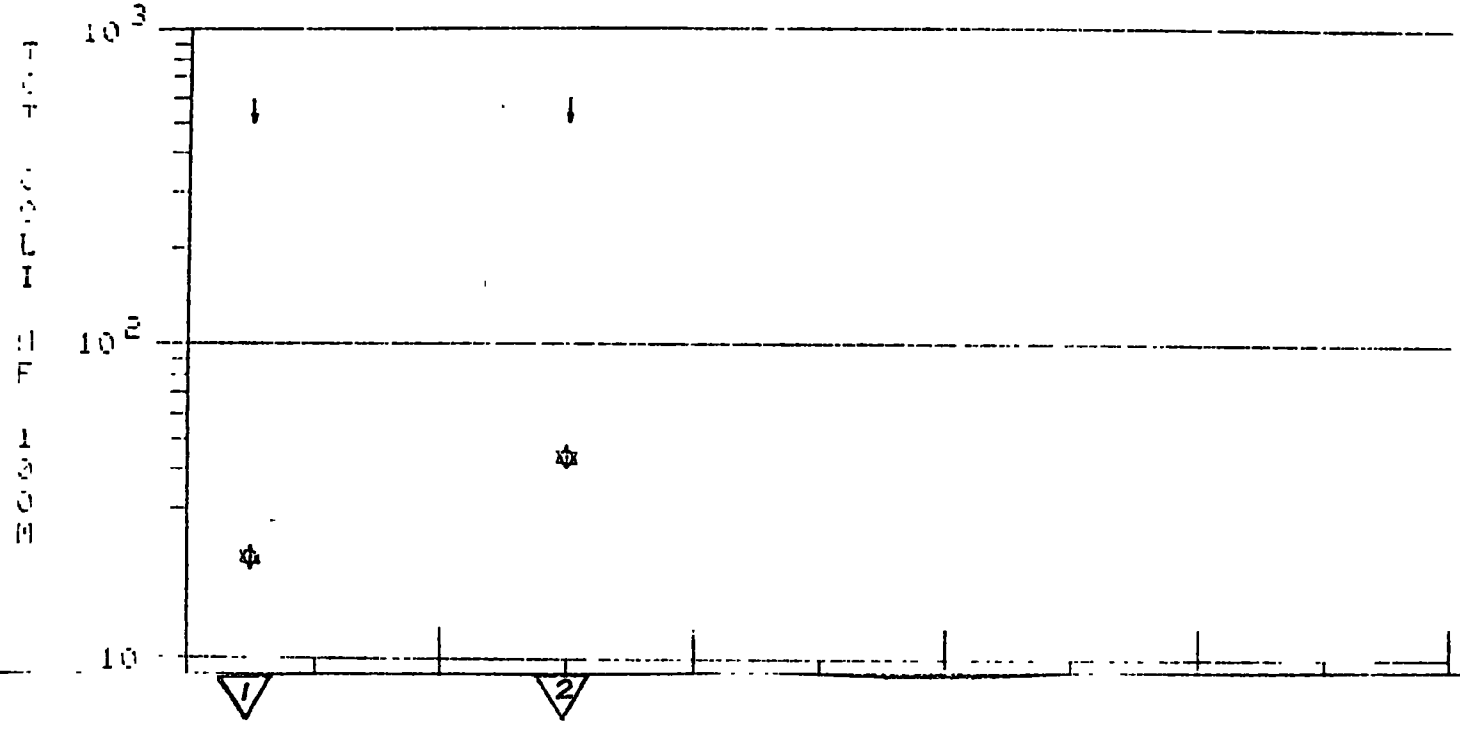


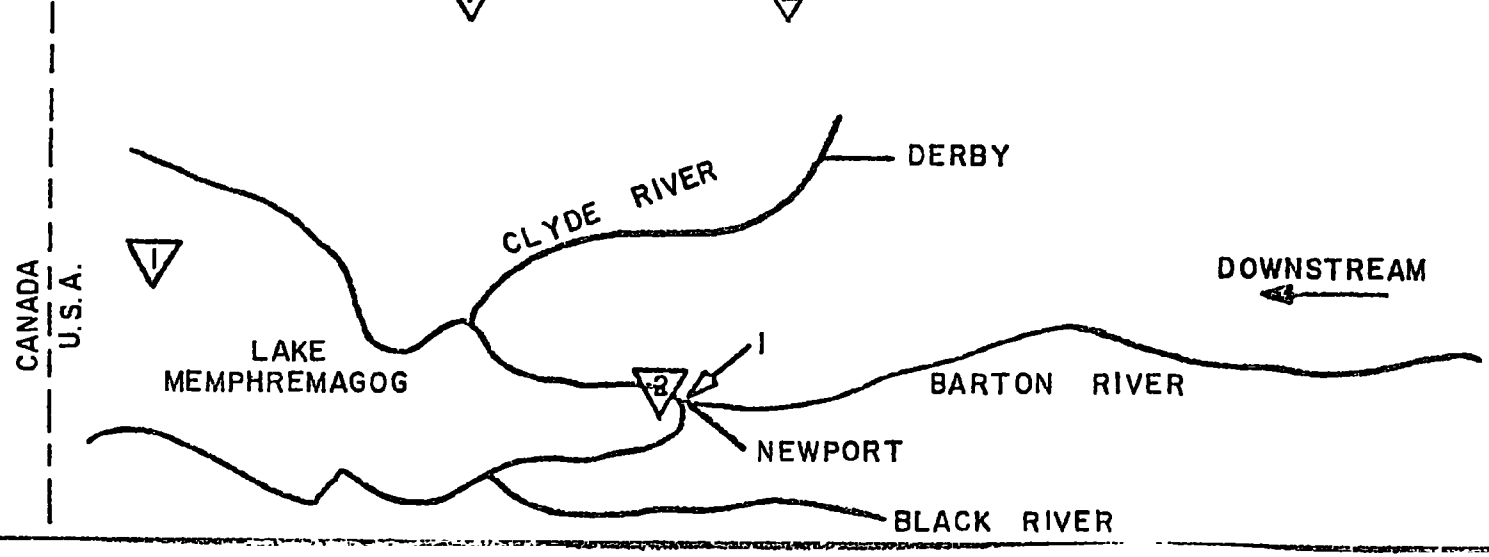
REGION I WQ ASSESSMENT REPORT - LAKE MEMPHREMAGOG (VT)



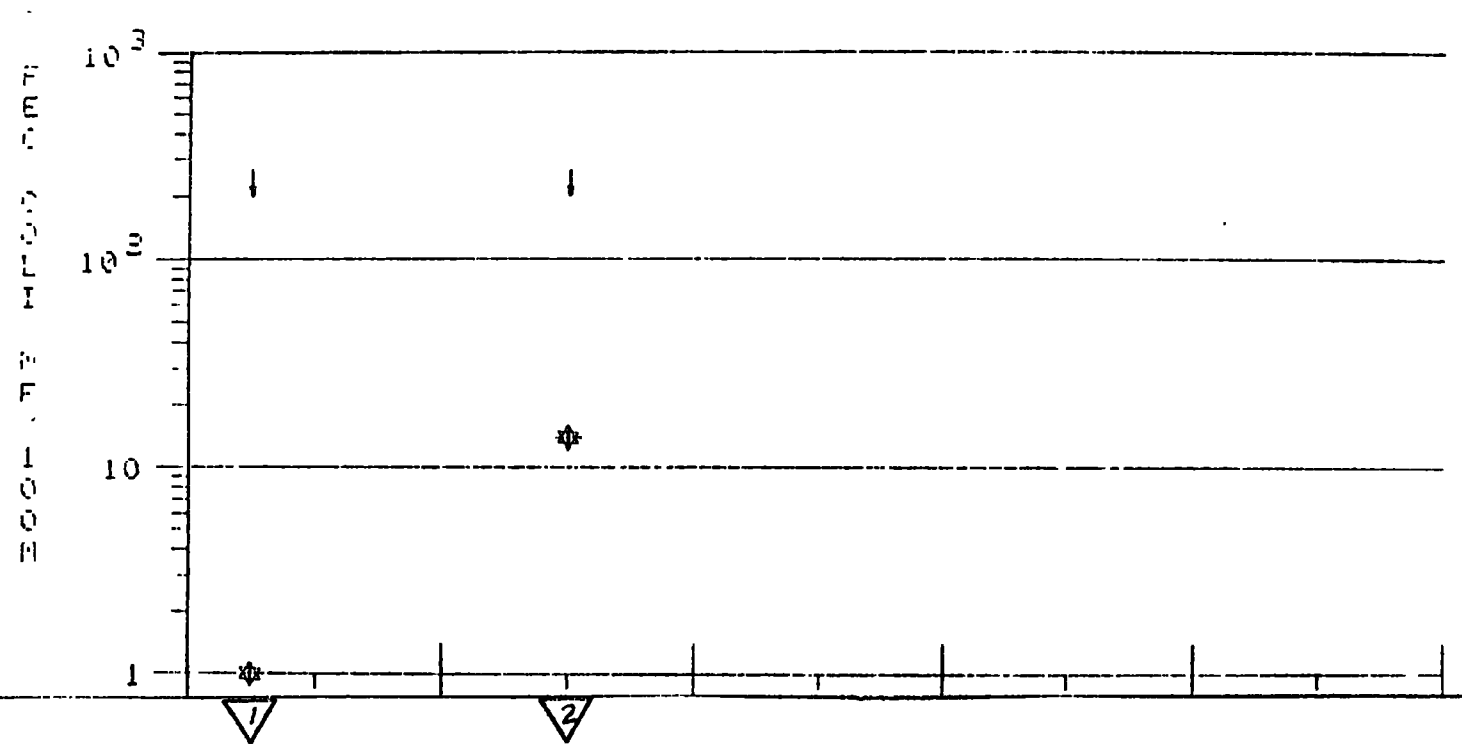


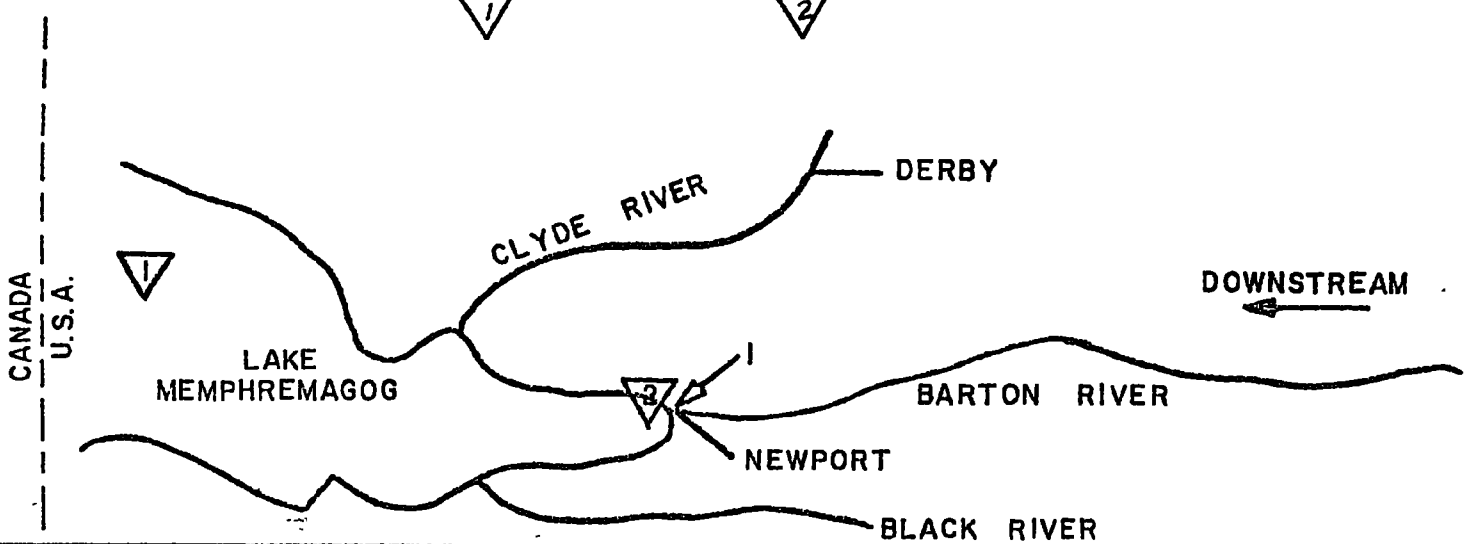
REGION I WQ ASSESSMENT REPORT - LAKE MEMPHREMAGOG (VT)



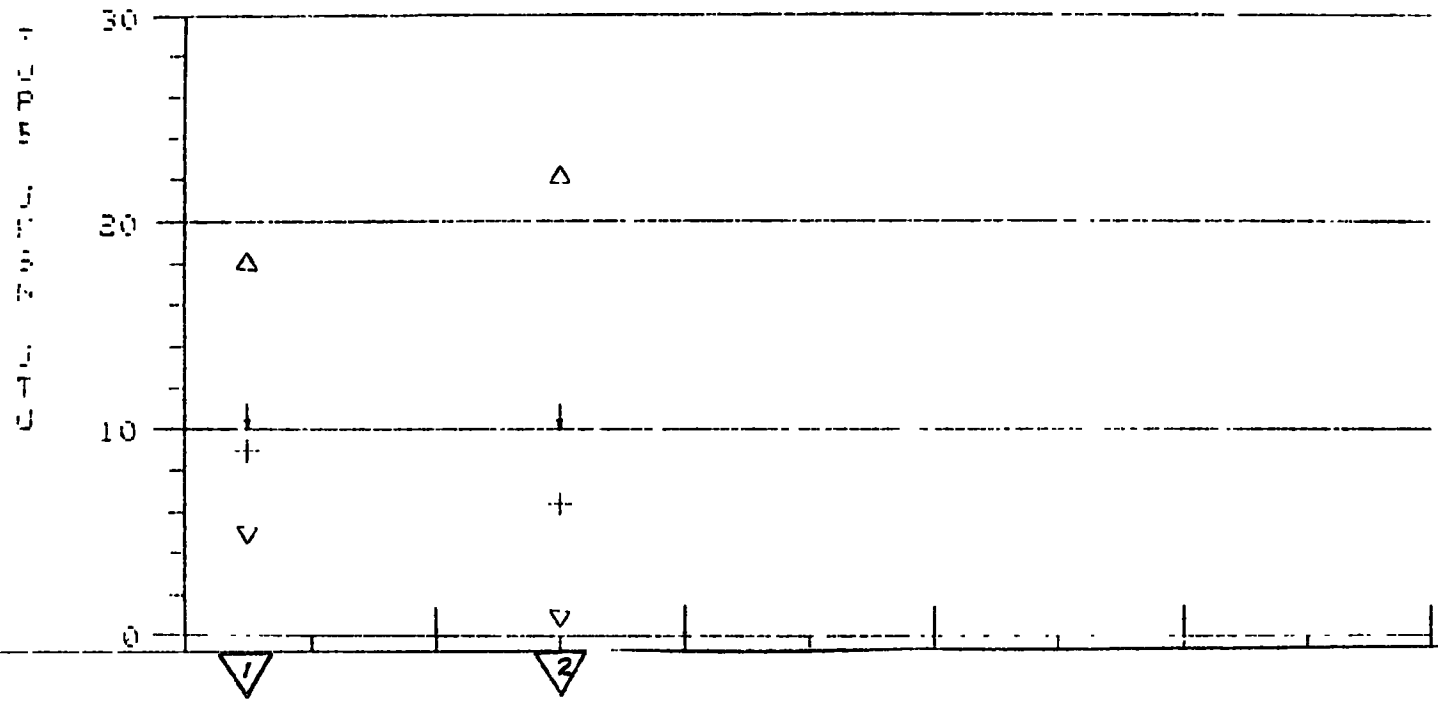


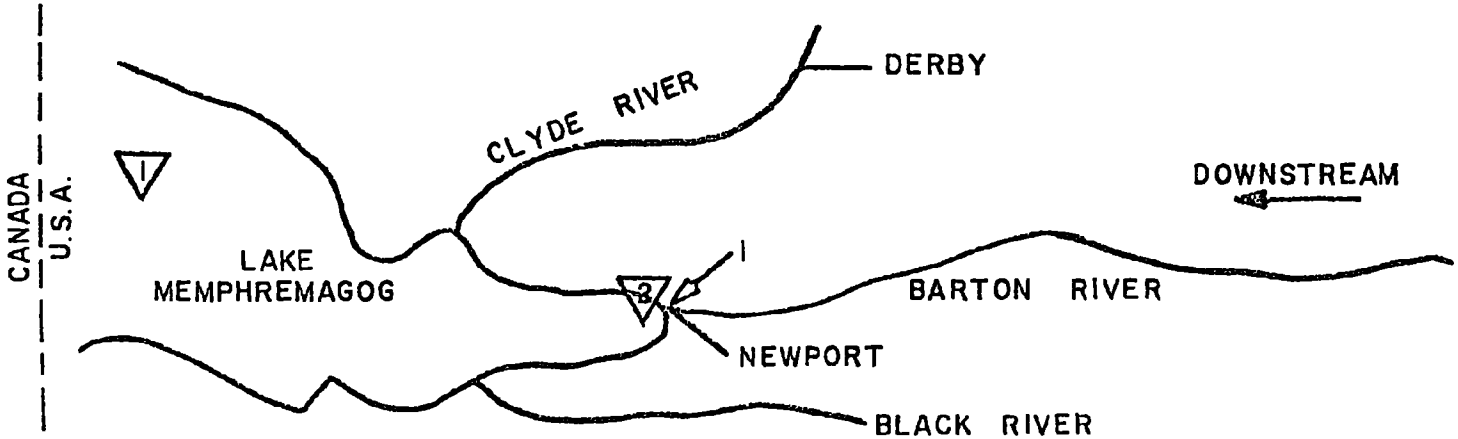
REGION I WQ ASSESSMENT REPORT - LAKE MEMPHREMAGOG (VT)



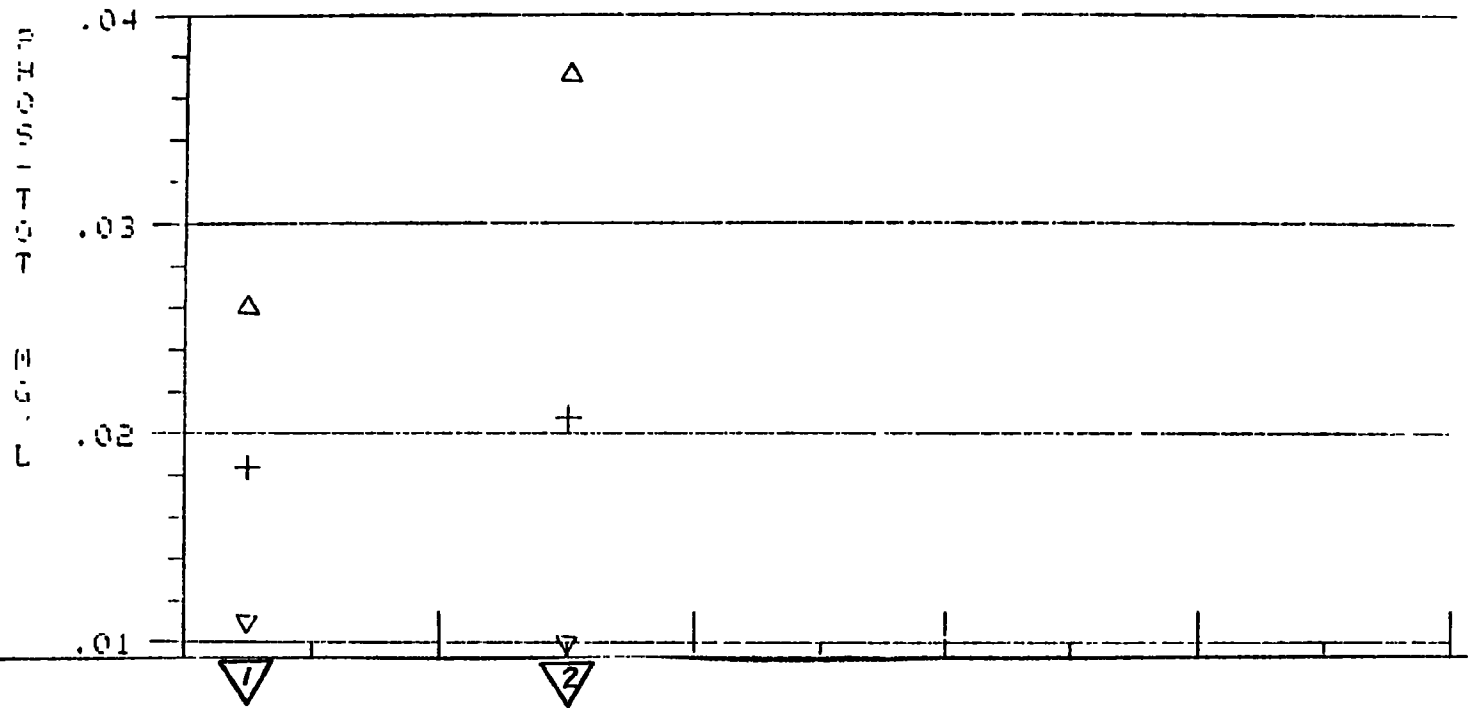


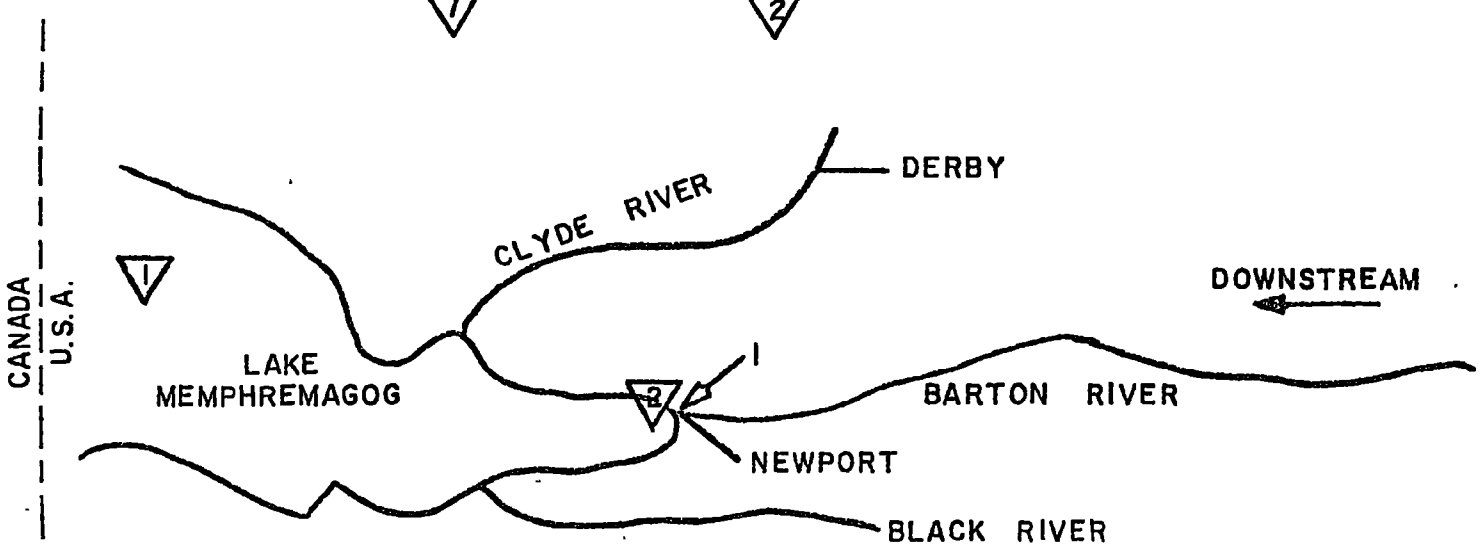
REGION I WQ ASSESSMENT REPORT - LAKE MEMPHREMAGOG (VT)





REGION I WQ ASSESSMENT REPORT - LAKE MEMPHREMAGOG (VT)





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3.18 CONNECTICUT RIVER BASIN (VERMONT)

The Connecticut River forms the Vermont-New Hampshire border with the entire width of the river being under the jurisdiction of the state of New Hampshire. There are, however, numerous tributaries flowing to the mainstem from Vermont. Stations located at or near the mouths of ten of these tributaries have been observed in this assessment.

All of the stations on these tributaries report pH violations and all except the West River record turbidity violations in 1975. These problems can be attributed to either rural runoff or natural conditions. Agricultural runoff is believed responsible for the high phosphorus levels reported on the Saxtons, Williams, White, Ottauquechee and Waits Rivers. Non-point sources are believed responsible for the high percentage of total coliform violations reported in this portion of the Connecticut River Basin. Municipal and/or industrial dischargers on the Passumpsic, White and Black Rivers are thought responsible for the large number of fecal coliform violations reported on these rivers. The Wells, Waits, Ottauquechee and Saxtons Rivers also have high percentages of coliform violations. These are possibly due to agricultural runoff. Further investigation into the cause of these violations is needed.

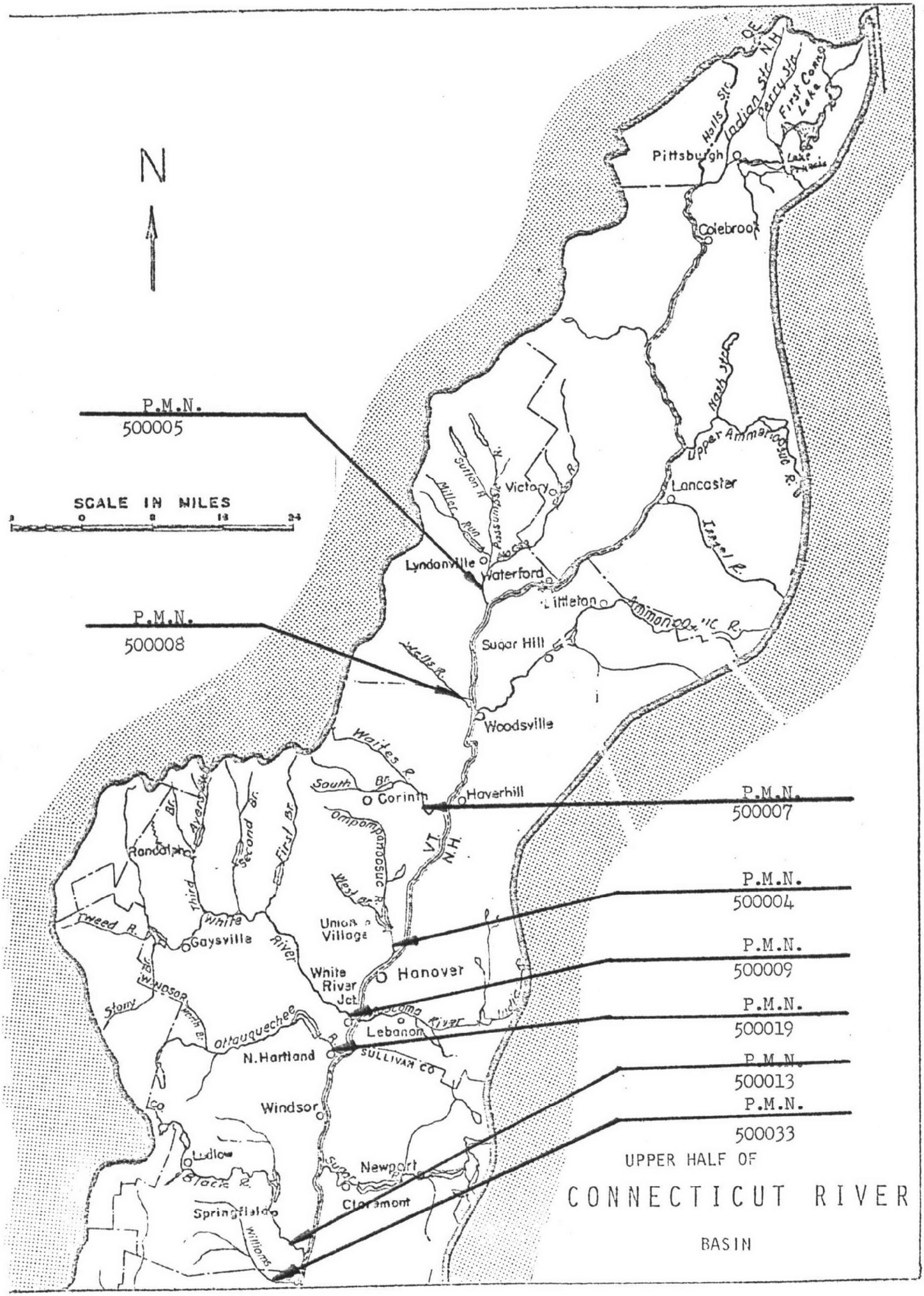
CONNECTICUT RIVER STATIONS

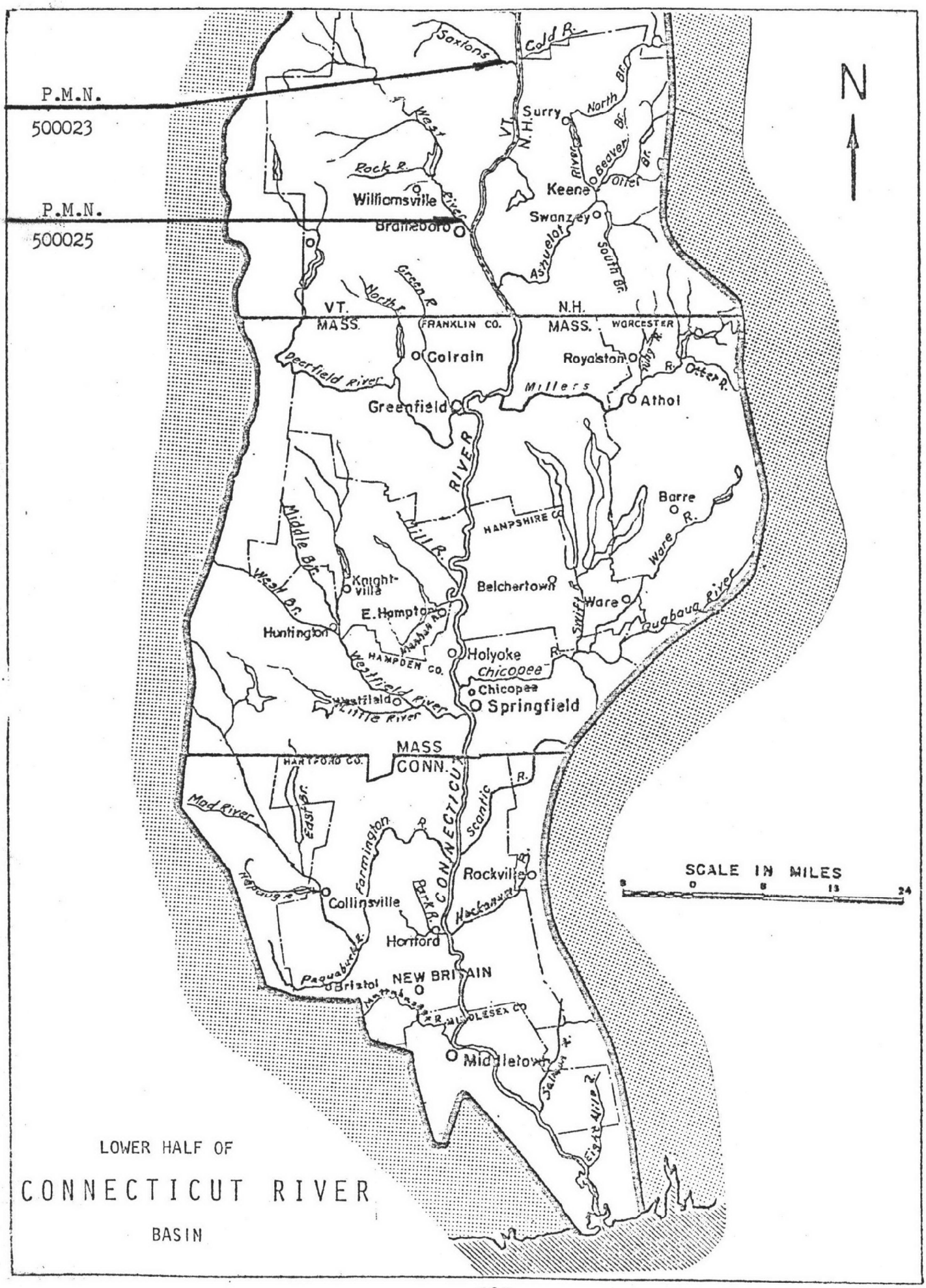
{VERMONT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Passumpsic River near Rte. 5 above Dam, VT	PMN 500005
2.	Wells River, Wells River, VT	PMN 500008
3.	Waits River, Bradford, VT	PMN 500007
4.	Ompompanoosuc River near Pompanoosuc, VT	PMN 500004
5.	White River, White River Jct., VT	PMN 500009
6.	Ottauquechee River at North Hartland, VT	PMN 500019
7.	Black River at Rte. 5 Bridge, VT	PMN 500013
8.	Williams River, Rockingham, VT	PMN 500033
9.	Saxtons River, Bellows Falls, VT	PMN 500023
10.	West River at Brattleboro, VT	PMN 500025


N
SCALE IN MILES
P.M.N.
500005
P.M.N.
500008
P.M.N.
500007
P.M.N.
500004
P.M.N.
500009
P.M.N.
500019
P.M.N.
500013
P.M.N.
500033
UPPER HALF OF
CONNECTICUT RIVER
BASIN
Pittsburgh
Colebrook
Lancaster
Victory
Lyndonville
Waterford
Littleton
Sugar Hill
Woodsville
Haverhill
Corinth
Hanover
Lebanon
Union Village
White River Jct.
Randolph
Gaysville
N. Hartland
Windsor
Ludlow
Newport
Claremont
Springfield
SULLIVAN CO
VT.
N.H.
Ammonoosuc R.
Upper Ammonoosuc R.
Israel R.
Waites R.
Wells R.
Sutton R.
Miller Run
Passumpsic R.
Nash Stream
Halls Str.
Indian Str.
Perry Str.
First Conn. Lake
Lake Francis
South Br.
Ompompanoosuc R.
West Br.
Second Br.
First Br.
Third Br.
Avery Br.
Tweed R.
White River
Stony Br.
Ottauquechee R.
Sugar R.
Black R.
Williams R.



LOWER HALF OF

CONNECTICUT RIVER

BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500005 PASSUMPSIC R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	5.	83.33	NONE	10.00	20.00
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.67
PH SU	6	2.	33.33	6.50	8.00	7.49
COLIFORM TOT MFIM/100ML	4	3.	75.00	NONE	500.00	1985.59
COLIFORM FEC MF/100ML	4	3.	75.00	NONE	200.00	214.08

STATION 500008 WELLS R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	1.	16.67	NONE	10.00	8.00
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.89
PH SU	6	2.	33.33	6.50	8.00	7.33
COLIFORM TOT MFIM/100ML	4	3.	75.00	NONE	500.00	1061.59
COLIFORM FEC MF/100ML	4	3.	75.00	NONE	200.00	311.66

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500007 WAITS R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
TURBIDITY JKSN JTU	6	1.	16.67	NONE	10.00	9.67
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.94
PH SU	6	3.	50.00	6.50	8.00	7.51
COLIFORM TOT MFIM/100ML	4	3.	75.00	NONE	500.00	2132.[illegible]
COLIFORM FEC MF/100ML	4	3.	75.00	NONE	200.00	364.[illegible]

STATION 500004 OMPOMPANOOSUC R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	1.	16.67	NONE	10.00	8.[illegible]
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.[illegible]
PH SU	6	1.	16.67	6.50	8.00	7.[illegible]
COLIFORM TOT MFIM/100ML	3	0.	0.0	NONE	500.00	104.[illegible]
COLIFORM FEC MF/100ML	3	0.	0.0	NONE	200.00	28.99

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500009 WHITE R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	3.	50.00	NONE	10.00	16.50
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	12.14
PH SU	6	1.	16.67	6.50	8.00	7.46
COLIFORM TOT MFIM/100ML	4	4.	100.00	NONE	500.00	17543.96
COLIFORM FEC MF/100ML	4	4.	100.00	NONE	200.00	2105.33

STATION 500019 OTTAUQUECHEE R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	3.	50.00	NONE	10.00	14.83
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.98
PH SU	6	1.	16.67	6.50	8.00	7.44
COLIFORM TOT MFIM/100ML	3	2.	66.67	NONE	500.00	1519.73
COLIFORM FEC MF/100ML	3	2.	66.67	NONE	200.00	132.00

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500013 BLACK R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
TURBIDITY JKSN JTU	6	3.	50.00	NONE	10.00	12.50
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.[illegible]
PH SU	6	1.	16.67	6.50	8.00	7.[illegible]
COLIFORM TOT MFIM/100ML	4	4.	100.00	NONE	500.00	2310.
COLIFORM FEC MF/100ML	4	3.	75.00	NONE	200.00	263.[illegible]

STATION 500033 WILLIAMS R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
TURBIDITY JKSN JTU	6	3.	50.00	NONE	10.00	16.[illegible]
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.[illegible]
PH SU	6	1.	16.67	6.50	8.00	6.[illegible]
COLIFORM TOT MFIM/100ML	4	2.	50.00	NONE	500.00	194.67
COLIFORM FEC MF/100ML	4	1.	25.00	NONE	200.00	14.89

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500023 SAXTON R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	4.	66.67	NONE	10.00	92.67
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.26
PH SU	5	1.	20.00	6.50	8.00	7.21
COLIFORM TOT MFIM/100ML	4	3.	75.00	NONE	500.00	13241.51
COLIFORM FEC MF/100ML	4	2.	50.00	NONE	200.00	624.55

STATION 500025 WEST R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	6	0.	0.0	NONE	10.00	7.50
DISS. OXYGEN MG/L	6	0.	0.0	6.00	NONE	11.32
PH SU	6	2.	33.33	6.50	8.00	6.66
COLIFORM TOT MFIM/100ML	4	1.	25.00	NONE	500.00	235.88
COLIFORM FEC MF/100ML	4	0.	0.0	NONE	200.00	9.60

* GEOMETRIC MEAN FOR COLIFORMS

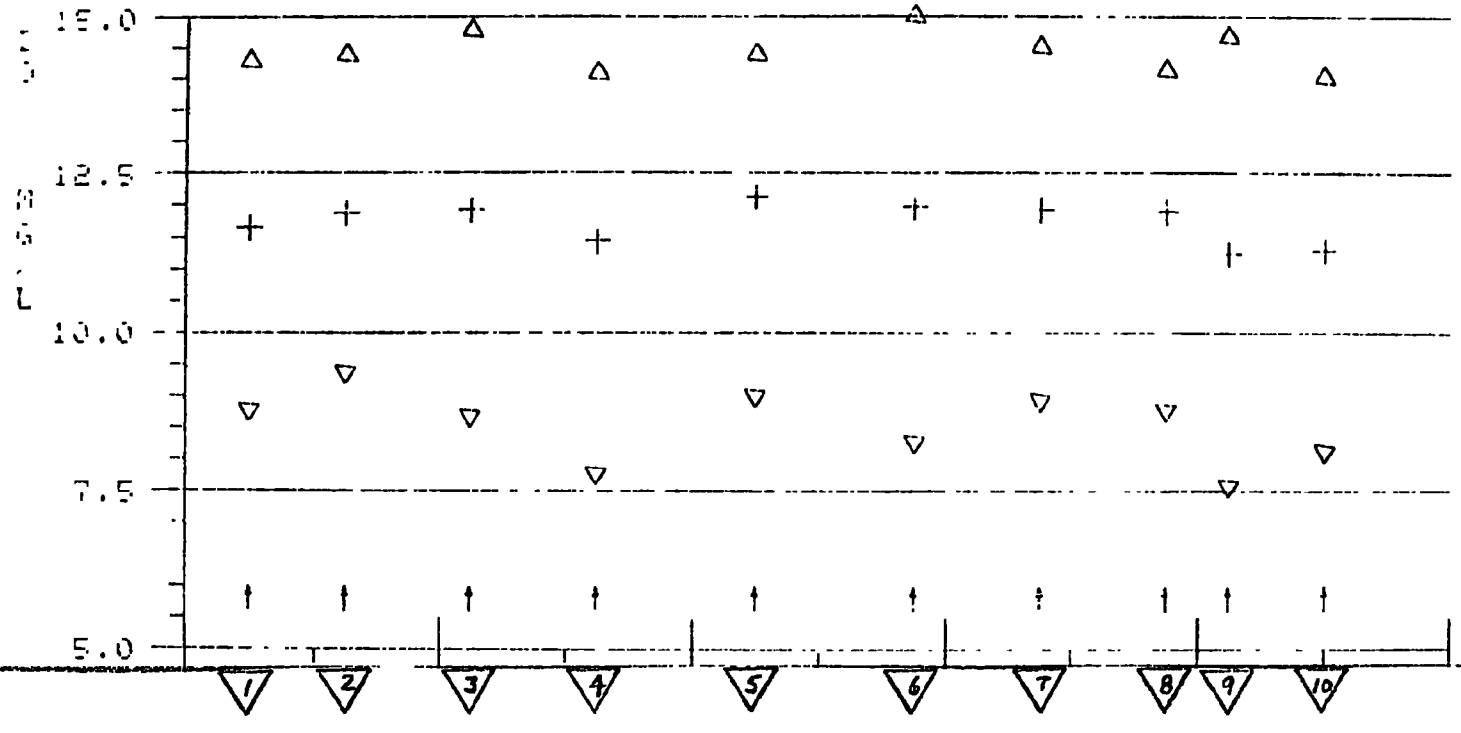
SIGNIFICANT DISCHARGERS

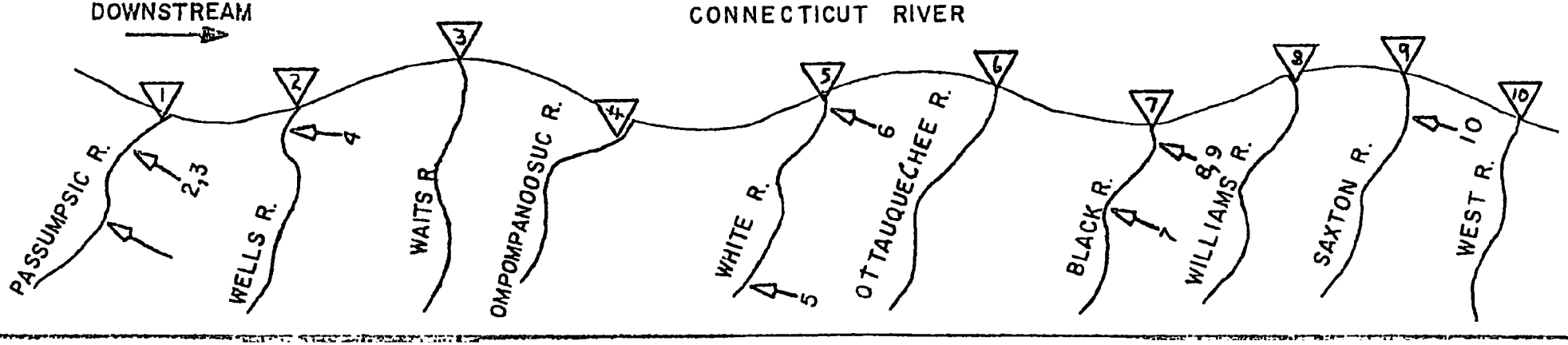
CONNECTICUT RIVER BASIN (VERMONT)

	Discharger	Location	Receiving Water	NPDES No.
1.	Lyndon MTP	Lyndon	Passumpsic River	0100595
2.	St. Johnsbury STP	St.Johnsbury	Passumpsic River	0100579
3.	EHV-Weidmann Industries	St.Johnsbury	Passumpsic River	0000019
* 4.	Wells River Paper Co.	Wells River	Wells River	0020494
5.	Forest Poultry Corp.	S.Royalton	White River	0000183
6.	Hartford-White River Junc. STP	White River Junction	White River	0101010
7.	Ludlow WTP	Ludlow	Black River	0100145
8.	Springfield MTP	Springfield	Black River	0100374
9.	Springfield Electroplate	Springfield	Black River	0000272
*10.	Northern States Paper Co.	Westminster	Saxtons River	0020125

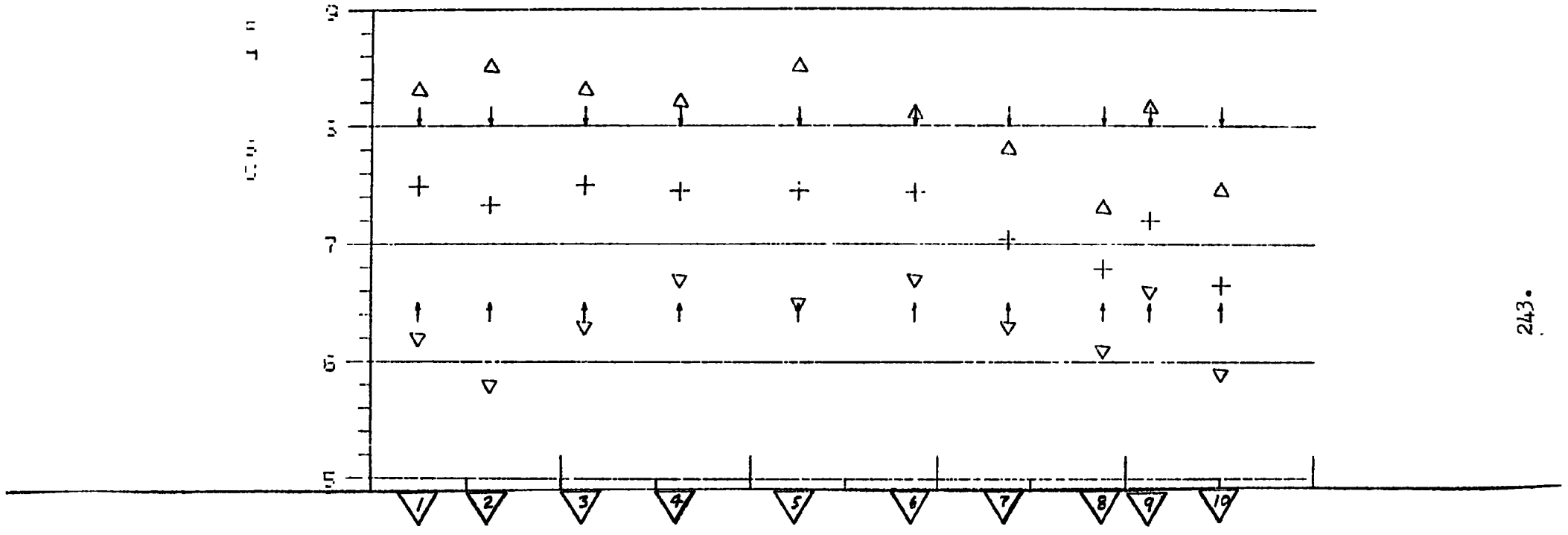
* Ceased operation

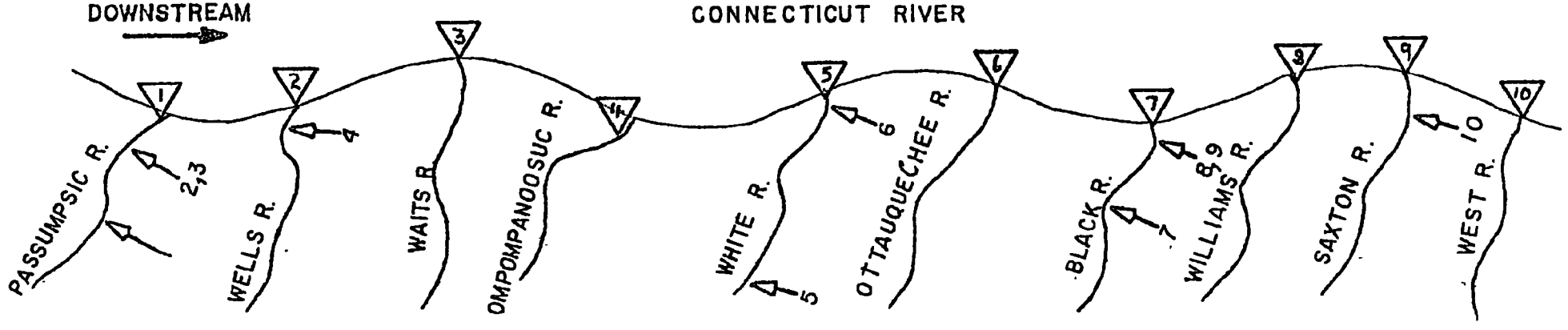
REGION I WQ ASSESSMENT REPORT - CONNECTICUT R. TRIB. (UT)



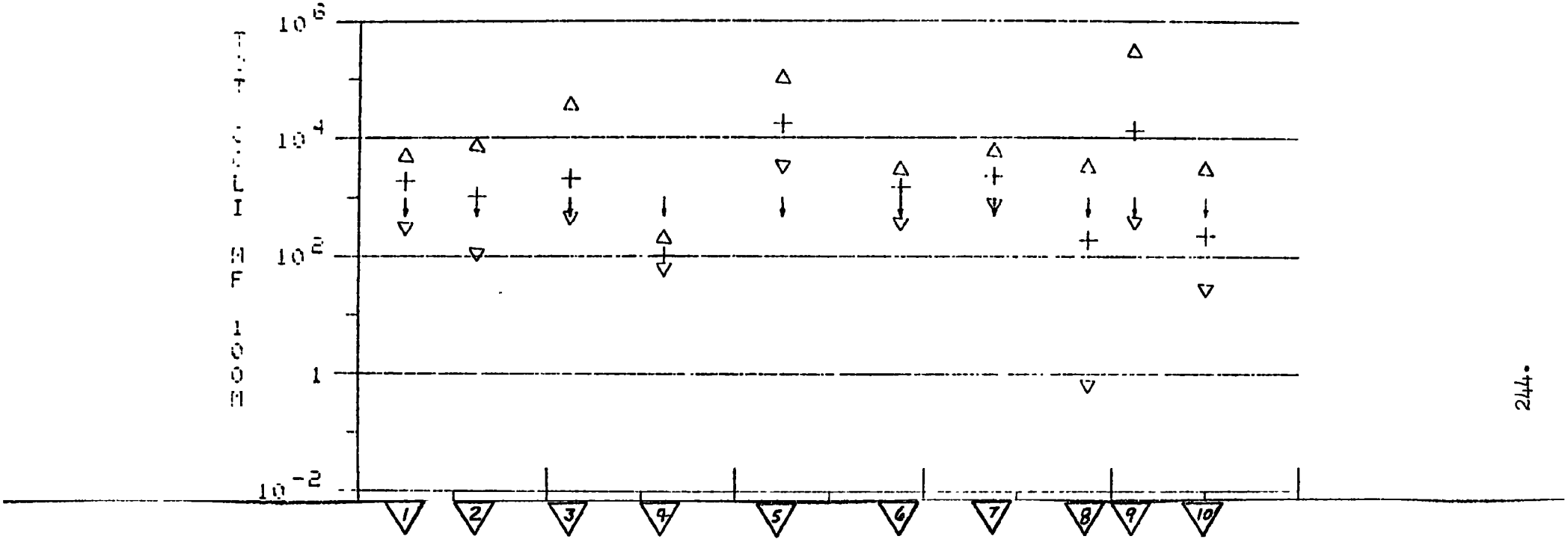


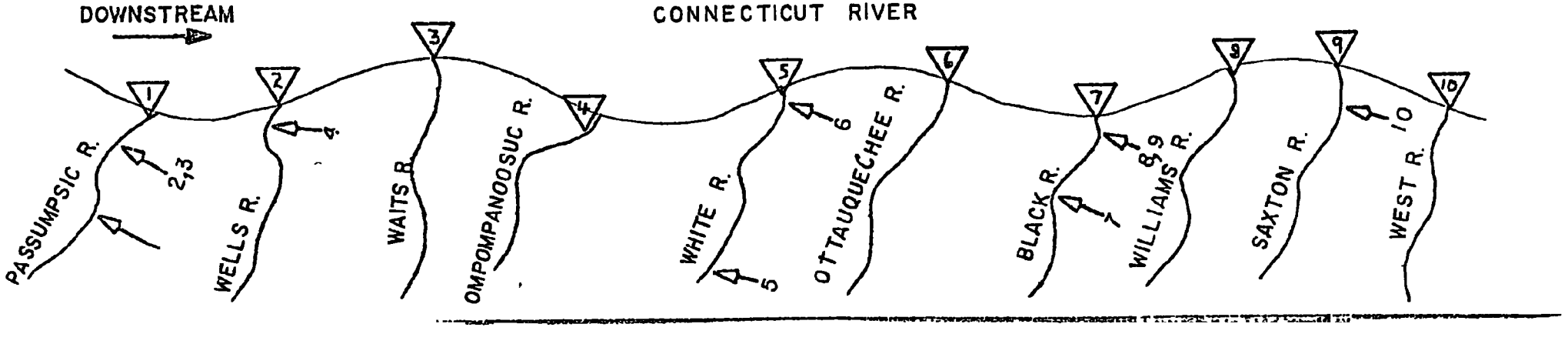
REGION I WQ ASSESSMENT REPORT - CONNECTICUT R. TRIB. (VT)



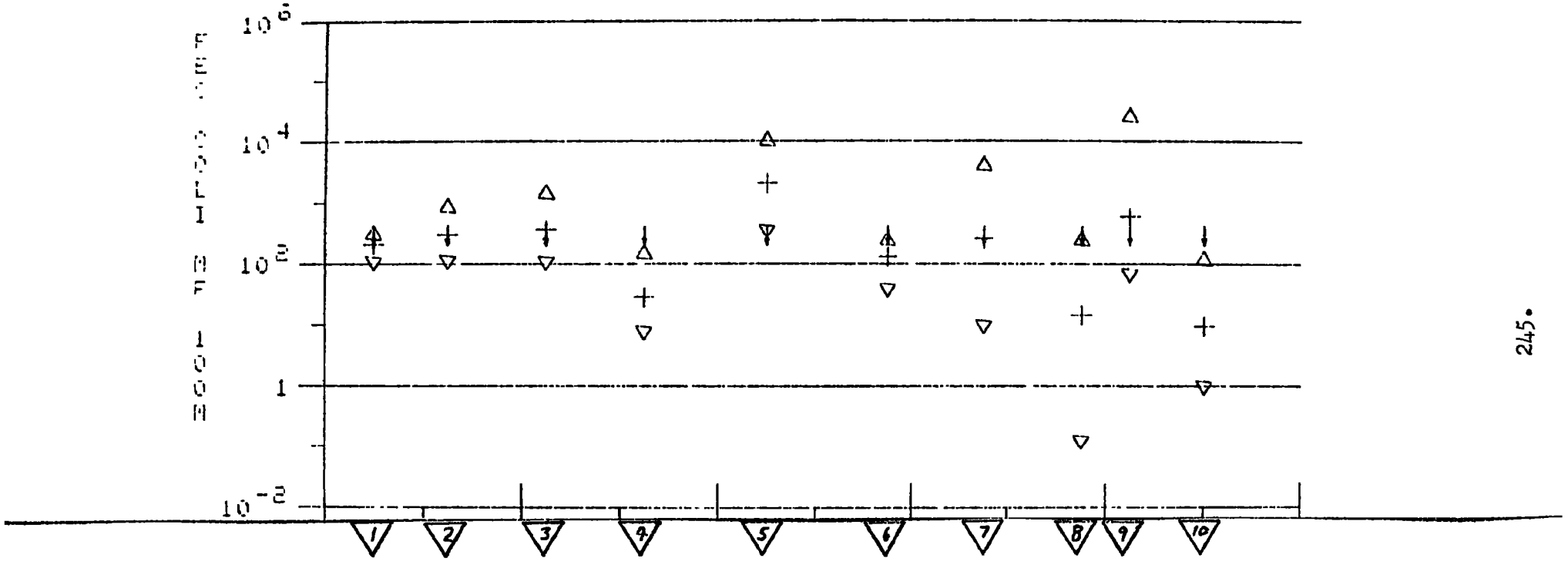


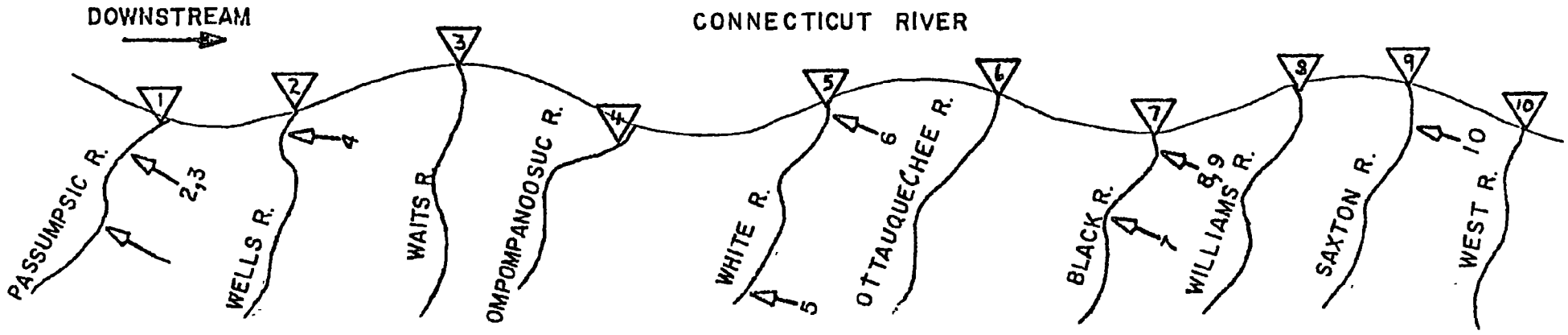
REGION I WQ ASSESSMENT REPORT - CONNECTICUT R. TRIB. (VT)



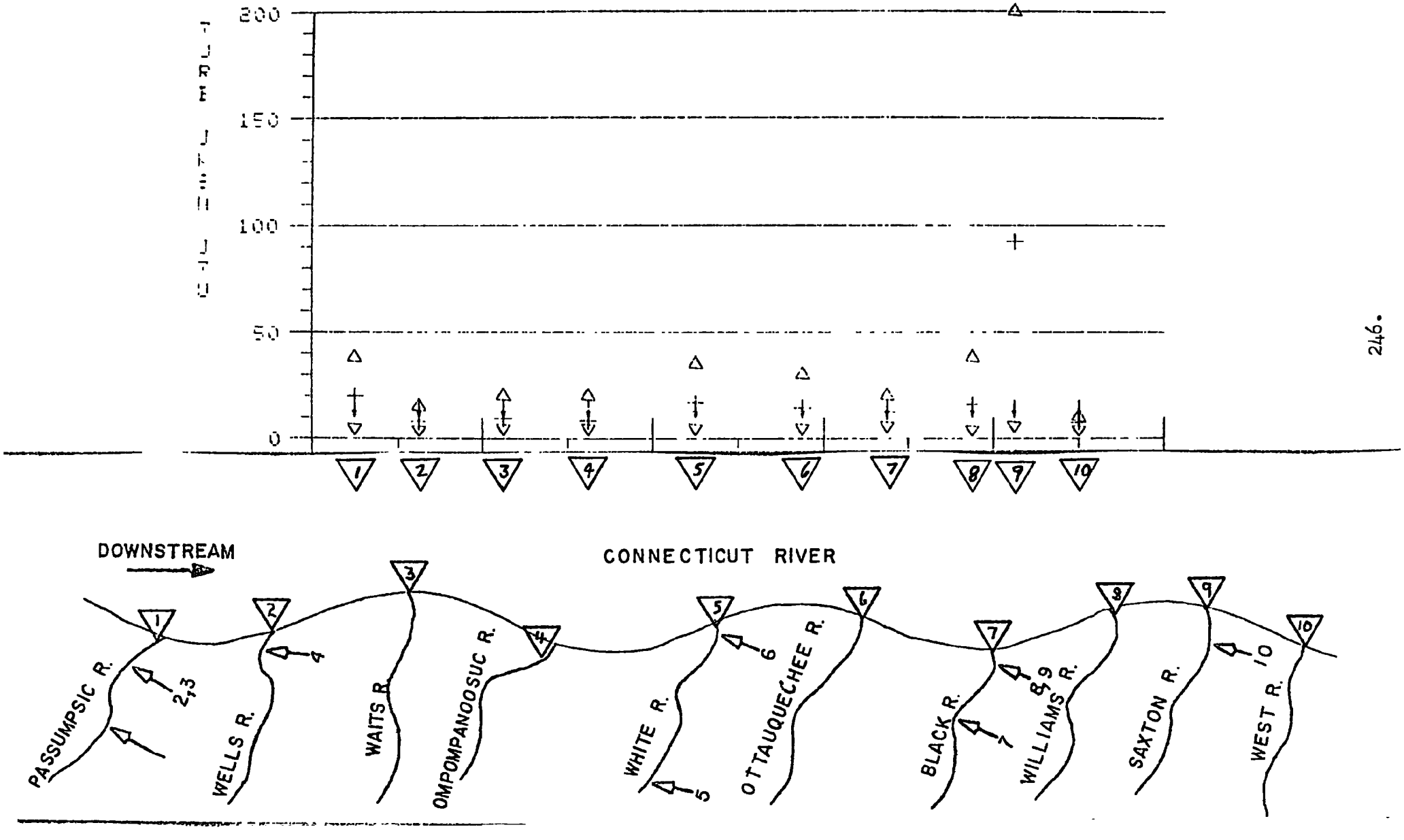


REGION I WQ ASSESSMENT REPORT - CONNECTICUT R. TRIB. (VT)

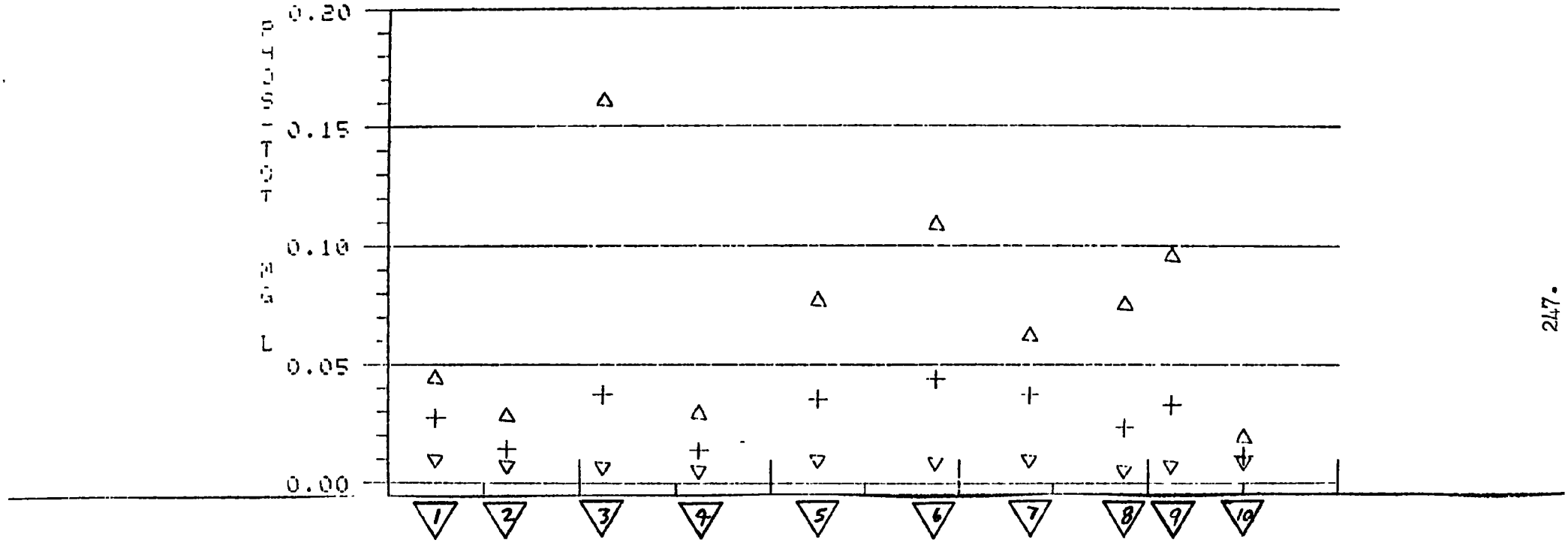


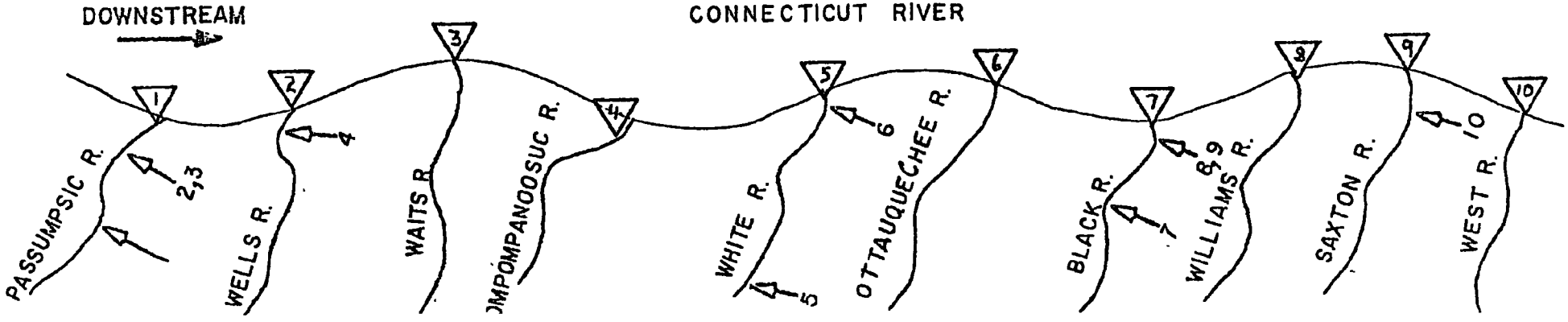


REGION I WQ ASSESSMENT REPORT - CONNECTICUT R. TRIB. (UT)



REGION I WQ ASSESSMENT REPORT - CONNECTICUT R. TRIB. (VT)





Plots
DO
Tot Phos
Fec Col.

3.19 UPPER HUDSON RIVER BASIN (VERMONT)

The two stations in this basin are located on the Hoosic River at North Pownal and on the Walloomsac River in New York just over the Vermont-New York state line.

The Hoosic flows from northwestern Massachusetts through extreme southwestern Vermont and into the Hudson River above Mechanicville, New York. The Walloomsac flows from Bennington, Vermont to Hoosick, New York and into the Hoosic River.

The Hoosic River station reports violation of Class "C" standards for turbidity (3 of 6, probably due to natural conditions) and fecal coliform (3 of 4). This station is affected by discharges in Massachusetts and from Pownal Tanning Company, the only major discharger on the Hoosic River in Vermont.

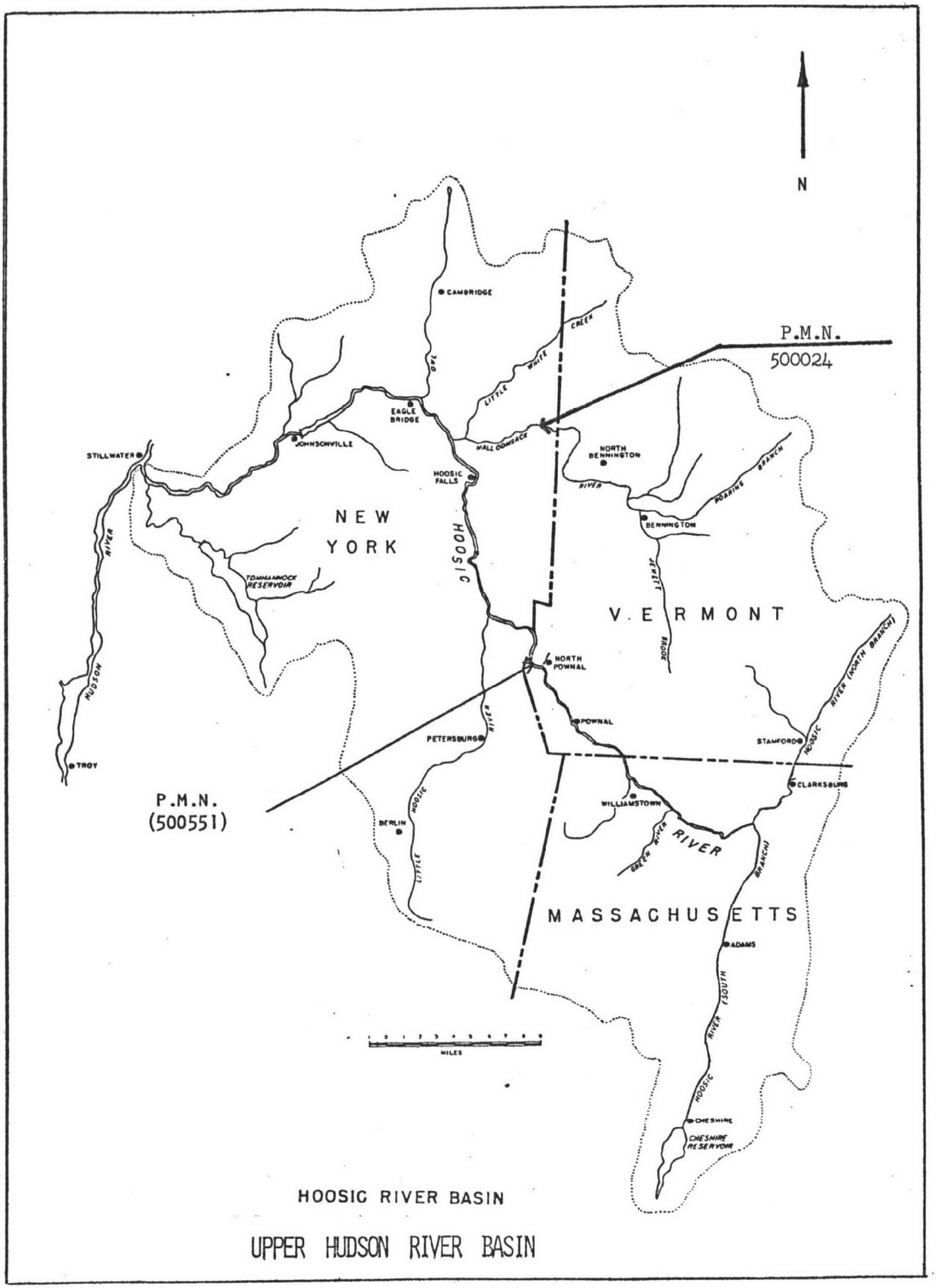
Violations of the Class "C" standard for turbidity (3 of 6) were the only violations reported by the Walloomsac River station. Again, these violations were probably due to natural conditions in the river.

UPPER HUDSON RIVER BASIN
{VERMONT}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Hoosic River at North Pownal, VT	PMN 500551
2.	Walloomsac River near Shaftsbury, VT	PMN 500024



HOOSIC RIVER BASIN

UPPER HUDSON RIVER BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 500551 HOOSIC R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
TURBIDITY JKSN JTU	6	3.	50.00	NONE	25.00	22.[illegible]7
DISS. OXYGEN MG/L	6	0.	0.0	5.00	NONE	11.72
PH SU	6	0.	0.0	6.00	8.50	7.36
COLIFORM FEC MF/100ML	4	3.	75.00	NONE	1000.00	2660.16

STATION 500024 WALLOOMSAC R. (VT)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
TURBIDITY JKSN JTU	6	3.	50.00	NONE	10.00	13.00
DISS. OXYGEN MG/L	5	0.	0.0	6.00	NONE	12.
PH SU	6	0.	0.0	6.00	8.50	7.[illegible]
COLIFORM FEC MF/100ML	4	0.	0.0	NONE	1000.00	0.

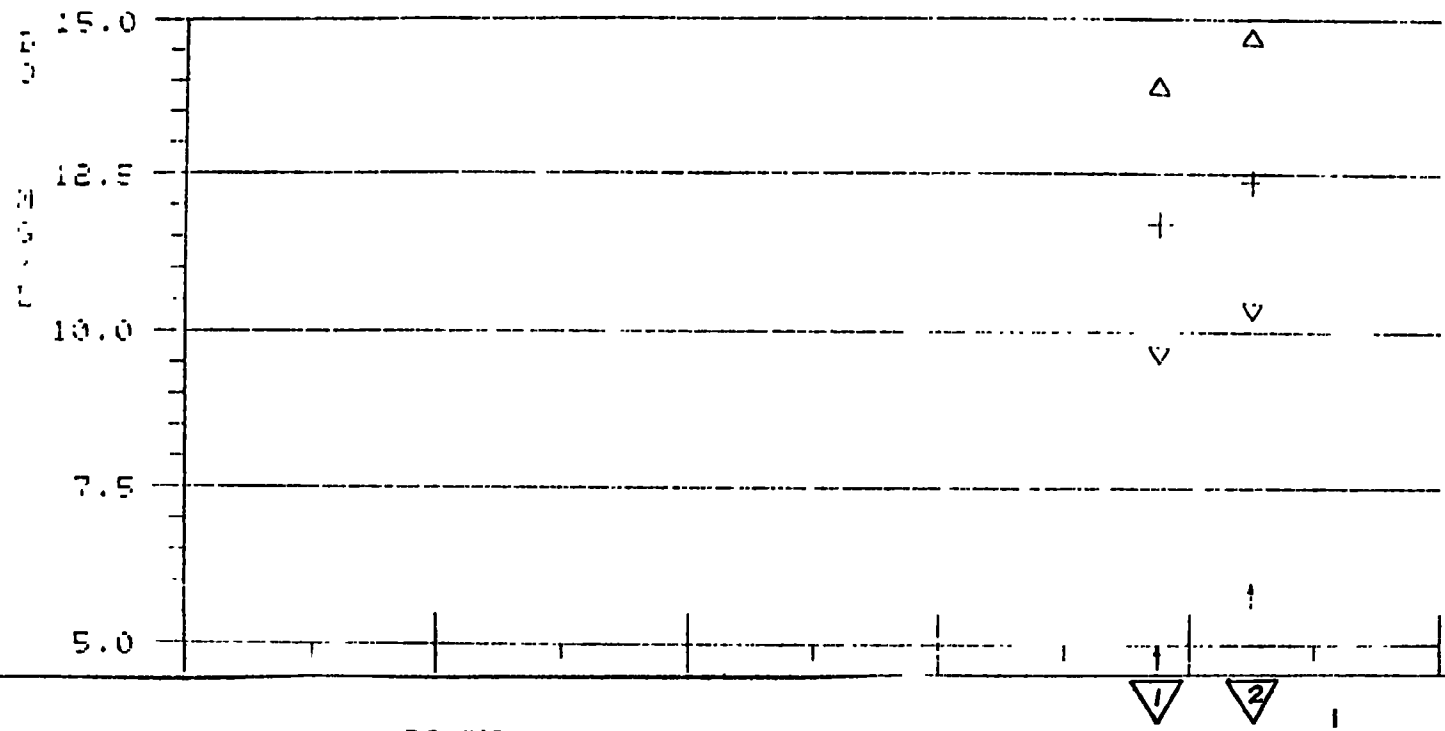
* GEOMETRIC MEAN FOR COLIFORMS

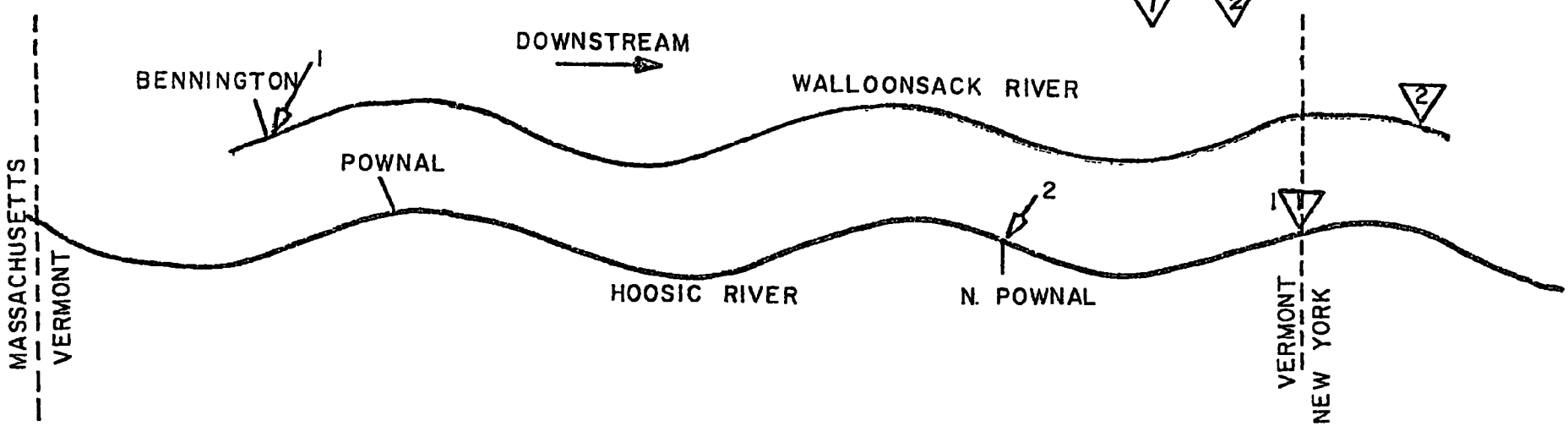
SIGNIFICANT DISCHARGERS

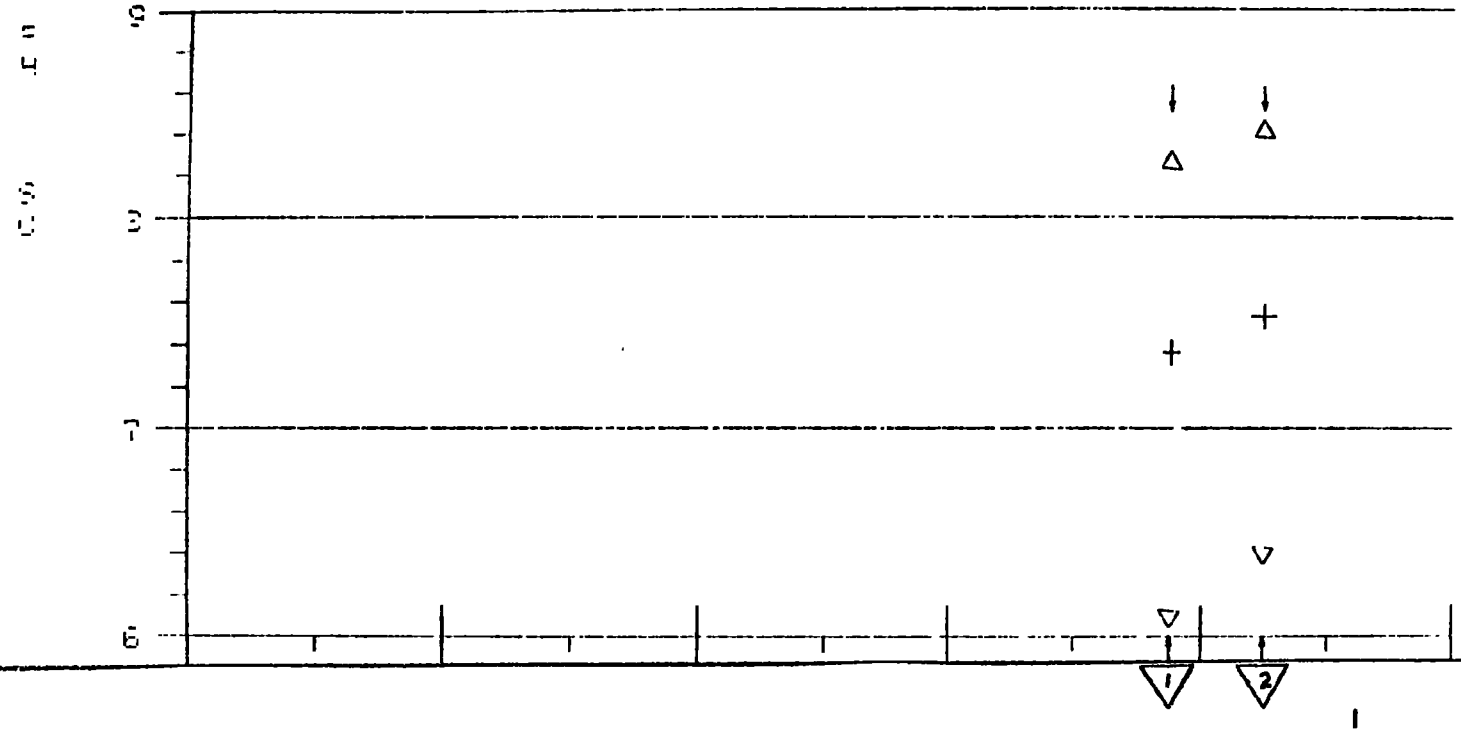
UPPER HUDSON BAY - MAJOR DISCHARGERS

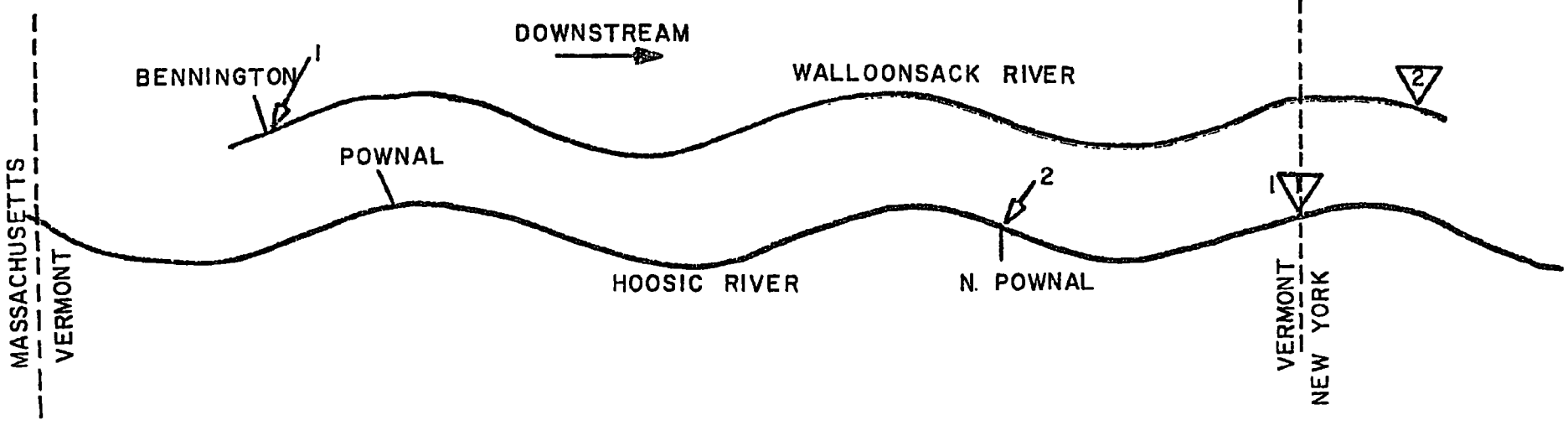
Discharger	Location	Receiving Water	NPDES No.
1. Bennington STP	Bennington	Wallomsac River	0100021
2. Pownal Tanning Co.	N. Pownal	Hoosic River	0000388

REGION I WQ ASSESSMENT REPORT - HOOSIC R. (VT)

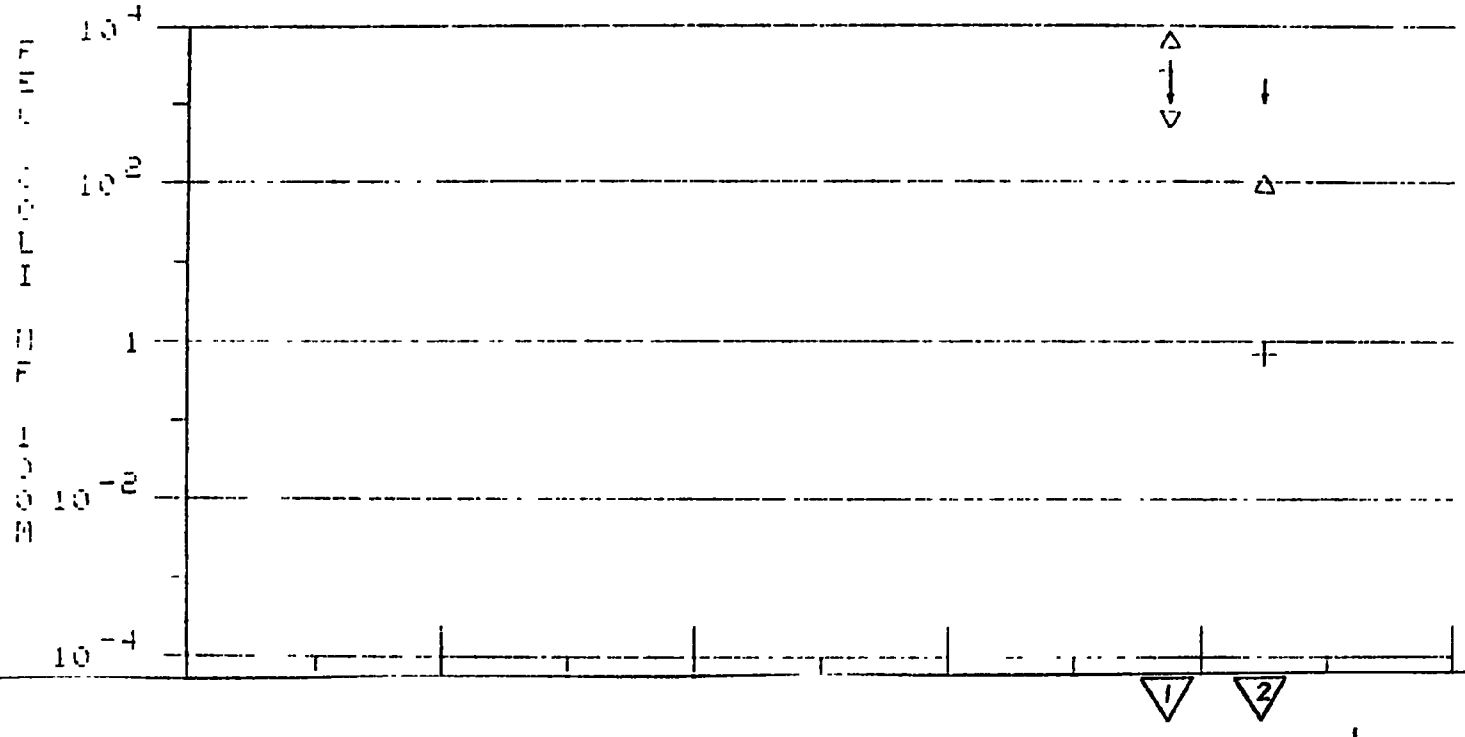


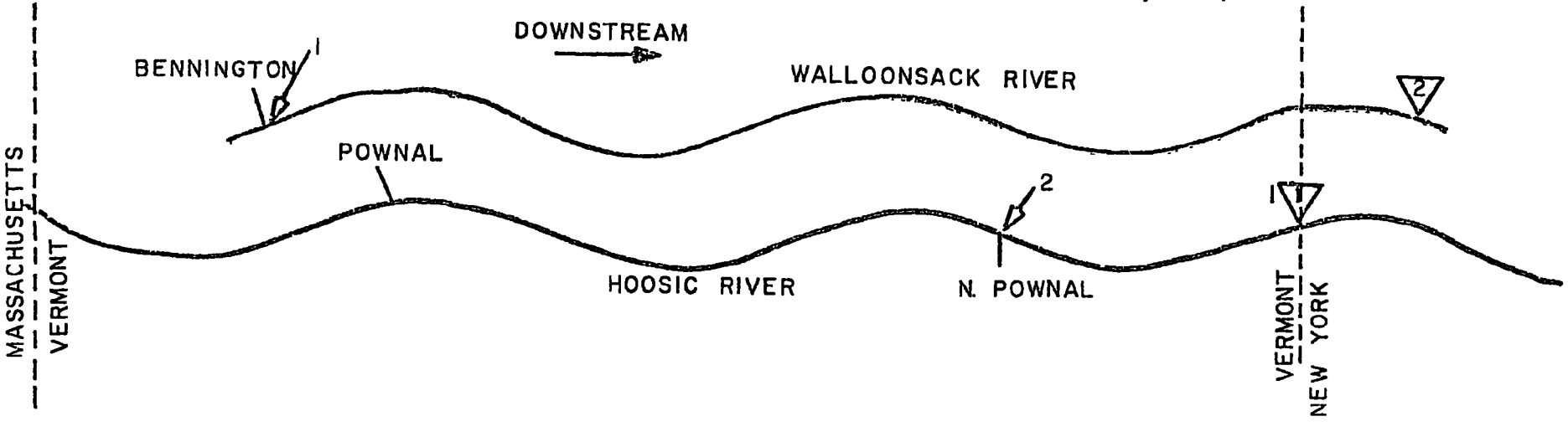



1
2

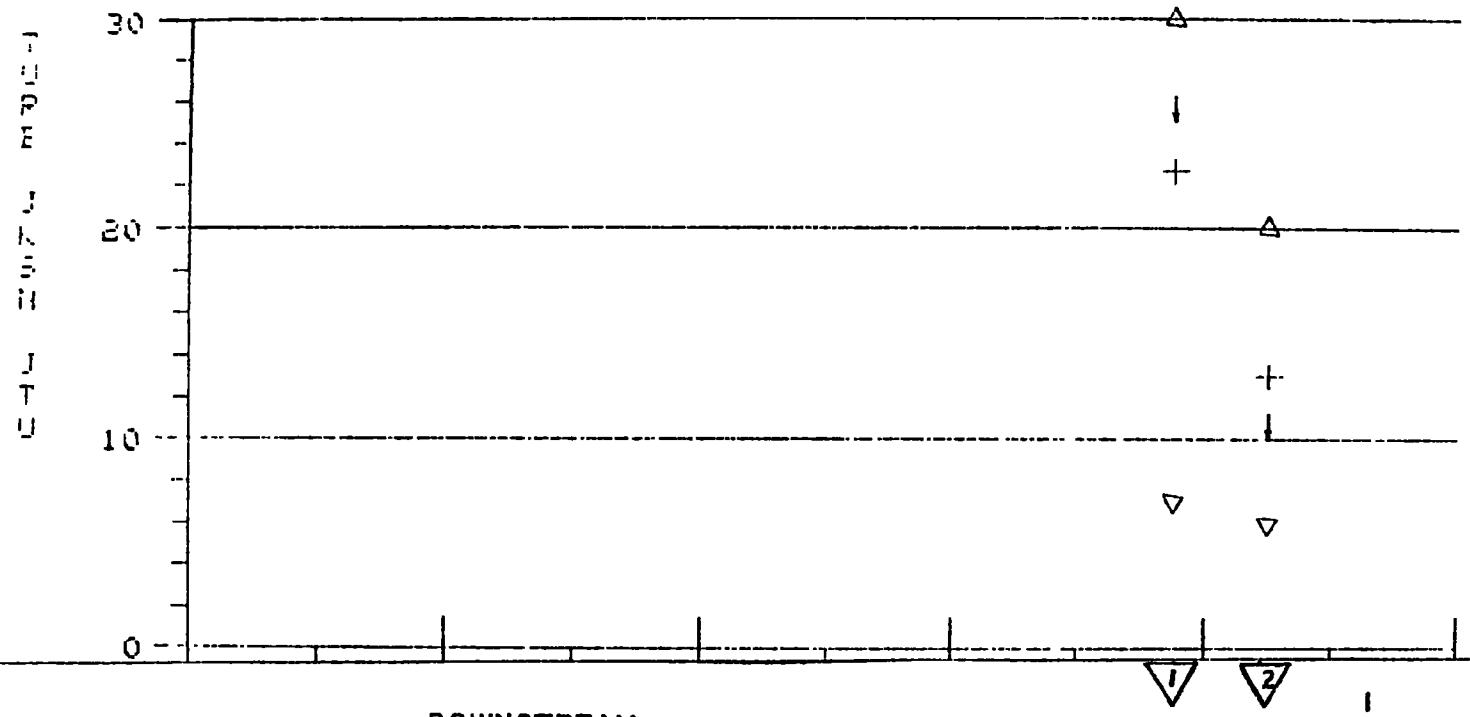

DOWNSTREAM
BENNINGTON
1
WALLOONSACK RIVER
2
POWNAL
2
1
MASSACHUSETTS
VERMONT
HOOSIC RIVER
N. POWNAL
VERMONT
NEW YORK

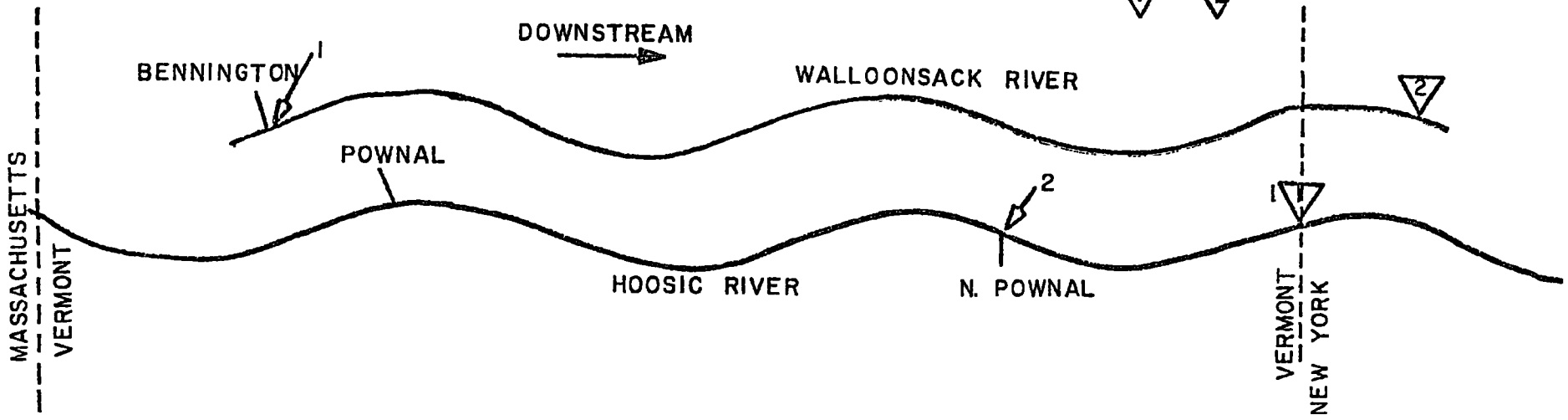
REGION I WQ ASSESSMENT REPORT - HOOSIC R. (VT)

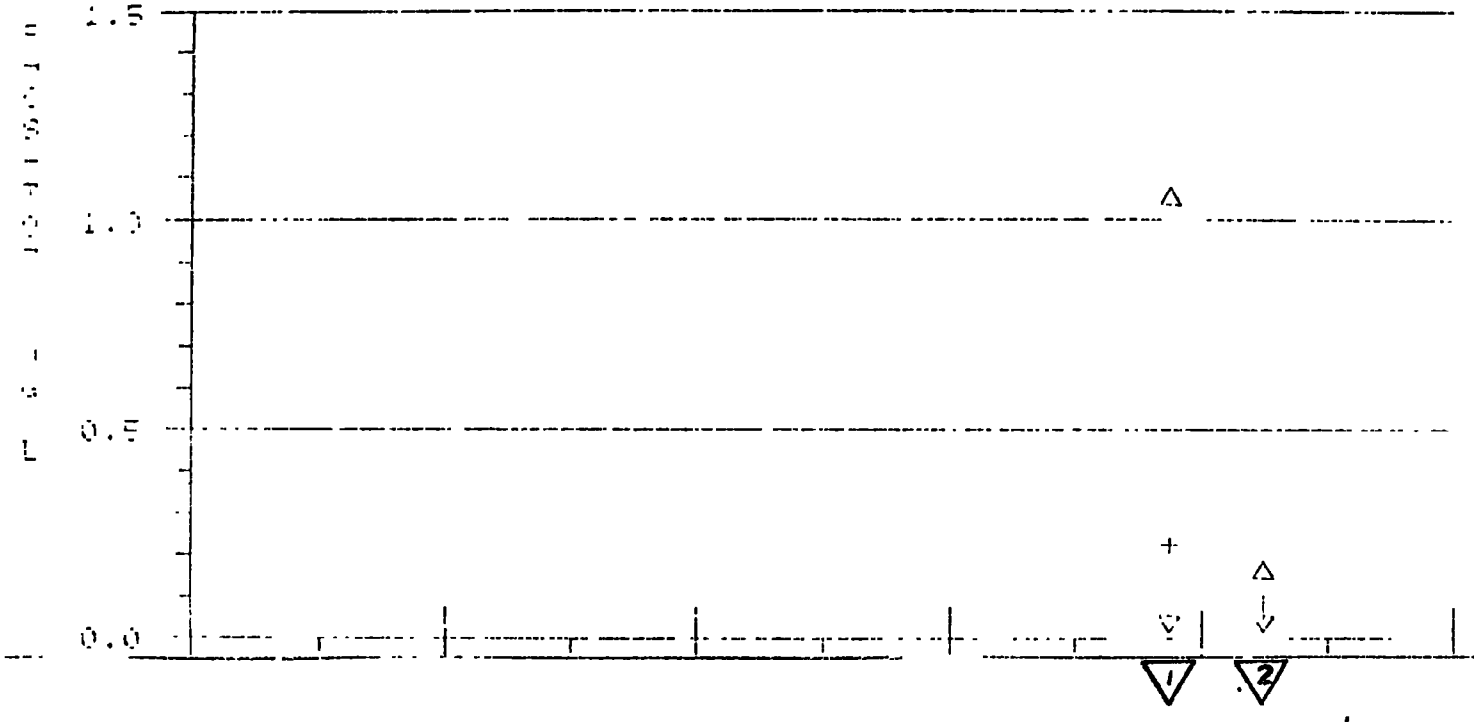


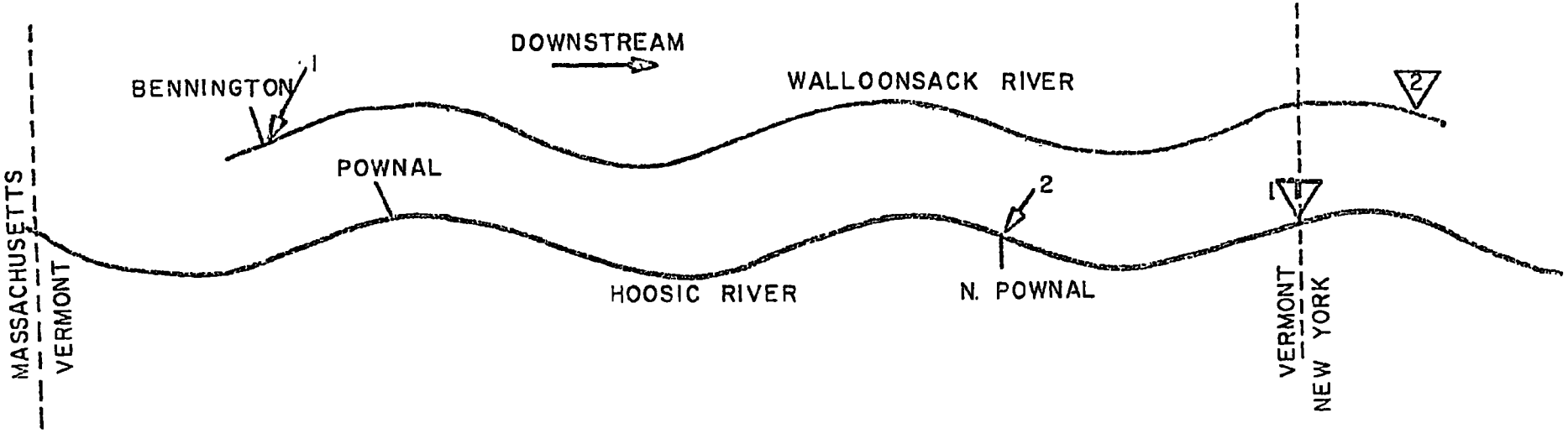


REGION I WQ ASSESSMENT REPORT - HOOSIC R. (VT)






1.5
1.0
0.5
0.0
1
2


DOWNSTREAM
BENNINGTON
1
WALLOONSACK RIVER
2
POWNAL
2
1
MASSACHUSETTS
VERMONT
HOOSIC RIVER
N. POWNAL
VERMONT
NEW YORK

Tot Col:

3.20 ANDROSCOGGIN RIVER BASIN (NEW HAMPSHIRE)

The Androscoggin River begins at Errol Dam at the outlet of Umbagog Lake and flows forty-six miles through New Hampshire before entering Maine at Gilead. Errol, Milan, Berlin, Gorham and Shelborne are located on the Androscoggin River with the major industry being the Brown Company paper mills. The flow of the river at Berlin is controlled by the Errol Dam and maintained at 1550 cfs.

In 1975, Class B standards violations for pH (2 of 8) and total coliform (4 of 8) as well as high nutrient levels were reported at the Milan station. These conditions can be attributed to non-point sources and natural conditions. Class C standards violations for total coliform (8 of 8) and high phosphorus levels were reported by the station at Gilead. Industrial waste discharges from the Brown Paper Company, untreated domestic sewage from Berlin and Gorham, and non-point sources are primarily responsible for the water quality problems reported at Gilead.

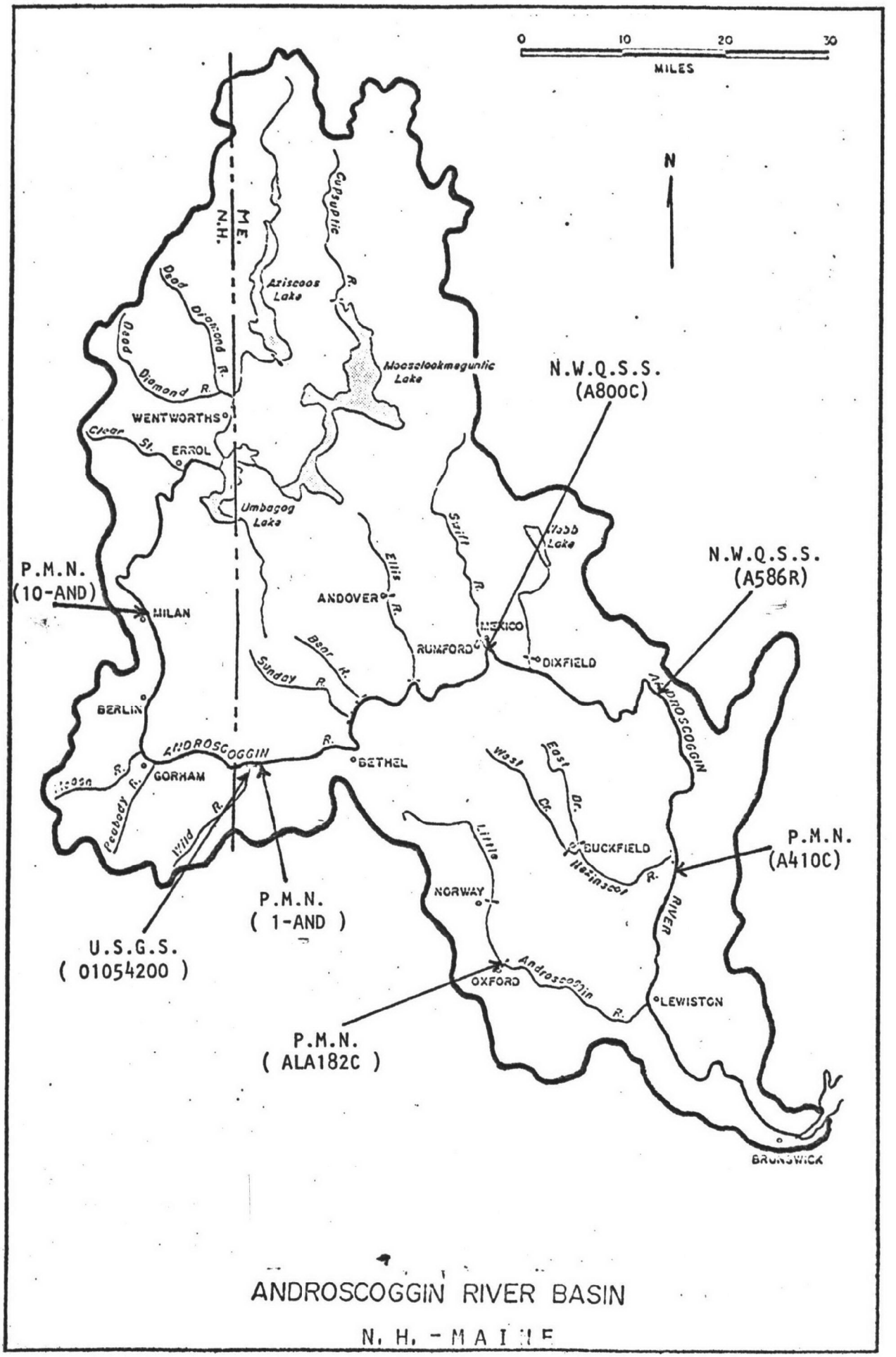
ANDROSCOGGIN RIVER

{NEW HAMPSHIRE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Androscoggin River Rte. 110 Milan, NH	PMN 10-AND
2.	Androscoggin River Rte. 2 Gilead, ME	PMN 1-AND



ANDROSCOGGIN RIVER BASIN

N. H. - MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 10-AND ANDROSCOGGIN R. (NH-ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH. MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	1.
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	10.
PH SU	8	2.	25.00	6.50	8.00	6.
COLIFORM TOT MFIM/100ML	8	4.	50.00	NONE	240.00	218.

STATION 1-AND ANDROSCOGGIN R. (NH-ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	2.
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	9.[illegible]
PH SU	8	0.	0.0	6.00	8.50	6.46
COLIFORM TOT MFIM/100ML	8	8.	100.00	NONE	1000.00	8784.80

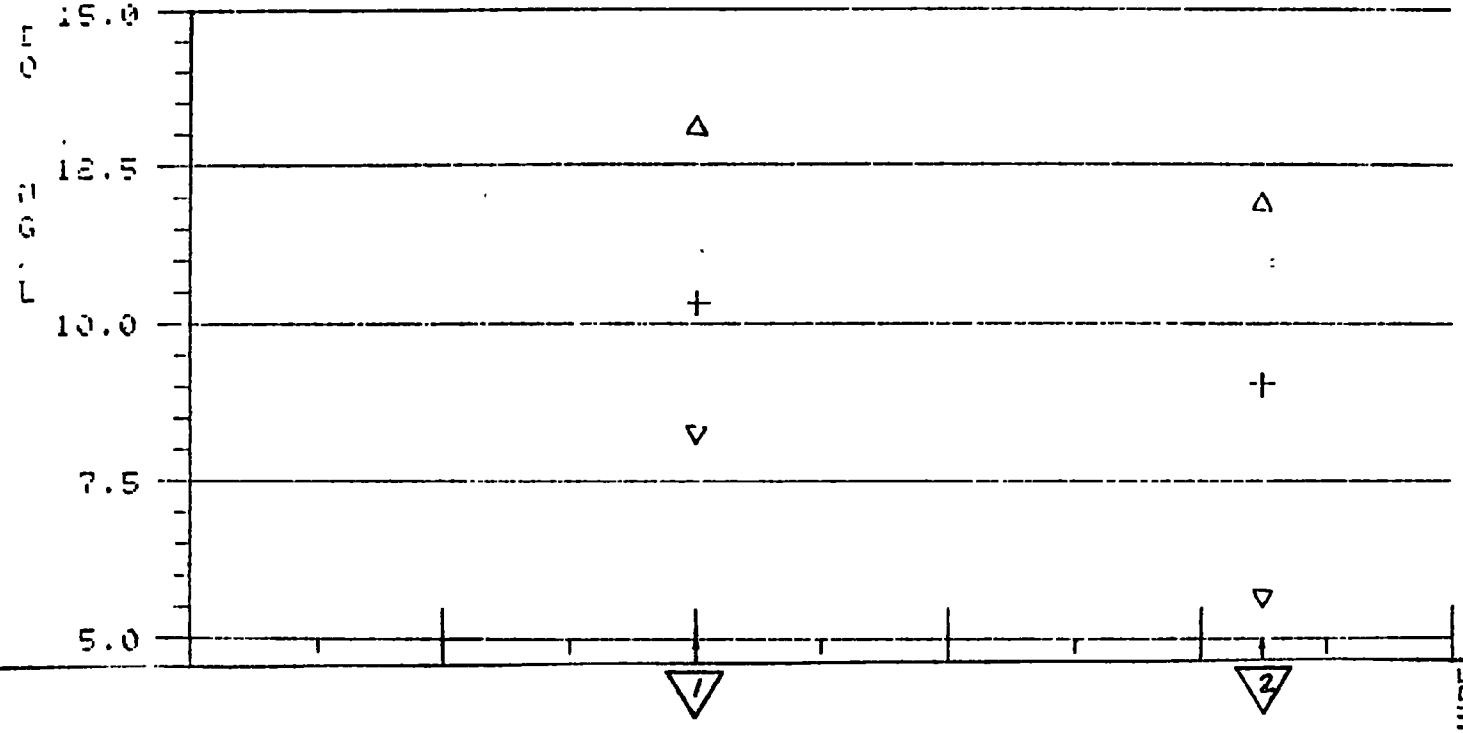
* GEOMETRIC MEAN FOR COLIFORMS

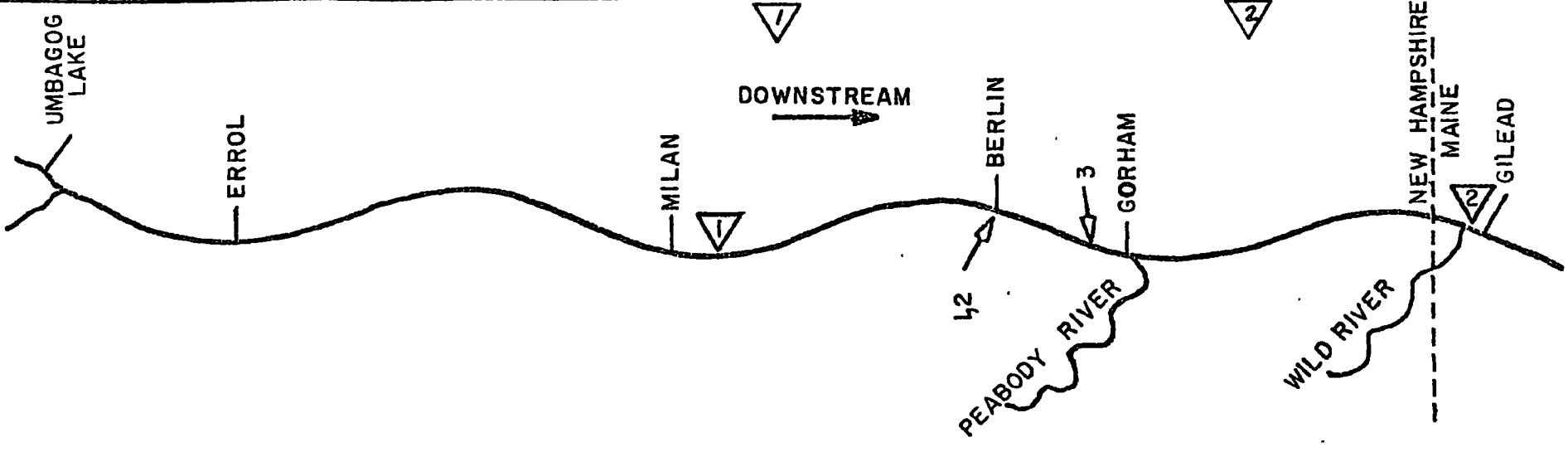
SIGNIFICANT DISCHARGERS

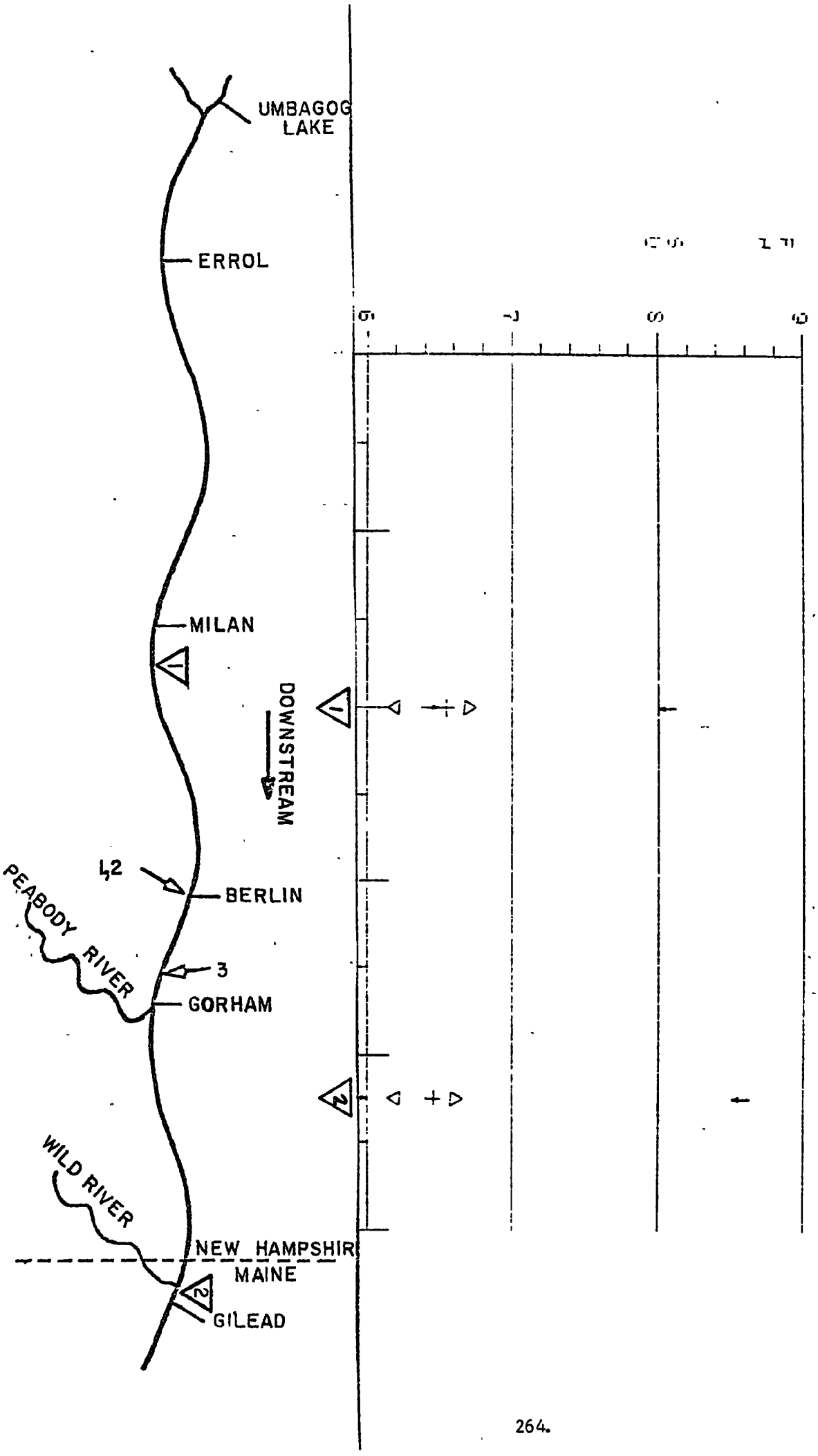
Androscoggin River Basin (New Hampshire)

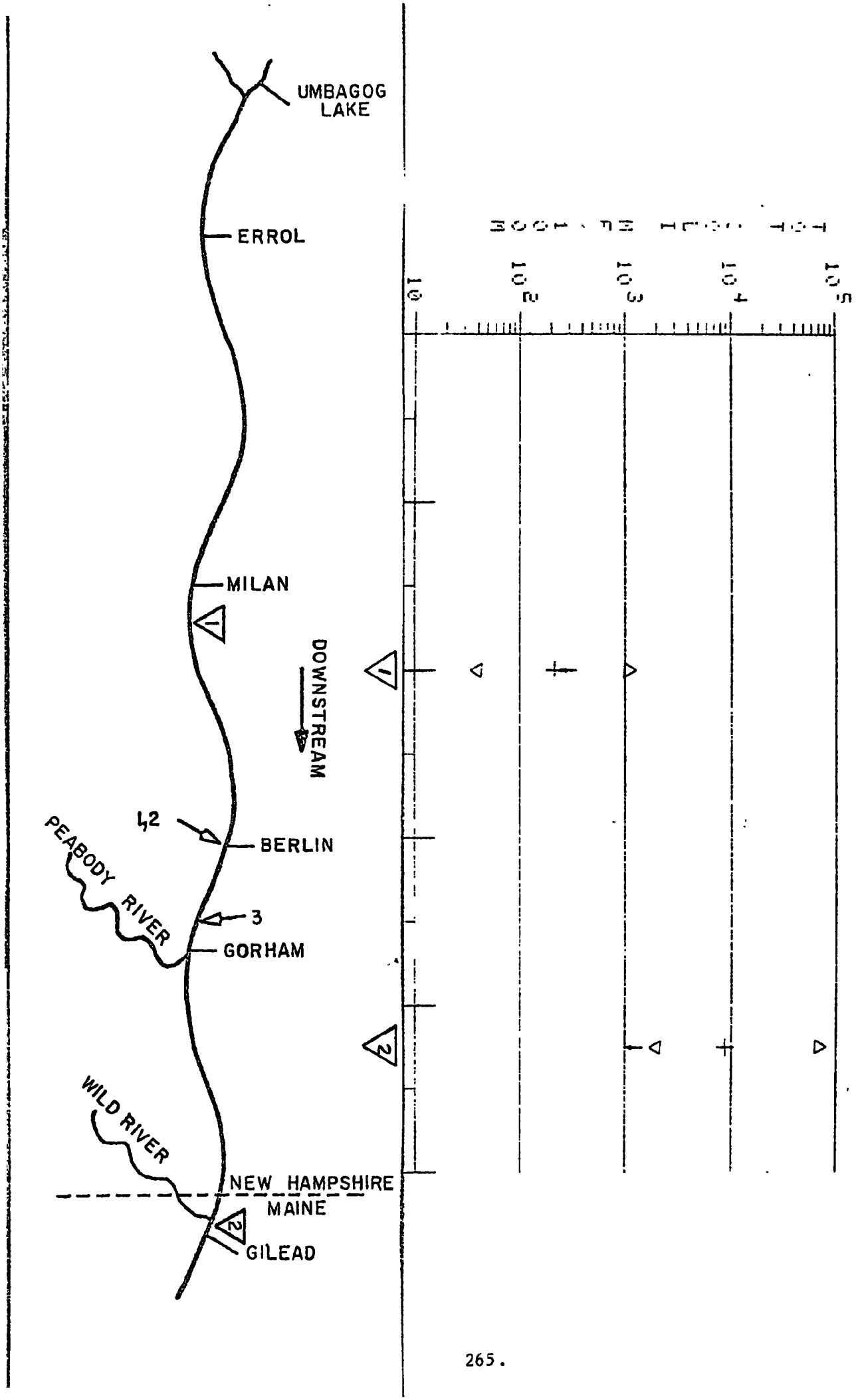
	Discharger	Location	Receiving Water	NPDES No.
1.	Brown Company - Berlin Mill	Berlin	Androscoggin River	0000612
2.	Brown Company - Cascade Mill	Berlin	Androscoggin River	0000655
3.	Brown Company - Resi-Chemical Mill	Gorham	Androscoggin River	0000647

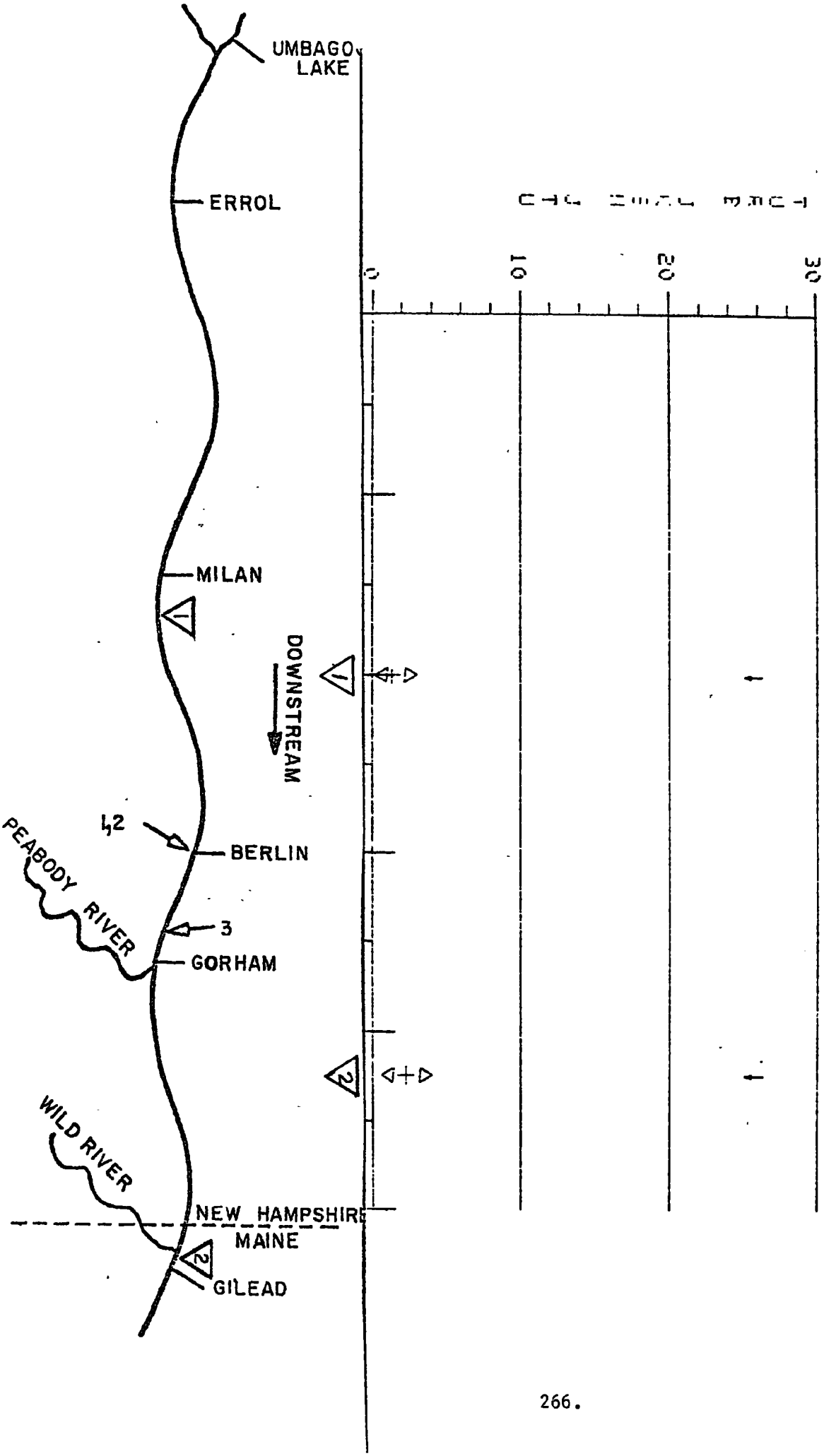
REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)

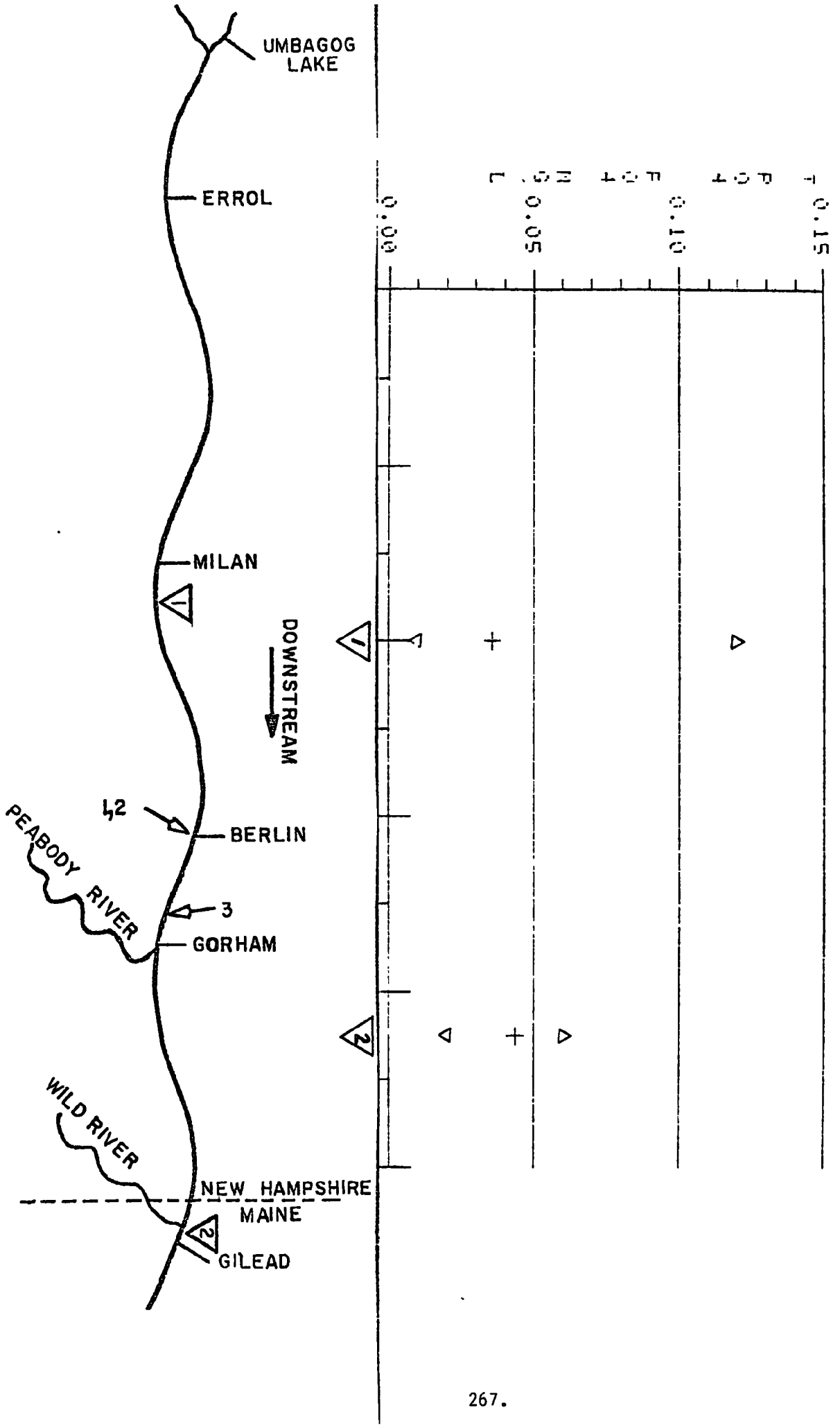





UMBAGOG LAKE
ERROL
MILAN
DOWNSTREAM
BERLIN
4,2
PEABODY RIVER
3
GORHAM
WILD RIVER
NEW HAMPSHIRE
MAINE
GILEAD


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
10^5
10^4
10^3
10^2
10
UMBAGOG LAKE
ERROL
MILAN
DOWNSTREAM
4,2
BERLIN
PEABODY RIVER
3
GORHAM
WILD RIVER
NEW HAMPSHIRE
MAINE
GILEAD


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
0
10
20
30
UMBAGO LAKE
ERROL
MILAN
DOWNSTREAM
4,2
BERLIN
PEABODY RIVER
3
GORHAM
WILD RIVER
NEW HAMPSHIRE
MAINE
GILEAD


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
PHOSPHORUS
0.15
0.10
0.05
0.00
UMBAGOG LAKE
ERROL
MILAN
DOWNSTREAM
BERLIN
PEABODY RIVER
GORHAM
WILD RIVER
NEW HAMPSHIRE
MAINE
GILEAD
1
2
3
4

Plots
DO
PO4
Fecal Col.

3.21 MERRIMACK RIVER BASIN (NEW HAMPSHIRE)

The Merrimack River is formed by the confluence of the Pemigewasset and Winnepesaukee Rivers at Franklin, New Hampshire. Other major tributaries in New Hampshire are the Contoocook, Suncook, Piscataquog and Nashua Rivers.

A progressive degradation in water quality is observed proceeding downstream from Franklin to Nashua, New Hampshire with increasing concentrations of coliform bacteria, suspended solids, B.O.D., nitrogen and phosphorus.

Numerous total coliform violations are reported at the Penacook, Hooksett, and Nashua stations. Natural conditions are believed to be responsible for the numerous pH violations seen at the New Hampton station on the Pemigewasset River and the Hooksett station on the Merrimack. Inadequate treatment of domestic sewage, industrial wastes, and combined sewer overflows in Franklin, Concord, Manchester and Nashua contribute to the large number of coliform violations reported at the stations on the mainstem.

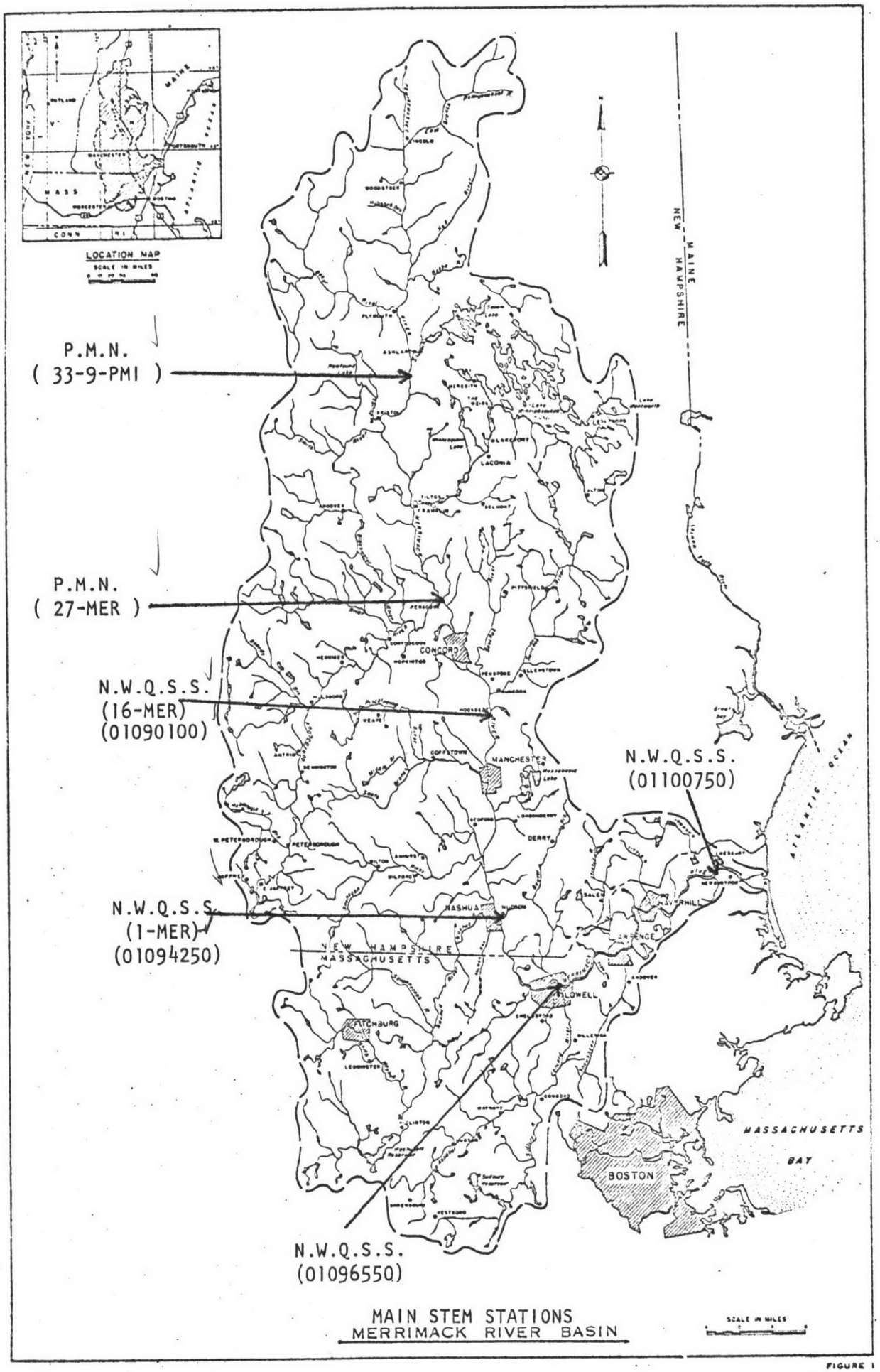
MERRIMACK RIVER BASIN

{NEW HAMPSHIRE}

in

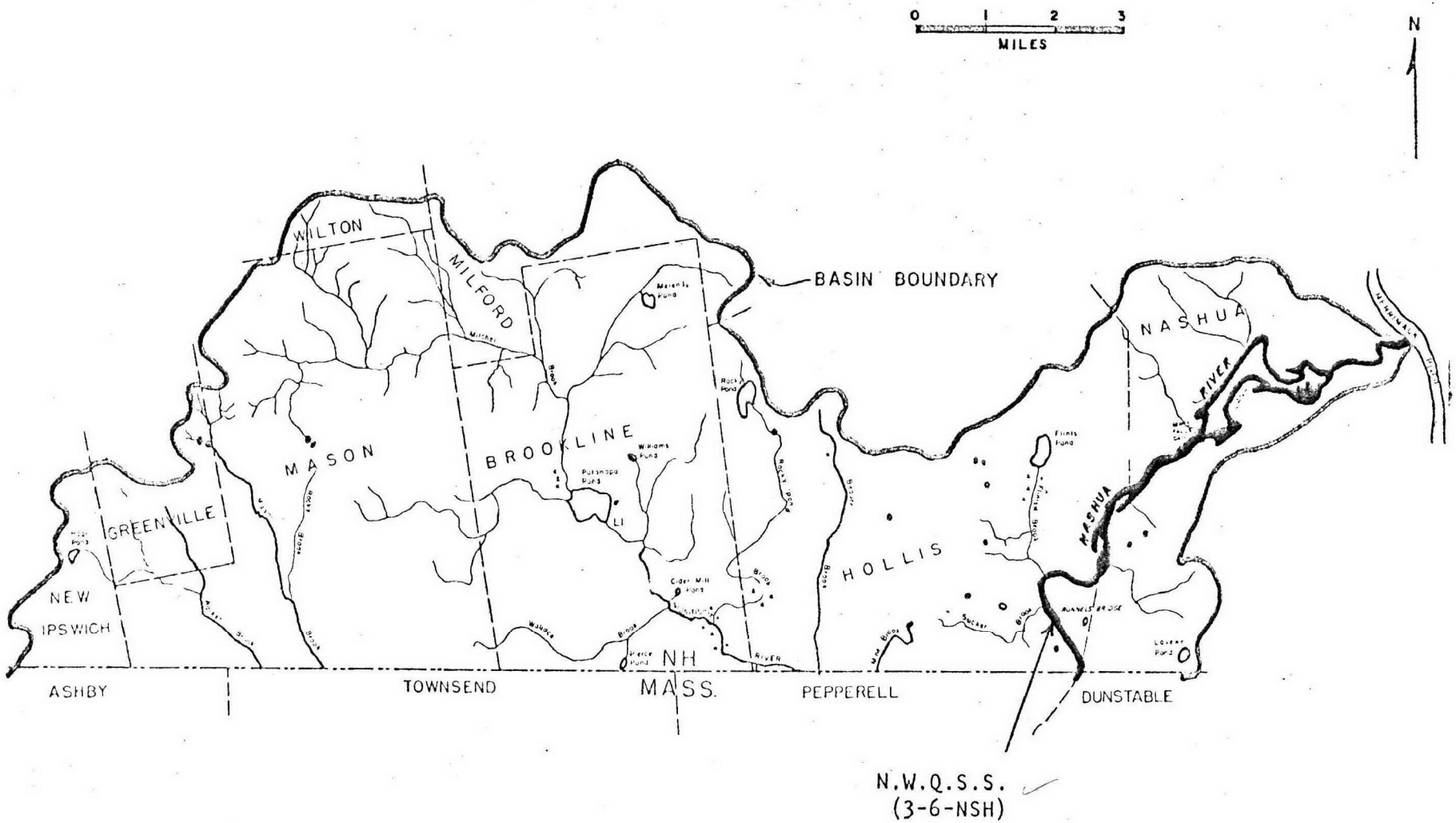
DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Pemigewasset River at New Hampton, NH	PMN 33-9-PMI
2.	Merrimack River at Penacook, NH	PMN 27-MER
3.	Merrimack River at Hooksett, NH	N.W.Q.S.S. 16-MER USGS 01090100
4.	Nashua River Hollis Depot, Hollis, NH	PMN 3-6-NSH
5.	Merrimack River at Nashua, NH	N.W.Q.S.S. 1-MER USGS 01094250



MAIN STEM STATIONS
MERRIMACK RIVER BASIN

FIGURE 1



NASHUA RIVER BASIN
IN
NEW HAMPSHIRE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 33-9-PMI PEMIGEWASSET R. (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	1.61
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	10.62
PH SU	8	7.	87.50	6.50	8.00	6.34
COLIFORM TOT MFIM/100ML	7	2.	28.57	NONE	240.00	103.79

STATION 27-MER MERRIMACK R. (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	1.54
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	10.17
PH SU	8	0.	0.0	6.50	8.00	6.89
COLIFORM TOT MFIM/100ML	7	7.	100.00	NONE	240.00	3551.78

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01090100 MERRIMACK R. (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	22	0.	0.0	NONE	25.00	2.6
DISS. OXYGEN MG/L	20	2.	10.00	5.00	NONE	8.9
PH SU	20	12.	60.00	6.50	8.00	6.6
COLIFORM TOT MFIM/100ML	22	22.	100.00	NONE	240.00	3893.

SAME

STATION 16-MER MERRIMACK R. (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	1.7
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	10.4
PH SU	8	1.	12.50	6.50	8.00	6.8
COLIFORM TOT MFIM/100ML	7	6.	85.71	NONE	240.00	7225.17

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 3-6-NSH NASHUA R. (NH-MA)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	6.16
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	9.26
PH SU	8	0.	0.0	6.00	8.50	6.71
COLIFORM TOT MFIM/100ML	7	2.	28.57	NONE	1000.00	389.44

STATION 01094250 MERRIMACK R. (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	22	0.	0.0	NONE	25.00	2.18
DISS. OXYGEN MG/L	20	1.	5.00	5.00	NONE	8.66
PH SU	20	0.	0.0	6.00	8.50	6.42
COLIFORM TOT MFIM/100ML	21	21.	100.00	NONE	1000.00	9110.64

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 1-MER MERRIMACK R. (NH)

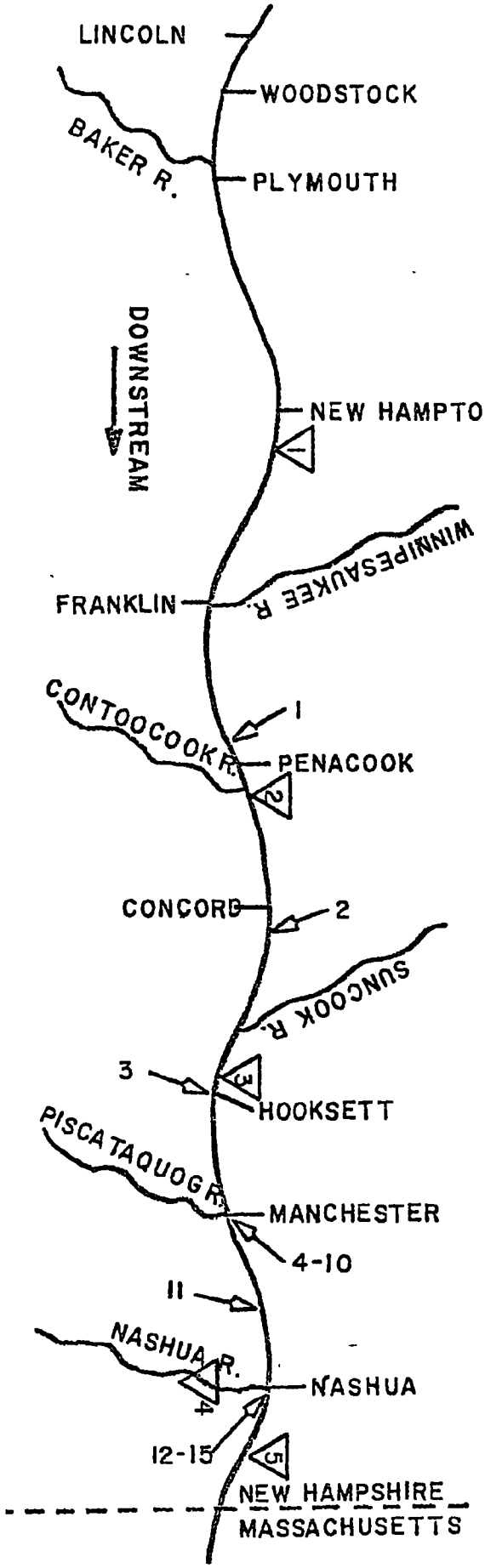
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	2.20
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	9.[illegible]
PH SU	8	0.	0.0	6.00	8.50	6.[illegible]
COLIFORM TOT MFIM/100ML	7	7.	100.00	NONE	1000.00	28584.[illegible]

* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

MERRIMACK RIVER BASIN (NEW HAMPSHIRE)

	Discharger	Location	Receiving Water	NPDES No.
1.	Penacook WTP	Penacook	Merrimack River	0100331
2.	Concord STP	Concord	Merrimack River	0100901
3.	Hooksett WTP	Hooksett	Merrimack River	0100129
4.	Manchester STP	Manchester	Merrimack River	0100447
5.	Wanbec Dyeing & Finish Company	Manchester	Merrimack River	0000531
6.	Seal Tanning, Ohio Leather Company	Manchester	Merrimack River	0001066
7.	Groval Knitted Fabrics	Manchester	Merrimack River	0000981
8.	Granite State Packing	Manchester	Merrimack River	0001171
9.	Syntextiles, Inc.	Manchester	Merrimack River	0000507
10.	Foster Grant Company	Manchester	Merrimack River	0000116
11.	Merrimack WTP	Merrimack	Merrimack River	0100161
12.	Sanders Associates, Inc.	Nashua	Nashua River	0000442
13.	Hampshire Chemical W. R. Grace Company	Nashua	Spot Brook	0000591
14.	Nashua STP	Nashua	Merrimack River	0100170
15.	Mohawk Associates	Nashua	Nashua River	0000396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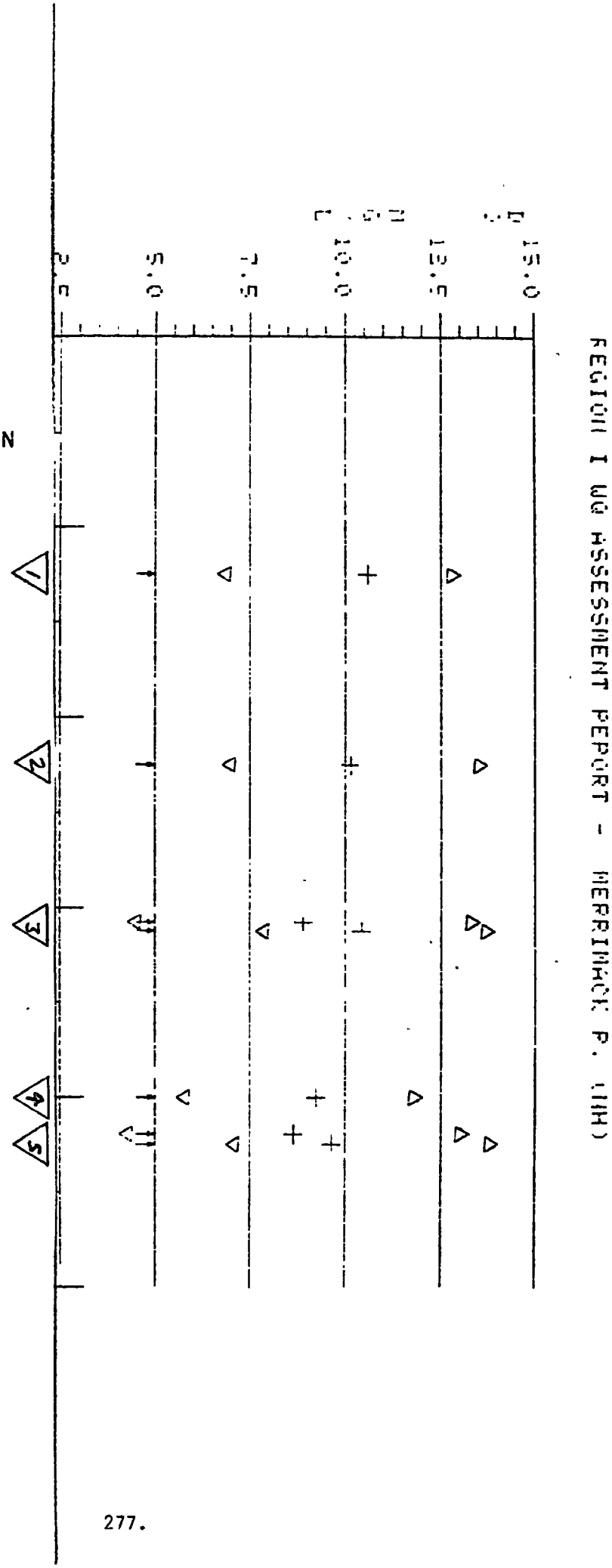
WOODSTOCK
BAKER R.
PLYMOUTH
DOWNSTREAM
NEW HAMPTON
WINNIPESAUKEE R.
FRANKLIN
CONTOOCOOK R.
PENACOOK
CONCORD
SUNCOOK R.
HOOKSETT
PISCATAQUOG R.
MANCHESTER
NASHUA R.
NASHUA
NEW HAMPSHIRE
MASSACHUSETTS


REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (NH)
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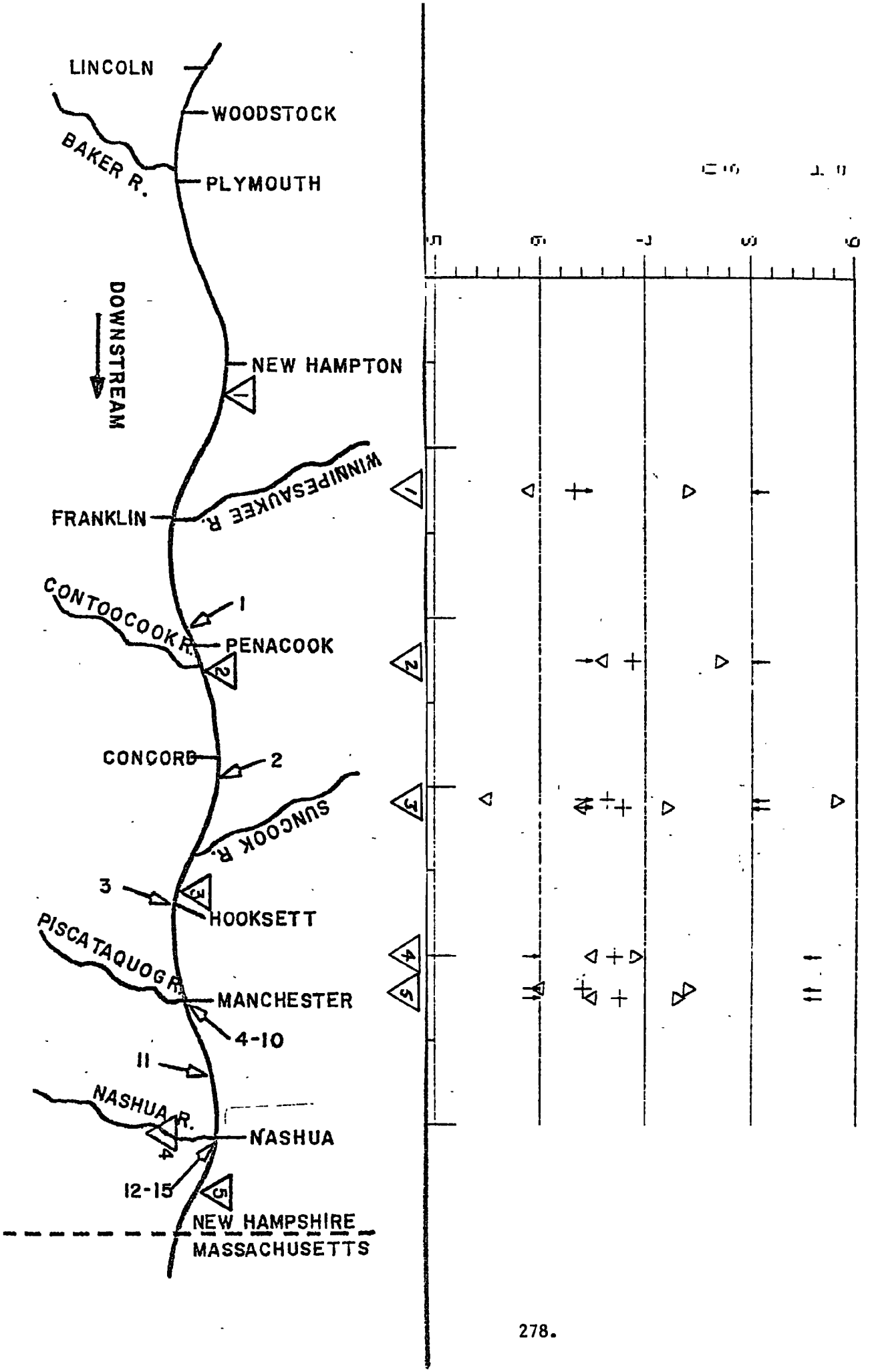
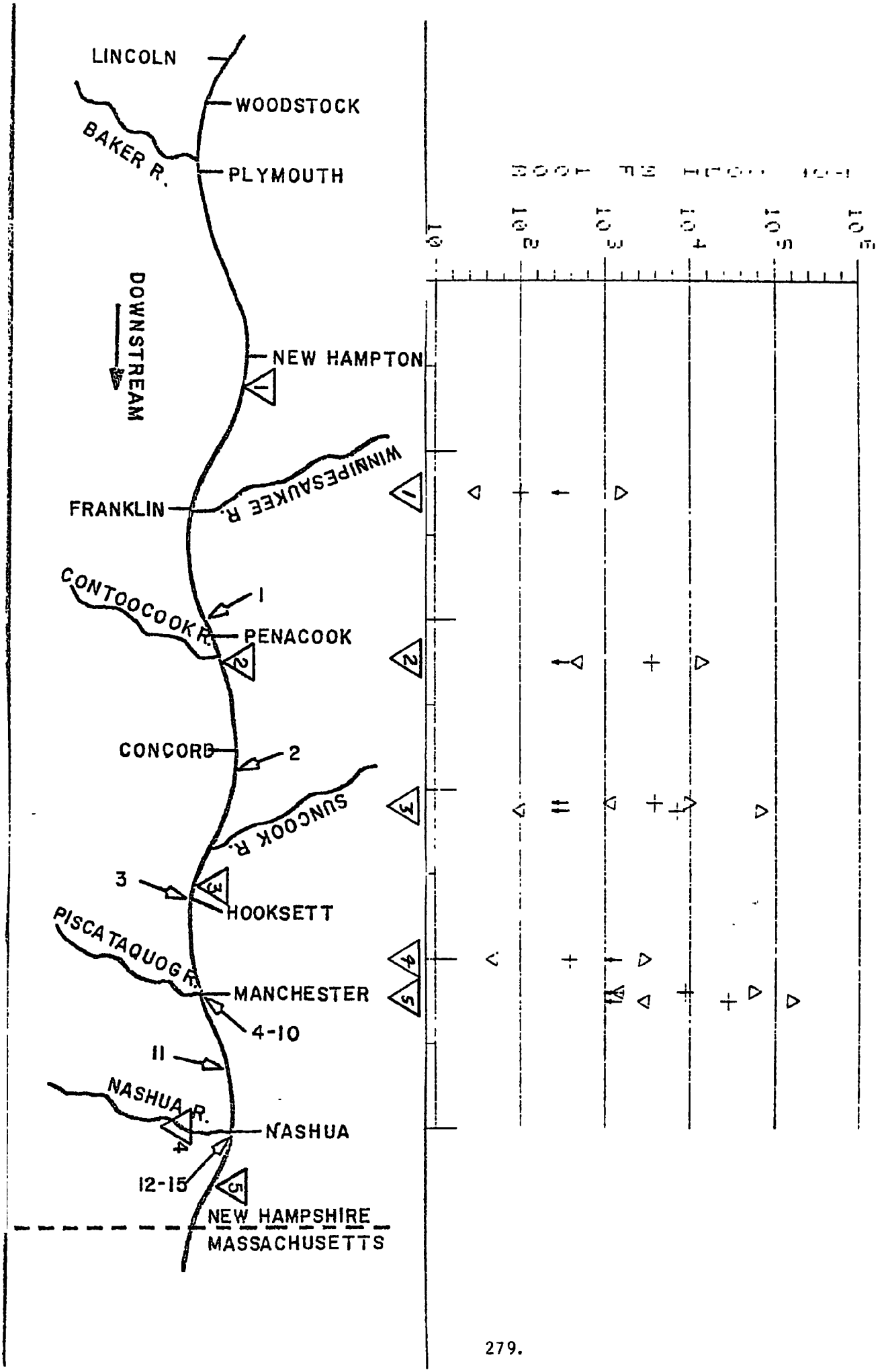
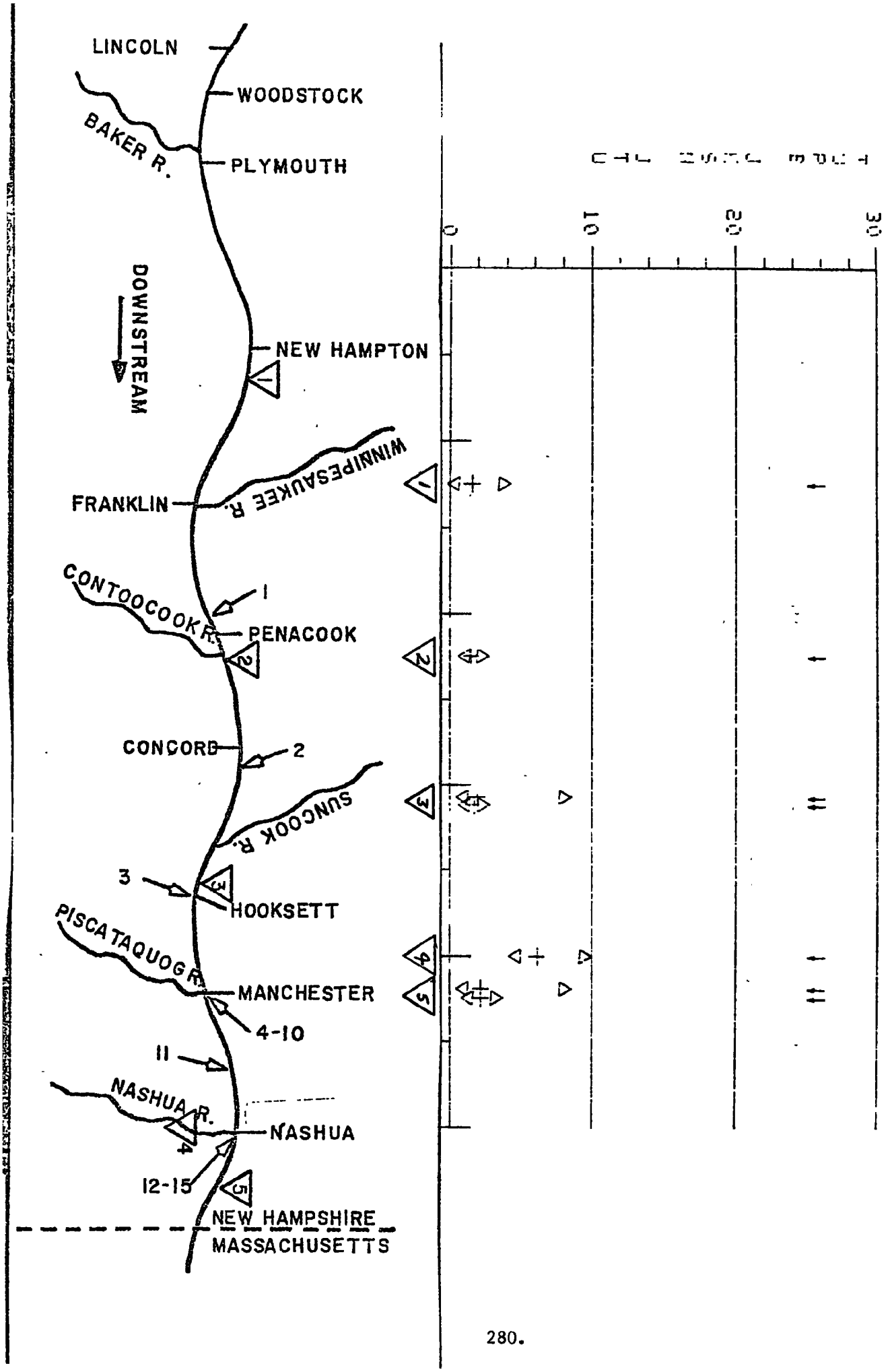
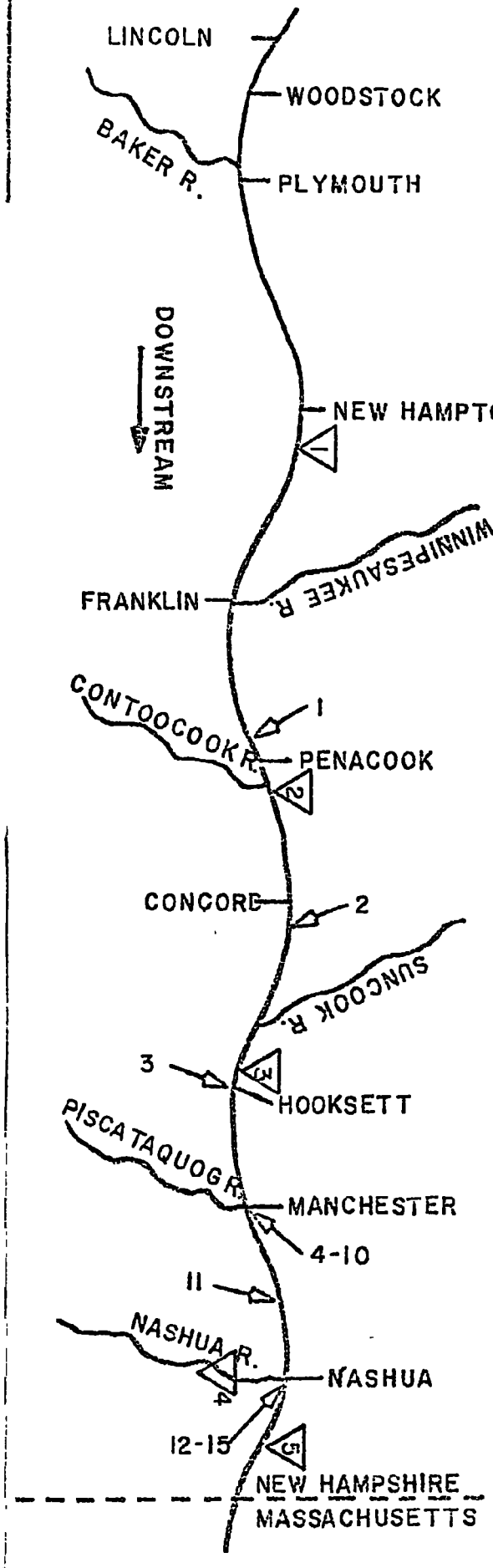
12.5
10.0
7.5
5.0
2.5


REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (NH)
LINCOLN
WOODSTOCK
BAKER R.
PLYMOUTH
DOWNSTREAM
NEW HAMPTON
WINNIPESAUKEE R.
FRANKLIN
CONTOOCOOK R.
PENACOOK
CONCORD
SUNCOOK R.
HOOKSETT
PISCATAQUOG R.
MANCHESTER
NASHUA R.
NASHUA
NEW HAMPSHIRE
MASSACHUSETTS


LINCOLN
WOODSTOCK
BAKER R.
PLYMOUTH
DOWNSTREAM
NEW HAMPTON
WINNIPESAUKEE R.
FRANKLIN
CONTOOCOOK R.
PENACOOK
CONCORD
SUNCOOK R.
HOOKSETT
PISCATAQUOG R.
MANCHESTER
NASHUA R.
NASHUA
NEW HAMPSHIRE
MASSACHUSETTS
REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (MHD)


REGION I WQ ASSESSMENT REPORT - MERRIMACK R. (NH)
0
10
20
30
LINCOLN
WOODSTOCK
BAKER R.
PLYMOUTH
DOWNSTREAM
NEW HAMPTON
WINNIPESAUKEE R.
FRANKLIN
CONTOOCOOK R.
PENACOOK
CONCORD
SUNCOOK R.
HOOKSETT
PISCATAQUOG R.
MANCHESTER
NASHUA R.
NASHUA
NEW HAMPSHIRE
MASSACHUSETTS


LINCOLN
WOODSTOCK
BAKER R.
PLYMOUTH
DOWNSTREAM
NEW HAMPTON
WINNIPESAUKEE R.
FRANKLIN
CONTOOCOOK R.
1
PENACOOK
CONCORD
2
SUNCOOK R.
3
HOOKSETT
PISCATAQUOG R.
MANCHESTER
4-10
11
NASHUA R.
NASHUA
4
12-15
5
NEW HAMPSHIRE
MASSACHUSETTS

Plots
DO
Incomplete

3.22 CONNECTICUT RIVER BASIN (NEW HAMPSHIRE)

The Connecticut River flows southerly from its source in northwestern New Hampshire and forms the New Hampshire-Vermont border before entering Massachusetts at Northfield. The entire width of this 256 mile segment of the mainstem is under the jurisdiction of New Hampshire and classifies it as "B" water. The major New Hampshire tributaries to the Connecticut River are the Upper Ammonoosuc, Ammonoosuc, Mascoma, Sugar, Cold and Ashuelot Rivers.

Discharges from the Groveton Paper Company and the wastewater treatment plants at Groveton and Lancaster, New Hampshire are primarily responsible for the DO, pH and total coliform violations at the Gilman station and the DO and pH violations at the Waterford station. Inadequate sewage treatment at Lebanon and Claremont, as well as non-point sources, are believed responsible for the total coliform (8 of 9) violations reported at the Walpole station. Industrial dischargers in Keene, W. Swanzey, Winchester and Hinsdale determine the quality of the Ashuelot River, particularly during low flow periods. Numerous violations are reported at both stations on this river.

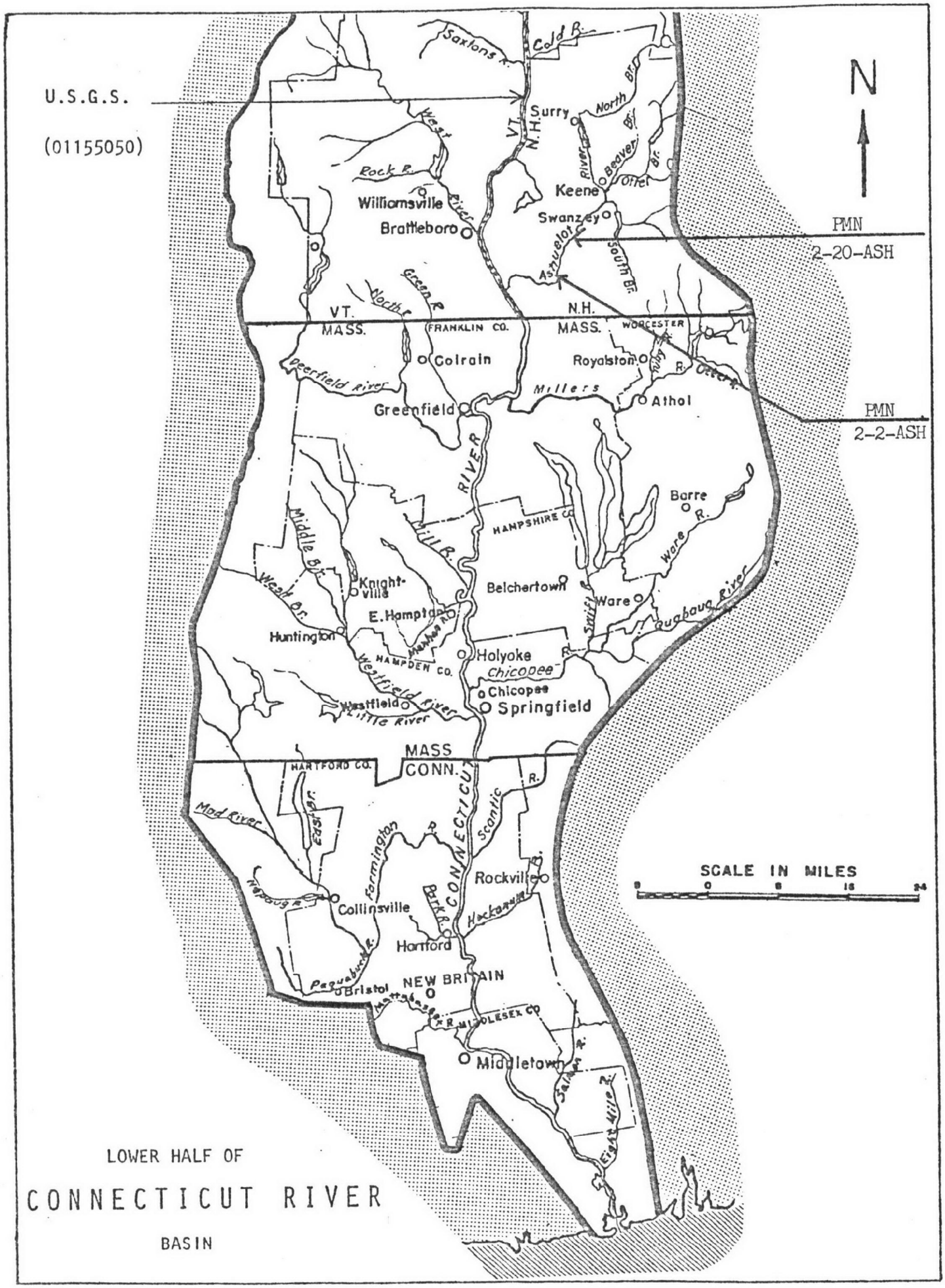
CONNECTICUT RIVER BASIN

{NEW HAMPSHIRE}

in

DOWNSTREAM ORDER

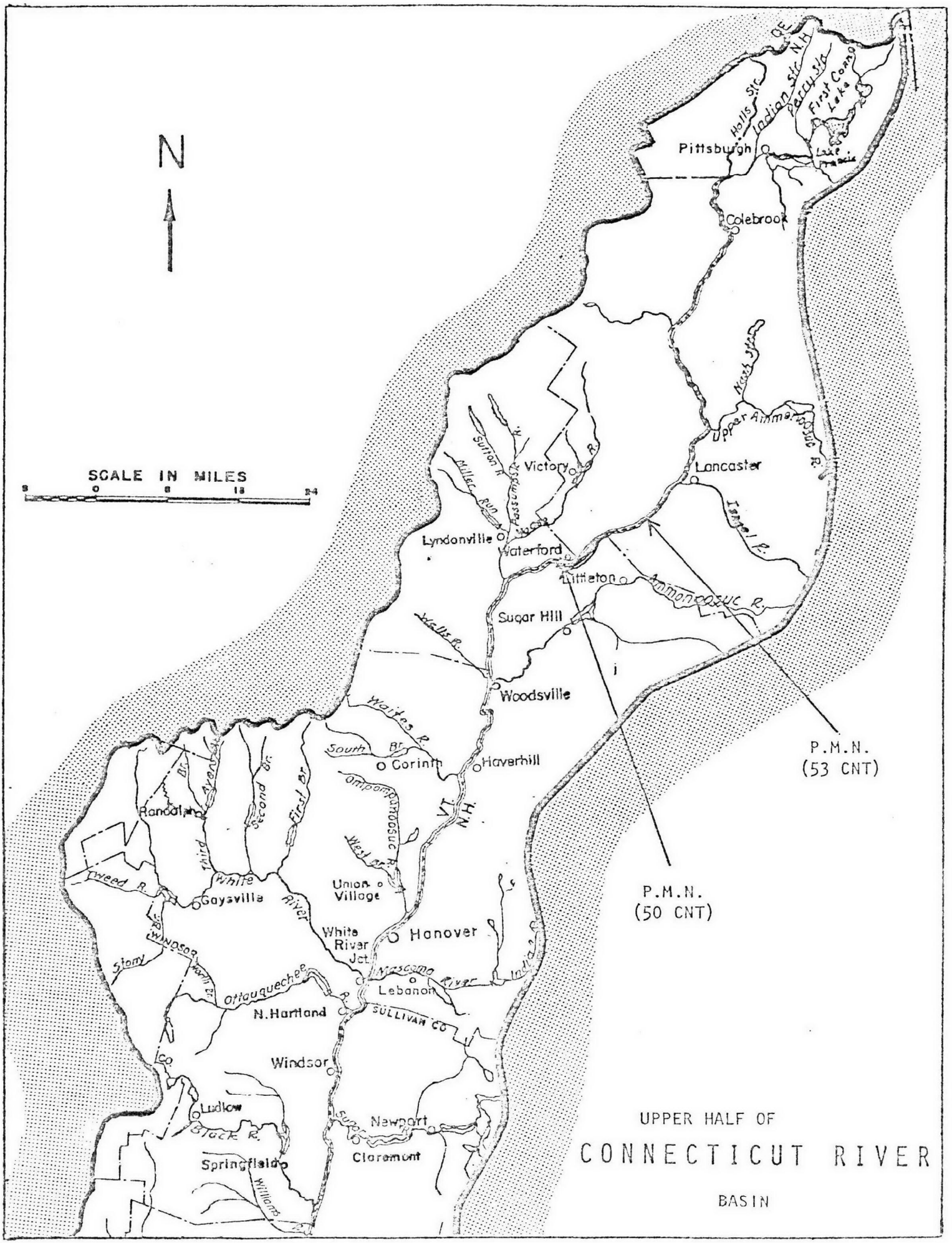
Plot Station Number	Station Location	Map Station Number
1.	Connecticut River at Gilman, Vt.	PMN 53-CNT
2.	Connecticut River at Waterford, Vt.	PMN 50-CNT
3.	Connecticut River at Walpole, N.H.	USGS 01155050
4.	Ashuelot River near Keene, N.H.	PMN 2-20-ASH
5.	Ashuelot River at Hinsdale, N.H.	PMN 2-2-ASH

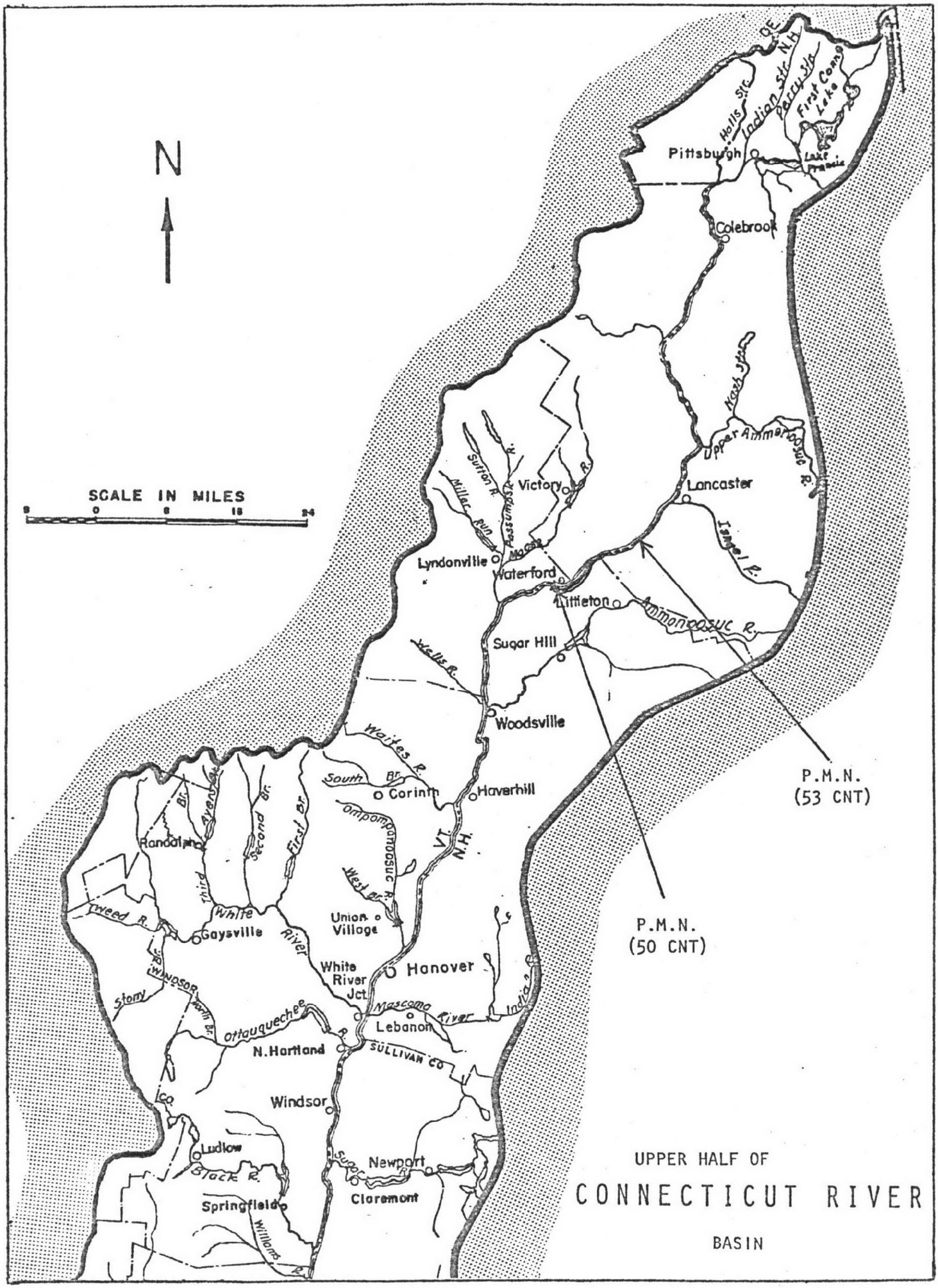


LOWER HALF OF

CONNECTICUT RIVER

BASIN


N
SCALE IN MILES
Pittsburgh
Colebrook
Lancaster
Victory
Lyndonville
Waterford
Littleton
Sugar Hill
Woodsville
Haverhill
Corinth
Randolph
Gaysville
Union Village
White River Jct.
Hanover
Lebanon
N. Hartland
Windsor
Ludlow
Springfield
Newport
Claremont
VT.
N.H.
P.M.N. (53 CNT)
P.M.N. (50 CNT)
UPPER HALF OF
CONNECTICUT RIVER
BASIN


N
SCALE IN MILES
Pittsburgh
Colebrook
Lancaster
Victory
Lyndonville
Waterford
Littleton
Sugar Hill
Woodsville
Haverhill
Corinth
Randolph
Gaysville
Union Village
White River Jct.
Hanover
Lebanon
N. Hartland
Windsor
Ludlow
Springfield
Newport
Claremont
VT.
N.H.
SULLIVAN CO
P.M.N. (53 CNT)
P.M.N. (50 CNT)
UPPER HALF OF
CONNECTICUT RIVER
BASIN

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 53-CNT CONNECTICUT RIVER (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	3.59
DISS. OXYGEN MG/L	8	2.	25.00	5.00	NONE	8.09
PH SU	8	2.	25.00	6.50	8.00	6.96
COLIFORM TOT MFIM/100ML	8	8.	100.00	NONE	240.00	1097.90

STATION 50-CNT CONNECTICUT RIVER (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	2.02
DISS. OXYGEN MG/L	8	1.	12.50	5.00	NONE	7.95
PH SU	8	2.	25.00	6.50	8.00	6.72
COLIFORM TOT MFIM/100ML	8	0.	0.0	NONE	240.00	59.50

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01155050 CONNECTICUT RIVER (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
TURBIDITY JKSN JTU	2	0.	0.0	NONE	25.00	1.5
DISS. OXYGEN MG/L	9	0.	0.0	5.00	NONE	10.
PH SU	9	2.	22.22	6.50	8.00	7.
COLIFORM TOT MFIM/100ML	9	8.	88.89	NONE	240.00	1990.

STATION 2-20-ASH ASHEULOT R. (NH)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
TURBIDITY JKSN JTU	8	0.	0.0	NONE	25.00	1.
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	9.
PH SU	8	5.	62.50	6.50	8.00	6.
COLIFORM TOT MFIM/100ML	7	4.	57.14	NONE	240.00	228.

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 2-2-ASH ASHEULOT R. (NH)

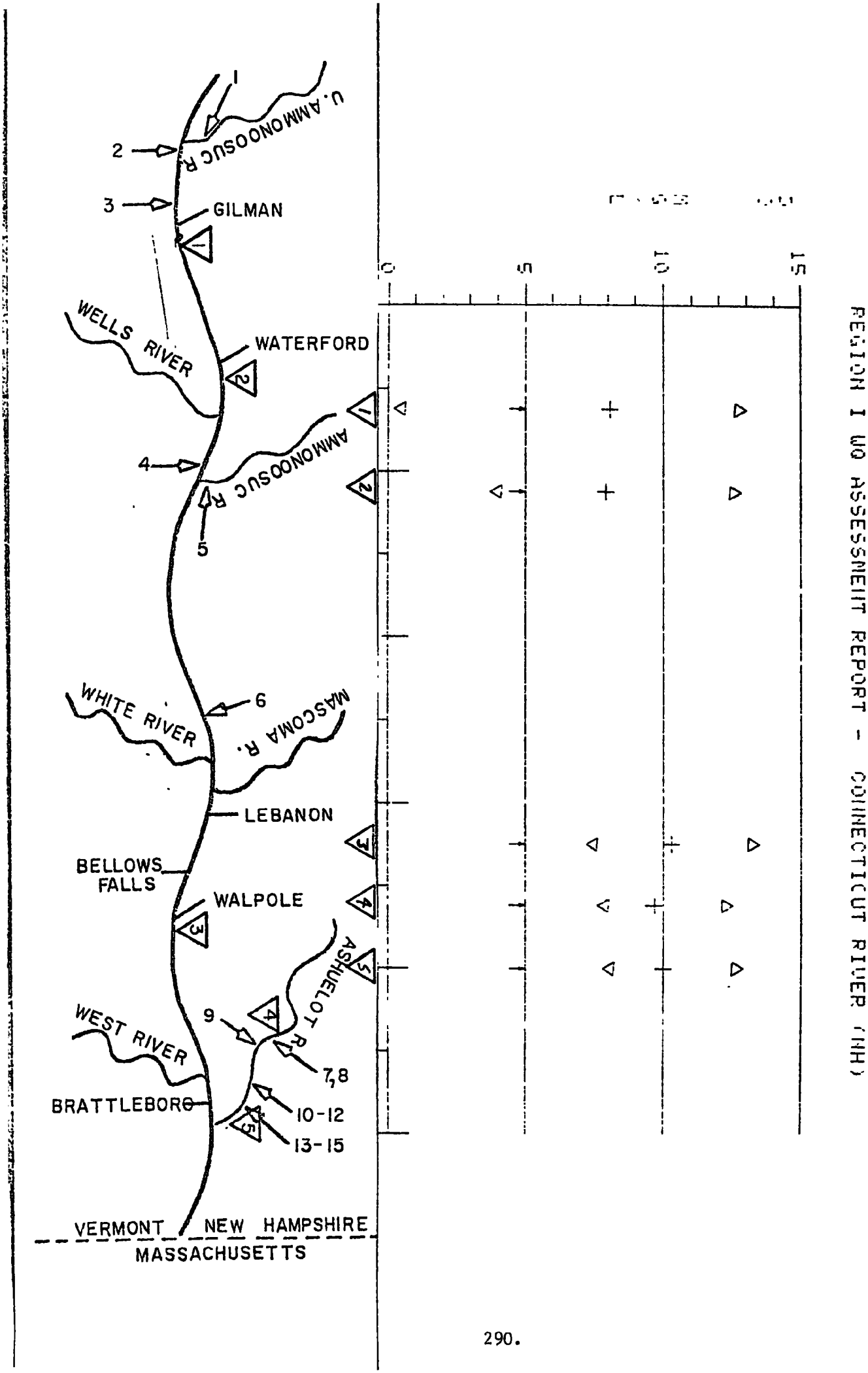
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
TURBIDITY JKSN JTU	8	3.	37.50	NONE	25.00	26.60
DISS. OXYGEN MG/L	8	0.	0.0	5.00	NONE	10.01
PH SU	8	0.	0.0	6.00	8.50	6.86
COLIFORM TOT MFIM/100ML	6	6.	100.00	NONE	1000.00	50761.29

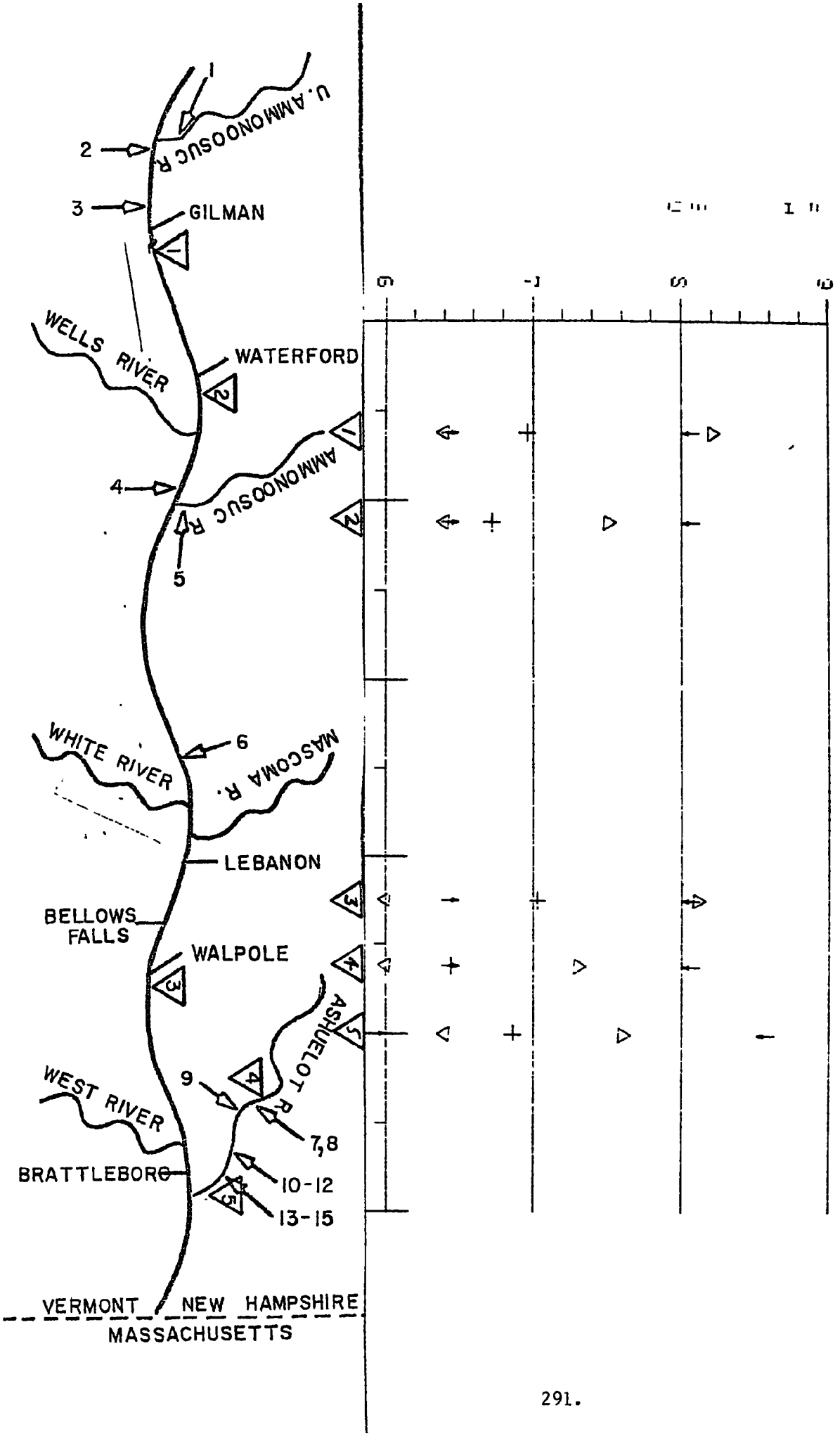
* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

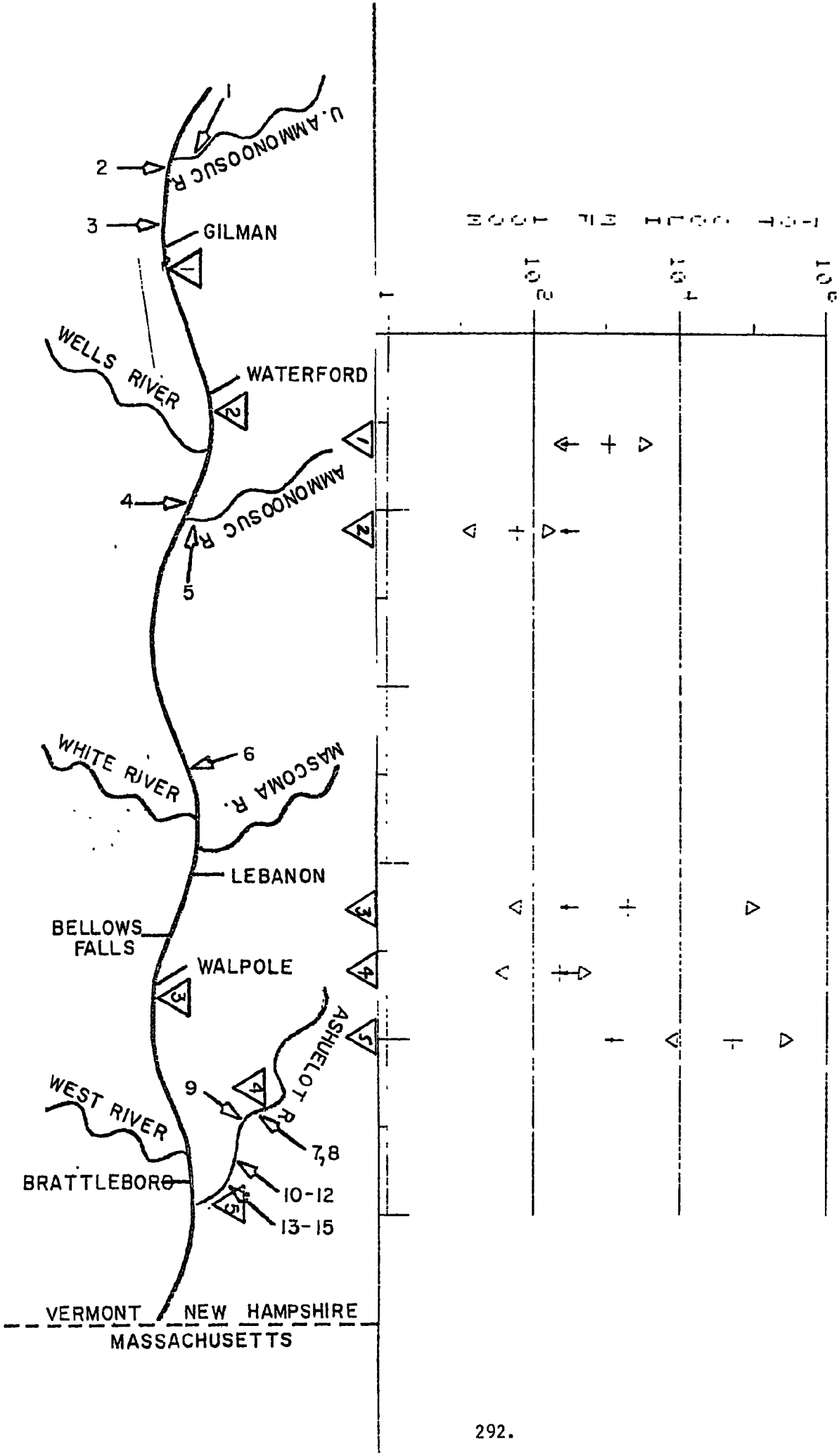
CONNECTICUT RIVER BASIN (N.H.)

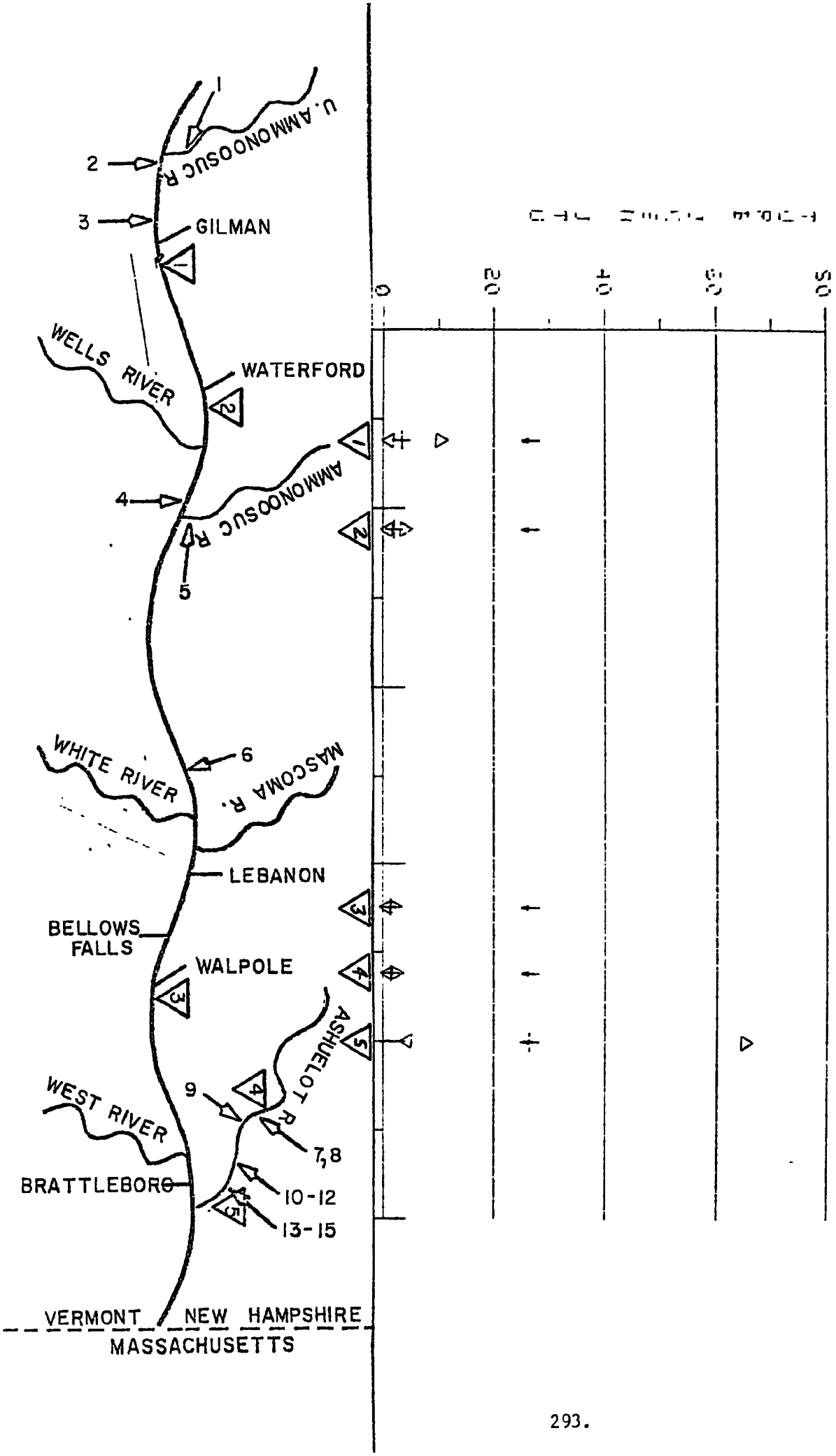
	Discharger	Location	Receiving Water	NPDES No.
1.	Groveton WTP	Groveton	Upper Ammonoosac R.	0100226
2.	Groveton Paper Co.	Northumberland	Connecticut R.	0001562
3.	Lancaster STP	Lancaster	Connecticut R.	0100145
4.	Lisbon STP	Lisbon	Connecticut R.	0100421
5.	Littleton STP	Littleton	Ammonoosac R.	0100153
6.	Hanover WTP	Hanover	Connecticut R.	0100099
7.	Central Screw Co.	Keene	Ashuelot R.	0000825
8.	Keene STP	Keene	Ashuelot R.	0100790
9.	Homestead Woolen Mills, Inc.	W.Swanzey	Ashuelot R.	0001589
10.	Paper Service Mills, Inc.	Winchester	Ashuelot R.	0000311
11.	Ashuelot Paper Co.	Winchester	Ashuelot R.	0001180
12.	A. C. Laurence Leather	Winchester	Ashuelot R.	0000183
13.	Hinsdale Products	Hinsdale	Ashuelot R.	0001554
14.	G. E. Robertson & Co.	Hinsdale	Ashuelot R.	0000434
15.	Hinsdale STP	Hinsdale	Ashuelot R.	0100382


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (NH)
0
5
10
15
U. AMMONOOSUC R.
GILMAN
WELLS RIVER
WATERFORD
AMMONOOSUC R.
WHITE RIVER
MASCOMA R.
LEBANON
BELLOWS FALLS
WALPOLE
ASHUELOT R.
WEST RIVER
BRATTLEBORO
VERMONT
NEW HAMPSHIRE
MASSACHUSETTS



REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (NH)


REGION I WQ ASSESSMENT REPORT - CONNECTICUT RIVER (NH)
U. AMMONOOSUC R.
GILMAN
WELLS RIVER
WATERFORD
AMMONOOSUC R.
WHITE RIVER
MASCOMA R.
LEBANON
BELLOWS FALLS
WALPOLE
ASHUELOT R.
WEST RIVER
BRATTLEBORO
VERMONT
NEW HAMPSHIRE
MASSACHUSETTS



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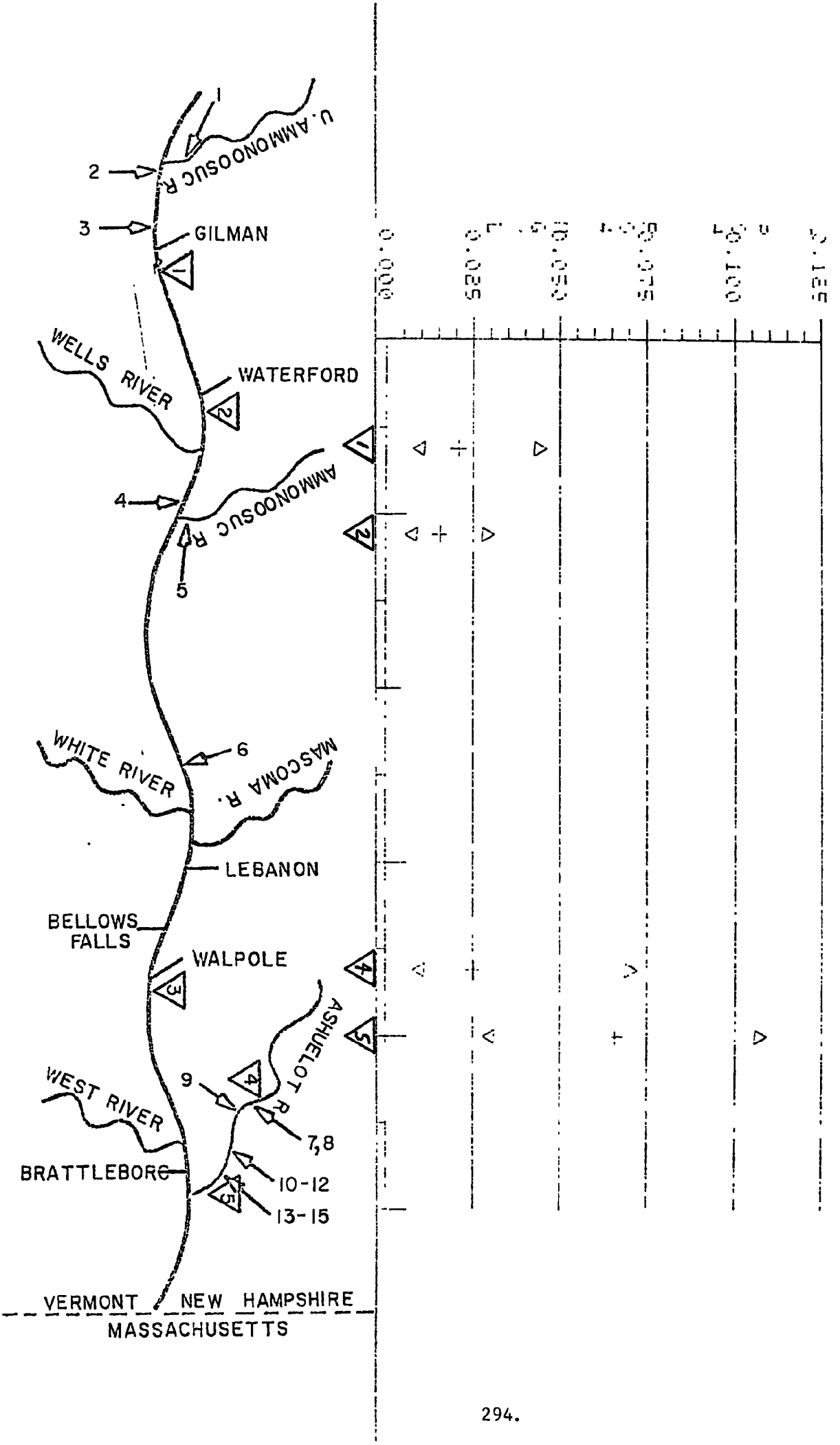
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0.000
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0.075
0.100
0.125
U. AMMONOOSUC R.
GILMAN
WELLS RIVER
WATERFORD
AMMONOOSUC R.
WHITE RIVER
MASCOMA R.
LEBANON
BELLOWS FALLS
WALPOLE
ASHUELOT R.
WEST RIVER
BRATTLEBORO
VERMONT / NEW HAMPSHIRE
MASSACHUSETTS

Plots
DO
Chemistry

3.23 ANDROSCOGGIN RIVER BASIN (MAINE)

The Androscoggin River enters Maine in a highly polluted condition at Gilead. The poor quality at this point is primarily due to waste discharges from the Brown Paper Company in Berlin, New Hampshire. The river slowly recovers from these wastes until it reaches Rumford, Maine. At Rumford, municipal sewage and paper mill wastes from Oxford Paper Company halt this recovery and cause a return to severe degradation. Sewage, paper mill, and textile waste loads continue to build as the river flows through Jay, Auburn, Lisbon Falls and Topsham. The largest dischargers on the mainstem are International and Pejepscot Paper Companies. Dissolved oxygen violations are reported in August at the stations in Rumford and Jay on the mainstem. The station at Jay also violates fecal coliform standards while the stations at Turner and Auburn regularly violate coliform and report some fecal coliform violations. Phosphorus levels are high at all the stations on the mainstem.

The Little Androscoggin River which flows into the mainstem at Auburn exhibits severe water quality problems. Dissolved oxygen levels fall below Maine standards in August and September, and total coliform standards are exceeded in September and November. Phosphorus levels are also high in March, April and May. Plastic, leather and paper industries are located on the Little Androscoggin River, the most significant discharger being the S. C. Lawrence Leather Company.

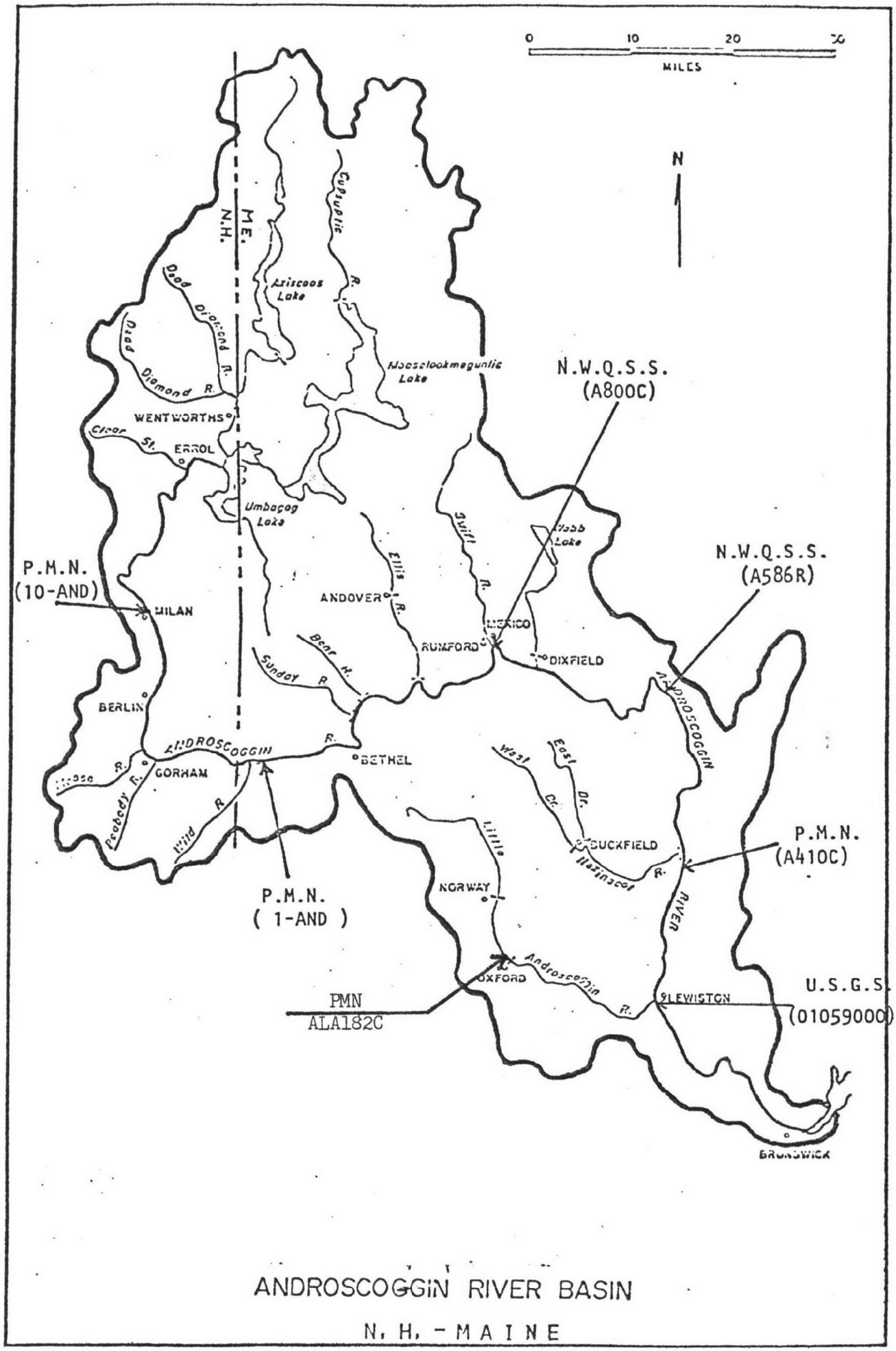
ANDROSCOGGIN RIVER BASIN

{MAINE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Androscoggin River at Rumford, ME	N.W.Q.S.S. A800C
2.	Androscoggin River at Jay, ME	N.W.Q.S.S. A586R
3.	Androscoggin River at North Turner, ME	PMN A410C
4.	Little Androscoggin at Welchville, ME	PMN ALA182C
5.	Androscoggin River at Auburn, ME	U.S.G.S. 01059000



ANDROSCOGGIN RIVER BASIN

N. H. - MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION A800C ANDROSCOGGIN R. (NH-ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
DISS. OXYGEN PROBE MG/L	10	1.	10.00	5.00	NONE	9.5[illegible]
PH SU	10	0.	0.0	6.00	8.50	6.3[illegible]
COLIFORM TOT MFIM/100ML	10	0.	0.0	NONE	5000.00	1108.[illegible]
COLIFORM FEC MF/100ML	10	0.	0.0	NONE	1000.00	125.[illegible]

STATION A586R ANDROSCOGGIN R. (NH-ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
DISS. OXYGEN PROBE MG/L	9	1.	11.11	5.00	NONE	10.
PH SU	9	0.	0.0	6.00	8.50	6.[illegible]
COLIFORM TOT MFIM/100ML	9	0.	0.0	NONE	5000.00	1316.[illegible]
COLIFORM FEC MF/100ML	9	1.	11.11	NONE	1000.00	278.[illegible]

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION A410C ANDROSCOGGIN R. (NH-ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	10	0.	0.0	5.00	NONE	10.99
PH SU	11	0.	0.0	6.00	8.50	6.67
COLIFORM TOT MFIM/100ML	11	2.	18.18	NONE	5000.00	1927.04
COLIFORM FEC MF/100ML	11	1.	9.09	NONE	1000.00	258.52

STATION ALA182C LITTLE ANDROSCOGGIN R(ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	9	2.	22.22	5.00	NONE	9.47
PH SU	9	0.	0.0	6.00	8.50	6.53
COLIFORM TOT MFIM/100ML	9	2.	22.22	NONE	5000.00	1358.44
COLIFORM FEC MF/100ML	9	0.	0.0	NONE	1000.00	85.75

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01059000 ANDROSCOGGIN R. (NH-ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
DISS. OXYGEN MG/L	9	0.	0.0	5.00	NONE	10.2
PH SU	9	0.	0.0	6.00	8.50	6.
COLIFORM TOT MFIM/100ML	9	5.	55.56	NONE	5000.00	4959.
COLIFORM FEC MF/100ML	9	1.	11.11	NONE	1000.00	410.

STATION 01059400 ANDROSCOGGIN R. (NH-ME)

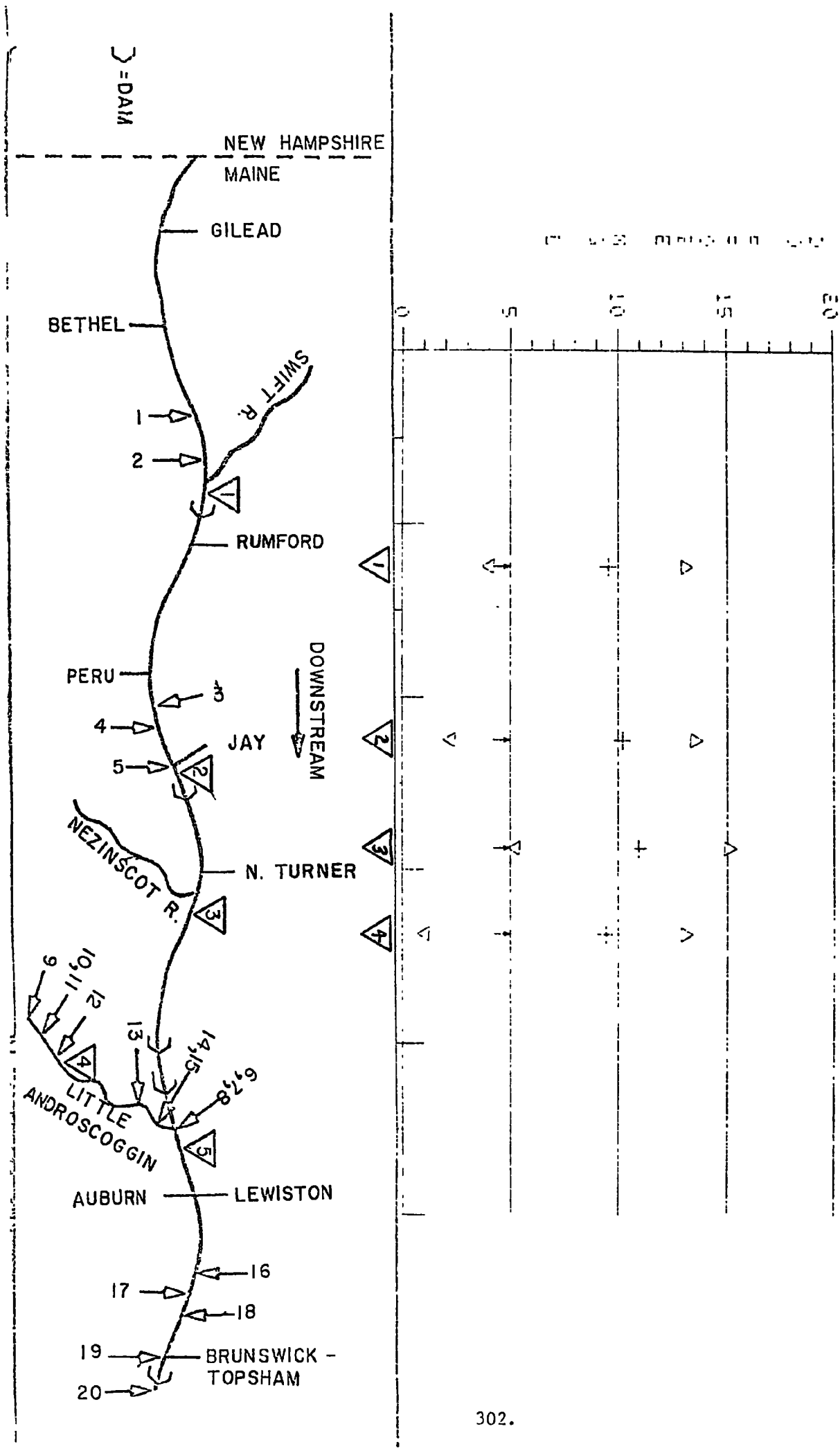
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
DISS. OXYGEN MG/L	3	0.	0.0	5.00	NONE	12.
PH SU	3	0.	0.0	6.00	8.50	6.
COLIFORM FEC MF/100ML	2	0.	0.0	NONE	1000.00	272.

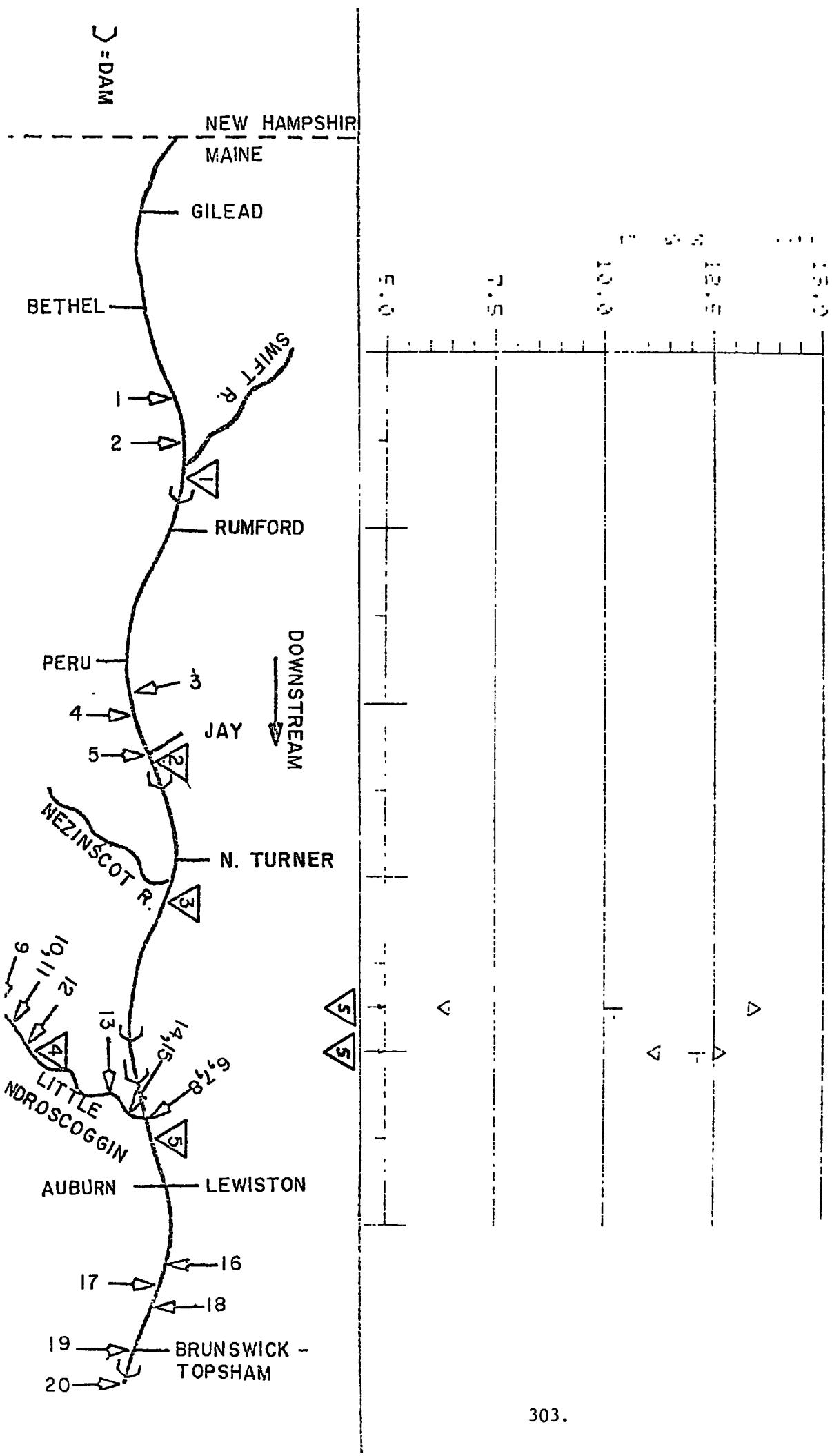
* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

ANDROSCOGGIN RIVER BASIN {ME}

	Discharger	Location	Receiving Water	NPDES No.
4.	Oxford Paper Co. {Boise-Coscade}	Rumford	Androscoggin River	0002054
5.	Diamond National	West Peru	Androscoggin River	0001848
6.	Brindis Leather Co.	Canton	Whitney Bk.	0001317
7.	International Paper Androscoggin Mill	Jay	Androscoggin River	0001937
8.	International Paper Otis Mill	Chisholm	Androscoggin River	0001929
9.	Bates Fabrics Mfg.	Lewiston	Androscoggin River	0001791
10.	W.S. Libbey	Lewiston	Androscoggin River	0001988
11.	Max Miller + Co.	Lewiston	Androscoggin River	0002500
12.	South Paris, MTP	South Paris	Little Androscoggin	0100951
13.	A.C. Lawrence Leather	South Paris	Little Androscoggin	0000311
14.	A.L. Stewart + Sons	Paris	Little Androscoggin	0000680
15.	Robinson Mfg. Co.	Oxford	Little Androscoggin	0002526
16.	Marcal Paper Mills	Mechanic Falls	Little Androscoggin	0002011
17.	Bonan Footwear	Auburn	Little Androscoggin	0001813
18.	Pioneer Plastics	Auburn	Little Androscoggin	0000540
19.	Max Miller + Co.	Lisbon Falls	Androscoggin	0001597
20.	U.S. Gypsum Co.	Lisbon Falls	Androscoggin	0002241
21.	Pejepscot Paper Co.	Topsham	Androscoggin	0002089
22.	Brunswick-Topsham Dist.	Brunswick	Androscoggin	0000957
23.	Pejepscot Paper Co.	Topsham	Androscoggin	0002071


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
0
5
10
15
20
NEW HAMPSHIRE
MAINE
GILEAD
BETHEL
SWIFT R.
RUMFORD
PERU
JAY
DOWNSTREAM
NEZINSCOT R.
N. TURNER
LITTLE ANDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK - TOPSHAM
DAM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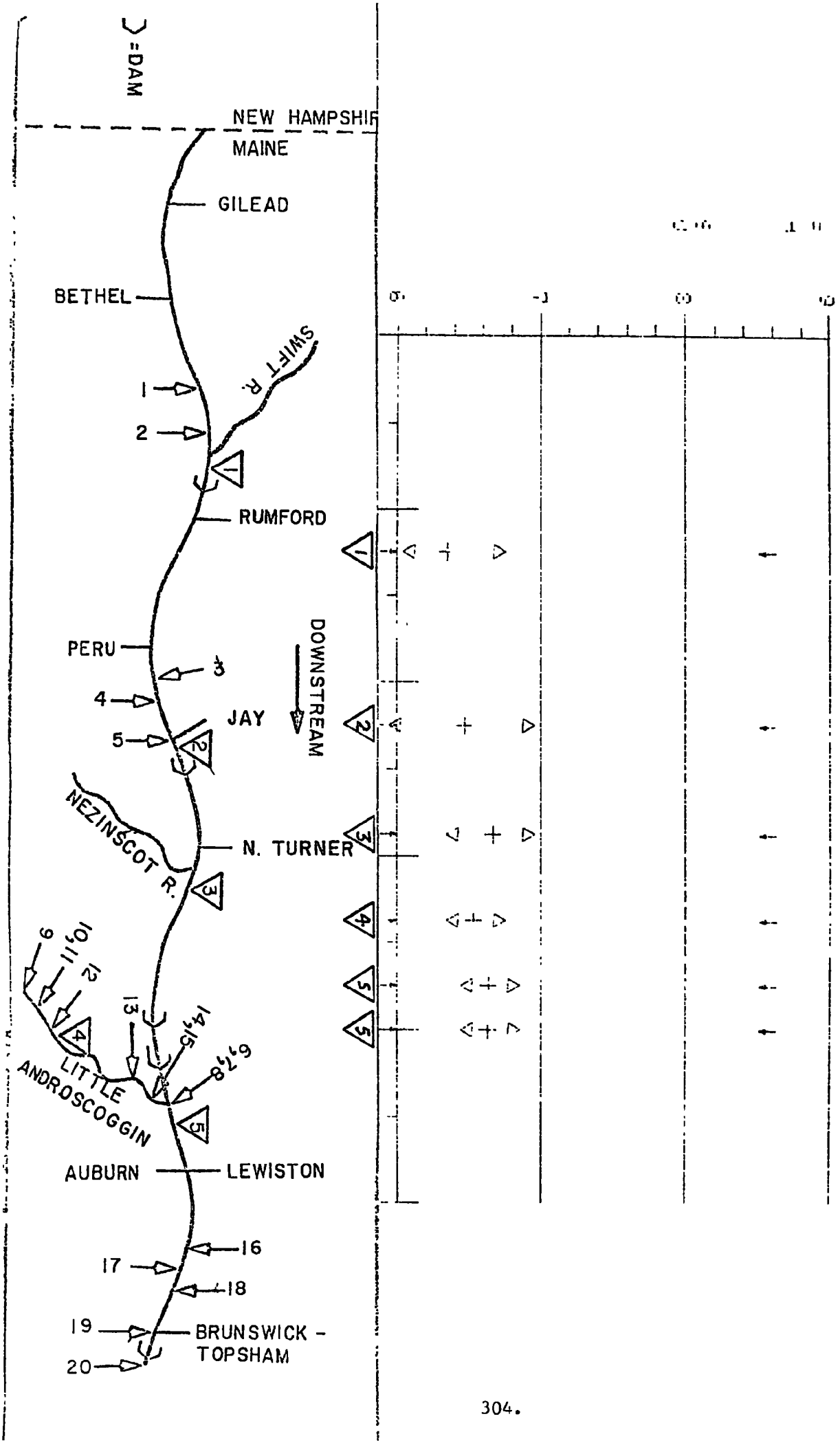
DAM
NEW HAMPSHIR
MAINE
GILEAD
BETHEL
SWIFT R.
RUMFORD
PERU
DOWNSTREAM
JAY
NEZINSCOT R.
N. TURNER
LITTLE
NDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK -
TOPSHAM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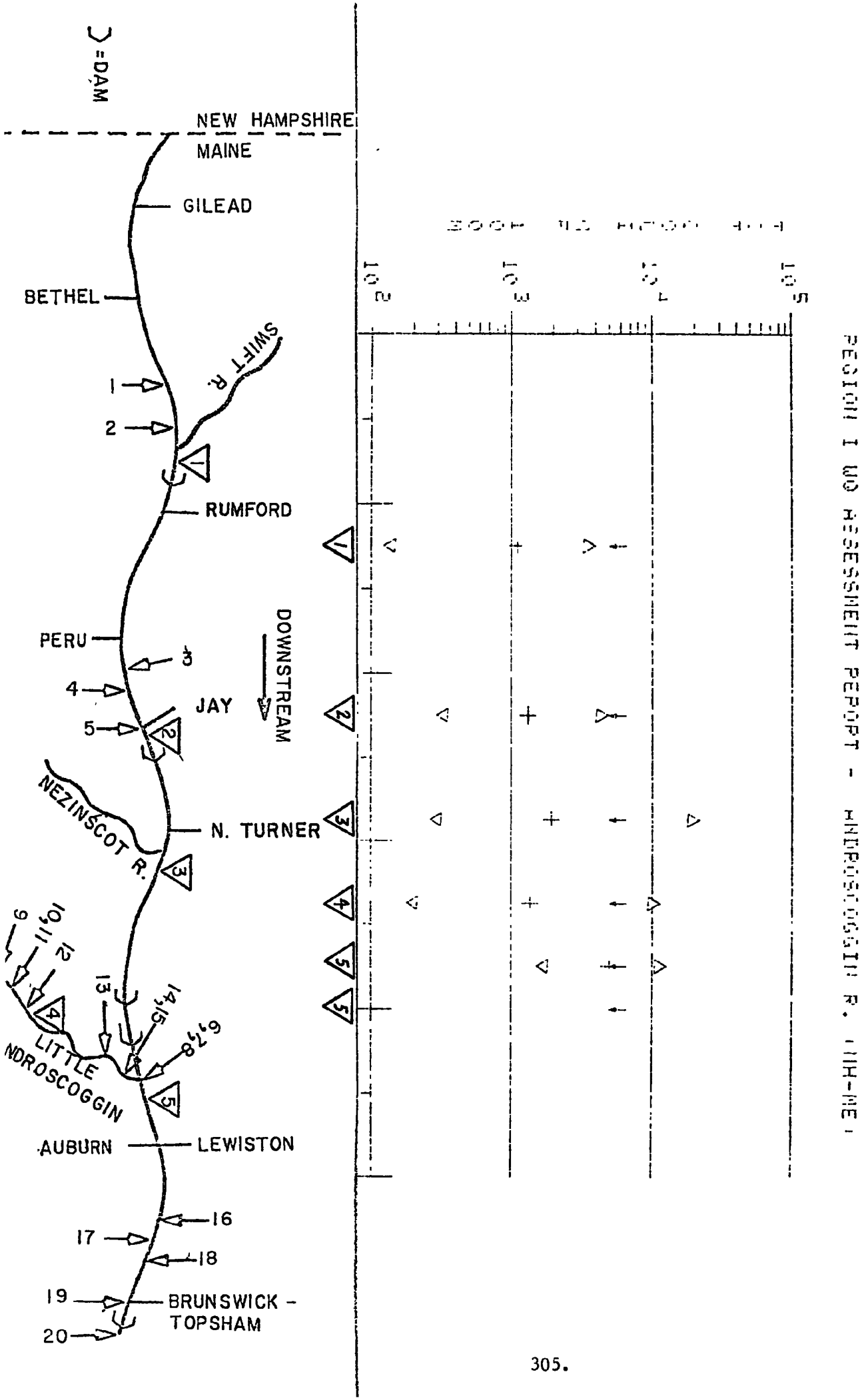
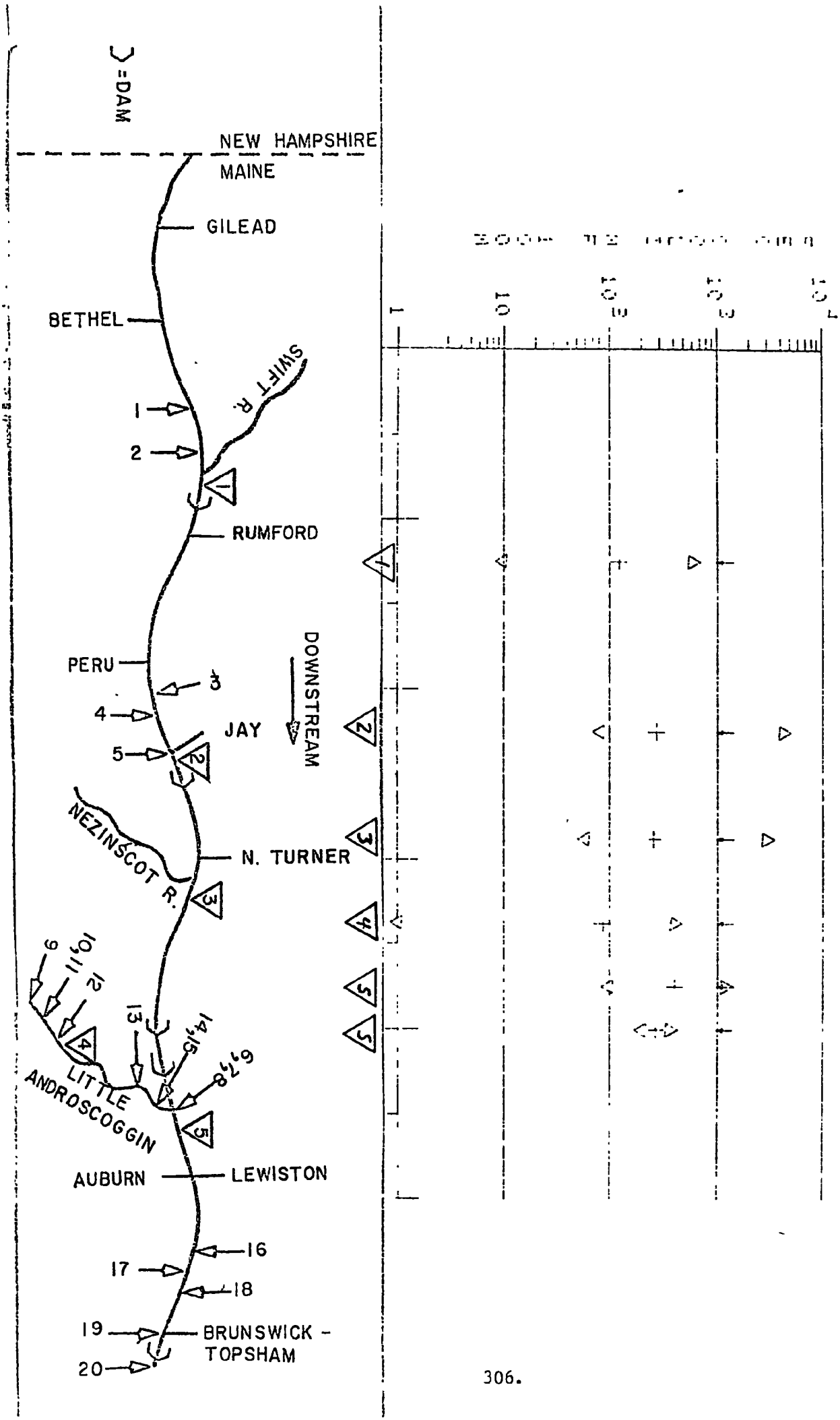
NEW HAMPSHIRE
MAINE
GILEAD
BETHEL
SWIFT R.
RUMFORD
PERU
JAY
DOWNSTREAM
NEZINSCOT R.
N. TURNER
LITTLE ANDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK - TOPSHAM
=DAM


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
BOD5 TO RIVER FLOW
10^2
10^3
10^4
10^5
NEW HAMPSHIRE
MAINE
GILEAD
BETHEL
SWIFT R.
RUMFORD
PERU
JAY
DOWNSTREAM
NEZINSCOT R.
N. TURNER
LITTLE ANDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK - TOPSHAM
DAM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NEW HAMPSHIRE
MAINE
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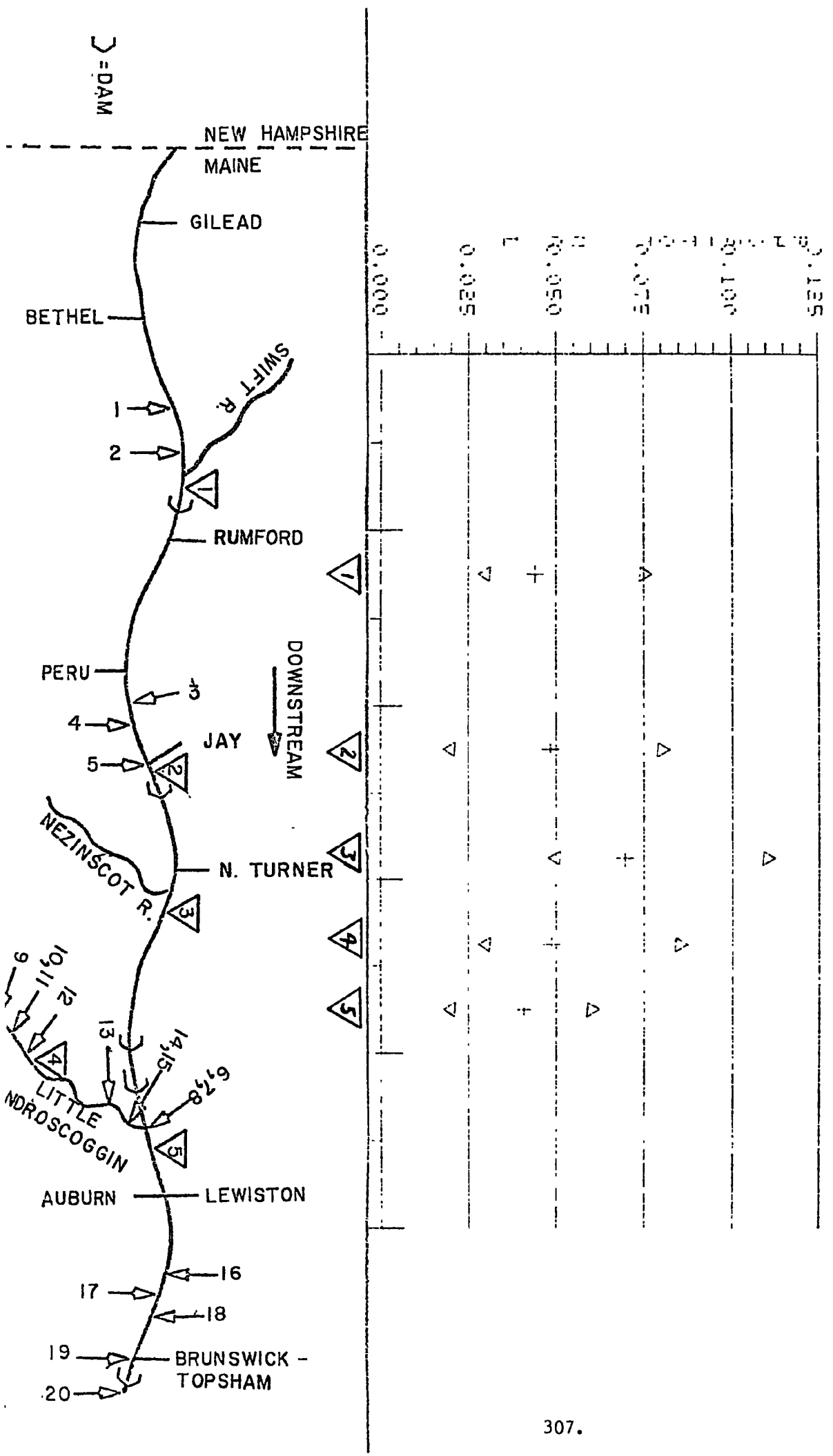
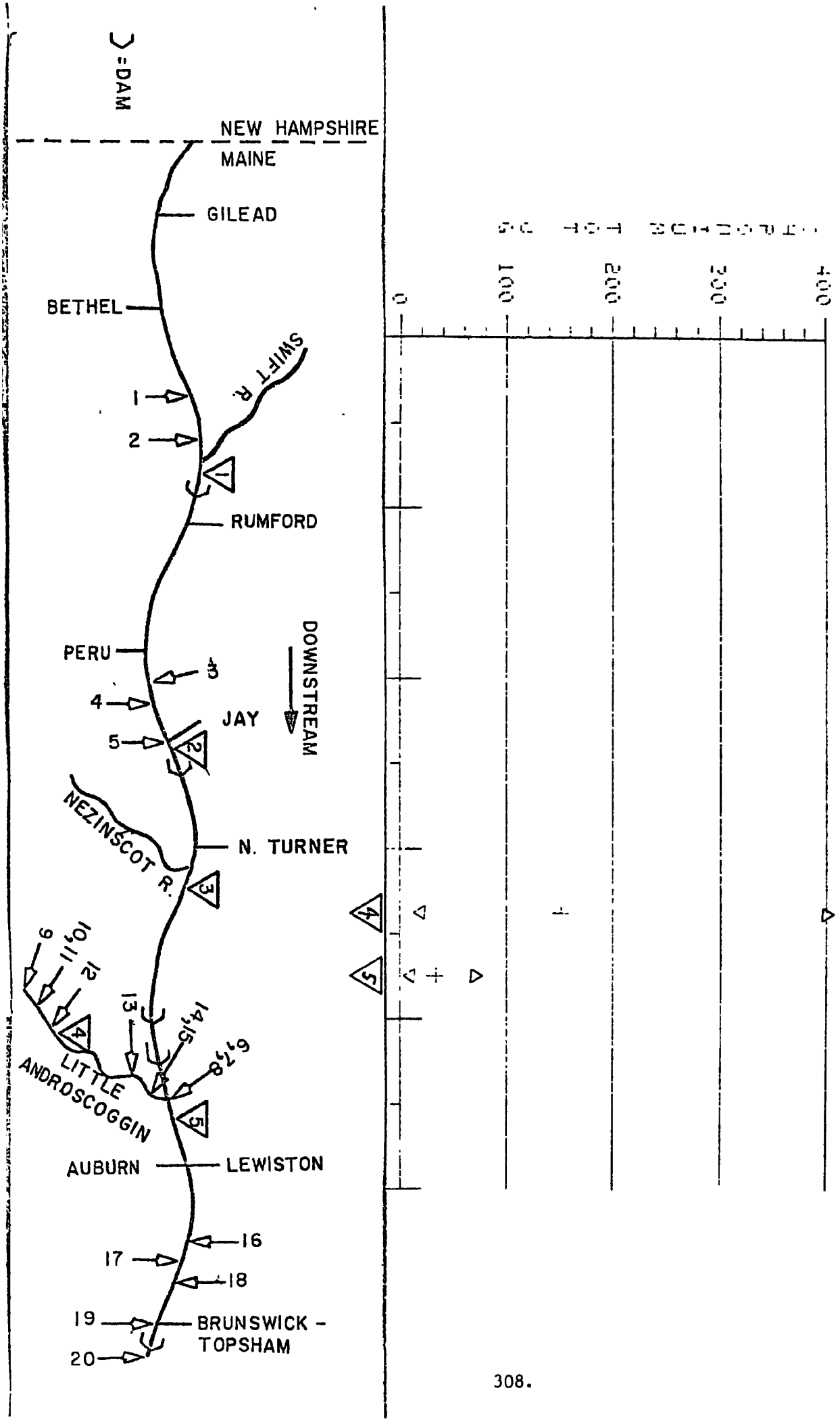
BETHEL
SWIFT R.
RUMFORD
PERU
JAY
DOWNSTREAM
N. TURNER
NEZINSCOT R.
LITTLE ANDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK - TOPSHAM
DAM


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
0.125
0.100
0.075
0.050
0.025
0.000
NEW HAMPSHIRE
MAINE
GILEAD
BETHEL
SWIFT R.
RUMFORD
PERU
JAY
DOWNSTREAM
NEZINSCOT R.
N. TURNER
LITTLE ANDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK - TOPSHAM
DAM


REGION I WQ ASSESSMENT REPORT - ANDROSCOGGIN R. (NH-ME)
0
100
200
300
400
DAM
NEW HAMPSHIRE
MAINE
GILEAD
BETHEL
SWIFT R.
RUMFORD
PERU
DOWNSTREAM
JAY
NEZINSCOT R.
N. TURNER
LITTLE ANDROSCOGGIN
AUBURN
LEWISTON
BRUNSWICK - TOPSHAM

P/07
DO
Fec Coli

3.24 PRESUMPSCOT RIVER BASIN

The major bodies of water in this basin are the Presumpscot, Royal and Crooked Rivers with impoundments on the mainstem forming Long and Sebago Lakes.

The water quality on the mainstem varies from Class A at the outlet of Sebago Lake to severe degradation below Westbrook, Maine. At Westbrook, the effluent from the S. D. Warren Paper Company has an organic waste equivalent of nearly one-half million people. This large volume of organic waste along with the natural and controlled low flows are the primary causes of the river's degradation. S. D. Warren has completed construction of a secondary treatment plant and it is expected to be fully operational by June 1, 1976.

The following tables show that coliform bacteria standards are violated at all stations while DO violations are reported in August at stations R22R and R00R. Total phosphorus levels are also high at the two stations discussed above.

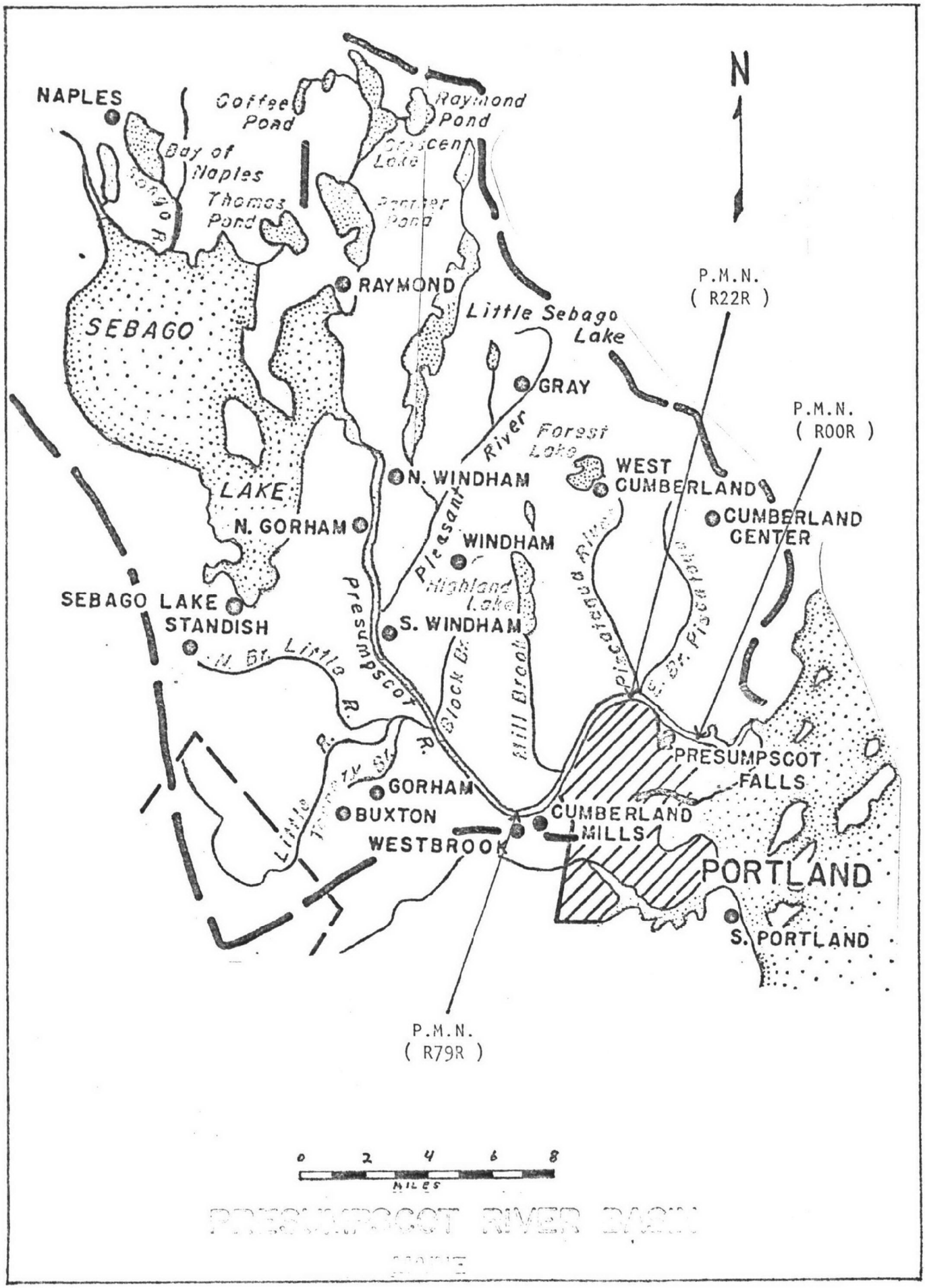
PRESUMPSCOT RIVER BASIN

{MAINE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Presumpscot River at Westbrook, ME	PMN R79R
2.	Presumpscot River at Falmouth, ME	PMN R22R
3.	Presumpscot River at Presumpscot Falls, ME	PMN ROOR



PRESUMPSCOT RIVER BASIN

MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION R79R PRESUMPSCOT R. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
DISS. OXYGEN PROBE MG/L	93	1.	1.08	5.00	NONE	8.64
PH SU	93	1.	1.08	6.00	8.50	6.[illegible]
COLIFORM TOT MFIM/100ML	90	8.	8.89	NONE	5000.00	1620.[illegible]
COLIFORM FEC MF/100ML	16	1.	6.25	NONE	1000.00	202.[illegible]

STATION R22R PRESUMPSCOT R. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	9	1.	11.11	5.00	NONE	10.[illegible]
PH SU	9	0.	0.0	6.00	8.50	6.[illegible]
COLIFORM TOT MFIM/100ML	9	9.	100.00	NONE	5000.00	27035.[illegible]
COLIFORM FEC MF/100ML	9	8.	88.89	NONE	1000.00	4383.07

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION R00R PRESUMPSCOT R. (ME)

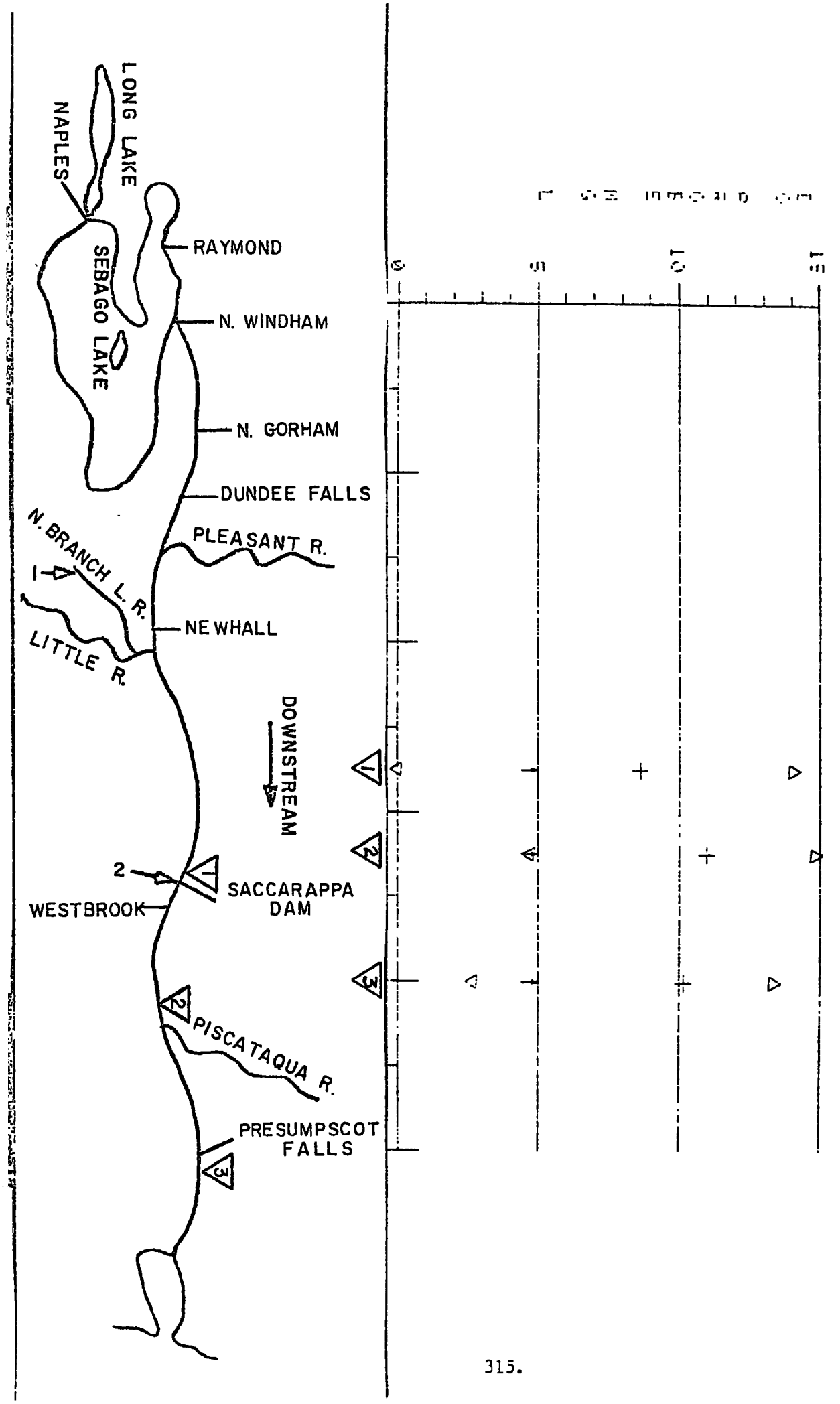
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	9	1.	11.11	5.00	NONE	10.13
PH SU	9	0.	0.0	6.00	8.50	6.62
COLIFORM TOT MFIM/100ML	9	8.	88.89	NONE	5000.00	10310.98
COLIFORM FEC MF/100ML	9	7.	77.78	NONE	1000.00	2426.43

* GEOMETRIC MEAN FOR COLIFORMS

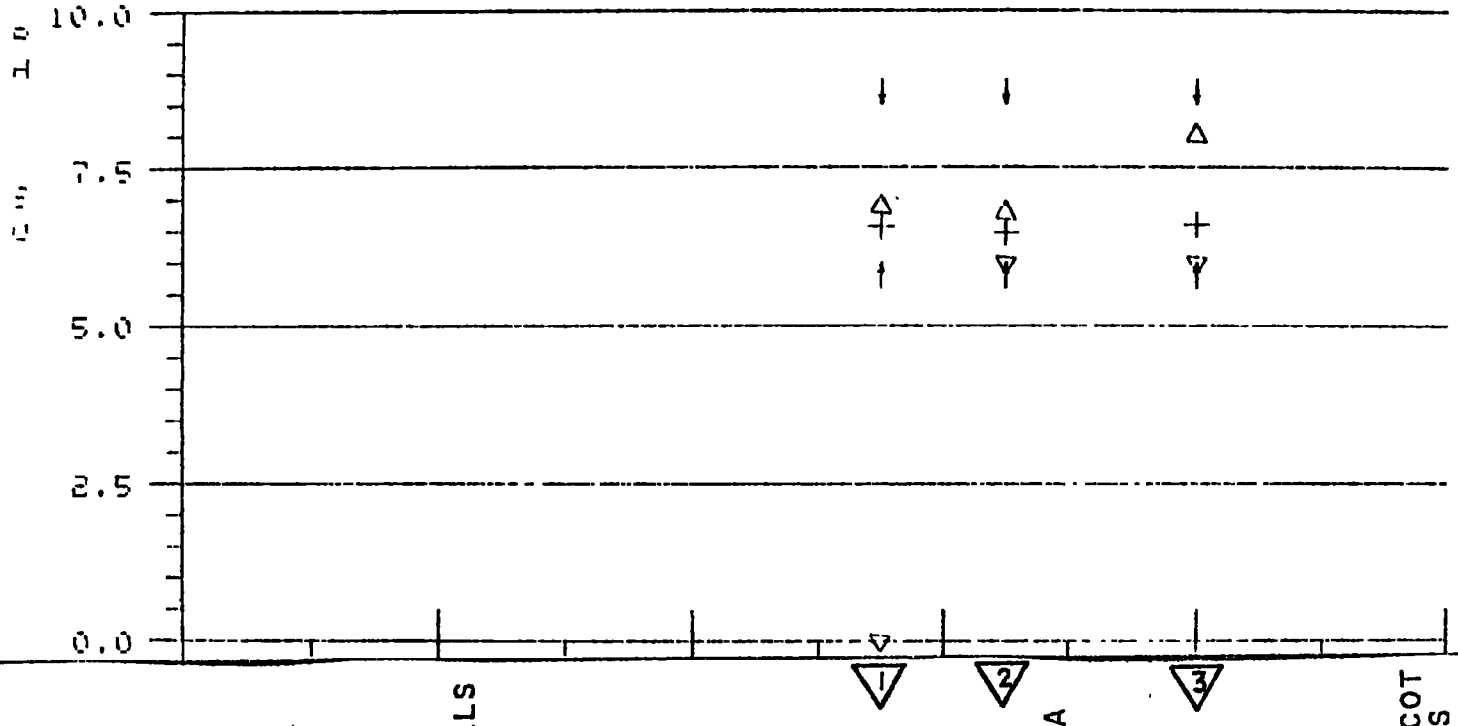
SIGNIFICANT DISCHARGERS

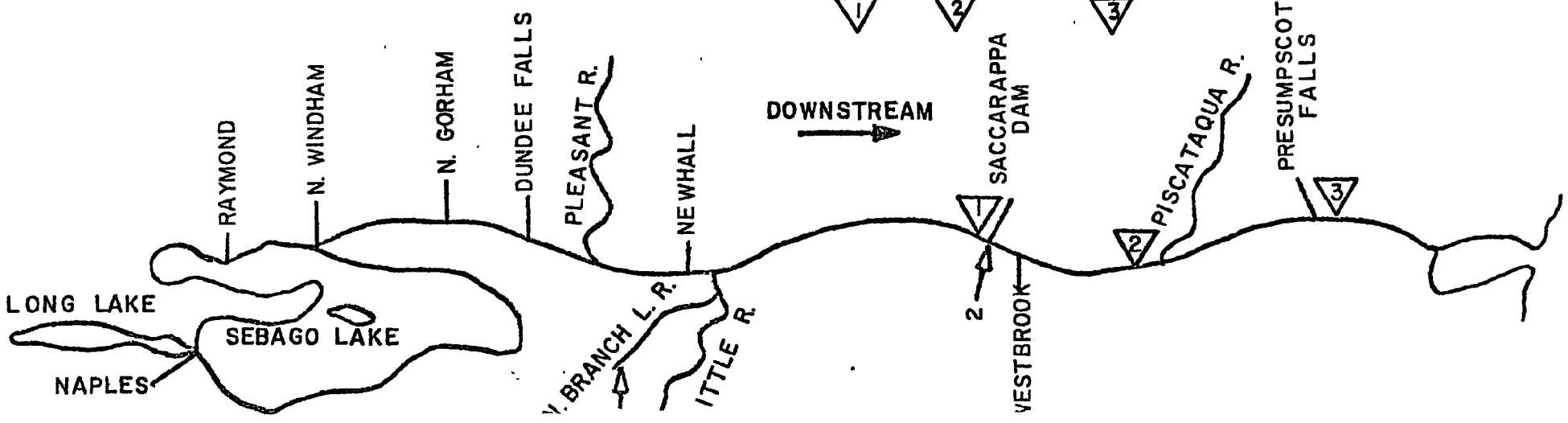
PRESUMPSCOT RIVER BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	GTE Sylvania	Standish	N. Branch of Little River	0002321
2.	S.D. Warren Co.-Scott Paper Co.	Westbrook		0002399

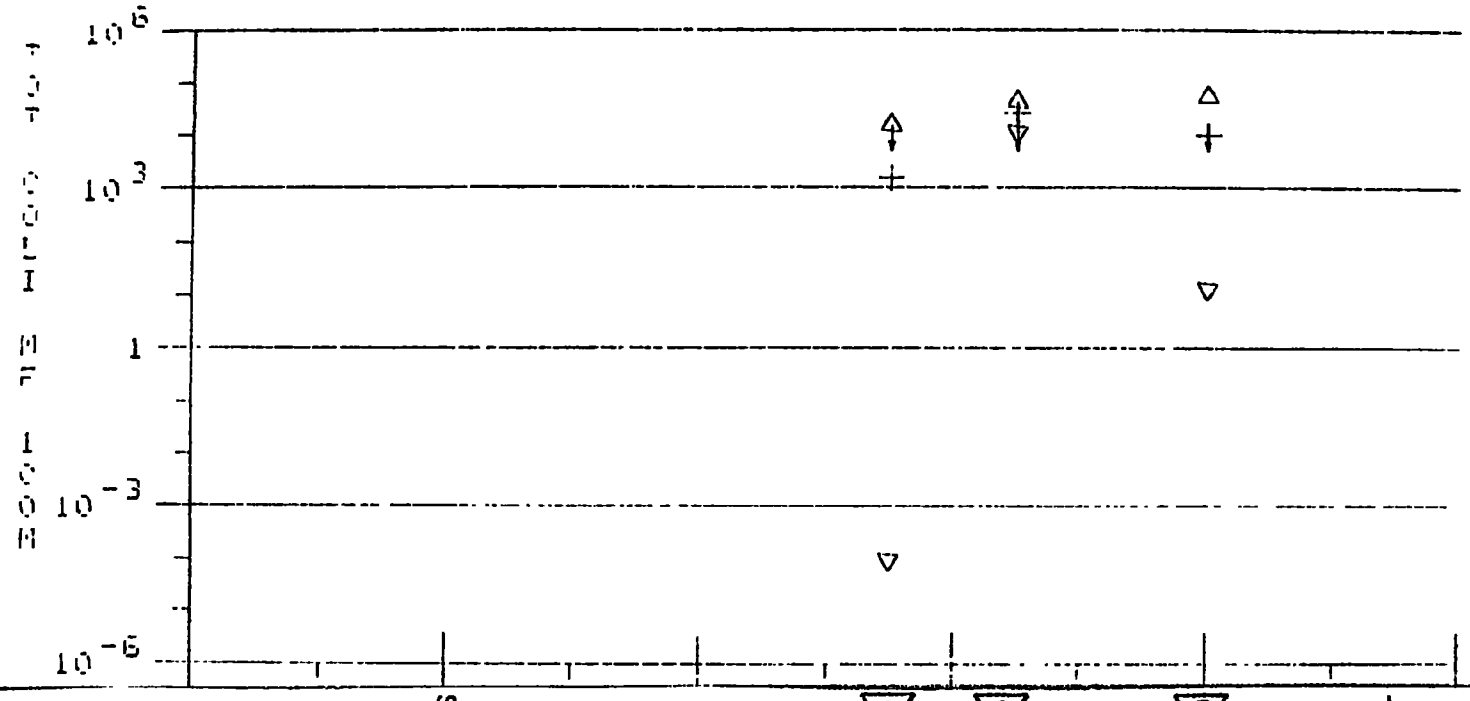

LONG LAKE
NAPLES
SEBAGO LAKE
RAYMOND
N. WINDHAM
N. GORHAM
DUNDEE FALLS
PLEASANT R.
N. BRANCH L. R.
NEWHALL
LITTLE R.
DOWNSTREAM
SACCARAPPA DAM
WESTBROOK
PISCATAQUA R.
PRESUMPSCOT FALLS
0
5
10
15

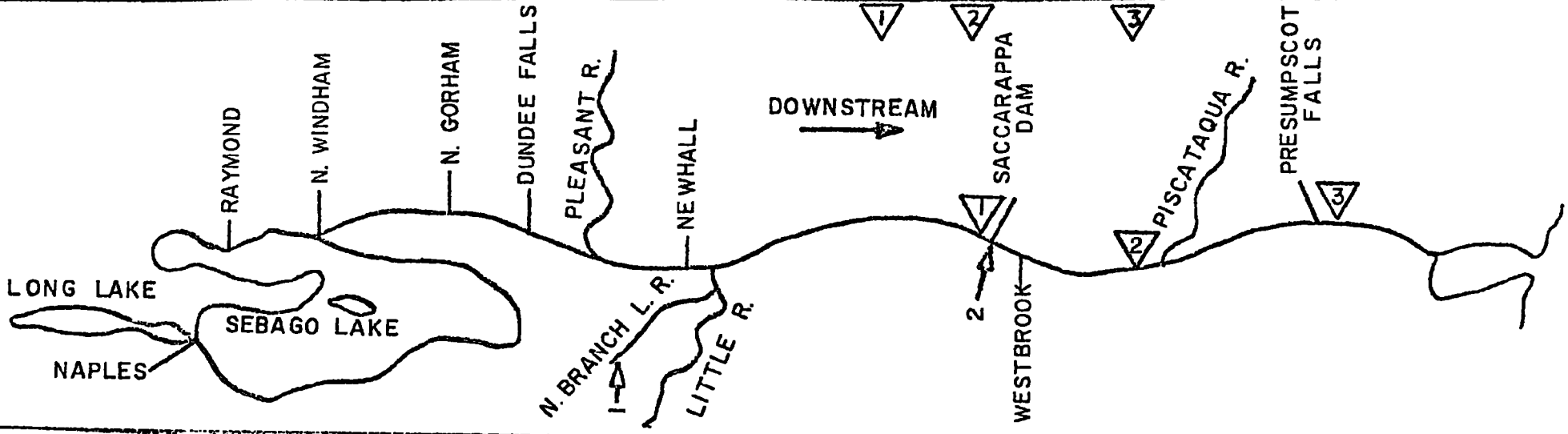
REGION I WQ ASSESSMENT REPORT - PRESUMPSCOT R. (ME)



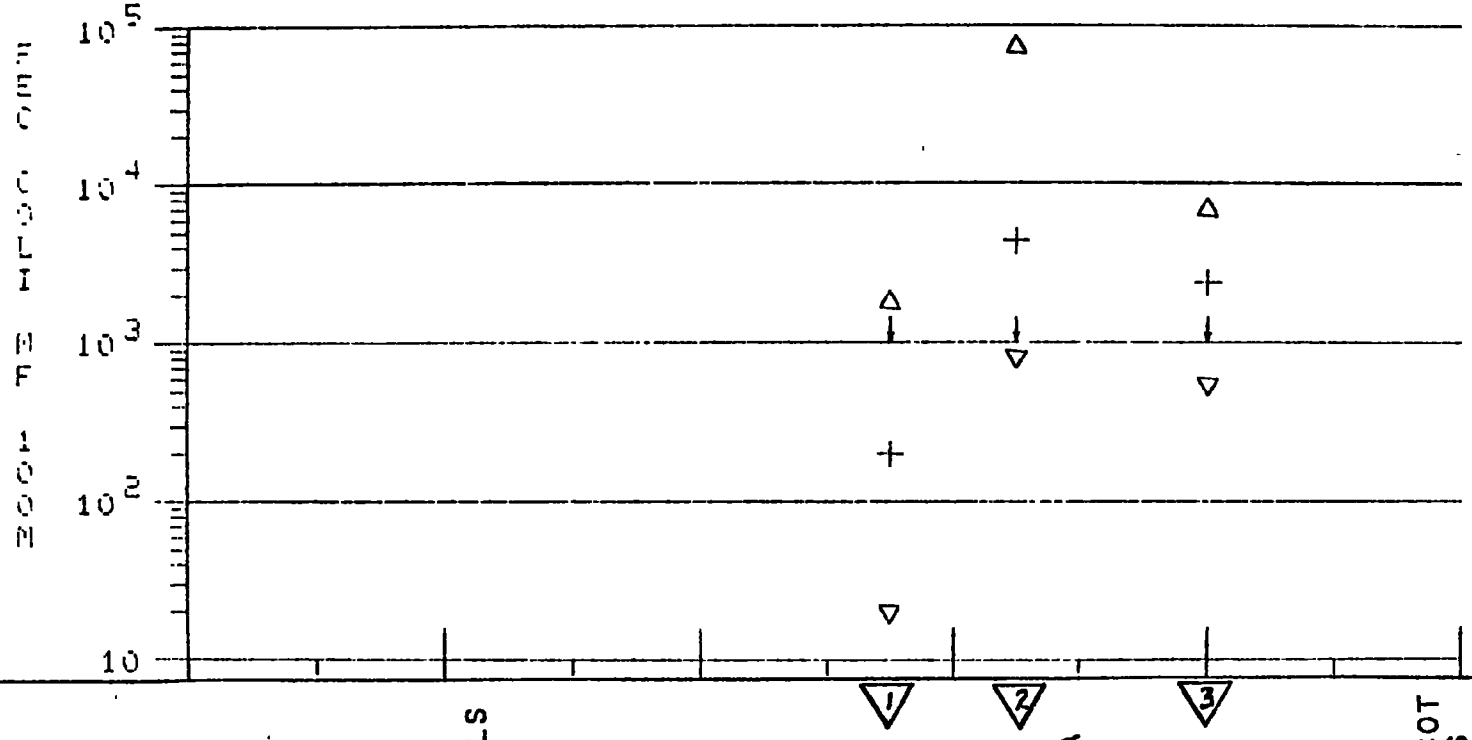


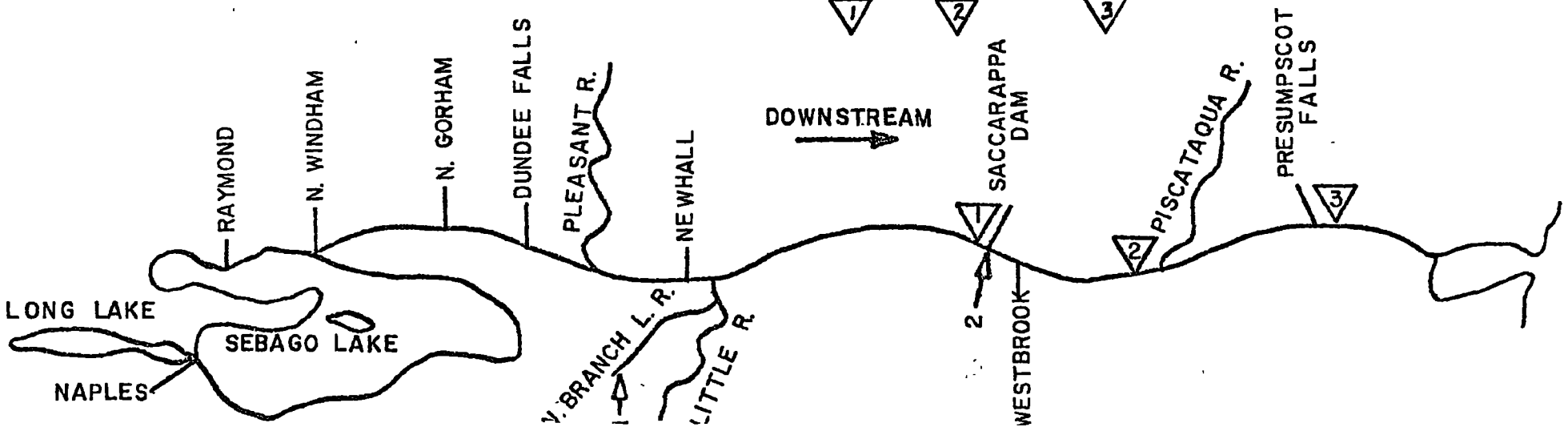
REGION I WQ ASSESSMENT REPORT - PRESUMPSCOT R. (ME)

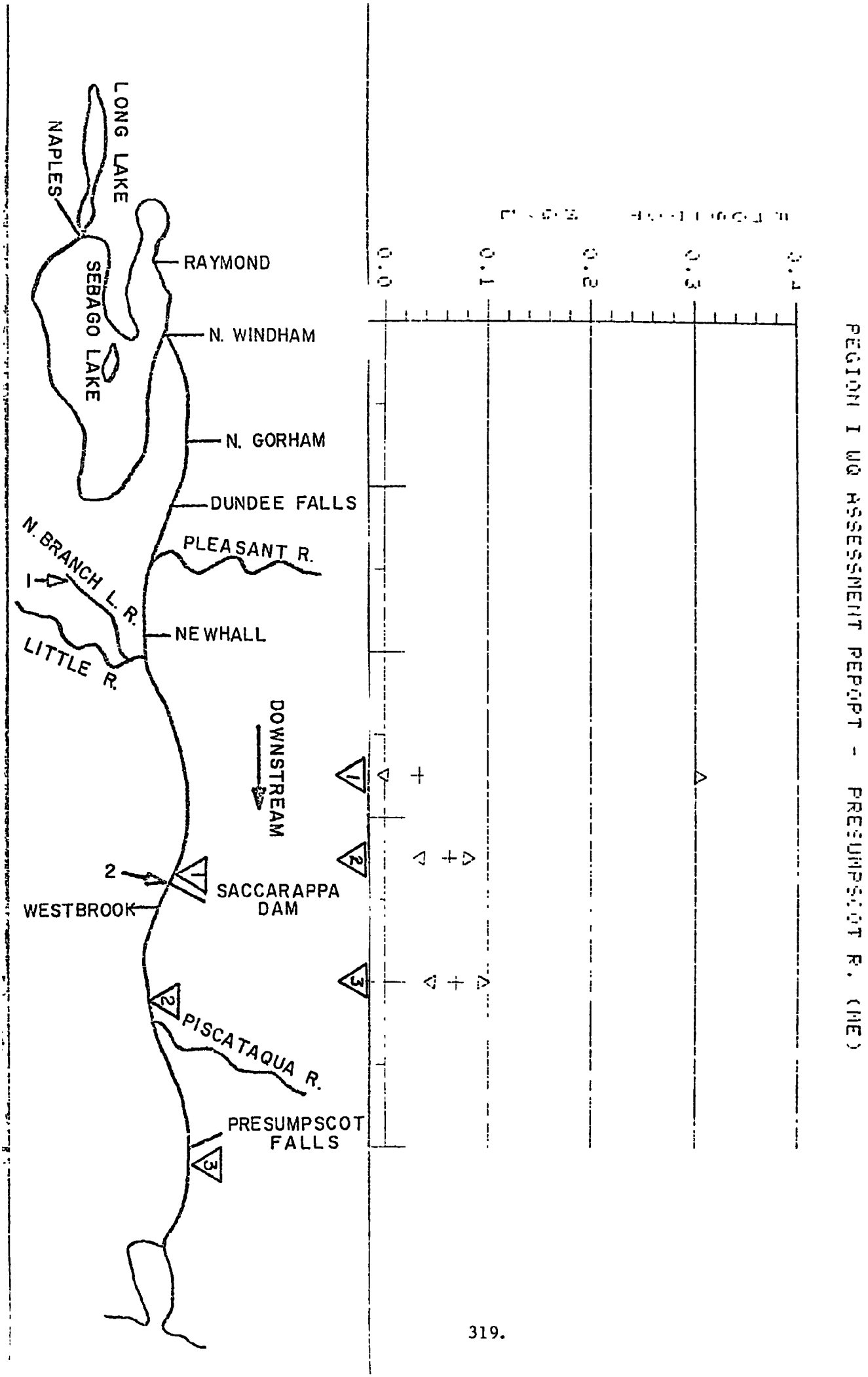




REGION I WQ ASSESSMENT REPORT - PRESUMPSCOT R. (ME)







REGION I WQ ASSESSMENT REPORT - PRESUMPSCOT R. (ME)

Plor
DO
Fecal Coli
Tot Phos

3.25 KENNEBEC RIVER BASIN

The Kennebec River flows from Moosehead Lake through Skowhegan and Augusta into Merrymeeting Bay at Abagadasset Point near Bath. Major tributaries to the mainstem are the Carrabassett, Sandy and Sebasticook Rivers.

The major water quality problems in this basin are due to paper and pulp mill discharges on the mainstem, textile mill and tannery wastes on the Sebasticook River.

The Sebasticook has severe water quality problems. The standards for DO and coliform bacteria are violated while high levels of phosphorus, chromium and zinc are also observed on this river.

The most serious problems on the mainstem occur below the Scott Paper Company discharges in Winslow. This discharge has an organic waste equivalent to a city of two million people. Scott is presently constructing a large kraft mill in Hinckley and will, upon its completion, close their sulfite mill in Winslow. The organic loadings of the proposed treated pulp wastes in Hinckley and the treated paper wastes in Winslow will be substantially less than at present. This should result in a vast improvement in the water quality of the Kennebec from Winslow to Merrymeeting Bay.

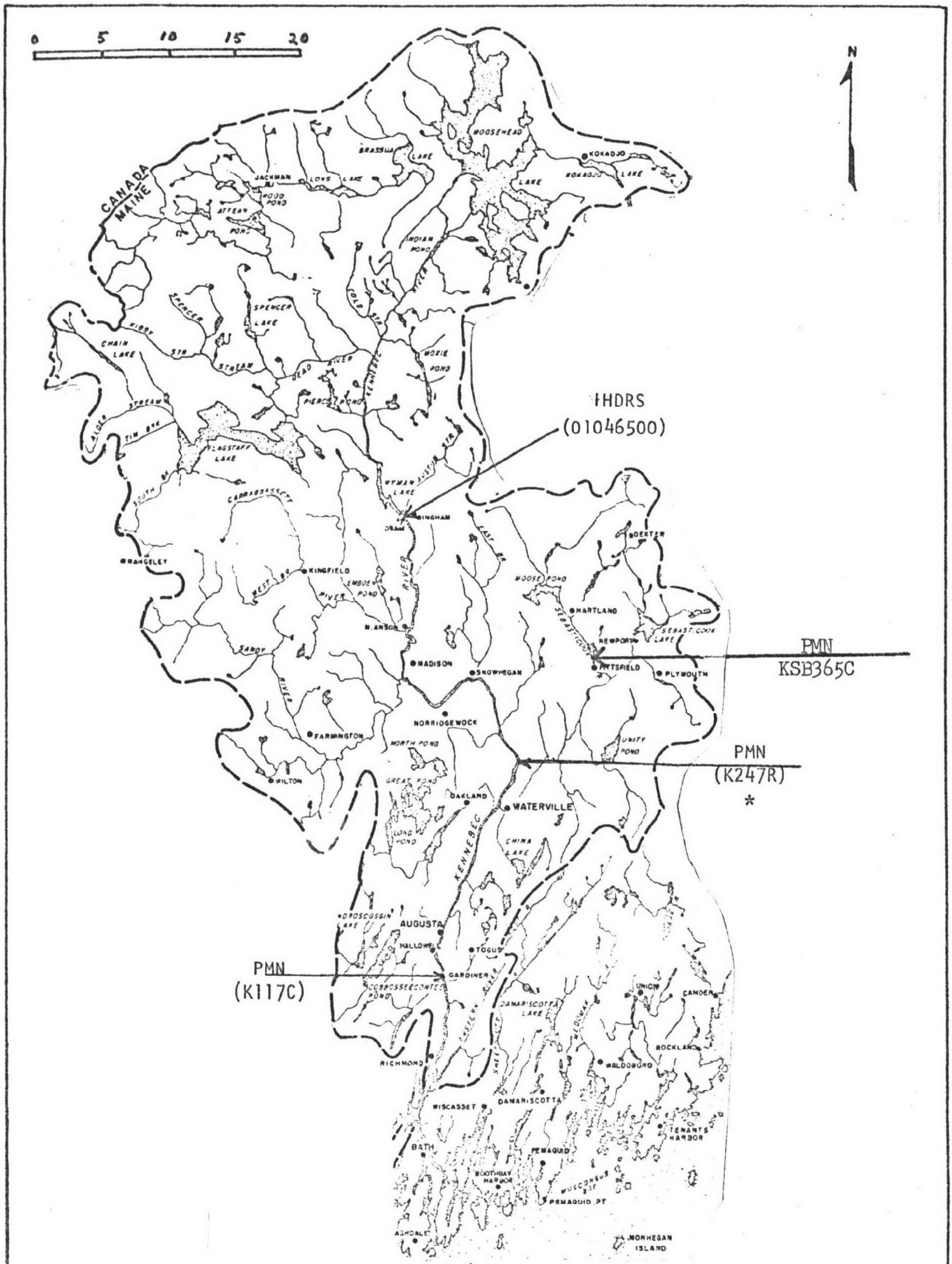
KENNEBEC RIVER BASIN

{MAINE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Kennebec River at Bingham, ME	U.S.G.S. 01046500
2.	Kennebec River at Fairfield, ME	PMN K247R
3.	Sevasticook River at West Palmyra, ME	PMN KSB365C
4.	Kennebec River at Gardiner, ME	PMN K117C



KENNEBEC RIVER BASIN

MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01046500 KENNEBEC R. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
DISS. OXYGEN MG/L	11	0.	0.0	5.00	NONE	10.[illegible]
PH SU	11	0.	0.0	6.00	8.50	6.
COLIFORM TOT MFIM/100ML	9	0.	0.0	NONE	5000.00	18.
COLIFORM FEC MF/100ML	12	0.	0.0	NONE	1000.00	0.

STATION K247R KENNEBEC R. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARIT MEAN
DISS. OXYGEN PROBE MG/L	8	0.	0.0	5.00	NONE	11.
DISS. OXYGEN SATUR %	4	0.	0.0	60.00	NONE	88.
PH SU	7	0.	0.0	6.00	8.50	6.[illegible]
COLIFORM TOT MFIM/100ML	4	0.	0.0	NONE	1000.00	238.4
COLIFORM FEC MF/100ML	8	1.	12.50	NONE	200.00	69.1

* GEOMETRIC MEAN FOR COLIFORMS

SUMMARY OF WATER QUALITY VIOLATIONS

STATION KSB365C SEBASTICOOK R. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	8	3.	37.50	5.00	NONE	8.00
PH SU	8	0.	0.0	6.00	8.50	7.00
COLIFORM TOT MFIM/100ML	5	2.	40.00	NONE	5000.00	3394.64
COLIFORM FEC MF/100ML	8	0.	0.0	NONE	1000.00	115.46

STATION K-117C KENNEBEC R. (ME)

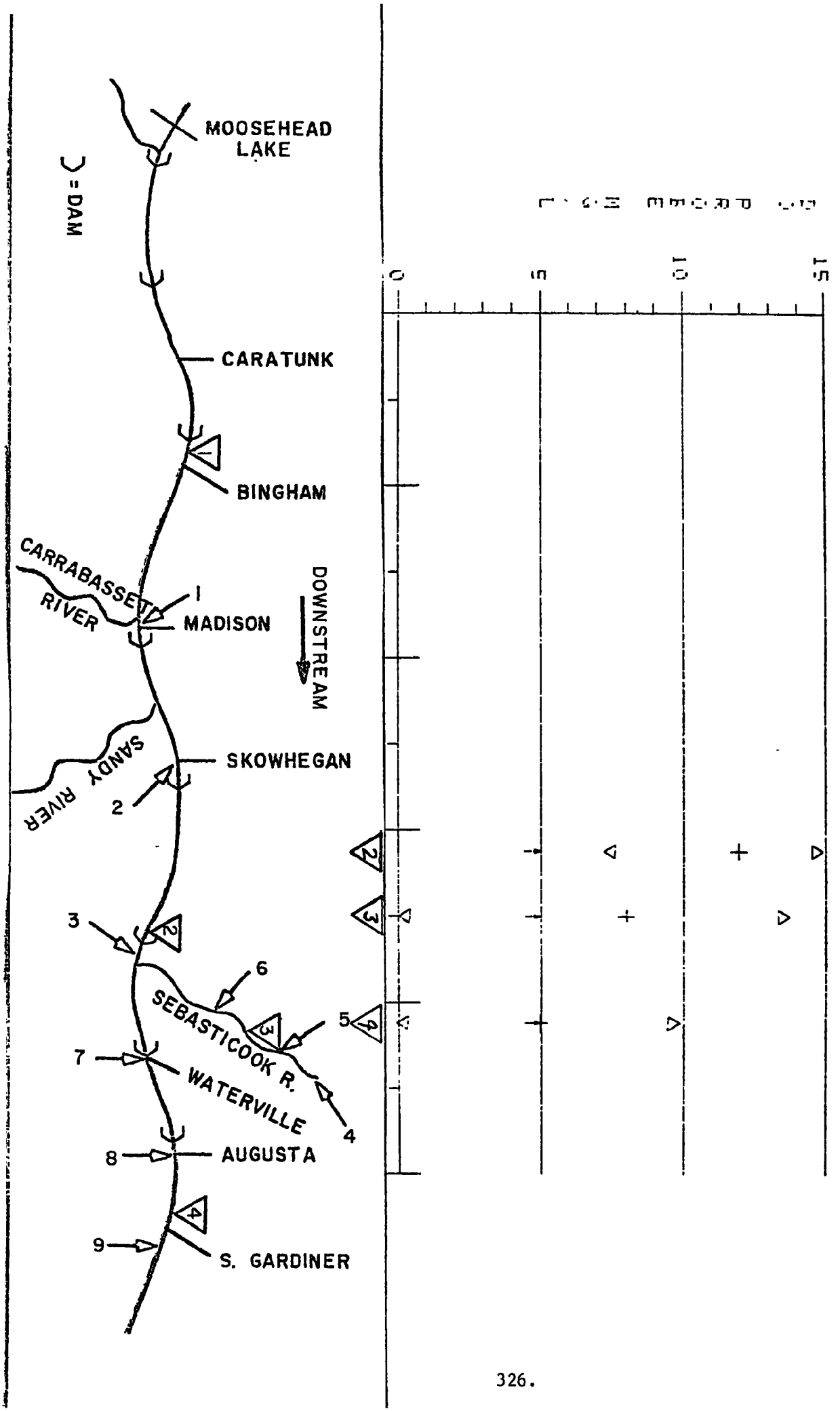
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	6	4.	66.67	5.00	NONE	4.97
PH SU	5	0.	0.0	6.00	8.50	6.14
COLIFORM TOT MFIM/100ML	6	3.	50.00	NONE	5000.00	8983.40
COLIFORM FEC MF/100ML	6	3.	50.00	NONE	1000.00	1063.44

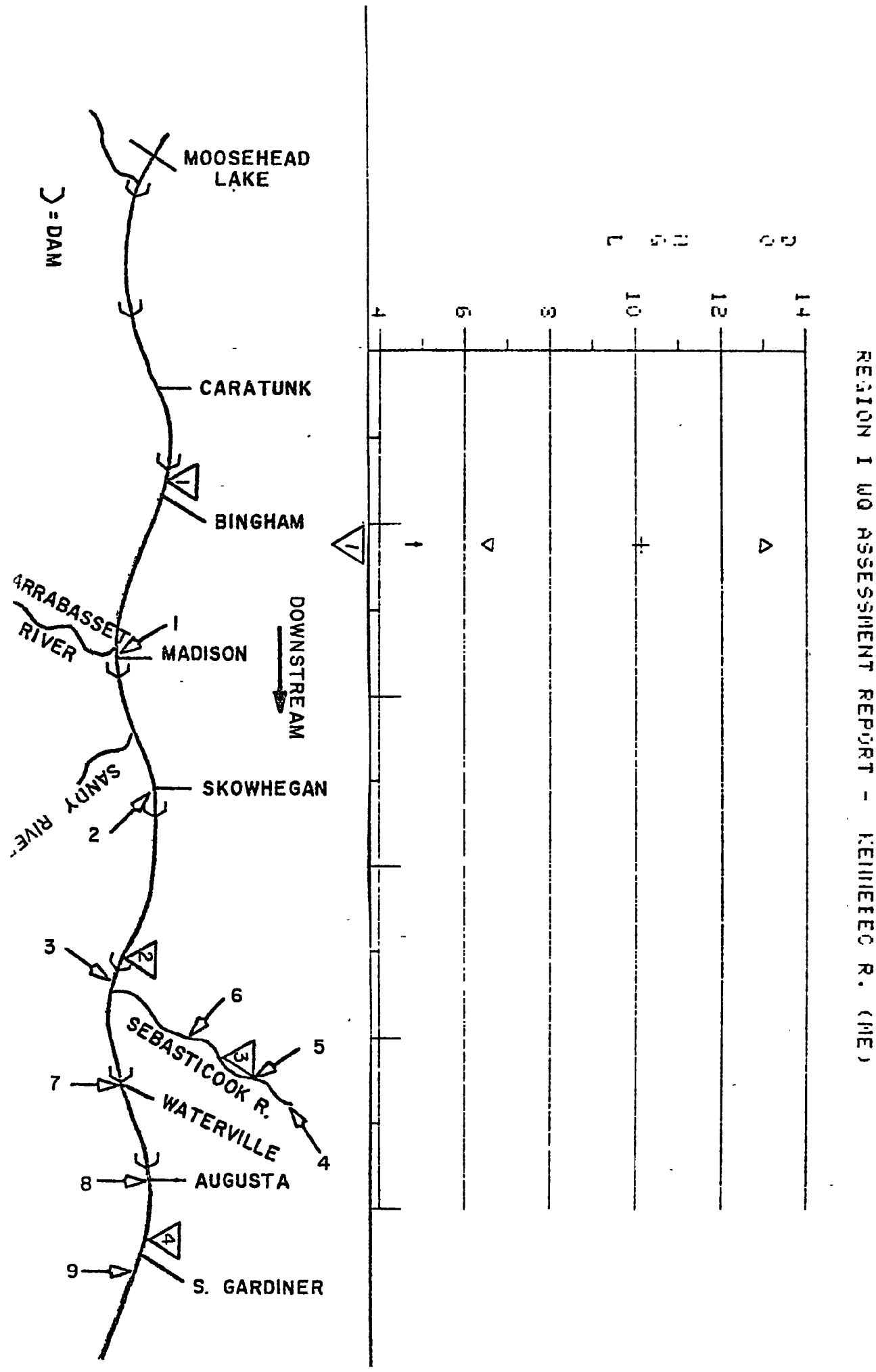
* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

KENNEBEC RIVER BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	Anson-Madison STP	Anson	Kennebec River	0101389
	Kennebec River Pulp +Paper	Madison	Kennebec River	0002534
2.	Skowhegan STP	Skowhegan	Kennebec River	0100625
	Scott Paper Co.	Winslow	Kennebec River	0002178
3.	Cascade Woolen Mill	Oakland	Messalonskee Stream	0000116
	Oakland STP	Oakland	Messalonskee Stream	0100463
4.	Dexter STP	Dexter	E. Branch Sebasticook River	0100170
	Amos Abbot	Dexter	Sebasticook River	0001759
	Corinna STP	Corinna	Sebasticook River	0100153
	Eastland Woolen Mill	Corinna	Sebasticook River	0021466
5.	Hartland STP	Hartland	Sebasticook River	0101443
	Hartland Tanning Co.	Hartland	Sebasticook River	0000108
6.	Pittsfield STP	Pittsfield	Sebasticook River	0100528
7.	Waterville SD	Waterville	Kennebec River	0101508
	Wyandotte Industries Co	Waterville	Kennebec River	0000787
	Scott Paper Co-Winslow	Winslow	Piscataquis River	0021521
	Keyes Fibre-Waterville	Waterville	Kennebec River	0000337
	Keyes Fibre-Shawmut	Shawmut	Kennebec River	0000302
8.	Augusta SD	Augusta	Kennebec River	0100013
	Statler Industries Inc.	Augusta	Kennebec River	0002224
	Globe Albany Corp.	N. Monmouth	Wilson Stream	0001911
9.	Gardiner	Gardiner	Kennebec River	0101702
	Yorktowne Paper Mills	Gardiner	Cobbosseecontee	0002542


REGION I WQ ASSESSMENT REPORT - KENNEBEC R. (ME)
MOOSEHEAD LAKE
CARATUNK
BINGHAM
CARRABASSETT RIVER
MADISON
DOWNSTREAM
SANDY RIVER
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
= DAM
0
5
10
15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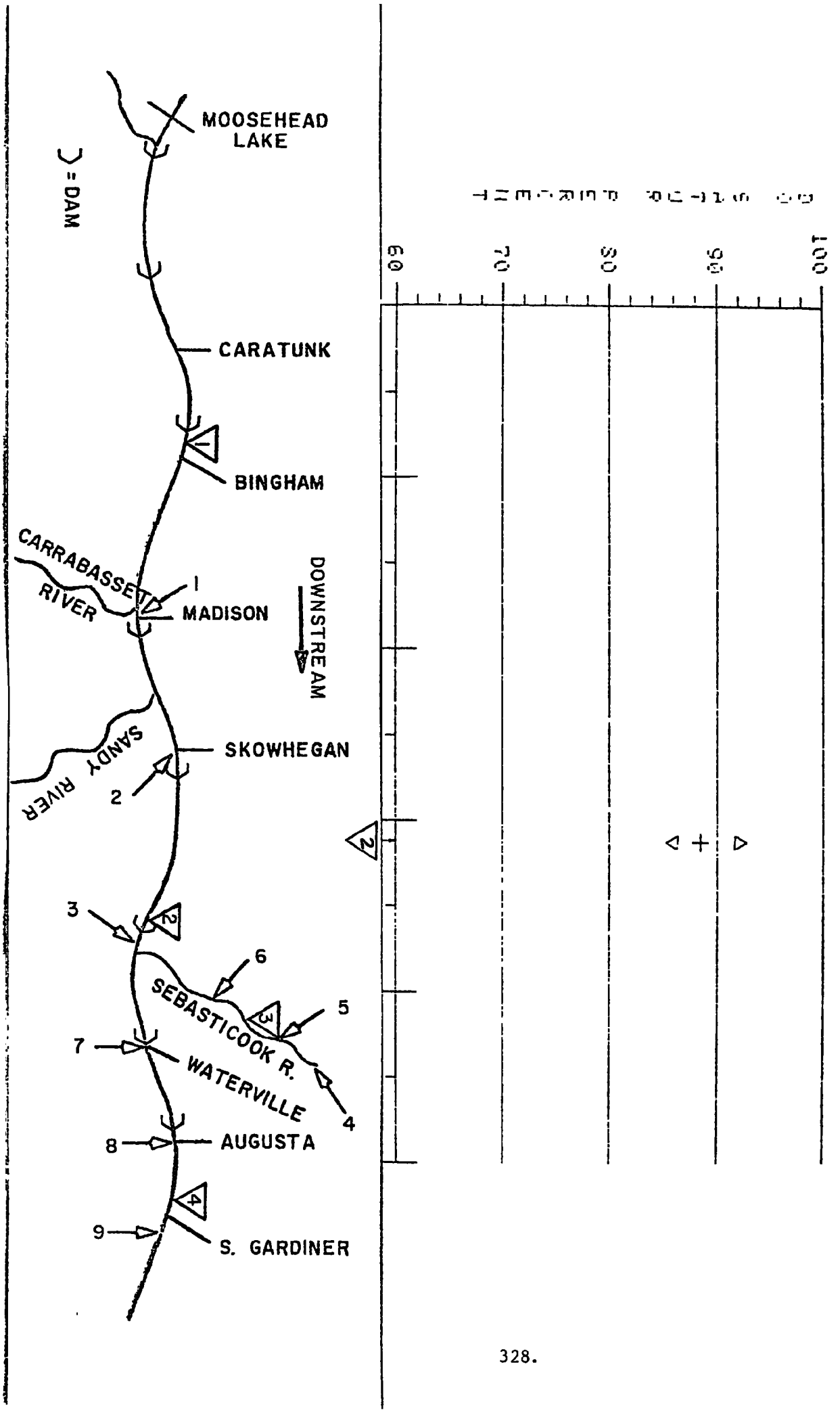
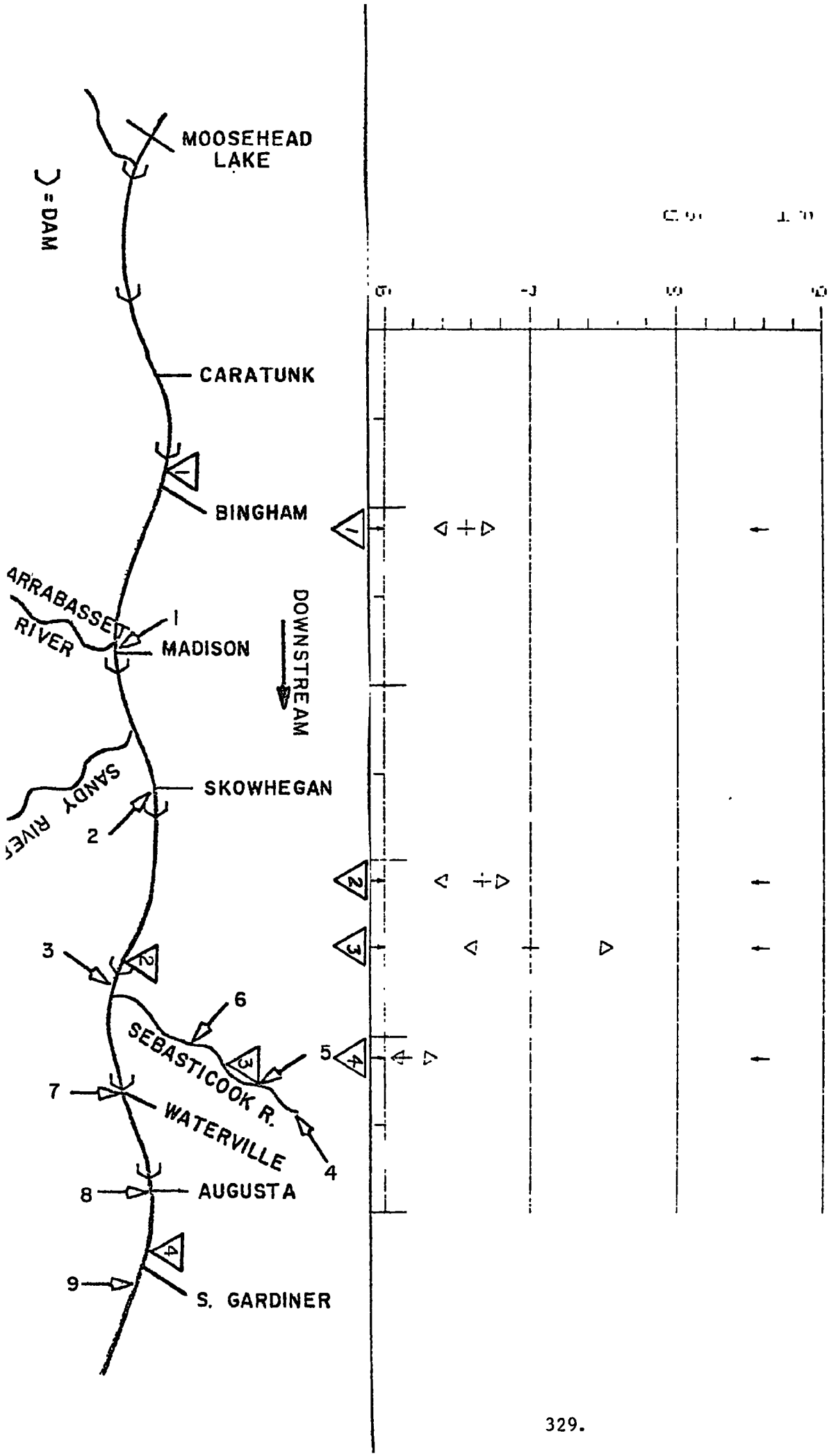
MOOSEHEAD LAKE
CARATUNK
BINGHAM
ARRABASSET RIVER
MADISON
DOWNSTREAM
SANDY RIVER
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
= DAM
1
2
3
4
5
6
7
8
9


REGION I WQ ASSESSMENT REPORT - KENNEBEC R. (ME)
PERCENT SATURATION DO
100
90
80
70
60
MOOSEHEAD LAKE
CARATUNK
BINGHAM
CARRABASSETT RIVER
MADISON
DOWNSTREAM
SANDY RIVER
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
DAM
1
2
3
4
5
6
7
8
9


MOOSEHEAD LAKE
= DAM
CARATUNK
BINGHAM
ARRABASSETT RIVER
MADISON
DOWNSTREAM
SANDY RIVER
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
1
2
3
4
5
6
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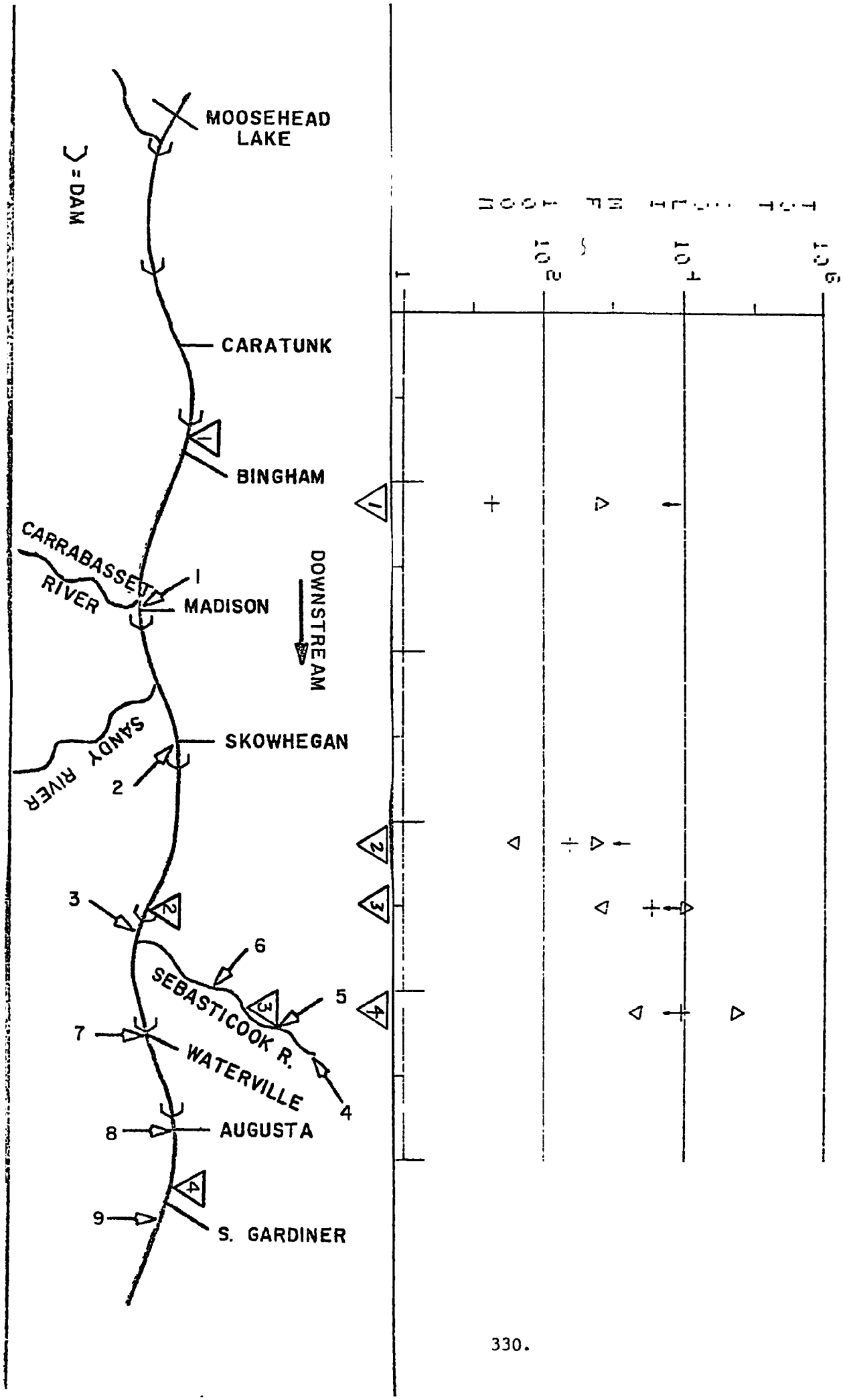
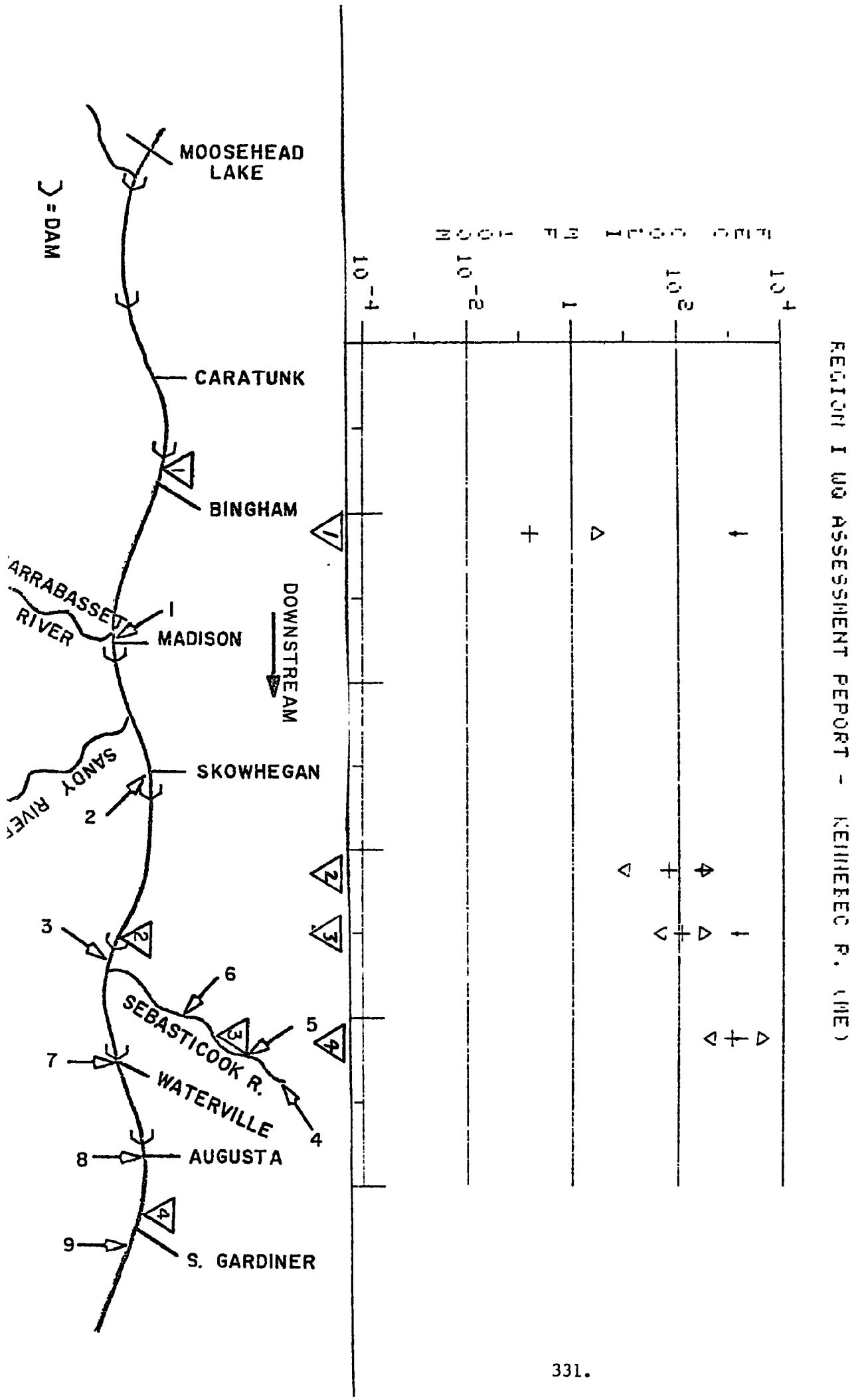
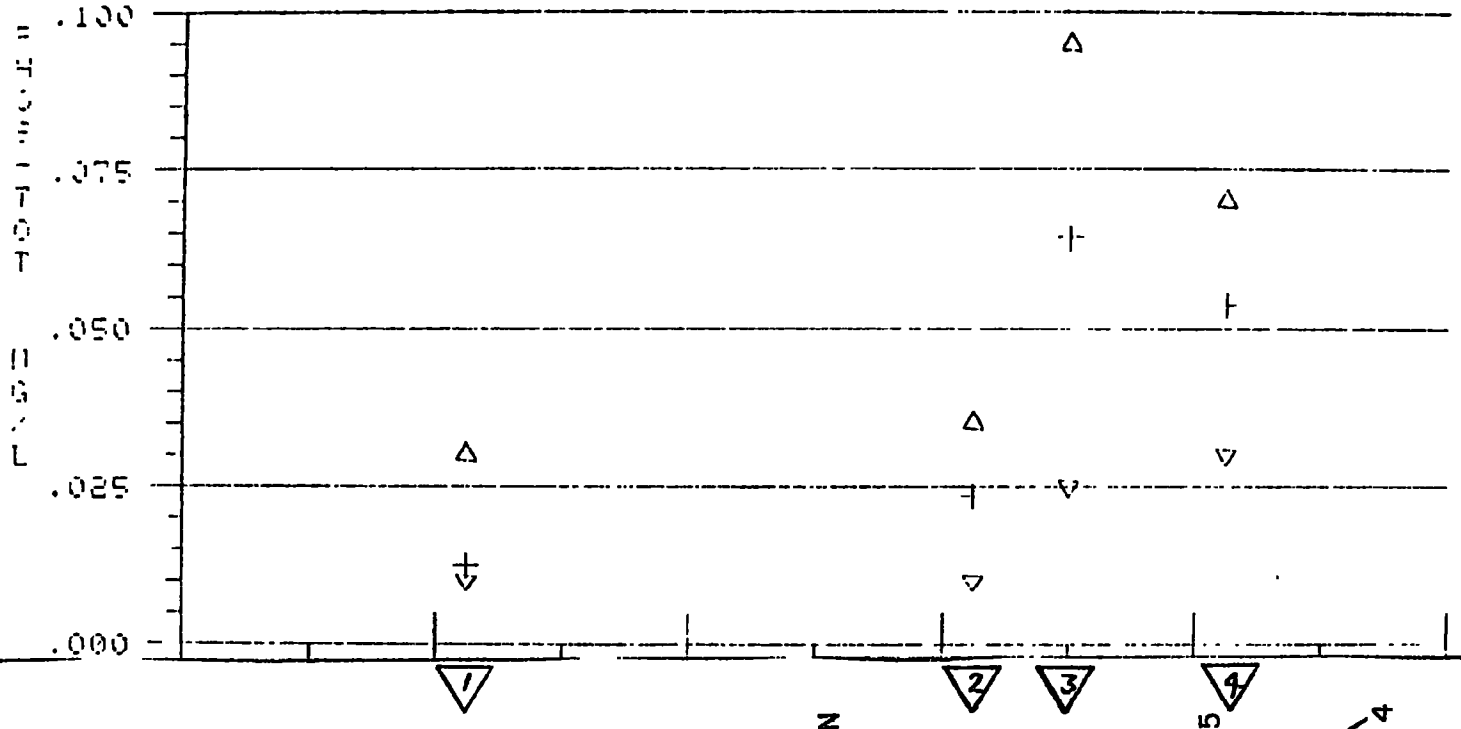
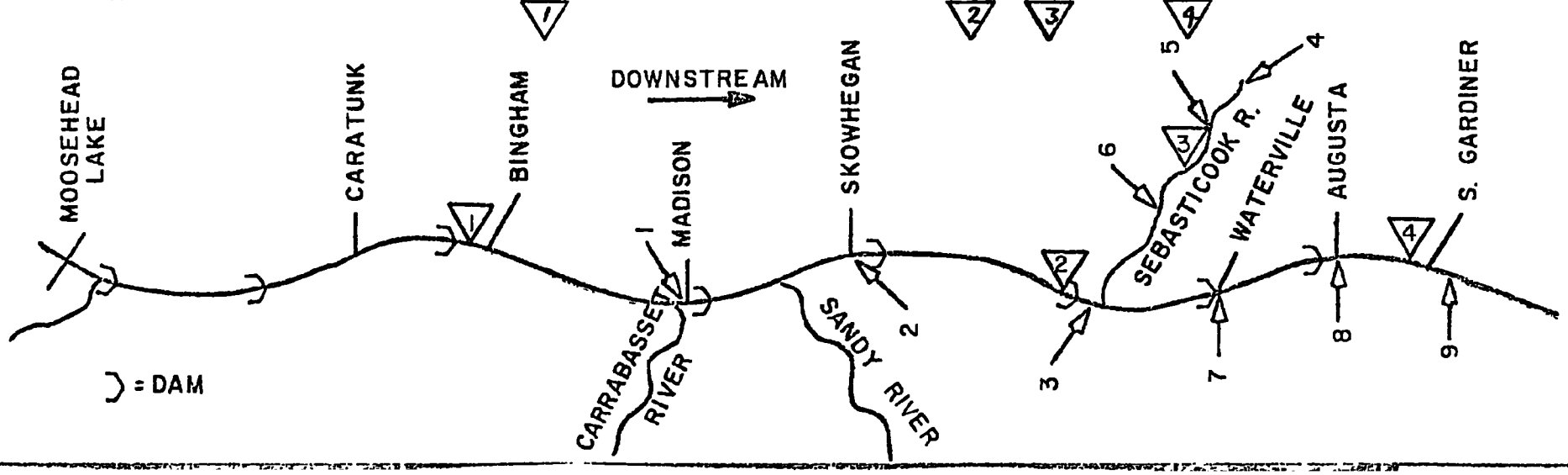
9

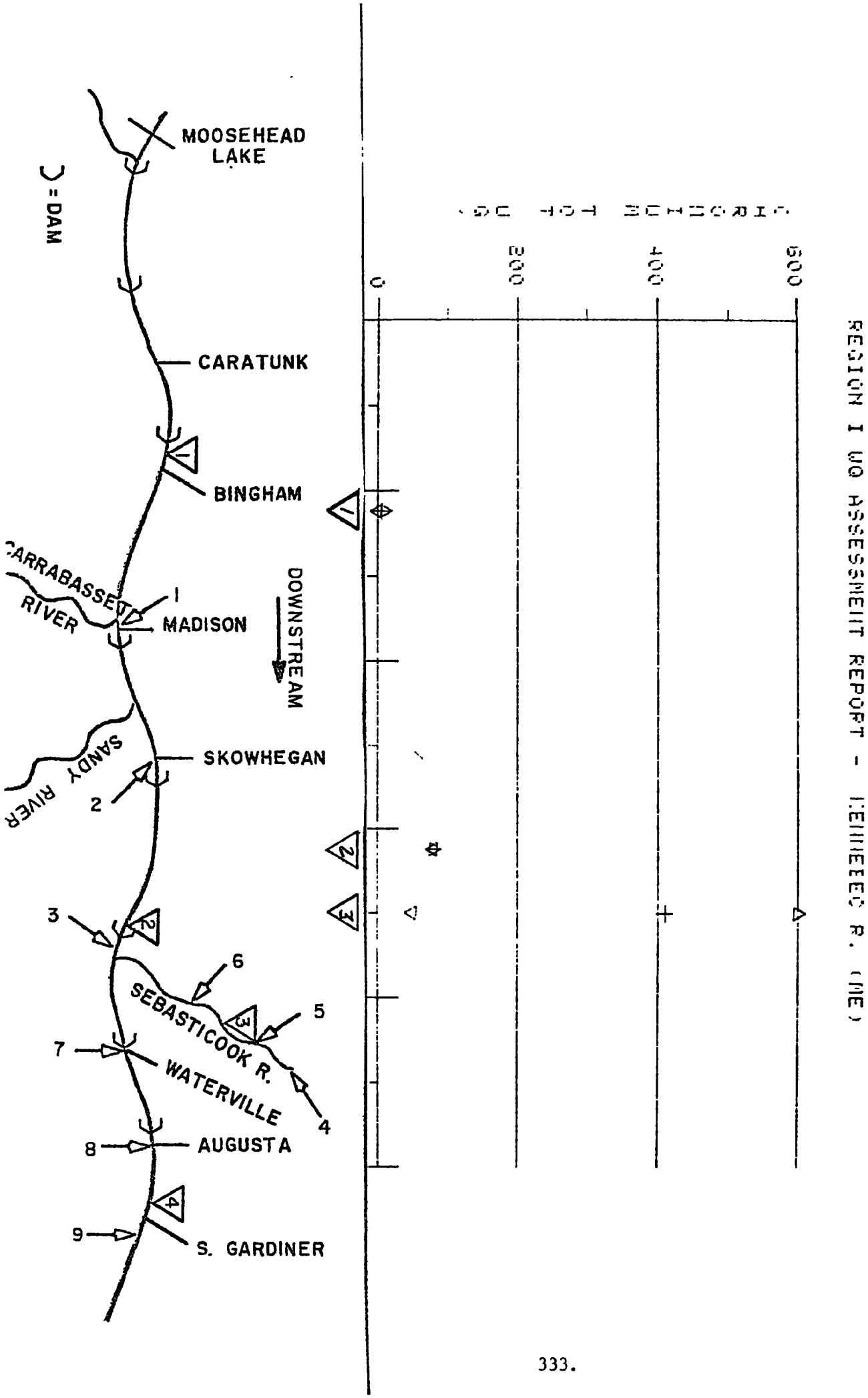

MOOSEHEAD LAKE
= DAM
CARATUNK
BINGHAM
CARRABASSETT RIVER
MADISON
DOWNSTREAM
SANDY RIVER
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
REGION I WQ ASSESSMENT REPORT - KENNEBEC R. (ME)


REGION I WQ ASSESSMENT REPORT - KENNEBEC R. (ME)
FECAL COLIFORM
10^4
10^2
1
10^{-2}
10^{-4}
MOOSEHEAD LAKE
CARATUNK
BINGHAM
MADISON
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
ARRABASSET RIVER
SANDY RIVER
DOWNSTREAM
= DAM
1
2
3
4
5
6
7
8
9

REGION I WQ ASSESSMENT REPORT - KENNEBEC R. (ME)






REGION I WQ ASSESSMENT REPORT - KENNEBEC R. (ME)
DISCHARGE FOR DO
0
200
400
600
MOOSEHEAD LAKE
DAM
CARATUNK
BINGHAM
CARRABASSET RIVER
MADISON
DOWNSTREAM
SANDY RIVER
SKOWHEGAN
SEBASTICOOK R.
WATERVILLE
AUGUSTA
S. GARDINER
1
2
3
4
5
6
7
8
9

Phos
DO
Fecl Col.

3.26 PENOBSCOT RIVER BASIN

The Penobscot River Basin with a drainage area of 8,910 square miles is the largest basin to lie totally within Maine's boundaries. The mainstem drains a complex network of lakes in northern Maine and flows 74 miles to the ocean at Penobscot Bay.

Most of the water quality problems in this basin are due to inadequately treated municipal and industrial (pulp and paper mill) discharges. However, changes in industrial processes, mill closings, and the application of best practicable treatment to the major pollution sources by October 1, 1976, should improve the river's water quality.

For this report only, data from the U.S.G.S. station at W.Enfield, Maine was analyzed. This station reported total coliform violations in May and September. Four primary monitoring network stations were established by the Maine D.E.P. in 1975. Data from these stations was not available in time for this report but these stations will be included in future reports.

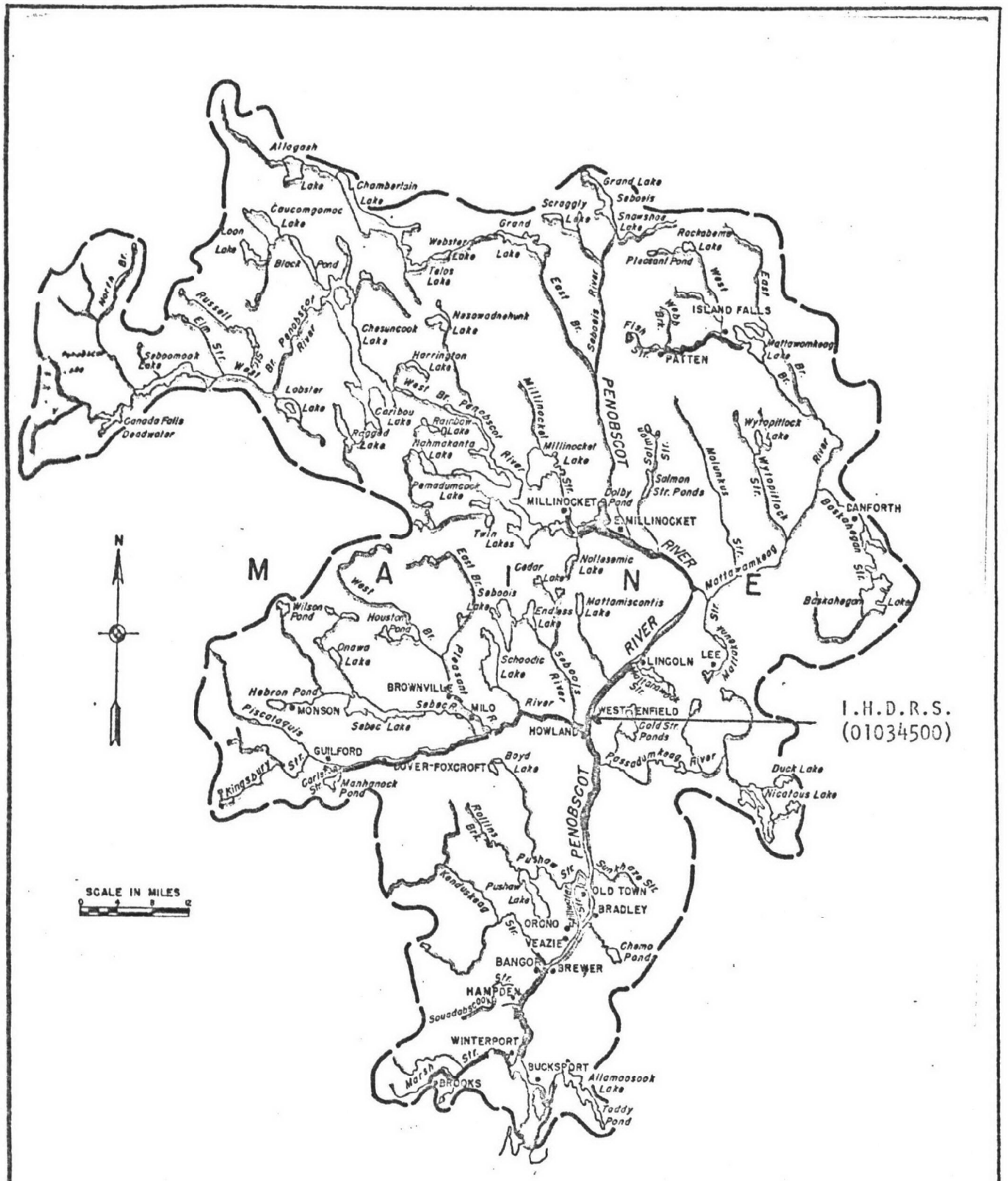
PENOBSCOT RIVER

{MAINE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Penobscot River at West Enfield, ME	U.S.G.S. 01034500



PENOBSCOT RIVER

BASIN

MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01034500 PENOBSCOT R. (ME)

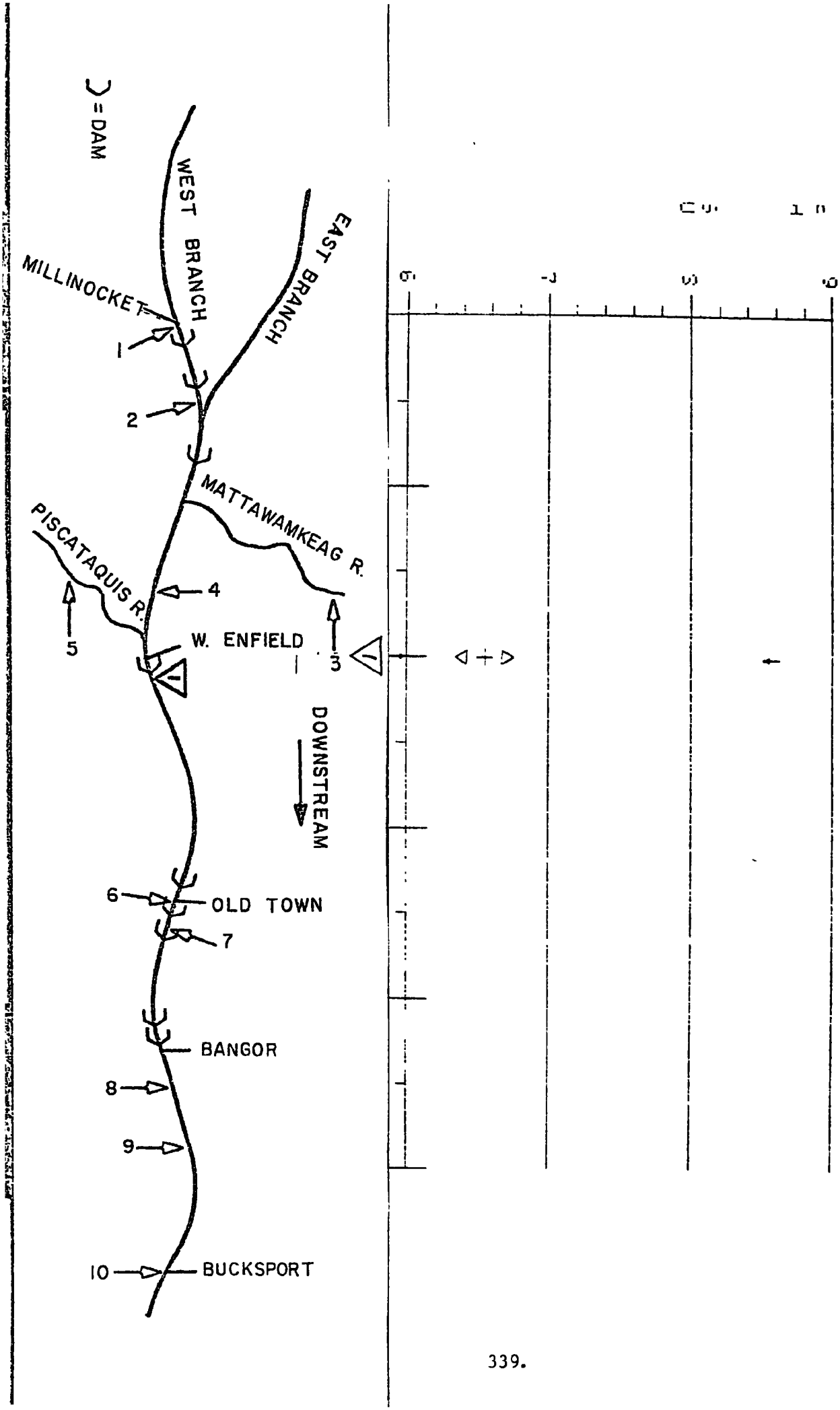
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
PH SU	12	0.	0.0	6.00	8.50	6.50
COLIFORM TOT MFIM/100ML	9	2.	22.22	NONE	5000.00	3825.0
COLIFORM FEC MF/100ML	12	0.	0.0	NONE	1000.00	135.1

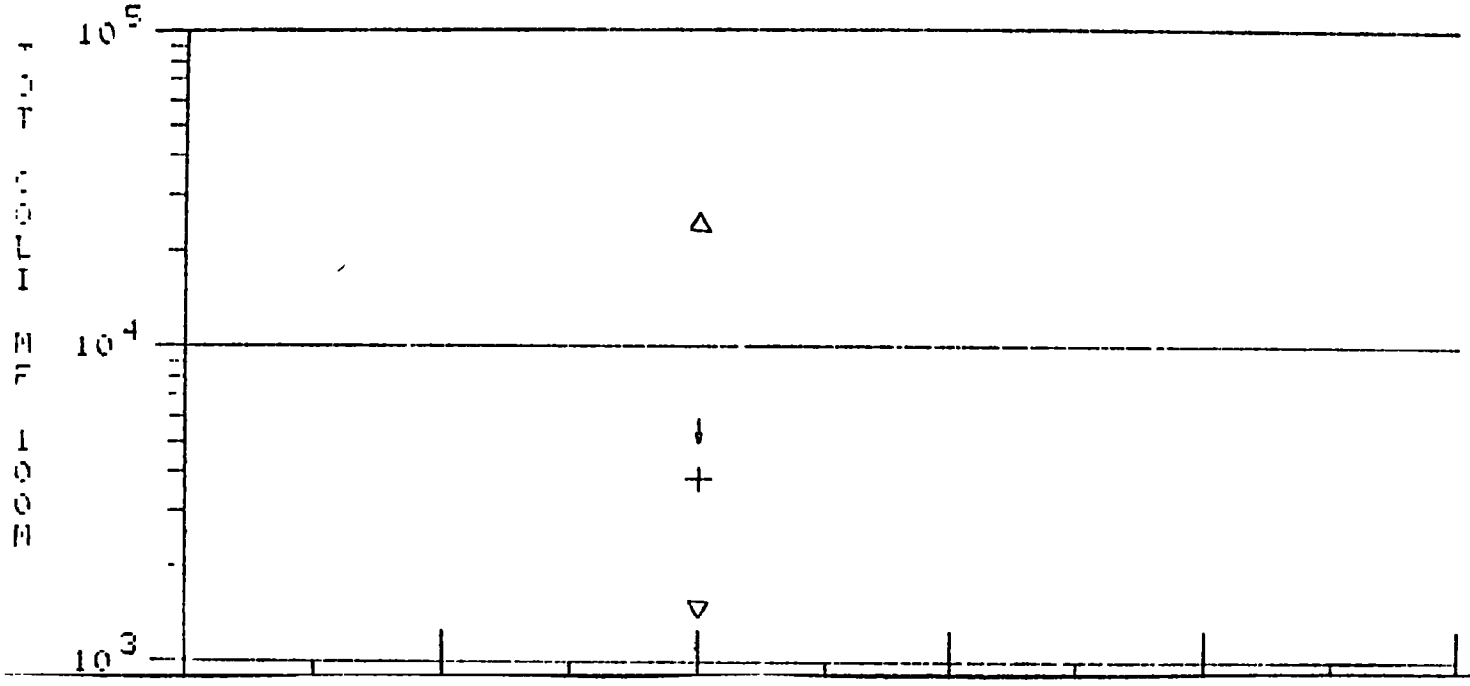
* GEOMETRIC MEAN FOR COLIFORMS

SIGNIFICANT DISCHARGERS

PENOBSCOT RIVER BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	Great Northern Paper	Baileyville	Penobscot River	0000167
	Millinocket STP	Millinocket	Millinocket Stream	0100803
2.	Great NorthernPaper	E. Millinocket	Penobscot River	0000175
3.	Stein-Hall Co.	Island Falls	Mattawamkeag River	0001856
4.	Lincoln Pulp and Paper Co.	Lincoln	Penobscot River	0002003
5.	Guildford Industries Inc.	Guildford	Piscatoquis River	0001902
6.	Owens Illinois Inc.	Oldtown	Penobscot River	0002046
	Old Town STP	Oldtown	Penobscot River	0100471
7.	Diamond International Corp.	Oldtown	Penobscot River	0002020
8.	Eastern Fine Paper	Brewer	Penobscot River	0000086
	Brewer STP	Brewer	Penobscot River	0100072
9.	Sobin Chlor-Alkali Inc.	Orrington	Penobscot River	0000639
10.	St. Regis Paper Co.	Bucksport	Penobscot River	0002160
	Bucksport STP	Bucksport	Penobscot River	0100111


REGION I WQ ASSESSMENT REPORT - PENOBSCOT R. (ME)
= DAM
WEST BRANCH
EAST BRANCH
MILLINOCKET
MATTAWAMKEAG R.
PISCATAQUIS R.
W. ENFIELD
DOWNSTREAM
OLD TOWN
BANGOR
BUCKSPORT
1
2
3
4
5
6
7
8
9
10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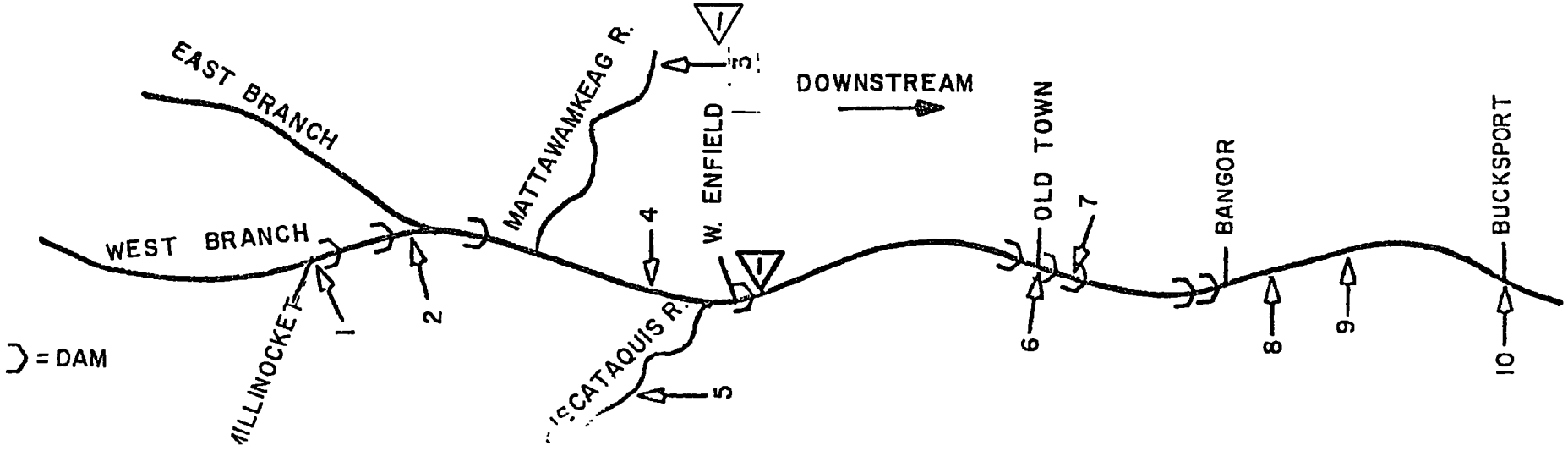
10^4
10^3


EAST BRANCH
WEST BRANCH
MILLINOCKET
MATTAWAMKEAG R.
W. ENFIELD
ISCATAQUIS R.
DOWNSTREAM
OLD TOWN
BANGOR
BUCKSPORT
1
2
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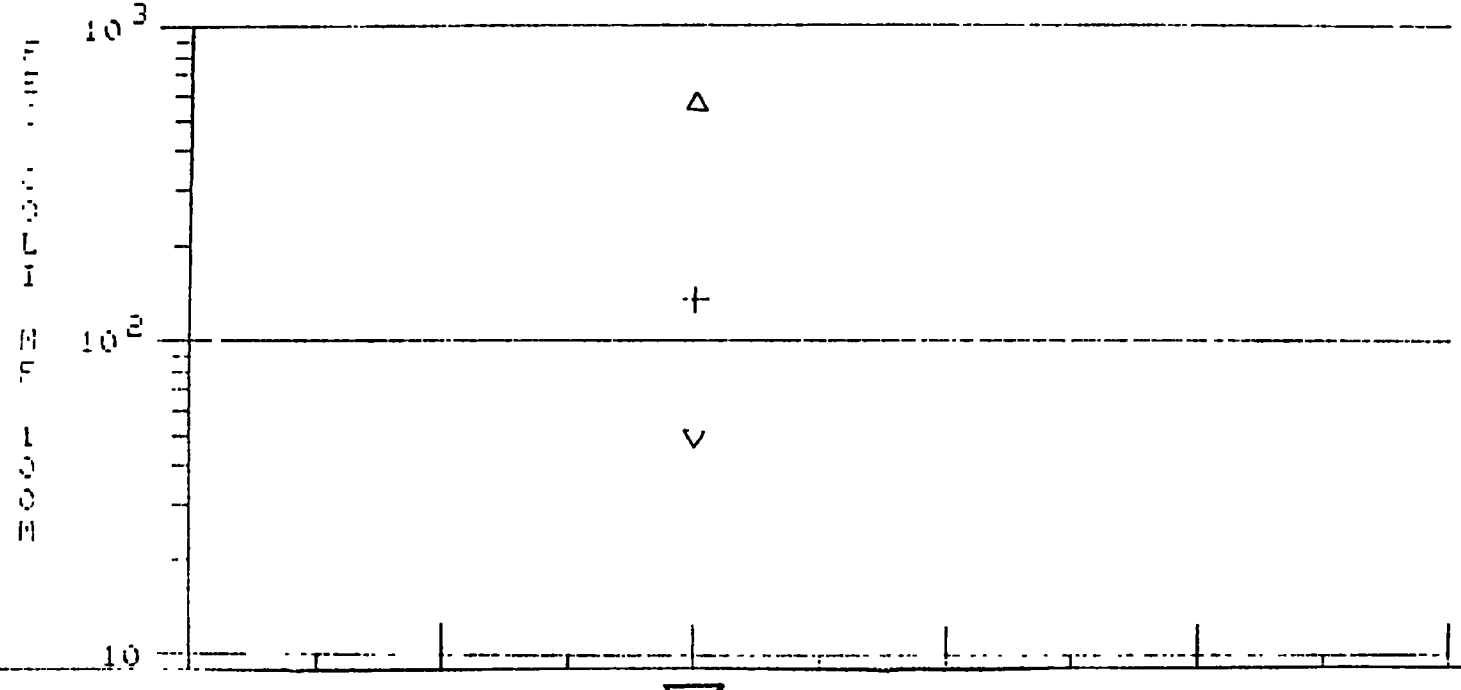
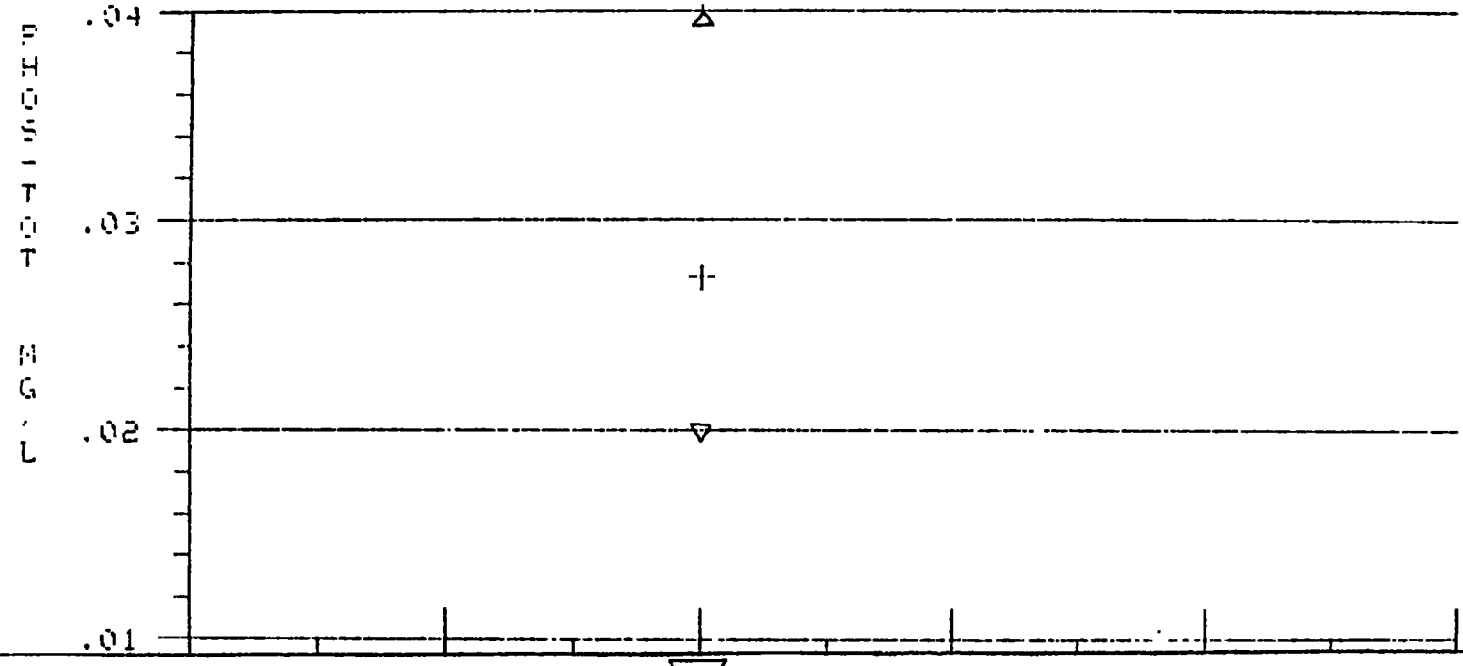
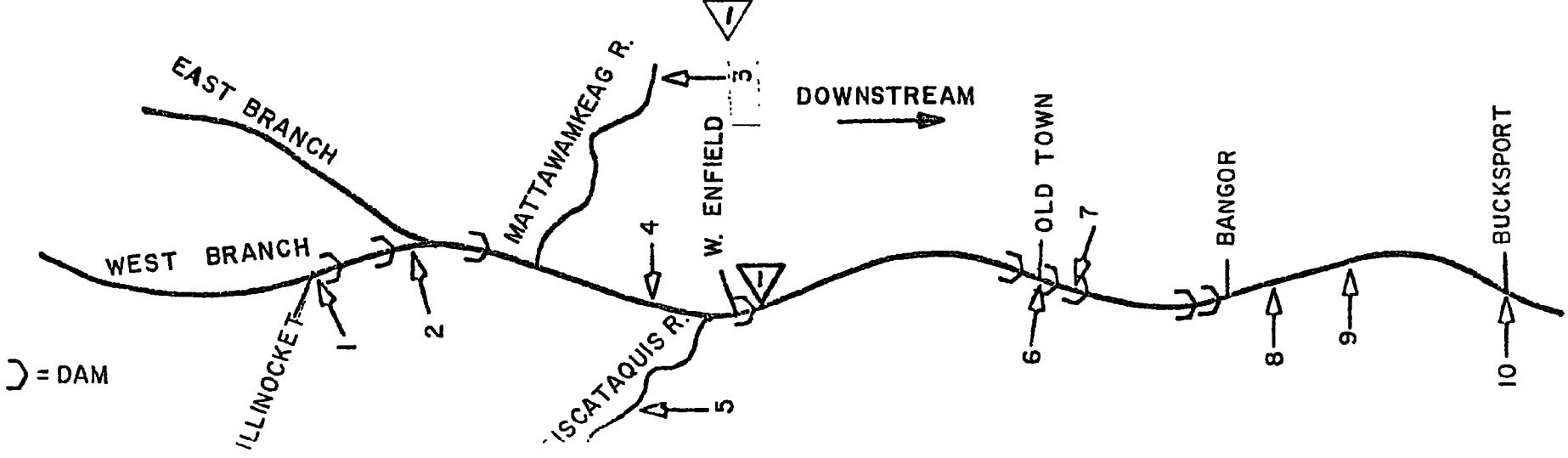
7
8
9
10
= DAM

REGION I WQ ASSESSMENT REPORT - PENOBSCOT R. (ME)

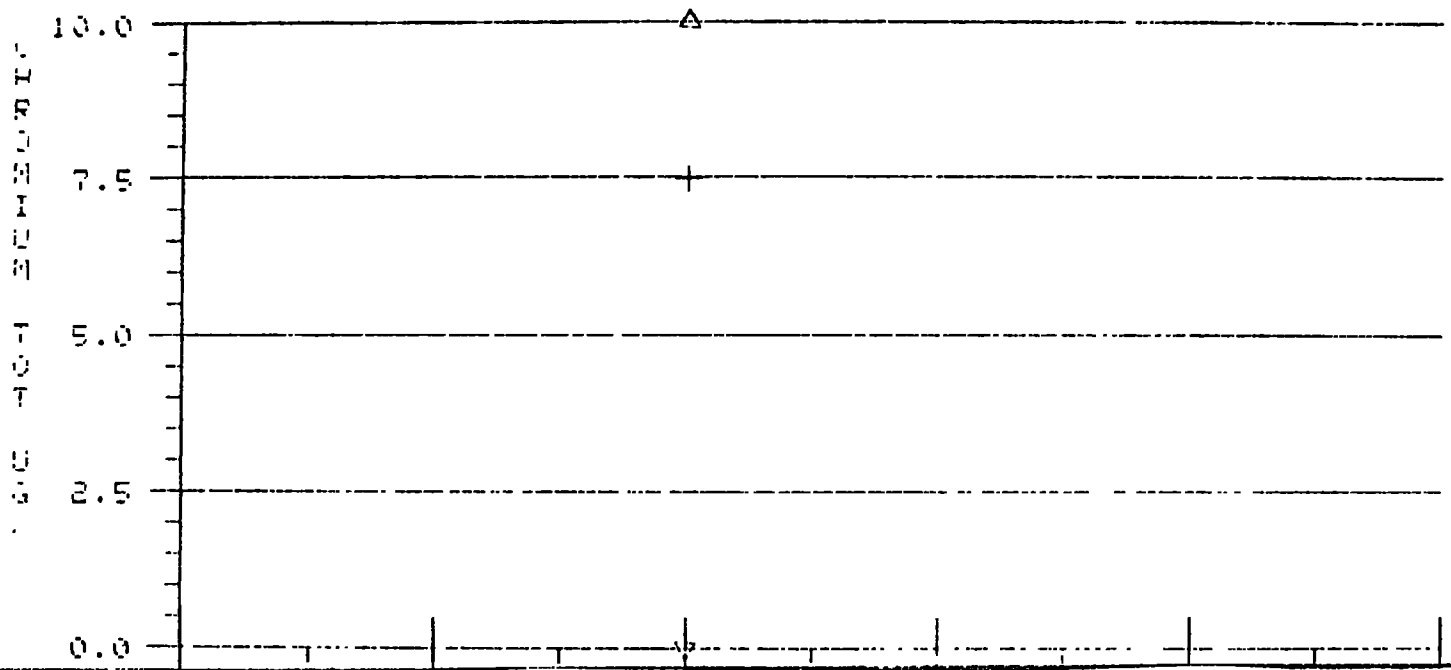


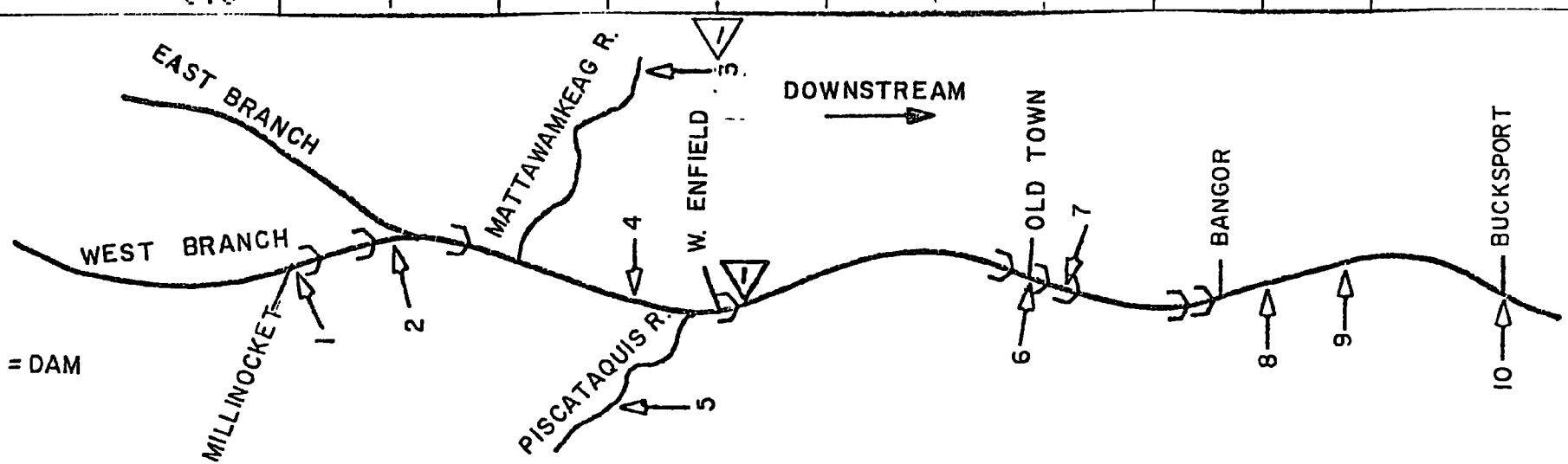
REGION I WQ ASSESSMENT REPORT - PENOBSCOT R. (ME)





REGION I WQ ASSESSMENT REPORT - PENOBSCOT R. (ME)





Plots
DO
pH
Fecal Coli
Tot. phos

3.27 ST. CROIX BASIN

The St. Croix River drains the Chiputneticook Lakes and forms the Maine-Canada border for 77 miles before it flows into the ocean at Calais, Maine.

The Georgia-Pacific Corporation paper mill in Woodland is the only major industrial discharger in the basin. Discharges from this plant control the quality of the St. Croix from Woodland to the ocean.

The following tables show that total coliform bacteria standards are consistently violated, fecal coliform standards are violated in August, while DO violations are recorded in July, August and September. Discharges from the Georgia-Pacific paper mill are primarily responsible for these problems. Though not as significant as the Georgia-Pacific discharges, combined sewer overflows in Milltown, Maine also exert a negative impact on the St. Croix.

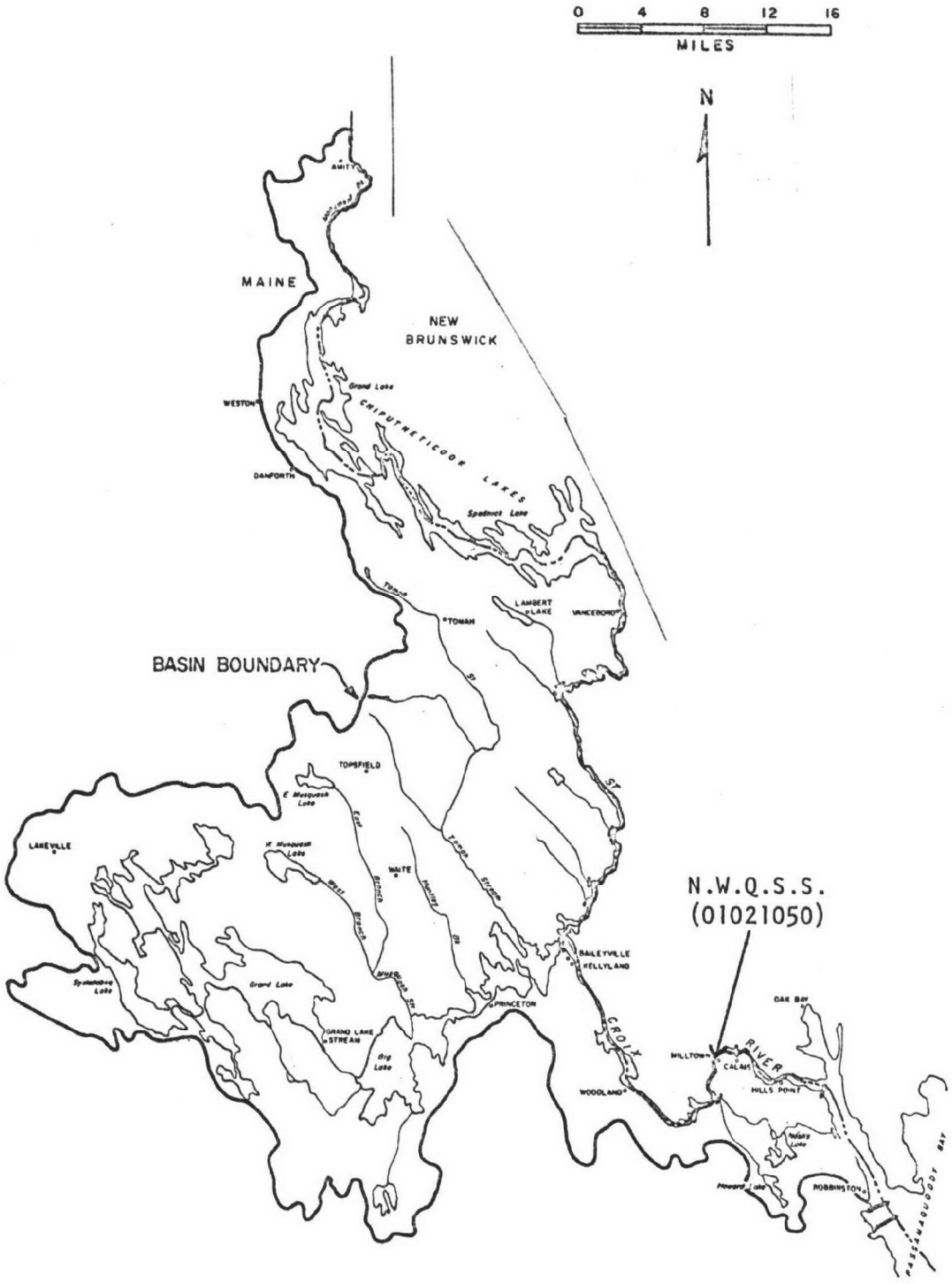
ST. CROIX RIVER BASIN

{MAINE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	St. Croix River at Milltown, ME	U.S.G.S. 01021050



SAINT CROIX RIVER BASIN

MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION 01021050 ST. CROIX R. (ME)

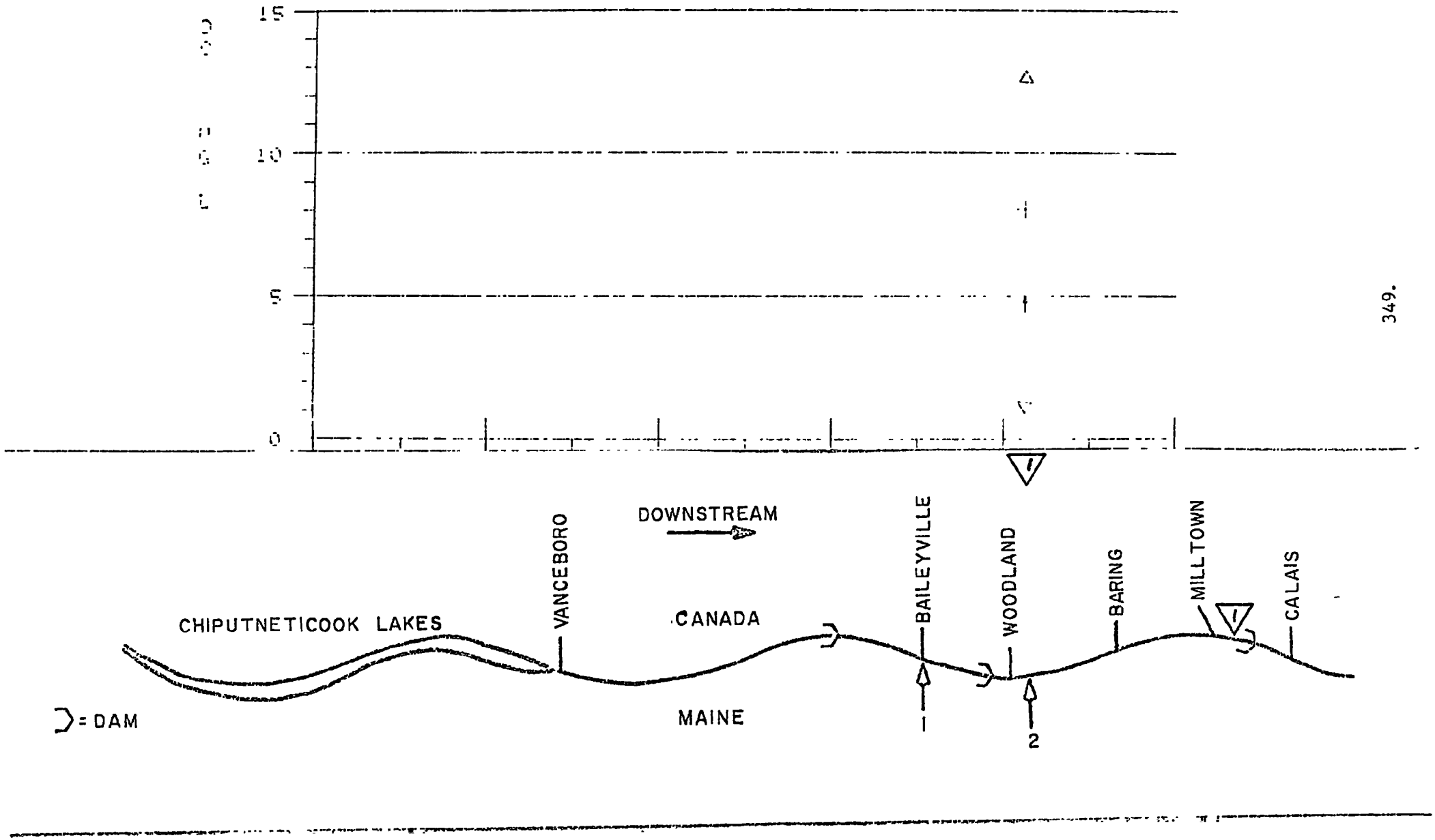
PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN MG/L	22	4.	18.18	5.00	NONE	8.0
PH SU	22	0.	0.0	6.00	8.50	6.4
COLIFORM TOT MFIM/100ML	16	9.	56.25	NONE	5000.00	5900.0
COLIFORM FEC MF/100ML	20	2.	10.00	NONE	1000.00	118.7

* GEOMETRIC MEAN FOR COLIFORMS

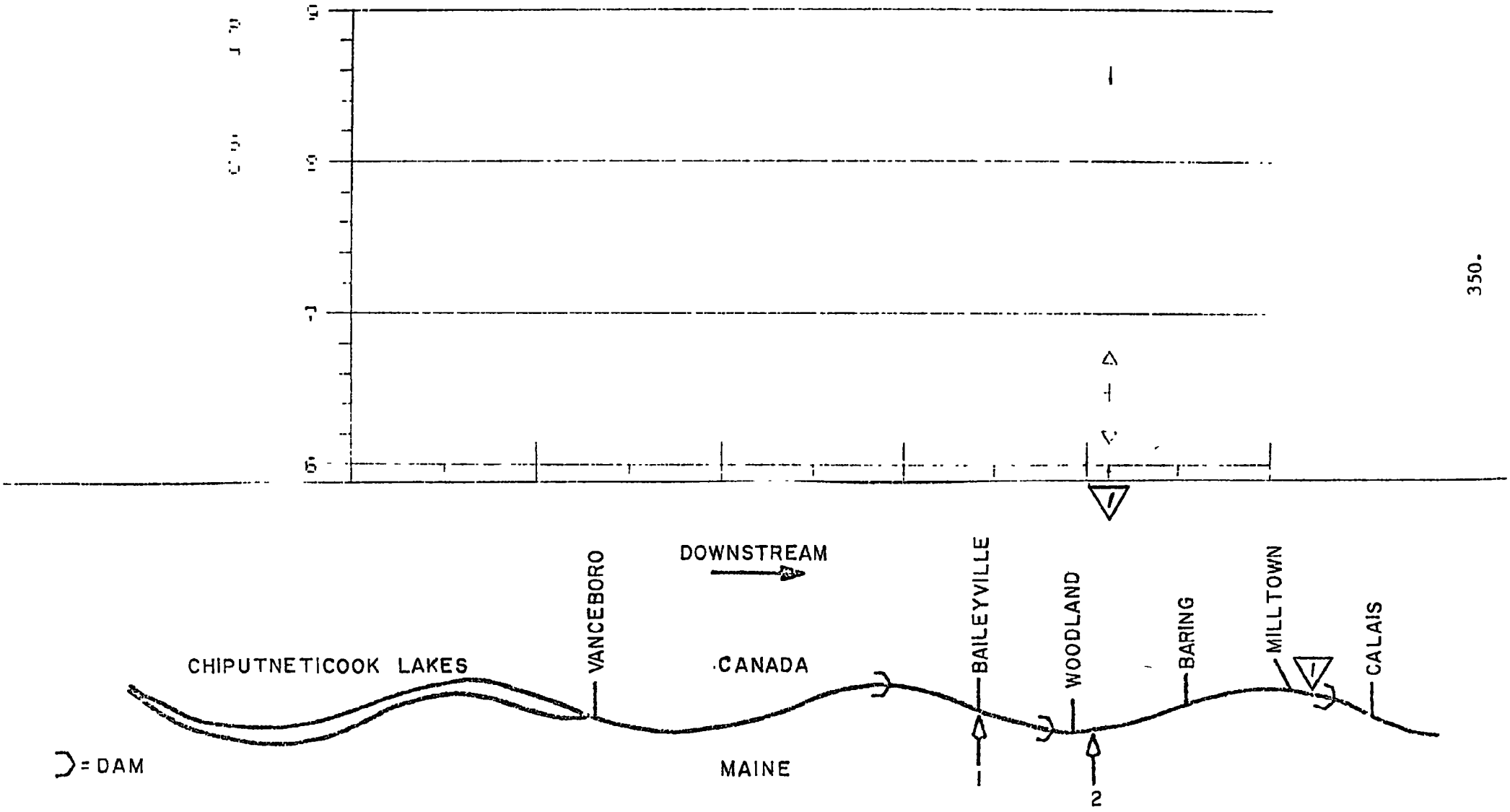
SIGNIFICANT DISCHARGERS

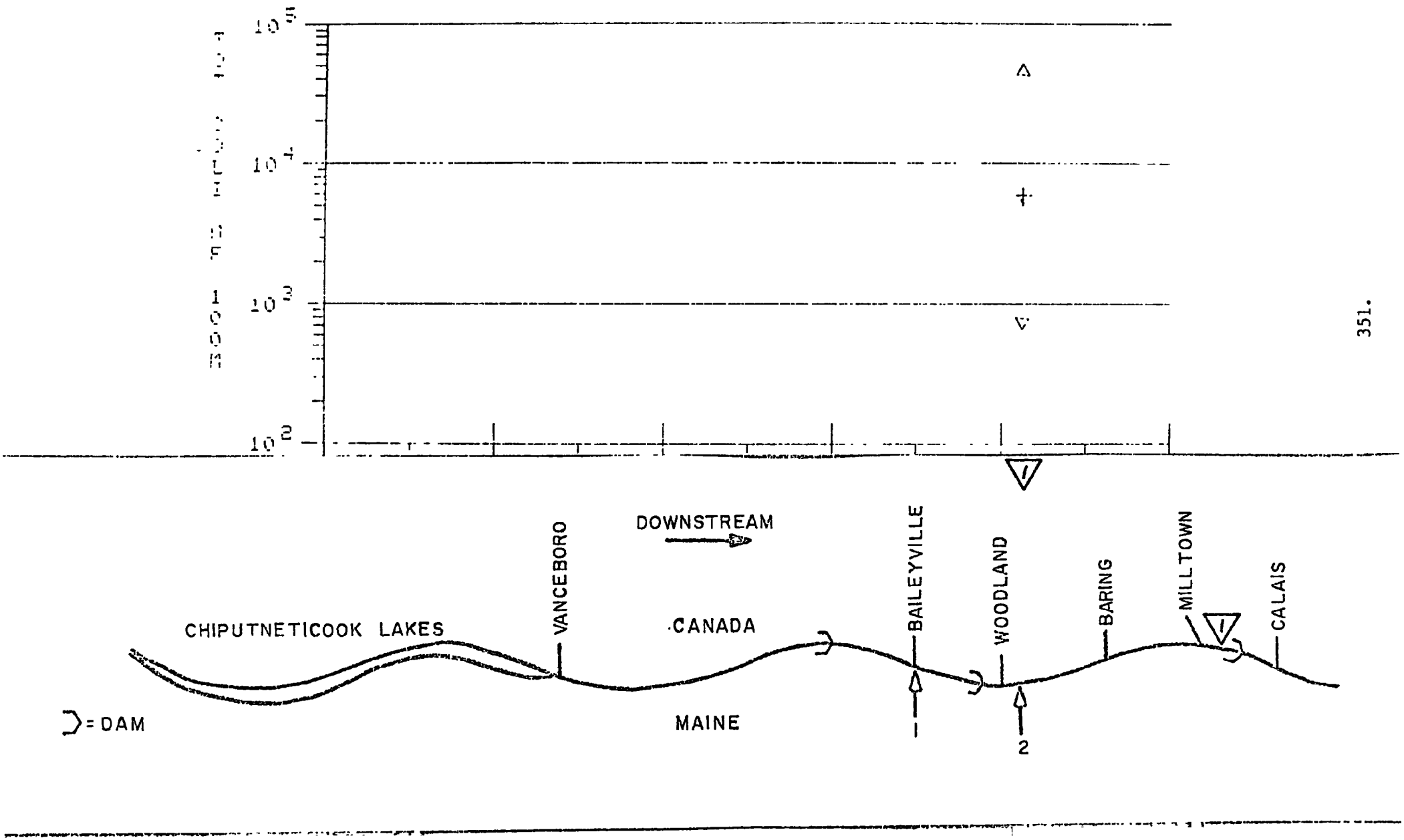
ST. CROIX RIVER BASIN

	Discharger	Location	Receiving Water	NPDES No.
1.	Baileyville WPCF	Baileyville	St. Croix River	0101320
2.	Georgia-Pacific Woodland	Baileyville	St. Croix River	0001872

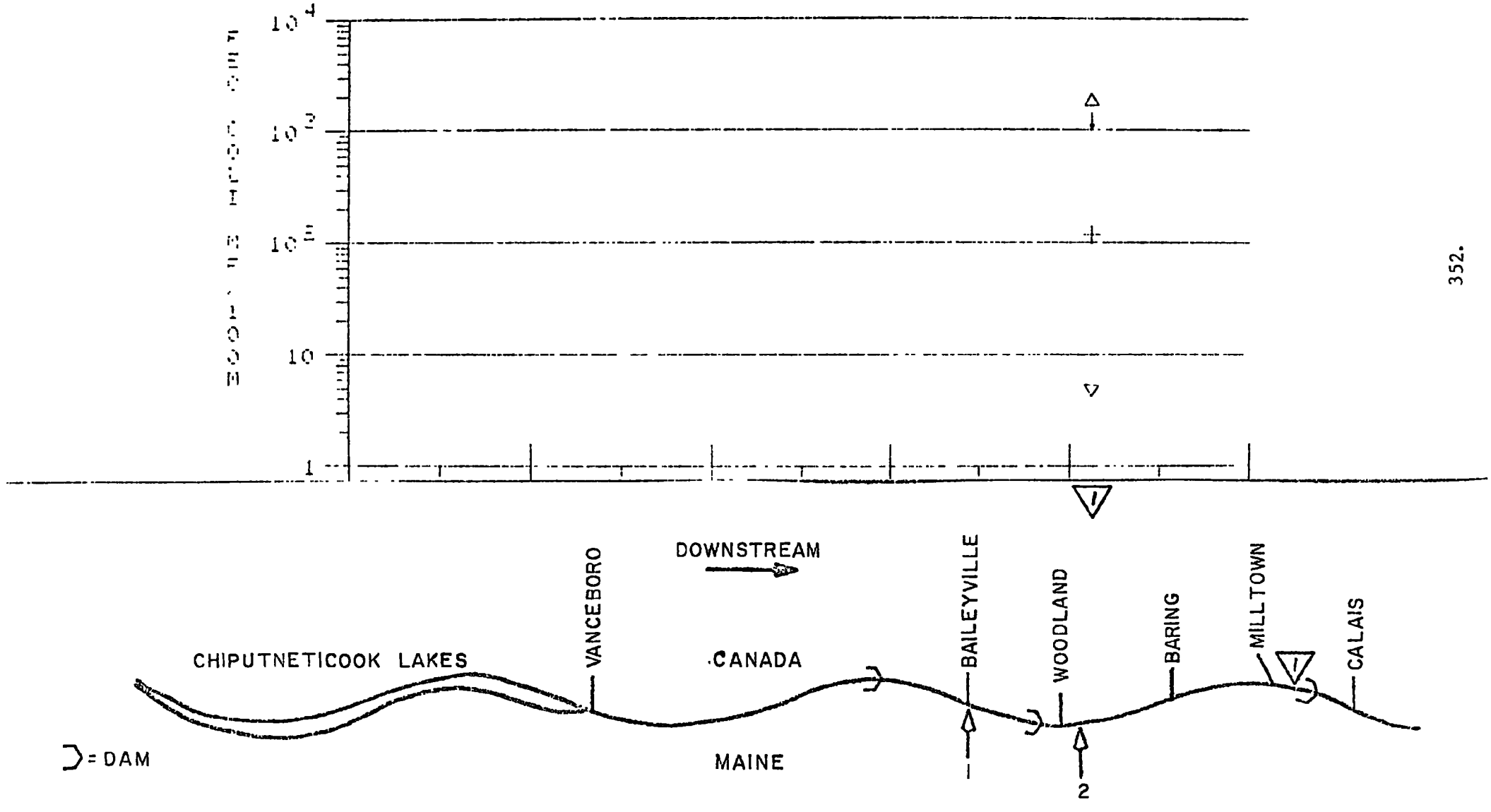

15
10
5
0
DOWNSTREAM
CHIPUTNETICOOK LAKES
VANCEBORO
CANADA
MAINE
BAILEYVILLE
WOODLAND
BARING
MILLTOWN
CALAIS
1
2
= DAM

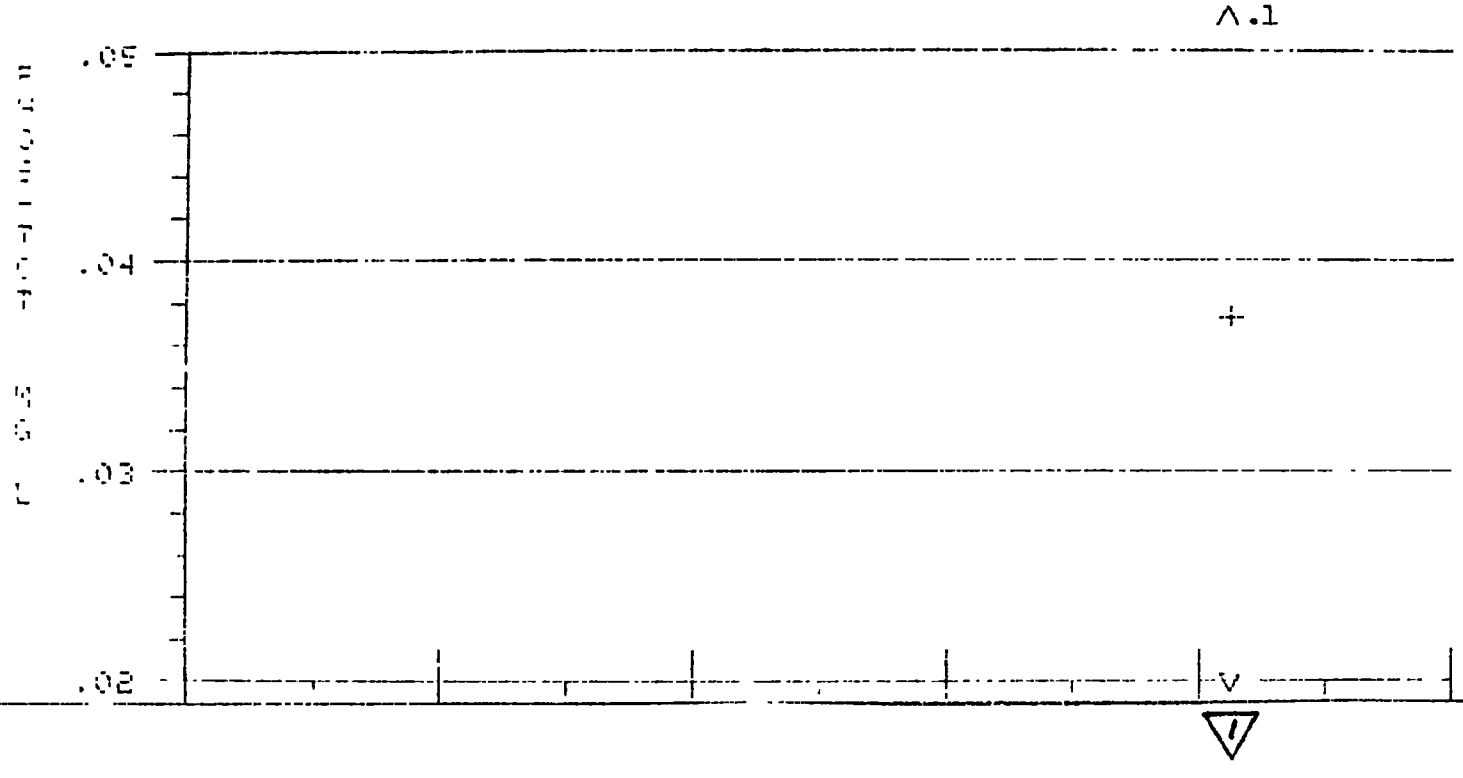
REGION I WQ ASSESSMENT REPORT - ST. CROIX R. (ME)

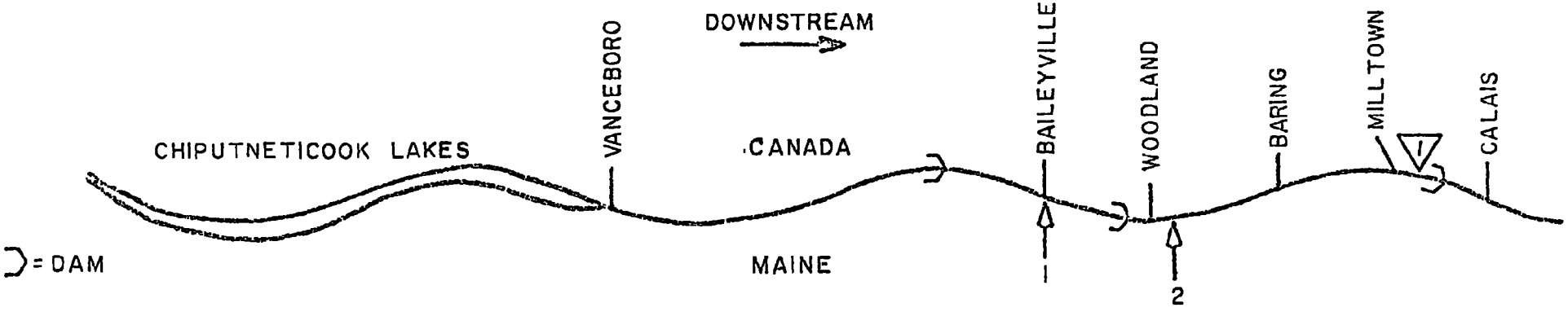



10^5
10^4
10^3
10^2
DOWNSTREAM
VANCEBORO
CHIPUTNETICOOK LAKES
CANADA
MAINE
BAILEYVILLE
WOODLAND
BARING
MILLTOWN
CALAIS
1
2
= DAM

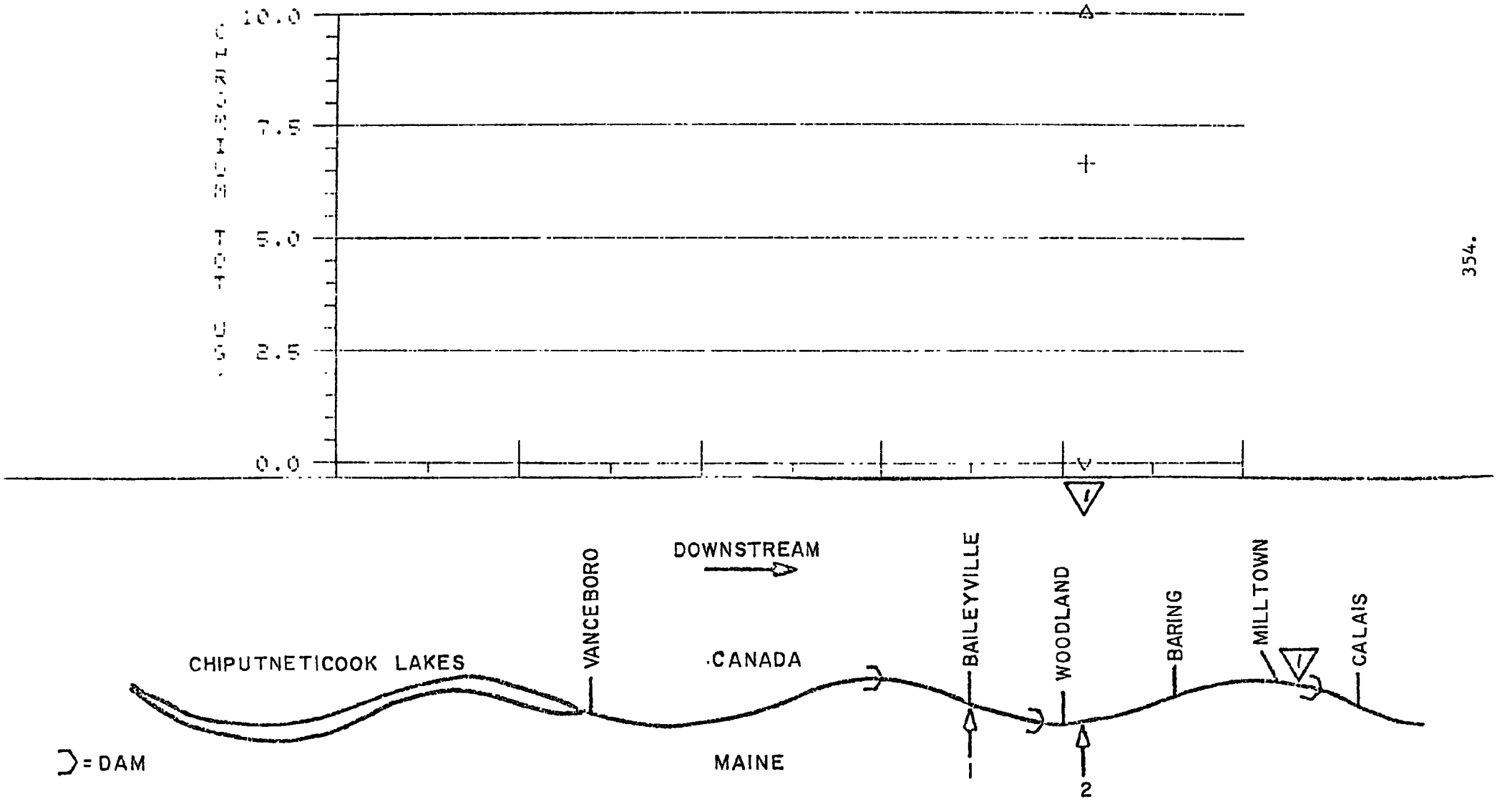
REGION I WQ ASSESSMENT REPORT - ST. CROIX R. (ME)




.1
.05
.04
.03
.02
1


DOWNSTREAM
CHIPUTNETICOOK LAKES
VANCEBORO
CANADA
MAINE
BAILEYVILLE
WOODLAND
BARING
MILLTOWN
CALAIS
1
2
= DAM

REGION I WQ ASSESSMENT REPORT - ST. CROIX R. (ME)



P/07
DU

3.28 ST. JOHN RIVER BASIN

The St. John River Basin drains the northernmost portion of Maine and parts of southern New Brunswick. The mainstem forms the United States-Canadian border from St. Francis to Hamlin, Maine. Major tributaries to the St. John are the St. Francis, Allagash, Fish and Aroostook Rivers.

The two stations monitored in this basin are on the Aroostook River and the Prestile Stream. Water quality standards violations were reported for total coliform bacteria in April and May at the Prestile Stream station and in April, May, June and August at the Aroostook River station. The Class B-1 standard for fecal coliform was also violated in April at the Aroostook River station in Caribou. This station has, however, shown improvement due to the construction of a secondary treatment plant at Potato Services, Inc. Potato processing wastes and non-point sources from agricultural areas are thought to be responsible for the high phosphorus levels reported at each station.

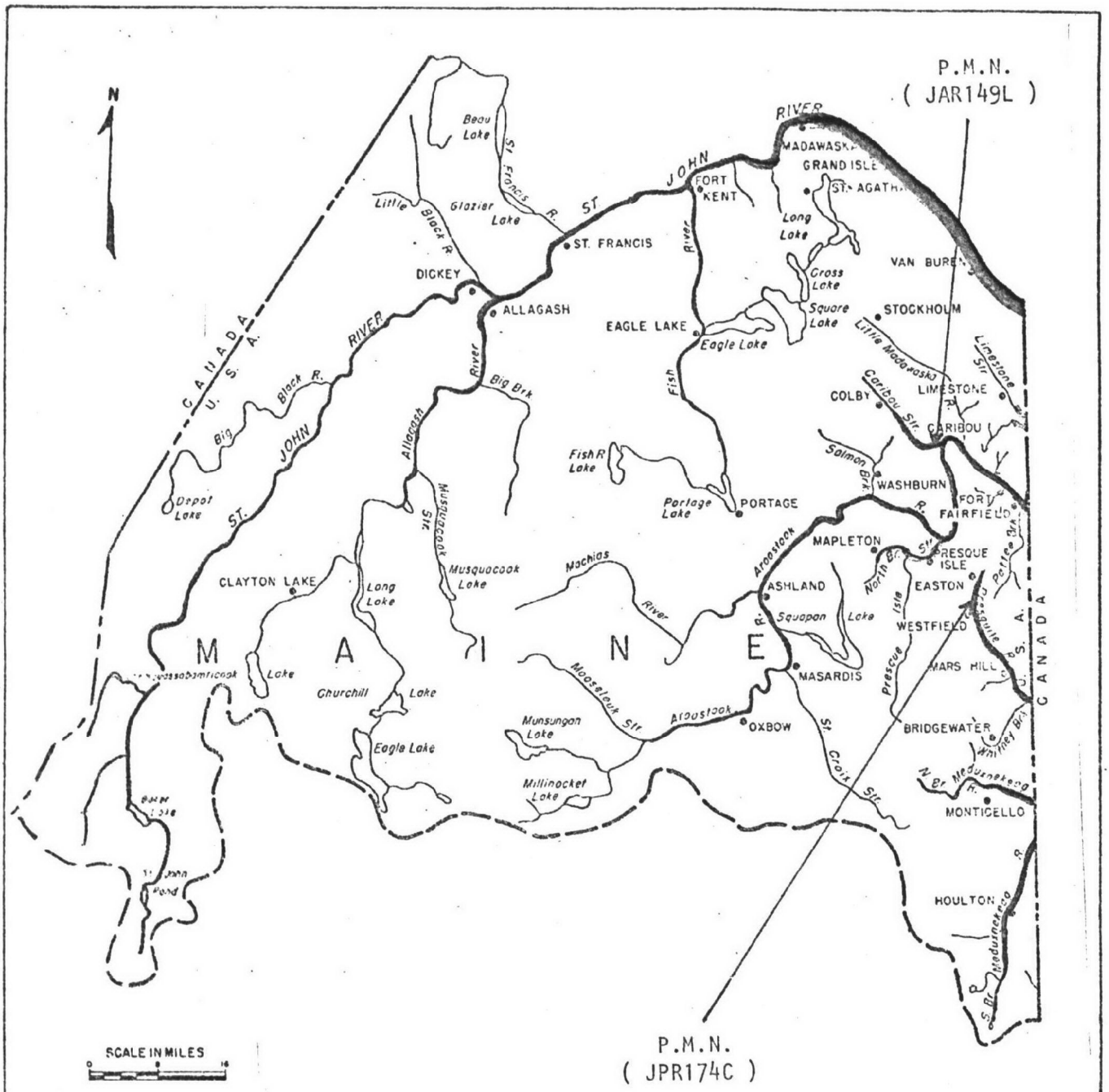
ST. JOHN BASIN

{MAINE}

in

DOWNSTREAM ORDER

Plot Station Number	Station Location	Map Station Number
1.	Prestile Stream Easton, ME	PMN JPR174C
2.	Aroostook River Caribou Dam, Caribou, ME	PMN JAR149L



SAINT JOHN RIVER BASIN
MAINE

SUMMARY OF WATER QUALITY VIOLATIONS

STATION JPR174C ST. JOHNS R. TRIB. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN
DISS. OXYGEN PROBE MG/L	7	0.	0.0	5.00	NONE	10.86
PH SU	7	0.	0.0	6.00	8.50	7.[illegible]
COLIFORM TOT MFIM/100ML	6	2.	33.33	NONE	5000.00	2959.
COLIFORM FEC MF/100ML	7	0.	0.0	NONE	1000.00	20.

STATION JAR149L AROOSTOOK R. (ME)

PARAMETER	- NUMBER OF - VALUES	VIOLATIONS	PERCENT VIOLATIONS	- CRITERIA - MINIMUM	MAXIMUM	ARITH MEAN *
DISS. OXYGEN PROBE MG/L	7	0.	0.0	5.00	NONE	10.
PH SU	7	0.	0.0	6.00	8.50	7.[illegible]
COLIFORM TOT MFIM/100ML	6	4.	66.67	NONE	300.00	590.[illegible]
COLIFORM FEC MF/100ML	7	1.	14.29	NONE	60.00	0.[illegible]

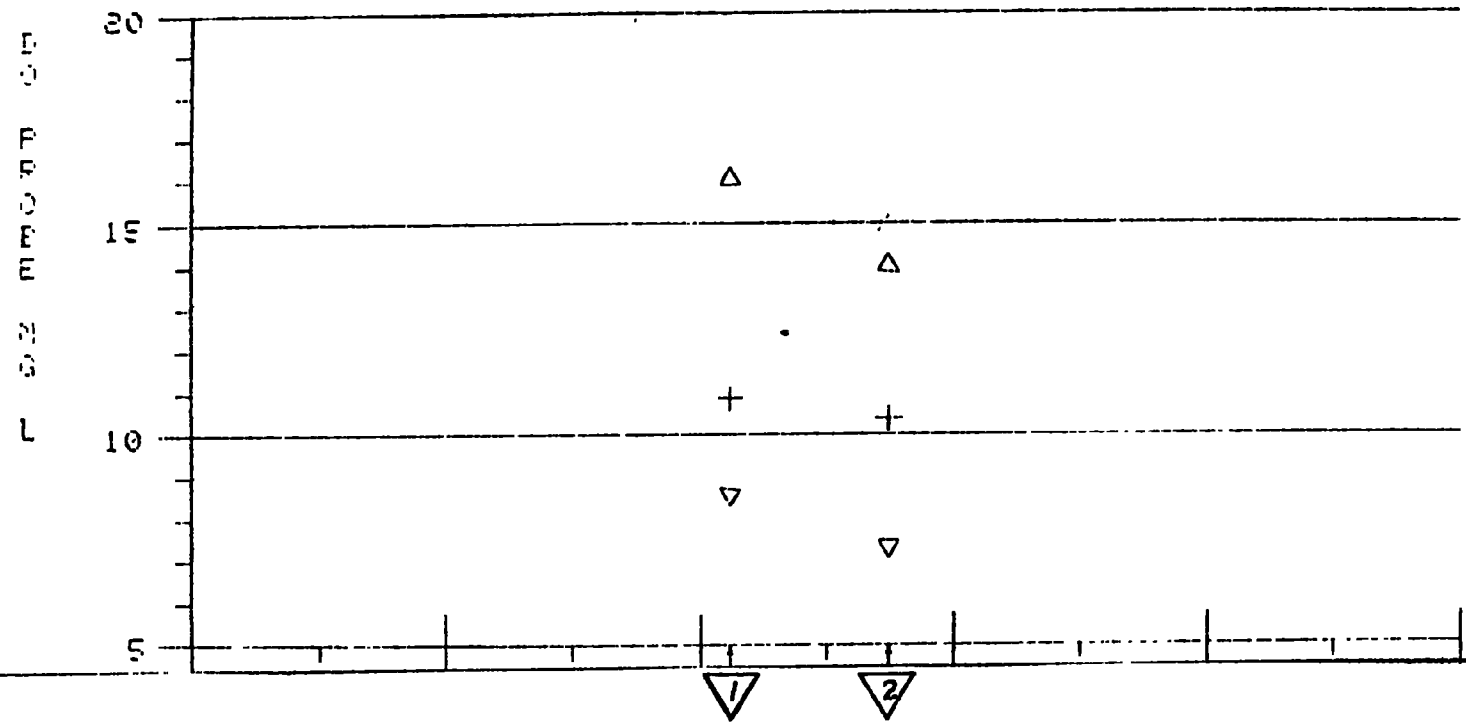
* GEOMETRIC MEAN FOR COLIFORMS

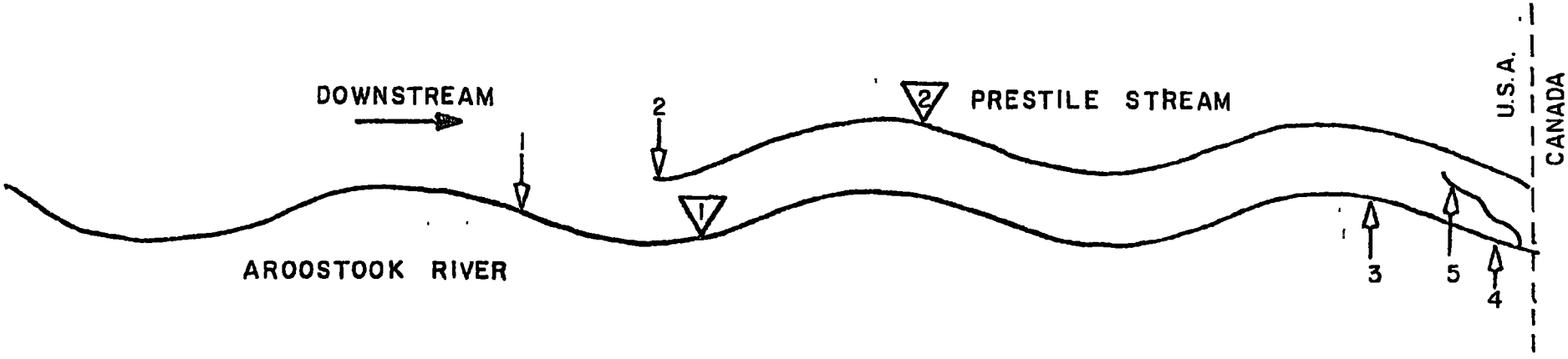
SIGNIFICANT DISCHARGERS

ST. JOHN RIVER BASIN

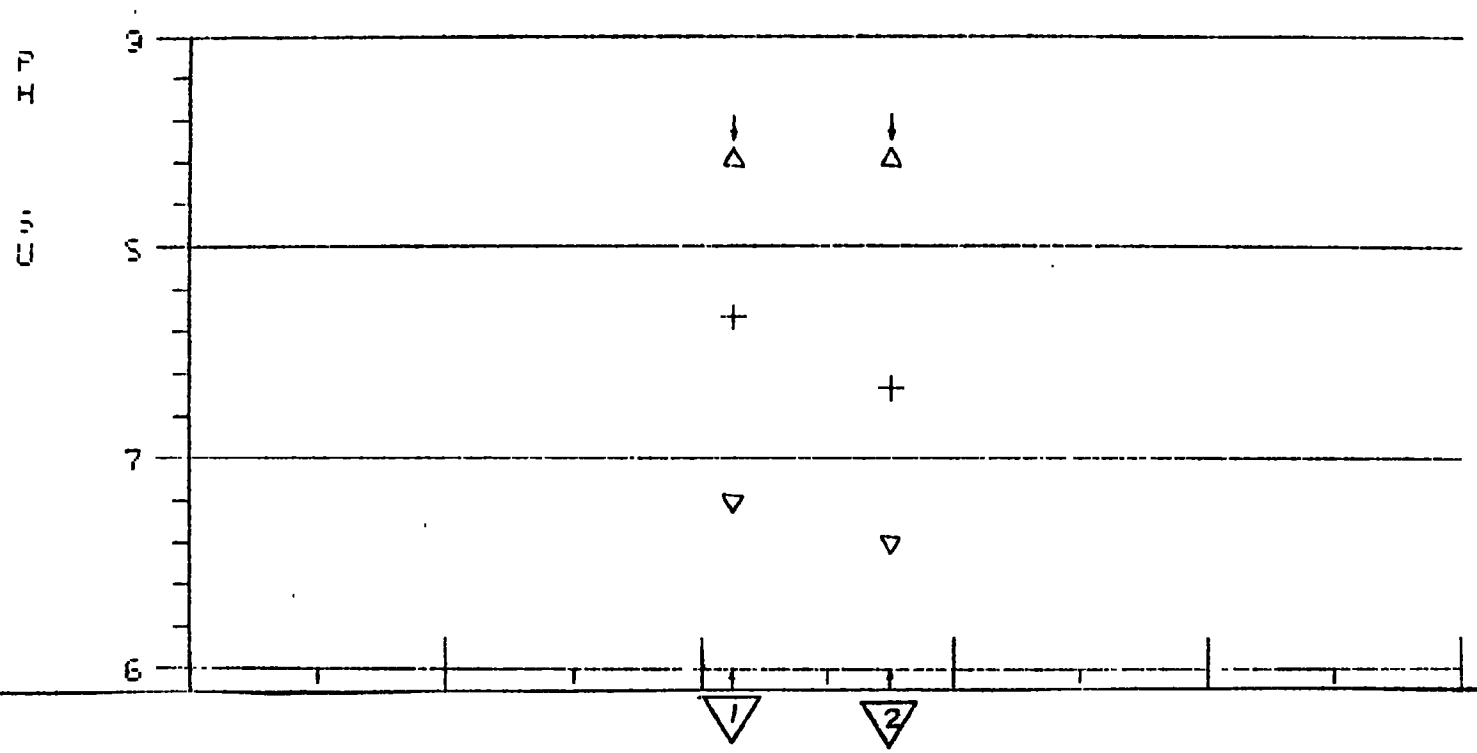
	Discharger	Location	Receiving Water	NPDES No.
1.	McCain's Foods	Presque Isle	Aroostook River	0000566
2.	Vahlsing Inc.	Easton	Prestile Stream	0002551
3.	Caribou STP	Caribou	Aroostook River	0100145
4.	Fort Fairfield STP	Fort Fairfield	Aroostook River	0100226
	A + P Tea Co.	Fort Fairfield	Aroostook River	0001881

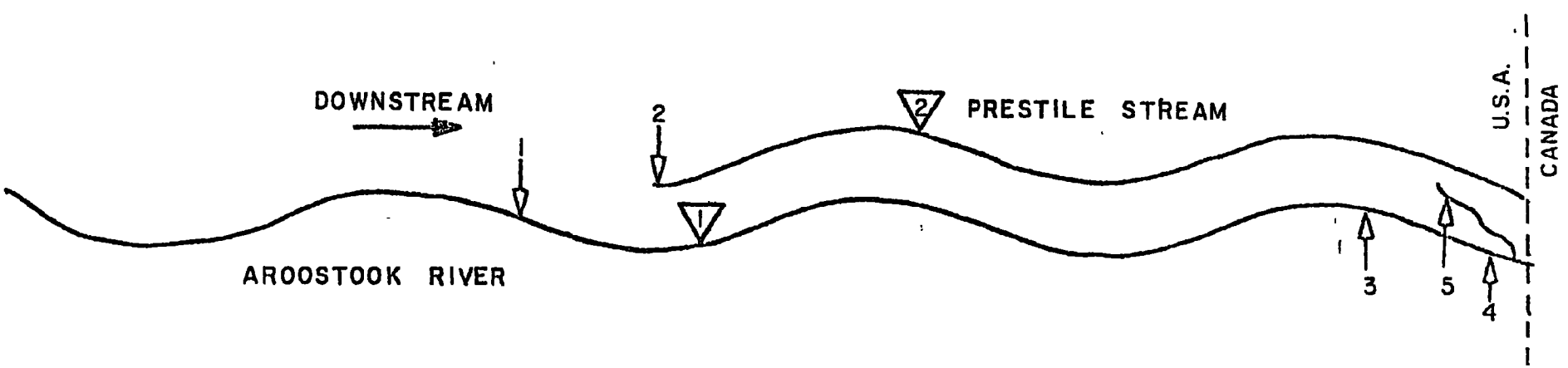
PEGION I WQ ASSESSMENT REPORT - ST. JOHNS R. TRIB. (ME)



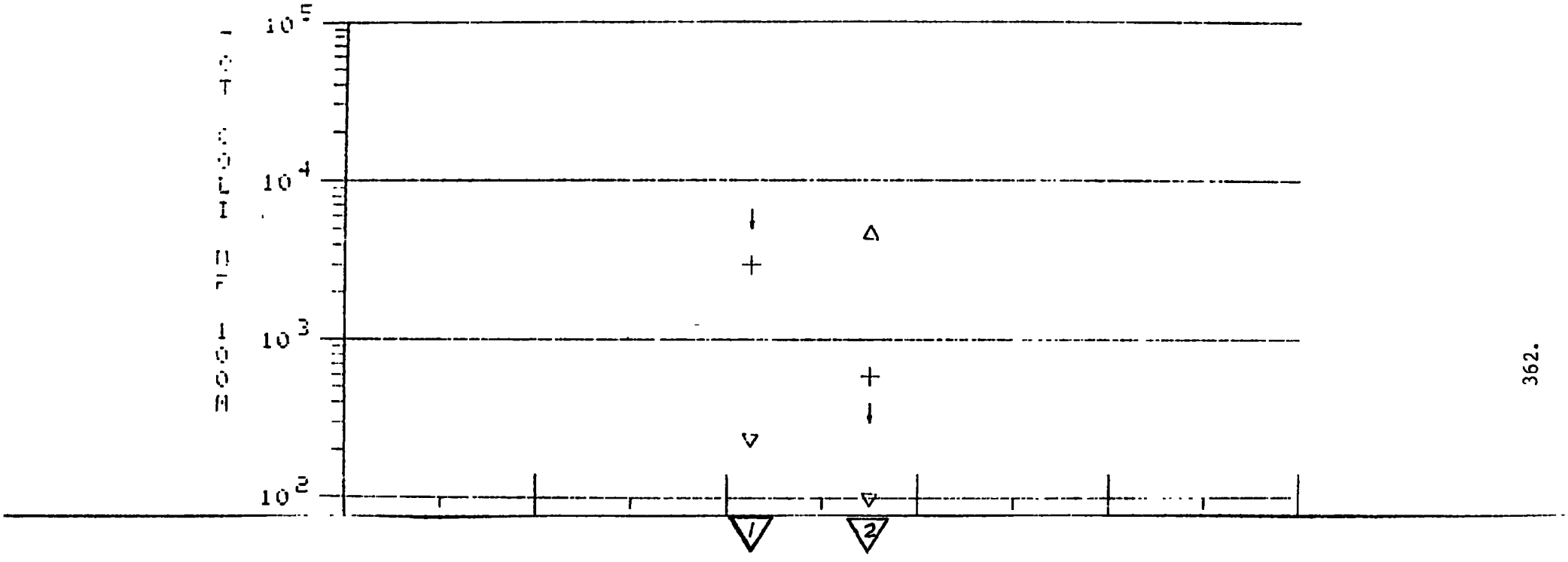


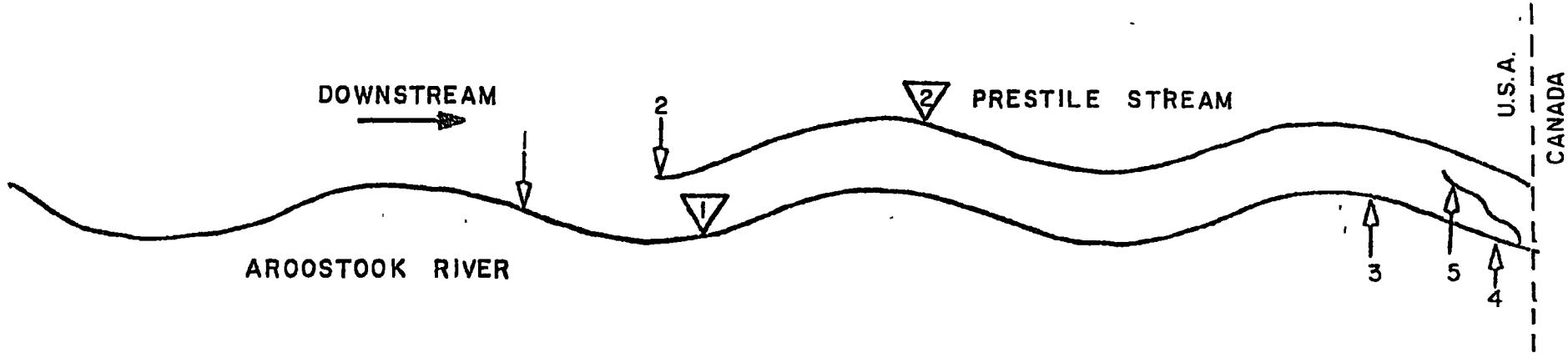
REGION I WQ ASSESSMENT REPORT - ST. JOHNS R. TRIB. (ME)

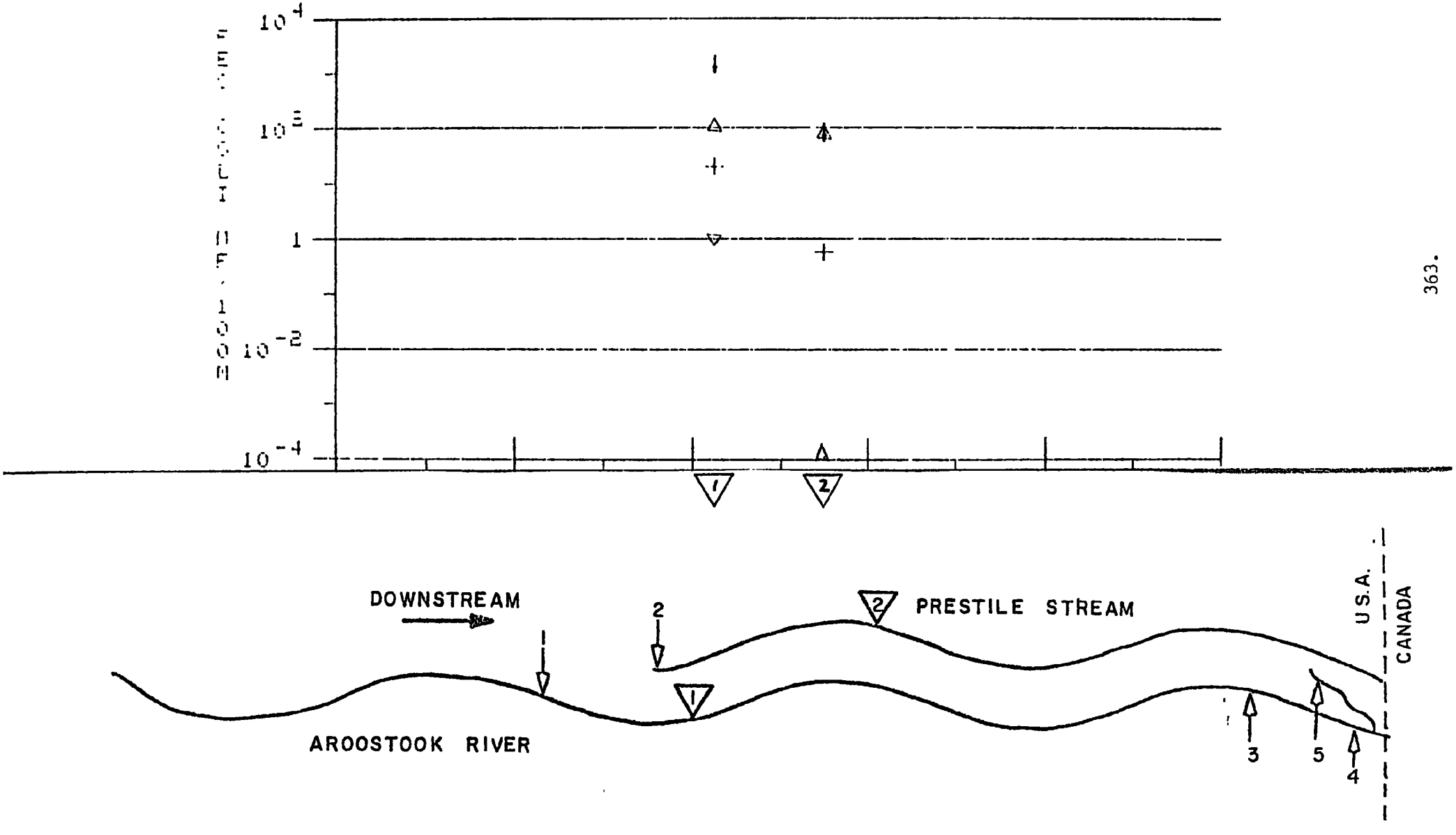
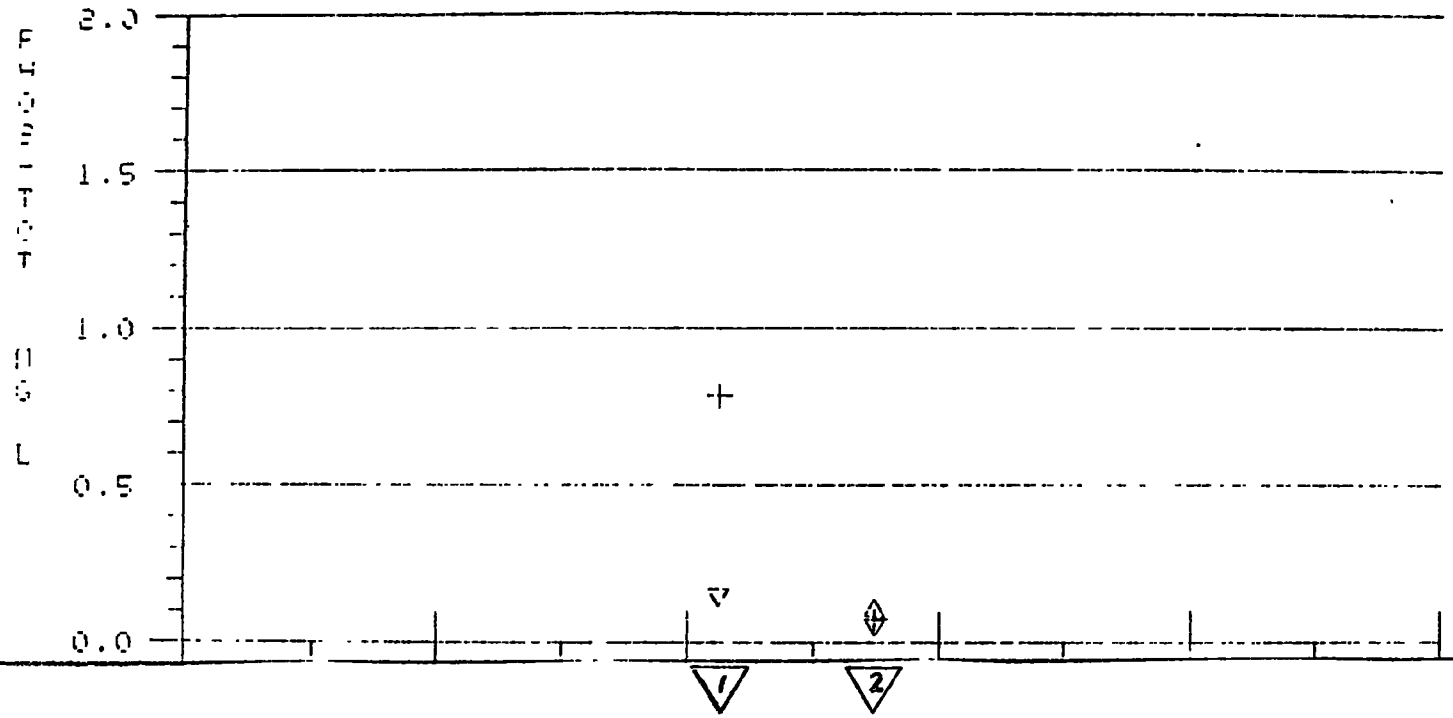
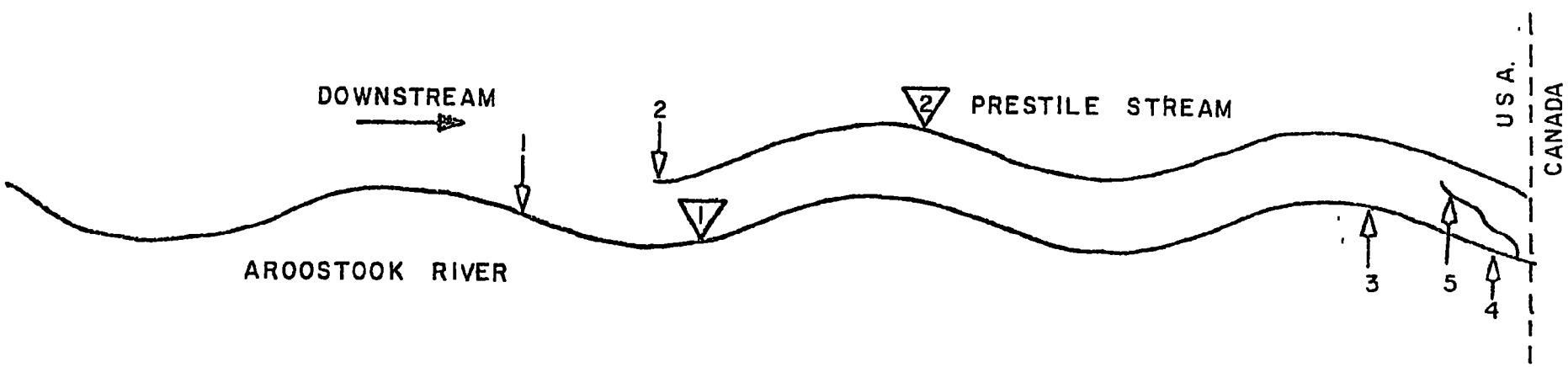




REGION I WQ ASSESSMENT REPORT - ST. JOHNS R. TRIB. (ME)






10^4
10^3
1
10^{-2}
10^{-4}
1
2
DOWNSTREAM
1
2
2
PRESTILE STREAM
AROOSTOOK RIVER
3
5
4
U.S.A.
CANADA

REGION I WQ ASSESSMENT REPORT - ST. JOHNS R. TRIB. (ME)