STATE OF CONNECTICUT

Department of Envrionmental Protection

Bureau of Natural Resources

Fisheries Division

Federal Aid in Sport Fish Restoration F-66-R-6

Annual Performance Report

Project Title: A Survey of Connecticut Streams and Rivers

Job 2. Stream Survey

Job 3. Angler Survey

Period Covered: April 1, 1993 to March 31, 1994

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ABSTRACT

A comprehensive stream survey was conducted in the lower Thames River, Pawcatuck River and eastern coastal drainage basins, as part of a multiple year study of Connecticut streams and rivers. A total of 179 sites on 130 streams were sampled for invertebrate populations, fish populations, and habitat information. Preliminary data analysis was done for most physical, chemical, and biological parameters measured, based on the presence or absence of trout and trout reproduction. Trout reproduction was found in 71% of the streams that were sampled. Preliminary data analyses were done on invertebrate samples collected in 1992 and 1993.

Angler surveys were done on six streams. The heaviest fishing pressure during the openning day to June 15 period was measured on the Hammonasset River Trout Mangaement area (TMA 1,415 hr/km). Fishing effort on Stony brook (239 hrs/km) was similar to levels measured on yearling trout streams elsewhere in the state. The new TMAs on the Moosup River, Salmon River and Hammonasset River were also surveyed during 1993 prior to the traditional opening day and in the fall. The Hammonasset River TMA was subject to the heaviest preseason fishing effort (836 hrs/km), whereas the fly-fishing-only section of the Salmon River TMA was most heavily used in the fall (913 hrs/km).

Data collected from over 875 sites were provided at the request of various federal agencies, state agencies, municipalities, land owners, private individuals and consultants.

1.0 Introduction:

A comprehensive survey of the streams and rivers of the State of Connecticut was begun by the Department of Environmental Protection (DEP) Fisheries Division in 1988. The objectives of this study include: development of trout stocking models to optimize allocation of hatchery fish, compilation of a data base which will allow timely and accurate completion of environmental permitting and reviews, identification and quantification of the state's coldwater and warmwater stream resources, development of models to accurately predict species composition and biomass in Connecticut streams, and dissemination of this information to the general public in a useful and comprehensible form. Most objectives cannot be realized until the last year of the study.

The lower Thames River, Pawcatuck River, and southeast coastal drainages were sampled during 1993 (Figure 1). This included the Shetucket River and the lower half of the Quinebaug River to the Moosup River confluence (Table 1). These regions have been undergoing a moderate level of development with approximately 3.01 construction permits per square mile issued per year during the mid 1980s (Chase Econometrics 1986). This report contains progress reports for Job 2 (Stream Survey) and Job 3 (Angler Survey), of Federal Aid in Sport Fish Restoration Project F-66-R, covering the sixth year of an eight year stream sampling program. The first five years covered sampling of the Connecticut River basin, the southwest coastal streams, and the Housatonic River basin.

The flows in the Shetucket River are regulated for power generation and/or flood controlled at several dams: Mansfield Hollow Dam, Scotland Dam, Taftville Dam and Greenville Dam. The operations are generally "run-of-river" with limited pondage and scheduled releases. The Quinebaug River has flows regulated flows below Aspinook Pond in Jewett City. These releases are unscheduled run-of-river type with pondage, release occurs as soon as the pond is full. The release schedules of both rivers cause daily flow variation, which can impact fish community structure. The Thames River is estuarine from its start in Norwich at the confluence of the Shetucket and Yantic rivers.

Table 1.-Area of drainage basins in the Pawcatuck River basin, lower Thames River basin, and Southeast Coastal basins.

Drainage Basin Name[1]	Major and Regional Basin Codes	Area (km^2)	Portion Sampled in 1993 Area (km^2)[2]
Pawcatuck Major Basin	1	786	*
Pawcatuck River Regional Basin	10	786	*
Wyassup Brook		30	30
Green Fall River		59	*
Ashaway River		72	*
Shunock River		44	44
Wood River Regional Basin	11	220	*
Moscow Brook		36	*
Southeast Coast Major Basin	2	380	380
Southeast Coastal Region-East	21	161	161
Anguilla Brook		33	33
Copps Brook		20	20
Williams Brook		17	17
Whitford Brook		39	39
Haleys Brook		19	19
Mystic River		69	69
Great Brook/Poquonock River		39	39
Southeast Coastal Region-West	22	156	156
Jordan Brook		24	24
Latimer Brook		46	46
Niantic River		79	79
Pattagansett River		23	23
Fourmile River		17	17
Thames Major Basin	3	3796	1230
Thames River Regional Basin	30	3796	1230
Trading Cove Brook		35	35
Indiantown Brook		41	41
Poquetanuck Brook		73	73
Oxoboxo Brook		31	31
Horton Cove/Stony Brook		27	27
Smith Cove/Hunts Brook		34	34
Pachaug Regional Basin	36	164	*
Great Meadow Brook		16	16
Mount Misery Brook		22	22
Myron Kinney Brook		16	16
Billings Brook		16	16
Quinebaug Regional Basin	37	1922	198
Fry Brook		18	18
Mill Brook		47	47
Cory Brook		20	20
Broad Brook		42	42
Shetucket Regional Basin	38	3282	3282
Beaver Brook (Baltic)		29	29
Merrick Brook		53	53
Beaver Brook (Scotland)		20	20
Little River		111	111
Yantic River Regional Basin	39	253	253
Bartlett Brook		38	38
Sherman Brook		59	59
Deep River		82	82
Pease Brook		32	32
Gardner Brook		35	35
Susquetonscut Brook		40	40

[1] Only drainage basins with watersheds greater than 15 km^2 are listed.

[2] Area includes the entire watershed upstream of the mouth of each stream. This may include the area of other regions or subregions located upstream.

* All portions of these drainage basins located within the state were sampled.

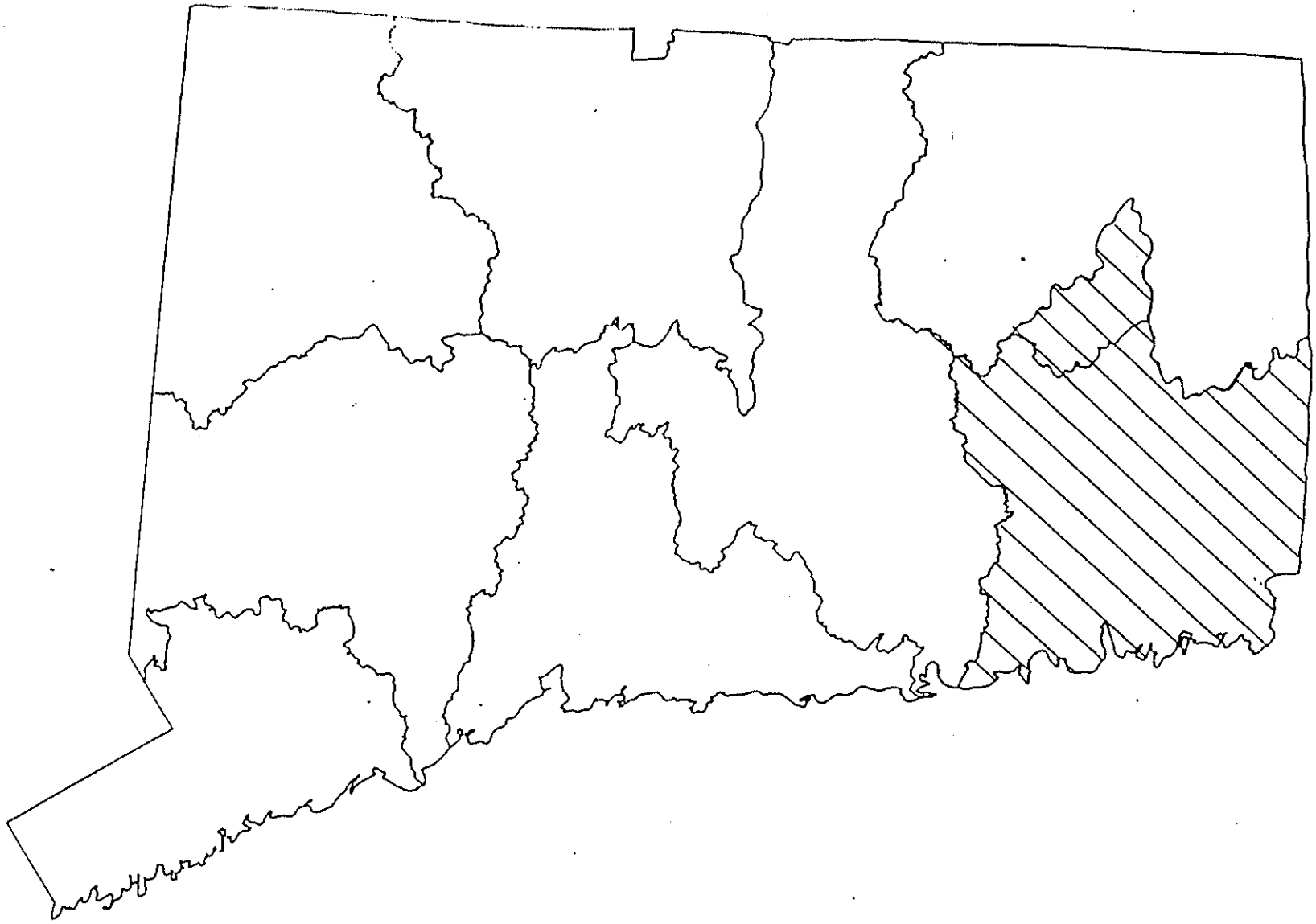

Figure 1. Drainage area sampled during 1993.

The high conductivities of this area make it impossible to sample the Thames River main channel with our methodology. The Yantic River has a sizable barrier to upstream migration at Indian leap just upstream of its confluence with the Thames River (over 15 m of drop including the rapids and dam structure). The Pawcatuck River is the lower part of the Connecticut-Rhode Island border, with approximately 1/4 of the drainage located in Connecticut. We sampled several mainstem river areas and several tributaries located in Connecticut. The southeast coastal streams flow directly into Long Island Sound and are split into two groups by the Thames River valley. Many of these streams are parts of municipal water supply reservior systems.

2.0 Methodology

2.1 Resource Identification:

The locations of all stocking sites in the study area were identified from stocking maps marked by state conservation officers. Public access areas were identified from the Connecticut DEP Property Map.

All surface waters within the bounds of the study area were located on 1:24,000 scale USGS topographic maps and transposed on to single mat, 0.3 mil. mylar overlays. Vellum copies of the original overlays were made and used for field checks.

Visual estimates of the width and depth of each stream were made at all accessible stream crossings. Where possible, information on ownership and access was obtained prior to further data collection.

Stream sections and subsections were identified and coded by overlaying the vellum maps onto corresponding maps of the "Natural Drainage Basins in Connecticut" (State of Connecticut Department of Environmental Protection, Natural Resources Center, USGS, 1981). Stream sections and subsections were assigned unique sequential codes, based on an extension of a numbering sequence developed by the Natural Resources Center and used on the drainage basin maps (Figure 2). Each drainage basin number defines an area of a drainage basin called a "Polygon". Any area which has a permanent stream was defined as a separate polygon and anytime a stream joined another stream or river resulting in a change in flow volume a new polygon was defined.

A list of streams and stream subsections, by stream code, with associated reference information, was generated using RBASE for DOS. The information specific to each polygon includes: stream name, length, width, township, topographic map name, stream features (dams, swamps, postings, and channelizing),

stocking status, drainage area, and water quality rating based on DEP, Water Management Unit's Water Quality Classification maps.

Normal Format: 4300032R150100

Polygon Coding Components

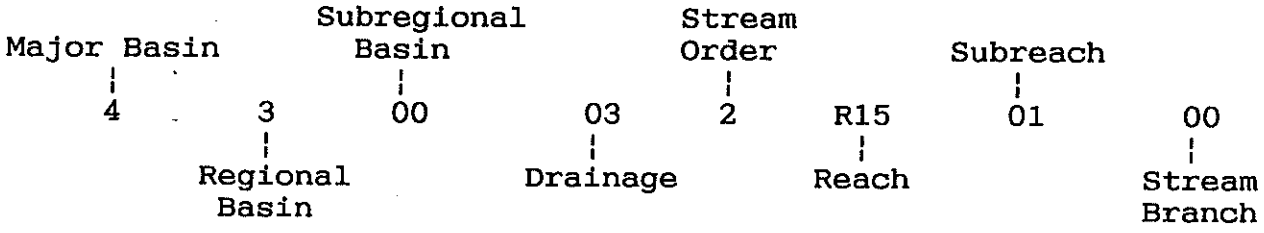

Figure 2. Polygon Coding System, an extension of DEP, Natural Resources Center's Stream Classification System.

All streams were characterized by habitat type, longitudinally, from the confluence with the next higher order stream to the head waters. Habitat types were defined based on stream gradient (the percentage rise over run; 0-3% meadow, 3-8% upland, >8% plunge pool) and stream alteration (impoundment, channelization, underground culverts). Length of each habitat section was measured with a planimeter and recorded sequentially on a stream kilometer basis. All dams and waterfalls were identified and their locations recorded by stream kilometer.

2.2 Site Selection:

Approximately 90-150 sample sites were sampled during each year in which normal flow regimes prevailed. Additional sites were sampled whenever flow conditions allowed for extended sampling. Sites were selected based on the following criteria.

A) **Mandatory Sites:**

1) One sample assigned to the dominant habitat type in each subregional drainage basin;

2) One sample site to a representative segment of each stocked stream (unless already included in priority 1 sites);
3) One sample to each creel survey location not covered by priority 1 or 2 sites.

B) **Optional Sites:**

4) Additional sites were assigned to the dominant stream of each subregional drainage basin as required to adequately assess the variability between significantly differing habitat types (eg. upland vs channelized meadow);
5) Using the list of all stream polygons sorted by widths, a random selection of sample sites was made within each stream size group (1-1.5 m, 1.6-3.0 m, 3.1-6.0 m, 6.1-9.0 m, and >9.0 m wide) until all sites were allocated.

Applying these priorities, we attempted to sample all streams with existing or potential fishery value. However, some of our largest rivers can not be sampled using the described methodology. Consequently, quantified data were not collected from the Thames River. Small streams (width 1-1.5 m) are numerous in most of the State's major drainage basins and are typically inhabited by brook trout (*Salvelinus fontinalis*). Despite the potential fishery value of these brooks it was logistically impossible to sample all of them and after being visually inspected and categorized, they were subsampled as described in #5 above.

Each selected sample site was visually inspected to identify any previously undetected sampling problems (e.g. postings). Where necessary, land owners were contacted for permission to sample. Stream width was measured at each site to help in planning manpower needs. All streams were inspected and sites selected during the period beginning with the end of the previous field season (October) and prior to April 15 of the next year.

2.3 Invertebrate Collections:

Aquatic invertebrates were collected between May 15 and June 9 (when insect biomass and diversity are at near peak levels). Samples were collected from representative riffle areas, centrally located within each sample site.

Samples were collected using a 0.065 m^2 Surber sampler with 1.02 mm mesh bag. Five samples were taken from a riffle area, starting close to the left bank spacing the samples equidistantly from left to right and moving diagonally upstream. Exact placement of the frame was contingent on the ability to obtain the best possible seal with the substrate. The substrate within the frame was stirred to a depth of 2-4 cm. All adhering invertebrates were dislodged into the collection net by brushing with a scrub brush. The net was dipped into the stream several times to wash insects into the collection bag. The bag was then slowly inverted and all insects and small bits of detritus removed with forceps and placed into screw cap glass jars containing 70% ethanol. Additional ethanol was added to completely cover the sample material, and a label identifying the site and sample number was placed into each jar.

Samples were taken to the lab and all debris and detritus removed. Invertebrates were sorted, identified, and enumerated. A blotted wet weight per family was recorded for each sample. Mean number and weight by family, and total invertebrate number and weight were calculated for each site. All numbers were calculated on a square meter basis.

2.4 Low Flow Data Collection:

The majority of fish population, channel morphology and habitat data collection was done during the normal low flow period between June 15 and October 1. Sampling was delayed during periods of abnormally high runoff, and was resumed when conditions returned to normal.

2.4.1 Site set up:

The location of each sample site was recorded, usually as a street reference and distance from major physical landmark (e.g. located at intersection of Rtes. 20 and 195 in Windham, 50 m above bridge).

A block net (6 mm mesh) was placed at the downstream end of the sample site in an area which allowed bank to bank coverage with a good bottom seal, and where the net was not overwhelmed by water current. Bridge pool areas were avoided when placing the block net. In some large streams, width and velocity prevented the use of block nets.

The length of the sample site was determined by stream width measured at the downstream block net as follows: 0-1.5 m wide (50 m long); 1.5-3.0 m wide (100 m long); and >3.0 m wide (150 m long). The length of a sample site was always at least 10 times the width and wherever possible, at least two pool/riffle combinations were included.

Sample sites were marked off into ten equidistant units using surveying flags. Care was taken to minimize disturbance of the substrate and water column while marking off subsample units. A block net was installed at the upstream end of the sample site. The exact length of a site was sometimes modified to ensure a suitable area for placement of the upstream block net.

In large streams where the use of block nets was impossible, data were collected from a length of stream approximately ten times the stream width. Mark/recapture methods were used to produce population data on all sport fish species (see section 2.4.3). Shorter sections (five times the stream width) located just upstream and downstream of the mark/recapture site were used to collect data on forage species and to control for emigration of marked sport fish.

2.4.2 Physical-chemical information collection:

While marking off the subsample units, a sequential record was made of all pool and riffle lengths to the nearest 0.1 m. Runs were included with riffles and glides were included with pools. This information was used to calculate a pool/riffle length ratio and total number of pools and riffles within the sample site.

Based on observations made while marking the site, three subjective estimates were made. Total length of cover was estimated and expressed using length of cover as a percentage of the total stream section length. A subjective estimate of overhead canopy coverage was expressed as a percentage with no canopy as zero and complete shade as 100%. An estimate of fishing pressure based on evidence of fishing activities (size and depth of paths, fishing related garbage) at the site was rated on a 0 to 3 scale: 0) no fishing, 1) light fishing (believed to be <500 hrs/ha/year), 2) moderate fishing (believed to be 500-1,250 hrs/ha/year), 3) heavy fishing (believed to be >1,250 hrs/ha/year).

Water chemistry data were obtained at sample flags one, five and nine (e.g. 10, 50 and 90 meters from the bottom net in a 100 meter section). At each water chemistry flag a 500 ml water sample was collected for alkalinity analysis. A plastic bottle was plunged into the water top first and then inverted and filled. This prevented material in the surface film from influencing the sample results. The pH was measured to the nearest 0.1 pH unit with an Orion pH meter. A Nester 8500 portable dissolved oxygen meter was used to measure dissolved oxygen concentrations to the nearest 0.1 ppm. Conductivity was measured in Umhos with a YSI Model 33 S-C-T conductivity meter. The pH meter was calibrated with pH 7 and pH 10 standard solutions on a daily basis as per the manufacturers standard procedure. Filling solution in the pH probes was replaced on a monthly basis. The dissolved oxygen meter was calibrated daily at the sample site to compensate for the effect of changes in elevation.

Water color was described as one of the following: light amber, dark amber, brown, dark brown, milky, clear, green, red, blue, or gray. Turbidity was assigned one of the following values: none, slight (some material visible in the water column), moderate (turbidity limits visibility into the water column to no more than 50 cm), or heavy (visibility limited to the top 5-10 cm).

The stream's width was measured at each subsample flag to the nearest 0.1 m. The total wetted distance perpendicular to the flow was measured including undercut areas. Any dry areas were subtracted from the width and any objects or boulders with significant flow under them were included in the width. Stream depths were measured along the width transect line to the nearest cm at the left bank, 1/4, 1/2 and 3/4 of the stream width.

Substrate type was determined at every meter along the transect line formed by the width measurement. Using a 0.06 m^2 quadrat frame with the left edge lined up on the meter mark, the dominant substrate type was determined as in Table 2 (from Platts et al. 1983). Substrate types were determined at all width transects. A subjective estimate of the percent embeddedness of the dominant substrate by sand ($\leq$4.7 mm ratings 1 and 2) was made for each substrate sample.

Table 2.-Substrate types and sizes from Platts et al. (1983).

Substrate type	Rating	Size
Fine Sand	1	<0.83 mm
Coarse Sand	2	0.83-4.7 mm
Gravel	3	4.7-76.0 mm
Cobble	4	76.0-304.0 mm
Small Boulders	5	305.0-609.0 mm
Large Boulders	6	>609.0 mm
Bedrock	7	--

Instream cover was quantified by identifying individual habitat pieces and assigning each piece to a habitat category. The criteria and types of categories where selected based on Bowlby and Roff (1986), Platts et al. (1983), Scarnecchia and Bergersen (1987) and Wesche et al. (1987). The categories used were: rock, undercut bank, overhanging plant material, logs (snags), deep water, turbulence, and artificial material. The length of each piece of habitat was measured along its long axis, and width was measured perpendicular to the long axis. Stream structures must meet certain requirements to qualify as cover. All cover must have a minimum undercut/overhang of 9 cm and be in water having a minimum depth of 15 cm. Overhanging plants have to be within 30 cm of the water surface. Deep water habitat has to have a minimum depth of 45 cm, and turbulence must cause enough disturbance to hide a 20 cm fish in water at least 15 cm deep.

A crown densiometer was used to measure the canopy at five transects. Measurements were made at the water surface at mid-channel and the data expressed as a percentage.

Streams influenced by agricultural runoff were designated as "agricultural" based on information found on topographic maps, visual appearance of the site and knowledge of the area. This category included heavy fertilization by golf courses and some heavily maintained residential areas. Sample sites located below a dam or lake were recorded as such, so as to assess the impact of lake fish species which may be transitory within these areas.

At approximately 12:00 noon, air and water temperatures were measured to the nearest degree Celsius at the midpoint of the sample site. Maximum air and water temperatures were determined for as many sample sites as possible during summer heat waves.

The bedrock type for each sample site was determined from the DEP Natural Resources Center's Connecticut Natural Resources Atlas Series: Bedrock Geological Map.

Flow stability was rated on a four point scale: 0= intermittent; 1= fluctuating flows, possibly drying up once every five to ten years; 2= fluctuating flows with no history of no-flow periods; 3= flows do not fluctuate much more than 50% from average daily flows. Stability of flow for each stream was determined from visual evidence and historic information.

Average stream velocity and discharge were measured by one of two methods: 1) Marsh McBirney digital flow meter, or 2) a salt dilution technique. With the flow meter, flow was measured along a transect perpendicular to the direction of stream flow. Flow velocity, water depth and distance from the left bank were measured wherever depth or velocity visibly changed. The velocity reading was recorded to the nearest 0.01 m/sec, depth to the nearest cm and width to the nearest 0.1 m. The flow meter requires a minimum of 9 cm of depth to operate. The depths at which the velocity readings were taken follow suggested USGS guidelines: at 0.5 of the water column where total depth is 9-10 cm; and at 0.6 of the water column depth from the surface where total depth is 11-76 cm. For depths greater than 76 cm two readings were taken, one at 0.2 and one at 0.8 of the water depth. The calculations follow USGS guidelines as outlined in Platts et al. (1983).

The salt dilution method (Allen 1924, and John 1978) was used to estimate mean velocity and discharge wherever channel morphology and depth precluded use of the flow meter (i.e. shallow water, etc.). A 40-100 m reach of stream was selected, excluding large standing pools, and three baseline conductivity readings were taken. A measured quantity of brine solution was then added to the upstream end of the area. Concentration of the brine solution was approximately 226 grams of salt for each estimated cfs of flow volume. Conductivity was recorded at one minute intervals following the release of the brine. The time elapsed prior to the first change in conductivity from baseline was noted as well as the time required to reach the highest conductivity reading.

2.4.3 Population estimation:

Fish population size was estimated at each sample site by either the Zippin removal method (Zippin 1958) or the Petersen mark recapture method (Everhart and Youngs 1981). The Zippin method was used in all streams where it was possible to place block nets at the upstream and downstream ends of the sample site. In large streams where it was impossible to use block nets, mark-recapture was used. Sampling was done with either Coffelt BP-4 dual electrode backpack electrofishing gear or a Coffelt VVP-2 stream shocker with 3 m electrodes. Prior to starting a shocking run the wind, weather, and precipitation were recorded along with output voltage, amperage, and pulse frequency. Each shocking pass consisted of one run upstream through the sample site. The length of time required for the first pass was recorded and subsequent passes were timed to maintain a consistent level of effort. Persons carrying the backpack or people holding the electrodes (stream shocker) were changed after each pass. One to four netters collected the stunned fish which were then transported in buckets to an adjacent stream section immediately above or below the block nets, where they were sorted and measured. Inflated sample estimates caused by chance encounters with large numbers of young-of-the-year fish prompted us not to include centrachids below 5 cm and cyprinids below 4 cm in length in population calculations. Usually three passes were made for the Zippin method, but if after three passes the dominant species present had not declined at least 30% from the initial pass then a fourth or fifth pass was added as needed.

All fish collected on the first pass for mark/recapture sites were measured, marked (caudal fin clips), and enumerated by species. The fish were then released evenly throughout the sample area and any dead individuals collected and subtracted from the number of marked fish. A one hour readjustment period (Petersen and Cederholm 1984) was allowed prior to beginning the recapture pass. All fish caught during this pass were enumerated by species, and presence or absence of a fin clip was noted.

Fish were identified and the first 100 individuals of each species were measured to the nearest centimeter. All subsequent individuals were tallied by species. Scale samples were taken from all game fish for the first two individuals measured in each 1 cm size class over 9 cm (brook trout *Salvelinus fontinalis*, brown trout *Salmo trutta*, rainbow trout *Oncorhynchus mykiss*, Atlantic salmon *Salmo salar*, largemouth bass *Micropterus salmoides*, smallmouth bass *Micropterus dolomieu*, rock bass *Ambloplites rupestris*, chain pickerel *Esox niger*, and sunfish *Lepomis* spp.) Scale samples were taken from above the lateral line for all soft-rayed fish, and behind the point of the pectoral fin for spiny-rayed fish. These fish were measured to the nearest millimeter total length. Up to eight representative specimens of each species were preserved in 10% formalin for independent confirmation of identification by Dr. W. Whitworth, University of Connecticut, Department of Natural Resources.

The tabulated length frequency data for each trout population were used to separate young of the year (YOY), Age 1, and adult fish. In many cases the separations in age groups were obvious from the size distribution. In cases where the size range seemed extreme or where there was no clear split in age groups, scale samples were checked and fish were assigned to age groups proportional to the frequency distribution. In samples where stocked and wild trout could not be separated by obvious visible cues, scales were checked for hatchery or wild growth patterns. Age 1 and younger fish were assumed to be of wild origin unless available stocking information indicated otherwise. All scales were mounted between two glass slides, and ages were determined by visual inspection of scale images from a trisimplex scale projector or microfiche reader.

Biomass estimates for each site were generated using the length frequency data and species specific length/weight relationships. The length/weight relationships were developed using the weight, in grams, of fish from several sample sites. In cases where the specimens were small (less than 8 cm),

group weights of fish within a centimeter class were used to produce an average centimeter class weight for that species.

Crayfish and mussel/clam abundance was determined by visual observation during sampling procedures. The site was rated on a three point scale: 0= not present; 1= present in low numbers; 2= abundant.

2.5 Laboratory Procedures:

Water samples were brought back to the lab to measure alkalinity. A potentiometric titration (APHA 1971) was used to analyze the three samples of water from each site. A 100 ml sample was measured in a graduated cylinder and added to a beaker which had been rinsed with sample water. A digital microburette with 0.02 N HCl was used to titrate to pH 4.5 and pH 4.2 end points. If less than 1.0 ml total titrant was used, the process was repeated using a 200 ml sample. All glassware was rinsed twice with distilled water and then with a small amount of the sample water. Alkalinity was calculated using the following formula:

$$Alk = \frac{(2C-D) * N * 50,000}{Vol} \qquad (1)$$

where Alk = Alkalinity (mg/ml as $CaCO_3$)
C = 4.5 pH titration volume
D = 4.2 pH titration volume
N = 0.02 titrant Normality
Vol = sample volume in ml

2.6 Calculations:

Means and standard deviations were calculated for pH, conductivity, D.O., and alkalinity.

The total length for each cover category (CL_j) was summed for all individual pieces of cover (L_i) for each site where j is the number of cover categories. A total length for all cover categories (T6CL) was summed from the separate cover categories.

A percent stream length as cover (PSL) was calculated from equation 4. The area of each piece of cover (A_i) was calculated from the width times the length measurements. A percent stream area as cover (PSA) for each category and total area cover (TCA) were calculated by equations 6 and 7. Total sample site area was the average width times the sample length:

$$CL_j = \sum L_i \quad (2)$$

$$TCL = \sum CL_j \quad (3)$$

$$PSL = \frac{TCL}{\text{Site length}} * 100 \quad (4)$$

$$CA_j = \sum A_i \quad (5)$$

$$TCA = \sum CA_j \quad (6)$$

$$PSA = \frac{TCA}{\text{Total sample site area}} * 100 \quad (7)$$

Calculation of population size (N) and probability of capture (p) for the Zippin method followed the Maximum Weighted Likelihood Estimate (MWLE) of Carle and Stubb (1978) (equations 8-11).

$$T_i = \sum C_i \quad (8)$$

where C_i = catch for pass 'i'

$$X = \sum (K-i)C_i \quad (9)$$

where K = total number of passes

The Maximum Weighted Likelihood Method Equality (equation 10) is an iterative solution where population size (N) was incremented until the solution of the equation was equal to or just less than one:

$$1.0 \geq \frac{(N+1)}{(N-T+1)} \sum_{i} \frac{(KN-X-T+(K-i)}{(KN-X+(K-i)} \qquad (10)$$

Probability of capture (p) was calculated to insure that an adequate reduction of the sampled population was accomplished. The minimum desired p-value for the total population was 0.3. The probability of capture was determined as follows:

$$p = T/(KN-X) \qquad (11)$$

The variance of the estimate of population size (N) was determined as in Zippin (1958):

$$Var(N) = \left(\frac{(N(N-T)T}{\frac{(Kp)^2}{(T^2-N(N-T)\ (1-p)}} \right)^{1/2} \qquad (12)$$

The population size and variance for mark and recapture data were calculated with a Chapman version of a Petersen estimate (equation 13, Everhart and Youngs 1981).

$$N = \frac{(M+1)(C+1)}{(R+1)} \qquad (13)$$

where M = Number of marked fish released from first pass
C = Number of fish captured on second pass
R = Number of marked fish recaptured on second pass

The variance of the estimate of population size (N) was determined by:

$$Var(N) = \frac{(M+1)^2(C+1)(C-R)}{(R+1)^2(R+2)} \qquad (14)$$

The length/weight relationship for each species was calculated using a log-log regression (Ricker 1975) of weight in grams by length in millimeters. The length frequency data from each site with over 100 individuals was expanded proportionally to reflect the total number of individuals estimated for each species. The lengths were then converted to biomass values by centimeter class using the length/weight relationships, and summed for a total biomass by species. These biomass values will be divided by the surface area of the sample site to generate biomass estimates in kg/ha for each species.

Growth rates for all trout species were calculated from the length frequency information as the mean length of each age class found at a site. Where enough scale samples were collected, back calculated length at age information was generated. Growth rates of other species of game fish were determined where appreciable numbers of individuals were collected.

The discharge volume calculations followed USGS recommendations outlined in Platts et al. (1983). The calculation of mean velocity using the salt method was as in equation 15. The stream discharge volume for the salt method was calculated by taking the cross sectional area from the width-depth information and multiplying by the average stream velocity. This gave the discharge at that stream transect. A mean discharge volume for all transects in the salt sample length was used as the estimate of the stream discharge volume.

$$Vel = \frac{Length}{Peak * 60 \text{ sec/min}} \qquad (15)$$

where Vel = Mean velocity of section
Length = length of salt discharge section

A mean and standard deviation were calculated for stream width and depth. Substrate data were tallied by type and a mean value for embeddedness was calculated for each substrate type. The length was calculated for each section of pool and riffle and then summed. A pool-length-to-riffle-length ratio (Platts et al. 1983) was calculated.

2.7 Creel Survey:

Creel surveys were conducted on a representative set of streams to supply information on the level of angler effort and to provide socioeconomic data on stream fishermen. The effort level information will be used in the development of models that compensate for the impact of angler effort on the stream biomass estimates.

2.7.1 Sampling design:

A stratified, random sampling design (non-uniform probability) was used for all streams and stream segments (Malvestuto et al. 1978 and 1983). Strata were non-overlapping. Two sampling periods were defined: period 1 (opening day to June 15) and period 2 (June 16 to October 15). A five stratum design was used for period 1 (Table 3) because of the variability in effort associated with stocking events (Thorpe et al. 1944, Butler and Borgensen 1965). Stocked (S) and non-stocked (NS)

Table 3.-Stratification of Angler Creel Surveys

Stratum	Description
1. Opening Day	Third Saturday in April
2. S-WE	Stocked weekend/holidays
3. NS-WE	Non-stocked weekend/holidays
4. S-WD	Stocked weekdays
5. NS-WD	Non-stocked weekdays

periods as well as weekday (WD) and weekend/holiday (WE/H) were defined as primary sample units (PSU) for all sample periods. The stocked period was defined as the first two weeks after opening day and a four day period after an in-season trout stocking. Sample times (i.e. hours within a day) were defined as secondary sample units (SSU).

Because fishing effort was highly variable along a stream length, it was possible to divide streams into separate areas defined by high use (bridge-pools and easily accessible areas) and low use (areas between bridge-pools with poor access). High use areas were identified during preseason site examinations. Several bridge-pool combinations were included in each creel survey section. Estimates of effort in low use areas, collected shortly after opening day, were compared with high use area effort estimates collected during the same time period. Expansion values, produced from these comparisons, were used to generate effort and catch estimates for the entire stream.

To conserve man power, three to four streams within close geographic proximity were creeled together as a single route. Creel routes were located in separate geographic locations in order to cover the drainage area. A starting time was assigned to the creel set based on sample probabilities (Tables 4 and 5). The order in which the streams were creeled was randomly assigned prior to the start of the sample.

Opening day (O.D.) was treated as an individual stratum because fishing pressure on that day differs from all other days of the year. A minimum of 3 samples were collected from each stream on opening day. Sample probabilities (Table 4) for O.D. sample times were derived from Farmington River creel surveys (Hyatt 1986).

Table 4.-Opening day sampling unit probabilities, derived from Farmington River creel data.

Time of day	Probability of time block
6:00	0.26
7:00	0.09
8:00	0.08
9:00	0.08
10:00	0.07
11:00	0.06
12:00	0.07
13:00	0.07
14:00	0.06
15:00	0.06
16:00	0.05
17:00	0.05

A total of 20 to 60 samples were scheduled for each stream based on variance estimates of angling effort from previously sampled streams. Equal probability was used for each hour within WE/H samples. Non-equal weighted probabilities were used for WD samples to account for increased fishing effort in late afternoon (Table 5). Period 2 was creel sampled on a "spot check" basis to determine angler effort expended during late summer through early fall. Samples were assigned by use of a four digit random numbers table until the correct number of samples for each stratum was reached.

For small streams stocked with yearling brook trout where large sample sizes were needed to reduce variance, a creel set included two creels on the same stream. This optimized manpower utilization when scheduling large and small streams that had different sample size requirements.

Table 5.-Sample probabilities for starting time of a three stream creel set and sample probabilities for the different areas to be subsampled by stratum.

Strata Subsample units	Weekdays	Weekends/holidays
Time:		
6:00	0.04	0.091
7:00	0.04	0.091
8:00	0.04	0.091
9:00	0.04	0.091
10:00	0.04	0.091
11:00	0.04	0.091
12:00	0.04	0.091
13:00	0.04	0.091
14:00	0.04	0.091
15:00	0.04	0.091
16:00	0.60	0.091

2.7.2 Site selection:

Creel sites were selected based on information generated from stream cataloging procedures discussed previously. Final site selections were made by visual inspections of individual streams, and were based on the following criteria: 1) angler accessibility (i.e. roads, trails, postings, etc.) 2) length of accessible stream area. Stream sections that were representative of the "typical" accessibility of stocked streams in that area were used. As large an area as possible was creeled on each stream. On some small yearling brook trout stocked streams the creeled areas were less than 1 km in length.

2.7.3 Angler survey methods:

A roving creel clerk (Malvestuto et al. 1978) began at one end of a survey site and proceeded through the entire creel site.

Clerks performed counts of all anglers and interviewed as many anglers as possible within the allotted time frame of one hour per site.

Three forms were used during creel sampling. An angler count form was used to gather angler effort data. A "long" interview form was used to generate fishing effort, catch, and economic data. A "short" form was used to gather information on fishing effort and catch. Only two long interviews were conducted during a sample to increase speed.

2.7.4 Data analysis:

Calculations followed the methods of Malvestuto et al. (1980), and Hyatt (1986). Estimates of total angler hours per hectare were calculated. Estimates of total angler days were made by dividing the total angler hours by the average trip length estimated from Farmington River creel data (4.0 hr).

2.8 Model development and information dissemination

Much of the statistical analysis required to develop and test models capable of predicting the abundance of stream fish populations will be delayed until after the final year of data collection is complete. Preliminary assessments of two previously developed models, WNHF (Engstrom-Heg 1979) and HQI (Binns and Eiserman 1979, Binns 1982), have been completed (Hagstrom et al. 1990 and 1991).

Production of a document suitable for distribution to the general public, and the development of a trout stocking formula, are scheduled for the final year of the project (jobs 5 and 6). In addition, methods used to determine trout stocking rates elsewhere in the United States will be evaluated (Hagstrom et al. 1989).

3.0 Stream Survey Results:

The Eastern Coastal streams are a complex of small parallel drainages, generally having a low gradient, which flowing directly into Long Island Sound. The lower Thames River occupies the eastern lowlands and the transition area into the eastern highlands. The drainages of the lower Thames River valley and Eastern Coastal streams are primarily underlain by granitic bedrock. Six of the Eastern Coastal drainages contain public water supplies, with some having undergone impoundment, channelization, or stream diversion. Of the lower Thames River streams, three have been modified for water supply use: Bobbin Mill Brook (reservior), Deep River (reservior), and Billings Avery Brook (diversion to Great Brook).

Rainfall during the six weeks prior to the start of 1993 sample season was below average (6.5 inches, 1993 vs. 9.2 inches, average). Low summer flows from tributaries reduced or eliminated thermal refuges in some streams and could have had an adverse effect on trout growth and survival. Maximum temperature data were not collected because the only period of extended hot weather occurred early in the summer (first week of July). We erroneously assumed a more intense heat wave would occur during the typical period in late July or early August.

Data were collected from 179 sites on 130 streams (Figure 3). Salmonids were present at 125 sites on 117 streams. Evidence of brook trout *Salvelinus fontinalis* and/or brown trout *Salmo trutta* reproduction was found at 114 sites on 92 streams (Table 6).

Preliminary data analyses were carried out on all chemical, habitat, and population data. Because of an outstanding commitment of time and effort by the project graduate student, Michael Beauchene, both the 1992 and 1993 invertebrate data sets were processed in time to include in this report. More detailed analyses will be conducted during the final year of the study when the invertebrate data set for the entire state has been compiled.

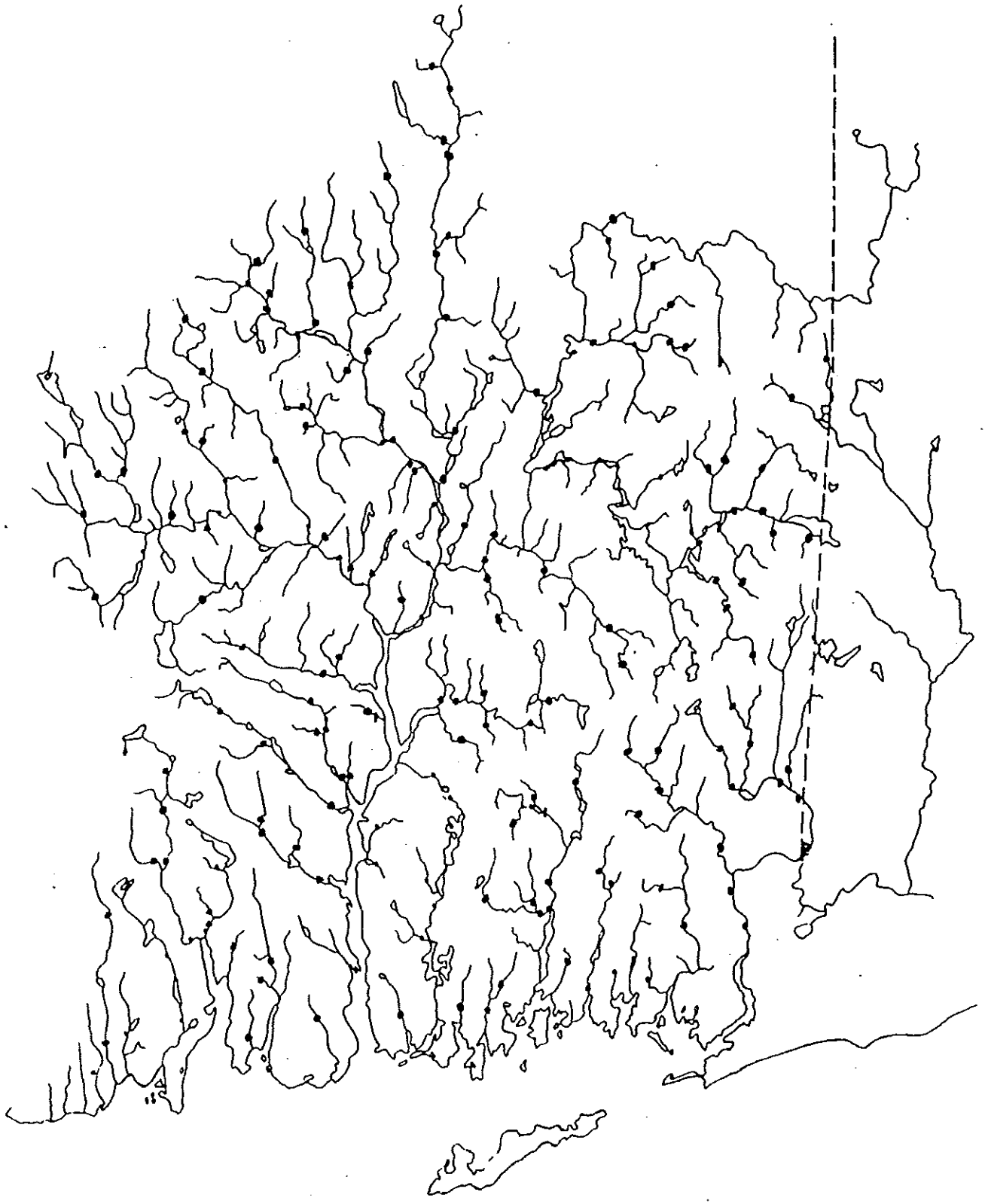

Figure 3. The 179 sites sampled during the 1993 season.
.=sampling site.

Table 6.-Percentage of streams with trout reproduction by species and drainage for the 1993 sample season.

Drainage Name and Code	Number of Streams	Percentage of Streams with Trout Reproduction		
		Brown Tr.	Brook Tr.	Total
Pawcatuck River 10	11	27.3	63.6	72.7
Moscow R. Trib. 11	3	66.7	0	66.7
Basin average		**35.7**	**50.0**	**71.4**
Eastern Coastals 20	8	0	37.5	37.5
Latimer Brook 21	15	13.3	73.0	73.0
Mystic River 22	12	25.0	75.0	75.0
Basin average		**14.3**	**65.7**	**65.7**
Thames River 30	18	22.2	72.2	72.2
Pachaug River 36	11	9.1	72.1	81.8
Quinebaug River 37	14	14.3	71.4	71.4
Shetucket River 38	23	39.2	65.2	82.6
Yantic River 39	15	20.0	53.3	53.3
Basin average		**23.4**	**66.7**	**72.8**
Totals 1993	**130**	**22.3**	**64.6**	**70.7**

Fish biomass and growth data for the upper Housatonic River basin are included in this report along with data from the lower Thames River, Pawcatuck River adn southern coastal drainages. Data from the Housatonic River basin were collected in 1992, but were not processed soon enough to included in that year's report.

3.1 Chemical:

Means, standard deviations, and ranges of values were calculated for dissolved oxygen, pH, conductivity, and alkalinity (Table 7). Statistics were also calculated for streams grouped by presence of trout and streams with trout reproduction. Mean values of chemical parameters for trout streams with and without reproduction were not significantly different from means of all streams. However, as in previous years, the ranges were not as extreme for streams with trout.

Mean dissolved oxygen (D.O.) concentrations were not significantly different from data collected elsewhere in the state. Two sites had D.O. concentrations below 5.0 mg/l. Both sites were located downstream of areas having heavy beaver activity. Conductivity values were all within expected ranges.

Table 7.-Mean ± standard deviation, and range ( ) of chemical parameters listed by trout presence, and occurrence of trout reproduction.

Parameter	All Streams 1993	Streams With Trout Present	Streams With Trout Reproduction
Dissolved Oxygen(mg/l)	8.3±1.2 (3.9-10.3)	8.5±1.0 (4.2-10.2)	8.7±0.9 (5.3-10.2)
pH	6.7±0.8 (3.3-8.9)	6.7±0.7 (4.7-8.9)	6.7±0.7 (4.7-8.9)
Conduct-ivity [1]	109±59 (20-334)	105±54 (20-334)	101±51 (20-274)
Alkalinity[2]	18.0±10.6 (0.8-60.2)	16.8±8.8 (0.8-47.6)	16.2±8.4 (0.8-47.6)

1 umhos/cm.
2 mg/l $CaCO_3$ equivalents.

The mean pH values were lower than in areas sampled elsewhere in the state. There were four sites with pH values below 5.0, the lowest of which had a pH of 3.3. This site was only inhabited by banded sunfish, *Enneacanthus obesus*, and visibility was limited to less then six inches by a heavy amber stain. The other three sites with low pH were small streams located near the Rhode Island border in the Pachaug River and Pawcatuck River drainages. The remaing site was a tannic tributary to a coastal stream.

The mean alkalinity values for this area of the state were less than in areas sampled in previous years. Only one site had an alkalinity value that was below 2.0 mg/l, indicating a susceptibility to the influence of acid rain. The lower mean pH value, previously mentioned, are expected given the lower alkalinity and reduced buffering capacity of these watersheds. The smaller streams in the Pachaug River and Pawcatuck River drainages contained most of the poorly buffered low pH streams. The larger stream sites in these drainages have values closer to the state average.

3.2 Physical:

Means, standard deviations, and ranges were calculated for several physical parameters (Table 8). Mean water velocity was below average (0.09 m/s) when compared to drainages sampled in previous years (0.11-0.22 m/s, Hagstrom et al. 1989, 1990, 1991, 1992, 1993). This is consistent with this year's low flows and the lower gradient of much of the sample area. Mean discharge volume in streams with trout present (0.40 m^3/s), although higher than previously encountered, was not significantly different than other drainages (0.32 m^3/s, 1992; 0.11 m^3/s, 1991; 0.28 m^3/s, 1990; 0.20 m^3/s, 1989) . The greater discharge volumes for 1993 are due to sampling a larger number of third and fourth order streams. Four sites on the Quinebaug River and Pawcatuck River had discharge values over 4.0 m^3/s. The average discharge (0.27 $\pm$ 0.4 m^3/s),was similar to other drainages when these four values were excluded. Mean overhead canopy values were similar to

Table 8.-Mean ± standard deviation, and range ( ) of selected physical parameters listed by trout presence, and occurrence of trout reproduction.

Parameter	All Streams 1993	Streams With Trout Present	Streams With Trout Reproduction
Mean Water Velocity m/s	0.09±0.07 (0.00-0.40)	0.09±0.07 (0.01-0.40)	0.08±0.07 (0.01-0.40)
Discharge Volume m^3/s	0.36±0.75 (0.000-5.70)	0.40±0.82 (0.000-5.70)	0.27±0.50 (0.000-4.12)
Overhead Canopy (%)	80.5±26.8 (0-100)	81.2±25.8 (0-100)	83.0±23.4 (0-100)
Pool/Riffle Ratio	94.8±415.8 (0.08-2000)	86.9±399.0 0.16-2000)	103.8±437.3 (0.16-2000)
Site elevation (meters above sea level)	45±34 (0-135)	46±34 (0-132)	46±33 (0-132)
Substrate[1] Percent Embeddedness			
Type 3	31.7±23.1 (0-100)	28.0±20.0 (0-86)	28.1±19.7 (0-86)
Type 4	25.6±16.6 (0-80)	24.7±16.3 (0-80)	25.1±15.9 (0-80)

1 Type 3 substrate is 4.7-76 mm in diameter, Type 4 substrate is 76-305 mm in diameter.

previously sampled drainages. The means of Mean embeddedness of type 3 and type 4 substrates were slightly lower compared to values from other drainages, but were not significantly different(alpha=0.05). For all streams combined, mean pool-riffle ratios were slightly higher than those in other drainages. The mean pool-riffle ratio for[002972`streamstrout reproduction (103.0), however, was considerably higher than in other drainages (0.6-47) but these values were not significantly different due to large standard deviations. The high pool-riffle ratio is consistant with the number of low gradient sites located in the coastal drainages.

3.3 Biological:

3.3.1 Invertebrates:

During May and June 1992, 715 invertebrate samples were collected at low flow sample sites in the upper Housatonic River basin. During May and June 1993, 798 invertebrate samples were collected in the lower Thames River basin. Invertebrate samples collected during 1992 and 1993 were sorted and identified to family (Appendix A) by January 1994. The mean number of families per site was calculated for sites without trout, sites with trout present, and sites with evidence of trout reproduction (Table 9 and Table 10). Mean-number-of-individuals, and mean-grams-of-invertebrates-per-square-meter were also calculated for the three types of streams. Bowlby and Roff (1986) indicated that invertebrates weighing less than 0.1 mg dry weight (approximately 1.0 mg wet weight) are not used for food by trout. To accommodate this observation, calculations were repeated on a subset of families where the average weight of the individuals was greater than or equal to 1.0 mg wet weight (Table 9 and Table 10).

Sites sampled in 1992 averaged 18 (± 4) families when trout were present and 15 (± 5) families when trout were absent. Sites from 1993 averaged 20(± 5) families when trout were present and 16 (± 5) when trout were absent. The mean number of families with trout present was similar to the 1988-1991 means. The number of families with no trout present was comparable to 1989-1991 values and higher than 1988 values. There were no statistically significant differences amoung years in the numbers of families present. The mean number of individuals per square meter was much higher in southeastern Connecticut (1993, Table 10) than elsewhere in the state. This also resulted in mean standing crop values that were double what was seen in other areas. The highest two invertebrate standing crop values encountered before 1993 were 112 g/m^2 and 71.1 g/m^2. During 1993 nine sites were sampled with standing crops of over 70 g/m^2, the highest being

Table 9.-Summary of invertebrate data from 1992 samples. Means ± standard deviation, were calculated for number of invertebrate families, average weight, and average number of individuals per sq meter for streams with no trout, trout present, and trout reproducing. The same calculations were performed on a subset of invertebrates with mean individual weights greater than or equal to 1.0 mg. Ranges of number of families are included in parentheses.

Variable	No Trout	Trout Present	Trout Reproducing
All Invertebrates			
Sample Size (N)	25	121	112
Number of Families	15 ± 5 (4-27)	18 ± 4 (4-29)	19 ± 4 (4-29)
Individuals/m^2	812 ± 513 (64 -2,179)	1008 ± 651 (69 -3,379)	997 ± 635 (69 -3,379)
Weight g/m^2	12.2 ± 12.0 (0.3 - 54.7)	15.3 ± 11.7 (0.2 - 70.8)	15.2 ± 10.6 (0.2 - 58.3)
Ind. Wt $\geq$1.0 mg			
Number of Families	10 ± 4.0 (2-18)	12 ± 3.0 (1-19)	12 ± 3.0 (1-19)
Individuals/m^2	695 ± 472	861 ± 617	863 ± 606
Weight g/m^2	12.1 ± 12.1	14.9 ± 10.6	15.3 ± 10.6

230 g/m^2. Many of these sites were associated with wetlands or lake outflows and most occured in the eastern section of the drainage area. In eight out of nine sites the dominant family by weight were Hydropsycidae, a net weaving caddis fly group, with Tipulidae, crane fly larve, being dominant in the other site.

Table 10.-Summary of invertebrate data from 1993 samples. Means ± standard deviation, were calculated for number of invertebrate families, average weight, and average number of individuals per sq meter for streams with no trout, trout present, and trout reproducing. The same calculations were performed on a subset of invertebrates with mean individual weights greater than or equal to 1.0 mg. Ranges of number of families are included in parentheses.

Variable	No Trout	Trout Present	Trout Reproducing
All Invertebrates			
Sample Size (N)	44	117	97
Number of Families	16 ± 5 (5-30)	20 ± 5 (3-31)	20 ± 5 (4-31)
Individuals/m^2	1,860 ± 2,831 (48 -16,265)	1,613 ±1,273 (48 -9,801)	1,514 ± 988 (214 -6,269)
Weight g/m^2	29.9 ± 41.7 (1.6 -229.7)	28.1 ± 22.1 (0 -181.6)	27.6 ± 22.7 (0 -181.6)
Ind. Wt ≥1.0 mg			
Number of Families	10 ± 4 (3 -19)	13 ± 4 (1 -22)	14 ± 4 (1 -22)
Individuals/m^2	1,430 ± 2034	1,328 ± 1264	1,218 ± 964
Weight g/m^2	29.8 ± 41.9	29.4 ± 23.0	28.7 ± 23.7

3.3.2 Fish populations:

In 1993 banded sunfish and swamp darters were collected from six sites. These two fish species are limited in distribution to the southeast portion of Connecticut. Five sites in the Pachaug River, Quiniebaug River and Pawcatuck River drainages had swamp darters and four sites in the Pachaug River and Pawcatuck River drainages had banded sunfish. All of these sites are characterized by acidic water, slow flows and marshes, which is the preferred habitat of these two species. Much of this type of habitat could not be sampled with our equipment so their abundance may be underrepresented by our collections.

Collections of several other species were noteworthy. A single specimen of tomcod, *Microgadus tomcod* was collected at the head of tide in Mystic River. A population of gizzard shad, comprised of three age classes was sampled in the Quinnipiac River below Community Lake. Green sunfish were present in the 10 sampled streams in the Shetucket River drainage and in two streams in the Quinebaug River drainage. Rock bass were rare and only found at the lowest sample site of the Little River and in the Shetucket River. Two populations of slimy sculpins were found in cold gravelly tributaries of the Shetucket River.

The capture efficiency (p) of all species combined was over 30% for most sites sampled. The mean capture efficiencies for individual species (all sites combined) were usually above 30% (Table 11). The negatively buoyant species, longnose dace, *Rhinichthys cataractae,* and tessellated darter, *Etheostoma olmstedi,* had the lowest mean capture efficiencies. Capture efficiencies were high enough to prevent any significant error in the population estimates for the dominant species at each site. Capture efficiencies for individual species were nearly identical, or slightly higher than those from other drainages (Hagstrom et al. 1989, 1990, 1991, 1992, 1993).

The percentage of streams with trout reproduction was highly variable between subregional basins and species (0-83%). The overall percentage of streams sampled with some measure of wild trout reproduction was 71%. Brown trout reproduction ranged from

zero in the immediate coastal streams (generally first order streams flowing directly into long Island Sound, regional basin code 20) to 39% in the Shetucket River regional basin. The overall mean was 22% for brown trout. The Pachaug River system had only one site with evidence of brown trout reproduction (9.1%). Brown trout reproduction in the southeast coastal streams was slightly lower than in other Connecticut coastal areas (Hagstrom et al. 1990). This maybe the result of the smaller size of the eastern coastal drainages, compared to the central or western coastal drainages. Brown trout reproduction occured more often in areas of larger drainage size and higher gradient. The frequency of occurrance of brook trout reproduction, approximately 65% of all streams sampled, was not quite as high as in some of the other basins sampled to date. In constrast to brown trout however, the coastal streams had a higher frequency of brook trout reproduction than in the other two coastal basins (Hagstrom et al. 1990). All subregional basins in the Thames basin had frequencies of reproductive success for brook trout over 50%, with a high value of 73%. The only low values for brook trout were in the small immediate coastal streams (37.5%, subregional basin code 20) and in the Moscow River tributaries of the Pawcatuck River basin (0%).

The length-weight relationships in Table 12 were used to generate biomass estimates for fish populations as described in Hagstrom et al. (1990). In the upper Housatonic River basin the standing crop ranged from 0.09 to 173 kg/ha (mean 9.4 kg/ha) for brown trout and from 0.04 to 90.5 kg/ha (mean 17.02 kg/ha) for brook trout (Table 13). The standing crop ranged from 0.07 to 70.0 kg/ha (mean 12.8 kg/ha) for brown trout and from 0.01 to 90.5 kg/ha for brook trout (mean 24.5 kg/ha) in the Thames River basin, Pawcatuck River basin and eastern coastal basin streams (Table 14). Mean standing crop values of brown trout for the two sample areas were not significantly different (alpha=0.05) nor were mean brook trout standing crops significantly different (alpha=0.05) between the two sample areas. The range in brown

trout standing crops in the upper Housatonic River basins streams was double that of the lower Thames River, Pawcatuck River and eastern coastal basin streams.

The number of brook trout per hectare (Table 13) ranged from 5.6 to 15,916 fish/ha (mean 1,580 fish/ha). The range of densities for brook trout was 47% greater than for the upper Housatonic River system but the mean density was not significantly different. The number of brown trout per hectare ranged from 4.0 to 1,220 fish/ha (mean 148 fish/ha). This was a considerably lower average number per hectare of brown trout than from the upper Housatonic River basin (399 fish/ha).

The dams on the lower Shetucket River and Quinebaug River limit the upstream movement of American eels (Levesque and

Table 11.-Efficiency of capture (p) during the 1993 sample season for selected species.

Species	Number of Sites	Number p>30%	Mean p	Maximum p	Minimum p
American eel *Anguilla rostrata*	98	95	67	100	23
Brown trout *Salmo trutta*	73	73	76	100	33
Brook trout *Salvelinus fontinalis*	117	115	68	100	17
Fallfish *Semotilus corporalis*	50	44	65	100	10
White sucker *Catostomus commersoni*	81	76	63	100	19
Blacknose dace *Rhinichthys atratulus*	78	66	58	100	11
Common shiner *Luxilus cornutus*	30	28	63	100	8
Longnose dace *Rhinichthys cataractae*	36	31	55	100	8
Tessellated darter *Etheostoma olmstedi*	79	60	49	100	11
All species combined	145	131	53		

Whitworth, 1987), but do not eliminate it. Densities of eels were greatest in the coastal streams and streams below the Shetucket River dams. Of interest is the lack of sea lampreys at any sites sampled.

White sucker populations were common with a wide range of densities. High biomasses of white suckers (739 kg/ha maximum) were found in some of the mainstem Housatonic River samples. Fallfish were most wide sprea and abundant in the Thames River drainage, with limited distribution in coastal streams. Centrarchid populations were at approximately the same levels, and ranges of densities as observed in drainages sampled in previous years. Chain pickerel and grass pickerel were common in all of the coastal drainages.

Table 12.-Equations used to generate biomass estimates from length frequency data. Total lengths (TL) are in millimeters and weights (W) are in grams.

Species	Equation	Source
Brook trout	Log(W)=-5.095 ± 3.04 Log(TL)	PA: Carlander(1969)
Brown trout	Log(W)=-4.862 ± 2.943 Log(TL)	CT: Stream Survey
American eel	Log(W)=-6.225 ± 3.167 Log(TL)	Nova Scotia: Jessop (1987)
Other species	Log(W)=-5.00 ± 3.0 Log(TL)	General Isometric Growth Equation

Populations of smallmouth bass were encountered in the Quinebaug River, Yantic River and Shetucket River. Densities ranged from 12 to 735 fish/ha and standing crops varied from

Table 13.-Mean ± standard deviation of standing crop (kg/ha) of trout by drainage in the Upper Housatonic River basin streams sampled in 1992.

Species/ Drainage	Standing Crop: Streams with Trout	Standing Crop: Streams with Trout Reproduction
Brown trout		
Houstanic R.	26.2 ± 40.7	25.8 ± 40.1
Blackberry R.	24.1 ± 32.1	24.1 ± 32.1
Hollenbeck R.	6.5 ± 4.5	6.8 ± 4.0
Tenmile R.	4.5 ± 4.1	4.5 ± 4.1
Aspetuck R.	11.8 ± 8.6	11.8 ± 8.6
Shepaug R.	6.2 ± 8.1	5.4 ± 6.8
Naugatuck R.	2.0 ± 4.2	2.0 ± 4.1
All Drainages	9.4 ± 23.7	11.1 ± 26.1
Brook trout		
Houstanic R.	17.0 ± 19.2	17.0 ± 19.2
Blackberry R.	8.3 ± 5.2	8.3 ± 5.2
Hollenbeck R.	22.1 ± 22.9	24.5 ± 23.5
Tenmile R.	4.9 ± 3.9	4.9 ± 3.9
Aspetuck R.	16.2 ± 23.2	16.2 ± 23.2
Shepaug R.	19.6 ± 23.4	21.7 ± 24.2
Naugatuck R.	20.8 ± 23.2	20.8 ± 23.2
All drainages	17.02 ± 20.4	18.0 ± 20.7

0.02 to 15.6 kg/ha. Young-of-the-year were abundant, indicating that all smallmouth bass populations encountered had very successful spawns during the spring of 1993. This observation also held true for populations in the Housatonic River (T. Barry personnal comm.).

Table 14.-Mean ± standard deviation of standing crop (kg/ha) and number per hectare of trout by drainage in Thames River, and Eastern Coastal basin streams sampled in 1993.

Species/ Drainage	Standing Crop		Number per Hectare	
	Streams with Trout	Streams with Reproduction	Streams with Trout	Streams with Reproduction
Brown trout				
Pawcatuck R.	38.1± 22.5	8.1±22.5	199±147	199±147
Moscow R. Trb.	5.2± ---	--- ---	24± ---	------
East. Coastals	3.8± ---	3.8± ---	25± ---	25± ---
Latimer Brook	18.4±18.2	21.1±20.3	159± 73	192± 51
Mystic River	25.7±11.9	25.7±11.9	682±439	682±439
Thames River	7.1± 5.4	7.9± 6.5	240±249	288±281
Pachaug River	18.4± 8.5	14.2± 7.6	116± 36	106± 41
Quinebaug R.	5.6± 4.2	4.4± 3.8	26± 15	20± 8
Shetucket R.	10.3± 8.7	10.3± 8.6	201±205	--- ---
Yantic River	11.2± 8.0	12.6± 9.8	170±209	--- ---
All drainages	12.8±13.1	13.7±14.4	198±248	230± 268
Brook trout				
Pawcatuck R.	14.9±19.9	14.9±19.9	694± 535	694± 535
Moscow R. Trb.	--- ---	--- ---	------	------
East. Coastals	44.8±51.8	44.8±51.8	1325±1537	1325±1537
Latimer Brook	24.8±27.7	28.6±28.2	1777±2141	2064±2189
Mystic River	45.1±44.3	45.1±44.3	2305±2236	2305±2236
Thames River	30.5±33.7	32.4±33.8	2507±3334	2664±3376
Pachaug River	27.3±22.9	27.3±22.9	1521±1467	1521±1467
Quinebaug R.	11.3±11.3	13.7±11.6	460± 451	583± 440
Shetucket R.	20.8±31.0	21.9±31.6	2077±3746	2194±3823
Yantic River	8.5±10.1	9.1±10.5	439± 569	484± 582
All drainages	24.5±31.8	26.3±32.4	1648±2592	1775±2651

Table 15.-Mean ± standard deviation and range of standing crop (kg/ha) of fish species by drainage in the upper Housatonic River, upper Naugatuck River, Lower Thames River, Pawcatuck River and eastern coastal stream basins.

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
White sucker, *Catostomus commersoni*					
Pawcatuck R.	7	21.7 ±	45.5	123.9	0.1
Latimer Brook	2	2.8 ±	1.2	3.7	2.0
Mystic River	8	4.3 ±	5.2	14.2	0.0
Thames R.	10	7.3 ±	5.5	16.1	0.5
Pachaug R.	3	2.2 ±	1.6	4.0	0.8
Quinebaug R.	7	4.2 ±	3.2	10.3	0.5
Shetucket R.	25	8.6 ±	7.7	27.5	0.0
Yantic R.	18	20.3 ±	45.7	199.4	0.0
Housatonic R.	24	65.2 ±	173.0	738.6	0.0
Blackberry R.	5	44.1 ±	65.6	158.9	1.7
Hollenbeck R.	4	3.1 ±	1.6	4.1	0.7
Tenmile R.	4	39.6 ±	48.4	109.4	1.1
Aspetuck R.	8	23.0 ±	23.2	64.0	1.3
Shepaug R.	19	14.1 ±	21.7	94.4	0.6
Naugatuck R.	25	15.9 ±	24.2	104.7	0.0
American Eel, *Anguilla rostrata*					
Pawcatuck R.	9	33.2 ±	26.3	91.8	5.2
Moscow R. Trib.	1	3.0 ±		3.0	3.0
Coastal Tribs.	6	32.3 ±	21.7	61.8	7.2
Latimer Brook	16	30.2 ±	28.0	111.7	1.6
Mystic River	16	27.5±	17.8	61.0	0.7
Thames R.	21	39.4 ±	28.6	111.2	0.2
Pachaug R.	22	9.9 ±		9.9	9.9
Quinebaug R.	5	16.6 ±	13.3	39.9	6.4
Shetucket R.	16	20.6 ±	18.1	52.8	0.0
Yantic R.	6	6.4 ±	4.1	11.2	1.2
Blacknose Dace, *Rhinicthys atratulus*					
Pawcatuck R.	3	1.2 ±	1.9	3.3	0.1
Mystic River	8	2.3 ±	2.8	8.7	1.0
Thames R.	14	2.4 ±	2.0	5.9	0.0
Pachaug R.	1	11.8 ±		11.8	11.8
Quinebaug R.	7	0.8 ±	1.2	2.9	0.0
Shetucket R.	23	3.1 ±	4.13	17.0	0.0
Yantic R.	18	3.8 ±	4.2	14.0	0.0
Housatonic R.	36	9.2 ±	11.3	44.7	0.0
Blackberry R.	9	9.9 ±	4.5	16.6	4.3
Hollenbeck R.	9	5.0 ±	5.7	19.3	0.3
Tenmile R.	6	12.0 ±	14.7	33.1	0.0
Aspetuck R.	9	5.1 ±	5.2	12.9	0.4
Shepaug R.	22	7.9 ±	8.7	32.0	0.2
Naugatuck R.	38	5.9 ±	7.5	37.5	0.0

Table 15.-continued

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
Chain Pickerel, *Esox niger*					
Pawcatuck R.	7	5.4 ±	3.7	11.7	0.2
Moscow R. Trib.	1	5.3 ±		5.3	5.3
Latimer Brook	9	3.2 ±	2.4	8.4	1.2
Mystic River	7	3.8 ±	3.7	9.4	0.4
Thames R.	13	5.6 ±	4.1	13.4	0.1
Pachaug R.	6	2.9 ±	2.5	7.5	0.7
Quinebaug R.	7	5.3 ±	4.6	11.8	0.1
Shetucket R.	10	6.8 ±	7.9	21.4	0.0
Yantic R.	10	5.2 ±	5.7	18.5	1.2
Housatonic R.	1	3.1 ±		3.1	3.1
Blackberry R.	1	0.1 ±		0.1	0.1
Hollenbeck R.	1	0.4 ±		0.4	0.4
Shepaug R.	3	0.2 ±	0.3	0.6	0.0
Naugatuck R.	3	7.1 ±	11.9	20.8	0.2
Common Shiner, *Luxilus cornutus*					
Pawcatuck R.	3	2.8 ±	1.4	4.5	1.8
Latimer Brook	2	1.4 ±	0.6	1.8	1.0
Quinebaug R.	1	3.9 ±		3.9	3.9
Shetucket R.	9	1.6 ±	1.5	4.2	0.1
Yantic R.	12	5.2 ±	7.6	24.9	0.0
Housatonic R.	10	6.8 ±	9.0	29.2	0.0
Blackberry R.	3	1.2 ±	1.2	2.5	0.1
Hollenbeck R.	4	1.1 ±	1.8	3.9	0.1
Tenmile R.	3	9.6 ±	8.7	19.6	3.5
Aspetuck R.	5	3.1 ±	1.5	5.4	1.4
Shepaug R.	14	4.3 ±	4.0	14.2	0.1
Naugatuck R.	16	12.8 ±	40.4	163.9	0.0
Fallfish, *Semotilus corporalis*					
Pawcatuck R.	3	5.0 ±	0.7	5.7	4.4
Latimer Brook	1	10.6 ±		10.6	10.6
Mystic River	1	0.05 ±		0.1	0.1
Thames R.	4	18.6 ±	30.5	64.0	0.1
Quinebaug R.	7	7.4 ±	3.5	11.2	2.2
Shetucket R.	23	9.0 ±	11.1	38.9	0.0
Yantic R.	13	6.6 ±	6.0	21.8	0.3
Housatonic R.	5	6.6 ±	8.4	20.3	0.4
Blackberry R.	2	9.4 ±	4.6	12.6	6.2
Hollenbeck R.	2	1.1 ±	1.1	1.8	0.3
Tenmile R.	3	5.4 ±	4.8	9.7	0.3
Aspetuck R.	3	19.4 ±	7.7	28.0	13.2
Shepaug R.	5	19.3 ±	22.9	59.0	2.6
Naugatuck R.	8	1.7 ±	2.1	6.0	0.0

Table 15.-continued

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
Longnose dace, *Rhinicthys cataractae*					
Pawcatuck R.	6	7.2 ±	5.8	13.5	1.4
Latimer Brook	3	1.8 ±	1.6	3.5	0.2
Thames R.	8	5.5 ±	4.5	12.3	0.3
Pachaug R.	1	14.4 ±		14.4	14.4
Quinebaug R.	4	3.4 ±	1.6	5.1	1.4
Shetucket R.	13	4.0 ±	7.0	20.1	0.1
Housatonic R.	17	2.4 ±	3.1	12.7	0.0
Blackberry R.	5	16.6 ±	19.7	44.3	0.3
Hollenbeck R.	4	5.9 ±	6.2	12.9	0.1
Tenmile R.	3	2.8 ±	0.8	3.4	1.9
Aspetuck R.	4	5.9 ±	5.6	13.7	1.2
Shepaug R.	13	3.2 ±	3.3	9.8	0.0
Naugatuck R.	20	4.8 ±	4.1	13.3	0.0
Largemouth bass, *Micropterus salmoides*					
Pawcatuck R.	1	0.6 ±		0.6	0.6
Latimer Brook	5	2.0 ±	3.6	8.4	0.1
Mystic R.	6	3.6 ±	7.6	19.0	0.0
Thames R.	7	0.7 ±	0.7	2.1	0.1
Pachaug R.	4	1.2 ±	2.3	4.6	0.0
Quinebaug R.	4	0.4 ±	0.2	0.6	0.2
Shetucket R.	12	3.4 ±	4.5	12.5	0.0
Yantic R.	10	0.6 ±	1.0	2.9	0.0
Housatonic R.	11	0.4 ±	0.5	1.8	0.0
Blackberry R.	2	1.6 ±	0.1	1.7	1.5
Tenmile R.	2	2.7 ±	1.0	3.4	1.9
Aspetuck R.	3	0.3 ±	0.1	0.4	0.1
Shepaug R.	10	0.6 ±	0.4	1.2	0.1
Naugatuck R.	11	3.3 ±	10.1	33.6	0.0
Pumpkinseed sunfish, *Lepomis gibbosus*					
Pawcatuck R.	6	0.9 ±	1.0	2.4	0.0
Thames R. Trib.	1	2.6 ±		2.6	2.6
Coastal Tribs.	1	2.7 ±		2.7	2.7
Latimer Brook	8	0.8 ±	0.9	2.3	0.1
Mystic R.		1.9 ±	2.8	6.7	0.1
Thames R.		1.5 ±	1.2	3.1	0.0
Pachaug R.	2	0.7 ±	0.7	1.2	0.2
Quinebaug R.	7	0.8 ±	0.8	2.2	0.1
Shetucket R.	12	1.2 ±	1.6	4.7	0.0
Yantic R.	11	1.3 ±	1.2	4.0	0.1
Housatonic R.	20	1.9 ±	5.3	23.9	0.0
Blackberry R.	5	0.2 ±	0.1	0.2	0.1
Hollenbeck R.	5	0.8 ±	1.1	2.8	0.0
Aspetuck R.	6	1.3 ±	2.0	5.1	0.0
Shepaug R.	14	1.3 ±	2.6	9.7	0.0
Naugatuck R.	22	0.7 ±	0.9	3.5	0.0

Table 15.-continued

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
Redbreast sunfish, *Lepomis auritus*					
Pawcatuck R.	1	0.9 ±		0.9	0.3
Latimer Brook	1	1.2 ±		1.2	1.2
Thames R.	4	3.3 ±	2.7	7.1	0.9
Pachaug R.	1	3.9 ±		3.9	3.9
Quinebaug R.	3	1.1 ±	0.7	1.9	0.6
Shetucket R.	2	0.02 ±	0.02	0.1	0.0
Yantic R.	8	1.9 ±	2.0	4.8	0.0
Housatonic R.	7	0.7 ±	1.8	4.7	0.0
Tenmile R.	1	0.7 ±		0.8	0.8
Aspetuck R.	1	0.5 ±		0.5	0.5
Shepaug R.	2	0.0 ±	0.0	0.00	0.2
Naugatuck R.	2	0.0 ±	0.0	0.00	0.0
Smallmouth bass, *Micropterus dolomieu*					
Quinebaug R.	2	2.2 ±		4.10	0.4
Shetucket R.	4	7.9 ±	6.9	15.6	0.0
Yantic R.	5	5.3 ±	5.3	13.1	0.3
Housatonic R.	5	7.8 ±	7.7	17.9	0.4
Blackberry R.	1	11.7 ±		11.7	6.2
Hollenbeck R.	1	3.0 ±		3.0	0.3
Tenmile R.	1	18.6 ±		18.6	0.3
Aspetuck R.	2	4.1 ±	5.6	8.0	13.2
Shepaug R.	2	12.0 ±	3.4	14.3	2.6
Tessellated darter, *Etheostoma olmstedi*					
Pawcatuck R.	6	1.2 ±	0.7	2.0	0.1
Coastal Tribs.	2	3.5 ±	1.2	4.4	2.7
Latimer Brook	11	1.6 ±	1.0	3.7	0.1
Mystic R.	6	2.6 ±	2.8	7.6	0.5
Thames R.	7	1.0 ±	0.6	2.0	0.1
Pachaug R.	3	0.7 ±	0.5	1.3	0.4
Quinebaug R.	9	1.0 ±	1.0	2.8	0.0
Shetucket R.	18	1.2 ±	1.6	7.0	0.0
Yantic R.	14	0.5 ±	0.4	1.2	0.0
Housatonic R.	13	0.4 ±	0.6	1.9	0.0
Blackberry R.	3	2.6 ±	4.3	7.5	0.1
Hollenbeck R.	3	0.1 ±	0.1	0.2	0.1
Tenmile R.	3	0.6 ±	0.7	1.4	0.0
Aspetuck R.	3	0.4 ±	0.2	0.6	0.2
Shepaug R.	10	1.2 ±	2.0	6.1	0.0
Naugatuck R.	13	0.7 ±	0.9	2.3	0.0

Table 15.-continued

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
Species of limited state distribution:					
Swamp darter, *Etheostoma fusiformas*					
Pawcatuck R.	1	0.1 ±		0.1	0.1
Pachaug R.	3	0.01 ±		0.02	0.01
Quinebaug R.	1	0.03 ±		0.03	0.03
Banded sunfish, *Eneacanthus obsesus*					
Pawcatuck R.	2	0.1 ±		0.1	0.1
Moscow R. Trib.	1	0.9 ±		0.9	0.9
Pachaug R.	1	0.7 ±		0.7	0.7
Cutlips Minnow, *Exoglossum maxillingua*					
Housatonic R.	4	1.6 ±	2.9	5.9	0.0
Tenmile R.	3	3.3 ±	1.8	5.4	2.0
Aspetuck R.	4	0.9 ±	1.3	2.8	0.2
Naugatuck R.	9	4.6 ±	7.0	21.8	0.0
Green sunfish, *Lepomis cyanellus*					
Quinebaug R.	2	0.7 ±		0.7	0.7
Shetucket R.	14	1.9 ±	3.5	12.1	0.0

Mean lengths at age of brown trout for all 1993 streams combined (Table 16) were in the moderate to high growth range for all age classes (Newman 1985). The ranges of values were comparable to other Connecticut coastal drainages and higher than most of the more inland drainages. The high end value for age 3 brown trout was 335 mm. This value was from a single individual from the mainstem Pawcatuck River.

The mean lengths at age of brook trout for all 1993 streams combined (Table 17) were average compared to other areas. The other coastal drainages had higher average values for age 1 and age 2 brook trout but held no age 3 fish. The range of values of age 2 western and central coastal brook trout overlap the age 2 and age 3 brook trout from 1993. The possibility of errors in the aging ofbrook trout from some of the coastal drainages will be reviewed later.

Table 16.-Mean brown trout length and range at age for streams sampled through 1993, and selected comparison values.

Source	Age 1 (mm)	Age 2 (mm)	Age 3 (mm)
Connecticut River Drainages, Conn.	98 (73-131)	177 (146-207)	246 (197-280)
Farmington River	86 (74-92)	153 (133-181)	222.5 (210-235)
Central Coastal Streams	98 (63-136)	200 (185-219)	238 (-)
Western Coastal Streams	109 (83-146)	227 (218-237)	308 (-)
Lower Housatonic and Adjacent Hudson River Drainages	110 (77-149)	201 (145-242)	266 (183-292)
Upper Housatonic River Drainage	94 (57-155)	193 (132-250)	259 (168-330)
Eastern Coastal and Pawactuck River Drainages	104 (90-144)	198 (174-226)	268 (234-335)
Lower Thames River Drainage	104 (92-144)	210 (174-250)	277 (244-297)
NY, PA, NH[1] 21 Streams	173 (97-241)	229 (145-345)	287 (236-566)
"Slow Growth"[2]	73 (60-81)	126 (120-138)	172 (161-194)
"Moderate Growth"[2]	99 (76-165)	191 (149-272)	249 (206-295)
"Fast Growth"[2]	110 (94-122)	231 (224-240)	335 (325-345)

1 From Carlander (1969), These data include measured lengths of fish at each age and are not directly comparable to back-calculated lengths.
2 Mean data from streams characterized as having "slow" (N=5), "moderate" (N=11), and "fast" (N=3) growth rates by Newman (1985).

Table 17.-Mean brook trout length and range at age for streams sampled through 1993, and selected comparison values.

Source	Age 1 (mm)	Age 2 (mm)	Age 3 (mm)
Connecticut River Drainages, Conn. (15 streams)	103.6 (68-141)	181.6 (116-255)	248 (223-299)
Farmington River	89.2 (71-104)	135.9 (115-161)	191 (183-199)
Central Coastal Streams	104 (79-128)	175 (144-221)	---
Western Coastal Streams and Adjacent Hudson River Drainages	113 (91-145)	198 (166-238)	---
Lower Housatonic and Adjacent Hudson River Drainages	97 (74-128)	161.6 (121-203)	210 (141-236)
Upper Housatonic River Drainage	88 (63-130)	146 (112-206)	187 (140-223)
Lower Thames River Drainage	97 (73-133)	157 (123-189)	193 (176-217)
Eastern Coastal and Pawcatuck River Drainages	99 (80-117)	159 (129-195)	244 (215-264)
NY Streams[1]	109 (74-287)	152 (66-287)	175 (102-381)
PA Streams[1] (12 streams)	102 (81-119)	135 (119-142)	163 (150-211)
NH Streams[1] (11 streams)	107-130 (76-188)	152-196 (127-272)	198-246 (165-335)

1 From Carlander (1969), These data include measured lengths at age and are not directly comparable to back-calculated lengths.

4.0 Angler Survey Results:

A total of seven streams were creeled during 1993 (Figure 4 and Table 18). One of the streams was a yearling-brook-trout-stocked stream on which we increased our data collection to 41 samples. Three streams were new Trout Management Areas (TMAs), and two of these TMAs had both fly-fishing-only and all-technique areas (Salmon River and Moosup River). The Hammonasset River TMA was open to all techniques throughout. The Fly-fishing only area and the standard regulation areas of the Yantic River, which is not considered a TMA, were surveyed separately. As part of the evaluation of angler patterns and usage of TMAs all three TMA streams were creeled during the usual closed period on other streams (March 1 to Opening day). The Salmon River TMA has a short closed period from March 31 until Opening Day. Since the Salmon River TMA reverts to regular regulations on opening day and had been previously creeled, it was not sampled after the March 31 closure. To determine the use of TMAs in the fall the Hammonasset River and Salmon River were also creeled from September to mid-November.

4.1 Angler Survey Site Descriptions:

Stony Brook (Montville), averages 5 m wide, and is stocked with yearling brook trout (YBT). In addition it is inhabited by a population of wild brown trout and wild brook trout. The upper end of the creel site was a channelized sandy section behind a rest area on route I-395. Downstream this became a moderate gradient boulder area south of the rest area along the highway. Also included in the creel site were a lower gradient meadow section east of I-395, and a short boulder area located between a pond and the head of tide east of route 32.

The Hammonasset River TMA averages 12 m wide and is open to all methods of fishing. The TMA begins at the outflow from Lake Hammonasset and continues downstream to Chestnut Hill Road. It has several large pools at the upper end and is primarily a

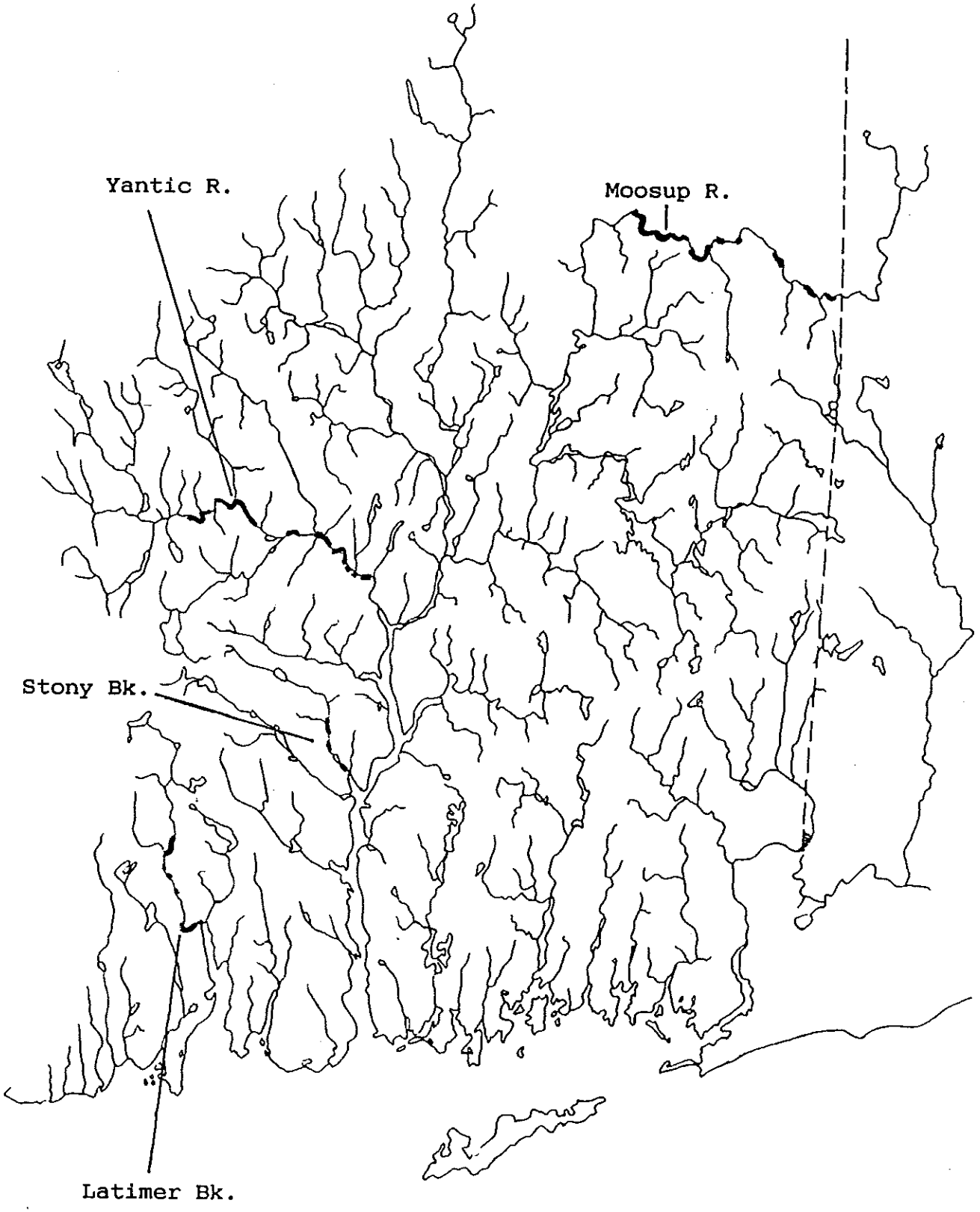

Figure 4.-Location of angler surveys in the Lower Thames River and eastern coastal drainages conducted during 1993.

Table 18.-Stocking information for streams on which angler surveys were conducted in 1993.

Stream	Species Stocked[1]	Total Number of Trout Stocked	Number Stocked per km	Number of In-season Stockings
Hammonasset River(TMA)				
3/1/93-4/16/93	BK, BN, RW	1,500	395	-
4/17/93-6/15/93	BK, BN, RW	4,250*	1,513	3
9/1/93-11/15/93	Not stocked during this period			-
Latimer Brook	BK, BN, RW	2,960	722	1
Moosup River (TMA)				
3/1/93-4/16/93	BK, BN, RW	800	286	-
4/17/93-6/15/93	BK, BN, RW	2,610*	1,396	2
Moosup River (Non-TMA)	BK, BN, RW	3,410	367	2
Salmon River (TMA)				
3/1/93-3/31/93	BK, BN, RW	2,410	1,148	2
9/1/93-11/15/93	BK, BN, RW	1,500		1
Salmon River (Non-TMA)				
9/1/93-11/15/93	BK, BN, RW	3,000		2
Stony Brook	YBK	780	709	0
Yantic River	BK, BN, RW	11,200	948	4

1 BK= brook trout *Salvelinus fontinalis* adults, BN= brown trout *Salmo trutta* adults, RW= rainbow trout *Oncorhynchus mykiss* adults, (20-30 cm TL), YBK= yearling brook trout *Salvelinus fontinalis* (14-20 cm TL).
*Includes a yearling brown trout stocking.

moderate gradient boulderstream. The entire length was surveyed on foot using a path along the western stream bank. Anglers accessed the area primarily from four spots having a limited parking capacity.

The Fly-fishing-only area of the Yantic River averaged 11 m wide and was divided into two sections. The upstream section was

relocated during the construction of route 2 and had rip-rapped banks and boulders placed in the stream. The second section was located between the Colchester Road bridge above Fitchville Pond and the next upstream road crossing. The downstream section had cobble and small boulder habitat with some small pools. Both areas had good access by road and paths.

The normal regulation area of the Yantic River averaged 13 m wide. The creel survey area consisted of intermittent sections from between the two parts of the fly-fishing-only area downstream to Norwichtown. Access was good, mostly available from bridge crossings, and store parking lots. Fitchville Pond, a 4 hectare impoundment in the upper half of the river was not creeled. The stream habitat consisted of long moderately deep pools (1.5-2 m) and cobble riffles. Some bank areas had been armored with boulders, especially around modified channel sections near parking lots and bridge crossings.

The Salmon River TMA averaged 17 m in width, and was located between the old Browns Mill Dam upstream to the confluence of the Jeremy and Blackledge Rivers. The TMA has both a fly-fishing-only and an all techniques section. It was open for catch and release fishing from September 1 to March 31, was closed to fishing April 1 to 6:00 am on opening day and then reopened under normal creel limits. The portion of the river downstream of the Day Meadow Bridge Abuttments was designated as fly-fishing-only. Each portion of the TMA was creeled seperately. Access was good to the fly-fishing-only section, but access to the all techniques section was limited because the road paralleling this section of the river was not maintained during the winter. All anglers using this section had to park and walk in. The habitat was dominated by riffles having a boulder substrate.

Latimer Brook was creeled at access points from below Silver Falls downstream to the head of tide at Golden Spur. Historically, anglers have been attracted to this area because of it's reputation for producing sea-run brown trout. Wild brook and brown trout were both present in this primarily low to

moderate gradient stream which averaged 6 m in width and had gravel and cobble substrate. Some areas of bedrock and boulders were present near Silver Falls and in a section downstream of route I-95. An esturine population of brown trout utilizes the stream and Niantic Bay. Water diversion and development have impacted this stream. Two fish ways are present on the stream, one to pass fish through the culvert under I-95 and the other to pass fish over the dam just upstream at Flanders Pond. Both structures attract angler interest.

The creeled section of the Moosup River TMA was a 2.8 km low to moderate gradient stream situated between route 14 in Plainfield and the Quinebaug River. It is located in part on the Quinebaug Wildlife Management Area near the Quinebaug State Hatchery. One section was restricted to fly-fishing-only, while the rest of the TMA was open to all techniques. Both sections had no closed season and zero creel limits at all times. The substrate was dominated by gravel with one section of small boulder habitat. A portion of the stream, located in the middle of this section, is overgrown and braided into four subchannels which are difficult to access (0.5 km from neareast vehicle access).

The Moosup River above the TMA is managed under standard statewide regulations. This section extends from route 14 to the Rhode Island border. A total of 4.4 km of this stream were creeled out of the 9.3 km of stream whcih is stocked. Much of the river has been impounded or channelized and there are numerous rip-rapped sections. Four dams and three of the impoundments(Sterling Pond, Oneco Pond and one unnamed impoundment) were included in the creel survey. Much of the angler activity was associated with these ponds. The nonimpounded areas below Sterling Pond were moderate gradient with small boulder and cobble substate. The area from the Rhode Island border to Sterling Pond was a meandering, sand and gravel section. Much of it was accessible only by canoe.

4.2 Angler Survey Summaries:

During 1993 we continued to use the 5 stratum sample design that utilizes stocked and non-stocked time periods. We used additional samples to try to reduce variance of effort and catch estimates on the small yearling brook trout stream (Stony Brook). During the preseason period it was found that stratification by air temperature was effective in reducing sample variance in some cases.

4.2.1 Effort:

Angler effort results are presented in Table 19. The level of angler effort on all streams ranged from 226 to 1,415 h/km during the period 4/17/93-6/15/93. The adult-stocked streams had total angler hours ranging from 384 to 5,377 h. These values are comparable to previously creeled adult-stocked streams.

Stony Brook, the yearling-brook-trout-stocked (YBT) stream, supported 269 total angler hours. This was in the the range of values seen elsewhere in Connecticut for YBT streams.

The Moosup River had an increase of effort in the fly-fishing-only area over 1992 levels (which are prior to establishment of the TMA) and about a 75% decrease of effort in the open techniques portion of the TMA compared to 1992 levels. Daily angler effort on streams is related to CPUE of prior days. Even though stocked in March, there was little or no catch in the Moosup River TMA during the first thirty days of the post opening day creeled period (Appendix B Fig B-1 & B-2) causing a corresponding drop in effort. During this time, effort and catch were occurring upstream in the Non-TMA area of the Moosup River (Appendix B Fig. B-3). It is assumed that some event, possible high flows, scouring, or poaching removed most of the stocked trout in the TMA prior to the stocking of the upper portion of the river. Following the stocking May 23, the TMA catch and effort levels increased. Under normal regulations the largest portion of the annual trout effort occurs in the first two weeks after opening day. It can be assumed that higher levels of

Table 19.-Effort in angler-hours and catch per unit of effort (CPUE) in fish-per-hour for streams surveyed in 1993.

Stream	Angler Effort			Catch Per Unit of Effort			
	Total Hrs	Hrs Per KM	±RSE	Brown Trout	Brook Trout	Rainbow Trout	All Fish[1]
Hammonasset River (TMA)							
3/1-4/16	3,760	836	± 6.9%	0.310	0.214	0.571	1.153
4/17-6/15	5,377	1,415	± 4.1%	0.548	0.217	0.124	1.255
9/1-11/15	1,178	310	± 3.3%	0.821	0.062	0.062	0.945
Latimer Brook							
4/17-6/15	2,598	633	± 4.8%	0.419	0.155	0.065	0.782
Moosup River (TMA)							
Fly-only area							
3/1-4/16	464	422	±17.1%	0.050	0.0	0.0	0.050
4/1-6/15	833	757	± 5.4%	1.272	0.228	0.088	1.446
All techniques area							
3/1-4/16	350	206	±17.6%	0.0	0.0	0.0	0.0
4/1-6/15	384	226	± 3.0%	--All trout		1.311	1.667
Mooup River (non-TMA)							
4/17-6/15	6,105	656	±18.7%	0.359	0.024	0.072	0.562
Salmon River (TMA)							
Fly-only area							
3/1-4/16	490	350	± 9.8%	0.033	0.0	0.0	0.033
9/1-11/15	1,278	913	±15.3%	0.613	0.0	0.0	0.636
All Techniques area							
3/1-4/16	344	181	± 9.3%	0.0	0.0	0.0	0.0
9/1-11/15	974	513	±16.5%	0.658	0.124	0.025	0.856
Salmon River (non-TMA)							
9/1-11/15	1,838	1,671	±20.8%	0.366	0.013	0.0	0.405
Stony Brook							
4/17-6/15	269	239	± 3.8%	0.174	0.373	0.0	0.548

1 Additional species include largemouth bass *Micropterus salmoides*, smallmouth bass *Micropterus dolomieu*, chain pickerel *Esox niger*, bullheads *Ameiurus spp.*, sunfish *Lepomis spp.*, and yellow perch *Perca flavescens*.

Table 19.-Continued

Stream	Angler Effort			Catch Per Unit of Effort			
	Total Hrs	Hrs Per KM	±RSE	Brown Trout	Brook Trout	Rainbow Trout	All Fish[1]
Yantic River							
Fly-only area							
4/17-6/15	3,360	1,200	± 3.9%	0.308	0.063	0.098	0.693
Unrestricted area							
4/17-6/15	10,545	1,171	± 8.7%	0.190	0.063	0.095	0.601

1 Additional species include largemouth bass *Micropterus salmoides*, smallmouth bass *Micropterus dolomieu*, chain pickerel *Esox niger*, bullheads *Ameiurus spp.*, sunfish *Lepomis spp.*, and yellow perch *Perca flavescens*.

angler effort would have occurred if there had been catch during the first two weeks of the season to reinforce angler expectations.

The non-TMA part of the Moosup River had a considerable portion of its angler effort focused on two instream impoundments. Effort at Sterling Pond and Oneco Pond accounted for approximately 35% of the total angler effort for this part of the river (2137 angler hours). Where ever these types of instream impoundments occur they tend to act as focal points for some anglers.

Effort in the TMAs during the normal closed period for trout, March 1 to Opening Day, appears to be dependent on air temperature, weather conditions, as well as catch rates. The angler effort during the opening day to June 15 creel period appears mostly CPUE driven. During the normal closure period the Salmon River and Moosup River had high flows at times, access was often icy and difficult, and there was little catch, resulting in a low level of effort.

The effort level on the Hammonasset River TMA during the normal closed season (on a per km basis) was double that of the

other two rivers (836 h/km Hammonasset River TMA vs 181-422 h/km other TMAs). The Hammonasset River is in a more moderate temperature area being closer to Long Island Sound. These warmer temperatures along the coast appear to account for some of the differences in utilization. Figure 5 illustrates the air temperature versus effort relationship whcih was used to further stratify the creel data of the Hammonasset River. Distinct changes in effort occurred at 5°C and 10°C. In a year with better flows or warmer temperatures a higher level of effort may be anticipated from the other TMAs.

The closure of the Salmon River on April 1 prevented it's use during some of the most favorable conditions prior to opening day. Over 80% of the effort on the Hammonasset River TMA occurred during the first two weeks of April. Based on this it can be estimated that approximately at a minimum 2,600 additional angler hours could be generated by opening the Salmon River through the first two weeks of April.

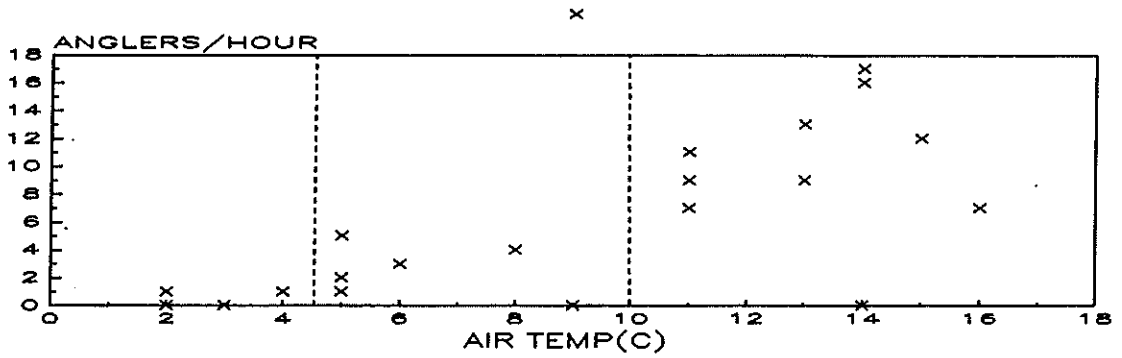

Figure 5 Temperature versus angler effort on the Hammonasset River TMA, spring 1993.

Fall use of the TMAs was looked at on the Salmon River and the Hammonasset River. During the first three weeks creeled, Sept. 1 to Sept. 23, no fish were stocked and effort was low. Following a press release and fall stocking of the Salmon River, in mid-September, the effort levels on the streams increased. Even on the Hammonasset River TMA, which was not stocked. Fall effort levels ranged from 310 to 1,671 h/km. This represents approximately 10-15% of the annual angler use of these rivers.

The relative standard error (RSE) of effort estimates for Stony Brook (YBT stream) was 3.8%. Adult streams had RSE values for effort ranging from 3.0-20.8% which is within the acceptable range of precision expected for this design.

4.2.2 Catch-per-unit-of-effort (CPUE)

The majortiy of catch-per-unit-of-effort (CPUE) values determined in 1993 were similiar to those measured on streams sampled in prior years (Table 19). The highest value yet recorded for an adult-stocked stream (1.66 fish/hr) was measured on the Moosup River TMA (during the regular season), which had very low angler effort for it's level of stocking.

The CPUE values of individual species is roughly proportional to the stocking ratios, except in the case of the Hammonasset River TMA. Rainbow trout CPUE was twice that of the brown trout CPUE even though both species were supposedly stocked in equal numbers. The pre-season CPUE values for the Moosup River and Salmon River TMAs were very low (0.0-0.05 fish/hr). Total CPUE values for the adult-stocked streams were within the normal range of values.

4.2.3 Total catch

Estimated total catches by stream and species are presented in Table 20. Trout catch averaged 751 trout/km for adult-stocked streams and was 131 trout/km for the one YBT stream. The RSEs of the 1993 catch estimates were consistent with the range of other adult-stocked streams (26.5 ± 14.4%). The RSE value for Stony Brook was 6.2%. Smallmouth bass contributed significantly to the fish creeled on the Yantic River (1041 out of 8,653 fish caught were smallmouth bass). During the post-opening-day period brown trout were still the most common trout caught in all streams.

Percent-return-to-the-creel was estimated by dividing the catch per kilometer (Table 20) by the total number of trout stocked per kilometer (Table 18). Percent-return-to-the-creel of

Table 20.-Total catch and catch by species for streams surveyed in 1993.

Stream	Trout Catch Per KM	±RSE	Total Catch Brown Trout	Brook Trout	Rainbow Trout	All Fish
Hammonasset River (TMA)						
3/1-4/16	820	±29.4%	883	611	1,625	3,119
4/17-6/15	1,776	±41.5%	4,156	1,646	945	6,747
9/1-11/15	303	±17.0%	1,001	75	75	1,151
Latimer Brook						
4/17-6/15	495	±21.2%	1,332	491	207	2,030
Moosup River (TMA)						
Fly-only area						
3/1-4/16	21	± 3.7%	23	0	0	23
4/17-6/15	1,096	±16.6%	964	174	66	1,205
All techniques area						
3/1-4/16	0	± 0.0%	0	0	0	0
4/17-6/15	376	±50.2%				640[1]
Moosup River (non-TMA)						
Unrestricted area						
4/17-6/15	369	±11.7%	2,598	171	520	3,429
Salmon River (TMA)						
Fly-only area						
3/1-4/16	11	± 4.0%	16	0	0	16
9/1-11/15	581	±40.2%	783	0	0	783
All Techniques area						
3/1-4/16	0	± 0.0%	0	0	0	0
9/1-11/15	439	±16.5%	640	121	24	785
Salmon River (non-TMA)						
9/1-11/15	759	±30.7%	718	26	--	744

1. Catch and release regulation made species identification questionable. Only total trout catch was calculated.

Table 20.-continued.

Stream	Trout Catch Per KM	±RSE	Total Catch: Brown Trout	Brook Trout	Rainbow Trout	All Fish
Stony Brook 4/17-6/15	131	± 6.2%	46	98	0	144
Yantic River Fly-only area 4/17-6/15	761	±15.8%	1,401	286	444	2,327[2]
Unrestricted area 4/17-6/15	556	±28.5%	1,971	666	999	6,336[2]

2. Includes estimated 195 smallmouth bass caught in Yantic River fly-fishing-only area and estiamted 846 smallmouth bass caught in the unrestricted area of the Yantic River.

trout (Table 21) averaged 82.6 ± 27% for adult streams and 19.0% for Stony Brook. These numbers are sometimes misleading because of the influence of catch-and-release fishing, wild trout supplementing the creel, and possible poaching problems.

5.0 Data Utilization:

One of our primary objectives in planning the Stream Survey was to provide data which could be used to comment on proposed construction and land acquisition. Data collected were made available for inquiry as soon as all calculations were complete (Table 22). Attempts have been made to make people aware of the data collected by the project through public speaking opportunities.

Table 21.-Return to the creel for trout in stream sections surveyed in 1993; all trout species combined.

Stream		# Caught per km	# Stocked per km	Percent return
Hammonasset River TMA	3/1-4/16	820	395	207%[1]
	4/17-6/15	1,776	1,513	117%[1]
	9/1-11/15	303	0	---
Latimer Brook		495	722	69%
Moosup River TMA[2]	3/1-4/16	8	286	3%
	4/17-6/15	666	1,396	48%
Moosup River Non-TMA		369	367	101%
Salmon River TMA[2]	3/1-4/16	5	445	1%
	9/1-11/15	499	303	164%
Salmon River Non-TMA	9/1-11/15	759	1,818	42%
Stony Brook		131	709	19%
Yantic River[2]		734	947	78%

1 Includes 3,000 yearling brown trout/km. Return-to-the-creel for adult trout only=245%.

2 A single allotment of trout is used for both parts of the river or TMA. Return-to-the-creel calculated from combined catches of open and fly-fishing-only areas.

6.0 Expenditures:

A total of $181,028.11 was expended for Job 2 and $45,257.02 for Job 3. Federal reimbursement under the Federal Aid in Sport Fish Restoration Act amounted to 75%, $144,822.49 and $36,205.62 respectively. State expenditures were $36,205.62 for Job 2 and $9,051.40 for Job 3.

Table 22.-Data/information requests: January 1993-January 1994.

Request Type	Information Needed	Number of Sites
1) Environmental Review	Physical, Chemical, Biological	42
2) Use by Other State Agencies	Physical, Chemical, Biological	437
3) Public Information	Physical, Chemical, Biological	82
4) Land Owner Requests	Physical, Chemical, Biological	37
5) Municipal Requests	Physical, Chemical, Biological	8
6) Rivers Advisory Committee	Physical, Chemical, Biological	875

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Appendix A

Table A-1.-List of invertebrate families found in Connecticut streams during the 1988-90 stream surveys.

Phylum	Class	Order	Family
Platyhelminthes	Turbellaria		
Nematoda			
Nematomorpha			
Tardigrada			
Annelida	Oligochaeta		
	Hirudinea		
Arthropoda	Crustacea		
		Amphipoda	
		Decapoda	
		Isopoda	
	Insecta	Coleoptera	Carabidae
			Chrysomelidae
			Circulionidae
			Curculonidae
			Dryopidae
			Dytiscidae
			Elmidae
			Gyrinidae
			Haliplidae
			Hydrophilidae
			Limnichidae
			Ptilodactylidae
			Psephenidae
			Staphylinidae
		Collembola	
		Diptera	Athericidiae
			Blephariceridae
			Ceratopogonidae
			Chironomidae
			Culicidae
			Dixidae
			Dolichopodidae
			Empididae
			Muscidae
			Psychodidae
			Simuliidae
			Stratiomyidae
			Tabanidae
			Tipulidae
		Ephemeroptera	Baetidae
			Caenidae
			Ephemeridae
			Ephemerellidae
			Heptageniidae
			Leptophlebiidae
			Oligoneuriidae
			Potamanthidae
			Siphlonuridae
			Tricorythidae
		Hemiptera	Belastomatidae
			Corixidae
			Gerridae
			Notonectidae
			Saldidae
			Veliidae
		Lepidoptera	Cosmepterigidae
			Nepticulidae
			Noctuiidae
			Pyralidae
			Tortricidae

[1] Super family

Table A-1.-Continued.

Phylum	Class	Order		Family
		Megaloptera		Corydalidae
				Syalidae
		Odonata	Anisoptera[1]	Aeshnidae
				Cordulegastridae
				Gomphidae
				Libellulidae
				Macromiidae
			Zygoptera[1]	Agrionidae
				Coenagronidae
				Calopterygidae
				Lestidae
		Plecoptera		Capniidae
				Chloroperlidae
				Leuctridae
				Nemouridae
				Perlidae
				Perlodidae
				Peltoperlidae
				Pteronarcyidae
				Taeniopterygidae
		Trichoptera		Brachycentridae
				Glossosomatidae
				Helicopsycidae
				Hydropsychidae
				Hydroptilidae
				Lepidostomatidae
				Leptoceridae
				Limnephilidae
				Molannidae
				Odontoceridae
				Philopotamidae
				Phryganeidae
				Polycentropodidae
				Psychomyiidae
				Rhyacophilidae
				Sericostomatidae
		Neuroptera		Sisyridae
Mollusca	Gastropoda	Basomnatophora		"limpets"
				Ancylidae
				Lymnaeidae
				Physidae
				Planorbidae
		Mesogastropoda		Viviparidae
				Spheridae
	Pelecypoda			
Arachnoidea		"Hydracarina"		

Appendix B

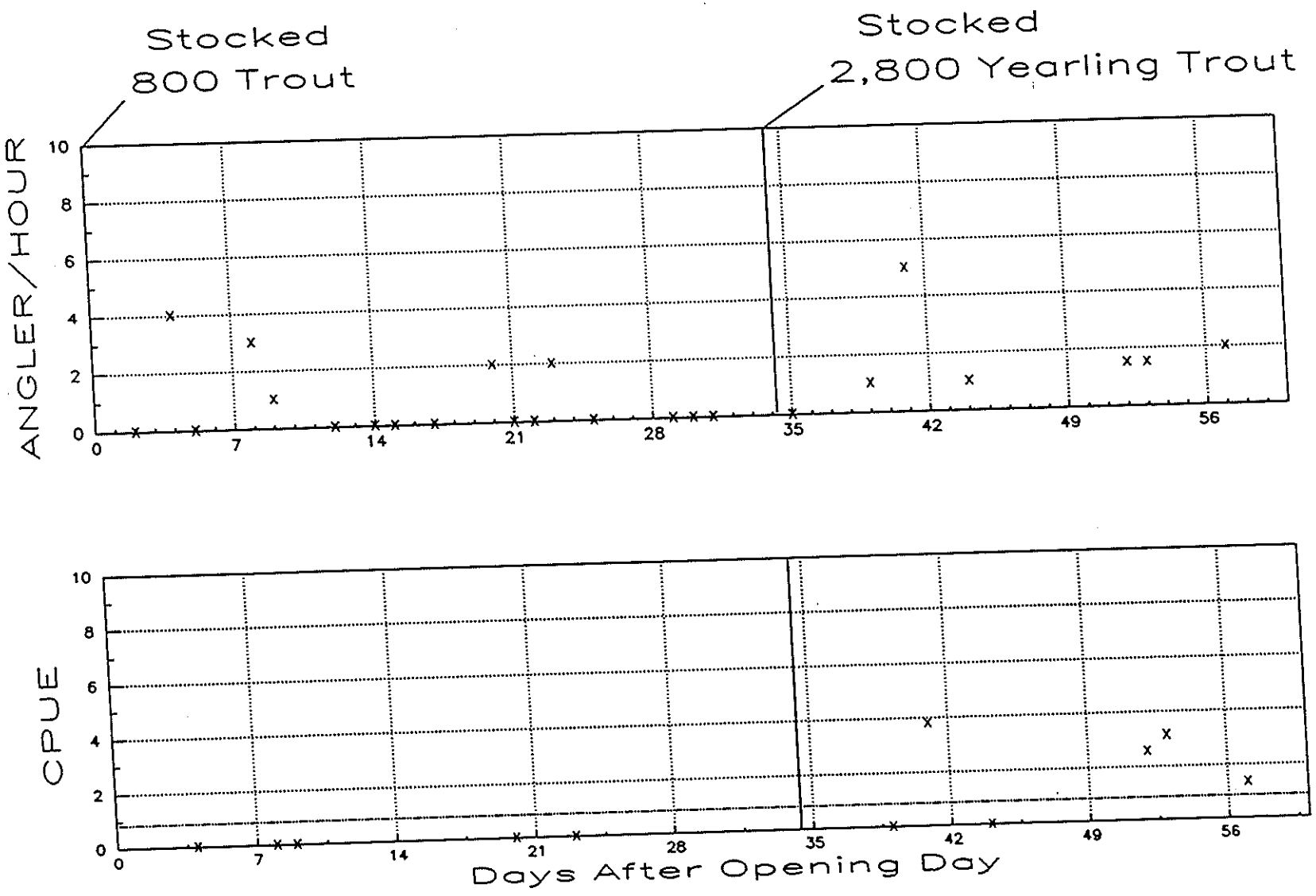

Figure B–1. Angler Effort and CPUE for the Moosup River TMA Fly Area

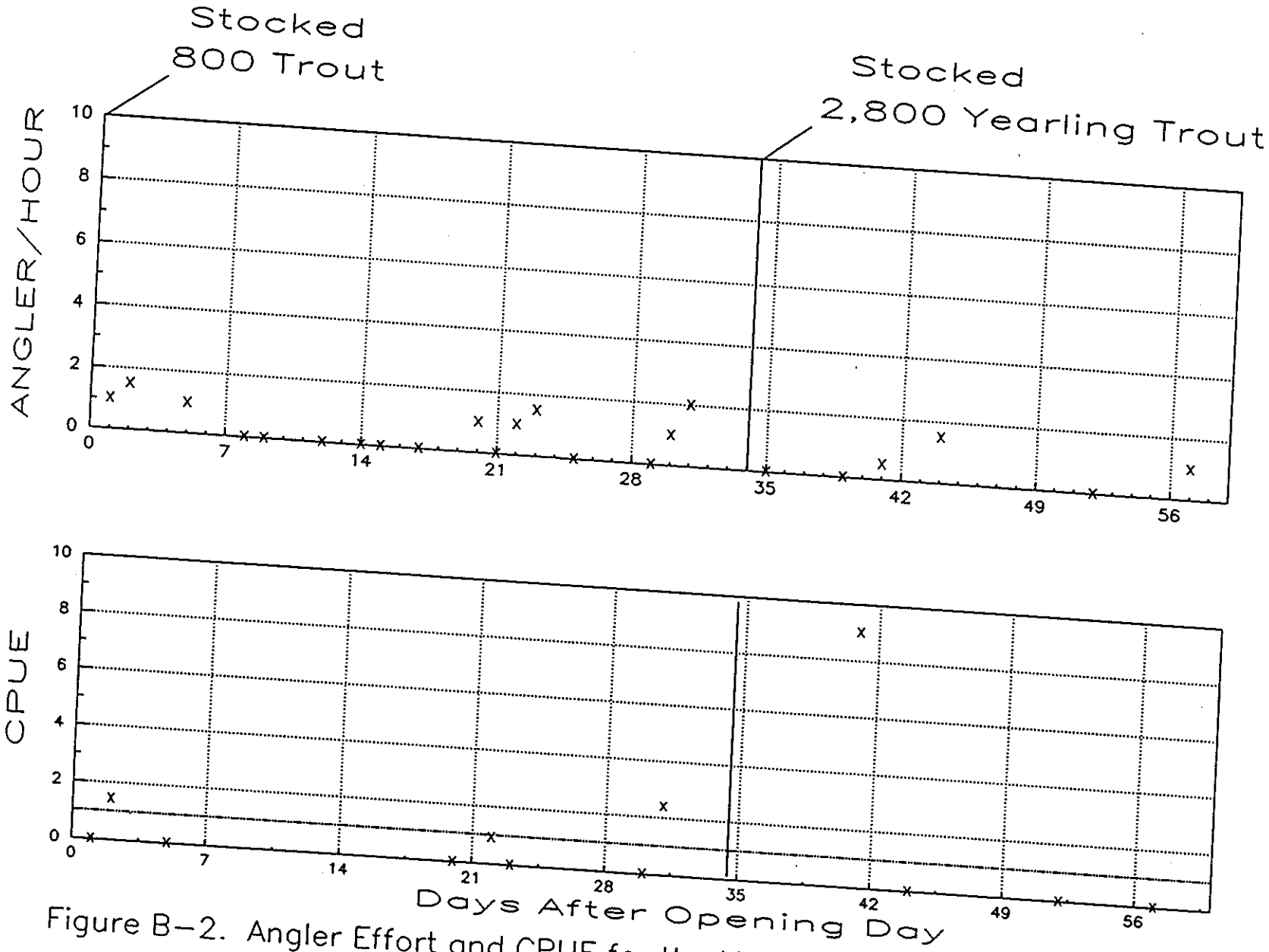

Figure B–2. Angler Effort and CPUE for the Moosup River TMA Open.

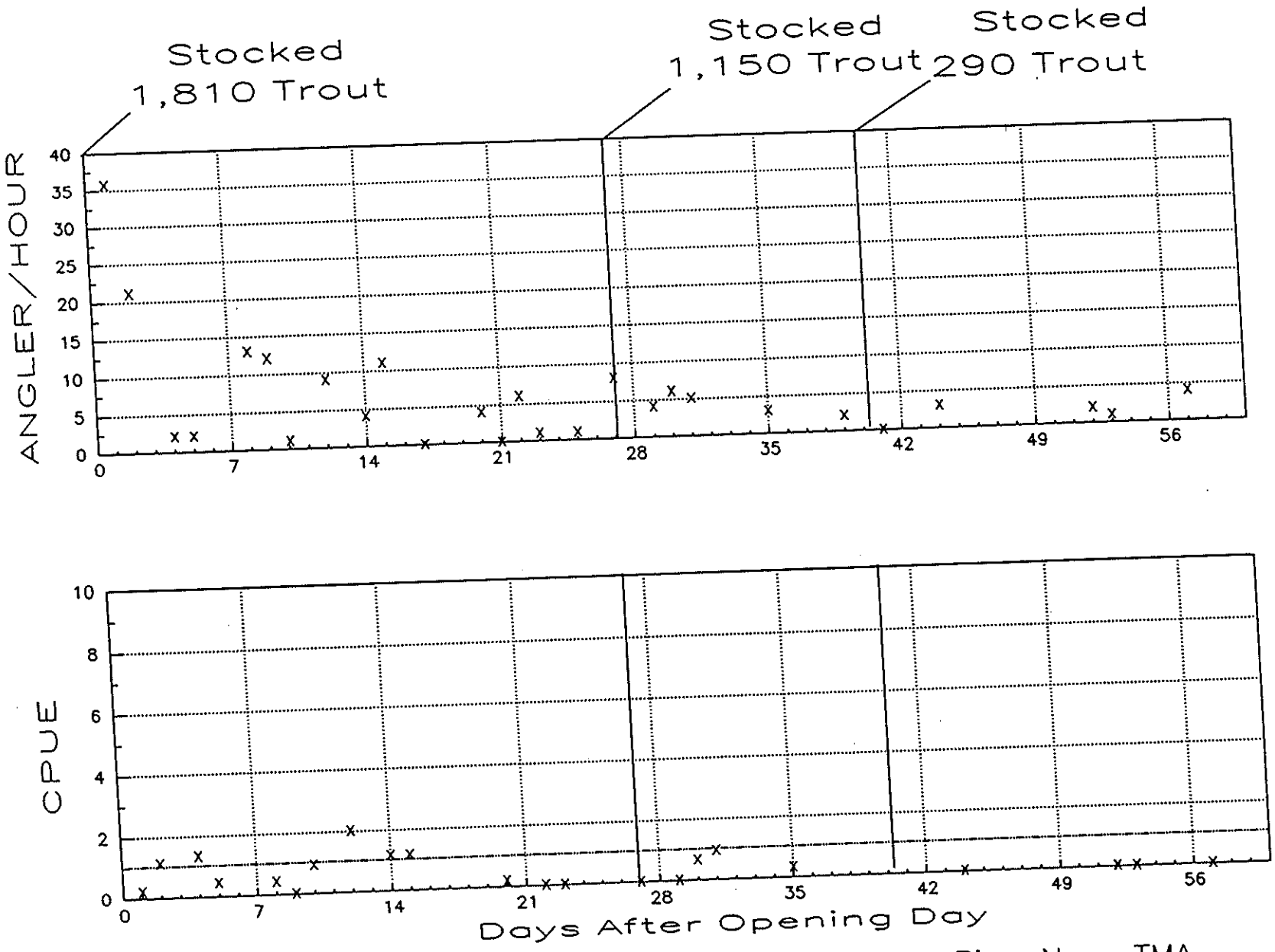

Figure B–3. Angler Effort and CPUE for the Moosup River Non– TMA

Appendix C

Stream names and site numbers where data were collected in 1993; and page numbers on which they are presented.

Location name	Site #	Page #
ANGUILLA BROOK	5008	82
ASHAWAY RIVER	5003	78
ASHWILLET BROOK	5183	188
ASSEKONK BROOK	5115	158
BALLYMAHACK BROOK	5132	168
BARTLETT BROOK	5050	117
BEAVER BROOK	5099	151
BEAVER BROOK	5043	110
BEAVER BROOK	5045	112
BILLINGS AVERY BROOK	5065	128
BILLINGS BROOK	5034	101
BIRCH PLAIN CREEK	5124	162
BLISSVILLE BROOK	5064	127
BLIVEN BROOK	5147	177
BOBBIN MILL BROOK	5139	173
BRIDE BROOK	5020	91
BROAD BROOK	5039	106
BYRON BROOK	5137	172
CARSON BROOK	5094	147
CEDAR SWAMP BROOK	5092	146
CHOATE BROOK	5040	107
COGINCHAUG RIVER	5208	194
COLD BROOK	5136	171
COLD BROOK	5204	191
COPPS BROOK	5113	158
COPPS BROOK	5009	83
COPPS BROOK TRIB.	5114	157
CORY BROOK	5038	105
CRANBERRY MEADOW BROOK	5103	153
CROOKED BROOK	5140	173
DEEP RIVER	5095	148
DEEP RIVER	5052	119
DENSION BROOK	5032	100
DONAHUE BROOK	5123	162
DOWNING BROOK	5142	175
ECCLESTON BROOK	5076	133
ELISHA BROOK	5146	176
EXETER BROOK	5049	116
FALLS BROOK	5088	143
FENGER BROOK	5120	161
FISHTOWN BROOK	5070	130
FLAT BROOK	5126	163
FOLWIX BROOK	5166	184
FORD BROOK	5127	164
FORT HILL BROOK	5077	134
FOURMILE BROOK	5102	152
FOURMILE RIVER	5021	91
FOX BROOK	5128	165
FRY BROOK	5036	103
FULLER BROOK	5130	166
GARDNER BROOK	5302	228
GARDNER BROOK	5054	120
GARDNER BROOK	5303	229
GILLETTE BROOK	5144	176
GLADE BROOK	5153	179
GREAT BROOK	5014	87
GREAT BROOK DIVERSION	5125	163
GREAT MEADOW BROOK	5030	99
GREEN FALL RIVER	5002	77
HALEYS BROOK	5012	86
HALEYS BROOK	5082	137
HAMMONASSET RIVER	5249	222
HAMMONASSET RIVER	5248	221
HAMPSTEAD BROOK	5121	161
HANS BROOK	5209	195
HETCHEL SWAMP BROOK	5154	180
HEWITT BROOK	5107	155
HOCKANUM RIVER	5252	224
HORSE BROOK	5058	123
HOXIE BROOK	5173	186
HUNTER BROOK	5202	189
HUNTS BROOK	5104	153
HUNTS BROOK	5028	97
HUNTS BROOK TRIB.	5149	177
HUNTS BROOK TRIB.	5163	183
INDIAN HOLLOW BROOK	5042	109
INDIANTOWN BROOK	5063	126
JOE CLARK BROOK	5066	128
JORDAN BROOK	5015	87
JORDAN BROOK TRIB.	5159	182
KOISTENEN BROOK	5155	180
LATHROP BROOK	5057	122
LATHROP BROOK TRIB.	5165	184
LATIMER BROOK	5079	135
LATIMER BROOK	5247	220
LATIMER BROOK	5080	136
LATIMER BROOK	5016	88
LATIMER BROOK	5078	134
LEE BROOK TRIB.	5061	125
LISBON BROOK	5181	187
LISBON BROOK	5138	172
LISBON BROOK TRIB.	5182	187
LITTLE RIVER	5083	138
LITTLE RIVER	5091	145
LITTLE RIVER	5085	140
LITTLE RIVER	5046	113
LITTLE RIVER TRIB.	5300	226
LONG ISLAND SOUND TRIB.	5119	160

Stream names and site numbers where data were collected in 1993; and page numbers on which they are presented.

Location name	Site #	Page #
LOWDEN BROOK	5068	129
MAIN BROOK	5110	156
MCCARTHYS BROOK	5069	130
MERRICK BROOK	5044	111
MERRICK BROOK	5141	174
MILL BROOK	5084	139
MILL BROOK (upper)	5037	104
MILLER BROOK	5100	151
MILLER BROOK	5129	165
MOHEGAN BROOK	5151	178
MOOSUP RIVER	5230	207
MOOSUP RIVER	5231	208
MOOSUP RIVER	5228	206
MOOSUP RIVER	5229	207
MOOSUP RIVER	5232	208
MOSCOW BROOK TRIB.	5006	81
MOUNT MISERY BROOK	5031	99
MOUNTAIN BROOK	5071	131
MYRON KINNEY BROOK	5101	152
MYRON KINNEY BROOK	5033	101
MYSTIC RIVER	5013	86
NATCHAUG RIVER	5241	214
NATCHAUG RIVER	5240	213
NATCHAUG RIVER	5242	215
NATCHUAG RIVER	5243	216
NAUGATUCK RIVER	5225	204
NAUGATUCK RIVER	5227	205
NAUGATUCK RIVER	5207	193
NAUGATUCK RIVER	5226	205
NORWICHTOWN BROOK	5200	189
OBWEBETUCK BROOK	5133	169
OIL MILL BROOK	5017	89
OIL MILL BROOK	5215	198
OLD STONE MILL BROOK	5098	149
OXOBOXO BROOK	5072	131
OXOBOXO BROOK	5026	95
PACHAUG RIVER	5205	192
PACHAUG RIVER	5029	98
PATTAGANSETT RIVER	5019	90
PATTAGANSETT RIVER	5118	160
PAWCATUCK RIVER	5005	80
PAWCATUCK RIVER	5090	144
PEASE BROOK	5073	132
PEASE BROOK	5053	119
PECK BROOK	5143	175
PENDLETON HILL BROOK	5074	132
POQUABUCK RIVER	5245	218
POQUABUCK RIVER	5246	219
POQUABUCK RIVER	5244	217
PEQUOTSEPOS BROOK	5157	181
PHELPS BROOK	5152	179
PIGEON SWAMP BROOK	5135	170
PINE SWAMP BROOK TRIB.	5161	183
POLLY BROOK	5171	185
POLLY BROOK	5150	178
POQUETANUCK BROOK	5024	94
POTASH BROOK	5131	167
QUINEBAUG RIVER	5035	102
QUINEBAUG RIVER	5086	141
QUINNIPIAC RIVER	5212	197
RAILROAD BROOK	5234	209
RED BROOK	5109	156
ROSE BROOK	5106	154
SALMON RIVER	5251	224
SALMON RIVER	5250	223
SHANTOCK BROOK	5108	155
SHERMAN BROOK	5051	118
SHETUCKET RIVER	5087	142
SHETUCKET RIVER	5041	108
SHETUCKET RIVER TRIB.	5156	181
SHETUCKET RIVER TRIB.	5134	169
SHETUCKET RIVER TRIB.	5203	190
SHEWVILLE BROOK	5023	93
SHEWVILLE BROOK	5025	95
SHUNOCK RIVER	5004	78
SHUNOCK RIVER	5116	159
STEELE BROOK	5269	225
STEELE BROOK	5270	226
STILL RIVER	5216	198
STILL RIVER	5218	199
STILL RIVER	5219	200
STILL RIVER	5221	201
STILL RIVER	5305	230
STILL RIVER	5217	199
STILL RVIER	5304	230
STONY BROOK	5027	96
STONY BROOK	5180	186
STONY BROOK	5211	196
STONY BROOK	5018	90
STONY BROOK	5105	154
SUGAR BROOK	5059	123
SUSQUETONSCUT BROOK	5055	121
SUSQUETONSCUT BROOK	5093	147
SUSQUETONSCUT BROOK	5060	124
SUSQUETONSCUT BROOK TRIB.	5172	185
SYMPAUG BROOK	5220	200
TANKERHOOSEN RIVER	5233	209
TANKERHOOSEN RIVER	5237	211

Stream names and site numbers where data were collected in 1993; and page numbers on which they are presented.

STREAM NAME : **WYASSUP BROOK** SITE #: **5001**

SITE DESCRIPTION: UPSTREAM OF GRINDSTONE HILL RD., NORTH STONINGTON.

SAMPLE LENGTH : 150.

SAMPLE DATE: 06/14/93

PHYSICAL

AIR TEMP. . . . :21.00 (C)
WATER TEMP. . . :14.00 (C)
VELOCITY. . . . : 0.0728(m/s)
DISCHARGE . . . : 0.0163(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.4	0.12
pH . . . . . :	5.3	0.06
COND . . . . . (uS/cm3). . :	41.3	1.5
ALKALINITY .(mg CaCO3 eq/l):	7.7	0.26

	MEAN		STD	
WIDTH. . . . . :	3.87		1.58	(m)
DEPTH. . . . . :	17.38		13.01	(cm)
DOMINANT SUBSTRATE TYPE. . :	1			
TYPE THREE SUBSTRATE . . . :	0.16	(%)		
EMBEDDEDNESS OF TYPE THREE :	39.00	(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	18.9	(m2)		

POOL/RIFFLE RATIO . .: 6.14

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	623.7	59.6
Ameiurus nebulosus	35.6	0.0
Salvelinus fontinalis	1568.1	83.9
Rhinichthys atratulus	35.6	0.0
Esox americanus	1158.3	73.2
Lepomis gibbosus	213.8	0.0

STREAM NAME : **GREEN FALL RIVER** SITE #: **5002**

SITE DESCRIPTION: DOWNSTREAM OF RTE. 216, NORTH STONINGTON.

SAMPLE DATE: 06/14/93

SAMPLE LENGTH : 150.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.50 (C)	DISSOLVED OXYGEN (mg/l). . :	9.0	0.06
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	5.5	0.00
VELOCITY. . . .	: 0.1845(m/s)	COND . . . . . (uS/cm3). . :	53.3	2.9
DISCHARGE . . .	: 0.2821(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	8.6	0.31

	MEAN		STD	
WIDTH. . . . . :	8.66		2.25	(m)
DEPTH. . . . . :	17.75		12.34	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	2.52
TYPE THREE SUBSTRATE . . . :	0.76	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	24.91	(%)		
OVERHEAD CANOPY. . . . . :	54.00	(%)		
INSTREAM SHELTER . . . . . :	193.4	(m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		473.3	75.5
Ameiurus nebulosus		138.8	Minimum estimate.
Salvelinus fontinalis		25.2	0.0
Rhinichthys atratulus		50.5	0.0
Salmo trutta	WILD	88.3	0.0
Salmo trutta	STOCKED	12.6	0.0
Esox niger		37.9	0.0
Luxilus cornutus		340.7	0.0
Semotilus corporalis		138.8	18.1
Esox americanus		69.4	0.0
Notemigonus crysoleucas		31.6	0.0
Rhinichthys cataractae		265.0	7.4
Micropterus salmoides		12.6	0.0
Lepomis gibbosus		12.6	0.0
Oncorhynchus mykiss		6.3	0.0
Etheostoma olmstedi		1640.6	199.6
Catostomus commersoni		795.1	64.8

STREAM NAME : **ASHAWAY RIVER**

SITE #: **5003**

SITE DESCRIPTION: UPSTREAM 150 M FROM CONNECTICUT -RHODE ISLAND BORDER, 300 M SOUTH OF INTERSECTION OF RTE. 95 AND CLARKS FALLS RD., NORTH STONINGTON.

SAMPLE LENGTH : 150.

SAMPLE DATE: 06/15/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.1169(m/s)
DISCHARGE . . . : 0.3332(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.6	0.06
pH . . . . . :	5.5	0.23
COND . . . . . (uS/cm3). . :	104.0	1.0
ALKALINITY .(mg CaCO3 eq/l):	10.5	0.61

	MEAN	STD	
WIDTH. . . . . :	6.75	1.84	(m)
DEPTH. . . . . :	29.08	22.24	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.46	(%)	
EMBEDDEDNESS OF TYPE THREE :	40.69	(%)	
OVERHEAD CANOPY. . . . . :	74.00	(%)	
INSTREAM SHELTER . . . . . :	173.6	(m2)	

POOL/RIFFLE RATIO . .: 29.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		404.9	25.6
Ameiurus nebulosus		9.9	0.0
Salvelinus fontinalis	WILD	197.5	0.0
Salvelinus fontinalis	STOCKED	9.9	0.0
Salmo trutta	WILD	49.4	0.0
Salmo trutta	STOCKED	39.5	0.0
Esox niger		276.5	78.0
Luxilus cornutus		572.0	0.0
Semotilus corporalis		98.8	0.0
Notemigonus crysoleucas		207.4	0.0
Rhinichthys cataractae		474.1	121.8
Lepomis gibbosus		9.9	0.0
Etheostoma olmstedi		671.6	131.8
Catostomus commersoni		138.3	0.0

STREAM NAME : **SHUNOCK RIVER** SITE #: **5004**

SITE DESCRIPTION: BELOW GRAVEL PIT BRIDGE OFF RTE. 184, NORTH STONINGTON.

SAMPLE LENGTH : 150. SAMPLE DATE: 06/15/93

PHYSICAL

AIR TEMP. . . . :22.50 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.2441(m/s)
DISCHARGE . . . : 0.2581(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.7	0.10
pH . . . . . :	5.4	0.17
COND . . . . . (uS/cm3). . :	83.0	1.0
ALKALINITY .(mg CaCO3 eq/l):	17.0	0.15

	MEAN	STD	
WIDTH. . . . . :	8.53	2.31	(m)
DEPTH. . . . . :	17.38	13.64	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .: 1.52
TYPE THREE SUBSTRATE . . . :	0.34 (%)		AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :	38.46 (%)		
OVERHEAD CANOPY. . . . . :	79.00 (%)		
INSTREAM SHELTER . . . . . :	163.1 (m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		393.1	16.4
Ameiurus nebulosus		13.8	0.0
Lepomis macrochirus		6.9	0.0
Salvelinus fontinalis		103.4	0.0
Salmo trutta	STOCKED	158.6	8.7
Salmo trutta	WILD	248.3	0.0
Esox niger		27.6	0.0
Luxilus cornutus		275.8	0.0
juvenile cyprinid		6.9	0.0
Semotilus corporalis		158.6	0.0
Esox americanus		34.5	0.0
Notemigonus crysoleucas		151.7	38.5
Rhinichthys cataractae		379.2	42.7
Lepomis gibbosus		20.7	0.0
Lepomis auritus		27.6	0.0
Oncorhynchus mykiss		6.9	0.0
Etheostoma olmstedi		1013.7	122.8
Catostomus commersoni		558.6	89.3
Perca flavescens		6.9	0.0

STREAM NAME : **PAWCATUCK RIVER**

SITE DESCRIPTION: FROM RTE. 78 FISHING ACCESS UPSTREAM TO ABANDONED IRON BRIDGE, STONINGTON. SITE #: **5005**

SAMPLE LENGTH : 365.

SAMPLE DATE: 06/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.5	0.06
WATER TEMP. . .	:20.50 (C)	pH . . . . . :	5.5	0.21
VELOCITY. . . .	: 0.4019(m/s)	COND . . . . . (uS/cm3). . :	99.7	0.6
DISCHARGE . . .	: 5.6993(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	8.0	0.70

	MEAN	STD	
WIDTH. . . . . :	32.36	5.19	(m)
DEPTH. . . . . :	42.35	24.63	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.14	(%)	
EMBEDDEDNESS OF TYPE THREE :	36.43	(%)	
OVERHEAD CANOPY. . . . . :	0.00	(%)	
INSTREAM SHELTER . . . . . :	2010.6	(m2)	

POOL/RIFFLE RATIO . .: 3.74

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Oncorhynchus mykiss		
Salmo salar		
Etheostoma olmstedi		
Anguilla rostrata		
Lepomis macrochirus		
Rhinichthys cataractae		
Micropterus salmoides		
Lepomis auritus		
Catostomus commersoni		
Ameiurus catus		

STREAM NAME : **MOSCOW BROOK TRIB.** SITE #: **5006**

SITE DESCRIPTION: UPSTREAM OF GREENFALL RD. IN PACHAUG STATE FOREST, 200 M FROM RHODE ISLAND BORDER, VOLUNTOWN.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/17/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:17.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.7	0.00
WATER TEMP. . .	:14.50 (C)	pH . . . . . :	3.4	0.06
VELOCITY. . . .	: 0.0088(m/s)	COND . . . . . (uS/cm3). . :	35.7	2.5
DISCHARGE . . .	: 0.0100(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	1.27		0.59	(m)
DEPTH. . . . . :	9.15		6.18	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	2.33
TYPE THREE SUBSTRATE . . . :	0.36	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	42.50	(%)		
OVERHEAD CANOPY. . . . . :	98.00	(%)		
INSTREAM SHELTER . . . . . :	3.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Enneacanthus obesus		

STREAM NAME : **WOOD RIVER** SITE #: **5007**

SITE DESCRIPTION: DOWNSTREAM OF GALLUP HOMESTEAD RD., STERLING.

SAMPLE LENGTH : 96. SAMPLE DATE: 06/17/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	5.9	0.36
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	5.4	0.12
VELOCITY. . . .	: 0.0744(m/s)	COND . . . . . (uS/cm3). . :	51.7	0.6
DISCHARGE . . .	: 0.2820(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.5	0.69

	MEAN		STD	
WIDTH. . . . . :	4.31		1.75	(m)
DEPTH. . . . . :	9.70		7.59	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	2.00
TYPE THREE SUBSTRATE . . . :	0.19	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	27.14	(%)		
OVERHEAD CANOPY. . . . . :	93.00	(%)		
INSTREAM SHELTER . . . . . :	20.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	72.5	0.0
Ameiurus nebulosus	145.0	0.0
Salmo trutta	24.2	0.0
Esox niger	120.8	0.0
Notemigonus crysoleucas	48.3	0.0
Lepomis gibbosus	265.9	0.0

STREAM NAME : **ANGUILLA BROOK** SITE #: **5008**

SITE DESCRIPTION: UPSTREAM OF PEQUOT TRAIL RD., STONINGTON.

SAMPLE LENGTH : 150. SAMPLE DATE: 06/21/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :18.50 (C)
VELOCITY. . . . : 0.0294(m/s)
DISCHARGE . . . : 0.0635(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.6	0.06
pH . . . . . :	7.3	
COND . . . . . (uS/cm3). . :	109.0	0.0
ALKALINITY .(mg CaCO3 eq/l):	19.2	2.48

	MEAN	STD	
WIDTH. . . . . :	4.75	1.92	(m)
DEPTH. . . . . :	24.75	19.85	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.47	(%)	
EMBEDDEDNESS OF TYPE THREE :	35.79	(%)	
OVERHEAD CANOPY. . . . . :	83.00	(%)	
INSTREAM SHELTER . . . . . :	181.7	(m2)	

POOL/RIFFLE RATIO . .: 5.30

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		3508.7	511.9
Lepomis macrochirus		210.5	0.0
Salvelinus fontinalis	WILD	449.1	0.0
Salvelinus fontinalis	STOCKED	14.0	0.0
Salmo trutta	WILD	56.1	0.0
Salmo trutta	STOCKED	182.5	0.0
Erimyzon oblongus		28.1	0.0
Luxilus cornutus		112.3	0.0
Semotilus corporalis		393.0	0.0
Esox americanus		477.2	0.0
Micropterus salmoides		42.1	0.0
Lepomis gibbosus		56.1	0.0
Oncorhynchus mykiss		28.1	0.0
Etheostoma olmstedi		477.2	129.7
Catostomus commersoni		70.2	0.0

STREAM NAME : COPPS BROOK SITE #: 5009

SITE DESCRIPTION: JUST ABOVE HEAD OF TIDE..ABOVE DEAD END DIRT RD. OFF COVE RD., STONINGTON.

SAMPLE LENGTH : 100. SAMPLE DATE: 06/21/93

PHYSICAL

AIR TEMP. . . . :17.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.0729(m/s)
DISCHARGE . . . : 0.1350(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.1	0.00
pH . . . . . :	7.3	
COND . . . . . (uS/cm3). . :	87.3	2.5
ALKALINITY .(mg CaCO3 eq/l):	17.2	0.32

	MEAN	STD	
WIDTH. . . . . :	3.34	0.49	(m)
DEPTH. . . . . :	5.45	4.56	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.75	(%)	
EMBEDDEDNESS OF TYPE THREE :	8.81	(%)	
OVERHEAD CANOPY. . . . . :	83.00	(%)	
INSTREAM SHELTER . . . . . :	0.3	(m2)	

POOL/RIFFLE RATIO . .: 0.56

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2754.5	86.3
Salvelinus fontinalis	209.6	0.0
Esox americanus	359.3	0.0
Pungitius pungitius	29.9	0.0

STREAM NAME : **WILLIAMS BROOK** SITE #: **5010**

SITE DESCRIPTION: DOWNSTREAM OF LEE BROOK CONFLUENCE, ABOVE OLD FORD ON HOLDRIDGE TREE FARM, LEDYARD.

SAMPLE LENGTH : 150.

SAMPLE DATE: 06/22/93

PHYSICAL

AIR TEMP. . . . :22.00 (C)
WATER TEMP. . . :17.00 (C)
VELOCITY. . . . : 0.0247(m/s)
DISCHARGE . . . : 0.0132(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.1	0.10
pH . . . . . :	6.1	0.00
COND . . . . . (uS/cm3). . :	96.7	1.5
ALKALINITY .(mg CaCO3 eq/l):	15.2	0.30

	MEAN	STD	
WIDTH. . . . . :	4.27	0.85	(m)
DEPTH. . . . . :	12.55	9.21	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.25	(%)	
EMBEDDEDNESS OF TYPE THREE :	23.33	(%)	
OVERHEAD CANOPY. . . . . :	98.00	(%)	
INSTREAM SHELTER . . . . . :	85.3	(m2)	

POOL/RIFFLE RATIO . .: 4.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	733.8	90.8
Ameiurus nebulosus	218.6	Minimum estimate.
Lepomis macrochirus	31.2	0.0
Salvelinus fontinalis	796.3	111.8
juvenile centrarchid	15.6	0.0
Esox niger	31.2	0.0
Esox americanus	15.6	0.0
Notemigonus crysoleucas	15.6	0.0
Rhinichthys cataractae	15.6	0.0
Micropterus salmoides	15.6	0.0
Lepomis gibbosus	187.4	0.0
Etheostoma olmstedi	515.2	76.2

STREAM NAME : **WHITFORD BROOK** SITE #: **5011**

SITE DESCRIPTION: PARALLEL TO SHEWVILLE RD. JUST SOUTH OF INTERSECTION WITH GALLOP HILL EXTENSION, LEDYARD/STONINGTON.

SAMPLE LENGTH : 169. SAMPLE DATE: 06/22/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.1263(m/s)
DISCHARGE . . . : 0.0748(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.2	0.06
pH . . . . . :	6.5	
COND . . . . . (uS/cm3). . :	160.0	0.0
ALKALINITY .(mg CaCO3 eq/l):	17.7	0.20

	MEAN	STD	
WIDTH. . . . . :	5.84	1.26	(m)
DEPTH. . . . . :	12.55	11.83	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.51	(%)	
EMBEDDEDNESS OF TYPE THREE :	12.88	(%)	
OVERHEAD CANOPY. . . . . :	72.00	(%)	
INSTREAM SHELTER . . . . . :	139.4	(m2)	

POOL/RIFFLE RATIO . .: 0.97

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		1631.3	57.3
Lepomis macrochirus		10.1	0.0
Salvelinus fontinalis	WILD	121.6	0.0
Salvelinus fontinalis	STOCKED	10.1	0.0
Salmo trutta	WILD	70.9	0.0
Salmo trutta	STOCKED	50.7	0.0
Esox niger		141.8	13.3
juvenile cyprinid		243.0	0.0
Rhinichthys cataractae		4822.8	155.3
Micropterus salmoides		10.1	0.0
Lepomis gibbosus		20.3	0.0
Lepomis auritus		40.5	0.0
Oncorhynchus mykiss	STOCKED	10.1	0.0
Etheostoma olmstedi		678.8	52.3

STREAM NAME : **HALEYS BROOK**

SITE DESCRIPTION: UPSTREAM OF QUAKER FARM RD., GROTON. (BRAIDED, MARSHY, AREA) SITE #: **5012**

SAMPLE LENGTH : 100. SAMPLE DATE: 06/23/93

PHYSICAL

AIR TEMP. . . . :18.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.0431(m/s)
DISCHARGE . . . : 0.2020(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.6	0.40
pH . . . . . :	6.9	
COND . . . . . (uS/cm3). . :	81.3	1.5
ALKALINITY .(mg CaCO3 eq/l):	14.6	0.51

	MEAN	STD	
WIDTH. . . . . :	2.55	0.32	(m)
DEPTH. . . . . :	18.48	15.54	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		
TYPE THREE SUBSTRATE . . . :	0.21	(%)	
EMBEDDEDNESS OF TYPE THREE :	56.67	(%)	
OVERHEAD CANOPY. . . . . :	79.00	(%)	
INSTREAM SHELTER . . . . . :	18.8	(m2)	

POOL/RIFFLE RATIO . .: 22.00
AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1607.8	0.0
Erimyzon oblongus	470.6	0.0
Esox niger	78.4	0.0
Luxilus cornutus	78.4	0.0
Esox americanus	2745.0	179.1
Notemigonus crysoleucas	823.5	0.0
Lepomis gibbosus	39.2	0.0

STREAM NAME : **MYSTIC RIVER**

SITE DESCRIPTION: FROM LOW TIDE MARK UPSTREAM TO CONFLUENCE OF WHITFORD AND HALEYS BROOKS, GROTON/STONINGTON. SITE #: **5013**

SAMPLE LENGTH : 50. SAMPLE DATE: 06/29/93

PHYSICAL

AIR TEMP. . . . : (C)
WATER TEMP. . . : (C)
VELOCITY. . . . : (m/s)
DISCHARGE . . . : (m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :		
pH . . . . . :		
COND . . . . . (uS/cm3). . :		
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			
TYPE THREE SUBSTRATE . . . :		(%)	
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

POOL/RIFFLE RATIO . .:
AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis gibbosus		
Fundulus diaphanus		
Micropterus salmoides		
Anguilla rostrata		
juvenile centrarchid		
Microgadus tomcod		
Etheostoma olmstedi		

STREAM NAME : **GREAT BROOK** SITE #: **5014**

SITE DESCRIPTION: OFF GALES FERRY RD., DOWNSTREAM OF CONFLUENCE OF GREAT BROOK AND OVERFLOW CHANNEL FROM LEDYARD RESERVIOR, GROTON.

SAMPLE LENGTH : 135. SAMPLE DATE: 06/23/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:18.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.2	0.06
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	6.8	0.00
VELOCITY. . . .	: 0.1503(m/s)	COND . . . . . (uS/cm3). . :	76.0	1.7
DISCHARGE . . .	: 0.1988(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	7.6	0.40

	MEAN		STD	
WIDTH. . . . . :	6.46		1.29	(m)
DEPTH. . . . . :	13.90		9.55	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.69
TYPE THREE SUBSTRATE . . . :	0.45	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	21.54	(%)		
OVERHEAD CANOPY. . . . . :	86.00	(%)		
INSTREAM SHELTER . . . . . :	10.1	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	137.6	0.0
Lepomis macrochirus	11.5	0.0
Salvelinus fontinalis	68.8	0.0
Esox niger	22.9	0.0
Etheostoma olmstedi	91.7	16.0

STREAM NAME : **JORDAN BROOK** SITE #: **5015**

SITE DESCRIPTION: PARALLEL TO DIRT ROAD ALONG ABANDONED AIRPORT, 600 M SOUTH OF RTE. 95, WATERFORD.

SAMPLE LENGTH : 139. SAMPLE DATE: 06/24/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.7	0.10
WATER TEMP. . .	:15.00 (C)	pH . . . . . :	7.3	
VELOCITY. . . .	: 0.1667(m/s)	COND . . . . . (uS/cm3). . :	115.3	0.6
DISCHARGE . . .	: 0.5180(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	13.2	0.25

	MEAN		STD	
WIDTH. . . . . :	2.85		0.49	(m)
DEPTH. . . . . :	10.88		6.44	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	0.90
TYPE THREE SUBSTRATE . . . :	0.45	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	50.50	(%)		
OVERHEAD CANOPY. . . . . :	63.00	(%)		
INSTREAM SHELTER . . . . . :	45.2	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1590.3	183.2
Salvelinus fontinalis	7244.3	219.6
Semotilus corporalis	25.2	0.0
Micropterus salmoides	25.2	0.0
Etheostoma olmstedi	933.9	Minimum estimate.

STREAM NAME : **LATIMER BROOK** SITE #: **5016**

SITE DESCRIPTION: ABOVE FOOT BRIDGE 400 M ABOVE CONFLUENCE WITH CRANBERRY MEADOW BROOK, EAST LYME.

SAMPLE LENGTH : 150.

SAMPLE DATE: 06/24/93

PHYSICAL

AIR TEMP. . . . :18.00 (C)
WATER TEMP. . . :15.00 (C)
VELOCITY. . . . : 0.0282(m/s)
DISCHARGE . . . : 0.0384(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.6	0.15
pH . . . . . :	6.9	
COND . . . . . (uS/cm3). . :	88.7	1.5
ALKALINITY .(mg CaCO3 eq/l):	13.6	0.31

	MEAN	STD	
WIDTH. . . . . :	5.53	2.15	(m)
DEPTH. . . . . :	14.10	10.11	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.28	(%)	
EMBEDDEDNESS OF TYPE THREE :	30.77	(%)	
OVERHEAD CANOPY. . . . . :	94.00	(%)	
INSTREAM SHELTER . . . . . :	19.3	(m2)	

POOL/RIFFLE RATIO . .: 2.75

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		711.3	36.1
Salvelinus fontinalis	WILD	192.9	0.0
Salvelinus fontinalis	STOCKED	12.1	0.0
Rhinichthys atratulus		265.2	0.0
Salmo trutta	STOCKED	24.1	0.0
Salmo trutta	WILD	120.6	0.0
Esox niger		24.1	0.0
Esox americanus		24.1	0.0
Etheostoma olmstedi		265.2	Minimum estimate.
Catostomus commersoni		48.2	0.0
Perca flavescens		12.1	0.0

STREAM NAME : **OIL MILL BROOK** SITE #: **5017**

SITE DESCRIPTION: 50 M ABOVE I-395 AT INTERSECTION OF PARKWAY NORTH AND OIL MILL RD., WATERFORD.

SAMPLE LENGTH : 150. SAMPLE DATE: 06/28/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.5	0.12
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	6.7	
VELOCITY. . . .	: 0.1531(m/s)	COND . . . . . (uS/cm3). . :	69.7	1.5
DISCHARGE . . .	: 0.7940(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.5	0.23

	MEAN	STD			
WIDTH. . . . . :	4.15	1.48	(m)		
DEPTH. . . . . :	13.43	10.34	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.41
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	30.77	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	13.2	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	866.9	80.3
Salvelinus fontinalis	617.1	67.4
Rhinichthys atratulus	1351.7	39.8
Salmo trutta	1381.1	61.4
Lepomis gibbosus	14.7	0.0
S. fontinalis X S. trutta	14.7	0.0

STREAM NAME : **STONY BROOK** SITE #: **5018**

SITE DESCRIPTION: DOWNSTREAM OF RTE. I-95 AND ADJACENT PARALLEL ROAD, WATERFORD.

SAMPLE LENGTH : 80.

SAMPLE DATE: 06/28/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)	
WATER TEMP. . . :16.00 (C)	
VELOCITY. . . . : 0.1241(m/s)	
DISCHARGE . . . : 0.1500(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.3	0.15
pH . . . . . :	6.8	0.06
COND . . . . . (uS/cm3). . :	135.3	6.4
ALKALINITY .(mg CaCO3 eq/l):	17.0	0.20

	MEAN	STD	
WIDTH. . . . . :	1.73	0.48	(m)
DEPTH. . . . . :	6.85	5.35	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	30.77	(%)	
OVERHEAD CANOPY. . . . . :	86.00	(%)	
INSTREAM SHELTER . . . . . :	1.7	(m2)	

POOL/RIFFLE RATIO . .: 1.22

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2601.2	0.0
Salvelinus fontinalis	7008.7	121.4
Rhinichthys atratulus	8453.7	189.3

STREAM NAME : **PATTAGANSETT RIVER** SITE #: **5019**

SITE DESCRIPTION: DOWNSTREAM OF BROOK ST., EAST LYME.

SAMPLE LENGTH : 150.

SAMPLE DATE: 06/30/93

PHYSICAL

AIR TEMP. . . . :21.00 (C)	
WATER TEMP. . . :24.00 (C)	
VELOCITY. . . . : 0.0482(m/s)	
DISCHARGE . . . : 0.0870(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	6.9	0.23
pH . . . . . :	6.7	
COND . . . . . (uS/cm3). . :	122.7	2.5
ALKALINITY .(mg CaCO3 eq/l):	18.0	1.03

	MEAN	STD	
WIDTH. . . . . :	4.39	2.04	(m)
DEPTH. . . . . :	15.30	12.50	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		
TYPE THREE SUBSTRATE . . . :	0.13	(%)	
EMBEDDEDNESS OF TYPE THREE :	70.00	(%)	
OVERHEAD CANOPY. . . . . :	22.00	(%)	
INSTREAM SHELTER . . . . . :	97.4	(m2)	

POOL/RIFFLE RATIO . .: 4.17

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	3356.1	525.7
Alosa pseudoharengus	7972.6	Minimum estimate.
Alosa aestivalis		
Esox niger	121.5	0.0
Micropterus salmoides	30.4	0.0
Perca flavescens	45.6	0.0

STREAM NAME : **BRIDE BROOK** SITE #: **5020**

SITE DESCRIPTION: UPSTREAM OF BRIDE BROOK RD. CROSSING, 300 M DOWNSTREAM OF BRIDE LAKE, EAST LYME.

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/30/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.5	0.10
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	6.5	0.31
VELOCITY. . . .	: 0.0413(m/s)	COND . . . . . (uS/cm3). . :	99.0	0.0
DISCHARGE . . .	: 0.0650(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	7.1	0.95

	MEAN	STD	
WIDTH. . . . . :	2.27	0.56	(m)
DEPTH. . . . . :	6.55	5.47	(cm)
DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	4.56
TYPE THREE SUBSTRATE . . . :	0.35 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	21.67 (%)		
OVERHEAD CANOPY. . . . . :	89.00 (%)		
INSTREAM SHELTER . . . . . :	0.3 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	88.1	0.0
Ameiurus nebulosus	528.6	0.0
Fundulus diaphanus	1585.9	111.4
Catostomus commersoni	2907.0	0.0
Perca flavescens	2290.7	176.9

STREAM NAME : **FOURMILE RIVER** SITE #: **5021**

SITE DESCRIPTION: DOWNSTREAM OF COLCHESTER RD., EAST LYME/OLD LYME.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.2	0.25
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	7.0	
VELOCITY. . . .	: 0.0971(m/s)	COND . . . . . (uS/cm3). . :	115.3	2.5
DISCHARGE . . .	: 0.6380(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	25.9	1.60

	MEAN	STD	
WIDTH. . . . . :	3.23	1.20	(m)
DEPTH. . . . . :	20.33	20.26	(cm)
DOMINANT SUBSTRATE TYPE. . :	6	POOL/RIFFLE RATIO . .:	2.05
TYPE THREE SUBSTRATE . . . :	0.03 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)		
OVERHEAD CANOPY. . . . . :	93.00 (%)		
INSTREAM SHELTER . . . . . :	50.5 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1609.9	35.7
Lepomis macrochirus	330.2	82.6
Micropterus salmoides	123.8	0.0
Lepomis gibbosus	289.0	0.0
Etheostoma olmstedi	536.6	25.2

STREAM NAME : **TRADING COVE BROOK** SITE #: **5022**

SITE DESCRIPTION: APPROXIMATELY 600 M ABOVE RTE. 395, UPSTREAM OF FIRST BRIDGE ABOVE RTE. 395, MONTVILLE-NORWICH.

SAMPLE LENGTH : 157.

SAMPLE DATE: 07/01/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.1220(m/s)
DISCHARGE . . . : 0.3730(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.4	0.12
pH . . . . . :	6.9	0.10
COND . . . . . (uS/cm3). . :	96.7	1.5
ALKALINITY .(mg CaCO3 eq/l):	19.5	0.15

	MEAN	STD	
WIDTH. . . . . :	3.94	1.21	(m)
DEPTH. . . . . :	7.80	6.03	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.79	(%)	
EMBEDDEDNESS OF TYPE THREE :	8.08	(%)	
OVERHEAD CANOPY. . . . . :	71.00	(%)	
INSTREAM SHELTER . . . . . :	8.8	(m2)	

POOL/RIFFLE RATIO . .: 0.85

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		48.5	0.0
Salvelinus fontinalis	WILD	1309.5	0.0
Rhinichthys atratulus		1309.0	27.4
Salmo trutta	WILD	2279.0	116.0
Esox niger		64.7	0.0
Semotilus corporalis		32.3	0.0
Rhinichthys cataractae		662.8	0.0
Lepomis gibbosus		0.0	0.0
Etheostoma olmstedi		1519.6	224.5
Catostomus commersoni		129.3	0.0

STREAM NAME : **SHEWVILLE BROOK** SITE #: 5023

SITE DESCRIPTION: DOWNSTREAM OF MATHEWSON MILL RD., LEDYARD.

SAMPLE DATE: 07/15/93

SAMPLE LENGTH : 90.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.3	0.21
WATER TEMP. . .	:24.00 (C)	pH . . . . . :	6.6	0.06
VELOCITY. . . .	: 0.0300(m/s)	COND . . . . . (uS/cm3). . :	120.0	0.0
DISCHARGE . . .	: 0.0121(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	30.3	1.88

	MEAN		STD	
WIDTH. . . . . :	5.63		2.02	(m)
DEPTH. . . . . :	22.02		18.24	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	11.86
TYPE THREE SUBSTRATE . . . :	0.16	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	45.00	(%)		
OVERHEAD CANOPY. . . . . :	90.00	(%)		
INSTREAM SHELTER . . . . . :	45.0	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	967.0	0.0
Salmo trutta	19.7	0.0
Esox niger	552.6	39.0
Notemigonus crysoleucas	118.4	0.0
Micropterus salmoides	19.7	0.0
Lepomis gibbosus	78.9	0.0
Lepomis auritus	256.6	44.8
Etheostoma olmstedi	592.1	38.4

STREAM NAME : **POQUETANUCK BROOK** SITE #: **5024**

SITE DESCRIPTION: UPSTREAM FROM HEAD OF TIDE, PRESTON.

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/25/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.0540(m/s)
DISCHARGE . . . : 0.0636(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.3	0.66
pH . . . . . :	7.7	0.15
COND . . . . . (uS/cm3). . :	126.7	4.9
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	7.03		3.37	(m)
DEPTH. . . . . :	27.90		31.05	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.03	(%)		
EMBEDDEDNESS OF TYPE THREE :	2.50	(%)		
OVERHEAD CANOPY. . . . . :	75.00	(%)		
INSTREAM SHELTER . . . . . :	148.0	(m2)		

POOL/RIFFLE RATIO . .: 1.88

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		2712.0	270.5
Ameiurus nebulosus		13.3	0.0
Lepomis macrochirus		26.6	0.0
Salmo trutta	STOCKED	106.4	0.0
Esox niger		106.4	0.0
Notemigonus crysoleucas		39.9	0.0
Rhinichthys cataractae		943.9	125.0
Lepomis gibbosus		279.2	0.0
Lepomis auritus		226.0	0.0
Etheostoma olmstedi		132.9	0.0
Catostomus commersoni		943.9	31.1
Perca flavescens			
Fundulus heteroclitus			
Fundulus diaphanus			
Pomoxis nigromaculatus			
Notemigonus crysoleucas			

STREAM NAME : **SHEWVILLE BROOK** SITE #: **5025**

SITE DESCRIPTION: ABOVE POND IN LINCOLN PARK, PRESTON. (LOOSE COBBLE, HARDWOODS)

SAMPLE LENGTH : 150. SAMPLE DATE: 07/21/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	6.8	0.67
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	7.4	
VELOCITY. . . .	: 0.0748(m/s)	COND . . . . . (uS/cm3). . :	53.0	
DISCHARGE . . .	: 0.4630(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	27.9	0.30

	MEAN		STD	
WIDTH. . . . . :	7.06		3.39	(m)
DEPTH. . . . . :	8.27		7.79	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	2.08
TYPE THREE SUBSTRATE . . . :	0.13	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	38.75	(%)		
OVERHEAD CANOPY. . . . . :	96.00	(%)		
INSTREAM SHELTER . . . . . :	10.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1029.3	46.3
Esox niger	292.7	18.9
Notemigonus crysoleucas	56.7	0.0
Micropterus salmoides	18.9	0.0
Lepomis auritus	764.9	31.0
Etheostoma olmstedi	66.1	0.0

STREAM NAME : **OXOBOXO BROOK** SITE #: **5026**

SITE DESCRIPTION: UPSTREAM OF PINK ROW ROAD, UNCASVILLE. (UNDER FARIA FACTORY)

SAMPLE LENGTH : 150. SAMPLE DATE: 08/23/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	: (C)	DISSOLVED OXYGEN (mg/l). . :	8.7	0.25
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	7.9	0.10
VELOCITY. . . .	: 0.1154(m/s)	COND . . . . . (uS/cm3). . :	99.0	1.0
DISCHARGE . . .	: 0.6770(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	5.09		1.12	(m)
DEPTH. . . . . :	11.68		9.00	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.37
TYPE THREE SUBSTRATE . . . :	0.05	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)		
OVERHEAD CANOPY. . . . . :	71.00	(%)		
INSTREAM SHELTER . . . . . :	31.8	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1021.6	72.0
Ameiurus nebulosus	117.9	0.0
Lepomis macrochirus	13.1	0.0
Rhinichthys atratulus	13.1	0.0
juvenile centrarchid	13.1	0.0
Esox niger	157.2	0.0
Semotilus corporalis	2540.9	47.3
Micropterus salmoides	327.4	37.1
Catostomus commersoni	366.7	0.0

STREAM NAME : **STONY BROOK**

SITE DESCRIPTION: 300 M BELOW FOOT BRIDGE AT RTE. 395 REST STOP, MONTVILLE. SITE #: **5027**

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/06/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.0737(m/s)
DISCHARGE . . . : 0.4250(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.7	0.15
pH . . . . . :	7.1	
COND . . . . . (uS/cm3). . :	177.3	2.1
ALKALINITY .(mg CaCO3 eq/l):	19.2	0.26

	MEAN	STD	
WIDTH. . . . . :	7.94	4.54	(m)
DEPTH. . . . . :	9.38	10.45	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.31	(%)	
EMBEDDEDNESS OF TYPE THREE :	37.37	(%)	
OVERHEAD CANOPY. . . . . :	95.00	(%)	
INSTREAM SHELTER . . . . . :	34.2	(m2)	

POOL/RIFFLE RATIO . .: 2.61

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	948.8	243.2
Salvelinus fontinalis	243.5	0.0
Rhinichthys atratulus	3400.5	93.0
Salmo trutta	688.5	28.9
Rhinichthys cataractae	352.6	9.9
Catostomus commersoni	167.9	17.9

STREAM NAME : HUNTS BROOK SITE #: 5028

SITE DESCRIPTION: UPSTREAM OF OLD MILL RD., WATERFORD.

SAMPLE DATE: 08/25/93

SAMPLE LENGTH : 150.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.9	0.06
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	6.5	
VELOCITY. . . .	: 0.1592(m/s)	COND . . . . . (uS/cm3). . :	78.0	4.6
DISCHARGE . . .	: 1.9230(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	5.77		2.60	(m)
DEPTH. . . . . :	21.33		20.06	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.24
TYPE THREE SUBSTRATE . . . :	0.04	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	15.00	(%)		
OVERHEAD CANOPY. . . . . :	96.00	(%)		
INSTREAM SHELTER . . . . . :	50.0	(m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		716.3	47.9
Lepomis macrochirus		0.0	0.0
Salvelinus fontinalis	STOCKED	0.0	0.0
Rhinichthys atratulus		404.4	13.9
Salmo trutta		11.6	0.0
Salmo trutta	STOCKED	11.6	0.0
Esox niger		23.1	0.0
Notemigonus crysoleucas		34.7	0.0
Micropterus salmoides		196.4	0.0
Lepomis gibbosus		0.0	0.0
Catostomus commersoni		92.4	0.0
Perca flavescens		11.6	0.0

STREAM NAME : **PACHAUG RIVER**

SITE DESCRIPTION: UPSTREAM OF RTE. 138, VOLUNTOWN. SITE #: **5029**

SAMPLE LENGTH : 78.

SAMPLE DATE: 08/03/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :23.00 (C)
VELOCITY. . . . : 0.1067(m/s)
DISCHARGE . . . : 0.1801(m3/s)

	MEAN		STD	
WIDTH. . . . . :	7.86		3.26	(m)
DEPTH. . . . . :	23.83		16.66	(cm)
DOMINANT SUBSTRATE TYPE. . :	6			
TYPE THREE SUBSTRATE . . . :	0.04	(%)		
EMBEDDEDNESS OF TYPE THREE :	13.33	(%)		
OVERHEAD CANOPY. . . . . :	75.00	(%)		
INSTREAM SHELTER . . . . . :	66.4	(m2)		

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.4	0.06
pH . . . . . :	7.2	
COND . . . . . (uS/cm3). . :	70.0	0.0
ALKALINITY .(mg CaCO3 eq/l):		
POOL/RIFFLE RATIO . .:		0.90
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		32.6	0.0
Ameiurus nebulosus		16.3	0.0
Salmo trutta	WILD	32.6	0.0
Salmo trutta	STOCKED	32.6	0.0
Esox niger		32.6	0.0
Micropterus salmoides		1076.5	49.6
Lepomis auritus		244.7	0.0
Etheostoma olmstedi		163.1	0.0
Catostomus commersoni		16.3	0.0

STREAM NAME : **GREAT MEADOW BROOK** SITE #: 5030

SITE DESCRIPTION: DOWNSTREAM OF MASON GRAY POND, VOLUNTOWN.

SAMPLE DATE: 07/08/93

SAMPLE LENGTH : 150.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	6.6	0.46
WATER TEMP. . .	:23.00 (C)	pH . . . . . :	6.0	0.21
VELOCITY. . . .	: 0.1325(m/s)	COND . . . . . (uS/cm3). . :	37.3	0.6
DISCHARGE . . .	: 1.1910(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	4.0	0.38

	MEAN	STD	
WIDTH. . . . . :	5.24	2.17	(m)
DEPTH. . . . . :	16.13	16.33	(cm)
DOMINANT SUBSTRATE TYPE. . :	5	POOL/RIFFLE RATIO . .:	0.61
TYPE THREE SUBSTRATE . . . :	0.09 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	12.50 (%)		
OVERHEAD CANOPY. . . . . :	98.00 (%)		
INSTREAM SHELTER . . . . . :	20.1 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	152.7	29.8
Lepomis macrochirus	25.4	0.0
Salvelinus fontinalis	127.2	18.0
Erimyzon oblongus	38.2	0.0
Esox niger	89.1	0.0
Notemigonus crysoleucas	25.4	0.0
Micropterus salmoides	12.7	0.0
Etheostoma fusiforme	12.7	0.0
Catostomus commersoni	76.3	0.0

STREAM NAME : **MOUNT MISERY BROOK** SITE #: 5031

SITE DESCRIPTION: DOWNSTREAM OF PACHAUG STATE FOREST ACCESS ROAD, 300 M UPSTREAM OF LOWDON BROOK CONFLUENCE, VOLUNTOWN.

SAMPLE DATE: 07/12/93

SAMPLE LENGTH : 130.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	5.3	0.81
WATER TEMP. . .	:21.00 (C)	pH . . . . . :	5.7	
VELOCITY. . . .	: 0.0690(m/s)	COND . . . . . (uS/cm3). . :	34.0	6.1
DISCHARGE . . .	: 0.3050(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	4.3	0.99

	MEAN	STD	
WIDTH. . . . . :	3.42	1.46	(m)
DEPTH. . . . . :	12.18	9.09	(cm)
DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	0.30
TYPE THREE SUBSTRATE . . . :	0.43 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	44.17 (%)		
OVERHEAD CANOPY. . . . . :	99.00 (%)		
INSTREAM SHELTER . . . . . :	50.0 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	337.4	0.0
Erimyzon oblongus	22.5	0.0
Esox niger	337.4	116.6

STREAM NAME : **DENSION BROOK** SITE #: **5032**

SITE DESCRIPTION: UPSTREAM OF DIRT RD. WHICH INTERSECTS WITH RTE. 49 ACROSS FROM HODGE RD.; APPROXIMATELY 3.5 KM UPSTREAM OF RTE. 138, VOLUNTOWN.

SAMPLE LENGTH : 100.

SAMPLE DATE: 07/06/93

PHYSICAL

AIR TEMP. . . . :20.00 (C)	
WATER TEMP. . . :14.00 (C)	
VELOCITY. . . . : 0.0813(m/s)	
DISCHARGE . . . : 0.2300(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.9	0.10
pH . . . . . :	7.0	0.10
COND . . . . . (uS/cm3). . :	130.0	0.0
ALKALINITY .(mg CaCO3 eq/l):	15.7	0.92

	MEAN		STD	
WIDTH. . . . . :	2.02		0.23	(m)
DEPTH. . . . . :	14.10		7.24	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.00	(%)		
EMBEDDEDNESS OF TYPE THREE :	44.17	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	1.8	(m2)		

POOL/RIFFLE RATIO . .: 0.52

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	9405.9	102.2

STREAM NAME : **MYRON KINNEY BROOK** (lower) SITE #: **5033**

SITE DESCRIPTION: APPROXIMATELY. 700 M UPSTREAM OF GRISWOLD TOWN LINE, ADJACENT TO KINNIE RD., VOLUNTOWN.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/12/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)	
WATER TEMP. . . :16.50 (C)	
VELOCITY. . . . : 0.1010(m/s)	
DISCHARGE . . . : 1.0140(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	6.5	0.15
pH . . . . . :	5.2	0.06
COND . . . . . (uS/cm3). . :	51.3	1.5
ALKALINITY .(mg CaCO3 eq/l):	13.2	0.49

	MEAN		STD	
WIDTH. . . . . :	5.88		1.38	(m)
DEPTH. . . . . :	17.75		11.94	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.15	(%)		
EMBEDDEDNESS OF TYPE THREE :	2.50	(%)		
OVERHEAD CANOPY. . . . . :	98.00	(%)		
INSTREAM SHELTER . . . . . :	76.9	(m2)		

POOL/RIFFLE RATIO . .: 0.85

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus		11.3	0.0
Salvelinus fontinalis	WILD	136.1	0.0
Salvelinus fontinalis	STOCKED	11.3	0.0
Rhinichthys atratulus		0.0	0.0
Salmo trutta	STOCKED	147.4	0.0
Esox niger		158.7	0.0
Rhinichthys cataractae		1507.9	530.7
Micropterus salmoides		90.7	0.0
Lepomis gibbosus		11.3	0.0
Oncorhynchus mykiss	STOCKED	11.3	0.0
Etheostoma olmstedi		147.4	Minimum estimate.

STREAM NAME : BILLINGS BROOK SITE #: 5034

SITE DESCRIPTION: DOWNSTREAM OF RTE. 201, GRISWOLD.

SAMPLE DATE: 07/15/93

SAMPLE LENGTH : 3.

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :		(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	19.00	(C)	pH . . . . . :	8.0	
VELOCITY. . . . :		(m/s)	COND . . . . . (uS/cm3). . :	60.0	
DISCHARGE . . . :		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	9.9	

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		

STREAM NAME : QUINEBAUG RIVER

SITE DESCRIPTION: UPTREAM FROM RIFFLES 350 M BELOW CONFLUENCE WITH MOOSUP RIVER, PLAINFIELD. (BEDROCK RIFFLES AND DEEP POOL)

SITE #: 5035

SAMPLE LENGTH : 425.

SAMPLE DATE: 07/29/93

PHYSICAL

AIR TEMP. . . . :	(C)			
WATER TEMP. . . :	(C)			
VELOCITY. . . . :	0.1216(m/s)			
DISCHARGE . . . :	2.6052(m3/s)			
	MEAN	STD		
WIDTH. . . . . :	51.71	10.03	(m)	
DEPTH. . . . . :	57.30	51.13	(cm)	
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.21	(%)		
EMBEDDEDNESS OF TYPE THREE :	24.52	(%)		
OVERHEAD CANOPY. . . . . :	0.00	(%)		
INSTREAM SHELTER . . . . . :	1919.1	(m2)		

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :		
pH . . . . . :	8.8	
COND . . . . . (uS/cm3). . :	172.0	
ALKALINITY .(mg CaCO3 eq/l):	30.0	3.58
POOL/RIFFLE RATIO . .:	7.17	
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus natalis			
Perca flavescens			
juvenile centrarchid			
Luxilus cornutus			
Semotilus corporalis			
Rhinichthys cataractae			
Micropterus salmoides			
Lepomis gibbosus			
Lepomis auritus			
Oncorhynchus mykiss	STOCKED		
Micropterus dolomieu			
Anguilla rostrata			
Pomoxis nigromaculatus			
Lepomis macrochirus			
Salvelinus fontinalis	STOCKED		
Rhinichthys atratulus			
Salmo trutta	STOCKED		
Cyprinus carpio			
Morone americanus			
Notropis hudsonius			
Etheostoma olmstedi			
Ameiurus catus			
Catostomus commersoni			

STREAM NAME : FRY BROOK SITE #: 5036

SITE DESCRIPTION: PARALLEL TO D.O.T. PARKING LOT DOWNSTREAM OF RTE. 14-A, PLAINFIELD.

SAMPLE LENGTH : 100.

SAMPLE DATE: 07/19/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.0636(m/s)
DISCHARGE . . . : 0.0869(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.3	0.51
pH . . . . . :	7.2	
COND . . . . . (uS/cm3). . :	126.3	20.2
ALKALINITY .(mg CaCO3 eq/l):	24.4	2.61

	MEAN		STD	
WIDTH. . . . . :	2.36		0.54	(m)
DEPTH. . . . . :	5.55		5.27	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.79
TYPE THREE SUBSTRATE . . . :	0.18	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	23.33	(%)		
OVERHEAD CANOPY. . . . . :	99.00	(%)		
INSTREAM SHELTER . . . . . :	0.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1186.4	0.0
Rhinichthys atratulus	11949.1	194.8
Semotilus corporalis	296.6	0.0
Notemigonus crysoleucas	7542.3	556.7
Lepomis gibbosus	169.5	0.0
Catostomus commersoni	4533.9	151.5

STREAM NAME : **MILL BROOK** (upper) SITE #: **5037**

SITE DESCRIPTION: DOWNSTREAM OF RTE. 12, PLAINFIELD.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/19/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :17.50 (C)
VELOCITY. . . . : 0.0705(m/s)
DISCHARGE . . . : 0.0154(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.12
pH . . . . . :	6.6	0.25
COND . . . . . (uS/cm3). . :	138.3	5.8
ALKALINITY .(mg CaCO3 eq/l):	25.3	0.15

	MEAN		STD	
WIDTH. . . . . :	3.93		0.85	(m)
DEPTH. . . . . :	13.93		11.25	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.27	(%)		
EMBEDDEDNESS OF TYPE THREE :	38.89	(%)		
OVERHEAD CANOPY. . . . . :	89.00	(%)		
INSTREAM SHELTER . . . . . :	10.8	(m2)		

POOL/RIFFLE RATIO . .: 3.69

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		33.9	0.0
Salvelinus fontinalis	WILD	237.5	0.0
Salvelinus fontinalis	STOCKED	17.0	0.0
Rhinichthys atratulus		17.0	0.0
Erimyzon oblongus		118.7	0.0
Esox niger		17.0	0.0
juvenile cyprinid		152.7	0.0
Semotilus corporalis		865.1	108.3
Notemigonus crysoleucas		33.9	0.0
Micropterus salmoides		254.5	0.0
Lepomis gibbosus		33.9	0.0
Etheostoma olmstedi		1068.7	110.9
Catostomus commersoni		593.7	Minimum estimate.
Perca flavescens		33.9	0.0

STREAM NAME : CORY BROOK SITE #: 5038

SITE DESCRIPTION: UPSTREAM OF POWERLINES ADJACENT TO DEPOT RD.. CANTERBURY.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/21/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.1000(m/s)
DISCHARGE . . . : 0.4950(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.6	0.12
pH . . . . . :	7.1	0.20
COND . . . . . (uS/cm3). . :	78.0	0.0
ALKALINITY .(mg CaCO3 eq/l):	15.5	0.06

	MEAN	STD	
WIDTH. . . . . :	5.14	1.69	(m)
DEPTH. . . . . :	10.40	7.85	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.02	(%)	
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)	
OVERHEAD CANOPY. . . . . :	94.00	(%)	
INSTREAM SHELTER . . . . . :	12.2	(m2)	

POOL/RIFFLE RATIO . .: 1.08

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus		87.3	0.0
Lepomis macrochirus		24.9	0.0
Salvelinus fontinalis	WILD	37.4	0.0
Rhinichthys atratulus		1097.5	27.7
Salmo trutta	WILD	12.5	0.0
Salmo trutta	STOCKED	12.5	0.0
Semotilus corporalis		685.9	86.5
Notemigonus crysoleucas		24.9	0.0
Rhinichthys cataractae		2469.3	92.7
Micropterus salmoides		187.1	0.0
Lepomis gibbosus		87.3	17.3
Lepomis auritus		24.9	0.0
Etheostoma fusiforme		12.5	0.0
Notropis hudsonius		12.5	0.0
Etheostoma olmstedi		374.1	Minimum estimate.
Catostomus commersoni		536.3	95.2
Ameiurus natalis		1010.4	41.5

STREAM NAME : **BROAD BROOK**

SITE DESCRIPTION: DOWNSTREAM 300 M FROM RTE. 164, PRESTON. SITE #: 5039

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/21/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :22.00 (C)
VELOCITY. . . . : 0.0845(m/s)
DISCHARGE . . . : 0.6385(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :		
pH . . . . . :	8.9	
COND . . . . . (uS/cm3). . :	110.5	
ALKALINITY .(mg CaCO3 eq/l):	26.1	0.26

	MEAN	STD	
WIDTH. . . . . :	8.69	2.11	(m)
DEPTH. . . . . :	9.70	11.34	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.19	(%)	
EMBEDDEDNESS OF TYPE THREE :	24.67	(%)	
OVERHEAD CANOPY. . . . . :	92.00	(%)	
INSTREAM SHELTER . . . . . :	51.7	(m2)	

POOL/RIFFLE RATIO . .: 1.21

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		368.2	0.0
Salvelinus fontinalis		61.4	0.0
Rhinichthys atratulus		1703.1	90.5
Salmo trutta	WILD	23.0	0.0
Salmo trutta	STOCKED	7.7	0.0
Esox niger		406.6	38.2
Luxilus cornutus		652.1	8.6
Semotilus corporalis		475.6	26.8
Notemigonus crysoleucas		23.0	0.0
Rhinichthys cataractae		2201.7	175.1
Lepomis gibbosus		7.7	0.0
Lepomis auritus		23.0	0.0
Etheostoma olmstedi		260.8	31.6
Catostomus commersoni		260.8	0.0

STREAM NAME : CHOATE BROOK SITE #: 5040

SITE DESCRIPTION: 20 M UPSTREAM OF RIVER RD., LEDYARD.

SAMPLE DATE: 07/22/93

SAMPLE LENGTH : 150.

PHYSICAL

AIR TEMP. . . . :20.00 (C)
WATER TEMP. . . :16.00 (C)
VELOCITY. . . . : 0.0524(m/s)
DISCHARGE . . . : 0.6890(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.9	0.50
pH . . . . . :	7.0	0.12
COND . . . . . (uS/cm3). . :	123.3	3.5
ALKALINITY .(mg CaCO3 eq/l):	42.9	0.50

	MEAN		STD	
WIDTH. . . . . :	6.38		2.40	(m)
DEPTH. . . . . :	18.65		19.66	(cm)
DOMINANT SUBSTRATE TYPE. . :	1			
TYPE THREE SUBSTRATE . . . :	0.00	(%)		
EMBEDDEDNESS OF TYPE THREE :	24.67	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	123.2	(m2)		

POOL/RIFFLE RATIO . .: 2.13

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	WILD	104.5	0.0
Ameiurus nebulosus		10.4	0.0
Pomoxis nigromaculatus		10.4	0.0
Lepomis macrochirus		31.3	0.0
Salvelinus fontinalis		10.4	0.0
Rhinichthys atratulus		31.3	0.0
Salmo trutta	STOCKED	52.2	0.0
juvenile centrarchid		10.4	0.0
Esox niger		94.0	0.0
Notemigonus crysoleucas		825.5	68.3
Rhinichthys cataractae		355.3	20.2
Micropterus salmoides		219.4	0.0
Lepomis gibbosus		209.0	22.3
Etheostoma olmstedi		637.4	175.7
Catostomus commersoni		1682.3	200.5

STREAM NAME : **SHETUCKET RIVER** (upper) SITE #: **5041**

SITE DESCRIPTION: APPROXIMATELY 200 M DOWNSTREAM OF RTE. 197, SPRAGUE.

SAMPLE LENGTH : 410.

SAMPLE DATE: 08/10/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 10.3	0.00
WATER TEMP. . .	:22.00 (C)	pH	: 8.9	0.00
VELOCITY. . . .	: 0.1688(m/s)	COND . . . . . (uS/cm3). .	:139.7	0.6
DISCHARGE . . .	: 1.9962(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH.	:		(m)	
DEPTH.	:		(cm)	
DOMINANT SUBSTRATE TYPE. .	:		POOL/RIFFLE RATIO . .:	3.18
TYPE THREE SUBSTRATE . . .	:	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE	:	(%)		
OVERHEAD CANOPY.	: 0.00	(%)		
INSTREAM SHELTER	: 3533.2	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANARD ERROR (Number/ha)
Anguilla rostrata		
Lepomis macrochirus		
Rhinichthys atratulus		
juvenile centrarchid		
Esox niger		
Semotilus corporalis		
Lepomis cyanellus		
Notemigonus crysoleucas		
hybrid sunfish		
Fundulus diaphanus		
Micropterus salmoides		
Lepomis gibbosus		
Ambloplites rupestris		
Lepomis auritus		
Micropterus dolomieu		
Notropis hudsonius		
Etheostoma olmstedi		
Catostomus commersoni		
Perca flavescens		

STREAM NAME : INDIAN HOLLOW BROOK SITE #: 5042

SITE DESCRIPTION: DOWNSTREAM OF JERUSALEM RD., WINDHAM.

SAMPLE LENGTH : 150. SAMPLE DATE: 07/26/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.1697(m/s)
DISCHARGE . . . : 0.7410(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.8	0.25
pH . . . . . :	7.0	
COND . . . . . (uS/cm3). . :	80.7	0.6
ALKALINITY .(mg CaCO3 eq/l):	20.7	1.62

	MEAN	STD	
WIDTH. . . . . :	5.04	1.67	(m)
DEPTH. . . . . :	9.23	7.67	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.25	(%)	
EMBEDDEDNESS OF TYPE THREE :	13.64	(%)	
OVERHEAD CANOPY. . . . . :	98.00	(%)	
INSTREAM SHELTER . . . . . :	5.9	(m2)	

POOL/RIFFLE RATIO . .: 0.72

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	66.1	0.0
Ameiurus nebulosus	264.6	28.2
Lepomis macrochirus	52.9	0.0
Rhinichthys atratulus	1216.6	35.8
Salmo trutta	568.8	0.0
Luxilus cornutus	462.9	0.0
Semotilus corporalis	3955.1	44.4
Lepomis cyanellus	13.2	0.0
Notemigonus crysoleucas	26.5	0.0
Rhinichthys cataractae	1071.4	30.0
Micropterus salmoides	264.6	0.0
Lepomis gibbosus	13.2	0.0
Lepomis auritus	0.0	0.0
Notropis hudsonius	3187.8	0.0
Etheostoma olmstedi	3571.4	428.6
Catostomus commersoni	4365.1	99.2
Perca flavescens	26.5	0.0

STREAM NAME : **BEAVER BROOK**

SITE DESCRIPTION: 500 M ABOVE GAGER HILL RD., SCOTLAND. SITE #: **5043**
(ABOVE BASS FARM POND EFFLUENT)

SAMPLE LENGTH : 161.

SAMPLE DATE: 07/13/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.2064(m/s)
DISCHARGE . . . : 1.7690(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.7	0.10
pH . . . . . :	6.9	
COND . . . . . (uS/cm3). . :	80.3	1.2
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	6.31		1.91	(m)
DEPTH. . . . . :	14.68		13.27	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.32	(%)		
EMBEDDEDNESS OF TYPE THREE :	42.78	(%)		
OVERHEAD CANOPY. . . . . :	92.00	(%)		
INSTREAM SHELTER . . . . . :	39.8	(m2)		

POOL/RIFFLE RATIO . .: 0.39
AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		68.9	0.0
Salvelinus fontinalis		19.7	0.0
Rhinichthys atratulus		3386.1	35.4
Salmo trutta	WILD	216.6	0.0
Salmo trutta	STOCKED	9.8	0.0
Luxilus cornutus		846.5	166.0
Semotilus corporalis		718.5	11.0
Lepomis cyanellus		275.6	0.0
Notemigonus crysoleucas		0.0	0.0
Rhinichthys cataractae		226.4	0.0
Lepomis gibbosus		9.8	0.0
Etheostoma olmstedi		59.1	13.5
Catostomus commersoni		374.0	18.5

STREAM NAME : MERRICK BROOK SITE #: 5044

SITE DESCRIPTION: DOWNSTREAM OF CONFLUENCE WITH BEAVER BROOK, SCOTLAND.
(STATE WILDLIFE MANAGEMENT AREA)

SAMPLE LENGTH : 150. SAMPLE DATE: 07/22/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.5	0.15
WATER TEMP. . .	:16.50 (C)	pH . . . . . :	6.7	0.15
VELOCITY. . . .	: 0.1270(m/s)	COND . . . . . (uS/cm3). . :	89.0	0.0
DISCHARGE . . .	: 0.1204(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	21.7	0.50

	MEAN		STD	
WIDTH. . . . . :	7.51		1.77	(m)
DEPTH. . . . . :	14.68		14.97	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.54
TYPE THREE SUBSTRATE . . . :	0.76	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	19.02	(%)		
OVERHEAD CANOPY. . . . . :	92.00	(%)		
INSTREAM SHELTER . . . . . :	54.7	(m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		39.2	0.0
Salvelinus fontinalis	WILD	39.2	0.0
Salvelinus fontinalis	STOCKED	7.8	0.0
Rhinichthys atratulus		4339.3	129.1
Salmo trutta	WILD	838.1	31.8
Salmo trutta	STOCKED	7.8	0.0
Luxilus cornutus		438.6	70.5
Semotilus corporalis		845.9	131.5
Lepomis cyanellus		227.1	27.8
Rhinichthys cataractae		1002.6	minimum estimate.
Lepomis gibbosus		7.8	0.0
Lepomis auritus		0.0	0.0
Salmo salar	STOCKED	39.2	0.0
Cottus cognatus		1519.5	205.9
Etheostoma olmstedi		101.8	10.2
Catostomus commersoni		650.1	100.5

STREAM NAME : **BEAVER BROOK**

SITE DESCRIPTION: 50 M DOWNSTREAM OF UNDER MOUNTAIN RD./ POND RD. INTERSECTION, FRANKLIN. SITE #: **5045**

SAMPLE LENGTH : 100.

SAMPLE DATE: 08/03/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)	
WATER TEMP. . . :22.00 (C)	
VELOCITY. . . . : 0.0367(m/s)	
DISCHARGE . . . : 0.0127(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.9	0.10
pH . . . . . :	7.1	
COND . . . . . (uS/cm3). . :	115.3	4.6
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	2.86		0.38	(m)
DEPTH. . . . . :	8.30		7.41	(cm)
DOMINANT SUBSTRATE TYPE. . :	3			
TYPE THREE SUBSTRATE . . . :	0.39	(%)		
EMBEDDEDNESS OF TYPE THREE :	23.33	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	2.5	(m2)		

POOL/RIFFLE RATIO . .: 1.32

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus		
Etheostoma olmstedi		
Catostomus commersoni		
Semotilus corporalis		
Salvelinus fontinalis		
Rhinichthys atratulus		
Esox niger		
Lepomis gibbosus		

STREAM NAME : LITTLE RIVER SITE #: 5046

SITE DESCRIPTION: 100 M DOWNSTREAM OF DOWNING BROOK CONFLUENCE, SCOTLAND.
(TOP OF SITE WAS 150 M BELOW OLD BRIDGE SITE IN PUDDING HILL W.M.A.)

SAMPLE LENGTH : 150. SAMPLE DATE: 08/02/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :21.00 (C)
VELOCITY. . . . : 0.0748(m/s)
DISCHARGE . . . : 0.1366(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.3	0.10
pH . . . . . :	6.6	
COND . . . . . (uS/cm3). . :	79.7	0.6
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	7.77	2.03	(m)
DEPTH. . . . . :	22.80	17.00	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.54	(%)	
EMBEDDEDNESS OF TYPE THREE :	44.32	(%)	
OVERHEAD CANOPY. . . . . :	73.00	(%)	
INSTREAM SHELTER . . . . . :	82.9	(m2)	

POOL/RIFFLE RATIO . .: 4.17

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		120.1	0.0
Rhinichthys atratulus		1055.4	149.4
Salmo trutta	STOCKED	8.6	0.0
Salmo trutta	WILD	17.2	0.0
Esox niger		25.7	0.0
Luxilus cornutus		634.9	33.6
juvenile cyprinid		17.2	0.0
Semotilus corporalis		1973.4	80.8
Lepomis cyanellus		51.5	0.0
Notemigonus crysoleucas		34.3	0.0
Rhinichthys cataractae		25.7	0.0
Micropterus salmoides		111.5	0.0
Lepomis auritus		0.0	0.0
Notropis hudsonius		8.6	0.0
Etheostoma olmstedi		85.8	0.0
Catostomus commersoni		1844.7	71.2

STREAM NAME : YANTIC RIVER

SITE #: 5047

SITE DESCRIPTION: UPSTREAM 250 M FROM NORWICHTOWN RD., NORWICH. (ABOVE SITE 5184)

SAMPLE LENGTH : 200.

SAMPLE DATE: 07/20/93

PHYSICAL

AIR TEMP. . . . :	(C)				
WATER TEMP. . . :	(C)				
VELOCITY. . . . :	0.1184(m/s)				
DISCHARGE . . . :	0.2752(m3/s)				
	MEAN	STD			
WIDTH. . . . . :	12.46	4.95	(m)		
DEPTH. . . . . :	43.78	37.63	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3				
TYPE THREE SUBSTRATE . . . :	0.54	(%)			
EMBEDDEDNESS OF TYPE THREE :	4.59	(%)			
OVERHEAD CANOPY. . . . . :	53.00	(%)			
INSTREAM SHELTER . . . . . :	441.7	(m2)			

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	6.8	0.17
pH . . . . . :	7.7	
COND . . . . . (uS/cm3). . :	136.7	1.5
ALKALINITY .(mg CaCO3 eq/l):	23.7	1.01
POOL/RIFFLE RATIO . .:	49.00	
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		20.1	0.0
Ameiurus nebulosus		28.1	0.0
Lepomis macrochirus		12.0	0.0
Rhinichthys atratulus		28.1	0.0
Salmo trutta	STOCKED	60.2	0.0
juvenile centrarchid		16.1	0.0
Esox niger		8.0	0.0
Luxilus cornutus		164.5	0.0
juvenile cyprinid		104.0	32.1
Semotilus corporalis		76.2	0.0
Notemigonus crysoleucas		0.0	0.0
hybrid sunfish		4.0	0.0
Micropterus salmoides		20.1	0.0
Lepomis gibbosus		32.1	0.0
Lepomis auritus		196.6	10.0
Oncorhynchus mykiss	STOCKED	4.0	0.0
Micropterus dolomieu		68.2	0.0
Etheostoma olmstedi		32.1	0.0
Catostomus commersoni		1324.2	15.6
Perca flavescens		0.0	0.0

STREAM NAME : YANTIC RIVER SITE #: 5048

SITE DESCRIPTION: 150 M UPSTREAM OF COLCHESTER RD., BOZRAH.

SAMPLE DATE: 08/19/93

SAMPLE LENGTH : 150.

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.6	0.06
WATER TEMP. . .	:19.00	(C)	pH . . . . . :	7.7	0.06
VELOCITY. . . .	: 0.0259	(m/s)	COND . . . . . (uS/cm3). . :	115.7	0.6
DISCHARGE . . .	: 0.1070	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH. . . . . :	13.08	2.07	(m)		
DEPTH. . . . . :	20.80	15.73	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	11.38	
TYPE THREE SUBSTRATE . . . :	0.09	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	80.00	(%)			
OVERHEAD CANOPY. . . . . :	89.00	(%)			
INSTREAM SHELTER . . . . . :	114.1	(m2)			

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		20.4	0.0
Ameiurus nebulosus		20.4	0.0
Lepomis macrochirus		270.0	Minimum estimate.
Rhinichthys atratulus		152.9	21.8
Salmo trutta	WILD	30.6	0.0
Salmo trutta	STOCKED	20.4	0.0
juvenile centrarchid		642.2	101.0
Esox niger		10.2	0.0
Luxilus cornutus		234.5	16.2
Semotilus corporalis		682.9	13.1
Micropterus salmoides		66.3	11.6
Lepomis gibbosus		810.4	Minimum estimate.
Lepomis auritus		525.0	67.0
Micropterus dolomieu		382.3	60.9
Etheostoma olmstedi		285.4	53.6
Catostomus commersoni		479.1	Minimum estimate.
Perca flavescens		25.5	0.0

STREAM NAME : **EXETER BROOK**

SITE #: **5049**

SITE DESCRIPTION: UPSTREAM OF ACCESS IN BARTLETT BROOK W.M.A., APPROX. 700 M ABOVE BARTLETT BROOK CONFLUENCE, LEBANON.

SAMPLE LENGTH : 143.

SAMPLE DATE: 08/02/93

PHYSICAL

AIR TEMP. . . . :22.50 (C)
WATER TEMP. . . :19.50 (C)
VELOCITY. . . . : 0.0389(m/s)
DISCHARGE . . . : 0.1020(m3/s)

	MEAN	STD	
WIDTH. . . . . :	3.87	1.20	(m)
DEPTH. . . . . :	6.43	5.52	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	80.00	(%)	
OVERHEAD CANOPY. . . . . :	99.00	(%)	
INSTREAM SHELTER . . . . . :	5.1	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.7	0.40
pH . . . . . :	6.5	0.32
COND . . . . . (uS/cm3). . :120.7		2.5
ALKALINITY .(mg CaCO3 eq/l):		
POOL/RIFFLE RATIO . .:		0.22
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	90.3	0.0
Salvelinus fontinalis	289.1	0.0
Rhinichthys atratulus	2638.2	112.3
Erimyzon oblongus	18.1	0.0
Esox niger	36.1	0.0
Semotilus corporalis	72.3	0.0
Notemigonus crysoleucas	18.1	0.0
Micropterus salmoides	18.1	0.0
Etheostoma olmstedi	162.6	58.0
Catostomus commersoni	903.5	66.9
Perca flavescens	253.0	0.0

STREAM NAME : **BARTLETT BROOK** SITE #: 5050

SITE DESCRIPTION: DOWNSTREAM OF RTE. 16, LEBANON.

SAMPLE DATE: 08/02/93

SAMPLE LENGTH : 150.

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :20.00 (C)
VELOCITY. . . . : 0.0139(m/s)
DISCHARGE . . . : 0.0103(m3/s)

	MEAN	STD	
WIDTH. . . . . :	5.19	1.68	(m)
DEPTH. . . . . :	15.38	10.42	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		
TYPE THREE SUBSTRATE . . . :	0.16	(%)	
EMBEDDEDNESS OF TYPE THREE :	38.57	(%)	
OVERHEAD CANOPY. . . . . :	75.00	(%)	
INSTREAM SHELTER . . . . . :	44.3	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	4.2	0.12
pH . . . . . :	6.3	
COND . . . . . (uS/cm3). . :	72.3	3.2
ALKALINITY .(mg CaCO3 eq/l):		
POOL/RIFFLE RATIO . .:		8.12
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	64.2	0.0
Notropis bifrenatus	102.8	17.2
Lepomis macrochirus	38.5	0.0
Salvelinus fontinalis	0.0	0.0
Erimyzon oblongus	12.8	0.0
Esox niger	488.1	50.9
Semotilus corporalis	2029.5	370.3
Notemigonus crysoleucas	51.4	0.0
Micropterus salmoides	89.9	0.0
Lepomis gibbosus	141.3	17.0
Lepomis auritus	102.8	30.1
Etheostoma olmstedi	1040.4	Minimum estimate.
Catostomus commersoni	334.0	36.7
Perca flavescens	0.0	0.0

STREAM NAME : **SHERMAN BROOK**

SITE DESCRIPTION: UPSTREAM OF OBRIEN RD., COLCHESTER. SITE #: **5051**

SAMPLE LENGTH : 100.

SAMPLE DATE: 08/02/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)
WATER TEMP. . . :22.00 (C)
VELOCITY. . . . : 0.0487(m/s)
DISCHARGE . . . : 0.1150(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	6.8	0.15
pH . . . . . :	6.3	0.06
COND . . . . . (uS/cm3). . :	77.0	0.0
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	3.16		0.86	(m)
DEPTH. . . . . :	7.60		7.72	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.56
TYPE THREE SUBSTRATE . . . :	0.29	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	99.00	(%)		
INSTREAM SHELTER . . . . . :	1.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	693.2	87.2
Rhinichthys atratulus	602.8	0.0
juvenile centrarchid	421.9	65.8
Esox niger	90.4	0.0
Semotilus corporalis	934.3	58.8
Micropterus salmoides	452.1	0.0
Lepomis gibbosus	90.4	0.0
Lepomis auritus	30.1	0.0
Etheostoma olmstedi	391.8	0.0
Catostomus commersoni	361.7	0.0

STREAM NAME : **DEEP RIVER** SITE #: **5052**

SITE DESCRIPTION: 250 M DOWNSTREAM OF DEEP RIVER RESERVOIR DAM, LEBANON. (NEW LONDON WATER DEPARTMENT)

SAMPLE LENGTH : 110. SAMPLE DATE: 08/04/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	16.00	(C)	pH . . . . . :	5.5	
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). . :	85.0	
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :	6.36	1.48	(m)	
DEPTH. . . . . :	49.03	31.90	(cm)	
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.11	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	86.00	(%)		
OVERHEAD CANOPY. . . . . :	52.00	(%)		
INSTREAM SHELTER . . . . . :	443.1	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	285.8	18.5
Esox niger	114.3	0.0
Perca flavescens	42.9	0.0

STREAM NAME : **PEASE BROOK** SITE #: **5053**

SITE DESCRIPTION: IN PEASE BROOK W.M.A., 1500 M BELOW HOXIE BROOK CONFLUENCE, LEBANON.

SAMPLE LENGTH : 150. SAMPLE DATE: 08/05/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). . :	7.9	0.12
WATER TEMP. . .	19.00	(C)	pH . . . . . :	7.2	
VELOCITY. . . .	0.0119	(m/s)	COND . . . . . (uS/cm3). . :	182.0	2.6
DISCHARGE . . .	0.0128	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :	6.09	1.38	(m)	
DEPTH. . . . . :	21.42	22.39	(cm)	
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	4.30
TYPE THREE SUBSTRATE . . . :	0.49	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	34.26	(%)		
OVERHEAD CANOPY. . . . . :	77.00	(%)		
INSTREAM SHELTER . . . . . :	150.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	10.9	0.0
Salvelinus fontinalis	383.1	0.0
Rhinichthys atratulus	4378.8	151.6
Salmo trutta	1007.1	68.6
Luxilus cornutus	1083.7	297.0
Semotilus corporalis	448.8	Minimum estimate.
Lepomis gibbosus	32.8	0.0
Etheostoma olmstedi	284.6	48.9
Catostomus commersoni	4422.6	Minimum estimate.

STREAM NAME : GARDNER BROOK

SITE DESCRIPTION: APPROX. 500 M UPSTREAM OF SCOTT HILL RD. BOZRAH. SITE #: 5054

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/05/93

PHYSICAL

AIR TEMP. . . . :20.00 (C)
WATER TEMP. . . :17.50 (C)
VELOCITY. . . . : 0.0572(m/s)
DISCHARGE . . . : 0.1980(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.3	0.12
pH . . . . . :		
COND . . . . . (uS/cm3). . :	98.3	22.8
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	3.97		1.61	(m)
DEPTH. . . . . :	8.82		13.77	(cm)
DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	0.70
TYPE THREE SUBSTRATE . . . :	0.03	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	96.00	(%)		
INSTREAM SHELTER . . . . . :	17.5	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	50.4	0.0
Ameiurus nebulosus	33.6	0.0
Lepomis macrochirus	16.8	0.0
Salvelinus fontinalis	50.4	0.0
Rhinichthys atratulus	1175.5	43.1
Salmo trutta	235.1	0.0
Luxilus cornutus	117.5	0.0
Semotilus corporalis	4701.9	56.9
Notemigonus crysoleucas	50.4	0.0
Micropterus salmoides	67.2	0.0
Lepomis gibbosus	84.0	0.0
Micropterus dolomieu	16.8	0.0
Etheostoma olmstedi	151.1	0.0
Catostomus commersoni	537.4	0.0
Perca flavescens	167.9	0.0

STREAM NAME : **SUSQUETONSCUT BROOK** SITE #: **5055**

SITE DESCRIPTION: DOWNSTREAM OF RAILROAD BRIDGE, BELOW RTE. 87, FRANKLIN.

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/11/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:16.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.1	0.06
WATER TEMP. . .	:27.00 (C)	pH . . . . . :	7.5	0.06
VELOCITY. . . .	: 0.0273(m/s)	COND . . . . . (uS/cm3). . :	146.7	1.5
DISCHARGE . . .	: 0.0114(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD		
WIDTH. . . . . :	5.55		0.98	(m)	
DEPTH. . . . . :	24.48		21.97	(cm)	
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		5.52
TYPE THREE SUBSTRATE . . . :	0.37	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	66.67	(%)			
OVERHEAD CANOPY. . . . . :	90.00	(%)			
INSTREAM SHELTER . . . . . :	162.9	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	24.0	0.0
Ameiurus nebulosus	12.0	0.0
Salvelinus fontinalis	36.0	0.0
Rhinichthys atratulus	3927.9	274.4
Salmo trutta	24.0	0.0
Esox niger	60.1	0.0
Luxilus cornutus	972.9	20.9
Semotilus corporalis	288.3	0.0
Notemigonus crysoleucas	132.1	0.0
Micropterus salmoides	12.0	0.0
Lepomis gibbosus	240.2	25.6
Lepomis auritus	24.0	0.0
Micropterus dolomieu	12.0	0.0
Etheostoma olmstedi	1021.0	246.4
Catostomus commersoni	4372.4	194.9

STREAM NAME : **WALDO BROOK** SITE #: **5056**

SITE DESCRIPTION: DOWNSTREAM OF WALDO RD., SPRAGUE.

SAMPLE LENGTH : 90.

SAMPLE DATE: 07/29/93

PHYSICAL

AIR TEMP. . . . :25.50 (C)
WATER TEMP. . . :19.50 (C)
VELOCITY. . . . : 0.0910(m/s)
DISCHARGE . . . : 0.2530(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.0	0.10
pH . . . . . :	6.9	0.06
COND . . . . . (uS/cm3). . :	112.0	0.0
ALKALINITY .(mg CaCO3 eq/l):	29.5	0.21

	MEAN		STD	
WIDTH. . . . . :	2.50		1.00	(m)
DEPTH. . . . . :	11.43		9.60	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.81
TYPE THREE SUBSTRATE . . . :	0.06	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)		
OVERHEAD CANOPY. . . . . :	76.00	(%)		
INSTREAM SHELTER . . . . . :	15.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	133.3	0.0
Salvelinus fontinalis	4933.3	118.6
Rhinichthys atratulus	2133.3	0.0
Salmo trutta	488.9	0.0
Semotilus corporalis	1155.6	0.0
Notemigonus crysoleucas	755.6	0.0
Micropterus salmoides	933.3	0.0
Etheostoma olmstedi	533.3	0.0
Catostomus commersoni	755.6	57.5

STREAM NAME : **LATHROP BROOK** SITE #: **5057**

SITE DESCRIPTION: UNDER DOW RD. BRIDGE, PLAINFIELD.

SAMPLE LENGTH : 25.

SAMPLE DATE: 08/09/93

PHYSICAL

AIR TEMP. . . . :22.00 (C)
WATER TEMP. . . :16.00 (C)
VELOCITY. . . . : (m/s)
DISCHARGE . . . : (m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :		
pH . . . . . :	6.3	
COND . . . . . (uS/cm3). . :	92.0	
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :				(m)
DEPTH. . . . . :				(cm)
DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)		
OVERHEAD CANOPY. . . . . :	94.00	(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Rhinichthys cataractae		
Catostomus commersoni		
Rhinichthys atratulus		

STREAM NAME : **HORSE BROOK** SITE #: **5058**

SITE DESCRIPTION: DOWNSTREAM OF PICKETT RD., PLAINFIELD.

SAMPLE DATE: 07/29/93

SAMPLE LENGTH : 100.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.8	0.00
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	5.9	0.31
VELOCITY. . . .	: 0.0602(m/s)	COND . . . . . (uS/cm3). . :	115.3	3.5
DISCHARGE . . .	: 0.9890(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.3	5.93

	MEAN		STD	
WIDTH. . . . . :	2.63		0.81	(m)
DEPTH. . . . . :	6.25		4.81	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.50
TYPE THREE SUBSTRATE . . . :	0.58	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	33.64	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	2.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	38.0	0.0
Esox niger	722.4	0.0
Lepomis gibbosus	0.0	0.0
Etheostoma olmstedi	1406.8	102.9

STREAM NAME : **SUGAR BROOK** SITE #: **5059**

SITE DESCRIPTION: BELOW SUGAR RD., PLAINFIELD.

SAMPLE DATE: 08/09/93

SAMPLE LENGTH : 100.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	: (C)	DISSOLVED OXYGEN (mg/l). . :	5.8	0.23
WATER TEMP. . .	: (C)	pH . . . . . :	6.3	
VELOCITY. . . .	: 0.0714(m/s)	COND . . . . . (uS/cm3). . :	89.0	1.0
DISCHARGE . . .	: 0.0230(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	4.21		1.88	(m)
DEPTH. . . . . :	10.43		8.05	(cm)
DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	0.69
TYPE THREE SUBSTRATE . . . :	0.11	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)		
OVERHEAD CANOPY. . . . . :	98.00	(%)		
INSTREAM SHELTER . . . . . :	15.1	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	6674.6	179.6
Micropterus salmoides	190.0	0.0
Lepomis gibbosus	23.8	0.0
Etheostoma olmstedi	71.3	0.0

STREAM NAME : **SUSQUETONSCUT BROOK**

SITE DESCRIPTION: APPROXIMATELY 150 M DOWNSTREAM OF MEETINGHOUSE HILL RD., FRANKLIN. SITE #: 5060

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/05/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :19.50 (C)
VELOCITY. . . . : 0.0350(m/s)
DISCHARGE . . . : 0.2430(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.06
pH . . . . . :		
COND . . . . . (uS/cm3). . :	120.0	0.0
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	6.55		2.42	(m)
DEPTH. . . . . :	10.13		13.69	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.58
TYPE THREE SUBSTRATE . . . :	0.02	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	96.00	(%)		
INSTREAM SHELTER . . . . . :	13.0	(m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		10.2	0.0
Ameiurus nebulosus		50.9	0.0
Lepomis macrochirus		20.4	0.0
Salvelinus fontinalis	WILD	20.4	0.0
Salvelinus fontinalis	STOCKED	20.4	0.0
Rhinichthys atratulus		8173.0	147.4
Salmo trutta	STOCKED	20.4	0.0
Salmo trutta	WILD	91.6	0.0
Esox niger		20.4	0.0
Luxilus cornutus		1190.8	204.5
Semotilus corporalis		793.9	18.9
Lepomis gibbosus		20.4	0.0
Lepomis auritus		10.2	0.0
Etheostoma olmstedi		417.3	62.3
Catostomus commersoni		702.3	51.9

STREAM NAME : **LEE BROOK TRIB.** SITE #: 5061

SITE DESCRIPTION: UPSTREAM OF GALLOP HILL RD, LEDYARD.

SAMPLE LENGTH : 16. SAMPLE DATE: 07/15/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	20.00	(C)	pH . . . . . :	4.2	
VELOCITY. . . . :		(m/s)	COND . . . . . (uS/cm3). . :	88.0	
DISCHARGE . . . :		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	19.2	12.93

	MEAN		STD	
WIDTH. . . . . :	1.46		0.90	(m)
DEPTH. . . . . :	10.45		11.10	(cm)
DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	60.00	(%)		
INSTREAM SHELTER . . . . . :	1.0	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		

STREAM NAME : **WHEELER BROOK** SITE #: 5062

SITE DESCRIPTION: APPROXIMATELY 1.3 KM DOWNSTREAM OF TAUGWANK RD., STONINGTON.
(UPSTREAM 30 M FROM CATTLE FORD, OFF MINOR PENTWAY RD.)

SAMPLE LENGTH : 50. SAMPLE DATE: 07/14/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.9	0.06
WATER TEMP. . .	19.00	(C)	pH . . . . . :	6.6	
VELOCITY. . . . :	0.0153	(m/s)	COND . . . . . (uS/cm3). . :	81.3	12.4
DISCHARGE . . . :	0.0168	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	19.1	0.57

	MEAN		STD	
WIDTH. . . . . :	1.62		0.98	(m)
DEPTH. . . . . :	6.45		5.57	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	4.50
TYPE THREE SUBSTRATE . . . :	0.31	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	1.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	987.7	0.0
Salvelinus fontinalis	4938.36	0.0
Esox americanus	246.9	0.0
Lepomis gibbosus	493.8	0.0
Etheostoma olmstedi	617.3	0.0
Catostomus commersoni	2222.2	0.0

STREAM NAME : **INDIANTOWN BROOK** SITE #: 5063

SITE DESCRIPTION: APPROXIMATELY 300 M UPSTREAM OF CONFLUENCE WITH SHEWVILLE BROOK, ABOVE ACCESS RD. BRIDGE, LEDYARD.

SAMPLE LENGTH : 100.

SAMPLE DATE: 08/11/93

PHYSICAL

AIR TEMP. . . .	:19.00 (C)
WATER TEMP. . .	:18.00 (C)
VELOCITY. . . .	: 0.0480(m/s)
DISCHARGE . . .	: 0.0248(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	5.8	0.31
pH . . . . . :	6.7	0.06
COND . . . . . (uS/cm3). . :	120.7	1.2
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	6.95	2.17	(m)
DEPTH. . . . . :	44.80	40.15	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		
TYPE THREE SUBSTRATE . . . :	0.03	(%)	
EMBEDDEDNESS OF TYPE THREE :	25.00	(%)	
OVERHEAD CANOPY. . . . . :	22.00	(%)	
INSTREAM SHELTER . . . . . :	666.5	(m2)	

POOL/RIFFLE RATIO . .: 32.33

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus		
juvenile centrarchid		
Erimyzon oblongus		
Lepomis auritus		
Perca flavescens		
Micropterus salmoides		
Lepomis gibbosus		
Esox niger		
Notemigonus crysoleucas		
Anguilla rostrata		

STREAM NAME : **BLISSVILLE BROOK** SITE #: 5064

SITE DESCRIPTION: ADJACENT TO AMOS CEMETERY OFF RTE. 169, LISBON.

SAMPLE LENGTH : 100.

SAMPLE DATE: 08/04/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.50 (C)	DISSOLVED OXYGEN (mg/l). . :	8.5	0.32
WATER TEMP. . .	:27.00 (C)	pH . . . . . :	7.0	
VELOCITY. . . .	: 0.0284(m/s)	COND . . . . . (uS/cm3). . :	141.7	2.9
DISCHARGE . . .	: 0.0060(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD		
WIDTH. . . . . :	2.57		0.91	(m)	
DEPTH. . . . . :	18.15		13.11	(cm)	
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		5.87
TYPE THREE SUBSTRATE . . . :	0.33	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	8.57	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	13.3	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1128.4	47.1
Salvelinus fontinalis	272.4	0.0
Rhinichthys atratulus	38.9	0.0
Esox niger	233.5	0.0
Semotilus corporalis	1634.2	0.0
Catostomus commersoni	77.8	0.0

STREAM NAME : **BILLINGS AVERY BROOK** SITE #: 5065

SITE DESCRIPTION: DOWNSTREAM OF AVERY HILL RD., LEDYARD.

SAMPLE LENGTH : 55.

SAMPLE DATE: 07/14/93

PHYSICAL

AIR TEMP. . . . :27.00 (C)
WATER TEMP. . . :22.00 (C)
VELOCITY. . . . : 0.1164(m/s)
DISCHARGE . . . : 0.3050(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.4	0.17
pH . . . . . :	6.6	0.12
COND . . . . . (uS/cm3). . :	100.7	2.3
ALKALINITY .(mg CaCO3 eq/l):	14.8	0.53

	MEAN	STD	
WIDTH. . . . . :	2.02	1.52	(m)
DEPTH. . . . . :	9.98	8.72	(cm)
DOMINANT SUBSTRATE TYPE. . :	5		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	8.57	(%)	
OVERHEAD CANOPY. . . . . :	100.00	(%)	
INSTREAM SHELTER . . . . . :	0.2	(m2)	

POOL/RIFFLE RATIO . .: 2.06

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2700.3	0.0
Salvelinus fontinalis	450.0	0.0
Esox niger	180.0	0.0

STREAM NAME : **JOE CLARK BROOK** SITE #: 5066

SITE DESCRIPTION: 500 M DOWNSTREAM OF RTE. 117, LEDYARD.
(SAMPLED AT SMEY RESIDENCE PARALLEL TO BOLDUC DR.)

SAMPLE LENGTH : 50.

SAMPLE DATE: 07/08/93

PHYSICAL

AIR TEMP. . . . :27.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.1251(m/s)
DISCHARGE . . . : 0.0970(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.6	0.12
pH . . . . . :	6.9	0.15
COND . . . . . (uS/cm3). . :	153.3	7.6
ALKALINITY .(mg CaCO3 eq/l):	21.0	0.76

	MEAN	STD	
WIDTH. . . . . :	1.45	0.42	(m)
DEPTH. . . . . :	5.10	4.42	(cm)
DOMINANT SUBSTRATE TYPE. . :	2		
TYPE THREE SUBSTRATE . . . :	0.20	(%)	
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)	
OVERHEAD CANOPY. . . . . :	96.00	(%)	
INSTREAM SHELTER . . . . . :	0.7	(m2)	

POOL/RIFFLE RATIO . .: 1.08

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	965.5	0.0
Salvelinus fontinalis	17103.5	227.5
Rhinichthys atratulus	1379.3	0.0
Salmo trutta	0.0	0.0
Notemigonus crysoleucas	0.0	0.0
Catostomus commersoni	0.0	0.0

STREAM NAME : **WHITFORD(LANTERN HILL) BROOK** SITE #: 5067

SITE DESCRIPTION: UPSTREAM OF LANTERN HILL RD., LEDYARD/NORTH STONINGTON.

SAMPLE LENGTH : 100. SAMPLE DATE: 06/29/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.6	0.06
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	6.4	0.12
VELOCITY. . . .	: 0.1409(m/s)	COND . . . . . (uS/cm3). . :	80.0	0.0
DISCHARGE . . .	: 0.2850(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	12.7	0.26

	MEAN		STD	
WIDTH. . . . . :	1.72		0.39	(m)
DEPTH. . . . . :	11.32		8.96	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	0.19
TYPE THREE SUBSTRATE . . . :	0.83	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	24.50	(%)		
OVERHEAD CANOPY. . . . . :	85.00	(%)		
INSTREAM SHELTER . . . . . :	2.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1744.2	159.2
Ameiurus nebulosus	58.1	0.0
Lepomis macrochirus	872.1	0.0
Salvelinus fontinalis	58.1	0.0
Salmo trutta	58.1	0.0
Esox niger	58.1	0.0
Micropterus salmoides	1627.9	70.2
Perca flavescens	58.1	0.0

STREAM NAME : **LOWDEN BROOK** SITE #: 5068

SITE DESCRIPTION:APPROXIMATELY 700 M UPSTREAM OF MOUNT MISERY BROOK, UPSTREAM OF STONE HILL RD. IN PACHAUG STATE FOREST, VOLUNTOWN.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/12/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:20.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.8	0.25
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	7.0	
VELOCITY. . . .	: 0.0360(m/s)	COND . . . . . (uS/cm3). . :	50.0	0.0
DISCHARGE . . .	: 0.0570(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	21.3	0.84

	MEAN		STD	
WIDTH. . . . . :	3.15		1.41	(m)
DEPTH. . . . . :	5.18		7.68	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.67
TYPE THREE SUBSTRATE . . . :	0.04	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	90.00	(%)		
INSTREAM SHELTER . . . . . :	3.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	31.7	0.0
Salvelinus fontinalis	4666.7	249.6

STREAM NAME : **MCCARTHYS BROOK** SITE #: **5069**

SITE DESCRIPTION: DOWNSTREAM OF BALTIC RD., FRANKLIN.

SAMPLE LENGTH : 50.

SAMPLE DATE: 08/02/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :28.00 (C)		DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :21.00 (C)		pH . . . . . :	6.7	
VELOCITY. . . . : 0.0627(m/s)		COND . . . . . (uS/cm3). . :	50.0	
DISCHARGE . . . : 0.0410(m3/s)		ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	1.60		0.74	(m)
DEPTH. . . . . :	4.05		3.62	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.38
TYPE THREE SUBSTRATE . . . :	0.83	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	21.00	(%)		
OVERHEAD CANOPY. . . . . :	98.00	(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Lepomis macrochirus		
Etheostoma olmstedi		
Lepomis gibbosus		

STREAM NAME : **FISHTOWN BROOK** SITE #: **5070**

SITE DESCRIPTION: UPSTREAM OF FOOTBRIDGE BEHIND CUTLER JR. HIGH SCHOOL, 500 M UPSTREAM OF ECCLESTON BROOK, GROTON.

SAMPLE LENGTH : 100.

SAMPLE DATE: 06/29/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :23.00 (C)		DISSOLVED OXYGEN (mg/l). . :	7.8	0.83
WATER TEMP. . . :18.00 (C)		pH . . . . . :	6.5	
VELOCITY. . . . : 0.0587(m/s)		COND . . . . . (uS/cm3). . :121.0		2.0
DISCHARGE . . . : 0.0185(m3/s)		ALKALINITY .(mg CaCO3 eq/l): 18.8		0.44

	MEAN		STD	
WIDTH. . . . . :	3.42		0.56	(m)
DEPTH. . . . . :	14.95		12.79	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	13.29
TYPE THREE SUBSTRATE . . . :	0.11	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	33.33	(%)		
OVERHEAD CANOPY. . . . . :	90.00	(%)		
INSTREAM SHELTER . . . . . :	59.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1549.7	206.1
Salvelinus fontinalis	467.8	0.0
Esox americanus	964.9	142.7
Notemigonus crysoleucas	1081.9	34.9
Etheostoma olmstedi	1374.3	53.5

STREAM NAME : MOUNTAIN BROOK SITE #: 5071

SITE DESCRIPTION: DOWNSTREAM OF UNDER THE MOUNTAIN RD.. FRANKLIN.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/02/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.50 (C)		DISSOLVED OXYGEN (mg/1). . :	7.6	0.31
WATER TEMP. . .	:22.00 (C)		pH . . . . . :	7.1	
VELOCITY. . . .	: 0.0357(m/s)		COND . . . . . (uS/cm3). . :	238.0	5.6
DISCHARGE . . .	: 0.0120(m3/s)		ALKALINITY .(mg CaCO3 eq/1):		
		MEAN	STD		
WIDTH.	:	1.03	0.55 (m)		
DEPTH.	:	2.95	3.85 (cm)		
DOMINANT SUBSTRATE TYPE. .	:	1	POOL/RIFFLE RATIO . .:		0.22
TYPE THREE SUBSTRATE . . .	:	0.00 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE	:	33.33 (%)			
OVERHEAD CANOPY.	:	96.00 (%)			
INSTREAM SHELTER	:	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	776.7	0.0
juvenile centrarchid	194.2	0.0
Esox niger	194.2	0.0
Lepomis gibbosus	0.0	0.0

STREAM NAME : OXOBOXO BROOK SITE #: 5072

SITE DESCRIPTION: DOWNSTREAM 50 M FROM OXOBOXO DAM RD.. MONTVILLE.

SAMPLE LENGTH : 135. SAMPLE DATE: 07/01/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	: (C)		DISSOLVED OXYGEN (mg/1). . :	7.2	0.44
WATER TEMP. . .	: (C)		pH . . . . . :	7.2	
VELOCITY. . . .	: 0.1239(m/s)		COND . . . . . (uS/cm3). . :	62.0	2.6
DISCHARGE . . .	: 1.8210(m3/s)		ALKALINITY .(mg CaCO3 eq/1):	6.1	0.15
		MEAN	STD		
WIDTH.	:	11.39	17.11 (m)		
DEPTH.	:	13.32	7.50 (cm)		
DOMINANT SUBSTRATE TYPE. .	:	4	POOL/RIFFLE RATIO . .:		0.69
TYPE THREE SUBSTRATE . . .	:	0.08 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE	:	11.25 (%)			
OVERHEAD CANOPY.	:	98.00 (%)			
INSTREAM SHELTER	:	16.9 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	13.0	0.0
Ameiurus nebulosus	26.0	0.0
Lepomis macrochirus	78.0	0.0
Salvelinus fontinalis	6.5	0.0
Esox niger	32.5	0.0
Micropterus salmoides	6.5	0.0
Lepomis gibbosus	6.5	0.0
Ameiurus catus	6.5	0.0
Catostomus commersoni	19.5	0.0

STREAM NAME : **PEASE BROOK** SITE #: **5073**

SITE DESCRIPTION: AT POWERLINE CROSSING DOWNSTREAM OF GOSHEN HILL RD., LEBANON.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/12/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :21.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.4	0.00
WATER TEMP. . . :21.00 (C)		pH . . . . . :	7.0	0.12
VELOCITY. . . . : 0.1040(m/s)		COND . . . . . (uS/cm3). . :	98.7	3.1
DISCHARGE . . . : 0.0771(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	27.3	0.32

	MEAN		STD	
WIDTH. . . . . :	6.03		1.73	(m)
DEPTH. . . . . :	8.77		7.59	(cm)
DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	10.54
TYPE THREE SUBSTRATE . . . :	0.12	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	56.67	(%)		
OVERHEAD CANOPY. . . . . :	77.00	(%)		
INSTREAM SHELTER . . . . . :	3.5	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	995.0	12.2
Rhinichthys atratulus	552.8	4093
Salmo trutta	221.1	0.0
Luxilus cornutus	221.1	13.8
Semotilus corporalis	143.7	25.1
Etheostoma olmstedi	143.7	0.0
Catostomus commersoni	740.7	114.4

STREAM NAME : **PENDLETON HILL BROOK** SITE #: **5074**

SITE DESCRIPTION: UPSTREAM OF GRINDSTONE HILL RD., NORTH STONINGTON.

SAMPLE LENGTH : 77.

SAMPLE DATE: 07/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :22.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.9	0.17
WATER TEMP. . . :20.00 (C)		pH . . . . . :	6.0	0.06
VELOCITY. . . . : 0.0762(m/s)		COND . . . . . (uS/cm3). . :	55.0	0.0
DISCHARGE . . . : 0.5910(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	7.7	0.15

	MEAN		STD	
WIDTH. . . . . :	4.30		0.99	(m)
DEPTH. . . . . :	17.40		15.21	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.57
TYPE THREE SUBSTRATE . . . :	0.08	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)		
OVERHEAD CANOPY. . . . . :	97.00	(%)		
INSTREAM SHELTER . . . . . :	51.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	936.3	60.5
Salvelinus fontinalis	845.7	0.0
Esox niger	90.6	0.0
Esox americanus	694.7	38.0
Notemigonus crysoleucas	271.8	0.0
Rhinichthys cataractae	2023.6	103.3
Etheostoma olmstedi	785.3	0.0

STREAM NAME : **WYASSUP BROOK** SITE #: **5075**

SITE DESCRIPTION: UNDER AND ABOVE RTE. 49 BRIDGE, NORTH STONINGTON.

SAMPLE DATE: 07/26/93

SAMPLE LENGTH : 25.

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	19.00	(C)	pH . . . . . :	5.7	
VELOCITY. . . . :		(m/s)	COND . . . . . (uS/cm3). . :	51.0	
DISCHARGE . . . :		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.9	

	MEAN	STD			
WIDTH. . . . . :	4.94	1.79	(m)		
DEPTH. . . . . :	28.80	27.98	(cm)		
DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	2000.00	
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)			
OVERHEAD CANOPY. . . . . :	84.00	(%)			
INSTREAM SHELTER . . . . . :	32.7	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis gibbosus		
Micropterus salmoides		
Esox americanus		
Anguilla rostrata		
Lepomis macrochirus		
Enneacanthus obesus		
Etheostoma fusiforme		

STREAM NAME : **ECCLESTON BROOK** SITE #: **5076**

SITE DESCRIPTION: UPSTREAM OF RTE. 215, GROTON.

SAMPLE DATE: 07/15/93

SAMPLE LENGTH : 96.

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.5	0.10
WATER TEMP. . .	21.00	(C)	pH . . . . . :	6.7	0.00
VELOCITY. . . . :	0.0461	(m/s)	COND . . . . . (uS/cm3). . :	139.7	0.6
DISCHARGE . . . :	0.0079	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.8	0.44

	MEAN	STD			
WIDTH. . . . . :	2.78	0.83	(m)		
DEPTH. . . . . :	14.90	12.81	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	6.38	
TYPE THREE SUBSTRATE . . . :	0.04	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)			
OVERHEAD CANOPY. . . . . :	83.00	(%)			
INSTREAM SHELTER . . . . . :	25.1	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2473.0	425.2
Salvelinus fontinalis	3484.7	580.7
Esox niger	0.0	0.0
Esox americanus	187.4	0.0
Etheostoma olmstedi	2135.8	791.4

STREAM NAME : **FORT HILL BROOK** SITE #: **5077**

SITE DESCRIPTION: UPSTREAM OF SEWAGE TREATMENT PLANT ACCESS RD. BRIDGE OFF MIDWAY OVAL, GROTON.

SAMPLE LENGTH : 90.

SAMPLE DATE: 07/15/93

PHYSICAL

AIR TEMP. . . . :28.00 (C)
WATER TEMP. . . :21.00 (C)
VELOCITY. . . . : 0.0499(m/s)
DISCHARGE . . . : 0.0560(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	5.4	0.06
pH . . . . . :	6.7	0.10
COND . . . . . (uS/cm3). . :	226.7	10.1
ALKALINITY .(mg CaCO3 eq/l):	55.1	0.81

	MEAN		STD	
WIDTH. . . . . :	2.18		0.67	(m)
DEPTH. . . . . :	5.28		4.58	(cm)
DOMINANT SUBSTRATE TYPE. . :	3			
TYPE THREE SUBSTRATE . . . :	0.87	(%)		
EMBEDDEDNESS OF TYPE THREE :	33.08	(%)		
OVERHEAD CANOPY. . . . . :	90.00	(%)		
INSTREAM SHELTER . . . . . :	0.3	(m2)		

POOL/RIFFLE RATIO . .: 11.86

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	4485.2	829.1
Fundulus diaphanus	0.0	0.0
Pungitius pungitius	4791.0	147.1

STREAM NAME : **LATIMER BROOK** SITE #: **5078**

SITE DESCRIPTION: AT OLD BRIDGE ABUTMENTS APPROXIMATELY 250 M ABOVE BECKWITH POND, MONTVILLE.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/08/93

PHYSICAL

AIR TEMP. . . . :27.00 (C)
WATER TEMP. . . :22.00 (C)
VELOCITY. . . . : 0.1054(m/s)
DISCHARGE . . . : 0.1140(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.5	0.12
pH . . . . . :	7.1	
COND . . . . . (uS/cm3). . :	48.7	0.6
ALKALINITY .(mg CaCO3 eq/l):	7.9	0.40

	MEAN		STD	
WIDTH. . . . . :	5.76		1.58	(m)
DEPTH. . . . . :	23.35		21.69	(cm)
DOMINANT SUBSTRATE TYPE. . :	3			
TYPE THREE SUBSTRATE . . . :	0.38	(%)		
EMBEDDEDNESS OF TYPE THREE :	12.75	(%)		
OVERHEAD CANOPY. . . . . :	74.00	(%)		
INSTREAM SHELTER . . . . . :	29.5	(m2)		

POOL/RIFFLE RATIO . .: 0.99

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	289.4	0.0
Notropis bifrenatus	46.3	0.0
Lepomis macrochirus	34.7	0.0
Salvelinus fontinalis	150.5	0.0
Rhinichthys atratulus	277.8	14.3
Esox niger	46.3	0.0
Micropterus salmoides	254.6	53.9
Lepomis gibbosus	11.6	0.0

STREAM NAME : **LATIMER BROOK** SITE #: 5079

SITE DESCRIPTION: UPSTREAM OF POWERLINE, AND PARALLEL TO RTE. 85, MONTVILLE.

SAMPLE LENGTH : 105.

SAMPLE DATE: 07/13/93

PHYSICAL

AIR TEMP. . . .	22.00	(C)	
WATER TEMP. . .	19.00	(C)	
VELOCITY. . . .	0.0080	(m/s)	
DISCHARGE . . .	0.0038	(m3/s)	
WIDTH.	4.39	1.66	(m)
DEPTH.	11.15	12.62	(cm)
DOMINANT SUBSTRATE TYPE. .	4		
TYPE THREE SUBSTRATE . . .	0.44	(%)	
EMBEDDEDNESS OF TYPE THREE	13.13	(%)	
OVERHEAD CANOPY.	66.00	(%)	
INSTREAM SHELTER	72.1	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). .	9.0	0.00
pH	6.4	0.25
COND . . . . . (uS/cm3). .	123.0	8.5
ALKALINITY .(mg CaCO3 eq/l):	12.5	0.50

POOL/RIFFLE RATIO . .: 2000.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	520.7	175.3
Salvelinus fontinalis	1952.5	292.6
Rhinichthys atratulus	976.2	0.0
Erimyzon oblongus	21.7	0.0
Esox niger	195.2	0.0
Micropterus salmoides	477.3	101.1
Lepomis gibbosus	43.4	0.0

STREAM NAME : **LATIMER BROOK**

SITE DESCRIPTION: APPROXIMATELY 300 M BELOW RTE. I-95, EAST LYME. SITE #: **5080**

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/30/93

PHYSICAL

AIR TEMP. . . . :	25.00	(C)
WATER TEMP. . . :	20.00	(C)
VELOCITY. . . . :		(m/s)
DISCHARGE . . . :		(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.1	0.10
pH . . . . . :	7.1	0.00
COND . . . . . (uS/cm3). . :	102.3	4.0
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	6.69	2.11	(m)
DEPTH. . . . . :	20.58	16.27	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.12	(%)	
EMBEDDEDNESS OF TYPE THREE :	25.71	(%)	
OVERHEAD CANOPY. . . . . :	95.00	(%)	
INSTREAM SHELTER . . . . . :	123.9	(m2)	

POOL/RIFFLE RATIO . .: 5.25

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	WILD	478.3	25.8
Pomoxis nigromaculatus	WILD	25.6	0.0
Lepomis macrochirus	WILD	51.2	0.0
Salvelinus fontinalis	WILD	102.5	0.0
Rhinichthys atratulus	WILD	128.1	0.0
Salmo trutta	WILD	316.2	0.0
Salmo trutta	STOCKED FINGERLINGS	341.7	10.1
Esox niger	WILD	102.5	27.3
Micropterus salmoides	WILD	85.4	0.0
Lepomis gibbosus	WILD	94.0	0.0
Etheostoma olmstedi	WILD	247.7	30.4
Catostomus commersoni	WILD	264.8	0.0
Perca flavescens	WILD	145.2	10.7

STREAM NAME : **THOMPSON BROOK** SITE #: **5081**

SITE DESCRIPTION: APPROXIMATELY 400 M UPSTREAM OF GREAT BROOK, UPSTREAM OF PRIVATE DIRT RD. OFF OF GALES FERRY RD., GROTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/23/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.5	0.10
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	7.3	0.12
VELOCITY. . . .	: 0.0556(m/s)	COND . . . . . (uS/cm3). . :	99.7	0.6
DISCHARGE . . .	: 0.1240(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	16.4	0.49

	MEAN		STD	
WIDTH. . . . . :	2.50		0.54	(m)
DEPTH. . . . . :	9.40		6.77	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.61
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	25.71	(%)		
OVERHEAD CANOPY. . . . . :	97.00	(%)		
INSTREAM SHELTER . . . . . :	1.0	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	436.4	0.0
Lepomis macrochirus	72.7	0.0
Salvelinus fontinalis	11490.1	354.5
Etheostoma olmstedi	218.2	0.0

STREAM NAME : **HALEYS BROOK** SITE #: **5082**

SITE DESCRIPTION: , APPROXIMATELY 700 M UPSTREAM OF WHITFORD BROOK CONFLUENCE, GROTON. (OLD GRAVEL PIT, TOWN OF GROTON LAND)

SAMPLE LENGTH : 150. SAMPLE DATE: 06/29/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.2	0.06
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	7.8	
VELOCITY. . . .	: 0.0965(m/s)	COND . . . . . (uS/cm3). . :	93.0	1.7
DISCHARGE . . .	: 0.0361(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	15.1	0.26

	MEAN		STD	
WIDTH. . . . . :	3.39		0.51	(m)
DEPTH. . . . . :	9.20		6.49	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.88
TYPE THREE SUBSTRATE . . . :	0.20	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	33.33	(%)		
OVERHEAD CANOPY. . . . . :	79.00	(%)		
INSTREAM SHELTER . . . . . :	14.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2045.2	179.3
Salvelinus fontinalis	2851.5	82.5
Salmo trutta	216.3	0.0
Esox niger	39.3	0.0
Rhinichthys cataractae	373.6	0.0
Lepomis gibbosus	177.0	0.0
Etheostoma olmstedi	1258.6	153.5

STREAM NAME : LITTLE RIVER SITE #: 5083

SITE DESCRIPTION: 200 M BELOW VERSAILLES POND, LISBON/SPRAGUE.
(CHANNELIZED POND OUTFLOW)

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/04/93

PHYSICAL

AIR TEMP. . . . :26.00 (C)
WATER TEMP. . . :27.00 (C)
VELOCITY. . . . : 0.1169(m/s)
DISCHARGE . . . : 0.1829(m3/s)

	MEAN	STD	
WIDTH. . . . . :	6.80	1.21	(m)
DEPTH. . . . . :	19.50	15.39	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.18	(%)	
EMBEDDEDNESS OF TYPE THREE :	45.45	(%)	
OVERHEAD CANOPY. . . . . :	96.00	(%)	
INSTREAM SHELTER . . . . . :	106.2	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :		
pH . . . . . :	7.4	
COND . . . . . (uS/cm3). . :	320.3	0.6
ALKALINITY .(mg CaCO3 eq/l):		
POOL/RIFFLE RATIO . .:		0.70
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	284.3	0.0
Ameiurus nebulosus	19.6	0.0
Pomoxis nigromaculatus	39.2	0.0
Lepomis macrochirus	176.5	47.5
juvenile centrarchid		
Semotilus corporalis	3245.1	52.0
Lepomis cyanellus	9.8	0.0
Notemigonus crysoleucas	294.1	0.0
Rhinichthys cataractae	49.0	0.0
Micropterus salmoides	156.9	30.0
Lepomis gibbosus	274.5	11.8
Ambloplites rupestris	29.4	0.0
Lepomis auritus	9.8	0.0
Micropterus dolomieu	735.3	254.7
Notropis hudsonius	127.5	22.3
Etheostoma olmstedi	186.3	Minimum estimate.
Catostomus commersoni	303.9	57.0
Perca flavescens	451.0	176.8

STREAM NAME : **MILL BROOK** SITE #: **5084**

SITE DESCRIPTION: 50 M DOWNSTREAM OF PACKERS RD.. PLAINFIELD.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.2	0.10
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	7.1	0.10
VELOCITY. . . .	: 0.1250(m/s)	COND . . . . . (uS/cm3). . :	265.0	5.0
DISCHARGE . . .	: 0.1245(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	47.6	1.31

	MEAN		STD	
WIDTH. . . . . :	7.60		2.48	(m)
DEPTH. . . . . :	11.93		9.63	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.59
TYPE THREE SUBSTRATE . . . :	0.06	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	33.75	(%)		
OVERHEAD CANOPY. . . . . :	95.00	(%)		
INSTREAM SHELTER . . . . . :	15.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	52.6	0.0
Lepomis macrochirus	17.5	0.0
Rhinichthys atratulus	8.8	0.0
Salmo trutta	8.8	0.0
Esox niger	131.6	0.0
Semotilus corporalis	131.6	0.0
Lepomis cyanellus	52.6	0.0
Notemigonus crysoleucas	114.0	0.0
Rhinichthys cataractae	1368.4	9.5
Lepomis auritus	96.5	11.6
Oncorhynchus mykiss	0.0	0.0
Etheostoma olmstedi	8.8	0.0
Catostomus commersoni	140.4	0.0
Ameiurus natalis	8.8	0.0

STREAM NAME : **LITTLE RIVER** SITE #: **5085**

SITE DESCRIPTION: APPROXIMATELY 200 M DOWNSTREAM OF SAND HILL RD., HAMPTON.

SAMPLE LENGTH : 150.

SAMPLE DATE: 08/04/93

PHYSICAL

AIR TEMP. . . . :22.00 (C)
WATER TEMP. . . :18.50 (C)
VELOCITY. . . . : 0.1358(m/s)
DISCHARGE . . . : 0.8930(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.8	0.10
pH . . . . . :		
COND . . . . . (uS/cm3). . :	90.0	4.4
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	6.07		0.88	(m)
DEPTH. . . . . :	11.07		9.60	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.15	(%)		
EMBEDDEDNESS OF TYPE THREE :	9.38	(%)		
OVERHEAD CANOPY. . . . . :	94.00	(%)		
INSTREAM SHELTER . . . . . :	8.7	(m2)		

POOL/RIFFLE RATIO . .: 0.90

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	22.0	0.0
Salvelinus fontinalis	230.6	0.0
Rhinichthys atratulus	1581.5	59.5
Salmo trutta	120.8	0.0
Esox niger	32.9	0.0
Luxilus cornutus	11.0	0.0
Semotilus corporalis	76.9	0.0
Rhinichthys cataractae	735.9	31.9
Micropterus salmoides	0.0	0.0
Lepomis gibbosus	0.0	0.0
Oncorhynchus mykiss	0.0	0.0
Etheostoma olmstedi	98.8	35.2
Catostomus commersoni	43.9	0.0

STREAM NAME : QUINEBAUG RIVER SITE #: 5086

SITE DESCRIPTION: 150 M UPSTREAM OF CONFLUENCE WITH CHOATE BROOK, LISBON/PRESTON.

SAMPLE LENGTH : 301. SAMPLE DATE: 07/28/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :	7.0	0.06
WATER TEMP. . . :	(C)	pH . . . . . :	6.9	0.21
VELOCITY. . . . :	0.1890(m/s)	COND . . . . . (uS/cm3). . :	143.0	1.7
DISCHARGE . . . :	4.3326(m3/s)	ALKALINITY .(mg caCO3 eq/l):		

	MEAN	STD			
WIDTH. . . . . :	84.38	4.46	(m)		
DEPTH. . . . . :	24.48	16.80	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		1.50
TYPE THREE SUBSTRATE . . . :	0.06	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	21.67	(%)			
OVERHEAD CANOPY. . . . . :	0.00	(%)			
INSTREAM SHELTER . . . . . :	156.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
juvenile centrarchid		
Lepomis auritus		
Semotilus corporalis		
Anguilla rostrata		
Lepomis macrochirus		
Salmo trutta		
Cyprinus carpio		
Catostomus commersoni		
Ameiurus natalis		
Etheostoma olmstedi		
Lepomis auritus		
Micropterus dolomieu		
Notropis hudsonius		
Ameiurus catus		

STREAM NAME : SHETUCKET RIVER

SITE DESCRIPTION: FROM 50 M BELOW FIRST BRIDGE BELOW GREENVILLE DAM TO FIRST POWER PLANT OUTLET.

SITE #: 5087

SAMPLE LENGTH : 400.

SAMPLE DATE: 08/12/93

PHYSICAL

AIR TEMP. . . . : (C)
WATER TEMP. . . : (C)
VELOCITY. . . . : (m/s)
DISCHARGE . . . : (m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :		
pH . . . . . :		
COND . . . . . (uS/cm3). . :		
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD
WIDTH. . . . . :		(m)
DEPTH. . . . . :		(cm)
DOMINANT SUBSTRATE TYPE. . :		
TYPE THREE SUBSTRATE . . . :		POOL/RIFFLE RATIO . .:
EMBEDDEDNESS OF TYPE THREE :	(%)	AIR/WATER TEMP. RATIO:
OVERHEAD CANOPY. . . . . :	(%)	
INSTREAM SHELTER . . . . . :	(%)	
	(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
juvenile centrarchid		
Micropterus salmoides		
Lepomis gibbosus		
Morone saxatilis		
Lepomis macrochirus		
Cyprinus carpio		
Catostomus commersoni		
Etheostoma olmstedi		
Lepomis auritus		
Micropterus dolomieu		
Notropis hudsonius		
Morone americanus		

STREAM NAME : **FALLS BROOK** SITE #: **5088**

SITE DESCRIPTION: UPSTREAM OF CONFLUENCE WITH STONY BROOK, BEHIND RTE. I-395 REST AREA, MONTVILLE.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/06/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.7	0.10
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	7.3	
VELOCITY. . . .	: 0.0450(m/s)	COND . . . . . (uS/cm3). . :	93.3	1.5
DISCHARGE . . .	: 0.0055(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.9	0.26

	MEAN	STD			
WIDTH. . . . . :	2.55	0.89	(m)		
DEPTH. . . . . :	4.47	4.03	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4			POOL/RIFFLE RATIO . .:	0.47
TYPE THREE SUBSTRATE . . . :	0.38	(%)		AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	17.50	(%)			
OVERHEAD CANOPY. . . . . :	33.00	(%)			
INSTREAM SHELTER . . . . . :	0.2	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2039.2	0.0
Rhinichthys atratulus	10039.2	133.5
Salmo trutta	78.4	0.0
Rhinichthys cataractae	1098.0	478.5
S.fontinalis X S. trutta	78.4	0.0

STREAM NAME : **WILLYS MEADOW BROOK** SITE #: **5089**

SITE DESCRIPTION: UPSTREAM OF RTE. I-395, WATERFORD.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/13/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.1	0.06
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	6.1	0.12
VELOCITY. . . .	: 0.0245(m/s)	COND . . . . . (uS/cm3). . :	35.3	4.5
DISCHARGE . . .	: 0.0480(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	4.4	0.10

	MEAN	STD			
WIDTH. . . . . :	2.73	0.65	(m)		
DEPTH. . . . . :	7.65	7.93	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4			POOL/RIFFLE RATIO . .:	0.96
TYPE THREE SUBSTRATE . . . :	0.17	(%)		AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)			
OVERHEAD CANOPY. . . . . :		(%)			
INSTREAM SHELTER . . . . . :	2.8	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	73.3	0.0
Salvelinus fontinalis	769.2	112.0
Esox niger	146.5	0.0

STREAM NAME : **PAWCATUCK RIVER** SITE #: **5090**

SITE DESCRIPTION: DOWNSTREAM OF FACTORY DAM, 600 M NORTH OF RTE. 1, PAWCATUCK/STONINGTON.

SAMPLE LENGTH : 210.

SAMPLE DATE: 07/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.5	0.06
WATER TEMP. . .	:24.00 (C)	pH . . . . . :	6.6	0.06
VELOCITY. . . .	: 0.4020(m/s)	COND . . . . . (uS/cm3). . :	117.0	0.0
DISCHARGE . . .	: 4.1191(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	8.9	0.31

	MEAN	STD			
WIDTH. . . . . :	30.98	3.97	(m)		
DEPTH. . . . . :	38.25	33.68	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		3.17
TYPE THREE SUBSTRATE . . . :	0.33	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	9.24	(%)			
OVERHEAD CANOPY. . . . . :	0.00	(%)			
INSTREAM SHELTER . . . . . :	1938.9	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
Esox americanus		
Notemigonus crysoleucas		
Rhinichthys cataractae		
Anguilla rostrata		
Lepomis macrochirus		
Salmo trutta		
Esox niger		
Semotilus corporalis		
Etheostoma olmstedi		
Ameiurus catus		
Catostomus commersoni		
Micropterus salmoides		
Lepomis gibbosus		
Lepomis auritus		
Oncorhynchus mykiss		
Salmo salar		

STREAM NAME : LITTLE RIVER SITE #: 5091

SITE DESCRIPTION: UPSTREAM OF HAMMOND HILL RD., HAMPTON.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/20/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :19.00 (C)
VELOCITY. . . . : 0.0109(m/s)
DISCHARGE . . . : 0.0069(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.9	1.12
pH . . . . . :	6.4	0.15
COND . . . . . (uS/cm3). . :	100.7	7.2
ALKALINITY .(mg CaCO3 eq/l):	24.8	1.77

	MEAN		STD	
WIDTH. . . . . :	4.81		0.43	(m)
DEPTH. . . . . :	39.92		35.51	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.13	(%)		
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)		
OVERHEAD CANOPY. . . . . :	0.00	(%)		
INSTREAM SHELTER . . . . . :	598.1	(m2)		

POOL/RIFFLE RATIO . .: 2000.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	27.7	0.0
Ameiurus nebulosus	13.9	0.0
Lepomis macrochirus	110.9	0.0
Salvelinus fontinalis	124.7	0.0
Rhinichthys atratulus	97.0	0.0
Salmo trutta	41.6	0.0
juvenile centrarchid	41.6	0.0
Esox niger	415.8	0.0
Semotilus corporalis	124.7	0.0
Lepomis cyanellus	27.7	0.0
Micropterus salmoides	41.6	0.0
Lepomis gibbosus	235.6	0.0
Etheostoma olmstedi	13.9	0.0
Catostomus commersoni	194.0	0.0

STREAM NAME : **CEDAR SWAMP BROOK** SITE #: 5092

SITE DESCRIPTION: DOWNSTREAM OF SOUTH BIGELOW RD., HAMPTON.
(DOWNSTREAM OF BRIDGE POOL)

SAMPLE LENGTH : 50.

SAMPLE DATE: 07/19/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :18.00 (C)
VELOCITY. . . . : 0.0954(m/s)
DISCHARGE . . . : 0.2000(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.00
pH . . . . . :	6.3	
COND . . . . . (uS/cm3). . :	59.3	1.2
ALKALINITY .(mg CaCO3 eq/l):	7.8	0.21

	MEAN		STD	
WIDTH. . . . . :	2.43		0.63	(m)
DEPTH. . . . . :	8.65		7.64	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.28	(%)		
EMBEDDEDNESS OF TYPE THREE :	16.00	(%)		
OVERHEAD CANOPY. . . . . :	40.00	(%)		
INSTREAM SHELTER . . . . . :	4.3	(m2)		

POOL/RIFFLE RATIO . .: 0.85
AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	905.3	0.0
Salvelinus fontinalis	82.3	0.0
Rhinichthys atratulus	10205.8	396.1
Salmo trutta	246.9	0.0
Luxilus cornutus	82.3	0.0
Semotilus corporalis	987.7	0.0
Lepomis cyanellus	0.0	0.0
Micropterus salmoides	1646.1	0.0
Lepomis gibbosus	246.9	0.0
Catostomus commersoni	2551.4	0.0

STREAM NAME : **SUSQUETONSCUT BROOK** SITE #: **5093**

SITE DESCRIPTION: UPSTREAM OF RTE. 207, LEBANON.

SAMPLE LENGTH : 100.

SAMPLE DATE: 07/12/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.8	0.06
WATER TEMP. . .	:23.00 (C)	pH . . . . . :	6.9	0.06
VELOCITY. . . .	: 0.1607(m/s)	COND . . . . . (uS/cm3). . :	105.0	1.0
DISCHARGE . . .	: 0.0944(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.5	0.06

	MEAN		STD	
WIDTH. . . . . :	3.49		0.52	(m)
DEPTH. . . . . :	30.70		22.94	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	32.33
TYPE THREE SUBSTRATE . . . :	0.11	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	80.00	(%)		
OVERHEAD CANOPY. . . . . :	47.00	(%)		
INSTREAM SHELTER . . . . . :	307.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	57.3	0.0
Salvelinus fontinalis	28.7	0.0
Salmo trutta	86.0	0.0
Esox niger	200.6	0.0
Luxilus cornutus	86.0	0.0
juvenile cyprinid	257.9	0.0
Semotilus corporalis	458.5	0.0
Micropterus salmoides	28.7	0.0
Lepomis gibbosus	315.2	0.0
Lepomis auritus	86.0	0.0
Catostomus commersoni	114.6	0.0

STREAM NAME : **CARSON BROOK** SITE #: **5094**

SITE DESCRIPTION: 1 KM UPSTREAM OF NEWPORT RD., SOUTH OF DIRT ROAD CROSSING, STERLING. (PACHAUG STATE FOREST, MEANDERING MEADOW)

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/17/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:19.00 (C)	DISSOLVED OXYGEN (mg/l). . :	6.4	0.20
WATER TEMP. . .	:13.00 (C)	pH . . . . . :	4.4	0.06
VELOCITY. . . .	: 0.0504(m/s)	COND . . . . . (uS/cm3). . :	29.0	1.0
DISCHARGE . . .	: 0.0158(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	2.2	0.38

	MEAN		STD	
WIDTH. . . . . :	1.51		0.42	(m)
DEPTH. . . . . :	11.22		10.45	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	15.67
TYPE THREE SUBSTRATE . . . :	0.10	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)		
OVERHEAD CANOPY. . . . . :	94.00	(%)		
INSTREAM SHELTER . . . . . :	3.7	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis gibbosus		
Esox niger		

STREAM NAME : **DEEP RIVER** SITE #: **5095**

SITE DESCRIPTION: APPROXIMATELY 500 M UPSTREAM OF MARVIN RD. AT SAND PIT ACCESS RD., COLCHESTER.

SAMPLE LENGTH : 100.

SAMPLE DATE: 06/30/93

PHYSICAL

AIR TEMP. . . .	:23.00	(C)	
WATER TEMP. . .	:19.00	(C)	
VELOCITY. . . .	: 0.0284	(m/s)	
DISCHARGE . . .	: 0.0610	(m3/s)	
	MEAN	STD	
WIDTH.	: 3.30	1.05	(m)
DEPTH.	: 6.95	7.72	(cm)
DOMINANT SUBSTRATE TYPE. .	: 4		
TYPE THREE SUBSTRATE . . .	: 0.11	(%)	
EMBEDDEDNESS OF TYPE THREE	: 16.67	(%)	
OVERHEAD CANOPY.	: 91.00	(%)	
INSTREAM SHELTER	: 0.9	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.15
pH . . . . . :	6.4	0.06
COND . . . . . (uS/cm3). . :	49.3	1.2
ALKALINITY .(mg CaCO3 eq/l):	3.6	0.62
POOL/RIFFLE RATIO . .:		0.28
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	121.2	0.0
Salvelinus fontinalis	2030.3	122.8
Rhinichthys atratulus	4727.3	148.5
Notemigonus crysoleucas	242.4	71.0
Etheostoma olmstedi	90.9	0.0

STREAM NAME : **TRADING COVE BROOK** SITE #: **5096**

SITE DESCRIPTION: UPSTREAM OF ROUND BROOK CONFLUENCE, UPSTREAM OF POWERLINE CROSSING ADJACENT TO SOUTH RD., MONTVILLE.

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/30/93

PHYSICAL

AIR TEMP. . . .	:26.00	(C)	
WATER TEMP. . .	:23.00	(C)	
VELOCITY. . . .	: 0.0400	(m/s)	
DISCHARGE . . .	: 0.0720	(m3/s)	
	MEAN	STD	
WIDTH.	: 1.60	0.53	(m)
DEPTH.	: 10.38	7.11	(cm)
DOMINANT SUBSTRATE TYPE. .	: 4		
TYPE THREE SUBSTRATE . . .	: 0.00	(%)	
EMBEDDEDNESS OF TYPE THREE	: 16.67	(%)	
OVERHEAD CANOPY.	: 86.00	(%)	
INSTREAM SHELTER	: 0.7	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	6.4	0.45
pH . . . . . :	6.3	
COND . . . . . (uS/cm3). . :	61.3	1.5
ALKALINITY .(mg CaCO3 eq/l):	10.0	0.42
POOL/RIFFLE RATIO . .:	2000.00	
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	500.0	0.0
Salvelinus fontinalis	625.0	0.0
Esox niger	875.0	0.0
Etheostoma olmstedi	750.0	0.0

STREAM NAME : **OLD STONE MILL BROOK** SITE #: **5098**

SITE DESCRIPTION: UPSTREAM OF POTASH HILL RD., LISBON.

SAMPLE LENGTH : 100.

SAMPLE DATE: 08/04/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :20.00 (C)
VELOCITY. . . . : 0.0851(m/s)
DISCHARGE . . . : 0.1130(m3/s)

	MEAN	STD	
WIDTH. . . . . :	2.19	0.77	(m)
DEPTH. . . . . :	5.93	5.42	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.53	(%)	
EMBEDDEDNESS OF TYPE THREE :	16.67	(%)	
OVERHEAD CANOPY. . . . . :	97.00	(%)	
INSTREAM SHELTER . . . . . :	6.9	(m2)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.2	0.25
pH . . . . . :	6.6	
COND . . . . . (uS/cm3). . :	64.3	6.7
ALKALINITY .(mg CaCO3 eq/l):		
POOL/RIFFLE RATIO . .:		1.94
AIR/WATER TEMP. RATIO:		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	45.7	0.0
Salvelinus fontinalis	1598.2	55.0
Rhinichthys atratulus	13196.4	625.7
Semotilus corporalis	137.0	0.0
Rhinichthys cataractae	45.7	0.0
Catostomus commersoni	1735.2	181.1

STREAM NAME : **BEAVER BROOK** SITE #: 5099

SITE DESCRIPTION: BEHIND SPRAGUE TOWN HALL, UPSTREAM OF CONFLUENCE WITH SHETUCKET RIVER, BALTIC.

SAMPLE LENGTH : 150.

SAMPLE DATE: 07/06/93

PHYSICAL

AIR TEMP. . . . :25.00 (C)
WATER TEMP. . . :20.00 (C)
VELOCITY. . . . : 0.1351(m/s)
DISCHARGE . . . : 1.3750(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.2	0.15
pH . . . . . :	7.3	0.10
COND . . . . . (uS/cm3). . :	140.0	1.0
ALKALINITY .(mg CaCO3 eq/l):	35.5	0.21

	MEAN	STD	
WIDTH. . . . . :	6.36	1.87	(m)
DEPTH. . . . . :	16.13	13.30	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	16.67	(%)	
OVERHEAD CANOPY. . . . . :	52.00	(%)	
INSTREAM SHELTER . . . . . :	107.8	(m2)	

POOL/RIFFLE RATIO . .: 1.59

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		555.6	38.4
Ameiurus nebulosus		31.4	0.0
Salvelinus fontinalis	WILD	115.3	0.0
Rhinichthys atratulus		765.2	18.2
Salmo trutta	WILD	136.3	0.0
Salmo trutta	STOCKED	21.0	0.0
Esox niger		10.5	0.0
juvenile cyprinid		2337.5	92.3
Semotilus corporalis		262.0	Minimum estimate.
Lepomis cyanellus		52.4	0.0
Notemigonus crysoleucas		10.5	0.0
Rhinichthys cataractae		10.5	0.0
Lepomis gibbosus		21.0	0.0
Oncorhynchus mykiss	STOCKED	10.5	0.0
Micropterus dolomieu		94.3	0.0
Notropis hudsonius		41.9	0.0
Etheostoma olmstedi		125.8	14.0
Catostomus commersoni		618.4	70.6

STREAM NAME : **MILLER BROOK** SITE #: **5100**

SITE DESCRIPTION: DOWNSTREAM OF SWANTOWN RD., GROTON.

SAMPLE LENGTH : 135.

SAMPLE DATE: 08/03/93

PHYSICAL

AIR TEMP. . . . :26.00 (C)
WATER TEMP. . . :22.00 (C)
VELOCITY. . . . : 0.0428(m/s)
DISCHARGE . . . : 0.0203(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	6.3	0.93
pH . . . . . :	6.7	
COND . . . . . (uS/cm3). . :	109.3	5.5
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :	4.79	1.64	(m)	
DEPTH. . . . . :	19.33	20.10	(cm)	
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	12.50
TYPE THREE SUBSTRATE . . . :	0.38	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	38.75	(%)		
OVERHEAD CANOPY. . . . . :	77.00	(%)		
INSTREAM SHELTER . . . . . :	87.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	123.7	0.0
Salvelinus fontinalis	603.1	39.7
Rhinichthys atratulus	77.3	0.0
Salmo trutta	15.5	0.0
Esox niger	371.1	0.0
Semotilus corporalis	1221.7	26.8
Lepomis gibbosus	92.8	0.0
Etheostoma olmstedi	278.4	0.0
Catostomus commersoni	587.6	18.5

STREAM NAME : **MYRON KINNEY BROOK** SITE #: **5101**

SITE DESCRIPTION: 50 M DOWNSTREAM OF HODGE RD., VOLUNTOWN.

SAMPLE LENGTH : 105. SAMPLE DATE: 06/16/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :21.00 (C)
VELOCITY. . . . : 0.1270(m/s)
DISCHARGE . . . : 0.0492(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	5.5	0.15
pH . . . . . :	5.2	0.06
COND . . . . . (uS/cm3). . :	70.3	2.1
ALKALINITY .(mg CaCO3 eq/l):	19.4	1.04

	MEAN		STD	
WIDTH. . . . . :	3.67		0.82	(m)
DEPTH. . . . . :	20.70		15.34	(cm)
DOMINANT SUBSTRATE TYPE. . :	2			
TYPE THREE SUBSTRATE . . . :	0.13	(%)		
EMBEDDEDNESS OF TYPE THREE :	52.50	(%)		
OVERHEAD CANOPY. . . . . :	92.00	(%)		
INSTREAM SHELTER . . . . . :	38.8	(m2)		

POOL/RIFFLE RATIO . .: 10.67

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	136.2	0.0
Salmo trutta	136.2	0.0
Enneacanthus obesus	54.5	0.0
Erimyzon oblongus	27.2	0.0
Esox niger	54.5	0.0
Micropterus salmoides	109.0	0.0
Lepomis gibbosus	136.2	0.0
Etheostoma olmstedi	136.2	0.0

STREAM NAME : **FOURMILE BROOK** SITE #: **5102**

SITE DESCRIPTION: UPSTREAM OF ACCESS RD. THROUGH YALE FOREST PROPERTY AT NORTHEAST CORNER OF NATIONAL GUARD RESERVE, EAST LYME.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/30/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)
WATER TEMP. . . :22.00 (C)
VELOCITY. . . . : 0.0127(m/s)
DISCHARGE . . . : 0.0336(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	7.8	0.06
pH . . . . . :	5.5	
COND . . . . . (uS/cm3). . :	58.7	1.2
ALKALINITY .(mg CaCO3 eq/l):	9.3	0.46

	MEAN		STD	
WIDTH. . . . . :	2.69		0.52	(m)
DEPTH. . . . . :	9.32		9.65	(cm)
DOMINANT SUBSTRATE TYPE. . :	3			
TYPE THREE SUBSTRATE . . . :	0.32	(%)		
EMBEDDEDNESS OF TYPE THREE :	85.00	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	11.9	(m2)		

POOL/RIFFLE RATIO . .: 11.50

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2156.1	440.1
Ameiurus nebulosus	223.0	0.0
Salvelinus fontinalis	2453.5	0.0
Notemigonus crysoleucas	4907.1	1754.4
Etheostoma olmstedi	41040.0	1281.5
Catostomus commersoni		

STREAM NAME : **CRANBERRY MEADOW BROOK** SITE #: **5103**

SITE DESCRIPTION: 50 M DOWNSTREAM OF RTE. 161, EAST LYME.

SAMPLE DATE: 06/24/93

SAMPLE LENGTH : 60.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 10.0	0.06
WATER TEMP. . .	:15.00 (C)	pH	: 7.2	
VELOCITY. . . .	: 0.0939(m/s)	COND . . . . . (uS/cm3). .	: 70.0	0.0
DISCHARGE . . .	: 0.2390(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.5	0.17

	MEAN	STD		
WIDTH.	2.20	0.82	(m)	
DEPTH.	10.23	8.87	(cm)	
DOMINANT SUBSTRATE TYPE. .	3		POOL/RIFFLE RATIO . .:	3.55
TYPE THREE SUBSTRATE . . .	0.65	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE	27.27	(%)		
OVERHEAD CANOPY.	100.00	(%)		
INSTREAM SHELTER	10.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	303.0	0.0
Salvelinus fontinalis	9545.5	163.4
Rhinichthys atratulus	2045.5	0.0
Salmo trutta	681.8	0.0
Etheostoma olmstedi	303.0	0.0
Catostomus commersoni	1818.2	0.0

STREAM NAME : **HUNTS BROOK** SITE #: **5104**

SITE DESCRIPTION: 150 M UPSTREAM OF WATERFORD TOWN LINE,
UPSTREAM OF GRAVEL PIT RD. OFF FIRE ST., MONTVILLE.

SAMPLE DATE: 06/16/93

SAMPLE LENGTH : 150.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 8.1	0.29
WATER TEMP. . .	:21.00 (C)	pH	: 5.1	0.21
VELOCITY. . . .	: 0.0575(m/s)	COND . . . . . (uS/cm3). .	: 47.0	3.5
DISCHARGE . . .	: 0.0169(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	5.2	0.36

	MEAN	STD		
WIDTH.	4.49	1.13	(m)	
DEPTH.	28.58	27.04	(cm)	
DOMINANT SUBSTRATE TYPE. .	1		POOL/RIFFLE RATIO . .:	29.00
TYPE THREE SUBSTRATE . . .	0.22	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE	61.25	(%)		
OVERHEAD CANOPY.	96.00	(%)		
INSTREAM SHELTER	230.5	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	103.9	0.0
Ameiurus nebulosus	297.0	84.2
Salvelinus fontinalis	697.8	0.0
Rhinichthys atratulus	29.7	0.0
Esox niger	74.2	0.0
Micropterus salmoides	14.8	0.0

STREAM NAME : **STONY BROOK** (upper) SITE #: **5105**

SITE DESCRIPTION: ADJACENT TO END OF XTRA-MART DRIVE, MONTVILLE.

SAMPLE LENGTH : 107.

SAMPLE DATE: 06/30/93

PHYSICAL

AIR TEMP. . . . :24.00 (C)	
WATER TEMP. . . :18.00 (C)	
VELOCITY. . . . : 0.0536(m/s)	
DISCHARGE . . . : 0.1950(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.4	0.10
pH . . . . . :	6.8	0.26
COND . . . . . (uS/cm3). . :	49.3	1.5
ALKALINITY .(mg CaCO3 eq/l):	9.9	0.44

	MEAN	STD	
WIDTH. . . . . :	3.82	1.05	(m)
DEPTH. . . . . :	8.80	8.05	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.03	(%)	
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)	
OVERHEAD CANOPY. . . . . :	100.00	(%)	
INSTREAM SHELTER . . . . . :	0.9	(m2)	

POOL/RIFFLE RATIO . .: 0.95

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2275.3	115.1
Salvelinus fontinalis	1639.2	56.9
Rhinichthys atratulus	0.0	0.0
Esox niger	97.9	0.0
Semotilus corporalis	146.8	0.0
Rhinichthys cataractae	146.8	0.0

STREAM NAME : **ROSE BROOK** SITE #: **5106**

SITE DESCRIPTION: IN ROSE HILL W.M.A., 200 M ABOVE ROSE HILL RD., LEDYARD

SAMPLE LENGTH : 50.

SAMPLE DATE: 07/08/93

PHYSICAL

AIR TEMP. . . . :29.00 (C)	
WATER TEMP. . . :19.00 (C)	
VELOCITY. . . . : 0.0484(m/s)	
DISCHARGE . . . : 0.0360(m3/s)	

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.3	0.42
pH . . . . . :	7.0	
COND . . . . . (uS/cm3). . :	91.7	1.5
ALKALINITY .(mg CaCO3 eq/l):	16.7	0.36

	MEAN	STD	
WIDTH. . . . . :	2.23	1.45	(m)
DEPTH. . . . . :	2.30	2.81	(cm)
DOMINANT SUBSTRATE TYPE. . :	5		
TYPE THREE SUBSTRATE . . . :	0.05	(%)	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)	
OVERHEAD CANOPY. . . . . :	95.00	(%)	
INSTREAM SHELTER . . . . . :		(m2)	

POOL/RIFFLE RATIO . .: 0.45

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	89.7	0.0
Salvelinus fontinalis	4125.6	Minimum estimate.

STREAM NAME : HEWITT BROOK SITE #: 5107

SITE DESCRIPTION: UPSTREAM OF RTE. 2, PRESTON.

SAMPLE DATE: 06/29/93

SAMPLE LENGTH : 48.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	3.9	0.06
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	6.5	0.12
VELOCITY. . . .	: 0.0000(m/s)	COND . . . . . (uS/cm3). . :	104.7	3.1
DISCHARGE . . .	: 0.0000(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	27.0	0.12

	MEAN		STD	
WIDTH. . . . . :	0.98		0.37	(m)
DEPTH. . . . . :	8.85		9.44	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	5.86
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	3.8	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Etheostoma olmstedi		
Esox niger		

STREAM NAME : SHANTOK BROOK SITE #: 5108

SITE DESCRIPTION: PARALLEL TO FORT SHANTOK RD. 100 M DOWNSTREAM OF ROAD CROSSING, MONTVILLE.

SAMPLE DATE: 06/29/93

SAMPLE LENGTH : 48.

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.3	0.06
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	7.1	
VELOCITY. . . .	: 0.0648(m/s)	COND . . . . . (uS/cm3). . :	173.0	3.0
DISCHARGE . . .	: 0.1480(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	26.4	0.50

	MEAN		STD	
WIDTH. . . . . :	2.30		1.06	(m)
DEPTH. . . . . :	10.25		9.54	(cm)
DOMINANT SUBSTRATE TYPE. . :	6		POOL/RIFFLE RATIO . .:	0.41
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	5.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	695.7	0.0
Rhinichthys atratulus	2521.7	109.6
Catostomus commersoni	173.9	0.0

STREAM NAME : **RED BROOK**

SITE DESCRIPTION: UPSTREAM OF WELLS RD., GROTON. SITE #: **5109**

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/14/93

PHYSICAL

AIR TEMP. . . .	:21.50	(C)
WATER TEMP. . .	:18.00	(C)
VELOCITY. . . .	:	(m/s)
DISCHARGE . . .	: 0.0000	(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.1	0.20
pH . . . . . :	5.9	0.06
COND . . . . . (uS/cm3). . :	69.7	0.6
ALKALINITY .(mg CaCO3 eq/l):	8.8	0.10

	MEAN	STD	
WIDTH. . . . . :	2.14	0.28	(m)
DEPTH. . . . . :	13.86	13.78	(cm)
DOMINANT SUBSTRATE TYPE. . :	2		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)	
OVERHEAD CANOPY. . . . . :	86.00	(%)	
INSTREAM SHELTER . . . . . :	5.4	(m2)	

POOL/RIFFLE RATIO . .: 2000.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1044.0	0.0
Salvelinus fontinalis	7099.2	843.1
Esox niger	69.6	0.0
Notemigonus crysoleucas	278.4	0.0
Lepomis gibbosus	69.6	0.0
Etheostoma olmstedi	1461.6	144.1

STREAM NAME : **MAIN BROOK**

SITE DESCRIPTION: DOWNSTREAM OF WATSON RD., ABOVE GASLINE CROSSING, PRESTON. SITE #: **5110**

SAMPLE LENGTH : 100.

SAMPLE DATE: 06/22/93

PHYSICAL

AIR TEMP. . . .	:	(C)
WATER TEMP. . .	:	(C)
VELOCITY. . . .	: 0.1007	(m/s)
DISCHARGE . . .	: 0.0191	(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.06
pH . . . . . :	6.1	0.06
COND . . . . . (uS/cm3). . :	67.0	1.0
ALKALINITY .(mg CaCO3 eq/l):	20.7	0.44

	MEAN	STD	
WIDTH. . . . . :	2.21	0.60	(m)
DEPTH. . . . . :	13.90	11.09	(cm)
DOMINANT SUBSTRATE TYPE. . :	2		
TYPE THREE SUBSTRATE . . . :	0.13	(%)	
EMBEDDEDNESS OF TYPE THREE :	35.00	(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :	9.2	(m2)	

POOL/RIFFLE RATIO . .: 7.33

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	543.0	0.0
Esox niger	543.0	154.0
Etheostoma olmstedi	724.0	61.1

STREAM NAME : **YAWBUCS BROOK** SITE #: **5112**

SITE DESCRIPTION: UPSTREAM OF DIRT RD. OFF RYDER RD., NORTH STONINGTON.

SAMPLE LENGTH : 100. SAMPLE DATE: 06/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.1	0.10
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	5.8	0.10
VELOCITY. . . .	: 0.0577(m/s)	COND . . . . . (uS/cm3). . :	47.0	0.0
DISCHARGE . . .	: 0.2790(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	9.5	0.57

	MEAN		STD	
WIDTH. . . . . :	4.02		1.43	(m)
DEPTH. . . . . :	12.88		8.76	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.89
TYPE THREE SUBSTRATE . . . :	0.06	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)		
OVERHEAD CANOPY. . . . . :	74.00	(%)		
INSTREAM SHELTER . . . . . :	1.9	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	522.4	0.0
Salvelinus fontinalis	1119.4	246.6
Rhinichthys atratulus	4303.5	425.4
Esox americanus	174.1	0.0
Rhinichthys cataractae	1169.2	125.9
Etheostoma olmstedi	74.6	0.0
Catostomus commersoni		

STREAM NAME : **COPPS BROOK** SITE #: **5113**

SITE DESCRIPTION: DOWNSTREAM OF RTE. 184, STONINGTON.

SAMPLE LENGTH : 92. SAMPLE DATE: 06/21/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.8	0.17
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	6.6	
VELOCITY. . . .	: 0.0750(m/s)	COND . . . . . (uS/cm3). . :	76.0	5.3
DISCHARGE . . .	: 0.3890(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	16.0	0.81

	MEAN		STD	
WIDTH. . . . . :	4.53		1.38	(m)
DEPTH. . . . . :	11.77		9.46	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.56
TYPE THREE SUBSTRATE . . . :	0.08	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	6.67	(%)		
OVERHEAD CANOPY. . . . . :	94.00	(%)		
INSTREAM SHELTER . . . . . :	11.5	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1055.8	367.6
Salvelinus fontinalis	8758.0	418.7
Esox americanus	2351.5	675.4
Etheostoma olmstedi	239.9	0.0

STREAM NAME : **COPPS BROOK TRIB.** SITE #: **5114**

SITE DESCRIPTION: UPSTREAM OF GROTON SPORTMAN'S CLUB DRIVEWAY, OFF AL HARVEY RD., STONINGTON.

SAMPLE LENGTH : 50.

SAMPLE DATE: 07/15/93

PHYSICAL

AIR TEMP. . . .	:25.00	(C)
WATER TEMP. . .	:20.00	(C)
VELOCITY. . . .	:	(m/s)
DISCHARGE . . .	:	(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.06
pH . . . . . :	6.4	0.15
COND . . . . . (uS/cm3). . :	115.3	13.6
ALKALINITY .(mg CaCO3 eq/l):	35.1	14.61

	MEAN	STD		
WIDTH. . . . . :	1.31	0.45	(m)	
DEPTH. . . . . :	15.65	10.15	(cm)	
DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	6.67	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	6.0	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	458.0	0.0
Esox americanus	10687.0	279.9

STREAM NAME : **ASSEKONK BROOK** SITE #: **5115**

SITE DESCRIPTION: UPSTREAM OF JEREMY HILL RD., NORTH STONINGTON.

SAMPLE LENGTH : 100.

SAMPLE DATE: 06/14/93

PHYSICAL

AIR TEMP. . . .	:24.00	(C)
WATER TEMP. . .	:18.00	(C)
VELOCITY. . . .	: 0.0489	(m/s)
DISCHARGE . . .	: 0.2680	(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.2	0.12
pH . . . . . :	7.1	0.12
COND . . . . . (uS/cm3). . :	104.7	2.3
ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :	2.66	0.80	(m)	
DEPTH. . . . . :	16.92	16.81	(cm)	
DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	7.33
TYPE THREE SUBSTRATE . . . :	0.32	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	21.88	(%)		
OVERHEAD CANOPY. . . . . :	66.00	(%)		
INSTREAM SHELTER . . . . . :	75.6	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	112.8	0.0
Esox americanus	1654.1	467.3
Notemigonus crysoleucas	864.7	0.0

STREAM NAME : **SHUNOCK RIVER** SITE #: **5116**

SITE DESCRIPTION: ABOVE OLD BRIDGE AT END OF HUNTLEY RD., STONINGTON.

SAMPLE LENGTH : 70. SAMPLE DATE: 06/21/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :24.00 (C)		DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :19.00 (C)		pH . . . . . :	6.4	
VELOCITY. . . . : 0.0311(m/s)		COND . . . . . (uS/cm3). . :	89.0	
DISCHARGE . . . : 0.0890(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	16.6	1.04

	MEAN	STD		
WIDTH. . . . . :	7.62	1.53	(m)	
DEPTH. . . . . :	40.60	20.79	(cm)	
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.18	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	51.67	(%)		
OVERHEAD CANOPY. . . . . :	74.00	(%)		
INSTREAM SHELTER . . . . . :	98.8	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	787.4	22.3
Ameiurus nebulosus	37.5	0.0
Notropis bifrenatus	0.0	0.0
Erimyzon oblongus	18.7	0.0
Esox niger	206.2	0.0
Esox americanus	2043.5	341.7
Notemigonus crysoleucas	75.0	0.0
Lepomis gibbosus	168.7	0.0
Etheostoma olmstedi	75.0	0.0
Catostomus commersoni	18.7	0.0

STREAM NAME : **THREEMILE RIVER** SITE #: **5117**

SITE DESCRIPTION: DOWNSTREAM OF MILE CREEK RD., OLD LYME.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/30/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :24.00 (C)		DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :18.00 (C)		pH . . . . . :	6.0	
VELOCITY. . . . : (m/s)		COND . . . . . (uS/cm3). . :	99.0	
DISCHARGE . . . : (m3/s)		ALKALINITY .(mg CaCO3 eq/l):	13.9	0.70

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Micropterus salmoides		
Lepomis gibbosus		
Anguilla rostrata		

STREAM NAME : **PATTAGANSETT RIVER** SITE #: **5118**

SITE DESCRIPTION: DOWNSTREAM OF DIRT DRIVEWAY, 15 M UPSTREAM OF I-95, EAST LYME.

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/28/93

PHYSICAL

AIR TEMP. . . .	:27.00 (C)
WATER TEMP. . .	:18.00 (C)
VELOCITY. . . .	: 0.1431(m/s)
DISCHARGE . . .	: 0.7310(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.9	0.06
pH . . . . . :	7.1	
COND . . . . . (uS/cm3). . :	86.3	4.0
ALKALINITY .(mg CaCO3 eq/l):	13.7	0.17

	MEAN	STD	
WIDTH. . . . . :	3.16	0.58	(m)
DEPTH. . . . . :	16.65	12.11	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		
TYPE THREE SUBSTRATE . . . :	0.56	(%)	
EMBEDDEDNESS OF TYPE THREE :	69.64	(%)	
OVERHEAD CANOPY. . . . . :	95.00	(%)	
INSTREAM SHELTER . . . . . :	10.2	(m2)	

POOL/RIFFLE RATIO . .: 4.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	949.4	0.0
Ameiurus nebulosus	126.6	0.0
Esox niger	126.6	0.0
Lepomis gibbosus	0.0	0.0
Perca flavescens	63.3	0.0

STREAM NAME : **LONG ISLAND SOUND TRIB.** SITE #: **5119**

SITE DESCRIPTION: PARALLEL TO GARDNERS WOOD RD., APPROXIMATELY 200 M UPSTREAM OF LOWER RD. CROSSING, WATERFORD.

SAMPLE LENGTH : 100.

SAMPLE DATE: 06/28/93

PHYSICAL

AIR TEMP. . . .	:21.00 (C)
WATER TEMP. . .	:17.00 (C)
VELOCITY. . . .	: 0.0267(m/s)
DISCHARGE . . .	: 0.0960(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.1	0.06
pH . . . . . :	7.1	0.06
COND . . . . . (uS/cm3). . :	129.7	6.8
ALKALINITY .(mg CaCO3 eq/l):	20.4	0.68

	MEAN	STD	
WIDTH. . . . . :	3.55	1.18	(m)
DEPTH. . . . . :	10.10	10.21	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		
TYPE THREE SUBSTRATE . . . :	0.07	(%)	
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)	
OVERHEAD CANOPY. . . . . :	90.00	(%)	
INSTREAM SHELTER . . . . . :	8.1	(m2)	

POOL/RIFFLE RATIO . .: 1.74

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	906.3	87.0
Ameiurus nebulosus	49.0	0.0
Salvelinus fontinalis	24.5	0.0
Salmo trutta	24.5	0.0
Notemigonus crysoleucas	24.5	0.0
Pungitius pungitius	3037.4	405.5

STREAM NAME : **FENGER BROOK** SITE #: **5120**

SITE DESCRIPTION: DOWNSTREAM 20 M FROM RTE. 1, WATERFORD. (CHANNELIZED)

SAMPLE LENGTH : 50. SAMPLE DATE: 06/23/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	5.9	1.18
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	6.5	
VELOCITY. . . .	: 0.0684(m/s)	COND . . . . . (uS/cm3). . :	278.0	2.6
DISCHARGE . . .	: 0.1070(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	60.2	3.06

	MEAN		STD	
WIDTH. . . . . :	1.38		0.63	(m)
DEPTH. . . . . :	12.55		10.60	(cm)
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.38
TYPE THREE SUBSTRATE . . . :	0.42	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	42.00	(%)		
OVERHEAD CANOPY. . . . . :	75.00	(%)		
INSTREAM SHELTER . . . . . :	9.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
Esox americanus		

STREAM NAME : **HEMPSTEAD BROOK** SITE #: **5121**

SITE DESCRIPTION: UPSTREAM OF BUDDINGTON RD., GROTON.

SAMPLE LENGTH : 100. SAMPLE DATE: 06/28/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.0	0.06
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	7.1	0.10
VELOCITY. . . .	: 0.0730(m/s)	COND . . . . . (uS/cm3). . :	140.0	0.0
DISCHARGE . . .	: 0.3680(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.6	0.70

	MEAN		STD	
WIDTH. . . . . :	4.04		0.88	(m)
DEPTH. . . . . :	12.38		8.43	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	2.33
TYPE THREE SUBSTRATE . . . :	0.17	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	25.00	(%)		
OVERHEAD CANOPY. . . . . :	75.00	(%)		
INSTREAM SHELTER . . . . . :	16.1	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	148.5	0.0
Ameiurus nebulosus	24.8	0.0
Salvelinus fontinalis	49.5	0.0
Esox niger	396.0	104.9
Esox americanus	0.0	0.0
Etheostoma olmstedi	915.8	371.2

STREAM NAME : **DONAHUE BROOK** SITE #: **5123**

SITE DESCRIPTION: 1/2 MILE UPSTREAM OF RTE. 1, THROUGH ESTATE ACCESS RD., STONINGTON.

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/21/93

PHYSICAL

AIR TEMP. . . . :21.00 (C)
WATER TEMP. . . :16.00 (C)
VELOCITY. . . . : 0.0305(m/s)
DISCHARGE . . . : 0.0600(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.3	0.06
pH . . . . . :	7.0	
COND . . . . . (uS/cm3). . :	105.7	6.0
ALKALINITY .(mg CaCO3 eq/l):	23.0	0.40

	MEAN	STD	
WIDTH. . . . . :	1.77	0.42	(m)
DEPTH. . . . . :	10.55	7.92	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	25.00	(%)	
OVERHEAD CANOPY. . . . . :	34.00	(%)	
INSTREAM SHELTER . . . . . :	18.4	(m2)	

POOL/RIFFLE RATIO . .: 2000.00

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1109.8	0.0
Salvelinus fontinalis	201.8	0.0
Esox americanus	1614.2	323.1
Gasterosteus aculeatus	100.9	0.0

STREAM NAME : **BIRCH PLAIN CREEK** SITE #: **5124**

SITE DESCRIPTION: 200 M BELOW POQUONOCK AVE., GROTON.

SAMPLE LENGTH : 50.

SAMPLE DATE: 06/24/93

PHYSICAL

AIR TEMP. . . . :21.00 (C)
WATER TEMP. . . :13.00 (C)
VELOCITY. . . . : 0.0397(m/s)
DISCHARGE . . . : 0.0880(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	8.6	0.00
pH . . . . . :		
COND . . . . . (uS/cm3). . :	282.0	5.3
ALKALINITY .(mg CaCO3 eq/l):	40.2	0.35

	MEAN	STD	
WIDTH. . . . . :	1.74	0.57	(m)
DEPTH. . . . . :	12.82	9.60	(cm)
DOMINANT SUBSTRATE TYPE. . :	1		
TYPE THREE SUBSTRATE . . . :	0.00	(%)	
EMBEDDEDNESS OF TYPE THREE :	25.00	(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :	3.3	(m2)	

POOL/RIFFLE RATIO . .: 11.50

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	2643.7	144.7
Apeltes quadracus	2873.6	236.6
Notemigonus crysoleucas	459.8	0.0
Fundulus diaphanus	3103.4	593.4
Pungitius pungitius	1034.5	0.0
Lepomis gibbosus		

STREAM NAME : **GREAT BROOK DIVERSION** SITE #: **5125**

SITE DESCRIPTION: DOWNSTREAM OF RTE. 214, LEDYARD.

SAMPLE LENGTH : 100.

SAMPLE DATE: 06/29/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.2	0.35
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	6.4	0.06
VELOCITY. . . .	: 0.0160(m/s)	COND . . . . . (uS/cm3). . :	120.7	1.5
DISCHARGE . . .	: 0.0370(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	13.4	0.21

	MEAN	STD			
WIDTH. . . . . :	4.17	0.50	(m)		
DEPTH. . . . . :	5.55	3.99	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4			POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.17	(%)		AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	89.17	(%)			
OVERHEAD CANOPY. . . . . :	0.00	(%)			
INSTREAM SHELTER . . . . . :		(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	24.0	0.0
Lepomis macrochirus	191.8	0.0
Esox niger	4748.2	424.6
Micropterus salmoides	647.5	0.0
Lepomis gibbosus	119.9	0.0
Etheostoma olmstedi	215.8	0.0

STREAM NAME : **FLAT BROOK** SITE #: **5126**

SITE DESCRIPTION: HEMLOCK GORGE AT HEAD OF TIDE, PARALLEL TO LONG COVE RD., LEDYARD.

SAMPLE LENGTH : 75.

SAMPLE DATE: 07/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.0	0.12
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	7.2	
VELOCITY. . . .	: 0.0702(m/s)	COND . . . . . (uS/cm3). . :	145.7	47.1
DISCHARGE . . .	: 0.1660(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	16.1	0.46

	MEAN	STD			
WIDTH. . . . . :	2.68	0.84	(m)		
DEPTH. . . . . :	9.81	8.35	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4			POOL/RIFFLE RATIO . .:	1.78
TYPE THREE SUBSTRATE . . . :	0.11	(%)		AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	75.00	(%)			
OVERHEAD CANOPY. . . . . :	97.00	(%)			
INSTREAM SHELTER . . . . . :	6.8	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	995.9	0.0
Salvelinus fontinalis	2390.0	217.4
Rhinichthys atratulus	1941.9	93.8
Apeltes quadracus	99.6	0.0
Notemigonus crysoleucas	1444.0	0.0
Lepomis gibbosus	199.2	0.0
Lepomis auritus	99.6	0.0

STREAM NAME : **FORD BROOK** SITE #: **5127**

SITE DESCRIPTION: AT CUL-DE-SAC AT END OF GREAT PLAIN RD., NORWICH.

SAMPLE LENGTH : 50.

SAMPLE DATE: 07/01/93

PHYSICAL

AIR TEMP. . . . :23.00 (C)
WATER TEMP. . . :17.00 (C)
VELOCITY. . . . : 0.0962(m/s)
DISCHARGE . . . : 0.2630(m3/s)

CHEMICAL

	MEAN	STD
DISSOLVED OXYGEN (mg/l). . :	9.5	0.12
pH . . . . . :	7.0	0.06
COND . . . . . (uS/cm3). . :	243.3	25.2
ALKALINITY .(mg CaCO3 eq/l):	25.0	0.67

	MEAN		STD	
WIDTH. . . . . :	3.14		0.62	(m)
DEPTH. . . . . :	8.50		7.29	(cm)
DOMINANT SUBSTRATE TYPE. . :	4			
TYPE THREE SUBSTRATE . . . :	0.33	(%)		
EMBEDDEDNESS OF TYPE THREE :	6.25	(%)		
OVERHEAD CANOPY. . . . . :	99.00	(%)		
INSTREAM SHELTER . . . . . :	1.7	(m2)		

POOL/RIFFLE RATIO . .: 1.08

AIR/WATER TEMP. RATIO:

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	573.2	0.0
Rhinichthys atratulus	1273.9	0.0
Salmo trutta	191.1	0.0
Esox americanus	191.1	0.0
Rhinichthys cataractae	1847.1	290.7
Etheostoma olmstedi	828.0	0.0

STREAM NAME : **FOX BROOK** SITE #: **5128**

SITE DESCRIPTION: UPSTREAM OF RTE. 163, MONTVILLE.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	6.8	0.56
WATER TEMP. . .	:23.00 (C)	pH . . . . . :	7.4	0.06
VELOCITY. . . .	: 0.1701(m/s)	COND . . . . . (uS/cm3). . :	63.3	3.2
DISCHARGE . . .	: 0.5500(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :	3.06	1.18	(m)	
DEPTH. . . . . :	9.43	7.68	(cm)	
DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:		0.43
TYPE THREE SUBSTRATE . . . :	0.40	(%) AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	17.00	(%)		
OVERHEAD CANOPY. . . . . :	90.00	(%)		
INSTREAM SHELTER . . . . . :	3.7	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	98.0	0.0
Lepomis macrochirus	130.7	0.0
Salvelinus fontinalis	32.7	0.0
Rhinichthys atratulus	98.0	0.0
Esox niger	65.4	0.0
Semotilus corporalis	7091.5	138.0
Micropterus salmoides	294.1	0.0
Lepomis gibbosus	653.6	0.0
Catostomus commersoni	784.3	0.0
Ameiurus natalis	228.8	0.0

STREAM NAME : **MILLER BROOK** SITE #: **5129**

SITE DESCRIPTION: UPSTREAM OF FOOT BRIDGE AT YMCA CAMP OFF BUTTON RD., NORTH STONINGTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/26/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:19.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.5	0.06
WATER TEMP. . .	:16.00 (C)	pH . . . . . :	6.7	0.15
VELOCITY. . . .	: 0.0279(m/s)	COND . . . . . (uS/cm3). . :	70.0	0.0
DISCHARGE . . .	: 0.0660(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	23.2	0.49

	MEAN	STD		
WIDTH. . . . . :	1.89	0.42	(m)	
DEPTH. . . . . :	12.23	9.01	(cm)	
DOMINANT SUBSTRATE TYPE. . :	1	POOL/RIFFLE RATIO . .:		24.00
TYPE THREE SUBSTRATE . . . :	0.08	(%) AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	3.3	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1058.2	0.0
Esox niger	317.5	0.0
Semotilus corporalis	529.1	0.0
Etheostoma olmstedi	211.6	0.0

STREAM NAME : **FULLER BROOK** SITE #: **5130**

SITE DESCRIPTION: UPSTREAM OF CONFLUENCE WITH LITTLE RIVER, HAMPTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/09/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :20.00	(C)		DISSOLVED OXYGEN (mg/l). . :	7.5	0.35
WATER TEMP. . . :15.00	(C)		pH . . . . . :	6.9	0.15
VELOCITY. . . . :	(m/s)		COND . . . . . (uS/cm3). . :	75.0	0.0
DISCHARGE . . . :	(m3/s)		ALKALINITY .(mg CaCO3 eq/l):		

	MEAN		STD	
WIDTH. . . . . :	1.29		0.68	(m)
DEPTH. . . . . :	6.35		8.70	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.83
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	0.8	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	0.0	0.0
Salvelinus fontinalis	155.0	0.0
Rhinichthys atratulus	8682.2	914.5
Esox niger	155.0	0.0
Semotilus atromaculatus	155.0	0.0
Semotilus corporalis	0.0	0.0
Micropterus salmoides	310.1	0.0
Lepomis gibbosus	1085.3	0.0
Catostomus commersoni	0.0	0.0

STREAM NAME : **POTASH BROOK** SITE #: **5131**

SITE DESCRIPTION: UPSTREAM OF CONFLUENCE WITH SHETUCKET RIVER, WINDHAM.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/19/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.6	0.00
WATER TEMP. . .	:21.00 (C)	pH . . . . . :	7.2	0.06
VELOCITY. . . .	: 0.2498(m/s)	COND . . . . . (uS/cm3). . :	103.0	0.0
DISCHARGE . . .	: 0.4830(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.1	0.15

	MEAN	STD			
WIDTH. . . . . :	3.17	0.94	(m)		
DEPTH. . . . . :	6.32	4.16	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.39
TYPE THREE SUBSTRATE . . . :	0.48	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	12.31	(%)			
OVERHEAD CANOPY. . . . . :	94.00	(%)			
INSTREAM SHELTER . . . . . :	5.0	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	126.2	0.0
Ameiurus nebulosus	31.5	0.0
Rhinichthys atratulus	410.1	0.0
Salmo trutta	31.5	0.0
Luxilus cornutus	31.5	0.0
Semotilus corporalis	12050.5	1223.8
Notemigonus crysoleucas	157.7	0.0
Rhinichthys cataractae	3817.0	736.3
Micropterus salmoides	63.1	0.0
Micropterus dolomieu	694.0	204.2
Notropis hudsonius	504.7	0.0
Etheostoma olmstedi	630.9	0.0
Catostomus commersoni	1356.5	189.8
Perca flavescens	94.6	0.0

STREAM NAME : **BALLYMAHACK BROOK** SITE #: **5132**

SITE DESCRIPTION: UPSTREAM OF OLD DIVERSION DAM AT MANFREDE PROPERTY, OFF BACK RD., WINDHAM.

SAMPLE LENGTH : 53. SAMPLE DATE: 07/13/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.5	0.12
WATER TEMP. . .	18.00	(C)	pH . . . . . :	6.8	
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). . :	54.0	1.7
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	6.2	0.40

	MEAN	STD			
WIDTH.	3.32	1.00	(m)		
DEPTH.	13.60	8.94	(cm)		
DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	10.00	
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	12.31	(%)			
OVERHEAD CANOPY. . . . . :	99.00	(%)			
INSTREAM SHELTER . . . . . :	2.4	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	6421.9	149.6

STREAM NAME : **OBWEBETUCK BROOK** SITE #: **5133**

SITE DESCRIPTION: UPSTREAM OF RTE. 32, WINDHAM.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/19/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:20.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.0	0.38
WATER TEMP. . .	:18.50 (C)	pH . . . . . :	6.9	0.12
VELOCITY. . . .	: 0.0102(m/s)	COND . . . . . (uS/cm3). . :	65.0	1.0
DISCHARGE . . .	: 0.0020(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	12.8	0.36

	MEAN	STD			
WIDTH. . . . . :	2.69	1.07	(m)		
DEPTH. . . . . :	9.36	8.75	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:		1.86
TYPE THREE SUBSTRATE . . . :	0.58	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	11.82	(%)			
OVERHEAD CANOPY. . . . . :	60.00	(%)			
INSTREAM SHELTER . . . . . :	6.9	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2194.2	0.0
Rhinichthys atratulus	3756.2	0.0
Etheostoma olmstedi	483.5	0.0
Catostomus commersoni	3309.9	41.5

STREAM NAME : **SHETUCKET RIVER TRIB.** SITE #: **5134**

SITE DESCRIPTION: UPSTREAM OF SHETUCKET RIVER CONFLUENCE, ABOVE RTE. 203 BRIDGE, WINDHAM.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/13/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.4	0.06
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	7.0	
VELOCITY. . . .	: 0.2151(m/s)	COND . . . . . (uS/cm3). . :151.0		1.7
DISCHARGE . . .	: 0.0460(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	35.4	0.46

	MEAN	STD			
WIDTH. . . . . :	0.65	0.27	(m)		
DEPTH. . . . . :	3.33	2.70	(cm)		
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:		0.09
TYPE THREE SUBSTRATE . . . :	0.10	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	80.00	(%)			
OVERHEAD CANOPY. . . . . :	74.00	(%)			
INSTREAM SHELTER . . . . . :	0.0	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Semotilus corporalis	16615.4	793.0
Rhinichthys cataractae	307.7	0.0
Micropterus salmoides	3076.9	0.0
Etheostoma olmstedi	13538.5	3558.1
Catostomus commersoni	42461.5	4645.2

STREAM NAME : **PIGEON SWAMP BROOK** SITE #: **5135**

SITE DESCRIPTION: DOWNSTREAM OF RTE. 32, WINDHAM.

SAMPLE LENGTH : 80. SAMPLE DATE: 07/19/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.4	0.10
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	6.9	0.15
VELOCITY. . . .	: 0.1358(m/s)	COND . . . . . (uS/cm3). . :	71.7	2.9
DISCHARGE . . .	: 0.2760(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	19.9	0.15

	MEAN	STD			
WIDTH. . . . . :	2.85	0.77	(m)		
DEPTH. . . . . :	7.55	8.04	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.31
TYPE THREE SUBSTRATE . . . :	0.05	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	100.00	(%)			
OVERHEAD CANOPY. . . . . :	94.00	(%)			
INSTREAM SHELTER . . . . . :	8.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	87.7	0.0
Rhinichthys atratulus	2412.3	0.0
Luxilus cornutus	87.7	0.0
Semotilus corporalis	1535.1	0.0
Notemigonus crysoleucas	614.0	0.0
Rhinichthys cataractae	131.6	0.0
Etheostoma olmstedi	1228.1	0.0
Catostomus commersoni	6403.5	71.6

STREAM NAME : COLD BROOK SITE #: 5136

SITE DESCRIPTION: ABOVE SHETUCKET RIVER CONFLUENCE, WINDHAM.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/03/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 10.1	0.06
WATER TEMP. . .	:12.00 (C)	pH	: 6.0	
VELOCITY. . . .	: 0.1462(m/s)	COND . . . . . (uS/cm3). .	: 52.7	3.1
DISCHARGE . . .	: 0.5540(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH.	: 2.89	0.83	(m)		
DEPTH.	: 13.48	11.15	(cm)		
DOMINANT SUBSTRATE TYPE. .	: 3		POOL/RIFFLE RATIO . .:		1.40
TYPE THREE SUBSTRATE . . .	: 0.43	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE	: 60.00	(%)			
OVERHEAD CANOPY.	: 96.00	(%)			
INSTREAM SHELTER	: 42.9	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	34.6	0.0
Salvelinus fontinalis	3737.0	58.1
Rhinichthys atratulus	138.4	0.0
Salmo trutta	34.6	0.0
Semotilus corporalis	3252.6	0.0
Lepomis cyanellus	207.6	47.4
Rhinichthys cataractae	242.2	0.0
Lepomis gibbosus	34.6	0.0
Oncorhynchus mykiss	0.0	0.0
Cottus cognatus	5709.3	Minimum esitmate.
Etheostoma olmstedi	8615.9	Minumum estimate.
Catostomus commersoni	7508.7	370.2

STREAM NAME : **BYRON BROOK** SITE #: **5137**

SITE DESCRIPTION: APPROX. 200 M UPSTREAM OF RTE. 97, NORWICH.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :23.00 (C)		DISSOLVED OXYGEN (mg/l). . :	9.3	0.15
WATER TEMP. . . :19.00 (C)		pH . . . . . :	7.4	0.06
VELOCITY. . . . : 0.0908(m/s)		COND . . . . . (uS/cm3). . :	227.0	0.0
DISCHARGE . . . : 0.1700(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	26.3	0.31
	MEAN	STD		
WIDTH. . . . . :	2.55	1.09 (m)		
DEPTH. . . . . :	7.25	7.93 (cm)		
DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.47	
TYPE THREE SUBSTRATE . . . :	0.14 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	0.00 (%)			
OVERHEAD CANOPY. . . . . :	100.00 (%)			
INSTREAM SHELTER . . . . . :	0.6 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	78.4	0.0
Rhinichthys atratulus	22666.7	83.1
Erimyzon oblongus	78.4	0.0
Semotilus atromaculatus	0.0	0.0
Lepomis cyanellus	784.3	0.0
Notemigonus crysoleucas	235.3	0.0
Rhinichthys cataractae	78.4	0.0
Etheostoma olmstedi	0.0	0.0
Catostomus commersoni	78.4	0.0

STREAM NAME : **LISBON BROOK** SITE #: **5138**

SITE DESCRIPTION: UPSTREAM OF RTE. 12, PRESTON.

SAMPLE LENGTH : 37. SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :28.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.8	0.10
WATER TEMP. . . :20.00 (C)		pH . . . . . :	7.0	
VELOCITY. . . . : 0.0141(m/s)		COND . . . . . (uS/cm3). . :	117.3	12.7
DISCHARGE . . . : 0.0170(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	21.3	
	MEAN	STD		
WIDTH. . . . . :	1.74	0.59 (m)		
DEPTH. . . . . :	6.43	5.98 (cm)		
DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	2.36	
TYPE THREE SUBSTRATE . . . :	0.57 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	56.88 (%)			
OVERHEAD CANOPY. . . . . :	75.00 (%)			
INSTREAM SHELTER . . . . . :	6.4 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Catostomus commersoni		
Rhinichthys atratulus		
Salvelinus fontinalis		
Ameiurus nebulosus		
Notemigonus crysoleucas		

STREAM NAME : **BOBBIN MILL BROOK** SITE #: **5139**

SITE DESCRIPTION: UPSTREAM OF WASHINGTON ST., NORWICH.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/20/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.1	0.12
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	6.7	0.12
VELOCITY. . . .	: 0.2271(m/s)	COND . . . . . (uS/cm3). . :	79.0	0.0
DISCHARGE . . .	: 0.6090(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	8.1	0.31

	MEAN	STD			
WIDTH. . . . . :	2.24	0.18	(m)		
DEPTH. . . . . :	11.95	7.66	(cm)		
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:		0.56
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	56.88	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	4.2	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	89.3	0.0
Rhinichthys atratulus	4732.1	0.0
Micropterus salmoides	89.3	0.0
Lepomis gibbosus	89.3	0.0
Catostomus commersoni	1607.1	0.0

STREAM NAME : **CROOKED BROOK** SITE #: **5140**

SITE DESCRIPTION: UPSTREAM OF RTE. 201, GRISWOLD.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:31.00 (C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	6.8	
VELOCITY. . . .	: 0.0616(m/s)	COND . . . . . (uS/cm3). . :	36.7	2.1
DISCHARGE . . .	: 0.1000(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	5.3	0.42

	MEAN	STD			
WIDTH. . . . . :	2.30	0.51	(m)		
DEPTH. . . . . :	6.93	6.81	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.19
TYPE THREE SUBSTRATE . . . :	0.19	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	76.67	(%)			
OVERHEAD CANOPY. . . . . :	94.00	(%)			
INSTREAM SHELTER . . . . . :	0.6	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Catostomus commersoni		
Rhinichthys atratulus		

STREAM NAME : **MERRICK BROOK** SITE #: **5141**

SITE DESCRIPTION: PARALLEL TO BROOK RD. EXTENSION, HAMPTON.

SAMPLE LENGTH : 140. SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :23.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.4	0.61
WATER TEMP. . . :19.00 (C)		pH . . . . . :	6.8	
VELOCITY. . . . : 0.0697(m/s)		COND . . . . . (uS/cm3). . :	48.0	2.6
DISCHARGE . . . : 1.1030(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	8.3	0.38
	MEAN	STD		
WIDTH. . . . . :	12.14	4.33	(m)	
DEPTH. . . . . :	13.35	10.78	(cm)	
DOMINANT SUBSTRATE TYPE. . :	5	POOL/RIFFLE RATIO . .:		0.22
TYPE THREE SUBSTRATE . . . :	0.01 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	0.00 (%)			
OVERHEAD CANOPY. . . . . :	88.00 (%)			
INSTREAM SHELTER . . . . . :	50.8 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	47.1	0.0
Ameiurus nebulosus	29.4	0.0
Salvelinus fontinalis (WILD)	70.6	0.0
Salvelinus fontinalis (STOCKED)	5.9	0.0
Rhinichthys atratulus	1476.8	57.5
Esox niger	5.9	0.0
Luxilus cornutus	353.0	35.6
juvenile cyprinid	35.3	0.0
Semotilus corporalis	664.9	45.1
Rhinichthys cataractae	0.0	0.0
Catostomus commersoni	759.0	20.4

STREAM NAME : **DOWNING BROOK** SITE #: **5142**

SITE DESCRIPTION: OFF COLBURN RD., DOWNSTREAM OF PRIVATE DIRT ACCESS RD., CANTERBURY.

SAMPLE LENGTH : 150. SAMPLE DATE: 07/19/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.4	0.17
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	5.9	
VELOCITY. . . .	: 0.0887(m/s)	COND . . . . . (uS/cm3). . :	66.7	4.9
DISCHARGE . . .	: 0.4760(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	10.4	0.21

	MEAN	STD			
WIDTH. . . . . :	4.34	2.74	(m)		
DEPTH. . . . . :	8.15	12.94	(cm)		
DOMINANT SUBSTRATE TYPE. . :	7		POOL/RIFFLE RATIO . .:		0.36
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	4.8	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	138.2	0.0
Salmo trutta	15.4	0.0
Esox niger	61.4	0.0
Lepomis cyanellus	1397.8	288.5
Hybrid Sunfish	15.4	0.0
Micropterus salmoides	76.8	0.0
Catostomus commersoni	414.7	31.0
Semotilus corporalis		

STREAM NAME : **PECK BROOK** SITE #: **5143**

SITE DESCRIPTION: UPSTREAM OF HANOVER RD., SCOTLAND.

SAMPLE LENGTH : 55. SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:31.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.2	0.17
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	6.9	0.00
VELOCITY. . . .	: 0.0201(m/s)	COND . . . . . (uS/cm3). . :	69.0	0.0
DISCHARGE . . .	: 0.0143(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	10.4	0.06

	MEAN	STD			
WIDTH. . . . . :	1.30	0.32	(m)		
DEPTH. . . . . :	5.60	5.48	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.67
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	0.00	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	0.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	2797.2	0.0
Salvelinus fontinalis	5174.8	771.0
Rhinichthys atratulus	1538.5	0.0
Notemigonus crysoleucas	279.7	0.0
Lepomis gibbosus	139.9	0.0
Catostomus commersoni	139.9	0.0

STREAM NAME : **GILLETTE BROOK** SITE #: **5144**

SITE DESCRIPTION: DOWNSTREAM OF COLCHESTER RD. (OLD RTE. 2), LEBANON.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/22/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00	(C)	DISSOLVED OXYGEN (mg/l). . :	5.2	2.70
WATER TEMP. . .	:16.00	(C)	pH . . . . . :	6.7	
VELOCITY. . . .	:	(m/s)	COND . . . . . (uS/cm3). . :	57.3	18.1
DISCHARGE . . .	:	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	13.0	1.18

	MEAN	STD			
WIDTH. . . . . :	1.81	1.96	(m)		
DEPTH. . . . . :	6.07	8.29	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	3.71	
TYPE THREE SUBSTRATE . . . :	0.24	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	40.00	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	10.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	12044.2	346.2
Rhinichthys atratulus	8839.8	0.0
Luxilus cornutus	331.5	0.0
Etheostoma olmstedi	110.5	0.0
Catostomus commersoni	3314.9	0.0

STREAM NAME : **ELISHA BROOK** SITE #: **5146**

SITE DESCRIPTION: 20 M UPSTREAM OF CONFLUENCE WITH YANTIC RIVER, FRANKLIN.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/14/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.0	0.12
WATER TEMP. . .	:21.00	(C)	pH . . . . . :	6.3	0.06
VELOCITY. . . .	: 0.1057	(m/s)	COND . . . . . (uS/cm3). . :	180.0	0.0
DISCHARGE . . .	: 0.0061	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	18.3	0.23

	MEAN	STD			
WIDTH. . . . . :	1.55	0.33	(m)		
DEPTH. . . . . :	6.43	5.31	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.94	
TYPE THREE SUBSTRATE . . . :	0.67	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	27.50	(%)			
OVERHEAD CANOPY. . . . . :	21.00	(%)			
INSTREAM SHELTER . . . . . :	0.1	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	39225.8	621.7
Catostomus commersoni	129.0	0.0

STREAM NAME : **BLIVEN BROOK** SITE #: **5147**

SITE DESCRIPTION: UPSTREAM OF RTE. 138, VOLUNTOWN.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/06/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.6	0.06
WATER TEMP. . .	15.00	(C)	pH . . . . . :	6.0	0.15
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). . :	60.0	0.0
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	6.4	0.23

	MEAN	STD			
WIDTH. . . . . :	1.88	0.39	(m)		
DEPTH. . . . . :	13.68	11.60	(cm)		
DOMINANT SUBSTRATE TYPE. . :	6		POOL/RIFFLE RATIO . .:	2000.00	
TYPE THREE SUBSTRATE . . . :	0.25	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	26.67	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	3.9	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2021.3	0.0

STREAM NAME : **HUNTS BROOK TRIB.** SITE #: **5149**

SITE DESCRIPTION: APPROX. 200 M UPSTREAM OF CONFLUENCE WITH HUNTS BROOK, MONTVILLE.

SAMPLE LENGTH : 53. SAMPLE DATE: 07/26/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). . :	5.3	2.95
WATER TEMP. . .	15.00	(C)	pH . . . . . :	5.0	0.15
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). . :	38.0	3.0
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	6.3	1.61

	MEAN	STD			
WIDTH. . . . . :	1.22	0.96	(m)		
DEPTH. . . . . :	7.32	11.21	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.74	
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	40.00	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	6.3	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	464.0	0.0
Salvelinus fontinalis	2319.8	0.0

STREAM NAME : **POLLY BROOK** SITE #: **5150**

SITE DESCRIPTION: 100 M SOUTH OF LAKES POND RD., 15 M DOWNSTREAM OF NO-NAME TRIB., WATERFORD.

SAMPLE LENGTH : 47. SAMPLE DATE: 06/28/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :23.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.3	0.12
WATER TEMP. . . :20.00 (C)		pH . . . . . :		
VELOCITY. . . . : 0.0638(m/s)		COND . . . . . (uS/cm3). . :	69.0	0.0
DISCHARGE . . . : 0.0370(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	8.7	0.61
	MEAN	STD		
WIDTH. . . . . :	0.81	0.20 (m)		
DEPTH. . . . . :	6.57	4.56 (cm)		
DOMINANT SUBSTRATE TYPE. . :	1	POOL/RIFFLE RATIO . .:	2.92	
TYPE THREE SUBSTRATE . . . :	0.00 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	40.00 (%)			
OVERHEAD CANOPY. . . . . :	100.00 (%)			
INSTREAM SHELTER . . . . . :	0.4 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	525.3	0.0
Salvelinus fontinalis	2101.4	0.0
Rhinichthys atratulus	525.3	0.0

STREAM NAME : **MOHEGAN BROOK** SITE #: **5151**

SITE DESCRIPTION: UPSTREAM OF MASSAPEAG RD., MONTVILLE.

SAMPLE LENGTH : 47. SAMPLE DATE: 06/22/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :25.00 (C)		DISSOLVED OXYGEN (mg/l). . :	9.4	0.10
WATER TEMP. . . :18.00 (C)		pH . . . . . :	7.0	
VELOCITY. . . . : 0.0817(m/s)		COND . . . . . (uS/cm3). . :181.0		1.7
DISCHARGE . . . : 0.2900(m3/s)		ALKALINITY .(mg CaCO3 eq/l): 14.7		0.15
	MEAN	STD		
WIDTH. . . . . :	2.14	0.70 (m)		
DEPTH. . . . . :	14.45	14.75 (cm)		
DOMINANT SUBSTRATE TYPE. . :	2	POOL/RIFFLE RATIO . .:	0.74	
TYPE THREE SUBSTRATE . . . :	0.27 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	27.50 (%)			
OVERHEAD CANOPY. . . . . :	79.00 (%)			
INSTREAM SHELTER . . . . . :	8.0 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1292.5	129.4
Lepomis macrochirus	298.3	0.0
Salvelinus fontinalis	7059.1	232.9
Rhinichthys atratulus	3579.2	189.2

STREAM NAME : **PHELPS BROOK** SITE #: **5152**

SITE DESCRIPTION: UPSTREAM OF RTE. 2 TO DAM AT HEWITT POND, NORTH STONINGTON.

SAMPLE LENGTH : 80. SAMPLE DATE: 06/22/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	5.2	0.12
WATER TEMP. . .	25.00 (C)	pH . . . . . :	6.0	0.06
VELOCITY. . . .	0.1063(m/s)	COND . . . . . (uS/cm3). . :	69.0	1.0
DISCHARGE . . .	0.2410(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	12.1	0.38

	MEAN	STD			
WIDTH. . . . . :	2.88	0.64	(m)		
DEPTH. . . . . :	7.91	5.84	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.45
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	27.50	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	0.4	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	478.3	0.0
Esox niger	217.4	0.0
Rhinichthys cataractae	2000.0	166.1
Lepomis gibbosus	43.5	0.0
Etheostoma fusiforme	43.5	0.0
Catostomus commersoni	391.3	0.0

STREAM NAME : **GLADE BROOK** SITE #: **5153**

SITE DESCRIPTION: DOWNSTREAM OF CLARK FALLS RD., NORTH STONINGTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.1	0.10
WATER TEMP. . .	25.00 (C)	pH . . . . . :	4.7	0.06
VELOCITY. . . .	0.0892(m/s)	COND . . . . . (uS/cm3). . :	28.7	0.6
DISCHARGE . . .	0.0790(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	2.0	0.59

	MEAN	STD			
WIDTH. . . . . :	1.85	0.59	(m)		
DEPTH. . . . . :	4.78	3.41	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:		0.16
TYPE THREE SUBSTRATE . . . :	0.79	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	4.55	(%)			
OVERHEAD CANOPY. . . . . :	0.00	(%)			
INSTREAM SHELTER . . . . . :		(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1081.1	0.0
Esox niger	108.1	0.0
Catostomus commersoni	2378.4	140.5

STREAM NAME : **HETCHEL SWAMP BROOK** SITE #: **5154**

SITE DESCRIPTION: DOWNSTREAM OF WYASSUP LAKE RD., NORTH STONINGTON.
(BOULDERS AND TILL, ACIDIC)

SAMPLE LENGTH : 100. SAMPLE DATE: 06/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :22.00 (C)		DISSOLVED OXYGEN (mg/l). . :	5.1	0.12
WATER TEMP. . . :18.00 (C)		pH . . . . . :	5.0	0.10
VELOCITY. . . . : 0.0542(m/s)		COND . . . . . (uS/cm3). . :	39.7	0.6
DISCHARGE . . . : 0.1260(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	8.5	0.12
	MEAN	STD		
WIDTH. . . . . :	2.69	0.99 (m)		
DEPTH. . . . . :	8.65	7.05 (cm)		
DOMINANT SUBSTRATE TYPE. . :	6	POOL/RIFFLE RATIO . .:	1.12	
TYPE THREE SUBSTRATE . . . :	0.04 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)			
OVERHEAD CANOPY. . . . . :	99.00 (%)			
INSTREAM SHELTER . . . . . :	1.9 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		

STREAM NAME : **KOISTENEN BROOK** SITE #: **5155**

SITE DESCRIPTION: UPSTREAM OF SAND HILL RD., VOLUNTOWN.

SAMPLE LENGTH : 47. SAMPLE DATE: 06/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :22.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.6	0.06
WATER TEMP. . . :20.00 (C)		pH . . . . . :	5.6	0.06
VELOCITY. . . . : 0.0335(m/s)		COND . . . . . (uS/cm3). . :	91.7	17.6
DISCHARGE . . . : 0.0350(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	21.0	0.49
	MEAN	STD		
WIDTH. . . . . :	0.87	0.34 (m)		
DEPTH. . . . . :	10.93	8.80 (cm)		
DOMINANT SUBSTRATE TYPE. . :	1	POOL/RIFFLE RATIO . .:	5.71	
TYPE THREE SUBSTRATE . . . :	0.00 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)			
OVERHEAD CANOPY. . . . . :	0.00 (%)			
INSTREAM SHELTER . . . . . :	7.9 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1229.9	0.0
Rhinichthys atratulus	9592.9	0.0
Notemigonus crysoleucas	737.9	0.0

STREAM NAME : **SHETUCKET RIVER TRIB.** SITE #: **5156**

SITE DESCRIPTION: OFF MUKLUK CLUB ACCESS ROAD AT N.U. GATE TO SCOTLAND DAM, SPRAGUE.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/16/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	26.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.0	0.61
WATER TEMP. . .	18.00	(C)	pH . . . . . :	7.5	0.06
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). . :	55.3	2.5
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH.	0.92	0.44	(m)		
DEPTH.	7.13	6.32	(cm)		
DOMINANT SUBSTRATE TYPE. .	2		POOL/RIFFLE RATIO . .:		0.67
TYPE THREE SUBSTRATE . . .	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE	50.00	(%)			
OVERHEAD CANOPY.	100.00	(%)			
INSTREAM SHELTER	0.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	6521.7	0.0

STREAM NAME : **PEQUOTSEPOS BROOK** SITE #: **5157**

SITE DESCRIPTION: DOWNSTREAM OF COOGAN BLVD., STONINGTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/21/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). . :	7.8	0.20
WATER TEMP. . .	17.00	(C)	pH . . . . . :	6.8	
VELOCITY. . . .	0.0469	(m/s)	COND . . . . . (uS/cm3). . :	151.3	1.5
DISCHARGE . . .	0.0380	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	28.7	0.53

	MEAN	STD			
WIDTH.	1.01	0.45	(m)		
DEPTH.	6.45	7.15	(cm)		
DOMINANT SUBSTRATE TYPE. .	2		POOL/RIFFLE RATIO . .:		9.00
TYPE THREE SUBSTRATE . . .	0.10	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE	80.00	(%)			
OVERHEAD CANOPY.	94.00	(%)			
INSTREAM SHELTER	0.1	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1188.1	0.0
Notemigonus crysoleucas	0.0	0.0
Pungitius pungitius	72673.3	13838.6
Lepomis gibbosus	0.0	0.0

STREAM NAME : **WILLIAMS BROOK TRIB.** SITE #: **5158**

SITE DESCRIPTION: UPSTREAM OF SHEWVILLE RD., LEDYARD.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/22/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :23.00 (C)		DISSOLVED OXYGEN (mg/l). . :	9.1	0.06
WATER TEMP. . . :17.00 (C)		pH . . . . . :	5.3	0.00
VELOCITY. . . . : 0.0181(m/s)		COND . . . . . (uS/cm3). . :	49.0	0.0
DISCHARGE . . . : 0.0026(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	7.3	0.06
	MEAN	STD		
WIDTH. . . . . :	1.19	0.22 (m)		
DEPTH. . . . . :	6.50	5.96 (cm)		
DOMINANT SUBSTRATE TYPE. . :	2	POOL/RIFFLE RATIO . .:	1.94	
TYPE THREE SUBSTRATE . . . :	0.20 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	10.00 (%)			
OVERHEAD CANOPY. . . . . :	100.00 (%)			
INSTREAM SHELTER . . . . . :	0.2 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	168.1	0.0
Salvelinus fontinalis	2016.8	0.0

STREAM NAME : **JORDAN BROOK TRIB.** SITE #: **5159**

SITE DESCRIPTION: PARALLEL TO RTE. 1, 200 M UPSTREAM OF FOG PLAIN RD., AT PLAZA, WATERFORD.

SAMPLE LENGTH : 55. SAMPLE DATE: 06/24/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :24.00 (C)		DISSOLVED OXYGEN (mg/l). . :	9.3	0.06
WATER TEMP. . . :15.00 (C)		pH . . . . . :	7.2	
VELOCITY. . . . : 0.0847(m/s)		COND . . . . . (uS/cm3). . :122.7		38.8
DISCHARGE . . . : 0.1040(m3/s)		ALKALINITY .(mg CaCO3 eq/l): 22.7		1.45
	MEAN	STD		
WIDTH. . . . . :	1.18	0.35 (m)		
DEPTH. . . . . :	10.25	7.06 (cm)		
DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	1.16	
TYPE THREE SUBSTRATE . . . :	0.70 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	12.86 (%)			
OVERHEAD CANOPY. . . . . :	57.00 (%)			
INSTREAM SHELTER . . . . . :	7.9 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	8936.8	180.1
Anguilla rostrata	616.3	0.0

STREAM NAME : **PINE SWAMP BROOK TRIB.** SITE #: **5161**

SITE DESCRIPTION: UPSTREAM OF 108 CHRISTIE HILL RD., OFF RTE. 12, LEDYARD.

SAMPLE LENGTH : 55. SAMPLE DATE: 06/23/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	10.2	0.35
WATER TEMP. . .	:15.00 (C)	pH . . . . . :	6.9	0.19
VELOCITY. . . .	: 0.0645(m/s)	COND . . . . . (uS/cm3). . :	121.3	2.9
DISCHARGE . . .	: 0.0440(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	10.5	0.21

	MEAN	STD			
WIDTH. . . . . :	1.40	0.33	(m)		
DEPTH. . . . . :	4.68	3.79	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4			POOL/RIFFLE RATIO . .:	0.25
TYPE THREE SUBSTRATE . . . :	0.00	(%)		AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	12.86	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	0.7	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	21428.6	530.6

STREAM NAME : **HUNTS BROOK TRIB.** SITE #: **5163**

SITE DESCRIPTION: UPSTREAM OF COLCHESTER RD., WATERFORD.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/26/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:18.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.7	0.06
WATER TEMP. . .	:13.00 (C)	pH . . . . . :	6.2	0.38
VELOCITY. . . .	: (m/s)	COND . . . . . (uS/cm3). . :	180.0	91.7
DISCHARGE . . .	: (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	32.3	7.58

	MEAN	STD			
WIDTH. . . . . :	0.81	0.35	(m)		
DEPTH. . . . . :	3.10	5.40	(cm)		
DOMINANT SUBSTRATE TYPE. . :	1			POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.10	(%)		AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	80.00	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :		(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Esox niger		

STREAM NAME : **LATHROP BROOK TRIB.** SITE #: **5165**

SITE DESCRIPTION: UPSTREAM OF SPAULDING RD., PLAINFIELD.

SAMPLE LENGTH : 60. SAMPLE DATE: 06/17/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :22.00 (C)		DISSOLVED OXYGEN (mg/l). . :	9.4	0.00
WATER TEMP. . . :15.00 (C)		pH . . . . . :		
VELOCITY. . . . : 0.0500(m/s)		COND . . . . . (uS/cm3). . :	20.0	0.0
DISCHARGE . . . : 0.1180(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	0.8	0.06

	MEAN	STD			
WIDTH. . . . . :	2.68	1.03	(m)		
DEPTH. . . . . :	9.32	9.60	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.62	
TYPE THREE SUBSTRATE . . . :	0.05	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)			
OVERHEAD CANOPY. . . . . :	97.00	(%)			
INSTREAM SHELTER . . . . . :	0.7	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		

STREAM NAME : **FOLWIX BROOK** SITE #: **5166**

SITE DESCRIPTION: UPSTREAM OF BENJAMIN RD., PRESTON.
(OLD MILL CHANNEL, BOULDERS AND HEAVY SILT)

SAMPLE LENGTH : 38. SAMPLE DATE: 08/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :24.00 (C)		DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :18.00 (C)		pH . . . . . :	6.1	
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	69.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH. . . . . :	1.31	0.85	(m)		
DEPTH. . . . . :	11.75	10.46	(cm)		
DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	2000.00	
TYPE THREE SUBSTRATE . . . :	0.08	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	100.00	(%)			
OVERHEAD CANOPY. . . . . :	10.00	(%)			
INSTREAM SHELTER . . . . . :	1.9	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Notemigonus crysoleucas		

STREAM NAME : **POLLY BROOK** SITE #: **5171**

SITE DESCRIPTION: APPROXIMATELY 200 M ABOVE YANTIC RIVER CONFLUENCE, BOZRAH.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/13/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.4	0.12
WATER TEMP. . .	:23.50 (C)	pH . . . . . :	6.6	0.15
VELOCITY. . . .	: 0.0784(m/s)	COND . . . . . (uS/cm3). . :	193.3	11.5
DISCHARGE . . .	: 0.1760(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	36.5	0.23

	MEAN	STD			
WIDTH. . . . . :	1.72	0.64	(m)		
DEPTH. . . . . :	12.13	10.57	(cm)		
DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:		2.57
TYPE THREE SUBSTRATE . . . :	0.00	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)			
OVERHEAD CANOPY. . . . . :	77.00	(%)			
INSTREAM SHELTER . . . . . :	9.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
juvenile cyprinid	465.1	0.0
Notemigonus crysoleucas	3255.8	0.0
Semotilus corporalis	1744.2	0.0
Lepomis macrochirus	116.3	0.0
Rhinichthys atratulus	1976.7	0.0
Esox niger	116.3	0.0
Luxilus cornutus	4186.0	0.0
Etheostoma olmstedi	116.3	0.0
Catostomus commersoni	8139.5	0.0
Lepomis gibbosus	814.0	0.0

STREAM NAME : **SUSQUETONSCUT BROOK TRIB.** SITE #: **5172**

SITE DESCRIPTION: BELOW SWAMP DOWNSTREAM OF BENDER RD., LEBANON.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/13/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.4	0.21
WATER TEMP. . .	:20.50 (C)	pH . . . . . :	7.2	
VELOCITY. . . .	: 0.0768(m/s)	COND . . . . . (uS/cm3). . :	160.3	0.6
DISCHARGE . . .	: 0.1310(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	31.3	0.52

	MEAN	STD			
WIDTH. . . . . :	2.96	0.77	(m)		
DEPTH. . . . . :	5.40	5.23	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.85
TYPE THREE SUBSTRATE . . . :	0.13	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	63.33	(%)			
OVERHEAD CANOPY. . . . . :	100.00	(%)			
INSTREAM SHELTER . . . . . :	1.7	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	32297.3	4021.9
Semotilus corporalis	0.0	0.0
Semotilus atromaculatus	405.4	0.0

STREAM NAME : **HOXIE BROOK** SITE #: **5173**

SITE DESCRIPTION: DOWNSTREAM OF HOXIE RD., LEBANON.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.9	0.12
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	6.2	0.12
VELOCITY. . . .	: 0.0625(m/s)	COND . . . . . (uS/cm3). . :	188.7	1.5
DISCHARGE . . .	: 0.0620(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	44.5	0.92

	MEAN	STD			
WIDTH. . . . . :	1.60	0.75	(m)		
DEPTH. . . . . :	4.97	6.19	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		1.08
TYPE THREE SUBSTRATE . . . :	0.18	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	35.00	(%)			
OVERHEAD CANOPY. . . . . :	68.00	(%)			
INSTREAM SHELTER . . . . . :	1.2	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	9000.0	0.0
Salvelinus fontinalis	250.0	0.0
Luxilus cornutus	125.0	0.0
Catostomus commersoni	125.0	0.0
Salmo trutta	0.0	0.0

STREAM NAME : **STONY BROOK** SITE #: **5180**

SITE DESCRIPTION: CHANNELIZED AREA BEHIND I-395 REST STOP, MONTVILLE. (ABOVE FOOT BRIDGE)

SAMPLE LENGTH : 150. SAMPLE DATE: 07/06/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.8	0.21
WATER TEMP. . .	:18.00 (C)	pH . . . . . :	7.5	
VELOCITY. . . .	: 0.0288(m/s)	COND . . . . . (uS/cm3). . :	187.3	2.5
DISCHARGE . . .	: 0.0247(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	21.0	0.81

	MEAN	STD			
WIDTH. . . . . :	4.87	1.26	(m)		
DEPTH. . . . . :	17.92	15.47	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:		5.19
TYPE THREE SUBSTRATE . . . :	0.41	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.83	(%)			
OVERHEAD CANOPY. . . . . :	94.00	(%)			
INSTREAM SHELTER . . . . . :	57.2	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	999.3	60.9
Salvelinus fontinalis (STOCKED)	54.7	0.0
Salvelinus fontinalis (WILD)	1957.6	46.3
Salmo trutta	27.4	0.0
Rhinichthys cataractae	314.9	0.0
S.fontinalis X S. trutta	13.7	0.0
Rhinichthys atratulus	7885.0	127.2
Catostomus commersoni	766.6	0.0

STREAM NAME : **LISBON BROOK** SITE #: **5181**

SITE DESCRIPTION: FROM QUINEBAUG RIVER UP TO RTE. 12, LISBON.

SAMPLE LENGTH : 42. SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Luxilus cornutus		
Rhinichthys atratulus		
Etheostoma olmstedi		
Catostomus commersoni		
Rhinichthys cataractae		

STREAM NAME : **LISBON BROOK TRIB.** SITE #: **5182**

SITE DESCRIPTION: FROM LISBON BROOK UPSTREAM ON FIRST TRIB. ABOVE RTE. 12, LISBON.

SAMPLE LENGTH : 27. SAMPLE DATE: 07/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Rhinichthys atratulus		

STREAM NAME : **ASHWILLET BROOK** SITE #: **5183**

SITE DESCRIPTION: 20 M DOWNSTREAM OF RTE. 201, GRISWOLD.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.6	0.06
WATER TEMP. . .	:21.00 (C)	pH . . . . . :	6.6	
VELOCITY. . . .	: 0.1495(m/s)	COND . . . . . (uS/cm3). . :	65.0	3.6
DISCHARGE . . .	: 0.2160(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.1	0.12

	MEAN	STD			
WIDTH. . . . . :	2.46	0.60	(m)		
DEPTH. . . . . :	5.80	4.74	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:		0.22
TYPE THREE SUBSTRATE . . . :	0.67	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)			
OVERHEAD CANOPY. . . . . :	97.00	(%)			
INSTREAM SHELTER . . . . . :	9.E-2	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1707.3	105.4
Catostomus commersoni	487.8	0.0
Micropterus salmoides	0.0	0.0

STREAM NAME : **YANTIC RIVER** (lower) SITE #: **5184**

SITE DESCRIPTION: 20 M UPSTREAM OF WEST TOWN ST., NORWICH.

SAMPLE LENGTH : 200. SAMPLE DATE: 07/20/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.5	0.31
WATER TEMP. . .	:23.00 (C)	pH . . . . . :	6.8	0.06
VELOCITY. . . .	: 0.1387(m/s)	COND . . . . . (uS/cm3). . :	135.3	1.2
DISCHARGE . . .	: 0.2795(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	23.2	0.46

	MEAN	STD			
WIDTH. . . . . :	11.79	2.86	(m)		
DEPTH. . . . . :	17.25	15.44	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		1.63
TYPE THREE SUBSTRATE . . . :	0.18	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	5.88	(%)			
OVERHEAD CANOPY. . . . . :		(%)			
INSTREAM SHELTER . . . . . :	24.6	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Semotilus corporalis	2726.5	267.1
Micropterus salmoides	9.3	0.0
Lepomis auritus	922.2	57.9
Anguilla rostrata	40.1	0.0
Rhinichthys atratulus	456.5	122.9
Salmo trutta	15.4	0.0
juvenile centrarchid	37.0	6.9
Luxilus cornutus	863.6	22.5
Notropis hudsonius	6.2	0.0
Etheostoma olmstedi	265.2	67.9
Catostomus commersoni	1378.7	188.4
Micropterus dolomieu	117.2	0.0

STREAM NAME : **NORWICHTOWN BROOK** SITE #: **5200**

SITE DESCRIPTION: UPSTREAM OF CASE ST. PARALLEL TO MEDICAL CENTER PARKING LOT AND I-395 ON-RAMP, NORWICH.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :25.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.7	0.12
WATER TEMP. . . :19.00 (C)		pH . . . . . :	7.1	
VELOCITY. . . . : 0.0830(m/s)		COND . . . . . (uS/cm3). . :	230.7	17.9
DISCHARGE . . . : 0.0950(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	20.8	0.42
	MEAN	STD		
WIDTH. . . . . :	1.78	0.44 (m)		
DEPTH. . . . . :	6.45	6.56 (cm)		
DOMINANT SUBSTRATE TYPE. . :	1	POOL/RIFFLE RATIO . .:	1.38	
TYPE THREE SUBSTRATE . . . :	0.15 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	10.00 (%)			
OVERHEAD CANOPY. . . . . :	100.00 (%)			
INSTREAM SHELTER . . . . . :	0.8 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	8427.0	126.4
Catostomus commersoni	1378.7	188.4
Salvelinus fontinalis	674.2	0.0

STREAM NAME : **HUNTER BROOK** SITE #: **5202**

SITE DESCRIPTION: 200 M UPSTREAM OF SHETUCKET RIVER, DOWNSTREAM OF RTE. 12 , NORWICH.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/11/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :25.00 (C)		DISSOLVED OXYGEN (mg/l). . :	6.9	0.32
WATER TEMP. . . :22.00 (C)		pH . . . . . :	6.8	0.06
VELOCITY. . . . : 0.0667(m/s)		COND . . . . . (uS/cm3). . :	164.7	7.4
DISCHARGE . . . : 0.0740(m3/s)		ALKALINITY .(mg CaCO3 eq/l):		
	MEAN	STD		
WIDTH. . . . . :	1.52	0.79 (m)		
DEPTH. . . . . :	6.30	5.47 (cm)		
DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	0.72	
TYPE THREE SUBSTRATE . . . :	0.42 (%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	60.00 (%)			
OVERHEAD CANOPY. . . . . :	96.00 (%)			
INSTREAM SHELTER . . . . . :	0.7 (m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1052.6	0.0
Etheostoma olmstedi	3684.2	Minimum estimate.
Catostomus commersoni	5000.0	157.2
Esox niger	0.0	0.0
Ameiurus nebulosus	131.6	0.0
Rhinichthys atratulus	53421.1	1227.7
juvenile centrarchid	526.3	0.0
Lepomis gibbosus	0.0	0.0

STREAM NAME : **SHETUCKET RIVER TRIB.** SITE #: **5203**

SITE DESCRIPTION: UPSTREAM OF RTE. 97, NORWICH.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.3	0.00
WATER TEMP. . .	:16.00 (C)	pH . . . . . :	5.6	0.21
VELOCITY. . . .	: 0.0850(m/s)	COND . . . . . (uS/cm3). . :	274.3	4.0
DISCHARGE . . .	: 0.0690(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	23.4	0.35

	MEAN	STD			
WIDTH. . . . . :	1.44	0.26	(m)		
DEPTH. . . . . :	5.70	4.84	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		1.50
TYPE THREE SUBSTRATE . . . :	0.20	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)			
OVERHEAD CANOPY. . . . . :	36.00	(%)			
INSTREAM SHELTER . . . . . :	1.8	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	69.4	0.0
Notemigonus crysoleucas	1527.8	0.0
Etheostoma olmstedi	1041.7	0.0
Catostomus commersoni	1041.7	0.0
Ameiurus nebulosus	69.4	0.0
Salvelinus fontinalis	5486.1	157.2
Rhinichthys atratulus	9444.4	114.5
Salmo trutta	69.4	0.0
juvenile centrarchid	138.9	0.0

STREAM NAME : **COLD BROOK** SITE #: **5204**

SITE DESCRIPTION: UPSTREAM OF RTE. 97, NORWICH.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/05/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.1	0.21
WATER TEMP. . .	:19.00	(C)	pH . . . . . :	7.3	
VELOCITY. . . .	: 0.0424	(m/s)	COND . . . . . (uS/cm3). . :	89.3	1.2
DISCHARGE . . .	: 0.0950	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH. . . . . :	1.79	1.70	(m)		
DEPTH. . . . . :	7.05	8.73	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		0.72
TYPE THREE SUBSTRATE . . . :	0.07	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)			
OVERHEAD CANOPY. . . . . :	98.00	(%)			
INSTREAM SHELTER . . . . . :	2.7	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Semotilus corporalis	7150.8	792.4
Notemigonus crysoleucas	1340.8	0.0
Micropterus salmoides	223.5	0.0
Anguilla rostrata	446.9	0.0
Ameiurus nebulosus	1229.1	0.0
Lepomis macrochirus	1117.3	0.0
Rhinichthys atratulus	335.2	0.0
juvenile centrarchid	4581.0	0.0
Oncorhynchus mykiss	0.0	0.0
Etheostoma olmstedi	3016.8	672.6
Catostomus commersoni	2793.3	230.0
Lepomis gibbosus	223.5	0.0

STREAM NAME : **PACHAUG RIVER** SITE #: **5205**

SITE DESCRIPTION: DOWNSTREAM OF SHETUCKET TPKE., VOLUNTOWN.

SAMPLE LENGTH : 150. SAMPLE DATE: 06/09/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :20.00 (C)		DISSOLVED OXYGEN (mg/l). . :	8.4	0.20
WATER TEMP. . . :18.50 (C)		pH . . . . . :	5.0	0.06
VELOCITY. . . . : 0.0086(m/s)		COND . . . . . (uS/cm3). . :	41.3	1.2
DISCHARGE . . . : 0.0125(m3/s)		ALKALINITY .(mg CaCO3 eq/l):	3.2	0.40

	MEAN	STD	
WIDTH. . . . . :	4.86	0.88	(m)
DEPTH. . . . . :	39.80	31.41	(cm)
DOMINANT SUBSTRATE TYPE. . :	1	POOL/RIFFLE RATIO . .:	2.75
TYPE THREE SUBSTRATE . . . :	0.05 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	70.00 (%)		
OVERHEAD CANOPY. . . . . :	94.00 (%)		
INSTREAM SHELTER . . . . . :	206.8 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	13.7	0.0
Erimyzon oblongus	27.4	0.0
Esox niger	41.2	0.0
Ameiurus nebulosus	150.9	0.0
Perca flavescens	137.2	0.0
Etheostoma fusiforme	82.3	0.0

STREAM NAME : NAUGATUCK RIVER SITE #: 5207

SITE DESCRIPTION: UPSTREAM OF FIRST RIFFLE BELOW OLD CAMPVILLE BRIDGE ABUTTMENTS, ABOVE DEEP EXCAVATED GRAVEL PIT AREA, HARWINTON/LITCHFIELD.

SAMPLE LENGTH : 202. SAMPLE DATE: 08/18/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/1). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/1):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS_OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Catostomus commersoni		
Etheostoma olmstedi		
Ambloplites rupestris		
Notemigonus crysoleucas		
Rhinichthys cataractae		
Micropterus salmoides		
Rhinichthys atratulus		
Exoglossum maxillingua		
Semotilus atromaculatus		
Luxilus cornutus		
Semotilus corporalis		

STREAM NAME : **COGINCHAUG RIVER** SITE #: **5208**

SITE DESCRIPTION: UPSTREAM OF CHERRY HILL RD., MIDDLEFIELD.

SAMPLE LENGTH : 150. SAMPLE DATE: 08/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :24.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.8	0.06
WATER TEMP. . . :19.00	(C)	pH . . . . . :	7.5	0.06
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	280.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH. . . . . :	8.71	2.36	(m)		
DEPTH. . . . . :	20.83	19.12	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	4.77	
TYPE THREE SUBSTRATE . . . :	0.44	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	48.43	(%)			
OVERHEAD CANOPY. . . . . :		(%)			
INSTREAM SHELTER . . . . . :	185.5	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta	STOCKED	
Erimyzon oblongus	RARE	
Luxilus cornutus	RARE	
Semotilus corporalis	RARE	
Anguilla rostrata	ABUNDANT	
Ameiurus nebulosus	RARE	
Lepomis macrochirus	RARE	
Salvelinus fontinalis	WILD	
Salvelinus fontinalis	STOCKED	
Rhinichthys atratulus	RARE	
Catostomus commersoni	ABUNDANT	
Perca flavescens	RARE	
Lepomis gibbosus	COMMON	
Lepomis auritus	COMMON	
Oncorhynchus mykiss	RARE	
Esox americanus	ABUNDANT	
Notemigonus crysoleucas	ABUNDANT	
Rhinichthys cataractae	RARE	
Micropterus salmoides	RARE	
Etheostoma olmstedi	ABUNDANT	

STREAM NAME : **HANS BROOK** SITE #: **5209**

SITE DESCRIPTION: UPSTREAM OF COGINCHAUG RIVER CONFLUENCE, MIDDLEFIELD.

SAMPLE LENGTH : 150. SAMPLE DATE: 08/16/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :19.00	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	WILD		
Rhinichthys atratulus	COMMON		
Anguilla rostrata	COMMON		
Salvelinus fontinalis	STOCKED		
Rhinichthys cataractae	COMMON		
Micropterus salmoides	RARE		
Lepomis gibbosus	RARE		
Etheostoma olmstedi	COMMON		
Catostomus commersoni	COMMON		
Salmo trutta	STOCKED		
Salmo trutta	WILD		

STREAM NAME : **YANTIC RIVER** SITE #: **5210**

SITE DESCRIPTION: 500 M UPSTREAM OF WATERMAN BROOK IN UPPER PORTION OF THE FLY-ONLY AREA, LEBANON. (RECONSTRUCTED BOULDER CHANNEL)

SAMPLE LENGTH : 525. SAMPLE DATE: 08/19/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :25.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :21.00	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	WILD	
Salmo trutta	STOCKED	
Micropterus dolomieu		

STREAM NAME : **STONY BROOK** SITE #: **5211**

SITE DESCRIPTION: FROM HEAD OF TIDE UPSTREAM TO DAM BELOW RTE. 32, ALONG MASSAPEAG RD., MONTVILLE.

SAMPLE LENGTH : 95. SAMPLE DATE: 08/23/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :19.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.8	0.15
WATER TEMP. . . :18.00	(C)	pH . . . . . :	7.8	0.00
VELOCITY. . . . : 0.3813	(m/s)	COND . . . . . (uS/cm3). . :	161.0	3.6
DISCHARGE . . . : 0.0138	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :	3.44	1.71	(m)	
DEPTH. . . . . :	12.77	14.21	(cm)	
DOMINANT SUBSTRATE TYPE. . :	7		POOL/RIFFLE RATIO . .:	2.74
TYPE THREE SUBSTRATE . . . :	0.13	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	25.00	(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	39.4	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1346.4	56.5
Lepomis macrochirus	91.8	0.0
Salmo trutta	91.8	0.0
Notemigonus crysoleucas	122.4	0.0
Salvelinus fontinalis	91.8	0.0
Rhinichthys atratulus	2937.6	83.4
Catostomus commersoni	397.8	0.0
Rhinichthys cataractae	1897.2	126.9
Fundulus heteroclitus	30.6	0.0

STREAM NAME : **QUINNIPIAC RIVER** SITE #: **5212**

SITE DESCRIPTION: 400 M BELOW RTE. 150, WALLINGFORD.

SAMPLE LENGTH : 200. SAMPLE DATE: 08/24/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:28.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.3	0.20
WATER TEMP. . .	:22.50 (C)	pH . . . . . :	7.9	0.00
VELOCITY. . . .	: 0.3271(m/s)	COND . . . . . (uS/cm3). . :	333.7	1.5
DISCHARGE . . .	: 1.1606(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD			
WIDTH. . . . . :	14.85	2.76	(m)		
DEPTH. . . . . :	39.67	29.50	(cm)		
DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:		2.57
TYPE THREE SUBSTRATE . . . :	0.51	(%)	AIR/WATER TEMP. RATIO:		
EMBEDDEDNESS OF TYPE THREE :	32.55	(%)			
OVERHEAD CANOPY. . . . . :	75.00	(%)			
INSTREAM SHELTER . . . . . :	542.4	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Pimephales promelas	3.4	0.0
Esox americanus	3.4	0.0
juvenile centrarchid		
Luxilus cornutus	127.9	6.4
Salmo trutta	0.0	0.0
Cyprinus carpio	104.4	0.0
Anguilla rostrata	353.5	15.2
Morone saxatilis	6.7	0.0
Ameiurus nebulosus	0.0	0.0
Pomoxis nigromaculatus	16.8	0.0
Lepomis macrochirus	101.0	31.7
Rhinichthys atratulus	158.2	33.0
Catostomus commersoni	1420.9	103.6
Perca flavescens	6.7	0.0
Lepomis gibbosus	16.8	0.0
Ambloplites rupestris	40.4	0.0
Lepomis auritus	3.4	0.0
Notropis hudsonius	8289.6	723.6
Notemigonus crysoleucas	10.1	0.0
Rhinichthys cataractae	292.9	70.6
Micropterus salmoides	97.6	9.2
Etheostoma olmstedi	218.9	5.9
Morone americanus	3.4	0.0
Dosoma cepedianum	0.0	0.0

STREAM NAME : **OIL MILL BROOK** SITE #: **5215**

SITE DESCRIPTION: FROM HEAD OF TIDE UPSTREAM TO FIRST DAM, WATERFORD. (TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 172. SAMPLE DATE: 08/30/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta		
S. fontinalis X S. trutta		

STREAM NAME : **STILL RIVER** SITE #: **5216**

SITE DESCRIPTION: UPSTREAM FROM GRAYS BRIDGE, DANBURY. (REPEAT OF SITE 3017 FROM 1991)

SAMPLE LENGTH : 150. SAMPLE DATE: 09/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus		
Cyprinus carpio		
Notemigonus crysoleucas		
Rhinichthys cataractae		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : **STILL RIVER** SITE #: **5217**

SITE DESCRIPTION:150 M UPSTREAM OF GRAYS BRIDGE, DANBURY. (UPSTREAM OF SITE 5216, DEEP WATER HABITAT WITH SNAGS AND UNDERCUTS)

SAMPLE LENGTH : 173. SAMPLE DATE: 09/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus		
Cyprinus carpio		
Micropterus salmoides		
Lepomis gibbosus		
Ambloplites rupestris		
Catostomus commersoni		
Perca flavescens		

STREAM NAME : **STILL RIVER** SITE #: **5218**

SITE DESCRIPTION: DOWNSTREAM (NORTH) OF WHITE RD, DANBURY. (STEEP BOULDER/BEDROCK AREA)

SAMPLE LENGTH : 145. SAMPLE DATE: 09/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :22.00	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Semotilus atromaculatus		
Rhinichthys cataractae		
Micropterus salmoides		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : **STILL RIVER** SITE #: **5219**

SITE DESCRIPTION: CONCRETE CHANNEL ADJACENT TO PARKING LOT OFF MAIN ST., DANBURY.
(SMOOTH BOTTOM WITH INCLINED CHUTE)

SAMPLE LENGTH : 200. SAMPLE DATE: 09/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Etheostoma olmstedi	COMMON	
Catostomus commersoni	ABUNDANT	
Rhinichthys cataractae	COMMON	
Micropterus salmoides	COMMON	
Rhinichthys atratulus	COMMON	
Semotilus atromaculatus	COMMON	

STREAM NAME : **SYMPAUG BROOK** SITE #: **5220**

SITE DESCRIPTION: DOWNSTREAM OF WOOSTER ST. CROSSING, DANBURY.
(REPEAT OF 1991 SITE 3021, SINGLE PASS SAMPLE)

SAMPLE LENGTH : 150. SAMPLE DATE: 09/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Catostomus commersoni		
Semotilus atromaculatus		
Rhinichthys cataractae		
Micropterus salmoides		
Rhinichthys atratulus		

STREAM NAME : **STILL RIVER** SITE #: **5221**

SITE DESCRIPTION: AT HARRYBROOK TOWN PARK JUST ABOVE LAKE LILLINONAH, BROOKFIELD.
(BEDROCK RAPIDS AND POOLS)

SAMPLE LENGTH : SAMPLE DATE: 09/01/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus			
Salmo trutta	STOCKED		
juvenile centrarchid			
Perca flavescens			
Lepomis gibbosus			
Lepomis auritus			
Micropterus dolomieu			
Luxilus cornutus			
Semotilus corporalis			
Hybrid Sunfish			
Rhinichthys cataractae			
Micropterus salmoides			
Catostomus commersoni			
Ameiurus natalis			
Etheostoma olmstedi			

STREAM NAME : **WILLIMANTIC RIVER** SITE #: **5222**

SITE DESCRIPTION: UPSTREAM OF RTE. 84, WILLINGTON/STAFFORD. (TMA-HOLDOVER EVALUATION, GAMEFISH-ONLY SAMPLE)

SAMPLE LENGTH : SAMPLE DATE: 08/31/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Oncorhynchus mykiss	STOCKED		
Micropterus dolomieu			
Salmo trutta	ADIPOSE CLIP		
Salmo trutta	STOCKED		
Salmo trutta	WILD		
Salmo trutta	RIGHT VENTRAL CLIP		
Salmo trutta	LEFT VENTRAL CLIP		

STREAM NAME : **WILLIMANTIC RIVER** SITE #: **5223**

SITE DESCRIPTION: FROM RTE. 74 BRIDGE TO RTE. 84. WILLINGTON/TOLLAND.
(TMA HOLDOVER EVALUTATION)

SAMPLE LENGTH : SAMPLE DATE: 08/31/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus			
Lepomis auritus			
Micropterus dolomieu			
Etheostoma olmstedi			
Catostomus commersoni			
Perca flavescens			
Salmo trutta	ADIPOSE CLIP		
Salmo trutta	RIGHT PECTORAL CLIP		
Salmo trutta	STOCKED		
Salmo trutta	LEFT VENTRAL CLIP		
Luxilus cornutus			
Semotilus corporalis			
Notemigonus crysoleucas			
Micropterus salmoides			
Lepomis gibbosus			
Rhinichthys atratulus			

STREAM NAME : **NAUGATUCK RIVER** SITE #: **5225**

SITE DESCRIPTION: NAUGATUCK FOREST AREA APPROXIMATELY 200 M DOWNSTREAM OF SPRUCE BROOK, PARALLEL TO RTE. 8, BEACON FALLS. (REPEAT OF 1991 SITE)

SAMPLE LENGTH : 250. SAMPLE DATE: 09/02/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys cataractae		
Micropterus salmoides		
Lepomis auritus		
Semotilus corporalis		
Anguilla rostrata		
Lepomis macrochirus		
Luxilus cornutus		
Notropis hudsonius		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : **NAUGATUCK RIVER** SITE #: **5226**

SITE DESCRIPTION: POOL AREA AT MOUTH OF BEACON HILL BROOK NEAR CROSS ST., BEACON FALLS/NAUGATUCK. (CHECKED TROUT IN THERMAL REFUGE)

SAMPLE LENGTH : SAMPLE DATE: 09/02/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta		

STREAM NAME : **NAUGATUCK RIVER** SITE #: **5227**

SITE DESCRIPTION: DEEP POOLS AT SPRUCE BROOK CONFLUENCE, NAUGATUCK STATE FOREST, BEACON FALLS/NAUGATUCK. (DOCUMENTATION OF LESS COMMON SPECIES ONLY)

SAMPLE LENGTH : SAMPLE DATE: 09/02/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ambloplites rupestris		
Lepomis auritus		

STREAM NAME : **MOOSUP RIVER (fly-only area)** SITE #: **5228**

SITE DESCRIPTION: UPSTREAM FROM POWER LINE CROSSING 0.4 KM ABOVE QUINEBAUG RIVER, PLAINFIELD.

SAMPLE LENGTH : 155. SAMPLE DATE: 09/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata			
Ameiurus nebulosus			
Pomoxis nigromaculatus			
Rhinichthys atratulus			
Salmo trutta	STOCKED NO CLIP		
Salmo trutta	ADIPOSE FIN CLIP		
Cyprinus carpio			
juvenile centrarchid			
Esox niger			
Luxilus cornutus			
Semotilus corporalis			
Lepomis cyanellus			
Rhinichthys cataractae			
Micropterus salmoides			
Lepomis auritus			
Oncorhynchus mykiss			
Micropterus dolomieu			
Notropis hudsonius			
Etheostoma olmstedi			
Catostomus commersoni			
Perca flavescens			

STREAM NAME : **MOOSUP RIVER (Open area)** SITE #: **5229**

SITE DESCRIPTION: FROM 1.0 KM ABOVE QUINEBAUG RIVER, UPSTREAM TO STP OUTFALL, PLAINFIELD.
(TMA HOLDOVER TROUT EVALUATION IN ALL-TACKLE SECTION OF TROUT MANAGEMENT AREA)
(TROUT- ONLY SAMPLE)

SAMPLE LENGTH : 1200. SAMPLE DATE: 09/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta	STOCKED	
Salmo trutta	ADIPOSE CLIP	
Salmo trutta	RIGHT VENTRAL CLIP	
Oncorhynchus mykiss	STOCKED	

STREAM NAME : **MOOSUP RIVER (Above STP)** SITE #: **5230**

SITE DESCRIPTION: 100 M DOWNSTREAM OF RTE. 14 BRIDGE, DOWNSTREAM TO
SEWAGE TREATMENT PLANT OUTFALL, PLAINFIELD. (TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 327. SAMPLE DATE: 09/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta	STOCKED	
Salmo trutta	ADIPOSE CLIP	
Salmo trutta	RIGHT VENTRAL CLIP	

STREAM NAME : **MOOSUP RIVER (Fly area)** SITE #: **5231**

SITE DESCRIPTION: FROM 0.6 KM ABOVE QUINEBAUG RIVER, UPSTREAM 0.4 KM, PLAINFIELD.
(FROM TOP OF SITE 5228 TO TOP OF FLY-ONLY AREA IN TMA, GAMEFISH-ONLY SAMPLE)

SAMPLE LENGTH : SAMPLE DATE: 09/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta	ADIPOSE CLIP		
Salmo trutta	STOCKED		
Salmo trutta	RIGHT VENTRAL CLIP		
Micropterus salmoides			
Micropterus dolomieu			

STREAM NAME : **MOOSUP RIVER (Side Braid)** SITE #: **5232**

SITE DESCRIPTION: SHALLOW SIDE BRAID APPROXIMATELY 1 KM UPSTREAM OF QUINEBAUG RIVER, PLAINFIELD.
(IN BOTTOM 500 M OF OPEN TMA AREA)

SAMPLE LENGTH : 400. SAMPLE DATE: 09/07/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	PRESENT		
Salmo trutta	ADIPOSE CLIP		
Cyprinus carpio	PRESENT		
Luxilus cornutus	PRESENT		
Rhinichthys cataractae	PRESENT		

STREAM NAME : **TANKERHOOSEN RIVER** SITE #: **5233**

SITE DESCRIPTION: BELOW RAILROAD BROOK CONFLUENCE, VERNON.
(BELDEN PROPERTY, TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 379. SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :15.00	(C)	pH . . . . . :	7.2	
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	172.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta	STOCKED	
Salmo trutta	WILD	

STREAM NAME : **RAILROAD BROOK** SITE #: **5234**

SITE DESCRIPTION: UPSTREAM OF TANKERHOOSEN RIVER, VERNON. (TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 50. SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :17.00	(C)	pH . . . . . :	8.9	
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	145.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta		

STREAM NAME : **TANKERHOOSEN RIVER** SITE #: **5235**

SITE DESCRIPTION: SMALL SECTION BELOW AND UNDER BOLTON RD. BRIDGE, VERNON.
(BELDEN PROPERTY, TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 27. SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :		POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%) AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta	WILD	
Salmo trutta	STOCKED	
Oncorhynchus mykiss	STOCKED	

STREAM NAME : **TANKERHOOSEN RIVER** SITE #: **5236**

SITE DESCRIPTION: UPSTREAM OF BOLTON RD., IMMEDIATELY UPSTREAM OF BELDEN POND, VERNON.
(FROM POND TO FIRST BEND IN STREAM, STREAM AREA BACKED UP BY POND, TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 61. SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :		POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%) AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta		

STREAM NAME : **TANKERHOOSEN RIVER** SITE #: **5237**

SITE DESCRIPTION: STARTED 61 M ABOVE POND UPSTREAM OF BOLTON RD. VERNON. (TROUT-ONLY SAMPLE IN GRAVEL/COBBLE AREA ABOVE SITE 5236, BELDEN PROPERTY)

SAMPLE LENGTH : 222. SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta		

STREAM NAME : **TANKERHOOSEN RIVER TRIB.** SITE #: **5238**

SITE DESCRIPTION: 1.2 M WIDE TRIB. APPROXIMATELY 400 M UPSTREAM OF BOLTON RD., SAMPLED FROM MOUTH UPSTREAM VERNON. (ABOVE SITE 5237, BELDEN PROPERTY, TROUT-ONLY SAMPLE)

SAMPLE LENGTH : 62. SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :	6.9	
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	63.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis		
Salmo trutta		

STREAM NAME : **TANKERHOOSEN RIVER (Pond)** SITE #: **5239**

SITE DESCRIPTION: BELDEN POND APPROXIMATELY 100 M UPSTREAM OF BOLTON RD. ON TANKERHOOSEN RIVER, VERNON. (SEINE SAMPLE, 40-50% OF POND POPULATION SAMPLED)

SAMPLE LENGTH : SAMPLE DATE: 09/14/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Pomoxis nigromaculatus	RARE		
Lepomis macrochirus	COMMON		
Salvelinus fontinalis	WILD		
Salvelinus fontinalis	STOCKED		
Salmo trutta	STOCKED		
Salmo trutta	WILD		
Notemigonus crysoleucas	ABUNDANT		
Micropterus salmoides	RARE		
Lepomis gibbosus	COMMON		
Oncorhynchus mykiss	STOCKED		
Etheostoma olmstedi	RARE		
Catostomus commersoni	ABUNDANT		

STREAM NAME : **NATCHAUG RIVER** SITE #: **5240**

SITE DESCRIPTION: FROM LATHERS PARK UPSTREAM THROUGH FIRST RIFFLE, WINDHAM.

SAMPLE LENGTH : 117. SAMPLE DATE: 09/20/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
Lepomis macrochirus		
Rhinichthys atratulus		
juvenile centrarchid		
Luxilus cornutus		
Semotilus corporalis		
Rhinichthys cataractae		
Micropterus salmoides		
Lepomis gibbosus		
Lepomis auritus		
Micropterus dolomieu		
Notropis hudsonius		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : **NATCHAUG RIVER** SITE #: **5241**

SITE DESCRIPTION: FROM TOP OF SITE 5240 UPSTREAM TO CONFLUENCE WITH ORGINAL NATCHAUG CHANNEL BELOW THE RTE. 6 BY-PASS, WINDHAM.

SAMPLE LENGTH : SAMPLE DATE: 09/20/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta			
Cyprinus carpio			
Esox niger			
Notemigonus crysoleucas			
Esox lucius	RIGHT VENTRAL CLIP		
Ambloplites rupestris			
Catostomus commersoni			
Ameiurus natalis			
Perca flavescens			

STREAM NAME : **NATCHAUG RIVER** (original channel) SITE #: **5242**

SITE DESCRIPTION: ORIGINAL RIVER CHANNEL DOWNSTREAM OF RTE. 6, FROM CONFLUENCE WITH NEW CHANNEL UPSTREAM, WINDHAM.

SAMPLE LENGTH : 100. SAMPLE DATE: 09/20/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
Lepomis macrochirus		
Esox niger		
Luxilus cornutus		
Semotilus corporalis		
Rhinichthys cataractae		
Micropterus salmoides		
Ambloplites rupestris		
Lepomis auritus		
Micropterus dolomieu		
Notropis hudsonius		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : **NATCHAUG RIVER** SITE #: **5243**

SITE DESCRIPTION: FROM RTE. 6 BRIDGE UPSTREAM TO ARTIFICIAL RIFFLE, WINDHAM.

SAMPLE LENGTH : 270. SAMPLE DATE: 09/20/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
Pomoxis nigromaculatus		
Lepomis macrochirus		
Cyprinus carpio		
Esox niger		
Luxilus cornutus		
Semotilus corporalis		
Notemigonus crysoleucas		
Rhinichthys cataractae		
Micropterus salmoides		
Ambloplites rupestris		
Lepomis auritus		
Micropterus dolomieu		
Notropis hudsonius		
Etheostoma olmstedi		
Catostomus commersoni		
Perca flavescens		

STREAM NAME : **PEQUABUCK RIVER** SITE #: **5244**

SITE DESCRIPTION: UPSTREAM OF OLD DAM SITE ABOVE WASHINGTON ST.- RTE. 177, BRISTOL. (DEEP CUTS, GRAVEL)

SAMPLE LENGTH : 150. SAMPLE DATE: 09/22/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	19.00	(C)	DISSOLVED OXYGEN (mg/l). .	9.6	0.06
WATER TEMP. . .	13.00	(C)	pH	7.4	0.00
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). .	111.3	0.6
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	10.69	1.87	(m)
DEPTH.	36.13	23.55	(cm)
DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .: 0.49
TYPE THREE SUBSTRATE . . .	0.03	(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE	6.67	(%)	
OVERHEAD CANOPY.	58.00	(%)	
INSTREAM SHELTER	225.2	(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata			
Lepomis macrochirus			
Rhinichthys atratulus			
Salmo trutta	WILD		
Salmo trutta	ADIPOSE CLIP, SPRING 91 FINGERLING STOCKING		
Semotilus corporalis			
Notemigonus crysoleucas			
Micropterus salmoides			
Catostomus commersoni			

STREAM NAME : **PEQUABUCK RIVER** SITE #: **5245**

SITE DESCRIPTION: D.O.T. PROPERTY UPSTREAM OF WASHINGTON STREET, (ABOVE SITE 5244) BRISTOL.

SAMPLE LENGTH : 75. SAMPLE DATE:

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata			
Salmo trutta	WILD		
Semotilus corporalis			
Esox americanus			
Notemigonus crysoleucas			
Rhinichthys cataractae			
Catostomus commersoni			

STREAM NAME : **PEQUABUCK RIVER** SITE #: **5246**

SITE DESCRIPTION: D.O.T. PROPERTY.UPSTREAM OF WASHINGTON STREET (ABOVE SITE 5245), BRISTOL. (AREA UNDER HEAVY EROSION IMPACT)

SAMPLE LENGTH : 345. SAMPLE DATE:

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	323.6	(m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata			
Rhinichthys atratulus			
Salmo trutta	WILD		
Salmo trutta	ADIPOSE CLIP, SPRING 91 FINGERLING STOCKING		
Semotilus corporalis			
Esox americanus			
Notemigonus crysoleucas			
Rhinichthys cataractae			
Micropterus salmoides			
Notropis hudsonius			
Etheostoma olmstedi			
Catostomus commersoni			

STREAM NAME : **LATIMER BROOK** SITE #: **5247**

SITE DESCRIPTION: 272 M SECTION ABOVE HEAD OF TIDE, EAST LYME.
(DOWNSTREAM OF SITE 5080, SINGLE PASS SAMPLE)

SAMPLE LENGTH : 272. SAMPLE DATE:

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	WILD		
Salmo trutta	FINGERLING STOCKING		
Salmo trutta	STOCKED		
Salmo trutta	WILD		
Apeltes quadracus			
Micropterus salmoides			
Fundulus heteroclitus			
Fundulus diaphanus			
Lepomis gibbosus			
Etheostoma olmstedi			

STREAM NAME : **HAMMONASSET RIVER** SITE #: **5248**

SITE DESCRIPTION: UPSTREAM OF CHESTNUT HILL RD., MADISON. (SINGLE PASS TROUT ASSESSMENT)

SAMPLE LENGTH : 500. SAMPLE DATE: 08/26/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1993 YEARLING BURLINGTON STRAIN	
Salvelinus fontinalis	STOCKED	
Salvelinus fontinalis	WILD	
Salmo trutta	WILD	
Salmo trutta	1992 YEARLING CORTLAND STRAIN	
Salmo trutta	STOCKED	
Salmo trutta	1993 YEARLING BITTERROOT STRAIN	
Salmo trutta	1993 FINGERLING BITTERROOT STRAIN	
Oncorhynchus mykiss	STOCKED	

STREAM NAME : **HAMMONASSET RIVER** SITE #: **5249**

SITE DESCRIPTION: AT OLD MILL SITE APPROX. 1 KM UPSTREAM OF CHESTNUT HILL RD., MADISON/KILLINGWORTH. (TROUT ONLY)

SAMPLE LENGTH : 240. SAMPLE DATE: 08/26/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS_OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta	1993 YEARLING BITTERROOT STRAIN		
Salmo trutta	STOCKED		

STREAM NAME : **SALMON RIVER** SITE #: **5250**

SITE DESCRIPTION: UPSTREAM OF BIGELOW BROOK IN SALMON RIVER STATE PARK PICNIC AREA, EAST HAMPTON. (COBBLE, BOULDER)

SAMPLE LENGTH : 362. SAMPLE DATE: 09/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata			
Lepomis macrochirus			
Rhinichthys atratulus			
Salmo trutta	ADIPOSE CLIP		
Salmo trutta	STOCKED		
Salmo salar	STOCKED		
Luxilus cornutus			
Semotilus corporalis			
Rhinichthys cataractae			
Lepomis gibbosus			
Micropterus dolomieu			
Etheostoma olmstedi			
Catostomus commersoni			

STREAM NAME : **SALMON RIVER** SITE #: **5251**

SITE DESCRIPTION: FROM POWERLINE CROSSING IN TMA, UPSTREAM TO WOLF BROOK CONFLUENCE, COLCHESTER. (GAMEFISH ONLY)

SAMPLE LENGTH : 1400. SAMPLE DATE: 09/15/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salmo trutta	STOCKED	
Salmo trutta	ADIPOSE CLIP	
Salmo salar	STOCKED	
Micropterus dolomieu		

STREAM NAME : **HOCKANUM RIVER** SITE #: **5252**

SITE DESCRIPTION: FROM CHINESE RESTAURANT TO FINESS CLUB PARKING LOT, RECHANNELIZED AREA BY RTE. 84, MANCHESTER. (TROUT ONLY)

SAMPLE LENGTH : 1130. SAMPLE DATE: 09/27/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	WILD	
Salmo trutta	STOCKED	
Salmo trutta	FINGERLING STOCKED	
Salmo trutta	WILD	

STREAM NAME : **STEELE BROOK** SITE #: **5269**

SITE DESCRIPTION: SECTION PARALLEL TO RT 73, WATERTOWN. (JUST UPSTREAM OF STADIUM)

SAMPLE LENGTH : 150. SAMPLE DATE: 08/26/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :	8.0	
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	310.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . : POOL/RIFFLE RATIO . .:

TYPE THREE SUBSTRATE . . . : (%) AIR/WATER TEMP. RATIO:

EMBEDDEDNESS OF TYPE THREE : (%)

OVERHEAD CANOPY. . . . . : (%)

INSTREAM SHELTER . . . . . : (m2)

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Semotilus atromaculatus	415.9	11.0
Lepomis macrochirus	6.2	0
Rhinichthys atratulus	32228.4	874.0
Cyprinus carpio	18.6	0
Lepomis auritus	99.3	24.8
Etheostoma olmstedi	55.9	0
Catostomus commersoni	2185.0	116.4
Lepomis gibbosus	24.8	0
Notemigonus crysoleucas	6.2	0
Luxilus cornutus	1142.1	135.6

STREAM NAME : **STEELE BROOK** SITE #: **5270**

SITE DESCRIPTION: UPSTREAM OF SEWAGE TREATMENT PLANT, WATERTOWN.
(SAME AS SITE 3041)

SAMPLE LENGTH : 138. SAMPLE DATE: 08/26/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :	7.5	
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :	253.0	
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	10876.2	120.5
Pomoxis nigromaculatus	13.3	0
Lepomis auritus	26.6	0
Etheostoma olmstedi	2406.6	62.5
Catostomus commersoni	2858.7	37.6
Micropterus salmoides	186.2	0
Luxilus cornutus	16939.2	112.1
Semotilus atromaculatus	7286.3	94.3

STREAM NAME : **LITTLE RIVER TRIB.** SITE #: **5300**

SITE DESCRIPTION: UPSTREAM OF SAND HILL RD., HAMPTON.

SAMPLE LENGTH : 40. SAMPLE DATE: 07/21/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :25.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.7	0.06
WATER TEMP. . . :14.50	(C)	pH . . . . . :	6.3	0.00
VELOCITY. . . . : 0.0258	(m/s)	COND . . . . . (uS/cm3). . :	50.7	1.2
DISCHARGE . . . : 0.0200	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	18.6	0.70

	MEAN	STD		
WIDTH. . . . . :	1.30	0.43	(m)	
DEPTH. . . . . :	5.89	6.10	(cm)	
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	3.44
TYPE THREE SUBSTRATE . . . :	0.40	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	27.50	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	2.8	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	1538.5	0.0
Salvelinus fontinalis	29230.8	2551.8

STREAM NAME : MERRICK BROOK SITE #: 5301

SITE DESCRIPTION: FROM SHETUCKET RIVER UPSTREAM TO BEAVER BROOK, SCOTLAND. (SINGLE PASS, GAMEFISH ONLY)

SAMPLE LENGTH : 2000. SAMPLE DATE: 08/09/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	:16.00	(C)	pH . . . . . :		
VELOCITY. . . .	:	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . .	:	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH.	:		(m)	
DEPTH.	:		(cm)	
DOMINANT SUBSTRATE TYPE. .	:		POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . .	:	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE	:	(%)	OVERHEAD CANOPY. . . . . :	(%)
INSTREAM SHELTER	:	(m2)		

BIOLOGICAL

SPECIES		POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	WILD		
Salvelinus fontinalis	STOCKED		
Salmo trutta	WILD		
Salmo trutta	STOCKED		
Oncorhynchus mykiss	STOCKED		
Salmo salar .....STOCKED			
Micropterus dolomieu			

STREAM NAME : **GARDNER BROOK** SITE #: **5302**

SITE DESCRIPTION: UPSTREAM OF BISHOP RD., BOZRAH.

SAMPLE LENGTH : 200. SAMPLE DATE: 08/11/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :21.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :15.00	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	COMMON	
Lepomis macrochirus	COMMON	
Salmo trutta	STOCKED	
Salmo trutta	WILD	
Esox niger	COMMON	
Luxilus cornutus	COMMON	
Semotilus corporalis	ABUNDANT	
Micropterus salmoides	COMMON	
Lepomis gibbosus	COMMON	
Lepomis auritus	COMMON	
Etheostoma olmstedi	COMMON	
Catostomus commersoni	ABUNDANT	
Perca flavescens	ABUNDANT	

STREAM NAME : **GARDNER BROOK** (lower) SITE #: **5303**

SITE DESCRIPTION: 100 M UPSTREAM OF GAGER RD., BOZRAH.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/11/93

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :21.00	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :17.00	(C)	pH . . . . . :		
VELOCITY. . . . :	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD		
WIDTH. . . . . :			(m)	
DEPTH. . . . . :			(cm)	
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :		(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	RARE	
Ameiurus nebulosus	COMMON	
Lepomis macrochirus	COMMON	
Salvelinus fontinalis	COMMON	
Rhinichthys atratulus	COMMON	
Salmo trutta	COMMON	
Esox niger	COMMON	
Semotilus corporalis	ABUNDANT	
Micropterus salmoides	ABUNDANT	
Lepomis gibbosus	COMMON	
Lepomis auritus	COMMON	
Etheostoma olmstedi	COMMON	
Catostomus commersoni	ABUNDANT	
Perca flavescens	COMMON	

STREAM NAME : **STILL RIVER** SITE #: **5304**

SITE DESCRIPTION: SHALLOW CHANNELIZED SECTION WITH COBBLE BOTTOM, BELOW KOHANZA BROOK, DANBURY.

SAMPLE LENGTH : 100. SAMPLE DATE: 09/01/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :		(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	21.00	(C)	pH . . . . . :		
VELOCITY. . . . :		(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	COMMON	
Semotilus atromaculatus	COMMON	
Rhinichthys cataractae	ABUNDANT	
Etheostoma olmstedi	COMMON	
Catostomus commersoni	ABUNDANT	

STREAM NAME : **STILL RIVER** SITE #: **5305**

SITE DESCRIPTION: ABOVE SITE 5304, ABOVE KOHANZA BROOK, DANBURY. (SHALLOW COBBLE AND CEMENT CHANNEL)

SAMPLE LENGTH : 100. SAMPLE DATE: 09/01/93

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :		(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	21.00	(C)	pH . . . . . :		
VELOCITY. . . . :		(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :			(m)
DEPTH. . . . . :			(cm)
DOMINANT SUBSTRATE TYPE. . :			POOL/RIFFLE RATIO . .:
TYPE THREE SUBSTRATE . . . :		(%)	AIR/WATER TEMP. RATIO:
EMBEDDEDNESS OF TYPE THREE :		(%)	
OVERHEAD CANOPY. . . . . :		(%)	
INSTREAM SHELTER . . . . . :		(m2)	

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	ABUNDANT	
Semotilus atromaculatus	COMMON	
Rhinichthys cataractae	ABUNDANT	
Etheostoma olmstedi	COMMON	
Catostomus commersoni	ABUNDANT	