STATE OF CONNECTICUT

Department of Envrionmental Protection

Bureau of Natural Resources

Fisheries Division

Federal Aid in Sport Fish Restoration F-66-R-4

Annual Performance Report

Project Title: **A Survey of Connecticut Streams and Rivers**

Job 2. Stream Survey

Job 3. Angler Survey

Period Covered: April 1, 1991 to March 31, 1992

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Acknowledgments

We would like to acknowledge the many private land owners, towns, water districts, and water companies (Bridgeport Hydraulic Company, and Towns of Waterbury, Woodbury, and Danbury) who allowed us access to their properties. The diligence and dedication of the following field personnel was greatly appreciated: Mike Beauchene, Chris Bellucci, Steve Caromile, Dirk DeBoer, Mike Docker, and Evelyn Ryan. We appreciate the long hours endured by Chris Bellucci in processing our invertebrate samples. We wish to express our appreciation to Eleanor Mariani and Vic Crecco for their review and comments on this document. Additional thanks are offered to all other project and division staff whose assistance has helped to make our job a lot easier.

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ABSTRACT

A comprehensive stream survey was conducted on the lower Housatonic River drainage basin as part of a multiple year study of Connecticut streams and rivers. A total of 146 sites on 127 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 87.4% of the streams that were sampled. Preliminary data analyses were done on invertebrate samples collected in 1990. The number of insect families present was unrelated to the occurrence of wild trout. Previous years' data had indicated that wild trout were restricted to streams inhabited by at least 10 families of aquatic insects.

Angler surveys were done on six streams and one impounded stream section in a state park. Heavy fishing pressure (6,062 hrs/km) was measured on the impoundment in Southford Falls State Park. Light fishing pressure was observed on Eightmile Brook (463 hrs/km) and Little River (469 hrs/km), both of which are stocked with adult trout. Fishing effort on four streams stocked with yearling brook trout was also light and ranged from 55 to 377 hrs/km.

Requests for information collected during the stream survey more than doubled during 1991. Data collected from 232 sites were provided at the request of various 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 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 understandable form. Most objectives cannot be realized until the last year of the study.

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 forth year of a six year stream sampling program. The first three years covered sampling of the Connecticut River basin and the southwest coastal streams. The lower Housatonic River drainage, south of State Route 109, was sampled during 1991 (Figure 1). This included the southern half of the Naugatuck River and Shepaug River drainages, as well as three other regional basins greater than 100 km^2. These regions have been undergoing a moderate level of development with approximately 2.55 construction permits per square mile issued per year during the mid-1980's (Chase Econometrics 1986). The lower half of the Naugatuck River, the Still River (Danbury) and the section of the Housatonic River below Ansonia historically have had substantial impacts from industry. Great strides have been made in improving these areas in recent years.

Table 1.-Drainage area of lower Housatonic River basin, adjacent Hudson River streams, and lower Naugatuck River basin.

Regional Basins	Major and Regional Basin Codes	Area (km^2)	Portion Sampled Area (km^2)
Housatonic River	60	5,040	2,406
Candlewood Lake Regional Basin	64	105	105
Still River	66	185	185
Shepaug River	67	404	135
Pomperaug River	68	230	230
Naugatuck River	69	802	523
Additional subregional basins[1]			
Housatonic River	60		
Farmill River			67
Eightmile Brook			45
Pootatuck River			67
Pomperaug River	68		
Weekeepeemee River			69
Nonewaug River			70
Naugatuck River	69		
Little River			40
Hop Brook			45
Mad River			68
Steele Brook			44
Hancock Brook			40
Hudson River drainage	81		25
Quaker Brook (Conn. reaches only)			
Total Area Sampled			3,584

1(Only subregional basins 40 km^2 or greater are listed)

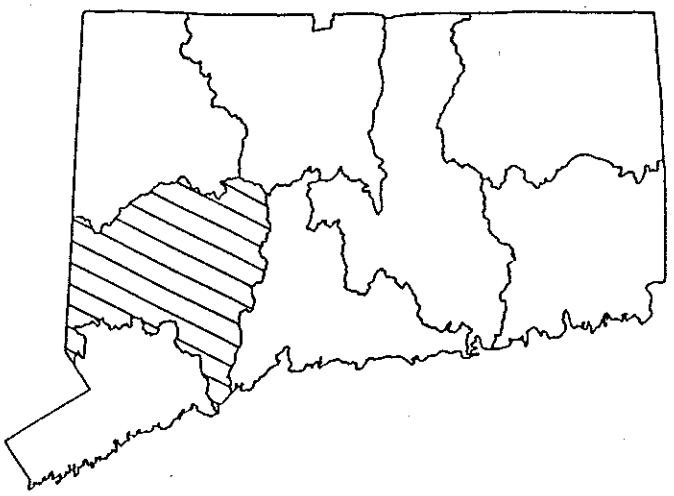

Figure 1. Drainage area sampled during 1991.

2.0 Methodology

2.1 Resource Identification:

The location 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. State land purchase and lease records were consulted to identify additional public access sites.

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.

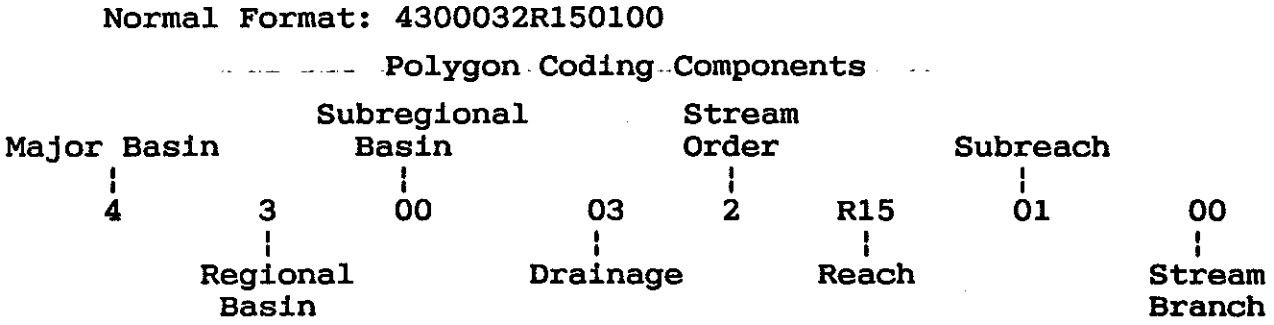

Figure 2. Polygon Coding System, an extension of DEP, Natural Resources Center's Stream Classification System.

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 100-130 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 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 access the variability between significantly differing habitat types (upland vs channelized meadow);
5) Using the list of all stream polygons sorted by widths, a random selection of sample sites were 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 was not collected from the lower Housatonic River (downstream of the Derby Dam). 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 (i.e. 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 (Oct. 1990) and prior to April 15, 1991.

2.3 Invertebrate Collections:

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

Samples were collected using a 0.25 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 field 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 Rte. 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 allows 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 60 cm 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 as length of cover as a percentage of the total stream 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 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 was obtained at sample flags one, five and nine (i.e. 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 was visible in the water column), moderate (turbidity limits visibility into the water column to no more than 50 cm), or heavy (visibility was 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 0.25 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 200 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 catagory include 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 a summer heat wave.

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 was measured by one of two methods: 1) Marsh McBirney digital flow meter, or 2) a salt dilution technique. With the Marsh McBirney, flow was measured along a transect line set 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 0-10 cm; and at 0.6 of the water column depth 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 to an adjacent stream section and processed. 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 hade 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 dolomieui*, 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 for 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 separation 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 size, scales were checked. 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.

Biomass estimates for each site were generated using the length frequency data and species specific length/weight relationship. 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 muscle/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 stored cold and 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 out 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 (TCL) 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):

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

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:

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

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.

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

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 strata 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 identifed 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 strata.

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 interview 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 devloped 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 Hyatt 1987). 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 Housatonic River flows south out of Massachusetts and ends at Long Island Sound. The majority of this basin drains the western highlands. The Naugatuck River is the single largest tributary. It flows south through a heavily developed area and receives industrial and municipal effluents. Areas of both the Naugatuck River and the Housatonic River have been dredged for gravel in the past. Several very deep sections were created in the Naugatuck River. The Housatonic River has a series of five hydropower dams, two of which form large impoundments (Lake Zoar and Lake Lillinonah).

The drainages of the lower Housatonic River are primarily underlain by granite bedrock, with a small area of marble along the main channel of the Still River, and a section of slate and arkose on the lower half of the Pomperaug River. Sections of 24 drainages are protected as public water supplies, with some having undergone impoundment, channelization, or extensive stream diversion (i.e. Boys Halfway River to Means Brook).

Data were collected from 146 sites on 127 streams (Figure 3 and Appendix B). Salmonids were present at 111 sites on 100 streams. Evidence of brook trout *Salvelinus fontinalis* and/or brown trout *Salmo trutta* reproduction was found at 104 sites on 96 streams (Table 6).

Preliminary data analyses were carried out on all chemical, habitat, and population data. Standing crop and age class abundance were calculated where possible. Because of the length of time required to identify, enumerate, and weigh invertebrates, 1991 sample processing has not been completed. In this report analyses of invertebrate data from 1990 sample sites are presented. More detailed analyses will be conducted during the final year of the study once more complete data sets have been compiled.

3.1 Chemical:

Means, standard deviations, and ranges of values were calculated for dissolved oxygen, pH, conductivity, and alkalinity

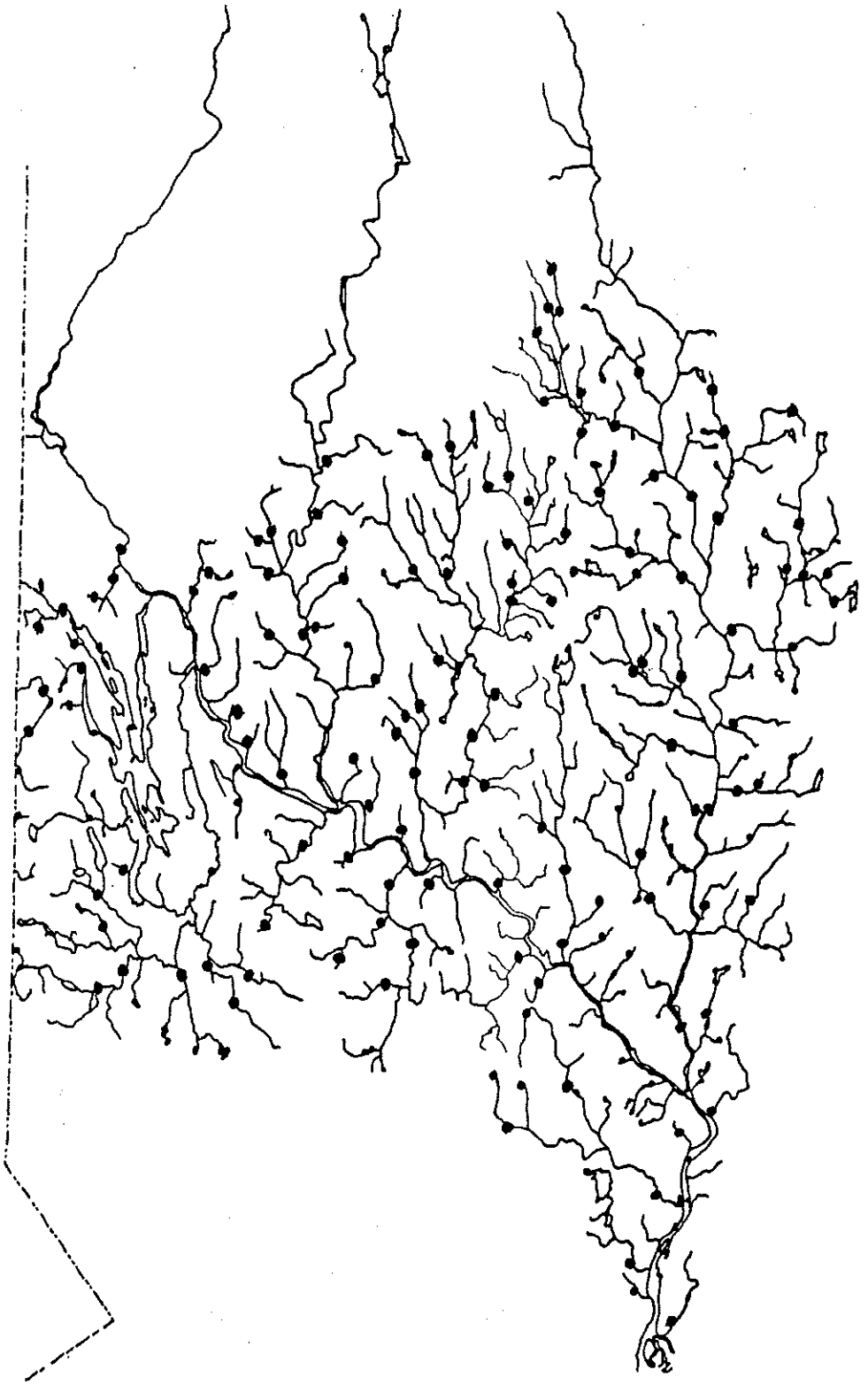

Figure 3.-The 146 sites sampled during the 1991 season.

Table 6.-Percentage of streams with trout reproduction[1] by species and drainage for the 1991 sample season.

Drainage Name and Code	Number of Streams	Percentage of Streams with Trout Reproduction		
		Brown Tr.	Brook Tr.	Total
Housatonic River 60	42	28.0	71.4	78.6
Candlewood Lake regional basin 64	11	18.2	45.4	63.6
Still River 66	7	28.6	28.6	28.6
Shepaug River 67	11	45.5	91.0	100.0
Pomperaug River 68	18	38.9	66.7	88.9
Naugatuck River 69	35	17.1	68.6	80.0
Hudson/Croton River basin 81	3	33.3	100.0	100.0
Totals 1991	127	32.3	72.4	87.4

1 Rainbow trout parr were present in two streams in the Housatonic River drainage (Wewaka Brook and Pootatuck River), however the origin of these fish (hatchery or wild) could not be determined with certainty.

(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.

Dissolved oxygen (D.O.) concentrations were not significantly different from previous years. No trout were found in streams with D.O. concentrations below 6.0 ppm, which is the lower limit of the range suitable for trout (Raleigh 1982).

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

Parameter	All Streams 1991	Streams With Trout Present	Streams With Trout Reproduction
Dissolved Oxygen(mg/l)	9.4±1.5 (4.0-11.5)	9.6±1.5 (6.6-11.5)	9.5±1.5 (6.6-11.5)
pH	7.3±0.5 (6.0-8.3)	7.3±0.5 (6.0-8.3)	7.3±0.5 (6.0-8.3)
Conductivity [1]	152±79 (39-523)	136±57 (39-349)	132±53 (39-267)
Alkalinity [2]	38.1±30.9 (2.6-161.4)	33.7±24.3 (2.6-131.6)	33.2±22.6 (2.6-117.5)

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

Conductivity and pH values were all within expected ranges. Alkalinity values were all above 2.5 mg/l indicating little likelihood of acidification problems.

3.2 Physical:

Means, standard deviations, and ranges were calculated for several physical parameters (Table 8). Mean water velocity was slightly lower (0.11 m/s) than in drainages sampled in previous years (0.12-0.22 m/s, Hagstrom et al. 1989, 1990, 1991). Mean discharge volume in streams with trout reproduction (0.11 m^3/s) was significantly lower (0.28 m^3/s, 1990; 0.20 m^3/s, 1989). Mean overhead canopy values were approximately the same as in previously sampled drainages. Embeddedness of type 3 and type 4 substrates was slightly higher and lower respectively than in streams sampled in 1990, but was generally comparable to other drainages. For all streams combined, pool-riffle ratios were similar to those in other drainages. The mean pool-riffle ratio for streams with trout reproduction, however, was considerably higher than in other drainages (21.6, 1991 versus 0.6, 1989; 6.7, 1990) but these values were not significantly different due to the large standard deviations.

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

Parameter	All Streams 1991	Streams With Trout Present	Streams With Trout Reproduction
Mean Water Velocity m/s	0.11±0.10 (0.0 -0.8)	0.11±0.10 (0.01-0.8)	0.11±0.10 (0.01-0.8)
Discharge Volume m^3/s	0.11±0.29 (0.001-2.6)	0.11±0.31 (0.001-2.6)	0.11±0.32 (0.001-2.6)
Overhead Canopy (%)	84.5±21.6 (0-100)	84.9±21.5 (0-100)	85.0±21.8 (0-100)
Pool/Riffle Ratio	47.0±296 (0-2000)	19.9±190.5 (0-2000)	21.6±198.8 (0-2000)
Site elevation (meters above sea level)	121±54 (11-261)	119±54 (14-261)	121±54 (15-261)
Substrate[1] Percent Embeddedness			
Type 3	45.9±23.6 (4-100)	41.9±21.8 (4-92)	41.8±21.6 (4-92)
Type 4	33.4±14.8 (2.5-90)	32.9±13.9 (2.5-70)	33.1±14.4 (2.5-70)

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

3.3 Biological:

3.3.1 Invertebrates:

During May and June 1991, 573 invertebrate samples were collected at low flow sample sites. Invertebrate samples collected during 1990 were sorted and identified to family (Appendix B) by June 1991. 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). 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).

Table 9.-Summary of invertebrate data from 1990 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)	53	61	44
Number of Families	13.8 ± 5.8 (3-28)	18.4 ± 6.2 (3-30)	18.8 ± 5.9 (6-30)
Individuals/m^2	1176 ± 891	1177 ± 972	1295 ± 1030
Weight g/m^2	12.5 ± 9.4	13.0 ± 9.6	14.5 ± 10.1
Ind. Wt ≥1.0 mg			
Number of Families	7.2 ± 3.7 (1-18)	9.1 ± 3.5 (0-15)	9.5 ± 3.2 (3-15)
Individuals/m^2	873 ± 908	926 ± 888	1021 ± 939
Weight g/m^2	13.0 ± 11.9	12.6 ± 9.6	14.0 ± 10.1

Sites sampled in 1990 averaged 18 (± 6) families when trout were present and 14 (± 6) families when trout were absent. The mean number of families with trout present was similar to the 1988 and 1989 means, but the number of families with no trout present was comparable to 1989 values and higher than 1988 values. Earlier data had suggested that a ten family cutoff may work to indicate streams capable of supporting trout reproduction, but this year at several streams with trout reproduction had fewer than 10 families present. This possible indicator of stream quality will be reexamined later for species specific differences at sites with reproducing trout populations.

3.3.2 Fish populations:

In 1991 one new fish species not previously encountered during the stream survey was collected: bluntnose minnow, *Pimephales notatus*. This single specimen was collected in a sample taken in the Housatonic River. Again green sunfish, *Lepomis cyanellus*, were collected in areas where they were not previously reported by Whitworth (1968).

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 all above 30% (Table 10). 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 bias 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).

Table 10.-Efficiency of capture (p) during the 1991 sample season for selected species.

Species	Number of Sites	Number p>30%	Mean p	Maximum p	Minimum p
American eel *Anguilla rostrata*	23	21	63	100	25
Brown trout *Salmo trutta*	58	55	67	100	33
Brook trout *Salvelinus fontinalis*	98	94	74	100	50
Fallfish *Semotilus corporalis*	20	17	61	100	10
White sucker *Catostomus commersoni*	82	73	61	100	15
Blacknose dace *Rhinichthys atratulus*	120	108	63	100	16
Common shiner *Luxilus cornutus*	40	34	60	100	17
Longnose dace *Rhinichthys cataractae*	50	41	54	100	13
Tessellated darter *Etheostoma olmstedi*	51	38	44	100	1
All species combined	133	118	61		

Trout reproductive success was very high (present in 87.4% of all streams) in all subregional basins except the Still River drainage (28.6 %). The high level of residential development and industrial effluent probably contributed to the low reproductive success in this area. Brown trout reproduction was wide spread and consistently present in every drainage. The levels of brook trout reproduction were as high as in any drainages sampled to date with five of the seven subregional basins having at least 60% of the streams containing evidence of brook trout reproduction.

The length-weight relationships in Table 11 were used to generate biomass estimates for fish populations as described in Hagstrom et al. (1990). Mean trout biomass (kg/ha) and number per hectare are listed by regional basin in Table 12. Trout biomass ranged from 0.1 to 214.1 kg/ha for brook trout and 0.04

Table 11.-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

Table 12.-Mean ± standard deviation of standing crop (kg/ha) and number per hectare of trout by drainage in the lower Housatonic River and Naugatuck River basins, and adjacent Hudson River drainage streams sampled in 1991.

	Standing Crop		Number per Hectare	
Species/ Drainage	Streams with Trout	Streams with Reproduction	Streams with Trout	Streams with Reproduction
Brown trout				
Housatonic R.	29.9± 31.8	34.9± 36.0	786± 956	1058± 1023
Candlewood L.	243.5±150.0	209.0±174.0	2092± 2063	2923± 2076
Still R.	26.3± 12.7	26.0± 12.7	508± 108	508± 108
Shepaug R.	41.0± 34.7	49.7± 40.0	1908± 2237	2224± 2334
Pomperaug R.	12.7± 14.2	13.6± 14.6	355± 440	388± 448
Naugatuck R.	9.7± 9.6	10.9± 10.2	248± 388	422± 454
Quaker Br.	0.1± ---	0.1± ---	15± ---	15± ---
All drainages	35.4± 66.7	35.4± 63.3	822± 1340	980± 1379
Brook trout				
Housatonic R.	23.7± 35.1	25.1± 35.8	1059± 1609	1159± 1650
Candlewood L.	58.8± 30.9	67.4± 26.1	1782± 2162	2301± 2269
Still R.	12.5± 8.6	12.5± 8.6	362± 24	362± 24
Shepaug R.	42.0± 62.8	42.0± 62.8	1282± 2197	1282± 2197
Pomperaug R.	34.9± 37.4	35.7± 38.4	2584± 2932	2756± 3061
Naugatuck R.	27.4± 30.2	28.3± 30.5	1434± 1520	1557± 1524
Quaker Br.	57.8± 25.0	57.8± 25.0	7238± 8956	7238± 8956
All drainages	32.4± 38.9	33.3± 39.6	1764± 2402	1901 2461

to 382.5 kg/ha for brown trout. The mean number per hectare ranged from 0.06 to 10,043 fish/ha for brook trout and 0.1 to 5800 fish/ha for brown trout. The average brown trout biomass values for the Housatonic River were higher than seen in most other drainages sampled, while brook trout biomasses were comparable to other drainages.

Biomass values from the Candlewood Lake regional basin included several streams that were thermal refuges for the lake. There were several large individuals at each site that inflated the biomass values (mean 209 kg/ha) above what the real carrying capacities of the streams were. This in turn inflated the mean biomass numbers up to 35 kg/ha for brown trout from all regional basins. With Candlewood Lake streams dropped out, mean brown trout biomass dropped to 22 kg/ha which is a more accurate reflection of stream biomass and is in close agreement with Farmington River values.

The biomass of other fish species varied considerably between drainages and stream sites (Table 13). American eel population biomasses were significantly lower in the Housatonic River and Naugatuck River systems and the number of sites with eels was greatly reduced. No sea lampreys were encountered this year which is surprising given the large flow volume of the Housatonic system. The dams on the lower Housatonic River and Naugatuck River greatly limit the upstream movement of American eels, but do not eliminate it. Some individuals were found to pass the Derby Dam at Ansonia and the Stevenson Dam (approx. 25 m high) on Lake Zoar. In the Naugatuck River some individuals were taken in the main stem of the river above the Kinneytown Dam, but no individuals were taken in tributary streams.

Table 13.-Mean ± standard deviation and range of standing crop (kg/ha) of fish species by drainage in the lower Housatonic River and Naugatuck River basins, and adjacent Hudson River drainage streams.

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
White sucker, *Catostomus commersoni*					
Housatonic R.	24	39.8 ±	75.1	423.8	0.01
Candlewood L.	3	0.9 ±	0.8	2.0	0.12
Still R.	9	62.1 ±	97.9	307.6	1.12
Shepaug R.	3	66.2 ±	57.7	140.7	0.15
Pomperaug R.	11	76.8 ±	130.9	423.8	0.37
Naugatuck R.	27	42.5 ±	61.2	237.0	0.01
Quaker Br.	2	0.08 ±	0.02	0.09	0.06
American eel, *Anguilla rostrata*					
Housatonic R.	13	47.0 ±	47.5	160.4	4.64
Candlewood L.	0	--- ±	---	---	---
Still R.	0	--- ±	---	---	---
Shepaug R.	0	--- ±	---	---	---
Pomperaug R.	6	13.4 ±	17.9	53.2	3.50
Naugatuck R.	3	2.3 ±	1.2	3.7	0.73
Quaker Br.	0	--- ±	---	---	---
Blacknose dace, *Rhinichthys atratulus*					
Housatonic R.	36	11.2 ±	4.7	55.0	0.25
Candlewood L.	6	4.4 ±	4.7	11.9	0.02
Still R.	7	39.6 ±	68.7	198.3	0.02
Shepaug R.	10	3.3 ±	2.7	9.0	0.33
Pomperaug R.	20	18.0 ±	22.2	102.6	0.40
Naugatuck R.	38	10.7 ±	10.1	38.8	0.04
Quaker Br.	2	6.3 ±	0.3	6.6	5.99
Longnose dace, *Rhinichthys cataractae*					
Housatonic R.	15	5.1 ±	5.5	20.0	0.26
Candlewood L.	0	--- ±	---	---	---
Still R.	4	2.1 ±	2.1	5.2	0.01
Shepaug R.	5	10.5 ±	8.4	20.7	0.45
Pomperaug R.	10	8.0 ±	8.6	30.1	0.07
Naugatuck R.	17	6.8 ±	9.9	41.8	0.21
Quaker Br.	0	--- ±	---	---	---
Fallfish, *Semotilus corporalis*					
Housatonic R.	4	1.2 ±	1.2	3.1	0.05
Candlewood L.	0	--- ±	---	---	---
Still R.	0	--- ±	---	---	---
Shepaug R.	1	2.3 ±	---	---	---
Pomperaug R.	6	16.8 ±	13.7	41.7	2.01
Naugatuck R.	7	23.9 ±	30.0	81.7	2.31
Quaker Br.	1	38.4 ±	---	---	---

Table 13.-Continued

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
Common shiner, *Luxilus cornutus*					
Housatonic R.	11	1.4 ±	2.2	6.7	0.02
Candlewood L.	0	--- ±	---	---	---
Still R.	6	0.3 ±	0.1	0.3	0.06
Shepaug R.	3	11.9 ±	10.0	25.4	1.55
Pomperaug R.	9	12.2 ±	16.2	41.7	0.04
Naugatuck R.	10	1.1 ±	1.8	6.1	0.04
Quaker Br.	1	0.3 ±	---	---	---
Redbreast sunfish, *Lepomis auritus*					
Housatonic R.	5	1.3 ±	1.1	2.6	0.06
Candlewood L.	2	20.4 ±	16.1	36.5	4.28
Still R.	4	0.3 ±	0.2	0.6	0.06
Shepaug R.	1	0.7 ±	---	---	---
Pomperaug R.	2	1.4 ±	1.4	2.8	0.01
Naugatuck R.	10	1.4 ±	3.2	10.9	0.03
Quaker Br.	0	--- ±	---	---	---
Pumpkinseed sunfish, *Lepomis gibbosus*					
Housatonic R.	12	2.7 ±	6.6	24.2	0.10
Candlewood L.	3	1.0 ±	0.9	2.3	0.03
Still R.	6	3.2 ±	3.8	11.3	0.15
Shepaug R.	3	0.9 ±	1.2	2.6	0.04
Pomperaug R.	6	0.5 ±	0.4	1.3	0.08
Naugatuck R.	20	0.5 ±	0.7	2.68	0.01
Quaker Br.	1	0.2 ±	---	---	---
Largemouth bass, *Micropterus salmoides*					
Housatonic R.	10	1.0 ±	1.7	5.9	0.05
Candlewood L.	2	0.1 ±	0.1	0.1	0.05
Still R.	8	1.4 ±	2.8	8.7	0.02
Shepaug R.	3	1.9 ±	2.0	4.8	0.28
Pomperaug R.	7	1.4 ±	2.1	6.4	0.17
Naugatuck R.	12	1.1 ±	1.5	5.4	0.02
Quaker Br.	2	0.2 ±	---	0.2	0.15
Smallmouth bass, *Micropterus dolomieui*					
Housatonic R.	3	0.9 ±	0.5	1.3	0.27
Candlewood L.	1	0.7 ±	---	---	---
Still R.	0	--- ±	---	---	---
Shepaug R.	0	--- ±	---	---	---
Pomperaug R.	2	3.4 ±	---	6.2	0.59
Naugatuck R.	2	0.9 ±	---	1.6	0.10
Quaker Br.	0	--- ±	---	---	---

Table 13.-Continued

Species/ Drainage	Number of Sites	Mean ±	sd	Max	Min
Species of limited state distribution					
Cutlips minnow, *Exoglossum maxillingua*					
Housatonic R.	2	1.2 ±	---	1.7	0.85
Candlewood L.	0	--- ±	---	---	---
Still R.	2	13.1 ±	---	25.8	0.35
Shepaug R.	0	--- ±	---	---	---
Pomperaug R.	3	14.0 ±	13.2	32.5	2.48
Naugatuck R.	0	--- ±	---	1.6	0.10
Quaker Br.	2	0.7 ±	0.5	1.2	0.25

White sucker populations were common and ranges of biomass were typical. High maximum values as seen in the Farmington River and Park River systems were not encountered in the lower Housatonic drainage, however this does not preclude the possibility that high white sucker biomasses will be seen during next year's sampling of the upper mainstem Housatonic River. Fallfish distribution was more restricted than in the central lowland areas of the state. Fallfish were primarily encountered in the larger rivers (Pomperaug River and Naugatuck River). Centrarchid populations were of approximately the same level and ranges of biomass as observed in previous years. There were a few more smallmouth bass populations than in 1990 and these were located primarily in the larger rivers (Naugatuck River, Pomperaug River, and Housatonic River). Cutlips minnows were present in the system and occasionally were found in high biomasses (10-15 kg/ha).

The densities of age 0 brown trout parr (Table 14) sampled in three tributaries of the Shepaug River and in two lake tributaries, one to Lake Lillinonah and one to Squantz Pond, were higher than any previously sampled. The highest density of age 0 parr was in Glenn Brook, a clean gravel stream that had few age 1 fish. It appears that this stream may function as a spawning and

Table 14.-Range of number of age-0 and age-1 brook trout and brown trout per hectare sampled in 1989, 1990 and 1991.

Year	Age 0	Age 1
Brook trout		
1989	12 - 6,114	4 - 2,111
1990	9 - 26,792	2 - 1,263
1991	10 - 7,304	6 - 4,822
Brown trout		
1989	1 - 680	2 - 1,125
1990	3 - 2,020	2 - 558
1991	2 - 4,819	1 - 917

nursery area for Squantz Pond brown trout. Part of the reason these densities appear so high is because data from relatively narrow streams were expanded to a fish-per-hectare basis. Also this year was a very low flow year which may have concentrated parr in higher than average numbers and inflated the estimates to some extent.

Densities of age 0 brook trout occurred in a range that was similar to previous years. Four sites had age 1 brook trout densities higher than seen before. Again this may be a result of concentration of individuals due to low flows. All four sites were small, unfished or lightly fished streams.

Mean lengths at age for brown trout (Table 15) were in the moderate to fast growth ranges for all age classes (Newman 1985). The ranges of values were comparable to other Connecticut drainages except for two values. Length at age 2 in the Nonewaug River (242 mm) and length at age 3 in the Pootatuck River (292 mm) were higher than previously seen for these age classes. Mean lengths at age for brook trout were similar to what has been found in previous years.

Table 15.-Mean brown trout length and range at age for streams sampled through 1991, and selected comparison values.

Source	Age 1 (mm)	Age 2 (mm)	Age 3 (mm)
Connecticut River Drainages, Conn.	97.6 (73-131)	176.9 (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)	200.7 (145-242)	266 (183-292)
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 16.-Mean brook trout length and range at age for streams sampled through 1991, 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)
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 six streams and one impounded stream section (Figure 4 and Table 17) were creeled during 1991. Four of the streams were yearling-brook-trout-stocked streams on which we increased the sampling effort by sampling twice on each creeling route. Creel clerks would sample the yearling streams, then creel an adult stocked stream and then repeat the yearling

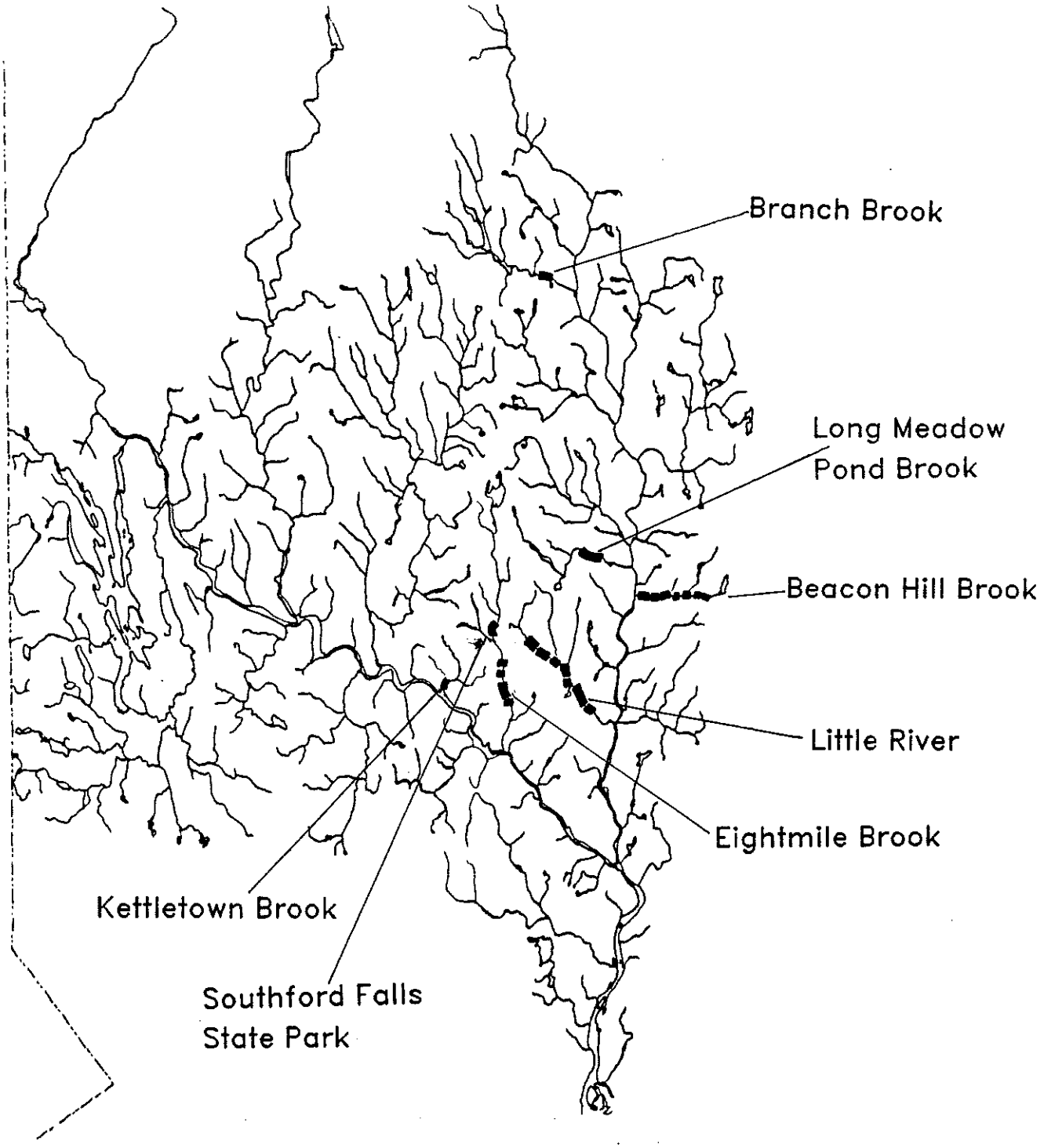

Figure 4.-Location of angler surveys in the lower Housatonic River drainages conducted during 1991.

Table 17.-Stocking information for streams on which angler surveys were conducted in 1991.

Stream	Species Stocked[1]	Total Number of Trout Stocked	Number Stocked per km	Number of In-season Stockings
Eightmile Br.	BK, BN	840	233	0
Southford Falls Park Pond	BK, BN, RW	2,180	---	2
Little R.	BK, BN, RW	1,340	480	1
Branch Br.	YBK	1000	713	0
Beacon Hill Br.	YBK	1080	389	0
Long Meadow Pond Br.	YBK	500	384	0
Kettletown Br.	YBK	600	794	0

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).

streams. This allowed us to obtain approximately 47-60 samples per yearling stream and better determine when these yearling streams were used. This also greatly reduced the variances of estimates.

4.1 Angler Survey Site Descriptions:

The Eightmile Brook originates at Lake Quassapaug in Middlebury and flows south to the Housatonic River in Oxford. It was characterized by a long low gradient stretch and two steep sections. One steep section was in Southford Falls State Park below Papermill Pond. This section has approximately 25 m of drop in elevation over a 300 m stretch of stream. The other steep section was the bottom 1.5 km of the stream. The stream was approximately 7 m wide and was dominated by cobble substrate in lower gradient areas, and bedrock and boulders in steeper sections.

Papermill Pond, a 1.5 hectare State park impoundment was used extensively during the fishing season. It has a foot bridge over the forebay to the dam, and open lawn around most of the pond. It also has an access area for the handicapped. The pond and the brook received separate allotments of fish, and the angler usage was considerably different. We creeled these two adjacent areas separately to try to quantify these differences in usage.

The Little River, which was approximately 6.5 m wide, parallels Rte. 67 in Oxford and Seymour. There were several small impoundments on this stream, and a significant wild population of brown trout was present. The substrate was dominated by cobble and small boulders, and several sections have been channelized. Portions of the stream owned by the Bridgeport Hydraulic Company were protected from development.

Branch Brook in Thomaston was a gravel/cobble substrate stream that had highly variable flows due to upstream water company diversions during the late spring and summer months. At the start of the creel period the stream width was approximately 10 m. By June it had decreased to about 6 m wide. The creeled section started just below the Army Corps of Engineer's Black Rock Flood Control Dam and continued downstream through the entire length of Black Rock State Park. The park has a camping area adjacent to the stream. This section of stream, which was stocked with yearling brook trout, was approximately 1 km upstream from the Naugatuck River.

Beacon Hill Brook, which was approximately 7 m wide, flows into the Naugatuck River in the town of Naugatuck. It received yearling brook trout stockings from the State and has received brown trout fry stockings from the State with the help of Trout Unlimited volunteers. Most sections were dominated by cobble and small boulder substrate. There were several sections with large boulders and some areas have been channelized. Most of the creel area was in a residential section. The upper most part of the creel section was adjacent to water company property and contained wild brook trout.

Long Meadow Pond Brook in Naugatuck was a narrow (approximately 4 m wide) stream that has been channelized in some areas and contains several old dams. Portions were overgrown and had artificial materials embedded in the substrate (shopping carts). The stream substrate was made up of cobble and shifting sand in some areas and small boulders in other areas. Long Meadow Pond Brook was stocked with yearling brook trout.

Kettletown Brook, 6 m wide, in Southbury was located in Kettletown State Park. The stream channel was located in a bedrock gorge surrounded by hemlock trees. There was access along the entire length of the stream from park roads and foot paths. This stream was stocked with yearling brook trout, and wild brook trout and brown trout were present in the stream.

4.2 Angler Survey Summaries:

During 1991 we continued to use the 5 strata 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 small yearling brook trout streams.

4.2.1 Effort:

Angler effort results are presented in Table 18. The level of angler effort ranged from a low of 72 h on Long Meadow Pond Brook to a high of over 6000 h at Papermill Pond in Southford Falls State Park. Papermill Pond attracted an extremely dense crowd on opening day (over 300 anglers during the first hour). Its open lawns, park surroundings, and nearby facilities attracted people for most of the creel period. The two adult stocked streams (Little River and Eightmile Brook) had moderate to low total angler hours (1665 and 1338 h respectively) compared to previously creeled adult-stocked streams, and relatively low levels of angler effort expressed on an hours-per-kilometer basis (469 and 463 h/km respectively).

Yearling-brook-trout-stocked (YBT) streams supported between 72 and 527 total angler hours. This was comparable to the range of values seen elsewhere in Connecticut for YBT streams. On an angler-hours-per-kilometer basis the effort in the more heavily used YBT streams (24-377 h/km) overlapped the range of effort in

adult trout stocked streams (238-7,576 h/km) from other drainages. YBT streams were utilized for a shorter period (24 days or less) each spring than adult-stocked trout streams (usually 50 days or more).

The relative standard error (RSE) of effort estimates for 1991 YBT streams ranged between 8.7 and 42.0% and averaged 22.7% (N=4). This represents a reduction in RSE values by more than 50% over values from 1988-89 YBT stream creels (mean RSE=58.7%, N=4). This improvement was accomplished by increasing the number of samples per season from 7-21 per stream in 1988-89 to 45-60 for each stream in 1991.

4.2.2 Catch per unit of effort (CPUE)

In general CPUE values (Table 18) averaged higher than in streams surveyed in previous years. Mean CPUE values from YBT streams were considerably higher in 1991 (1.93 fish/h-all fish; 1.62 fish/h-trout only) than in 1988-89 (0.36 fish/h-all fish; 0.36 fish/h-trout only). The CPUE on adult stocked streams in 1991 averaged 0.82 fish/h for all species, and 0.64 fish/h for trout only. In two YBT streams, Beacon Hill Brook and Long Meadow Pond Brook, the catch of wild and/or stocked brown trout augmented the creel significantly. In Beacon Hill Brook an ongoing brown trout fry stocking effort by local Trout Unlimited chapter volunteers (using fry from Burlington State Fish Hatchery) was probably responsible for at least some of the additional 0.26 fish/h supplied by brown trout. The source of brown trout in Long Meadow Pond Brook was not determined. Several brown trout and rainbow trout were documented in the Branch Brook creel. These fish were assumed to have come from upstream adult-stocked sites. In the adult streams CPUE values for each trout species were roughly proportional to their percentage of occurrence in the stocking mix.

Table 18.-Effort in angler-hours and catch per unit of effort (CPUE) in fish-per-hour for streams surveyed in 1991.

Stream	Angler Effort			Catch Per Unit of Effort			
	Total Hrs	Hrs Per KM	±RSE	Brown Trout	Brook Trout	Rainbow Trout	All Fish[1]
Eightmile Br.	1,665	463	±18.1%	0.553	0.125	0.201	1.092
Southford Falls Park Pond	6,062	---	± 8.7%	0.190	0.076	0.187	0.615
Little R.	1,338	469	±19.9%	0.420	0.139	0.016	0.746
Branch Br.	527	377	±17.0%	0.027	1.385	0.013	1.696
Beacon Hill Br.	448	162	±15.0%	0.225	1.130	0.0	1.964
Long Meadow Pond Br.	72	55	±42.0%	0.222	1.180	0.0	1.790
Kettletown Br.	174	236	±17.0%	0.0	2.250	0.0	2.250

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

4.2.3 Total catch

Estimated total catches by stream and species are presented in Table 19. Trout catch averaged 350 trout/km for adult stocked streams and 364 trout/km for YBT streams. The 1991 catch estimate RSEs were very consistent (33 ± 4%). The mean RSE value for YBT streams improved from 73.7 ± 26% prior to 1991, to 34.5 ± 5% in 1991. This was again due to the larger sample size in 1991, and the switch to stocked vs. non-stocked stratification used for the first time last year. Scheduling more samples in the stocked strata resulted in more angler catches being documented in the surveys.

Percent-return-to-the-creel was estimated by dividing the catch per kilometer (Table 19) by the total number of trout stocked per kilometer (Table 17). Percent-return-to-the-creel of stocked trout (Table 20) was highly variable with YBT tending to show lower return rates. These numbers are sometimes misleading because of the influence of catch-and-release fishing, and wild trout supplementing the creel.

Table 19.-Total catch and catch by species for streams surveyed in 1991.

Stream	Trout Catch Per KM	±RSE	Total Catch			
			Brown Trout	Brook Trout	Rainbow Trout	All Fish
Eightmile Br.	426	±36%	921	208	335	1,816
Papermill Pond[1] (Southford Falls)	(2,742)	±33%	1,151	458	1,133	3,729
Little R.	274	±27%	564	186	22	998
Branch Br.	537	±29%	14	730	7	894
Beacon Hill Br.	315	±35%	114	507	0	880
Long Meadow Pond Br.	78	±33%	16	85	0	129
Kettletown Br.	529	±41%	0	392	0	392

1 Approximately 1.5 hectare impoundment on Eightmile Brook. Data are raw numbers (not converted to number per kilometer).

Table 20.-Return to the creel for trout in stream sections surveyed in 1991; all trout species combined.

Stream	# Caught per km	# Stocked per km	Percent return
Eightmile Br.	426	247	173%
Papermill Pond[1]	(2,742)	(2180)	126%
Little R.	274	480	57%
Branch Br.	537	503	107%
Beacon Hill Br.	315	343	92%
Long Meadow Pond Br.	85	339	25%
Kettletown Br.	529	1150	46%

1 Approximately 1.5 hectare impoundment on Eightmile Brook. Data are raw numbers (not converted to number per kilometer).

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 inquires as soon as all calculations were complete. Attempts have been made to make people aware of the data collected by the project through public speaking opportunities. Requests for data increased from 85 in 1990, to 232 in 1991 (Table 21). This is an increase of 270% in information utilization. Public information requests alone increased from 13 to 72.

The State's fishing easment program continues to make use of our angler survey data to determine the price which should be paid to obtain permanent fishing access to private property (Laforte 1989).

6.0 Expenditures:

A total of $160,181.22 was expended for Job 2 and $44,863 for Job 3. Federal reimbursement under the Federal Aid in Sport Fish Restoration Act amounted to 75%, $126,534 and $33,647, respectively. State expenditures were $42,178 for Job 2 and $11,216 for Job 3.

Table 21.-Data/information requests: January 1991-January 1992.

Request Type	Information Needed	Number of Requests
1) Access Acquisition	Socioeconomic	5
2) Environmental Review	Physical, Chemical Biological	39
3) Use by Bureau of Fish and Wildlife on other programs	Biological, Angler Survey	46
4) Use by Other State Agencies	Physical, Chemical Biological	15
5) Public Information	Biological, Angler Survey	72
6) Land Owner Requests	Physical, Chemical Biological	49
7) Municipal Requests	Physical, Chemical Biological	6

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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				
Nematophorpha				
Tardigrada				
Annelida	Oligochaeta			
	Hirudinea			
Arthropoda	Crustacea			
		Amphipoda		
		Decapoda		
		Isopoda		
	Insecta	Coleoptera		Circulionidae
				Dryopidae
				Dytiscidae
				Elmidae
				Gyrinidae
				Hydrophilidae
				Ptilodactylidae
				Psephenidae
		Collembola		
		Diptera		Athericidae
				Ceratopogonidae
				Chironomidae
				Culicidae
				Dixidae
				Dolichopodidae
				Empididae
				Muscidae
				Psychodidae
				Simuliidae
				Stratiomyidae
				Tabanidae
				Tipulidae
		Ephemeroptera		Baetidae
				Caenidae
				Ephemeridae
				Ephemerellidae
				Heptageniidae
				Leptophlebiidae
				Oligoneuriidae
				Potamanthidae
				Siphlonuridae
				Tricorythidae
		Hemiptera		Corixidae
				Gerridae
				Saldidae
				Veliidae
		Lepidoptera		Pyralidae
				Tortricidae
		Megaloptera		Corydalidae
				Sialidae
		Odonata	Anisoptera[1]	
				Aeshnidae
				Cordulegastridae
				Gomphidae
				Macromiidae
			Zygoptera[1]	
				Agrionidae
				Coenagronidae
				Calopterygidae

[1] Super family

Table A-1.-Continued.

Phylum	Class	Order	Family
		Plecoptera	Capniidae
			Chloroperlidae
			Leuctridae
			Nemouridae
			Perlidae
			Perlodidae
			Peltoperlidae
			Pteronarcyidae
		Trichoptera	Brachycentridae
			Glossosomatidae
			Helicopsycidae
			Hydropsychidae
			Hydroptilidae
			Lepidostomatidae
			Leptoceridae
			Limnephilidae
			Molannidae
			Odontoceridae
			Philopotamidae
			Phryganeidae
			Polycentropodidae
			Psychomyiidae
			Rhyacophilidae
			Sericostomatidae
		Neuroptera	Sisyridae
Mollusca	Gastropoda	Basomnatophora	"limpets"
			Ancylidae
			Lymnacidae
			Physidae
			Planorbidae
		Mesogastropoda	Viviparidae
	Pelecypoda		Spheridae
Arachnoidea		"Hydracarina"	

Appendix B

Stream names and site numbers where data were collected in 1991; and page numbers on which they are presented.

Location name	Site #	Page #	Location name	Site #	Page #
Ball Pond Brook	3012	63	Hockanum Brook	3057	87
Beacon Hill Brook	3049	83	Hop Brook	3047	82
Beaver Brook	3119	113	Hopp Brook	3136	75
Beaver Brook	3078	97	Housatonic River	3062	89
Beaver Pond Brook	3043	80	Housatonic River	3150	126
Bladens River	3050	83	Hurds Brook	3094	104
Boys Halfway River	3090	103	Indian Hole Brook	3091	103
Branch Brook	3039	78	Ivy Brook	3138	121
Bullet Hill Br., S. Br.	3056	86	Jacks Brook	3025	70
Bullymuck Brook	3066	91	Jacks Brook	3077	97
(Bullymuck Brook trib)*	3106	108	Jeremy Brook	3096	105
(Candlewood Lake trib)*	3102	107	Jericho Brook	3137	121
(Candlewood Lake trib)*	3156	127	Kettletown Brook	3006	60
(Candlewood Lake trib)*	3157	127	Kinneytown Brook	3111	110
Cavanaugh Brook	3126	117	Kirby Brook	3083	100
Cross Brook	3067	92	Kohanza Brook	3019	67
(Curtis Brook trib)*	3132	119	(Lake Lillinonah trib)*	3139	122
Deep Brook	3009	62	Lewis Atwood Brook	3079	98
(Deep Brook trib)*	3127	117	Lewis Brook	3017	66
East Meadow Brook	3117	112	Limekiln Brook	3023	69
East Morris Brook	3071	94	Little Pootatuck Brook	3100	106
East Spring Brook	3028	71	Little River	3051	84
(East Spring Br. trib)*	3122	115	Long Meadow Pond Brook	3048	82
East Swamp Brook	3022	68	Long Swamp Brook	3053	85
East Swamp Brook	3063	90	Mad River	3044	80
Eightmile Brook	3004	59	Mad River	3045	81
Eightmile Brook	3059	88	Mad River	3055	86
Farmill River	3002	58	Mallory Brook	3081	99
Farmill River	3061	89	Means Brook	3003	59
Fenn Brook	3121	114	Merwin Brook	3124	116
Fenn Brook	3143	124	Miry Brook	3018	66
Fivemile Brook	3093	104	Moosehorn Brook	3069	93
Fourmile Brook	3135	120	Moosehorn Brook	3085	101
Fulling Mill Brook	3046	81	Naugatuck River	3036	75
Gerow Brook	3013	64	Naugatuck River	3037	76
Glen Brook	3065	91	Naugatuck River	3038	77
Goodhill Brook	3080	98	Nonewaug River	3029	72
Great Brook	3088	102	Nonewaug River	3033	74
Greenwood Brook	3087	101	(Nonewaug River trib)*	3105	108
Halfway River	3005	60	Old Tannery Brook	3109	109
Hancock Brook	3040	78	Padanaram Brook	3020	67
Hancock Brook	3130	119	Pitch Brook	3105	108
Harvey Pete Brook	3060	88	Pogond Brook	3146	125
Haviland Mill Pond Br.	3158	128	Pole Bridge Brook	3125	116
Hemp Swamp Brook	3076	96	Pomperaug River	3026	70
Hesseky Brook	3032	73	Pomperaug River	3027	71
Hitchcock Mill Brook	3113	111	Pond Brook	3010	62
			Pootatuck River	3007	61

* These streams have no official names. Names given to aid in location.

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STREAM NAME : PUMKIN GROUND BROOK SITE #: 3001
SITE DESCRIPTION: 100M BELOW CHAPEL ST. BRIDGE, STRATFORD, SHIFTING SAND, WOODED.
SAMPLE LENGTH : 120. SAMPLE DATE: 07/01/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.23	0.12
WATER TEMP. . .	23.00	(C)	pH . . . . . :	6.63	0.65
VELOCITY. . . .	0.072	(m/s)	COND . . . . . (uS/cm3). . :	211.00	10.58
DISCHARGE . . .	0.038	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	24.93	6.63

	MEAN	STD	
WIDTH. . . . . :	3.37	1.66	(m)
DEPTH. . . . . :	15.13	11.14	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	16.14
TYPE THREE SUBSTRATE . . . :	37.0	(%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	78.50	(%)		
OVERHEAD CANOPY. . . . . :	75.00	(%)		
INSTREAM SHELTER . . . . . :	47.980	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	544.	0.0
Lepomis macrochirus	123.	0.0
Salmo trutta	49.	0.0
Esox niger	222.	0.0
Notemigonus crysoleucas		
Micropterus salmoides	741.	0.0
Lepomis gibbosus	272.	0.0
Lepomis auritus	24.	0.0
Etheostoma olmstedi	1780.	138.0
Catostomus commersoni	2448.	90.3

STREAM NAME : FARMILL RIVER SITE #: 3002
SITE DESCRIPTION: PARALLEL TO YUTAKA TRAIL, 100M UPSTREAM OF INTERSECTION OF YUTAKA TRAIL AND MANHASSET ROAD, STRATFORD.
SAMPLE LENGTH : 150. SAMPLE DATE: 07/11/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.33	0.38
WATER TEMP. . .	19.00	(C)	pH . . . . . :	7.63	0.21
VELOCITY. . . .	0.087	(m/s)	COND . . . . . (uS/cm3). . :	211.00	1.00
DISCHARGE . . .	0.061	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	131.67	1.7E2

	MEAN	STD	
WIDTH. . . . . :	7.55	2.64	(m)
DEPTH. . . . . :	21.02	18.58	(cm)

DOMINANT SUBSTRATE TYPE. . :	6		POOL/RIFFLE RATIO . .:	1.34
TYPE THREE SUBSTRATE . . . :	4.5	(%)	AIR/WATER TEMP. RATIO:	1.32
EMBEDDEDNESS OF TYPE THREE :	36.67	(%)		
OVERHEAD CANOPY. . . . . :	0.80	(%)		
INSTREAM SHELTER . . . . . :	60.615	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	547.	46.6
Lepomis macrochirus	8.	0.0
Rhinichthys atratulus	4388.	146.4
Salmo trutta	141.	0.0
Esox niger	8.	0.0
Semotilus atromaculatus	35.	0.0
Unknown cyprinid	8.	0.0
Pimephales promelas	8.	0.0
Rhinichthys cataractae	1580.	224.5
Lepomis gibbosus		
Lepomis auritus	247.	31.0
Etheostoma olmstedi	423.	63.4
Catostomus commersoni	450.	27.3

STREAM NAME : **MEANS BROOK** SITE #: 3003
SITE DESCRIPTION: ABOVE MEANS RESERVOIR, UPSTREAM OF SAWMILL CITY RD, SHELTON. (BHC PROPERTY)
SAMPLE LENGTH : 150. SAMPLE DATE: 07/02/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.43	0.25
WATER TEMP. . .	18.00	(C)	pH . . . . . :	6.63	0.21
VELOCITY. . . .	0.025	(m/s)	COND . . . . . (uS/cm3). . :	136.67	10.60
DISCHARGE . . .	0.060	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	26.93	0.31

	MEAN	STD	
WIDTH. . . . . :	4.50	1.42	(m)
DEPTH. . . . . :	30.08	23.50	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	3.84
TYPE THREE SUBSTRATE . . . :	8.1	(%)	AIR/WATER TEMP. RATIO:	1.28
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)		
OVERHEAD CANOPY. . . . . :	0.90	(%)		
INSTREAM SHELTER . . . . . :	174.465	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	59.	0.0
Lepomis macrochirus	74.	0.0
Salvelinus fontinalis	29.	0.0
Salmo trutta	29.	0.0
Esox niger	14.	0.0
Unknown cyprinid	29.	0.0
Lepomis gibbosus	88.	0.0
Oncorhynchus mykiss	14.	0.0
Catostomus commersoni	29.	0.0
Perca flavescens	59.	0.0

STREAM NAME : **EIGHTMILE BROOK** SITE #: 3004
SITE DESCRIPTION: PARALLEL TO O'NEAL RD AT SEVENMILE BROOK CONFLUENCE, OXFORD.
SAMPLE LENGTH : 150. SAMPLE DATE: 07/15/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.93	0.06
WATER TEMP. . .	19.00	(C)	pH . . . . . :	7.37	0.06
VELOCITY. . . .	0.041	(m/s)	COND . . . . . (uS/cm3). . :	140.33	0.58
DISCHARGE . . .	0.026	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	34.90	0.20

	MEAN	STD	
WIDTH. . . . . :	7.46	1.58	(m)
DEPTH. . . . . :	12.18	11.57	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	6.43
TYPE THREE SUBSTRATE . . . :	20.6	(%)	AIR/WATER TEMP. RATIO:	1.16
EMBEDDEDNESS OF TYPE THREE :	57.14	(%)		
OVERHEAD CANOPY. . . . . :	0.89	(%)		
INSTREAM SHELTER . . . . . :	21.765	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	107.	0.0
Lepomis macrochirus	35.	0.0
Salvelinus fontinalis	98.	0.0
Rhinichthys atratulus	2448.	27.3
Salmo trutta	142.	0.0
Luxilus cornutus	1456.	74.9
Unknown cyprinid	268.	0.0
Semotilus corporalis	62.	0.0
Notemigonus crysoleucas	8.	0.0
Rhinichthys cataractae	205.	0.0
Lepomis gibbosus	26.	0.0
Lepomis auritus	232.	0.0
Oncorhynchus mykiss	8.	0.0
Micropterus dolomieui	71.	0.0
Etheostoma olmstedi	1000.	228.7
Catostomus commersoni	1045.	39.4

STREAM NAME : HALFWAY RIVER SITE #: 3005
SITE DESCRIPTION: RTE 34 PULLOFF 1/4 MILE UPSTREAM OF GREAT QUARTER RD., NEWTOWN. (HEMLOCKS)
SAMPLE LENGTH : 165. SAMPLE DATE: 07/18/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.43	0.12
WATER TEMP. . .	:21.00 (C)	pH . . . . . :	7.57	0.21
VELOCITY. . . .	: 0.085 (m/s)	COND . . . . . (uS/cm3). . :	88.67	1.53
DISCHARGE . . .	: 0.034 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	21.50	0.96

	MEAN	STD	
WIDTH. . . . . :	6.02	1.65	(m)
DEPTH. . . . . :	10.15	10.72	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.59
TYPE THREE SUBSTRATE . . . :	9.3 (%)	AIR/WATER TEMP. RATIO:	1.14
EMBEDDEDNESS OF TYPE THREE :	82.00 (%)		
OVERHEAD CANOPY. . . . . :	0.91 (%)		
INSTREAM SHELTER . . . . . :	16.970 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	40.	0.0
Lepomis macrochirus	10.	0.0
Salvelinus fontinalis	20.	0.0
Rhinichthys atratulus	956.	46.9
Salmo trutta	1147.	16.9
Unknown cyprinid	10.	0.0
Rhinichthys cataractae	573.	35.9
Catostomus commersoni	70.	0.0

STREAM NAME : KETTLETOWN BROOK SITE #: 3006
SITE DESCRIPTION: AT KETTLETOWN S.P., 200 M BELOW BRIDGE, SOUTHBURY. (BEDROCK/BOULDER)
SAMPLE LENGTH : 100. SAMPLE DATE: 06/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:17.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.93	0.15
WATER TEMP. . .	:14.00 (C)	pH . . . . . :	6.63	0.06
VELOCITY. . . .	: 0.085 (m/s)	COND . . . . . (uS/cm3). . :	97.33	2.52
DISCHARGE . . .	: 0.057 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	21.00	0.35

	MEAN	STD	
WIDTH. . . . . :	4.59	1.37	(m)
DEPTH. . . . . :	14.75	13.52	(cm)

DOMINANT SUBSTRATE TYPE. . :	7	POOL/RIFFLE RATIO . .:	1.04
TYPE THREE SUBSTRATE . . . :	0.0 (%)	AIR/WATER TEMP. RATIO:	1.21
EMBEDDEDNESS OF TYPE THREE :	82.00 (%)		
OVERHEAD CANOPY. . . . . :	0.91 (%)		
INSTREAM SHELTER . . . . . :	43.415 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	21.	0.0
Lepomis macrochirus	108.	0.0
Salvelinus fontinalis	784.	0.0
Rhinichthys atratulus	915.	243.2
Salmo trutta	479.	0.0
Semotilus atromaculatus	87.	0.0
Luxilus cornutus	21.	0.0
Notemigonus crysoleucas	43.	0.0
Rhinichthys cataractae	392.	0.0
Lepomis gibbosus	283.	0.0
Catostomus commersoni	980.	163.7

STREAM NAME : **POOTATUCK RIVER** SITE #: **3007**
SITE DESCRIPTION: AT ROCKY GLEN S. P., NEWTOWN.
(BEDROCK/HEMLOCK GORGE)
SAMPLE LENGTH : 150. SAMPLE DATE: 09/23/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	14.00	(C)	DISSOLVED OXYGEN (mg/l). .		11.57	0.06
WATER TEMP. . .	11.00	(C)	pH			
VELOCITY. . . .	0.036	(m/s)	COND . . . . . (uS/cm3). .		178.33	2.89
DISCHARGE . . .	0.190	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	10.67	3.55	(m)
DEPTH.	25.25	20.31	(cm)

DOMINANT SUBSTRATE TYPE. .	7		POOL/RIFFLE RATIO . .	3.75
TYPE THREE SUBSTRATE . . .	7.5	(%)	AIR/WATER TEMP. RATIO:	1.27
EMBEDDEDNESS OF TYPE THREE	16.67	(%)		
OVERHEAD CANOPY.	0.48	(%)		
INSTREAM SHELTER	416.130	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	6.	0.0
Salvelinus fontinalis	37.	0.0
Rhinichthys atratulus	712.	22.1
Salmo trutta	131.	0.0
Semotilus atromaculatus	81.	0.0
Luxilus cornutus	162.	0.0
Semotilus corporalis	6.	0.0
Rhinichthys cataractae	468.	38.7
Micropterus salmoides	12.	0.0
Lepomis auritus	150.	0.0
Oncorhynchus mykiss	12.	0.0
Etheostoma olmstedi	118.	19.0
Catostomus commersoni	243.	7.5

STREAM NAME : **POOTATUCK RIVER** SITE #: **3008**
SITE DESCRIPTION: POOTATUCK FISH AND GAME CLUB PROPERTY AT UPSTREAM
END OF ACCESS RD., NEWTOWN.
SAMPLE LENGTH : 152. SAMPLE DATE: 09/11/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .		11.13	0.12
WATER TEMP. . .	18.00	(C)	pH			
VELOCITY. . . .	0.203	(m/s)	COND . . . . . (uS/cm3). .		196.00	1.73
DISCHARGE . . .	0.137	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	5.29	1.77	(m)
DEPTH.	13.07	10.37	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .	1.14
TYPE THREE SUBSTRATE . . .	37.0	(%)	AIR/WATER TEMP. RATIO:	1.22
EMBEDDEDNESS OF TYPE THREE	39.41	(%)		
OVERHEAD CANOPY.	0.85	(%)		
INSTREAM SHELTER	33.520	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	74.	0.0
Lepomis macrochirus	49.	0.0
Salvelinus fontinalis	733.	43.8
Rhinichthys atratulus	2437.	550.8
Salmo trutta	1940.	162.6
Unknown centrarchid	12.	0.0
Semotilus atromaculatus	198.	26.6
Luxilus cornutus	37.	0.0
Unknown cyprinid	12.	0.0
Rhinichthys cataractae	360.	44.2
Micropterus salmoides	74.	0.0
Lepomis gibbosus	37.	0.0
Oncorhynchus mykiss	12.	0.0
Etheostoma olmstedi	435.	80.2
Catostomus commersoni	385.	14.9

STREAM NAME : DEEP BROOK SITE #: 3009
SITE DESCRIPTION: FAIRFIELD HILLS STATE HOSPITAL PROPERTY IMMEDIATELY UPSTREAM OF RAILROAD TRACKS, NEWTOWN.
SAMPLE LENGTH : 100. SAMPLE DATE: 06/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:16.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.47	0.12
WATER TEMP. . .	:14.00 (C)	pH . . . . . :	7.37	0.06
VELOCITY. . . .	: 0.065 (m/s)	COND . . . . . (uS/cm3). . :	174.67	3.21
DISCHARGE . . .	: 0.037 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	53.87	0.12

	MEAN	STD	
WIDTH. . . . . :	5.03	0.95	(m)
DEPTH. . . . . :	10.95	7.66	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	1.04
TYPE THREE SUBSTRATE . . . :	5.0 (%)	AIR/WATER TEMP. RATIO:	1.14
EMBEDDEDNESS OF TYPE THREE :	55.00 (%)		
OVERHEAD CANOPY. . . . . :	0.96 (%)		
INSTREAM SHELTER . . . . . :	23.122 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	198.	0.0
Rhinichthys atratulus	17594.	132.2
Salmo trutta	1153.	35.6
Semotilus atromaculatus	397.	0.0
Luxilus cornutus	19.	0.0
Unknown cyprinid	39.	0.0
Rhinichthys cataractae	3499.	57.1
Lepomis gibbosus		
Etheostoma olmstedi	19.	0.0
Catostomus commersoni	79.	0.0

STREAM NAME : POND BROOK SITE #: 3010
SITE DESCRIPTION: PARALLEL TO POND BROOK RD 1/4 MILE DOWNSTREAM OF INTERSECTION WITH OBTUSE RD, NEWTOWN.
SAMPLE LENGTH : 150. SAMPLE DATE: 06/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.80	0.00
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	7.77	0.12
VELOCITY. . . .	: 0.129 (m/s)	COND . . . . . (uS/cm3). . :	210.00	17.32
DISCHARGE . . .	: 0.107 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	8.00	2.51	(m)
DEPTH. . . . . :	10.80	8.05	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.79
TYPE THREE SUBSTRATE . . . :	15.5 (%)	AIR/WATER TEMP. RATIO:	1.26
EMBEDDEDNESS OF TYPE THREE :	65.45 (%)		
OVERHEAD CANOPY. . . . . :	0.89 (%)		
INSTREAM SHELTER . . . . . :	9.245 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	8.	0.0
Lepomis macrochirus	83.	0.0
Salvelinus fontinalis	33.	0.0
Rhinichthys atratulus	883.	41.7
Salmo trutta	83.	0.0
Unknown centrarchid	8.	0.0
Exoglossum maxillingua	83.	0.0
Semotilus atromaculatus	25.	0.0
Luxilus cornutus		
Unknown cyprinid	33.	0.0
Semotilus corporalis	33.	0.0
Rhinichthys cataractae	475.	24.8
Lepomis auritus	8.	0.0
Micropterus dolomieui	16.	0.0
Etheostoma olmstedi	41.	0.0
Catostomus commersoni	125.	0.0

STREAM NAME : SAWMILL BROOK SITE #: 3011
SITE DESCRIPTION: IMMEDIATELY UPSTREAM OF LAKE CANDLEWOOOD, AT SHERMAN TOWN PARK, SHERMAN.
SAMPLE LENGTH : 134. SAMPLE DATE: 07/18/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	30.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.20	0.17
WATER TEMP. . .	20.00	(C)	pH		7.80	0.10
VELOCITY. . . .	0.046	(m/s)	COND . . . . . (uS/cm3). .		258.00	5.29
DISCHARGE . . .	0.039	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		117.53	7.74

	MEAN	STD	
WIDTH.	5.81	2.20	(m)
DEPTH.	12.18	14.71	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	4.31
TYPE THREE SUBSTRATE . . . :	15.4	(%)	AIR/WATER TEMP. RATIO:	1.50
EMBEDDEDNESS OF TYPE THREE :	46.25	(%)		
OVERHEAD CANOPY. . . . . :	0.86	(%)		
INSTREAM SHELTER . . . . . :	23.610	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	25.	0.0
Lepomis macrochirus	12.	0.0
Salvelinus fontinalis	603.	0.0
Rhinichthys atratulus	616.	0.0
Salmo trutta	847.	0.0
Semotilus atromaculatus	51.	0.0
Notemigonus crysoleucas	12.	0.0
Fundulus diaphanus	12.	0.0
Micropterus salmoides	25.	0.0
Lepomis gibbosus	77.	0.0
Ambloplites rupestris	89.	0.0
Lepomis auritus	154.	0.0
Oncorhynchus mykiss	295.	0.0
Etheostoma olmstedi	1130.	141.1
Catostomus commersoni	1412.	51.7

STREAM NAME : BALL POND BROOK SITE #: 3012
SITE DESCRIPTION: PARALLEL TO RTE 39 APPROXIMATELY 150 M DOWNSTREAM OF RTE 39 CROSSING, NEW FAIRFIELD.
SAMPLE LENGTH : 150. SAMPLE DATE: 08/13/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). .		8.73	0.06
WATER TEMP. . .	18.00	(C)	pH		7.80	0.00
VELOCITY. . . .	0.030	(m/s)	COND . . . . . (uS/cm3). .		330.00	0.00
DISCHARGE . . .	0.009	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		78.73	0.49

	MEAN	STD	
WIDTH.	4.32	1.16	(m)
DEPTH.	13.82	12.06	(cm)

DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	3.78
TYPE THREE SUBSTRATE . . . :	18.9	(%)	AIR/WATER TEMP. RATIO:	1.39
EMBEDDEDNESS OF TYPE THREE :	54.29	(%)		
OVERHEAD CANOPY. . . . . :	0.96	(%)		
INSTREAM SHELTER . . . . . :	11.060	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	478.	32.0
Semotilus atromaculatus	385.	33.4
Unknown cyprinid	92.	0.0
Esox americanus	401.	0.0
Lepomis gibbosus	15.	0.0
Etheostoma olmstedi	941.	366.7
Catostomus commersoni	154.	0.0

STREAM NAME : GEROW BROOK SITE #: 3013
SITE DESCRIPTION: 100 M DOWNSTREAM OF QUAKER RD. BRIDGE, NEW FAIRFIELD.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/01/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). . :	7.80	0.17
WATER TEMP. . .	21.00	(C)	pH . . . . . :	7.77	0.06
VELOCITY. . . .	0.074	(m/s)	COND . . . . . (uS/cm3). . :	182.00	0.00
DISCHARGE . . .	0.018	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	62.47	0.85

	MEAN	STD	
WIDTH. . . . . :	3.64	1.17	(m)
DEPTH. . . . . :	7.22	7.29	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.15
TYPE THREE SUBSTRATE . . . :	46.7	(%)	AIR/WATER TEMP. RATIO:	1.19
EMBEDDEDNESS OF TYPE THREE :	9.29	(%)		
OVERHEAD CANOPY. . . . . :	0.91	(%)		
INSTREAM SHELTER . . . . . :	4.305	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	8956.	288.0
Rhinichthys atratulus	3736.	122.9
Exoglossum maxillingua	274.	0.0
Semotilus atromaculatus	796.	0.0
Unknown cyprinid	109.	0.0
Esox americanus	27.	0.0
Micropterus salmoides	412.	37.0
Catostomus commersoni	109.	0.0

STREAM NAME : QUAKER BROOK SITE #: 3014
SITE DESCRIPTION: 100 M DOWNSTREAM OF RTE 37 BRIDGE CROSSING, NEW FAIRFIELD.
(WESLEYAN UNIVERSITY PROPERTY)
SAMPLE LENGTH : 185. SAMPLE DATE: 07/01/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.07	0.06
WATER TEMP. . .	16.00	(C)	pH . . . . . :	7.30	0.10
VELOCITY. . . .	0.125	(m/s)	COND . . . . . (uS/cm3). . :	83.33	1.15
DISCHARGE . . .	0.037	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	29.23	0.71

	MEAN	STD	
WIDTH. . . . . :	3.67	1.93	(m)
DEPTH. . . . . :	8.52	9.09	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.74
TYPE THREE SUBSTRATE . . . :	10.0	(%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	26.67	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	1.730	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	58.	0.0
Salvelinus fontinalis	8144.	236.3
Rhinichthys atratulus	3181.	30.0
Salmo trutta	14.	0.0
Exoglossum maxillingua	14.	0.0
Semotilus atromaculatus	235.	86.2
Luxilus cornutus	44.	0.0
Semotilus corporalis	3019.	1347.6
Notemigonus crysoleucas	44.	0.0
Micropterus salmoides	235.	86.2
Lepomis gibbosus	88.	0.0
Etheostoma olmstedi	14.	0.0
Catostomus commersoni	29.	0.0

STREAM NAME : **TRIB TO PUTNAM LAKE** SITE #: 3015
SITE DESCRIPTION: UPSTREAM OF COLUMBIA DRIVE, NEW FAIRFIELD.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/13/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	24.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.63	0.23
WATER TEMP. . .	16.00 (C)	pH . . . . . :	8.10	0.00
VELOCITY. . . .	0.079 (m/s)	COND . . . . . (uS/cm3). . :	246.00	2.65
DISCHARGE . . .	0.006 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	91.07	2.30

	MEAN	STD	
WIDTH. . . . . :	1.22	0.51	(m)
DEPTH. . . . . :	5.55	6.21	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	1.72
TYPE THREE SUBSTRATE . . . :	81.8 (%)	AIR/WATER TEMP. RATIO:	1.50
EMBEDDEDNESS OF TYPE THREE :	34.44 (%)		
OVERHEAD CANOPY. . . . . :	0.96 (%)		
INSTREAM SHELTER . . . . . :	0.140 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2798.	0.0

STREAM NAME : **STILL RIVER** SITE #: 3016
SITE DESCRIPTION: AT DANBURY MILL CONDOS 200 M UPSTREAM OF LAKE AVE., DANBURY.
SAMPLE LENGTH : 150. SAMPLE DATE: 07/10/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.97	0.32
WATER TEMP. . .	18.00 (C)	pH . . . . . :	7.94	0.06
VELOCITY. . . .	0.043 (m/s)	COND . . . . . (uS/cm3). . :	340.00	0.00
DISCHARGE . . .	0.070 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	123.70	0.36

	MEAN	STD	
WIDTH. . . . . :	6.03	1.79	(m)
DEPTH. . . . . :	13.48	10.82	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.41
TYPE THREE SUBSTRATE . . . :	17.9 (%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	57.00 (%)		
OVERHEAD CANOPY. . . . . :	0.99 (%)		
INSTREAM SHELTER . . . . . :	18.430 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	11.	0.0
Rhinichthys atratulus	33.	0.0
Luxilus cornutus	143.	0.0
Esox americanus	11.	0.0
Rhinichthys cataractae	11.	0.0
Micropterus salmoides	66.	0.0
Lepomis gibbosus		
Lepomis auritus	22.	0.0
Etheostoma olmstedi	2012.	101.6
Catostomus commersoni	574.	85.4

STREAM NAME : STILL RIVER SITE #: 3017
SITE DESCRIPTION: UPSTREAM OF GRAY'S BRIDGE RD. CROSSING, DANBURY.

SAMPLE LENGTH : 150. SAMPLE DATE: 07/16/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	6.60	2.69
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	7.40	0.00
VELOCITY. . . .	: 0.151 (m/s)	COND . . . . . (uS/cm3). . :	523.33	2.89
DISCHARGE . . .	: 0.484 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	128.83	0.60

	MEAN	STD	
WIDTH. . . . . :	14.49	1.39	(m)
DEPTH. . . . . :	21.45	16.43	(cm)

DOMINANT SUBSTRATE TYPE. . :	2	POOL/RIFFLE RATIO . .:	1.10
TYPE THREE SUBSTRATE . . . :	18.0 (%)	AIR/WATER TEMP. RATIO:	1.11
EMBEDDEDNESS OF TYPE THREE :	68.33 (%)		
OVERHEAD CANOPY. . . . . :	0.55 (%)		
INSTREAM SHELTER . . . . . :	133.550 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	13.	0.0
Rhinichthys atratulus	13.	0.0
Carasius auratus	9.	0.0
Notemigonus crysoleucas	4.	0.0
Rhinichthys cataractae	13.	0.0
Micropterus salmoides	9.	0.0
Ambloplites rupestris	4.	0.0
Catostomus commersoni	202.	5.4

STREAM NAME : MIRY BROOK SITE #: 3018
SITE DESCRIPTION: UPSTREAM OF WOOSTER SCHOOL, 3RD DRIVEWAY OFF MIRY BROOK RD., DANBURY.
SAMPLE LENGTH : 165. SAMPLE DATE: 07/10/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:27.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.70	0.26
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	7.70	0.20
VELOCITY. . . .	: 0.010 (m/s)	COND . . . . . (uS/cm3). . :	209.67	10.02
DISCHARGE . . .	: 0.005 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	83.13	2.39

	MEAN	STD	
WIDTH. . . . . :	3.91	0.57	(m)
DEPTH. . . . . :	14.32	13.38	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	20.43
TYPE THREE SUBSTRATE . . . :	21.2 (%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	65.71 (%)		
OVERHEAD CANOPY. . . . . :	0.89 (%)		
INSTREAM SHELTER . . . . . :	18.325 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	232.	0.0
Exoglossum maxillingua	2852.	199.5
Semotilus atromaculatus	294.	19.7
Luxilus cornutus	139.	0.0
Unknown cyprinid	124.	0.0
Esox americanus	15.	0.0
Micropterus salmoides	139.	0.0
Lepomis gibbosus	46.	0.0
Ambloplites rupestris	62.	0.0
Lepomis auritus	248.	90.8
Etheostoma olmstedi	1674.	106.9
Catostomus commersoni	759.	161.9

STREAM NAME : KOHANZA BROOK SITE #: 3019
SITE DESCRIPTION: AT RIDGEWOOD GOLF COURSE 200 M UPSTREAM FROM POND, DANBURY.
SAMPLE LENGTH : 100. SAMPLE DATE: 06/19/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	19.00	(C)	DISSOLVED OXYGEN (mg/l). .	:	10.10	0.36
WATER TEMP. . .	17.00	(C)	pH	:	7.17	0.15
VELOCITY. . . .	0.111	(m/s)	COND . . . . . (uS/cm3). .	:	213.33	1.53
DISCHARGE . . .	0.008	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)	:	40.43	0.72

	MEAN	STD	
WIDTH.	1.15	0.35	(m)
DEPTH.	6.53	5.30	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.11
TYPE THREE SUBSTRATE . . . :	40.0	(%)	AIR/WATER TEMP. RATIO:	1.12
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)		
OVERHEAD CANOPY. . . . . :	0.19	(%)		
INSTREAM SHELTER . . . . . :	0.900	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	71652.	864.3
Semotilus atromaculatus	14956.	140.0
Micropterus salmoides	86.	0.0
Etheostoma olmstedi	86.	0.0
Catostomus commersoni	12869.	0.0

STREAM NAME : PADANARAM BROOK SITE #: 3020
SITE DESCRIPTION: WEST OF PADANARAM RD. 100 M UPSTREAM, OF RTE 37 BRIDGE CROSSING, DANBURY.
SAMPLE LENGTH : 10. SAMPLE DATE: 06/19/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	19.00	(C)	DISSOLVED OXYGEN (mg/l). .	:	9.70	0.10
WATER TEMP. . .	18.00	(C)	pH	:	7.30	0.00
VELOCITY. . . .	0.225	(m/s)	COND . . . . . (uS/cm3). .	:	174.00	1.73
DISCHARGE . . .	0.101	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)	:	49.47	2.18

	MEAN	STD	
WIDTH.	3.99	0.91	(m)
DEPTH.	11.75	9.23	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	0.72
TYPE THREE SUBSTRATE . . . :	36.1	(%)	AIR/WATER TEMP. RATIO:	1.06
EMBEDDEDNESS OF TYPE THREE :	59.62	(%)		
OVERHEAD CANOPY. . . . . :	0.91	(%)		
INSTREAM SHELTER . . . . . :	6.640	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	250.	0.0
Lepomis macrochirus	1754.	0.0
Rhinichthys atratulus	33834.	273.0
Semotilus atromaculatus	8270.	0.0
Notemigonus crysoleucas	501.	0.0
Micropterus salmoides	1253.	0.0
Lepomis gibbosus	751.	0.0
Ambloplites rupestris	250.	0.0
Catostomus commersoni	3258.	0.0
Perca flavescens	1002.	0.0

STREAM NAME : **SYMPAUG BROOK** SITE #: 3021
SITE DESCRIPTION: DOWNSTREAM OF WOOSTER ST. CROSSING, PARALLEL TO SEWER PIPE ACCESS RD, DANBURY.
SAMPLE LENGTH : 100. SAMPLE DATE: 08/12/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	4.00	0.44
WATER TEMP. . .	20.00 (C)	pH . . . . . :	7.37	0.06
VELOCITY. . . .	0.137 (m/s)	COND . . . . . (uS/cm3). . :	473.00	1.73
DISCHARGE . . .	0.073 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	161.43	0.96

	MEAN	STD	
WIDTH. . . . . :		0.84	(m)
DEPTH. . . . . :	32.92	20.89	(cm)

DOMINANT SUBSTRATE TYPE. . :	1	POOL/RIFFLE RATIO . .:	19.00
TYPE THREE SUBSTRATE . . . :	0.0 (%)	AIR/WATER TEMP. RATIO:	1.10
EMBEDDEDNESS OF TYPE THREE :	59.62 (%)		
OVERHEAD CANOPY. . . . . :	0.96 (%)		
INSTREAM SHELTER . . . . . :	74.095 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Catostomus commersoni	95.	

STREAM NAME : **EAST SWAMP BROOK** SITE #: 3022
SITE DESCRIPTION: UPSTREAM OF PLUM TREES RD. BRIDGE, BETHEL.

SAMPLE LENGTH : 150. SAMPLE DATE: 07/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.63	0.15
WATER TEMP. . .	20.00 (C)	pH . . . . . :	8.00	0.00
VELOCITY. . . .	0.172 (m/s)	COND . . . . . (uS/cm3). . :	239.33	0.58
DISCHARGE . . .	0.083 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	90.23	2.57

	MEAN	STD	
WIDTH. . . . . :	4.84	1.32	(m)
DEPTH. . . . . :	10.30	7.77	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	1.26
TYPE THREE SUBSTRATE . . . :	53.7 (%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	25.91 (%)		
OVERHEAD CANOPY. . . . . :	0.90 (%)		
INSTREAM SHELTER . . . . . :	25.720 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	68.	0.0
Salvelinus fontinalis	385.	0.0
Rhinichthys atratulus	1377.	133.7
Salmo trutta	399.	0.0
Semotilus atromaculatus	495.	0.0
Luxilus cornutus	41.	0.0
Unknown cyprinid	2203.	1078.9
Esox americanus	41.	0.0
Notemigonus crysoleucas	619.	62.7
Rhinichthys cataractae	798.	122.4
Micropterus salmoides	41.	0.0
Lepomis gibbosus	151.	0.0
Etheostoma olmstedi	647.	233.5
Catostomus commersoni	1060.	153.5

STREAM NAME : LIMEKILN BROOK SITE #: 3023
SITE DESCRIPTION: AT ROCKWELL PROPERTY PARALLEL TO ROCKWELL RD, 0.2 MILES DOWNSTREAM OF PLUMTREES RD., BETHEL.
SAMPLE LENGTH : 150. SAMPLE DATE: 08/12/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.77	0.06
WATER TEMP. . .	18.00	(C)	pH		7.17	0.06
VELOCITY. . . .	0.171	(m/s)	COND . . . . . (uS/cm3). .		196.67	5.77
DISCHARGE . . .	0.106	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		64.53	1.16

	MEAN	STD	
WIDTH.	5.52	2.33	(m)
DEPTH.	12.05	11.55	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.42
TYPE THREE SUBSTRATE . . . :	3.9	(%)	AIR/WATER TEMP. RATIO:	1.33
EMBEDDEDNESS OF TYPE THREE :	70.00	(%)		
OVERHEAD CANOPY. . . . . :	0.77	(%)		
INSTREAM SHELTER . . . . . :	22.405	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	12.	0.0
Lepomis macrochirus	193.	15.5
Salvelinus fontinalis	338.	14.6
Rhinichthys atratulus	4021.	200.4
Salmo trutta	615.	29.7
Unknown centrarchid	193.	36.9
Exoglossum maxillingua	24.	0.0
Semotilus atromaculatus	845.	54.1
Luxilus cornutus		
Rhinichthys cataractae	1014.	316.4
Micropterus salmoides	24.	0.0
Lepomis gibbosus	96.	0.0
Lepomis auritus	12.	0.0
Etheostoma olmstedi	144.	0.0
Catostomus commersoni	374.	0.0

STREAM NAME : SHEPAUG RIVER SITE #: 3024
SITE DESCRIPTION: AT HODGE PARK, ROXBURY. (MEADOW AREA, SMALL BOULDER, COBBLE)
SAMPLE LENGTH : 200. SAMPLE DATE: 06/13/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.80	0.10
WATER TEMP. . .	21.00	(C)	pH		7.77	0.06
VELOCITY. . . .	0.265	(m/s)	COND . . . . . (uS/cm3). .		107.33	2.08
DISCHARGE . . .	1.367	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		34.33	7.91

	MEAN	STD	
WIDTH.	22.38	3.79	(m)
DEPTH.	28.10	18.29	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	3.31
TYPE THREE SUBSTRATE . . . :	43.0	(%)	AIR/WATER TEMP. RATIO:	1.00
EMBEDDEDNESS OF TYPE THREE :	45.58	(%)		
OVERHEAD CANOPY. . . . . :	0.13	(%)		
INSTREAM SHELTER . . . . . :	336.755	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	855.	43.6
Salmo trutta	51.	0.0
Semotilus atromaculatus	149.	19.9
Luxilus cornutus	1025.	31.5
Semotilus corporalis	33.	0.0
Notemigonus crysoleucas	4.	0.0
Rhinichthys cataractae	3418.	181.6
Lepomis gibbosus	4.	0.0
Lepomis auritus	29.	0.0
Oncorhynchus mykiss	2.	0.0
Etheostoma olmstedi	525.	177.1
Catostomus commersoni	585.	18.0

STREAM NAME : JACKS BROOK SITE #: 3025
SITE DESCRIPTION: UPSTREAM OF RTE 67 BRIDGE, ROXBURY.
SAMPLE LENGTH : 120. SAMPLE DATE: 07/30/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.90	0.17
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	6.80	0.10
VELOCITY. . . .	: 0.115 (m/s)	COND . . . . . (uS/cm3). . :	94.00	3.61
DISCHARGE . . .	: 0.048 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	13.97	0.15

	MEAN	STD	
WIDTH. . . . . :	3.22	0.76	(m)
DEPTH. . . . . :	13.20	11.85	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	4.46
TYPE THREE SUBSTRATE . . . :	25.9 (%)	AIR/WATER TEMP. RATIO:	1.15
EMBEDDEDNESS OF TYPE THREE :	38.57 (%)		
OVERHEAD CANOPY. . . . . :	0.25 (%)		
INSTREAM SHELTER . . . . . :	8.820 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	25.	0.0
Salvelinus fontinalis	414.	0.0
Rhinichthys atratulus	4528.	53.9
Salmo trutta	0.	0.0
Semotilus atromaculatus	5486.	91.9
Luxilus cornutus	4736.	121.8
Unknown cyprinid	4477.	84.5
Micropterus salmoides	1061.	30.3
Lepomis gibbosus	232.	0.0
Catostomus commersoni	2536.	0.0

STREAM NAME : POMPERAUG RIVER SITE #: 3026
SITE DESCRIPTION: AT GEORGE EWALD TOWN PARK, UPSTREAM OF POVERTY RD., SOUTHBURY. (BELOW HERITAGE VILLAGE STP)
SAMPLE LENGTH : 200. SAMPLE DATE: 06/18/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.47	0.42
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	7.50	0.17
VELOCITY. . . .	: 0.118 (m/s)	COND . . . . . (uS/cm3). . :	173.00	31.76
DISCHARGE . . .	: 0.790 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	36.47	5.34

	MEAN	STD	
WIDTH. . . . . :	16.07	3.97	(m)
DEPTH. . . . . :	28.88	21.61	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	1.19
TYPE THREE SUBSTRATE . . . :	38.0 (%)	AIR/WATER TEMP. RATIO:	1.05
EMBEDDEDNESS OF TYPE THREE :	81.32 (%)		
OVERHEAD CANOPY. . . . . :	0.33 (%)		
INSTREAM SHELTER . . . . . :	625.420 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	24.	0.0
Lepomis macrochirus	21.	7.2
Salvelinus fontinalis	6.	0.0
Rhinichthys atratulus	5028.	859.0
Salmo trutta	12.	0.0
Unknown centrarchid	9.	0.0
Exoglossum maxillingua	2784.	227.3
Semotilus atromaculatus	18.	0.0
Luxilus cornutus	784.	167.5
Unknown cyprinid	395.	223.7
Semotilus corporalis	264.	150.9
Notemigonus crysoleucas	3.	0.0
Rhinichthys cataractae	1496.	550.7
Lepomis gibbosus	18.	7.1
Ambloplites rupestris	320.	198.3
Lepomis auritus	6.	0.0
Oncorhynchus mykiss	3.	0.0
Micropterus dolomieui	9.	0.0
Etheostoma olmstedi	276.	106.0
Catostomus commersoni	171.	78.4
Perca flavescens	3.	0.0

STREAM NAME : **POMPERAUG RIVER** SITE #: **3027**
SITE DESCRIPTION: UPSTREAM OF RTE 67 BRIDGE AT BENNET TOWN PARK, SOUTHBURY.
SAMPLE LENGTH : 180. SAMPLE DATE: 09/03/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.90	0.10
WATER TEMP. . .	19.00	(C)	pH			
VELOCITY. . . .	0.256	(m/s)	COND . . . . . (uS/cm3). .		122.33	1.15
DISCHARGE . . .	0.647	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	10.82	2.69	(m)
DEPTH.	33.17	28.75	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .	4.75
TYPE THREE SUBSTRATE . . .	6.9	(%)	AIR/WATER TEMP. RATIO:	1.11
EMBEDDEDNESS OF TYPE THREE	25.83	(%)		
OVERHEAD CANOPY.	0.31	(%)		
INSTREAM SHELTER	394.980	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	220.	70.0
Lepomis macrochirus	5.	0.0
Rhinichthys atratulus	10197.	1788.2
Salmo trutta	10.	0.0
Unknown centrarchid	20.	0.0
Exoglossum maxillingua	6459.	723.8
Semotilus atromaculatus	56.	0.0
Luxilus cornutus	8189.	1419.2
Unknown cyprinid	56.	0.0
Semotilus corporalis	831.	113.2
Notemigonus crysoleucas	5.	0.0
Rhinichthys cataractae	1596.	252.2
Micropterus salmoides	46.	0.0
Lepomis gibbosus	102.	11.0
Ambloplites rupestris	949.	355.3
Lepomis auritus	328.	26.7
Oncorhynchus mykiss	5.	0.0
Micropterus dolomieui	698.	28.3
Etheostoma olmstedi	1360.	600.2
Catostomus commersoni	2433.	275.6
Perca flavescens	5.	0.0

STREAM NAME : **EAST SPRING BROOK** SITE #: **3028**
SITE DESCRIPTION: UPSTREAM OF MAGNOLIA HILL RD., BETHLEHEM. (BOULDER-HEMLOCK AREA)
SAMPLE LENGTH : 96. SAMPLE DATE: 08/15/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.67	0.06
WATER TEMP. . .	22.00	(C)	pH		7.00	0.17
VELOCITY. . . .	0.200	(m/s)	COND . . . . . (uS/cm3). .		110.00	0.00
DISCHARGE . . .	0.087	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	4.35	0.89	(m)
DEPTH.	10.13	7.41	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .	0.57
TYPE THREE SUBSTRATE . . .	7.7	(%)	AIR/WATER TEMP. RATIO:	1.09
EMBEDDEDNESS OF TYPE THREE	83.33	(%)		
OVERHEAD CANOPY.	0.94	(%)		
INSTREAM SHELTER	15.980	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	23.	0.0
Ameiurus nebulosus	23.	0.0
Salvelinus fontinalis	71.	0.0
Rhinichthys atratulus	2155.	42.6
Semotilus atromaculatus	191.	0.0
Fundulus diaphanus	23.	0.0
Rhinichthys cataractae	191.	0.0
Catostomus commersoni	71.	0.0

STREAM NAME : NONEWAUG RIVER SITE #: 3029
SITE DESCRIPTION: UPSTREAM OF HIGH ST. BRIDGE, WOODBURY. (SMALL BOULDER AND COBBLE, CHANNELIZED)
SAMPLE LENGTH : 150. SAMPLE DATE: 07/29/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.50	0.10
WATER TEMP. . .	18.00	(C)	pH		7.30	0.26
VELOCITY. . . .	0.079	(m/s)	COND . . . . . (uS/cm3). .		113.00	1.00
DISCHARGE . . .	0.202	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		19.83	0.67

	MEAN	STD	
WIDTH.	7.66	2.16	(m)
DEPTH.	16.98	16.26	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.81
TYPE THREE SUBSTRATE . . . :	14.3	(%)	AIR/WATER TEMP. RATIO:	1.11
EMBEDDEDNESS OF TYPE THREE :	17.00	(%)		
OVERHEAD CANOPY. . . . . :	0.69	(%)		
INSTREAM SHELTER . . . . . :	40.950	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	17.	0.0
Ameiurus nebulosus	8.	0.0
Lepomis macrochirus	87.	0.0
Salvelinus fontinalis	17.	0.0
Rhinichthys atratulus	6231.	78.4
Salmo trutta	130.	0.0
Semotilus atromaculatus	417.	10.2
Luxilus cornutus	2854.	132.1
Unknown cyprinid	931.	128.5
Semotilus corporalis	469.	10.1
Pimephales promelas	8.	0.0
Notemigonus crysoleucas	52.	0.0
Rhinichthys cataractae	4630.	80.8
Micropterus salmoides	26.	0.0
Lepomis gibbosus	60.	0.0
Etheostoma olmstedi	200.	0.0
Catostomus commersoni	2454.	84.2
Perca flavescens	52.	0.0

STREAM NAME : SPRAIN BROOK SITE #: 3030
SITE DESCRIPTION: UPSTREAM OF RTE 47, DOWNSTREAM OF WOODBURY SKI & RACKET, WOODBURY. (WOODED, SMALL BOULDERS)
SAMPLE LENGTH : 170. SAMPLE DATE: 07/22/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). .		8.87	0.06
WATER TEMP. . .	25.00	(C)	pH		7.63	0.21
VELOCITY. . . .	0.097	(m/s)	COND . . . . . (uS/cm3). .		90.67	1.15
DISCHARGE . . .	0.039	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		22.33	0.32

	MEAN	STD	
WIDTH.	5.99	2.16	(m)
DEPTH.	6.95	8.46	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.24
TYPE THREE SUBSTRATE . . . :	24.1	(%)	AIR/WATER TEMP. RATIO:	1.08
EMBEDDEDNESS OF TYPE THREE :	50.77	(%)		
OVERHEAD CANOPY. . . . . :	0.84	(%)		
INSTREAM SHELTER . . . . . :	9.290	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	29.	0.0
Salvelinus fontinalis	88.	0.0
Rhinichthys atratulus	5744.	119.7
Salmo trutta	1365.	146.4
Semotilus atromaculatus	589.	29.0
Luxilus cornutus	284.	0.0
Rhinichthys cataractae	1355.	527.0
Lepomis gibbosus	98.	0.0
Etheostoma olmstedi	68.	0.0
Catostomus commersoni	451.	0.0

STREAM NAME : **WEEKEEPEEMEE RIVER** SITE #: 3031
SITE DESCRIPTION: UPSTREAM OF RTE 132 BRIDGE, WOODBURY.

SAMPLE LENGTH : 160. SAMPLE DATE: 07/22/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:27.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.57	0.12
WATER TEMP. . .	:21.00 (C)	pH . . . . . :	7.40	0.00
VELOCITY. . . .	: 0.103 (m/s)	COND . . . . . (uS/cm3). . :	122.67	1.15
DISCHARGE . . .	: 0.055 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	28.57	0.23

	MEAN	STD	
WIDTH. . . . . :	6.78	1.23	(m)
DEPTH. . . . . :	8.10	7.29	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.75
TYPE THREE SUBSTRATE . . . :	9.8 (%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE :	51.67 (%)		
OVERHEAD CANOPY. . . . . :	0.85 (%)		
INSTREAM SHELTER . . . . . :	8.765 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	9.	0.0
Rhinichthys atratulus	4507.	9.6
Salmo trutta	138.	0.0
Semotilus atromaculatus	589.	0.0
Luxilus cornutus	18.	0.0
Unknown cyprinid	1179.	39.6
Rhinichthys cataractae	2442.	142.2
Etheostoma olmstedi	29065.	20214.5
Catostomus commersoni	626.	21.8

STREAM NAME : **HESSEKY BROOK** SITE #: 3032
SITE DESCRIPTION: UPSTREAM FROM CONFLUENCE WITH POMPERAUG RIVER, WOODBURY.
SAMPLE LENGTH : 105. SAMPLE DATE: 08/15/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.63	0.15
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	6.20	0.00
VELOCITY. . . .	: 0.013 (m/s)	COND . . . . . (uS/cm3). . :	123.67	1.53
DISCHARGE . . .	: 0.004 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	23.87	1.32

	MEAN	STD	
WIDTH. . . . . :	3.68	1.80	(m)
DEPTH. . . . . :	9.45	9.87	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	2.13
TYPE THREE SUBSTRATE . . . :	80.6 (%)	AIR/WATER TEMP. RATIO:	1.15
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)		
OVERHEAD CANOPY. . . . . :	0.95 (%)		
INSTREAM SHELTER . . . . . :	22.400 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	25.	0.0
Lepomis macrochirus	129.	0.0
Rhinichthys atratulus	207.	0.0
Salmo trutta	103.	0.0
Esox niger	25.	0.0
Semotilus atromaculatus	2898.	175.1
Luxilus cornutus	2199.	597.3
Unknown cyprinid	103.	0.0
Semotilus corporalis	2173.	29.2
Rhinichthys cataractae	232.	0.0
Micropterus salmoides	77.	0.0
Lepomis gibbosus	25.	0.0
Etheostoma olmstedi	414.	33.3
Catostomus commersoni	750.	70.4
Perca flavescens	181.	0.0

STREAM NAME : NONEWAUG RIVER SITE #: 3033
SITE DESCRIPTION: UPSTREAM OF RTE 47 AT YOUNG'S NURSERY, WOODBURY.

SAMPLE LENGTH : 150. SAMPLE DATE: 07/17/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	30.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.10	0.36
WATER TEMP. . .	22.00	(C)	pH . . . . . :	7.17	0.06
VELOCITY. . . .	0.061	(m/s)	COND . . . . . (uS/cm3). . :	121.67	0.58
DISCHARGE . . .	0.078	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	27.93	1.45

	MEAN	STD	
WIDTH. . . . . :	6.61	0.94	(m)
DEPTH. . . . . :	19.23	13.44	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	2.41
TYPE THREE SUBSTRATE . . . :	27.9	(%)	AIR/WATER TEMP. RATIO:	1.36
EMBEDDEDNESS OF TYPE THREE :	45.29	(%)		
OVERHEAD CANOPY. . . . . :	0.19	(%)		
INSTREAM SHELTER . . . . . :	55.970	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	20.	0.0
Ameiurus nebulosus	20.	0.0
Lepomis macrochirus	574.	11.7
Salvelinus fontinalis	141.	0.0
Rhinichthys atratulus	12143.	94.9
Salmo trutta	272.	0.0
Semotilus atromaculatus	978.	42.2
Luxilus cornutus	5879.	110.2
Unknown cyprinid	221.	0.0
Semotilus corporalis	1028.	0.0
Notemigonus crysoleucas	30.	0.0
Fundulus diaphanus	231.	125.9
Rhinichthys cataractae	9006.	154.9
Micropterus salmoides	423.	39.9
Lepomis gibbosus	151.	0.0
Etheostoma olmstedi	1886.	170.4
Catostomus commersoni	5153.	101.3
Perca flavescens	10.	0.0

STREAM NAME : TRANSYLVANIA BROOK SITE #: 3034
SITE DESCRIPTION: AT MCMILLAN PARK, DOWNSTREAM OF MEADOW BROOK RD., SOUTHBURY. (SHIFTING SAND, SINGLE PASS)
SAMPLE LENGTH : 150. SAMPLE DATE: 08/07/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.10	0.17
WATER TEMP. . .	15.00	(C)	pH . . . . . :	6.67	0.06
VELOCITY. . . .	0.082	(m/s)	COND . . . . . (uS/cm3). . :	235.00	15.00
DISCHARGE . . .	0.023	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	28.33	0.85

	MEAN	STD	
WIDTH. . . . . :		1.22	(m)
DEPTH. . . . . :	19.50	15.55	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	4.36
TYPE THREE SUBSTRATE . . . :	58.6	(%)	AIR/WATER TEMP. RATIO:	1.53
EMBEDDEDNESS OF TYPE THREE :	84.71	(%)		
OVERHEAD CANOPY. . . . . :	0.70	(%)		
INSTREAM SHELTER . . . . . :	57.640	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	18.	
Lepomis macrochirus	18.	
Rhinichthys atratulus	1054.	
Semotilus atromaculatus	828.	
Luxilus cornutus	37.	
Unknown cyprinid	112.	
Semotilus corporalis	282.	
Notemigonus crysoleucas	1016.	
Micropterus salmoides	207.	
Etheostoma olmstedi	451.	
Catostomus commersoni	809.	

STREAM NAME : **TRANSYLVANIA BROOK** SITE #: 3035
SITE DESCRIPTION: BELOW 10 FT DAM, DOWNSTREAM OF UPPER RTE 179 BRIDGE, SOUTHBURY. (SOUTHBURY TRAINING SCHOOL)
SAMPLE LENGTH : 155. SAMPLE DATE: 08/07/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.37	0.06
WATER TEMP. . .	16.00	(C)	pH . . . . . :	6.77	0.15
VELOCITY. . . .	0.081	(m/s)	COND . . . . . (uS/cm3). . :	87.33	2.52
DISCHARGE . . .	0.022	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	17.27	0.06

	MEAN		STD	
WIDTH. . . . . :	2.78		0.96	(m)
DEPTH. . . . . :	8.57		8.32	(cm)
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.69
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.38
EMBEDDEDNESS OF TYPE THREE :	84.71	(%)		
OVERHEAD CANOPY. . . . . :	0.96	(%)		
INSTREAM SHELTER . . . . . :	8.315	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2251.	73.8
Rhinichthys atratulus	3689.	37.9
Salmo trutta	23.	0.0
Semotilus atromaculatus	928.	0.0
Unknown cyprinid	348.	0.0
Notemigonus crysoleucas	69.	0.0
Catostomus commersoni	185.	0.0

STREAM NAME : **NAUGATUCK RIVER** SITE #: 3036
SITE DESCRIPTION: CHANNELIZED SECTION AROUND RAILROAD BRIDGE, ANSONIA. (EDGE OF SALT INFLUENCE)
SAMPLE LENGTH : 400. SAMPLE DATE: 07/25/1991

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		
Alosa pseudiharengus		
Lepomis macrochirus		
Unknown centrarchid		
Luxilus cornutus		
Notemigonus crysoleucas		
Fundulus diaphanus		
Micropterus salmoides		
Lepomis gibbosus		
Ambloplites rupestris		
Lepomis auritus		
Notropis hudsonius		
Etheostoma olmstedi		
Menidia beryllina		
Ameiurus catus		
Morone americanus		
Catostomus commersoni		

STREAM NAME : NAUGATUCK RIVER SITE #: 3037
SITE DESCRIPTION: 200 METERS DOWNSTREAM OF SPRUCE BROOK CONFLUENCE, BEACON FALLS. (RECONSTRUCTED AREA)
SAMPLE LENGTH : 306. SAMPLE DATE: 08/06/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :		
VELOCITY. . . . : 0.123	(m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . : 2.570	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	32.05	3.13	(m)
DEPTH. . . . . :	42.60	28.50	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.84
TYPE THREE SUBSTRATE . . . :	20.0 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	69.25 (%)		
OVERHEAD CANOPY. . . . . :	0.00 (%)		
INSTREAM SHELTER . . . . . :	187.188 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	3.	0.0
Lepomis macrochirus	1.	0.0
Rhinichthys atratulus	119.	34.3
Salmo trutta	1.	0.0
Unknown centrarchid	1.	0.0
Semotilus atromaculatus	16.	0.0
Luxilus cornutus	45.	0.0
Semotilus corporalis	158.	15.5
Pimephales promelas	1.	0.0
Notemigonus crysoleucas	6.	0.0
Rhinichthys cataractae	470.	142.6
Micropterus salmoides	28.	3.6
Lepomis gibbosus	1.	0.0
Ambloplites rupestris	10.	3.3
Lepomis auritus	47.	0.0
Micropterus dolomieui	5.	0.0
Notropis hudsonius	238.	1.6
Etheostoma olmstedi	80.	9.1
Catostomus commersoni	1147.	6.4

STREAM NAME : NAUGATUCK RIVER SITE #: 3038
SITE DESCRIPTION: CENTERED UNDER FROST ROAD BRIDGE, WATERTOWN.
(DRIVE-IN AREA, BOULDER SUBSTRATE)
SAMPLE LENGTH : 165. SAMPLE DATE: 06/27/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	29.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.87	0.42
WATER TEMP. . .	25.00	(C)	pH		7.83	0.50
VELOCITY. . . .	0.177	(m/s)	COND . . . . . (uS/cm3). .		277.33	4.62
DISCHARGE . . .	0.947	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		26.40	1.22

	MEAN	STD			
WIDTH.	15.00	7.21	(m)		
DEPTH.	35.75	26.86	(cm)		
DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:		0.73
TYPE THREE SUBSTRATE . . .	1.1	(%)	AIR/WATER TEMP. RATIO:		1.16
EMBEDDEDNESS OF TYPE THREE	70.00	(%)			
OVERHEAD CANOPY.	0.44	(%)			
INSTREAM SHELTER	665.245	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	12.	0.0
Ameiurus nebulosus	4.	0.0
Lepomis macrochirus	4.	0.0
Rhinichthys atratulus	105.	0.0
Luxilus cornutus	8.	0.0
Unknown cyprinid	60.	0.0
Semotilus corporalis	2270.	61.5
Rhinichthys cataractae	2666.	141.5
Micropterus salmoides	20.	0.0
Lepomis gibbosus	8.	0.0
Ambloplites rupestris	343.	26.1
Lepomis auritus	16.	0.0
Micropterus dolomieui	32.	0.0
Notropis hudsonius	2363.	242.2
Etheostoma olmstedi	2234.	822.0
Catostomus commersoni	731.	6.5

STREAM NAME : BRANCH BROOK SITE #: 3039
SITE DESCRIPTION: IN BLACK ROCK S. P. AT UPPER END OF FIELD, THOMASTON. (HEMLOCK GROVE, LARGE COBBLE)
SAMPLE LENGTH : 150. SAMPLE DATE: 07/01/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00 (C)	DISSOLVED OXYGEN (mg/l). .	9.57	0.40
WATER TEMP. . .	18.00 (C)	pH	7.50	0.10
VELOCITY. . . .	0.121 (m/s)	COND . . . . . (uS/cm3). .	89.33	2.52
DISCHARGE . . .	0.077 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	20.73	0.86

	MEAN	STD	
WIDTH.	6.74	2.74	(m)
DEPTH.	10.48	8.24	(cm)

DOMINANT SUBSTRATE TYPE. .	3	POOL/RIFFLE RATIO . .	1.78
TYPE THREE SUBSTRATE . . .	56.1 (%)	AIR/WATER TEMP. RATIO:	1.22
EMBEDDEDNESS OF TYPE THREE	31.09 (%)		
OVERHEAD CANOPY.	0.78 (%)		
INSTREAM SHELTER	9.120 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	19.	0.0
Lepomis macrochirus	39.	0.0
Salvelinus fontinalis	19.	0.0
Rhinichthys atratulus	207.	0.0
Salmo trutta	69.	0.0
Semotilus corporalis	118.	0.0
Notemigonus crysoleucas	19.	0.0
Rhinichthys cataractae	98.	0.0
Micropterus salmoides	128.	12.9
Lepomis gibbosus	19.	0.0
Ambloplites rupestris		
Lepomis auritus	49.	0.0
Etheostoma olmstedi	29.	0.0
Catostomus commersoni	148.	0.0
Perca flavescens	9.	0.0

STREAM NAME : HANCOCK BROOK SITE #: 3040
SITE DESCRIPTION: UPSTREAM OF SUFFIELD ROAD BRIDGE, ADJACENT TO GRAVEL PIT, WATERVILLE. (STATE FOREST)
SAMPLE LENGTH : 152. SAMPLE DATE: 07/09/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00 (C)	DISSOLVED OXYGEN (mg/l). .	9.27	0.25
WATER TEMP. . .	18.00 (C)	pH	7.30	0.35
VELOCITY. . . .	0.165 (m/s)	COND . . . . . (uS/cm3). .	67.33	4.62
DISCHARGE . . .	0.173 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	9.97	0.75

	MEAN	STD	
WIDTH.	5.16	1.57	(m)
DEPTH.	17.05	19.14	(cm)

DOMINANT SUBSTRATE TYPE. .	4	POOL/RIFFLE RATIO . .	0.81
TYPE THREE SUBSTRATE . . .	8.5 (%)	AIR/WATER TEMP. RATIO:	1.22
EMBEDDEDNESS OF TYPE THREE	71.25 (%)		
OVERHEAD CANOPY.	0.85 (%)		
INSTREAM SHELTER	42.940 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	38.	0.0
Lepomis macrochirus	165.	0.0
Salvelinus fontinalis	0.	0.0
Rhinichthys atratulus	1759.	20.8
Salmo trutta	0.	0.0
Unknown centrarchid	38.	0.0
Esox niger	0.	0.0
Unknown cyprinid	191.	0.0
Semotilus corporalis	25.	0.0
Rhinichthys cataractae	1083.	228.3
Micropterus salmoides	165.	29.0
Lepomis gibbosus		
Lepomis auritus	76.	0.0
Etheostoma olmstedi	318.	36.1
Catostomus commersoni	968.	62.9
Perca flavescens	50.	0.0

STREAM NAME : STEELE BROOK SITE #: 3041
SITE DESCRIPTION: PARALLEL TO WATERTOWN RD. (RTE 73), APPROX. 500 M UPSTREAM OF MUNICIPAL STADIUM, WATERBURY.
SAMPLE LENGTH : 147. SAMPLE DATE: 07/08/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). .	8.10	0.20
WATER TEMP. . .	22.00	(C)	pH	7.53	0.12
VELOCITY. . . .	0.473	(m/s)	COND . . . . . (uS/cm3). .	260.00	2.00
DISCHARGE . . .	0.523	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	36.07	1.85

	MEAN	STD	
WIDTH.	10.74	1.37	(m)
DEPTH.	10.55	7.76	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .:	0.53
TYPE THREE SUBSTRATE . . .	8.3	(%)	AIR/WATER TEMP. RATIO:	1.23
EMBEDDEDNESS OF TYPE THREE	37.00	(%)		
OVERHEAD CANOPY.	0.48	(%)		
INSTREAM SHELTER	1.380	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	3876.	64.5
Semotilus atromaculatus	449.	68.5
Luxilus cornutus	12.	0.0
Unknown cyprinid	1849.	955.5
Lepomis gibbosus	120.	13.4
Lepomis auritus	145.	18.3
Catostomus commersoni	3084.	136.3

STREAM NAME : STEELE BROOK SITE #: 3042
SITE DESCRIPTION: UPSTREAM 20 M OF STP ACCESS ROAD, WATERTOWN. (CHANNELIZED MEADOW, GRAVEL AND SAND)
SAMPLE LENGTH : 150. SAMPLE DATE: 07/08/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). .	7.57	0.23
WATER TEMP. . .	22.00	(C)	pH	7.07	0.15
VELOCITY. . . .	0.076	(m/s)	COND . . . . . (uS/cm3). .	238.33	7.64
DISCHARGE . . .	0.102	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	43.67	1.15

	MEAN	STD	
WIDTH.	5.45	2.43	(m)
DEPTH.	18.38	11.87	(cm)

DOMINANT SUBSTRATE TYPE. .	3		POOL/RIFFLE RATIO . .:	11.50
TYPE THREE SUBSTRATE . . .	58.0	(%)	AIR/WATER TEMP. RATIO:	1.14
EMBEDDEDNESS OF TYPE THREE	95.52	(%)		
OVERHEAD CANOPY.	0.53	(%)		
INSTREAM SHELTER	69.330	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	12.	0.0
Rhinichthys atratulus	3229.	166.3
Semotilus atromaculatus	3559.	739.8
Luxilus cornutus	4232.	566.7
Unknown cyprinid	171.	91.5
Hybrid Sunfish	24.	0.0
Micropterus salmoides	12.	0.0
Lepomis gibbosus	12.	0.0
Lepomis auritus	244.	69.4
Etheostoma olmstedi	7278.	4352.8
Catostomus commersoni	16831.	1584.3

STREAM NAME : BEAVER POND BROOK SITE #: 3043
SITE DESCRIPTION: PARALLEL TO RT 84, WATERBURY. (CHANNELIZED AREA BY FREINDLY'S RESTURANT)
SAMPLE LENGTH : 115. SAMPLE DATE: 07/09/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:27.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.37	0.25
WATER TEMP. . .	:21.00 (C)	pH . . . . . :	7.50	0.30
VELOCITY. . . .	: 0.039 (m/s)	COND . . . . . (uS/cm3). . :	349.33	10.07
DISCHARGE . . .	: 0.031 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	46.63	0.40

	MEAN	STD	
WIDTH. . . . . :	3.86	0.73	(m)
DEPTH. . . . . :	17.42	12.41	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.67
TYPE THREE SUBSTRATE . . . :	11.8 (%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE :	55.00 (%)		
OVERHEAD CANOPY. . . . . :	0.56 (%)		
INSTREAM SHELTER . . . . . :	36.830 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	135.	0.0
Salvelinus fontinalis	45.	0.0
Rhinichthys atratulus	360.	0.0
Salmo trutta	22.	0.0
Esox americanus	135.	0.0
Lepomis gibbosus	45.	0.0
Lepomis auritus	90.	0.0
Etheostoma olmstedi	1554.	40.0
Catostomus commersoni	315.	0.0

STREAM NAME : MAD RIVER SITE #: 3044
SITE DESCRIPTION: 30 M UPSTREAM OF CONFLUENCE WITH NAUGATUCK RIVER, WATERBURY. (BEHIND BUCKLE FACTORY)
SAMPLE LENGTH : 150. SAMPLE DATE: 08/01/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:27.00 (C)	DISSOLVED OXYGEN (mg/l). . :	8.97	0.15
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	7.13	0.25
VELOCITY. . . .	: 0.148 (m/s)	COND . . . . . (uS/cm3). . :	216.33	6.35
DISCHARGE . . .	: 0.417 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	24.87	0.32

	MEAN	STD	
WIDTH. . . . . :	11.55	1.26	(m)
DEPTH. . . . . :	20.33	14.54	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	3.12
TYPE THREE SUBSTRATE . . . :	18.2 (%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	41.94 (%)		
OVERHEAD CANOPY. . . . . :	0.67 (%)		
INSTREAM SHELTER . . . . . :	28.135 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	1668.	68.1
Salmo trutta	5.	0.0
Unknown centrarchid	5.	0.0
Semotilus atromaculatus	28.	0.0
Luxilus cornutus	1062.	81.7
Unknown cyprinid	11.	0.0
Semotilus corporalis	1021.	33.9
Rhinichthys cataractae	836.	151.2
Micropterus salmoides	126.	32.2
Lepomis gibbosus	5.	0.0
Lepomis auritus	103.	7.3
Notropis hudsonius	1038.	29.5
Etheostoma olmstedi	1737.	660.7
Catostomus commersoni	4271.	371.7

STREAM NAME : MAD RIVER SITE #: 3045
SITE DESCRIPTION: IN PETERSON PARK, WOLCOTT.
(HEMLOCKS, MEADOW GRADIENT, SMALL BOULDER)
SAMPLE LENGTH : 160. SAMPLE DATE: 07/31/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.40	0.10
WATER TEMP. . .	17.00	(C)	pH		6.80	0.00
VELOCITY. . . .	0.045	(m/s)	COND . . . . . (uS/cm3). .		120.67	1.15
DISCHARGE . . .	0.029	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		10.87	0.49

	MEAN	STD			
WIDTH.	5.89	0.84	(m)		
DEPTH.	10.95	8.01	(cm)		
DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .:		2.85
TYPE THREE SUBSTRATE . . .	7.7	(%)	AIR/WATER TEMP. RATIO:		1.24
EMBEDDEDNESS OF TYPE THREE	40.00	(%)			
OVERHEAD CANOPY.	0.99	(%)			
INSTREAM SHELTER	7.990	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	31.	0.0
Salvelinus fontinalis	1230.	22.8
Rhinichthys atratulus	912.	18.3
Unknown cyprinid	63.	0.0
Micropterus salmoides	10.	0.0
Lepomis gibbosus	84.	0.0
Catostomus commersoni	159.	0.0

STREAM NAME : FULLING MILL BROOK SITE #: 3046
SITE DESCRIPTION: PARALLEL TO RTE 68, NAUGATUCK.
(COBBLE-BOULDER, HARDWOODS)
SAMPLE LENGTH : 150. SAMPLE DATE: 07/11/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		10.33	0.06
WATER TEMP. . .	16.00	(C)	pH		7.77	0.12
VELOCITY. . . .	0.109	(m/s)	COND . . . . . (uS/cm3). .		131.67	1.53
DISCHARGE . . .	0.046	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		21.43	0.42

	MEAN	STD			
WIDTH.	3.88	1.18	(m)		
DEPTH.	11.23	10.30	(cm)		
DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .:		0.65
TYPE THREE SUBSTRATE . . .	29.4	(%)	AIR/WATER TEMP. RATIO:		1.31
EMBEDDEDNESS OF TYPE THREE	23.50	(%)			
OVERHEAD CANOPY.	1.00	(%)			
INSTREAM SHELTER	27.560	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	34.	0.0
Salvelinus fontinalis	378.	0.0
Rhinichthys atratulus	1907.	37.2
Salmo trutta	790.	0.0
Esox niger	17.	0.0
Notemigonus crysoleucas	154.	0.0
Rhinichthys cataractae	1563.	165.8
Lepomis gibbosus	17.	0.0
Catostomus commersoni	171.	0.0

STREAM NAME : HOP BROOK SITE #: 3047
SITE DESCRIPTION: PARALLEL TO REGAN RD., UPSTREAM OF WELL HOUSE ACROSS FROM 284 REGAN RD, WATERBURY.
SAMPLE LENGTH : 149. SAMPLE DATE: 07/09/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). . :		6.63	0.15
WATER TEMP. . .	18.00	(C)	pH . . . . . :		6.33	0.06
VELOCITY. . . .	0.800	(m/s)	COND . . . . . (uS/cm3). . :		148.67	1.15
DISCHARGE . . .	0.034	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		32.20	0.79

	MEAN	STD			
WIDTH. . . . . :	4.80	1.92	(m)		
DEPTH. . . . . :	9.43	6.22	(cm)		
DOMINANT SUBSTRATE TYPE. . :	6		POOL/RIFFLE RATIO . .:		1.17
TYPE THREE SUBSTRATE . . . :	9.5	(%)	AIR/WATER TEMP. RATIO:		1.11
EMBEDDEDNESS OF TYPE THREE :	47.50	(%)			
OVERHEAD CANOPY. . . . . :	0.86	(%)			
INSTREAM SHELTER . . . . . :	15.535	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	125.	0.0
Rhinichthys atratulus	9969.	120.3
Salmo trutta	307.	29.2
Semotilus atromaculatus	587.	16.3
Luxilus cornutus	419.	0.0
Unknown cyprinid	573.	0.0
Rhinichthys cataractae	8165.	1369.6
Lepomis gibbosus	13.	0.0
Etheostoma olmstedi	335.	89.1
Catostomus commersoni	810.	0.0

STREAM NAME : LONG MEADOW POND BROOK SITE #: 3048
SITE DESCRIPTION: UPSTREAM OF ARMORY BRIDGE, PARALLEL TO RUDDER AVE, NAUGATUCK. (SHIFTING SAND, CHANNELIZED)
SAMPLE LENGTH : 142. SAMPLE DATE: 06/20/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	26.00	(C)	DISSOLVED OXYGEN (mg/l). . :		7.60	0.10
WATER TEMP. . .	20.00	(C)	pH . . . . . :		7.07	0.21
VELOCITY. . . .	0.406	(m/s)	COND . . . . . (uS/cm3). . :		105.67	6.03
DISCHARGE . . .	0.523	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		18.07	0.81

	MEAN	STD			
WIDTH. . . . . :	5.10	1.68	(m)		
DEPTH. . . . . :	24.10	19.45	(cm)		
DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:		1.03
TYPE THREE SUBSTRATE . . . :	31.1	(%)	AIR/WATER TEMP. RATIO:		1.30
EMBEDDEDNESS OF TYPE THREE :	64.29	(%)			
OVERHEAD CANOPY. . . . . :	0.70	(%)			
INSTREAM SHELTER . . . . . :	112.470	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	13.	0.0
Rhinichthys atratulus	8713.	431.1
Salmo trutta	13.	0.0
Semotilus atromaculatus	704.	98.9
Rhinichthys cataractae	1684.	152.3
Lepomis gibbosus	110.	0.0
Lepomis auritus	13.	0.0
Oncorhynchus mykiss	13.	0.0
Etheostoma olmstedi	662.	25.7
Catostomus commersoni	2582.	275.4

STREAM NAME : BEACON HILL BROOK SITE #: 3049
SITE DESCRIPTION: PARALLEL TO COTTON HOLLOW RD., UPSTREAM OF BREACHED DAM ACROSS FROM BEACON HILL CONDOMINIUMS, BEACON FALLS.
SAMPLE LENGTH : 150. SAMPLE DATE: 06/17/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.13	0.12
WATER TEMP. . .	18.00	(C)	pH		6.74	0.23
VELOCITY. . . .	0.318	(m/s)	COND . . . . . (uS/cm3). .		105.33	1.53
DISCHARGE . . .	0.332	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		16.70	1.61

	MEAN	STD	
WIDTH.	6.66	1.51	(m)
DEPTH.	15.82	14.06	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .:	0.82
TYPE THREE SUBSTRATE . . .	21.0	(%)	AIR/WATER TEMP. RATIO:	1.28
EMBEDDEDNESS OF TYPE THREE	27.69	(%)		
OVERHEAD CANOPY.	0.91	(%)		
INSTREAM SHELTER	58.295	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	70.	0.0
Rhinichthys atratulus	2242.	81.5
Salmo trutta	110.	0.0
Semotilus atromaculatus	110.	0.0
Rhinichthys cataractae	1211.	204.4
Lepomis gibbosus	10.	0.0
Etheostoma olmstedi	4634.	3164.1
Catostomus commersoni	840.	0.0

STREAM NAME : BLADENS RIVER SITE #: 3050
SITE DESCRIPTION: DOWNSTREAM OF SANFORD RD. CROSSING, WOODBRIDGE.

SAMPLE LENGTH : 100. SAMPLE DATE: 06/20/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). .		18.80	0.26
WATER TEMP. . .	17.00	(C)	pH		6.70	0.17
VELOCITY. . . .	0.075	(m/s)	COND . . . . . (uS/cm3). .		113.00	6.08
DISCHARGE . . .	0.037	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		24.07	0.31

	MEAN	STD	
WIDTH.	3.65	1.28	(m)
DEPTH.	13.25	13.41	(cm)

DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:	2.82
TYPE THREE SUBSTRATE . . .	17.2	(%)	AIR/WATER TEMP. RATIO:	1.18
EMBEDDEDNESS OF TYPE THREE	48.00	(%)		
OVERHEAD CANOPY.	100.00	(%)		
INSTREAM SHELTER	34.217	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	82.	0.0
Salvelinus fontinalis	2273.	103.3
Rhinichthys atratulus	465.	0.0
Pimephales promelas	27.	0.0
Esox americanus	794.	162.2
Lepomis gibbosus		

STREAM NAME : LITTLE RIVER SITE #: 3051
SITE DESCRIPTION: PARALLEL TO RTE 67, APPROX. 200 M UPSTREAM OF PARK RD. CROSSING, OXFORD.
SAMPLE LENGTH : 150. SAMPLE DATE: 06/26/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.53	0.06
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	7.20	0.00
VELOCITY. . . .	: 0.127 (m/s)	COND . . . . . (uS/cm3). . :	88.00	0.00
DISCHARGE . . .	: 0.083 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	15.20	0.40

	MEAN	STD	
WIDTH. . . . . :	6.75	1.90	(m)
DEPTH. . . . . :	10.10	9.95	(cm)

DOMINANT SUBSTRATE TYPE. . :	7	POOL/RIFFLE RATIO . .:	1.67
TYPE THREE SUBSTRATE . . . :	5.2 (%)	AIR/WATER TEMP. RATIO:	1.37
EMBEDDEDNESS OF TYPE THREE :	11.67 (%)		
OVERHEAD CANOPY. . . . . :	0.84 (%)		
INSTREAM SHELTER . . . . . :	6.290 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	19.	0.0
Rhinichthys atratulus	2182.	58.1
Salmo trutta	1254.	46.7
Semotilus atromaculatus	158.	0.0
Semotilus corporalis		
Rhinichthys cataractae	829.	37.9
Lepomis gibbosus		
Oncorhynchus mykiss	29.	0.0
Catostomus commersoni	19.	0.0

STREAM NAME : TODD HOLLOW BROOK SITE #: 3052
SITE DESCRIPTION: DOWNSTREAM OF SOUTH ST., PLYMOUTH. (SANDY CHANNEL)

SAMPLE LENGTH : 125. SAMPLE DATE: 06/26/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	15.83	0.31
WATER TEMP. . .	:15.00 (C)	pH . . . . . :	7.65	0.08
VELOCITY. . . .	: 0.060 (m/s)	COND . . . . . (uS/cm3). . :	67.00	0.00
DISCHARGE . . .	: 0.025 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	11.43	0.68

	MEAN	STD	
WIDTH. . . . . :	3.48	1.04	(m)
DEPTH. . . . . :	11.39	10.12	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	1.23
TYPE THREE SUBSTRATE . . . :	50.0 (%)	AIR/WATER TEMP. RATIO:	1.47
EMBEDDEDNESS OF TYPE THREE :	44.17 (%)		
OVERHEAD CANOPY. . . . . :	0.93 (%)		
INSTREAM SHELTER . . . . . :	2.780 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	46.	0.0
Lepomis macrochirus	1702.	65.0
Salvelinus fontinalis	851.	0.0
Rhinichthys atratulus	46.	0.0
Unknown centrarchid	115.	0.0
Esox niger	2783.	362.2
Lepomis gibbosus	368.	92.0
Etheostoma olmstedi	1725.	195.4

STREAM NAME : LONG SWAMP BROOK SITE #: 3053
SITE DESCRIPTION: MEADOW AREA AT EAST END OF BRSTOL PARK, OFF RTE 64, MIDDLEBURY. (FLAT POOL)
SAMPLE LENGTH : 50. SAMPLE DATE: 07/08/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	32.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.03	0.38
WATER TEMP. . .	21.00	(C)	pH . . . . . :	6.67	0.06
VELOCITY. . . .	0.025	(m/s)	COND . . . . . (uS/cm3). . :	202.00	6.93
DISCHARGE . . .	0.008	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	23.63	1.36

	MEAN	STD	
WIDTH. . . . . :	2.53	0.97	(m)
DEPTH. . . . . :	9.95	8.72	(cm)

DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	4.00
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.52
EMBEDDEDNESS OF TYPE THREE :	44.17	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	2.290	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1264.	0.0
Rhinichthys atratulus	5296.	229.7
Salmo trutta	158.	0.0
Semotilus atromaculatus	1422.	0.0
Notemigonus crysoleucas	79.	0.0
Micropterus salmoides	79.	0.0

STREAM NAME : WELTON BROOK SITE #: 3054
SITE DESCRIPTION: UPSTREAM OF HIKING TRAIL/ACCESS ROAD CROSSING IN HOP BROOK FLOOD CONTROL PARK, WATERBURY.
SAMPLE LENGTH : 50. SAMPLE DATE: 07/08/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.40	0.62
WATER TEMP. . .	20.00	(C)	pH . . . . . :	7.67	0.32
VELOCITY. . . .	0.030	(m/s)	COND . . . . . (uS/cm3). . :	144.00	1.73
DISCHARGE . . .	0.005	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	29.70	0.70

	MEAN	STD	
WIDTH. . . . . :	2.46	0.74	(m)
DEPTH. . . . . :	6.35	5.39	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.26
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	44.17	(%)		
OVERHEAD CANOPY. . . . . :	0.84	(%)		
INSTREAM SHELTER . . . . . :	0.490	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	162.	0.0
Rhinichthys atratulus	3008.	0.0
Semotilus atromaculatus	731.	0.0
Luxilus cornutus	81.	0.0
Unknown cyprinid	1463.	0.0
Rhinichthys cataractae	406.	0.0
Lepomis gibbosus	81.	0.0
Etheostoma olmstedi	1463.	0.0
Catostomus commersoni	1788.	0.0

STREAM NAME : **MAD RIVER** SITE #: 3055
SITE DESCRIPTION: PARALLEL TO WOODTICK ROAD, UNDER POWER LINES OPPOSITE ECHO FARM STAND, WOLCOTT. (MEADOW, HARDWOOD)
SAMPLE LENGTH : 150. SAMPLE DATE: 07/31/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .		8.30	0.36
WATER TEMP. . .	22.00	(C)	pH		6.87	0.21
VELOCITY. . . .	0.081	(m/s)	COND . . . . . (uS/cm3). .		119.00	0.00
DISCHARGE . . .	0.140	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		12.30	3.72

	MEAN	STD	
WIDTH.	7.42	2.25	(m)
DEPTH.	20.85	12.57	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .:	5.76
TYPE THREE SUBSTRATE . . .	20.3	(%)	AIR/WATER TEMP. RATIO:	1.00
EMBEDDEDNESS OF TYPE THREE	55.77	(%)		
OVERHEAD CANOPY.	0.75	(%)		
INSTREAM SHELTER	128.210	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	8.	0.0
Lepomis macrochirus	44.	0.0
Rhinichthys atratulus	8.	0.0
Esox niger	44.	0.0
Unknown cyprinid	35.	0.0
Semotilus corporalis	4609.	355.6
Notemigonus crysoleucas	62.	0.0
Rhinichthys cataractae	62.	0.0
Micropterus salmoides	107.	0.0
Lepomis gibbosus	350.	48.7
Lepomis auritus	799.	306.0
Etheostoma olmstedi	503.	67.4
Catostomus commersoni	772.	72.5

STREAM NAME : **SOUTH BR. BULLET HILL BROOK** SITE #: 3056
SITE DESCRIPTION: DOWNSTREAM OF RTE 84 EAST ENTRANCE RAMP BRIDGE, SOUTHBURY. (CHANNELIZED AREA)
SAMPLE LENGTH : 120. SAMPLE DATE: 06/18/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.87	0.29
WATER TEMP. . .	15.00	(C)	pH		8.00	0.10
VELOCITY. . . .	0.212	(m/s)	COND . . . . . (uS/cm3). .		237.00	29.31
DISCHARGE . . .	0.063	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		77.00	5.96

	MEAN	STD	
WIDTH.	3.19	0.57	(m)
DEPTH.	9.38	5.97	(cm)

DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:	0.80
TYPE THREE SUBSTRATE . . .	0.0	(%)	AIR/WATER TEMP. RATIO:	1.47
EMBEDDEDNESS OF TYPE THREE	55.77	(%)		
OVERHEAD CANOPY.	0.19	(%)		
INSTREAM SHELTER	0.980	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2925.	141.1
Rhinichthys atratulus	365.	34.2
Salmo trutta	888.	0.0

STREAM NAME : HOCKANUM BROOK SITE #: 3057
SITE DESCRIPTION: PARALLEL TO DEAD END DIRT ROAD OFF BLACKBERRY HILL RD., BEACON FALLS.
SAMPLE LENGTH : 100. SAMPLE DATE: 07/02/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.53	0.15
WATER TEMP. . .	17.00	(C)	pH . . . . . :	7.84	0.23
VELOCITY. . . .	0.043	(m/s)	COND . . . . . (uS/cm3). . :	53.67	1.53
DISCHARGE . . .	0.010	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	9.93	0.25

	MEAN	STD	
WIDTH. . . . . :	2.72	1.24	(m)
DEPTH. . . . . :	8.95	4.97	(cm)

DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	0.40
TYPE THREE SUBSTRATE . . . :	9.5	(%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)		
OVERHEAD CANOPY. . . . . :	0.93	(%)		
INSTREAM SHELTER . . . . . :	34.515	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	183.	0.0
Salvelinus fontinalis	1691.	0.0
Rhinichthys atratulus	7867.	382.6
Semotilus atromaculatus	551.	0.0
Notemigonus crysoleucas	257.	84.8
Rhinichthys cataractae	73.	0.0
Lepomis gibbosus		

STREAM NAME : SPRUCE BROOK SITE #: 3058
SITE DESCRIPTION: 100 M UPSTREAM OF COLD SPRING RD, OXFORD/NAUGATUCK. (STATE FOREST)
SAMPLE LENGTH : 100. SAMPLE DATE: 06/17/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.63	0.25
WATER TEMP. . .	17.00	(C)	pH . . . . . :	6.03	0.06
VELOCITY. . . .	0.056	(m/s)	COND . . . . . (uS/cm3). . :	39.33	0.58
DISCHARGE . . .	0.015	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	2.60	0.80

	MEAN	STD	
WIDTH. . . . . :	3.00	1.24	(m)
DEPTH. . . . . :	8.57	10.97	(cm)

DOMINANT SUBSTRATE TYPE. . :	6		POOL/RIFFLE RATIO . .:	0.64
TYPE THREE SUBSTRATE . . . :	7.7	(%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	19.015	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1466.	61.5
Rhinichthys atratulus	733.	0.0
Semotilus atromaculatus	133.	0.0
Rhinichthys cataractae	3333.	1582.4
Catostomus commersoni	66.	0.0

STREAM NAME : **EIGHTMILE BROOK** SITE #: 3059
SITE DESCRIPTION: DOWNSTREAM OF LOUGHLIN RD. CROSSING, OXFORD.

SAMPLE LENGTH : 150. SAMPLE DATE: 07/15/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). . :	8.87	0.55
WATER TEMP. . .	18.00	(C)	pH . . . . . :	7.63	0.12
VELOCITY. . . .	0.085	(m/s)	COND . . . . . (uS/cm3). . :	108.00	0.00
DISCHARGE . . .	0.044	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	19.90	0.17

	MEAN	STD	
WIDTH. . . . . :	6.37	2.36	(m)
DEPTH. . . . . :	11.48	11.39	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.85
TYPE THREE SUBSTRATE . . . :	5.3	(%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	35.00	(%)		
OVERHEAD CANOPY. . . . . :	0.80	(%)		
INSTREAM SHELTER . . . . . :	14.148	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	198.	0.0
Lepomis macrochirus	251.	0.0
Salvelinus fontinalis	10.	0.0
Rhinichthys atratulus	6509.	49.9
Salmo trutta	450.	12.4
Luxilus cornutus	52.	0.0
Unknown cyprinid	219.	0.0
Rhinichthys cataractae	2166.	102.4
Lepomis auritus	41.	0.0
Micropterus dolomieui	20.	0.0
Etheostoma olmstedi	219.	21.7
Catostomus commersoni	83.	0.0

STREAM NAME : **HARVEY PETE BROOK** SITE #: 3060
SITE DESCRIPTION: UPSTREAM OF THOMPSON ST., SHELTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/02/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.23	0.12
WATER TEMP. . .	18.00	(C)	pH . . . . . :	7.50	0.10
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). . :	143.67	5.51
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	14.53	0.06

	MEAN	STD	
WIDTH. . . . . :	0.68	0.53	(m)
DEPTH. . . . . :	1.73	2.50	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.20
TYPE THREE SUBSTRATE . . . :	20.0	(%)	AIR/WATER TEMP. RATIO:	1.28
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	0.000	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	0.	0.0
Salvelinus fontinalis	0.	0.0
Rhinichthys atratulus	15882.	0.0
Semotilus atromaculatus	2352.	0.0
Lepomis auritus	0.	0.0

STREAM NAME : FARMILL RIVER SITE #: 3061
SITE DESCRIPTION: UPSTREAM OF MOOSE HILL RD., MONROE. (BHC PROPERTY)

SAMPLE LENGTH : 150. SAMPLE DATE: 06/25/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.83	0.06
WATER TEMP. . .	17.00	(C)	pH . . . . . :	8.10	0.00
VELOCITY. . . .	0.016	(m/s)	COND . . . . . (uS/cm3). . :	145.67	1.15
DISCHARGE . . .	0.019	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	27.83	1.77

	MEAN	STD	
WIDTH. . . . . :	4.60	1.01	(m)
DEPTH. . . . . :	11.60	8.79	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	6.50
TYPE THREE SUBSTRATE . . . :	38.6	(%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	44.41	(%)		
OVERHEAD CANOPY. . . . . :	0.86	(%)		
INSTREAM SHELTER . . . . . :	41.100	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	28.	0.0
Rhinichthys atratulus	7768.	175.7
Unknown centrarchid	14.	0.0
Semotilus atromaculatus	1391.	46.0
Luxilus cornutus	2710.	126.7
Unknown cyprinid	318.	0.0
Semotilus corporalis	14.	0.0
Etheostoma olmstedi	840.	211.7
Catostomus commersoni	579.	47.1

STREAM NAME : HOUSATONIC RIVER SITE #: 3062
SITE DESCRIPTION: 1 MILE SOUTH OF SQUASH HOLLOW BROOK, NEW MILFORD.

SAMPLE LENGTH : 350. SAMPLE DATE: 07/23/1991

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 . . . . . :	0.000	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus		
Pimephales notatus		
Exoglossum maxillingua		
Luxilus cornutus		
Unknown cyprinid		
Semotilus corporalis		
Rhinichthys cataractae		
Ambloplites rupestris		
Lepomis auritus		
Micropterus dolomieui		
Notropis hudsonius		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : EAST SWAMP BROOK SITE #: 3063
SITE DESCRIPTION: DOWNSTREAM OF MECKAUER PARK, BETHEL.
(LOWLAND MARSHY AREA)
SAMPLE LENGTH : 143. SAMPLE DATE: 07/24/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	26.00	(C)	DISSOLVED OXYGEN (mg/l). .	8.73	0.06
WATER TEMP. . .	24.00	(C)	pH	7.37	0.06
VELOCITY. . . .	0.031	(m/s)	COND . . . . . (uS/cm3). .	356.33	5.51
DISCHARGE . . .	0.398	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	152.27	3.85

	MEAN	STD	
WIDTH.	5.21	1.42	(m)
DEPTH.	32.85	24.14	(cm)

DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	25.5	(%)	AIR/WATER TEMP. RATIO:	1.08
EMBEDDEDNESS OF TYPE THREE :	60.83	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	120.900	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	13.	0.0
Lepomis macrochirus	134.	0.0
Unknown centrarchid	13.	0.0
Luxilus cornutus	26.	0.0
Esox americanus	1476.	97.6
Notemigonus crysoleucas	80.	0.0
Micropterus salmoides	80.	0.0
Lepomis gibbosus	174.	0.0
Lepomis auritus	40.	0.0
Etheostoma olmstedi	362.	0.0
Catostomus commersoni	1288.	82.3

STREAM NAME : WORDEN BROOK SITE #: 3064
SITE DESCRIPTION: PARALLEL TO FIRE ACCESS RD. POOTATUCK STATE FOREST,
NEW FAIRFIELD.
SAMPLE LENGTH : 50. SAMPLE DATE: 07/16/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .	7.90	0.66
WATER TEMP. . .	17.00	(C)	pH	7.27	0.15
VELOCITY. . . .		(m/s)	COND . . . . . (uS/cm3). .	60.00	0.00
DISCHARGE . . .		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	18.50	0.26

	MEAN	STD	
WIDTH.	1.84	1.71	(m)
DEPTH.	13.04	12.40	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	28.6	(%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE :	36.67	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	4.955	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	6526.	0.0
Rhinichthys atratulus	4351.	128.8

STREAM NAME : GLEN BROOK SITE #: 3065
SITE DESCRIPTION: PARALLEL TO WAGON WHEEL RD, 200 M DOWNSTREAM OF BRIDGE CROSSING, SHERMAN.
SAMPLE LENGTH : 100. SAMPLE DATE: 07/16/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). .		8.23	0.59
WATER TEMP. . .	18.00	(C)	pH		7.30	0.10
VELOCITY. . . .	0.031	(m/s)	COND . . . . . (uS/cm3). .		127.00	3.61
DISCHARGE . . .	0.935	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		45.97	1.44

	MEAN	STD	
WIDTH.	1.66	0.88	(m)
DEPTH.	14.16	17.28	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	2.85
TYPE THREE SUBSTRATE . . . :	53.8	(%)	AIR/WATER TEMP. RATIO:	1.28
EMBEDDEDNESS OF TYPE THREE :	28.57	(%)		
OVERHEAD CANOPY. . . . . :	0.85	(%)		
INSTREAM SHELTER . . . . . :	12.580	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	60.	0.0
Salvelinus fontinalis	60.	0.0
Rhinichthys atratulus	2590.	0.0
Salmo trutta	5000.	0.0
Etheostoma olmstedi	481.	0.0
Catostomus commersoni	180.	0.0

STREAM NAME : BULLYMUCK BROOK SITE #: 3066
SITE DESCRIPTION: PARALLEL TO CANDLEWOOD HILL RD., DOWNSTREAM OF CONFLUENCE WITH TRIB, NEW MILFORD.
SAMPLE LENGTH : 96. SAMPLE DATE: 08/28/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.97	0.06
WATER TEMP. . .	19.00	(C)	pH		7.50	0.00
VELOCITY. . . .	0.224	(m/s)	COND . . . . . (uS/cm3). .		141.67	2.89
DISCHARGE . . .	0.140	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		58.27	2.03

	MEAN	STD	
WIDTH.	3.25	1.30	(m)
DEPTH.	18.10	14.70	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.74
TYPE THREE SUBSTRATE . . . :	50.0	(%)	AIR/WATER TEMP. RATIO:	1.26
EMBEDDEDNESS OF TYPE THREE :	36.15	(%)		
OVERHEAD CANOPY. . . . . :	0.81	(%)		
INSTREAM SHELTER . . . . . :	47.460	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	32.	0.0
Salvelinus fontinalis	576.	0.0
Rhinichthys atratulus	641.	210.4
Semotilus atromaculatus	2115.	605.3
Luxilus cornutus	160.	0.0
Catostomus commersoni	512.	0.0

STREAM NAME : CROSS BROOK SITE #: 3067
SITE DESCRIPTION: 100 M UPSTREAM OF CONFLUENCE WITH GREAT BROOK, NEW MILFORD.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/28/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:28.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 10.50	0.00
WATER TEMP. . .	:20.00 (C)	pH	: 7.50	0.00
VELOCITY. . . .	: 0.250 (m/s)	COND . . . . . (uS/cm3). .	:130.00	0.00
DISCHARGE . . .	: 0.080 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	40.00	0.62

	MEAN	STD	
WIDTH.	2.21	0.47	(m)
DEPTH.	14.35	10.97	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.19
TYPE THREE SUBSTRATE . . . :	6.3 (%)	AIR/WATER TEMP. RATIO:	1.40
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)		
OVERHEAD CANOPY. . . . . :	0.88 (%)		
INSTREAM SHELTER . . . . . :	6.690 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	271.	0.0
Salvelinus fontinalis	542.	0.0
Rhinichthys atratulus	13846.	5228.1
Salmo trutta	1266.	283.0
Semotilus atromaculatus	1990.	339.1
Pimephales promelas	271.	0.0
Notemigonus crysoleucas	361.	0.0
Rhinichthys cataractae		
Rhinichthys cataractae	180.	0.0
Catostomus commersoni	361.	0.0

STREAM NAME : TOWN FARM BROOK SITE #: 3068
SITE DESCRIPTION: BELOW BRIDGE AT CLATTER VALLEY TOWN PARK, BRIDGEWATER/NEW MILFORD.
SAMPLE LENGTH : 105. SAMPLE DATE: 08/27/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). .	:	
WATER TEMP. . .	: (C)	pH	: 8.07	0.25
VELOCITY. . . .	: 0.280 (m/s)	COND . . . . . (uS/cm3). .	:249.67	0.58
DISCHARGE . . .	: 0.110 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	95.60	1.85

	MEAN	STD	
WIDTH.	3.10	0.75	(m)
DEPTH.	13.25	9.45	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	0.27
TYPE THREE SUBSTRATE . . . :	47.8 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	40.00 (%)		
OVERHEAD CANOPY. . . . . :	0.46 (%)		
INSTREAM SHELTER . . . . . :	5.080 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	30.	0.0
Salvelinus fontinalis	1167.	0.0
Rhinichthys atratulus	153.	0.0
Salmo trutta	3870.	33.5
Lepomis cyanellus	0.	0.0
Micropterus salmoides	61.	0.0
Lepomis gibbosus	61.	0.0
Oncorhynchus mykiss	0.	0.0
Catostomus commersoni	184.	0.0

STREAM NAME : MOOSEHORN BROOK SITE #: 3069
SITE DESCRIPTION: DOWNSTREAM OF MOOSEHORN RD., LITCHFIELD. (HEMLOCKS)

SAMPLE LENGTH : 50. SAMPLE DATE: 06/26/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). .	8.30	0.87
WATER TEMP. . .	15.00	(C)	pH	6.67	0.06
VELOCITY. . . .	0.043	(m/s)	COND . . . . . (uS/cm3). .	71.00	0.00
DISCHARGE . . .	0.008	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	7.60	0.44

	MEAN	STD	
WIDTH.	1.53	0.75	(m)
DEPTH.	8.20	11.21	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.09
TYPE THREE SUBSTRATE . . . :	7.7	(%)	AIR/WATER TEMP. RATIO:	1.53
EMBEDDEDNESS OF TYPE THREE :	40.00	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	0.615	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	522.	0.0
Salvelinus fontinalis	3267.	0.0
Rhinichthys atratulus	15686.	143.2
Semotilus atromaculatus	130.	0.0
Notemigonus crysoleucas	5359.	0.0
Lepomis gibbosus	130.	0.0

STREAM NAME : WIGWAM BROOK SITE #: 3070
SITE DESCRIPTION: UPSTREAM OF BLAKESLEE RD., LITCHFIELD. (BOULDERS, HARDWOODS, WATERBURY WATER COMPANY PROPERTY)
SAMPLE LENGTH : 150. SAMPLE DATE: 06/17/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	25.00	(C)	DISSOLVED OXYGEN (mg/l). .	8.87	0.35
WATER TEMP. . .	20.00	(C)	pH	7.10	0.17
VELOCITY. . . .	0.127	(m/s)	COND . . . . . (uS/cm3). .	100.00	0.00
DISCHARGE . . .	0.064	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.17	5.83

	MEAN	STD	
WIDTH.	4.17	1.70	(m)
DEPTH.	12.27	7.42	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.63
TYPE THREE SUBSTRATE . . . :	30.8	(%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	66.25	(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	9.055	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	415.	0.0
Rhinichthys atratulus	4492.	107.0
Semotilus atromaculatus	543.	0.0
Luxilus cornutus	111.	22.2
Catostomus commersoni	319.	118.6

STREAM NAME : **EAST MORRIS BROOK** SITE #: 3071
SITE DESCRIPTION: 150 M UPSTREAM OF BRIDGE AT WOODLAND RD, MORRIS.
(BEDROCK)
SAMPLE LENGTH : 50. SAMPLE DATE: 06/17/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00 (C)	DISSOLVED OXYGEN (mg/l). .	8.37	0.40
WATER TEMP. . .	20.00 (C)	pH	7.57	0.35
VELOCITY. . . .	0.027 (m/s)	COND . . . . . (uS/cm3). .	288.33	25.66
DISCHARGE . . .	0.006 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	54.20	0.95

	MEAN	STD	
WIDTH.	2.57	1.03	(m)
DEPTH.	8.10	7.01	(cm)

DOMINANT SUBSTRATE TYPE. . :	7	POOL/RIFFLE RATIO . .:	1.00
TYPE THREE SUBSTRATE . . . :	4.8 (%)	AIR/WATER TEMP. RATIO:	1.10
EMBEDDEDNESS OF TYPE THREE :	100.00 (%)		
OVERHEAD CANOPY. . . . . :	0.93 (%)		
INSTREAM SHELTER . . . . . :	0.210 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	14785.	191.0
Semotilus atromaculatus	2801.	0.0
Rhinichthys cataractae		
Catostomus commersoni	311.	0.0

STREAM NAME : **WOOD CREEK** SITE #: 3072
SITE DESCRIPTION: UPSTREAM OF STILL HILL RD., BETHLEHEM. (HARDWOODS)

SAMPLE LENGTH : 50. SAMPLE DATE: 07/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00 (C)	DISSOLVED OXYGEN (mg/l). .	10.47	0.06
WATER TEMP. . .	15.00 (C)	pH		
VELOCITY. . . .	0.049 (m/s)	COND . . . . . (uS/cm3). .	75.00	2.00
DISCHARGE . . .	0.010 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	16.60	2.19

	MEAN	STD	
WIDTH.	2.31	0.93	(m)
DEPTH.	7.97	7.77	(cm)

DOMINANT SUBSTRATE TYPE. . :	2	POOL/RIFFLE RATIO . .:	11.00
TYPE THREE SUBSTRATE . . . :	8.7 (%)	AIR/WATER TEMP. RATIO:	1.53
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)		
OVERHEAD CANOPY. . . . . :	1.00 (%)		
INSTREAM SHELTER . . . . . :	0.390 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	86.	0.0
Salvelinus fontinalis	10043.	304.2
Rhinichthys atratulus	1731.	0.0

STREAM NAME : SMITH POND BROOK SITE #: 3073
SITE DESCRIPTION: DOWNSTREAM OF POWERLINES OFF OF NORTHFIELD RD., WATERTOWN.
(ROCKY, DEGRADED, ADJACENT POND)
SAMPLE LENGTH : 50. SAMPLE DATE: 07/31/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00 (C)	DISSOLVED OXYGEN (mg/l). .	7.87	0.42
WATER TEMP. . .	22.00 (C)	pH	6.97	0.23
VELOCITY. . . .	0.089 (m/s)	COND . . . . . (uS/cm3). .	111.00	6.56
DISCHARGE . . .	0.020 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	20.73	0.65

	MEAN	STD	
WIDTH.	2.43	1.10	(m)
DEPTH.	9.35	6.78	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.74
TYPE THREE SUBSTRATE . . . :	5.0	(%)	AIR/WATER TEMP. RATIO:	1.05
EMBEDDEDNESS OF TYPE THREE :	100.00	(%)		
OVERHEAD CANOPY. . . . . :	0.95	(%)		
INSTREAM SHELTER . . . . . :	0.840	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	4115.	95.6
Semotilus atromaculatus	1893.	101.5
Unknown cyprinid	411.	0.0
Lepomis gibbosus	493.	0.0
Catostomus commersoni	4115.	149.4

STREAM NAME : WATTTLES BROOK SITE #: 3074
SITE DESCRIPTION: UPSTREAM OF RTE 63, PARALLEL TO BUNKER HILL RD.,
WATERTOWN. (CHANNELIZED AND RIP-RAP)
SAMPLE LENGTH : 100. SAMPLE DATE: 08/15/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	21.00 (C)	DISSOLVED OXYGEN (mg/l). .	6.90	0.00
WATER TEMP. . .	18.00 (C)	pH	0.20	0.20
VELOCITY. . . .	0.060 (m/s)	COND . . . . . (uS/cm3). .	140.33	1.53
DISCHARGE . . .	0.012 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	2.94	1.30	(m)
DEPTH.	7.05	5.48	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.85
TYPE THREE SUBSTRATE . . . :	8.3	(%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	70.00	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	2.885	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	28129.	643.8
Unknown centrarchid	476.	0.0
Semotilus atromaculatus	544.	0.0
Rhinichthys cataractae	34.	0.0
Etheostoma olmstedi	170.	0.0
Catostomus commersoni	1904.	60.8

STREAM NAME : **SHATTUCK BROOK** SITE #: **3075**
SITE DESCRIPTION: UPSTREAM OF NICHOLS RD., NAUGATUCK.
(CONNECTICUT WATER COMPANY PROPERTY)
SAMPLE LENGTH : 50. SAMPLE DATE: 08/01/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	28.00 (C)	DISSOLVED OXYGEN (mg/l). .	9.10	1.35
WATER TEMP. . .	20.00 (C)	pH	7.67	0.21
VELOCITY. . . .	0.013 (m/s)	COND . . . . . (uS/cm3). .	165.67	30.92
DISCHARGE . . .	0.006 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	20.90	0.44

	MEAN	STD	
WIDTH.	3.14	1.08	(m)
DEPTH.	9.27	7.99	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	3.55
TYPE THREE SUBSTRATE . . . :	20.8 (%)	AIR/WATER TEMP. RATIO:	1.40
EMBEDDEDNESS OF TYPE THREE :	28.00 (%)		
OVERHEAD CANOPY. . . . . :	0.76 (%)		
INSTREAM SHELTER . . . . . :	6.945 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	891.	0.0
Rhinichthys atratulus	8089.	165.8
Semotilus atromaculatus	5732.	733.9
Luxilus cornutus	318.	0.0
Unknown cyprinid	127.	0.0
Esox americanus	63.	0.0
Etheostoma olmstedi	700.	259.3
Catostomus commersoni	445.	0.0

STREAM NAME : **HEMP SWAMP BROOK** SITE #: **3076**
SITE DESCRIPTION: PARALLEL TO RTE 42, DOWNSTREAM OF NEW INDUSTRIAL PARK ACCESS ROAD, BEACON FALLS.
SAMPLE LENGTH : 50. SAMPLE DATE: 09/17/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	26.00 (C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	19.00 (C)	pH . . . . . :		
VELOCITY. . . .	0.117 (m/s)	COND . . . . . (uS/cm3). . :	98.67	9.24
DISCHARGE . . .	0.029 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	2.75	0.68	(m)
DEPTH.	9.20	6.03	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	3.31
TYPE THREE SUBSTRATE . . . :	18.2 (%)	AIR/WATER TEMP. RATIO:	1.37
EMBEDDEDNESS OF TYPE THREE :	62.50 (%)		
OVERHEAD CANOPY. . . . . :	0.44 (%)		
INSTREAM SHELTER . . . . . :	1.290 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2690.	0.0
Rhinichthys cataractae	3781.	132.4
Micropterus salmoides	1018.	0.0
Catostomus commersoni	1672.	91.6

STREAM NAME : JACKS BROOK SITE #: 3077
SITE DESCRIPTION: PARALLEL TO GREENBRIAR RD., 0.5 KM DOWNSTREAM OF JACKS HILL RD, OXFORD.
SAMPLE LENGTH : 103. SAMPLE DATE: 08/29/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/1). .	: 10.57	0.12
WATER TEMP. . .	:20.00 (C)	pH	: 6.07	0.21
VELOCITY. . . .	: 0.032 (m/s)	COND . . . . . (uS/cm3). .	: 75.00	0.00
DISCHARGE . . .	: 0.010 (m3/s)	ALKALINITY .(mg CaCO3 eq/1):		

	MEAN	STD	
WIDTH.	3.35	0.81	(m)
DEPTH.	10.38	12.51	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.34
TYPE THREE SUBSTRATE . . . :	0.0 (%)	AIR/WATER TEMP. RATIO:	1.15
EMBEDDEDNESS OF TYPE THREE :	62.50 (%)		
OVERHEAD CANOPY. . . . . :	0.96 (%)		
INSTREAM SHELTER . . . . . :	5.540 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	1275.	0.0
Semotilus atromaculatus	1883.	0.0
Unknown cyprinid	115.	0.0

STREAM NAME : BEAVER BROOK SITE #: 3078
SITE DESCRIPTION: DOWNSTREAM OF GATE #1, PARALLEL TO BEAVER RD., ANSONIA. (ANSONIA-DERBY WATER COMPANY PROPERTY)
SAMPLE LENGTH : 100. SAMPLE DATE: 06/25/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:17.00 (C)	DISSOLVED OXYGEN (mg/1). .	: 9.73	0.23
WATER TEMP. . .	:15.00 (C)	pH	: 7.10	0.00
VELOCITY. . . .	: 0.094 (m/s)	COND . . . . . (uS/cm3). .	: 67.00	2.65
DISCHARGE . . .	: 0.018 (m3/s)	ALKALINITY .(mg CaCO3 eq/1):	10.60	0.10

	MEAN	STD	
WIDTH.	2.08	0.23	(m)
DEPTH.	9.13	8.10	(cm)

DOMINANT SUBSTRATE TYPE. . :	6	POOL/RIFFLE RATIO . .:	2.57
TYPE THREE SUBSTRATE . . . :	14.3 (%)	AIR/WATER TEMP. RATIO:	1.13
EMBEDDEDNESS OF TYPE THREE :	20.00 (%)		
OVERHEAD CANOPY. . . . . :	0.88 (%)		
INSTREAM SHELTER . . . . . :	1.490 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	336.	0.0
Rhinichthys atratulus	1778.	0.0
Micropterus salmoides	336.	0.0
Lepomis gibbosus	144.	0.0
Etheostoma olmstedi	480.	0.0
Catostomus commersoni	576.	0.0
Perca flavescens	48.	0.0

STREAM NAME : LEWIS ATWOOD BROOK SITE #: 3079
SITE DESCRIPTION: UPSTREAM OF RTE 6, BETHLEHEM.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/22/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:25.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.23	0.38
WATER TEMP. . .	:23.00 (C)	pH . . . . . :	8.10	0.26
VELOCITY. . . .	: 0.020 (m/s)	COND . . . . . (uS/cm3). . :	155.67	5.13
DISCHARGE . . .	: 0.002 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	33.93	0.90

	MEAN	STD	
WIDTH. . . . . :	1.29	0.74	(m)
DEPTH. . . . . :	6.30	7.31	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	2.13
TYPE THREE SUBSTRATE . . . :	41.7 (%)	AIR/WATER TEMP. RATIO:	1.09
EMBEDDEDNESS OF TYPE THREE :	44.00 (%)		
OVERHEAD CANOPY. . . . . :	(%)		
INSTREAM SHELTER . . . . . :	1.470 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2635.	0.0
Rhinichthys atratulus	55969.	1839.0
Semotilus atromaculatus	17519.	334.1
Notemigonus crysoleucas	155.	0.0

STREAM NAME : GOODHILL BROOK SITE #: 3080
SITE DESCRIPTION: UPSTREAM OF GRASSY HILL RD., WOODBURY.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/22/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	6.97	1.18
WATER TEMP. . .	:20.00 (C)	pH . . . . . :	6.90	0.20
VELOCITY. . . .	: 0.022 (m/s)	COND . . . . . (uS/cm3). . :	127.67	1.53
DISCHARGE . . .	: 0.004 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	12.53	0.25

	MEAN	STD	
WIDTH. . . . . :	2.08	0.68	(m)
DEPTH. . . . . :	8.20	7.53	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	1.80
TYPE THREE SUBSTRATE . . . :	42.9 (%)	AIR/WATER TEMP. RATIO:	1.30
EMBEDDEDNESS OF TYPE THREE :	15.00 (%)		
OVERHEAD CANOPY. . . . . :	0.96 (%)		
INSTREAM SHELTER . . . . . :	3.555 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	5000.	0.0
Rhinichthys atratulus	13413.	395.0
Semotilus atromaculatus	625.	0.0
Unknown cyprinid	144.	0.0

STREAM NAME : MALLORY BROOK SITE #: 3081
SITE DESCRIPTION: UPSTREAM OF WYANT RD., WASHINGTON. (WIDE, SHALLOW BEDROCK POOLS UPSTREAM OF SAMPLE AREA)
SAMPLE LENGTH : 107. SAMPLE DATE: 08/15/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.93	0.06
WATER TEMP. . .	17.00	(C)	pH . . . . . :	7.23	0.12
VELOCITY. . . .	0.125	(m/s)	COND . . . . . (uS/cm3). . :	133.33	1.53
DISCHARGE . . .	0.032	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	4.16	1.57	(m)
DEPTH. . . . . :	6.65	5.58	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.15
TYPE THREE SUBSTRATE . . . :	11.4	(%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)		
OVERHEAD CANOPY. . . . . :	0.78	(%)		
INSTREAM SHELTER . . . . . :	0.960	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	449.	0.0
Rhinichthys atratulus	2695.	24.7
Salmo trutta	112.	0.0
Semotilus atromaculatus	359.	0.0
Rhinichthys cataractae	3482.	570.8
Micropterus salmoides	89.	0.0
Etheostoma olmstedi	22.	0.0
Catostomus commersoni	112.	0.0

STREAM NAME : TOWANTIC BROOK SITE #: 3082
SITE DESCRIPTION: 100 M DOWN HILL PAST END OF HARPIN RD., OXFORD.

SAMPLE LENGTH : 110. SAMPLE DATE: 08/29/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	10.10	0.00
WATER TEMP. . .	19.00	(C)	pH . . . . . :	6.00	0.00
VELOCITY. . . .	0.062	(m/s)	COND . . . . . (uS/cm3). . :	55.67	1.15
DISCHARGE . . .	0.033	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	4.59	1.20	(m)
DEPTH. . . . . :	11.95	10.30	(cm)

DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	2.44
TYPE THREE SUBSTRATE . . . :	9.5	(%)	AIR/WATER TEMP. RATIO:	1.21
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)		
OVERHEAD CANOPY. . . . . :	0.83	(%)		
INSTREAM SHELTER . . . . . :	14.860	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1624.	22.1
Rhinichthys atratulus	1604.	118.1
Erimyzon oblongus	39.	0.0
Esox niger	19.	0.0
Semotilus atromaculatus	178.	0.0
Unknown cyprinid	396.	24.7
Notemigonus crysoleucas	19.	0.0
Rhinichthys cataractae	39.	0.0
Lepomis gibbosus	158.	0.0
Catostomus commersoni	732.	368.7
Perca flavescens	831.	346.3

STREAM NAME : KIRBY BROOK SITE #: 3083
SITE DESCRIPTION: UPSTREAM OF FIRST BRIDGE 30 M FROM SHEPAUG RIVER CONFLUENCE, STEEP ROCK PRESERVE, ROXBURY.
SAMPLE LENGTH : 100. SAMPLE DATE: 07/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	25.00 (C)	DISSOLVED OXYGEN (mg/1). . :	8.87	0.12
WATER TEMP. . . :	20.00 (C)	pH . . . . . :	7.37	0.58
VELOCITY. . . . :	0.102 (m/s)	COND . . . . . (uS/cm3). . :	140.33	1.53
DISCHARGE . . . :	0.034 (m3/s)	ALKALINITY .(mg CaCO3 eq/1):	31.07	1.03

	MEAN	STD	
WIDTH. . . . . :	3.81	1.55	(m)
DEPTH. . . . . :	9.55	9.83	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.31
TYPE THREE SUBSTRATE . . . :	12.1 (%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	40.00 (%)		
OVERHEAD CANOPY. . . . . :	100.00 (%)		
INSTREAM SHELTER . . . . . :	5.198 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	314.	0.0
Rhinichthys atratulus	157.	0.0
Salmo trutta	5800.	83.0
Rhinichthys cataractae	26.	0.0

STREAM NAME : WALKER BROOK SITE #: 3084
SITE DESCRIPTION: UPSTREAM OF WALKER BROOK RD. BRIDGE, NEW MILFORD.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/12/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	21.00 (C)	DISSOLVED OXYGEN (mg/1). . :	9.40	0.00
WATER TEMP. . . :	18.00 (C)	pH . . . . . :		
VELOCITY. . . . :	0.112 (m/s)	COND . . . . . (uS/cm3). . :	174.67	1.15
DISCHARGE . . . :	0.036 (m3/s)	ALKALINITY .(mg CaCO3 eq/1):	56.67	0.31

	MEAN	STD	
WIDTH. . . . . :	4.02	0.80	(m)
DEPTH. . . . . :	8.10	6.08	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.33
TYPE THREE SUBSTRATE . . . :	23.5 (%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	10.00 (%)		
OVERHEAD CANOPY. . . . . :	0.93 (%)		
INSTREAM SHELTER . . . . . :	1.230 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	99.	0.0
Salvelinus fontinalis	24.	0.0
Rhinichthys atratulus	422.	0.0
Salmo trutta	4179.	26.7
Unknown cyprinid	74.	0.0
Rhinichthys cataractae	223.	0.0

STREAM NAME : MOOSEHORN BROOK SITE #: 3085
SITE DESCRIPTION: UPSTREAM 100 M ABOVE DRIVEWAY BRIDGE ABOVE RTE 199, ROXBURY. (HUMPHREY PRESERVE, ROXBURY LAND TRUST)
SAMPLE LENGTH : 100. SAMPLE DATE: 08/15/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). .	9.17	0.06
WATER TEMP. . .	17.00	(C)	pH	6.56	0.06
VELOCITY. . . .	0.073	(m/s)	COND . . . . . (uS/cm3). .	68.00	0.00
DISCHARGE . . .	0.013	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	12.80	0.56

	MEAN	STD	
WIDTH.	2.66	1.07	(m)
DEPTH.	7.55	9.50	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.45
TYPE THREE SUBSTRATE . . . :	20.8	(%)	AIR/WATER TEMP. RATIO:	1.18
EMBEDDEDNESS OF TYPE THREE :	78.00	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	3.720	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	37.	0.0
Salvelinus fontinalis	7706.	76.1
Rhinichthys atratulus	939.	0.0
Micropterus salmoides	375.	0.0
Lepomis gibbosus	37.	0.0

STREAM NAME : GREENWOOD BROOK SITE #: 3087
SITE DESCRIPTION: 200 M DOWNSTREAM OF UPPER RTE 39 BRIDGE CROSSING, SHERMAN.

SAMPLE LENGTH : 100. SAMPLE DATE: 06/19/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .	9.50	0.10
WATER TEMP. . .	16.00	(C)	pH	7.57	0.12
VELOCITY. . . .	0.074	(m/s)	COND . . . . . (uS/cm3). .	110.00	0.00
DISCHARGE . . .	0.016	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	60.40	1.25

	MEAN	STD	
WIDTH.	2.69	1.02	(m)
DEPTH.	8.15	7.37	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.99
TYPE THREE SUBSTRATE . . . :	22.7	(%)	AIR/WATER TEMP. RATIO:	1.38
EMBEDDEDNESS OF TYPE THREE :	48.00	(%)		
OVERHEAD CANOPY. . . . . :	0.98	(%)		
INSTREAM SHELTER . . . . . :	8.360	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	3122.	142.6
Rhinichthys atratulus	1115.	0.0
Notemigonus crysoleucas	631.	0.0

STREAM NAME : GREAT BROOK SITE #: 3088
SITE DESCRIPTION: ADJACENT TO NORTH END OF CENTER CEMETERY, NEW MILFORD.

SAMPLE LENGTH : 120. SAMPLE DATE: 07/10/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:28.00 (C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	:22.00 (C)	pH . . . . . :	8.30	0.00
VELOCITY. . . .	: 0.153 (m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . .	: 0.066 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	67.47	0.67

	MEAN	STD			
WIDTH.	: 3.22	0.74	(m)		
DEPTH.	: 13.40	11.95	(cm)		
DOMINANT SUBSTRATE TYPE. .	: 3		POOL/RIFFLE RATIO . .:		1.46
TYPE THREE SUBSTRATE . . .	: 48.0	(%)	AIR/WATER TEMP. RATIO:		1.27
EMBEDDEDNESS OF TYPE THREE	: 45.83	(%)			
OVERHEAD CANOPY.	: 0.66	(%)			
INSTREAM SHELTER	: 32.695	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	51.	0.0
Salvelinus fontinalis	103.	0.0
Rhinichthys atratulus	5874.	908.7
Salmo trutta	2380.	71.7
Exoglossum maxillingua	129.	0.0
Semotilus atromaculatus	1656.	120.5
Pimephales promelas	232.	0.0
Rhinichthys cataractae	103.	0.0
Lepomis gibbosus	103.	0.0
Etheostoma olmstedi	388.	33.1
Catostomus commersoni	3234.	205.2

STREAM NAME : WEWAKA BROOK SITE #: 3089
SITE DESCRIPTION: PARALLEL TO RTE 133 1.4 MILES BELOW WEWAKA RD., BRIDGEWATER. (BEDROCK)
SAMPLE LENGTH : 103. SAMPLE DATE: 07/30/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:23.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.97	0.06
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	7.70	0.26
VELOCITY. . . .	: 0.068 (m/s)	COND . . . . . (uS/cm3). . :	177.00	1.73
DISCHARGE . . .	: 0.019 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	46.30	1.82

	MEAN	STD			
WIDTH.	: 4.01	1.36	(m)		
DEPTH.	: 6.50	6.46	(cm)		
DOMINANT SUBSTRATE TYPE. .	: 4		POOL/RIFFLE RATIO . .:		1.78
TYPE THREE SUBSTRATE . . .	: 25.7	(%)	AIR/WATER TEMP. RATIO:		1.35
EMBEDDEDNESS OF TYPE THREE	: 25.56	(%)			
OVERHEAD CANOPY.	: 0.88	(%)			
INSTREAM SHELTER	: 5.080	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	48.	0.0
Salvelinus fontinalis	169.	0.0
Rhinichthys atratulus	3510.	120.1
Salmo trutta	290.	0.0
Semotilus atromaculatus	581.	0.0
Unknown cyprinid	48.	0.0
Micropterus salmoides	1815.	95.2
Oncorhynchus mykiss	581.	0.0
Catostomus commersoni	1113.	28.5

STREAM NAME : **BOYS HALFWAY RIVER** SITE #: 3090
SITE DESCRIPTION: UPSTREAM OF END OF BROOKSIDE TRAIL, MONROE.

SAMPLE LENGTH : 100. SAMPLE DATE: 09/09/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:18.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 11.47	0.06
WATER TEMP. . .	:15.00 (C)	pH	:	
VELOCITY. . . .	: 0.035 (m/s)	COND . . . . . (uS/cm3). .	: 69.67	0.58
DISCHARGE . . .	: 0.008 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	2.77	1.39	(m)
DEPTH.	9.32	7.54	(cm)

DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	0.92
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.20
EMBEDDEDNESS OF TYPE THREE :	25.56	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	2.065	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	6317.	171.0
Rhinichthys atratulus	2021.	0.0
Semotilus atromaculatus	72.	0.0
Notemigonus crysoleucas	36.	0.0
Micropterus salmoides	180.	0.0

STREAM NAME : **INDIAN HOLE BROOK** SITE #: 3091
SITE DESCRIPTION: 20 M UPSTREAM FROM BRIDGE AT ENTRANCE TO INDIAN WELLS STATE PARK, SHELTON.
SAMPLE LENGTH : 53. SAMPLE DATE: 07/02/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:19.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 8.20	0.20
WATER TEMP. . .	:15.00 (C)	pH	: 7.20	0.00
VELOCITY. . . .	: 0.045 (m/s)	COND . . . . . (uS/cm3). .	:152.67	1.15
DISCHARGE . . .	: 0.015 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	15.90	0.66

	MEAN	STD	
WIDTH.	2.46	1.46	(m)
DEPTH.	11.00	12.99	(cm)

DOMINANT SUBSTRATE TYPE. . :	6		POOL/RIFFLE RATIO . .:	1.14
TYPE THREE SUBSTRATE . . . :	15.8	(%)	AIR/WATER TEMP. RATIO:	1.27
EMBEDDEDNESS OF TYPE THREE :	43.33	(%)		
OVERHEAD CANOPY. . . . . :	0.94	(%)		
INSTREAM SHELTER . . . . . :	20.260	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	766.	0.0
Salvelinus fontinalis	2224.	0.0
Rhinichthys atratulus	12808.	82.6
Salmo trutta	843.	0.0
Rhinichthys cataractae	76.	0.0
Etheostoma olmstedi	153.	0.0
Catostomus commersoni	76.	0.0

STREAM NAME : FIVEMILE BROOK SITE #: 3093
SITE DESCRIPTION: PARALLEL TO DRIVEWAY OFF PUNKUP RD., MONROE.
, (STEEP HEMLOCK GROVE WITH PLUNGE POOLS)
SAMPLE LENGTH : 58. SAMPLE DATE: 09/16/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .		10.87	0.06
WATER TEMP. . .	16.00	(C)	pH			
VELOCITY. . . .	0.050	(m/s)	COND . . . . . (uS/cm3). .		203.33	2.89
DISCHARGE . . .	0.010	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	1.92	0.56	(m)
DEPTH.	11.13	11.87	(cm)

DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	1.42
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.50
EMBEDDEDNESS OF TYPE THREE :	43.33	(%)		
OVERHEAD CANOPY. . . . . :	100.00	(%)		
INSTREAM SHELTER . . . . . :	4.340	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	269.	0.0
Lepomis macrochirus	179.	0.0
Salvelinus fontinalis	1526.	0.0
Rhinichthys atratulus	2065.	0.0
Salmo trutta	89.	0.0
Unknown centrarchid	359.	0.0
Unknown cyprinid	269.	0.0

STREAM NAME : HURDS BROOK SITE #: 3094
SITE DESCRIPTION: UPSTREAM OF BARN HILL RD, MONROE.

SAMPLE LENGTH : 100. SAMPLE DATE: 07/02/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.40	0.10
WATER TEMP. . .	16.00	(C)	pH		7.57	0.06
VELOCITY. . . .	0.053	(m/s)	COND . . . . . (uS/cm3). .		159.33	0.58
DISCHARGE . . .	0.012	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		40.10	0.92

	MEAN	STD	
WIDTH.	2.48	0.92	(m)
DEPTH.	8.25	6.97	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.12
TYPE THREE SUBSTRATE . . . :	11.1	(%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	40.00	(%)		
OVERHEAD CANOPY. . . . . :	0.91	(%)		
INSTREAM SHELTER . . . . . :	5.995	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	645.	0.0
Rhinichthys atratulus	2701.	0.0
Salmo trutta	524.	0.0
Semotilus atromaculatus	40.	0.0
Luxilus cornutus	80.	0.0
Unknown cyprinid	40.	0.0
Lepomis gibbosus		
Catostomus commersoni	40.	0.0

STREAM NAME : **JEREMY BROOK** SITE #: **3096**
SITE DESCRIPTION: UPPER CROSSING ON JEREMY SWAMP RD. SOUTH, SOUTHBURY.

SAMPLE LENGTH : 105. SAMPLE DATE: 09/09/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). .		11.10	0.10
WATER TEMP. . .	14.00	(C)	pH			
VELOCITY. . . .	0.067	(m/s)	COND . . . . . (uS/cm3). .		196.67	2.31
DISCHARGE . . .	0.017	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	2.53	1.26	(m)
DEPTH.	9.88	9.95	(cm)

DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	0.64
TYPE THREE SUBSTRATE . . . :	4.5	(%)	AIR/WATER TEMP. RATIO:	1.43
EMBEDDEDNESS OF TYPE THREE :	10.00	(%)		
OVERHEAD CANOPY. . . . . :	0.96	(%)		
INSTREAM SHELTER . . . . . :	5.730	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	225.	0.0
Salvelinus fontinalis	37.	0.0
Rhinichthys atratulus	8695.	317.7
Semotilus atromaculatus	6700.	444.5
Luxilus cornutus	225.	0.0
Unknown cyprinid	1618.	0.0
Micropterus salmoides	37.	0.0
Lepomis gibbosus	1091.	102.3
Etheostoma olmstedi	225.	0.0
Catostomus commersoni	112.	0.0

STREAM NAME : **PURCHASE BROOK** SITE #: **3097**
SITE DESCRIPTION: PARALLEL TO LITTLE YORK RD., 100 M UPSTREAM OF DEAD END PARKING LOT, SOUTHBURY. (SOUTHBURY TOWN PARK)
SAMPLE LENGTH : 98. SAMPLE DATE: 08/07/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	19.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.43	0.06
WATER TEMP. . .	15.00	(C)	pH		7.30	0.00
VELOCITY. . . .	0.073	(m/s)	COND . . . . . (uS/cm3). .		130.00	0.00
DISCHARGE . . .	0.013	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		29.17	0.51

	MEAN	STD	
WIDTH.	2.67	1.37	(m)
DEPTH.	6.38	6.38	(cm)

DOMINANT SUBSTRATE TYPE. . :	5		POOL/RIFFLE RATIO . .:	0.46
TYPE THREE SUBSTRATE . . . :	10.0	(%)	AIR/WATER TEMP. RATIO:	1.27
EMBEDDEDNESS OF TYPE THREE :	25.00	(%)		
OVERHEAD CANOPY. . . . . :	0.98	(%)		
INSTREAM SHELTER . . . . . :	6.340	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	114.	0.0
Rhinichthys atratulus	1146.	0.0
Semotilus atromaculatus	993.	47.5
Unknown cyprinid	152.	0.0

STREAM NAME : **WEEKEEPEEMEE RIVER (UPPER SITE)** SITE #: 3099
SITE DESCRIPTION: UPSTREAM OF BROOK RD., BETHLEHEM. (OLD BEAVER POND, MEADOW GRADIENT WITH ALDERS)
SAMPLE LENGTH : 50. SAMPLE DATE: 08/07/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .		10.03	0.06
WATER TEMP. . .	21.00	(C)	pH		6.13	0.15
VELOCITY. . . .	0.137	(m/s)	COND . . . . . (uS/cm3). .		96.00	3.61
DISCHARGE . . .	0.009	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		50.00	4.17

	MEAN	STD	
WIDTH.	1.38	0.38	(m)
DEPTH.	4.72	4.15	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.61
TYPE THREE SUBSTRATE . . . :	30.0	(%)	AIR/WATER TEMP. RATIO:	1.14
EMBEDDEDNESS OF TYPE THREE :	50.00	(%)		
OVERHEAD CANOPY. . . . . :	0.65	(%)		
INSTREAM SHELTER . . . . . :	0.360	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	434.	0.0
Rhinichthys atratulus	22318.	306.3
Semotilus atromaculatus	34782.	734.4
Unknown cyprinid	289.	0.0
Notemigonus crysoleucas	1304.	0.0
Micropterus salmoides	289.	0.0
Catostomus commersoni	434.	0.0

STREAM NAME : **LITTLE POOTATUCK BROOK** SITE #: 3100
SITE DESCRIPTION: PARALLEL TO FLAT HILL RD., SOUTHBURY.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/22/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		11.27	0.12
WATER TEMP. . .	18.00	(C)	pH			
VELOCITY. . . .	0.182	(m/s)	COND . . . . . (uS/cm3). .		76.33	1.53
DISCHARGE . . .	0.034	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	2.50	1.07	(m)
DEPTH.	7.97	6.35	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.11
TYPE THREE SUBSTRATE . . . :	25.0	(%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	17.00	(%)		
OVERHEAD CANOPY. . . . . :	0.98	(%)		
INSTREAM SHELTER . . . . . :	5.747	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1160.	50.4
Rhinichthys atratulus	760.	0.0
Salmo trutta	80.	0.0

STREAM NAME : CANDLEWOOD LAKE TRIB. SITE #: 3102
SITE DESCRIPTION: 50 M UPSTREAM LAKE CANDLEWOOD, SHERMAN.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/22/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.17	0.06
WATER TEMP. . .	:16.00 (C)	pH . . . . . :	7.60	0.00
VELOCITY. . . .	: 0.173 (m/s)	COND . . . . . (uS/cm3). . :	143.00	1.73
DISCHARGE . . .	: 0.032 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	53.70	0.72

	MEAN	STD	
WIDTH. . . . . :	2.37	0.92	(m)
DEPTH. . . . . :	8.25	6.50	(cm)

DOMINANT SUBSTRATE TYPE. . :	5	POOL/RIFFLE RATIO . .:	0.10
TYPE THREE SUBSTRATE . . . :	10.5 (%)	AIR/WATER TEMP. RATIO:	1.31
EMBEDDEDNESS OF TYPE THREE :	0.00 (%)		
OVERHEAD CANOPY. . . . . :	100.00 (%)		
INSTREAM SHELTER . . . . . :	0.430 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	0.	0.0
Micropterus salmoides	84.	0.0
Lepomis gibbosus	337.	0.0

STREAM NAME : NO NAME TRIB. TO NONEWAUG R. SITE #: 3103
SITE DESCRIPTION: DOWNSTREAM OF HICKORY LA., BETHLEHEM.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/08/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:26.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.57	0.81
WATER TEMP. . .	:19.00 (C)	pH . . . . . :	7.17	0.06
VELOCITY. . . .	: 0.095 (m/s)	COND . . . . . (uS/cm3). . :	118.67	1.15
DISCHARGE . . .	: 0.005 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	34.50	0.62

	MEAN	STD	
WIDTH. . . . . :	1.87	0.73	(m)
DEPTH. . . . . :	6.32	5.59	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	1.09
TYPE THREE SUBSTRATE . . . :	46.2 (%)	AIR/WATER TEMP. RATIO:	1.37
EMBEDDEDNESS OF TYPE THREE :	12.50 (%)		
OVERHEAD CANOPY. . . . . :	0.79 (%)		
INSTREAM SHELTER . . . . . :	0.060 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	534.	0.0
Rhinichthys atratulus	26310.	0.0
Salmo trutta	855.	0.0
Semotilus atromaculatus	4812.	0.0
Rhinichthys cataractae	534.	0.0

STREAM NAME : PITCH BROOK SITE #: 3105
SITE DESCRIPTION: UPSTREAM 300 M FROM PITCH RESERVIOR, MORRIS.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/11/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.80	0.44
WATER TEMP. . .	18.00	(C)	pH		7.10	0.17
VELOCITY. . . .	0.043	(m/s)	COND . . . . . (uS/cm3). .		55.33	3.51
DISCHARGE . . .	0.004	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		13.00	0.40

	MEAN	STD	
WIDTH.	1.95	0.69	(m)
DEPTH.	5.32	5.73	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.92
TYPE THREE SUBSTRATE . . . :	28.6	(%)	AIR/WATER TEMP. RATIO:	1.50
EMBEDDEDNESS OF TYPE THREE :	35.00	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	1.050	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	3282.	0.0
Rhinichthys atratulus	6461.	0.0
Semotilus atromaculatus	0.	0.0
Luxilus cornutus	0.	0.0
Esox americanus	0.	0.0
Etheostoma olmstedi	102.	0.0

STREAM NAME : TRIB TO BULLYMUCK BROOK SITE #: 3106
SITE DESCRIPTION: UPSTREAM 30 M OF CONFLUENCE WITH BULLYMUCK BROOK, NEW MILFORD.
SAMPLE LENGTH : 50. SAMPLE DATE: 08/22/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.03	0.06
WATER TEMP. . .	17.00	(C)	pH		7.50	0.00
VELOCITY. . . .	0.260	(m/s)	COND . . . . . (uS/cm3). .		183.00	0.00
DISCHARGE . . .	0.047	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)		72.00	0.70

	MEAN	STD	
WIDTH.	1.51	0.21	(m)
DEPTH.	12.69	10.16	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.23
TYPE THREE SUBSTRATE . . . :	77.8	(%)	AIR/WATER TEMP. RATIO:	1.24
EMBEDDEDNESS OF TYPE THREE :	22.86	(%)		
OVERHEAD CANOPY. . . . . :	0.64	(%)		
INSTREAM SHELTER . . . . . :	1.490	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1588.	0.0
Rhinichthys atratulus	1985.	0.0
Semotilus atromaculatus	794.	0.0
Unknown cyprinid	132.	0.0

STREAM NAME : LEWIS BROOK SITE #: 3107
SITE DESCRIPTION: UPSTREAM OF CASTLE MEADOW RD., NEWTOWN.

SAMPLE LENGTH : 50. SAMPLE DATE: 09/16/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .			
WATER TEMP. . .	17.00	(C)	pH			
VELOCITY. . . .	0.075	(m/s)	COND . . . . . (uS/cm3). .			
DISCHARGE . . .	0.012	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH.	2.53	1.21	(m)
DEPTH.	6.72	4.95	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.67
TYPE THREE SUBSTRATE . . . :	5.0	(%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE :	20.00	(%)		
OVERHEAD CANOPY. . . . . :	0.92	(%)		
INSTREAM SHELTER . . . . . :	0.300	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	79.	0.0
Rhinichthys atratulus	158.	0.0
Semotilus atromaculatus	79.	0.0
Notemigonus crysoleucas	0.	0.0
Micropterus salmoides	79.	0.0
Lepomis gibbosus		

STREAM NAME : OLD TANNERY BROOK SITE #: 3109
SITE DESCRIPTION: 100 M UPSTREAM OF TOSCAN RD., PARALLEL TO RTE 69, WOLCOTT.
(COBBLE STREAM,HEAVY FLOCCULENT)
SAMPLE LENGTH : 100. SAMPLE DATE: 07/09/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	29.00	(C)	DISSOLVED OXYGEN (mg/l). . :		8.93	0.15
WATER TEMP. . .	21.00	(C)	pH . . . . . :		6.37	0.35
VELOCITY. . . .	0.074	(m/s)	COND . . . . . (uS/cm3). . :		135.33	2.08
DISCHARGE . . .	0.017	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		19.33	0.38

	MEAN	STD	
WIDTH.	3.06	0.59	(m)
DEPTH.	7.35	6.75	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.66
TYPE THREE SUBSTRATE . . . :	4.3	(%)	AIR/WATER TEMP. RATIO:	1.38
EMBEDDEDNESS OF TYPE THREE :	80.00	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	1.680	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	2810.	114.0
Unknown cyprinid	98.	0.0
Semotilus corporalis	1372.	0.0
Rhinichthys cataractae	1176.	0.0
Micropterus salmoides	522.	0.0
Lepomis gibbosus	32.	0.0
Etheostoma olmstedi	326.	0.0
Catostomus commersoni	588.	0.0

STREAM NAME : TODD HOLLOW BROOK SITE #: 3110
SITE DESCRIPTION: UPSTREAM OF TODD HOLLOW RD. OFF RT 6, PLYMOUTH.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/26/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	23.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.87	0.06
WATER TEMP. . .	18.00	(C)	pH . . . . . :	7.60	0.10
VELOCITY. . . .	0.050	(m/s)	COND . . . . . (uS/cm3). . :	113.33	2.89
DISCHARGE . . .	0.004	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	16.20	0.40

	MEAN	STD	
WIDTH. . . . . :	1.67	0.55	(m)
DEPTH. . . . . :	5.44	4.09	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	2.13
TYPE THREE SUBSTRATE . . . :	53.8	(%)	AIR/WATER TEMP. RATIO:	1.28
EMBEDDEDNESS OF TYPE THREE :	92.86	(%)		
OVERHEAD CANOPY. . . . . :	0.97	(%)		
INSTREAM SHELTER . . . . . :	0.200	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	120.	0.0
Salvelinus fontinalis	1080.	0.0
Rhinichthys atratulus	2400.	0.0
Catostomus commersoni	1920.	0.0

STREAM NAME : KINNEYTOWN BROOK SITE #: 3111
SITE DESCRIPTION: PARALLEL TO BUNGAY RD., SEYMOUR.

SAMPLE LENGTH : 45. SAMPLE DATE: 08/13/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.93	0.06
WATER TEMP. . .	20.00	(C)	pH . . . . . :	7.07	0.51
VELOCITY. . . .	0.064	(m/s)	COND . . . . . (uS/cm3). . :	79.67	0.58
DISCHARGE . . .	0.007	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	14.13	0.46

	MEAN	STD	
WIDTH. . . . . :	1.77	0.58	(m)
DEPTH. . . . . :	6.93	6.37	(cm)

DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	2.57
TYPE THREE SUBSTRATE . . . :	21.4	(%)	AIR/WATER TEMP. RATIO:	1.35
EMBEDDEDNESS OF TYPE THREE :	86.67	(%)		
OVERHEAD CANOPY. . . . . :	0.93	(%)		
INSTREAM SHELTER . . . . . :	2.300	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	251.	0.0
Salvelinus fontinalis	5524.	0.0
Rhinichthys atratulus	14563.	499.6

STREAM NAME : **TWOMILE BROOK** SITE #: 3112
SITE DESCRIPTION: PARALLEL TO DERBY-MILFORD RD., DERBY.
(BOULDERS, OLD DAM, BUDA PROPERTY)
SAMPLE LENGTH : 100. SAMPLE DATE: 08/08/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00 (C)	DISSOLVED OXYGEN (mg/l). .	9.87	0.06
WATER TEMP. . .	18.00 (C)	pH	7.57	0.15
VELOCITY. . . .	0.060 (m/s)	COND . . . . . (uS/cm3). .	194.00	1.73
DISCHARGE . . .	0.012 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	38.50	1.18

	MEAN	STD	
WIDTH.	2.24	0.87	(m)
DEPTH.	8.55	7.36	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	1.63
TYPE THREE SUBSTRATE . . . :	5.6 (%)	AIR/WATER TEMP. RATIO:	1.50
EMBEDDEDNESS OF TYPE THREE :	10.00 (%)		
OVERHEAD CANOPY. . . . . :	(%)		
INSTREAM SHELTER . . . . . :	2.190 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	6026.	339.6
Rhinichthys atratulus	23660.	593.8
Salmo trutta	44.	0.0
S.fontenalis X S. trutta	44.	0.0
Catostomus commersoni	1964.	111.8

STREAM NAME : **HITCHCOCK MILL BROOK** SITE #: 3113
SITE DESCRIPTION: DOWNSTREAM OF FIRST BRIDGE ABOVE LAKE LILLINONAH,
BRIDGEWATER. (BEDROCK, PRIVATE RD.)
SAMPLE LENGTH : 50. SAMPLE DATE: 07/29/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	17.00 (C)	DISSOLVED OXYGEN (mg/l). .	9.60	0.00
WATER TEMP. . .	16.00 (C)	pH	7.47	0.06
VELOCITY. . . .	0.058 (m/s)	COND . . . . . (uS/cm3). .	130.00	0.00
DISCHARGE . . .	0.007 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	35.67	2.00

	MEAN	STD	
WIDTH.	1.10	0.52	(m)
DEPTH.	8.55	10.04	(cm)

DOMINANT SUBSTRATE TYPE. . :	7	POOL/RIFFLE RATIO . .:	1.00
TYPE THREE SUBSTRATE . . . :	36.4 (%)	AIR/WATER TEMP. RATIO:	1.06
EMBEDDEDNESS OF TYPE THREE :	53.75 (%)		
OVERHEAD CANOPY. . . . . :	0.98 (%)		
INSTREAM SHELTER . . . . . :	6.750 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	5277.	0.0
Rhinichthys atratulus	2911.	0.0
Unknown cyprinid	363.	0.0

STREAM NAME : **SOUTH BROOK** SITE #: **3116**
SITE DESCRIPTION: DOWNSTREAM OF RTE 6, WOODBURY.
(RIP-RAP, BROWN TROUT PRESENT DURING INVERT SAMPLING)
SAMPLE LENGTH : 50. SAMPLE DATE: 07/29/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.87	0.06
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	7.87	0.42
VELOCITY. . . .	: 0.179 (m/s)	COND . . . . . (uS/cm3). . :	98.67	2.31
DISCHARGE . . .	: 0.023 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	20.93	1.27

	MEAN	STD	
WIDTH. . . . . :	1.83	0.69	(m)
DEPTH. . . . . :	6.78	4.22	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	1.00
TYPE THREE SUBSTRATE . . . :	52.9 (%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE :	32.78 (%)		
OVERHEAD CANOPY. . . . . :	(%)		
INSTREAM SHELTER . . . . . :	0.270 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	9508.	247.2
Exoglossum maxillingua	1748.	0.0
Semotilus atromaculatus	218.	0.0
Luxilus cornutus	765.	0.0
Unknown cyprinid	3169.	0.0
Rhinichthys cataractae	109.	0.0
Micropterus salmoides	218.	0.0
Salmo trutta	0.	0.0

STREAM NAME : **EAST MEADOW BROOK** SITE #: **3117**
SITE DESCRIPTION: UPSTREAM OF PRIVATE DRIVE, 234 FLANDERS RD., WOODBURY.
(SMALL BOULDER AND COBBLE, BROOK TROUT PRESENT DURING INVERT SAMPLING)
SAMPLE LENGTH : 100. SAMPLE DATE: 09/24/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:19.00 (C)	DISSOLVED OXYGEN (mg/l). . :	11.60	0.10
WATER TEMP. . .	:12.00 (C)	pH . . . . . :		
VELOCITY. . . .	: 0.114 (m/s)	COND . . . . . (uS/cm3). . :	83.00	2.00
DISCHARGE . . .	: 0.027 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	3.02	1.18	(m)
DEPTH. . . . . :	8.23	7.74	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	1.27
TYPE THREE SUBSTRATE . . . :	16.0 (%)	AIR/WATER TEMP. RATIO:	1.58
EMBEDDEDNESS OF TYPE THREE :	60.00 (%)		
OVERHEAD CANOPY. . . . . :	0.93 (%)		
INSTREAM SHELTER . . . . . :	4.620 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	12417.	379.3
Semotilus atromaculatus	5529.	261.2
Salvelinus fontinalis	0.	0.0
Unknown cyprinid	5066.	0.0

STREAM NAME : **RAVEN BROOK** SITE #: **3118**
SITE DESCRIPTION: DOWNSTREAM OF WOODLAWN RD., STRAFFORD.

SAMPLE LENGTH : 50. SAMPLE DATE: 09/17/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	26.00 (C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	15.00 (C)	pH . . . . . :		
VELOCITY. . . . :	0.000 (m/s)	COND . . . . . (uS/cm3). . :		
DISCHARGE . . . :	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	2.34	0.56	(m)
DEPTH. . . . . :	9.63	10.46	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :	33.3	(%)	AIR/WATER TEMP. RATIO:	1.73
EMBEDDEDNESS OF TYPE THREE :	64.00	(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	10.910	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	1111.	0.0
Ameiurus nebulosus	0.	0.0
Lepomis macrochirus	769.	0.0
Unknown centrarchid	769.	0.0
Notemigonus crysoleucas	341.	0.0
Micropterus salmoides	85.	0.0
Lepomis gibbosus	5042.	0.0
Catostomus commersoni	0.	0.0

STREAM NAME : **BEAVER BROOK** SITE #: **3119**
SITE DESCRIPTION: DOWNSTREAM OF WEST AVE., MILFORD.
SCRWA PROPERTY, BIG SPRINGS UPSTREAM, SANDY BOTTOM
SAMPLE LENGTH : 75. SAMPLE DATE: 06/25/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	22.00 (C)	DISSOLVED OXYGEN (mg/l). . :	7.07	0.45
WATER TEMP. . . :	19.00 (C)	pH . . . . . :	6.60	0.10
VELOCITY. . . . :	0.116 (m/s)	COND . . . . . (uS/cm3). . :	203.00	3.46
DISCHARGE . . . :	0.082 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	37.07	1.03

	MEAN	STD	
WIDTH. . . . . :	4.49	0.86	(m)
DEPTH. . . . . :	16.13	10.02	(cm)

DOMINANT SUBSTRATE TYPE. . :	1		POOL/RIFFLE RATIO . .:	2000.00
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.16
EMBEDDEDNESS OF TYPE THREE :	64.00	(%)		
OVERHEAD CANOPY. . . . . :	0.88	(%)		
INSTREAM SHELTER . . . . . :	20.890	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	297.	0.0
Ameiurus nebulosus	326.	0.0
Lepomis macrochirus	59.	0.0
Esox americanus	59.	0.0
Notemigonus crysoleucas	237.	0.0
Lepomis gibbosus	59.	0.0

STREAM NAME : TRIB TO WALKER BROOK SITE #: 3120
SITE DESCRIPTION: UPSTREAM FROM CONFLUENCE WITH WALKER BROOK, WASHINGTON.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/27/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:20.00 (C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . .	:16.00 (C)	pH . . . . . :	6.83	0.06
VELOCITY. . . .	: 0.093 (m/s)	COND . . . . . (uS/cm3). . :	165.33	0.58
DISCHARGE . . .	: 0.019 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	52.23	0.35

	MEAN	STD	
WIDTH. . . . . :	2.05	0.77	(m)
DEPTH. . . . . :	9.70	6.81	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.24
TYPE THREE SUBSTRATE . . . :	5.9 (%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	50.00 (%)		
OVERHEAD CANOPY. . . . . :	0.98 (%)		
INSTREAM SHELTER . . . . . :	0.630 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1853.	0.0
Rhinichthys atratulus	1365.	0.0
Salmo trutta	975.	0.0
Unknown centrarchid	682.	0.0
Lepomis gibbosus		

STREAM NAME : FENN BROOK SITE #: 3121
SITE DESCRIPTION: DOWNSTREAM OF BASSETT RD., WATERTOWN.
(WATERBURY WATER DEPT. PROPERTY)
SAMPLE LENGTH : 100. SAMPLE DATE: 07/29/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	: (C)	DISSOLVED OXYGEN (mg/l). . :	9.27	0.15
WATER TEMP. . .	:17.00 (C)	pH . . . . . :	6.63	0.38
VELOCITY. . . .	: 0.072 (m/s)	COND . . . . . (uS/cm3). . :	139.00	1.73
DISCHARGE . . .	: 0.009 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	28.57	0.06

	MEAN	STD	
WIDTH. . . . . :	2.33	0.69	(m)
DEPTH. . . . . :	5.32	4.67	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.54
TYPE THREE SUBSTRATE . . . :	19.0 (%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	37.50 (%)		
OVERHEAD CANOPY. . . . . :	100.00 (%)		
INSTREAM SHELTER . . . . . :	8.100 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	42.	0.0
Salvelinus fontinalis	257.	0.0
Rhinichthys atratulus	7939.	138.7
Semotilus atromaculatus	5708.	70.1
Luxilus cornutus	85.	0.0
Unknown cyprinid	257.	0.0
Notemigonus crysoleucas	42.	0.0

STREAM NAME : TRIB TO EAST SPRING BROOK SITE #: 3122
SITE DESCRIPTION: DOWNSTREAM OF GREEN HILL RD., BETHLEHEM.

SAMPLE LENGTH : 50. SAMPLE DATE: 07/09/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .	7.67	0.21
WATER TEMP. . .	17.00	(C)	pH	7.20	0.20
VELOCITY. . . .	0.023	(m/s)	COND . . . . . (uS/cm3). .	170.67	17.04
DISCHARGE . . .	0.001	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)	45.60	1.40

	MEAN	STD	
WIDTH.	1.94	1.04	(m)
DEPTH.	2.45	2.56	(cm)

DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .	0.67
TYPE THREE SUBSTRATE . . .	20.0	(%)	AIR/WATER TEMP. RATIO:	1.29
EMBEDDEDNESS OF TYPE THREE	6.67	(%)		
OVERHEAD CANOPY.	0.99	(%)		
INSTREAM SHELTER	0.000	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	2268.	0.0
Rhinichthys atratulus	5463.	0.0
Unknown cyprinid	515.	0.0

STREAM NAME : TRIB TO WIGWAM BROOK SITE #: 3123
SITE DESCRIPTION: UPSTREAM OF BLAKESLEE RD., LITCHFIELD.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/17/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .	9.10	0.17
WATER TEMP. . .	19.00	(C)	pH	7.17	0.06
VELOCITY. . . .	0.029	(m/s)	COND . . . . . (uS/cm3). .	118.33	12.58
DISCHARGE . . .	0.001	(m3/s)	ALKALINITY .(mg CaCO3 eq/l)	17.77	0.42

	MEAN	STD	
WIDTH.	1.35	0.67	(m)
DEPTH.	3.03	2.36	(cm)

DOMINANT SUBSTRATE TYPE. .	3		POOL/RIFFLE RATIO . .	0.00
TYPE THREE SUBSTRATE . . .	84.6	(%)	AIR/WATER TEMP. RATIO:	1.26
EMBEDDEDNESS OF TYPE THREE	18.18	(%)		
OVERHEAD CANOPY.	0.94	(%)		
INSTREAM SHELTER	0.000	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	296.	0.0
Rhinichthys atratulus	5777.	0.0

STREAM NAME : MERWIN BROOK SITE #: 3124
SITE DESCRIPTION: 15 M DOWNSTREAM OF RTE 133, BROOKFIELD.

SAMPLE LENGTH : 50. SAMPLE DATE: 06/19/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	19.00	(C)	DISSOLVED OXYGEN (mg/l). .	10.37	0.06
WATER TEMP. . .	18.00	(C)	pH	7.61	0.05
VELOCITY. . . .	0.245	(m/s)	COND . . . . . (uS/cm3). .	189.33	0.58
DISCHARGE . . .	0.063	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	72.93	0.45

	MEAN	STD	
WIDTH.	2.30	0.78	(m)
DEPTH.	11.07	6.92	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	1.63
TYPE THREE SUBSTRATE . . . :	27.8	(%)	AIR/WATER TEMP. RATIO:	1.06
EMBEDDEDNESS OF TYPE THREE :	38.00	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	3.300	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	347.	0.0
Rhinichthys atratulus	9913.	345.0
Semotilus atromaculatus	4347.	0.0
Lepomis gibbosus	260.	0.0
Catostomus commersoni	173.	0.0

STREAM NAME : POLE BRIDGE BROOK SITE #: 3125
SITE DESCRIPTION: BETWEEN RTE 84 AND RIVERSIDE RD., NEWTOWN.
(UPSTREAM OF BROWN HOUSE)
SAMPLE LENGTH : 100. SAMPLE DATE: 09/16/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). .	11.37	0.21
WATER TEMP. . .	13.00	(C)	pH		
VELOCITY. . . .	0.011	(m/s)	COND . . . . . (uS/cm3). .	267.33	3.06
DISCHARGE . . .	0.008	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	3.14	0.98	(m)
DEPTH.	11.48	9.81	(cm)

DOMINANT SUBSTRATE TYPE. . :	2		POOL/RIFFLE RATIO . .:	8.09
TYPE THREE SUBSTRATE . . . :	3.6	(%)	AIR/WATER TEMP. RATIO:	2.08
EMBEDDEDNESS OF TYPE THREE :	30.00	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	3.920	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	350.	0.0
Rhinichthys atratulus	3280.	114.4
Semotilus atromaculatus	5891.	365.3
Unknown cyprinid	414.	0.0
Lepomis gibbosus	95.	0.0

STREAM NAME : **CAVANAUGH BROOK** SITE #: 3126
SITE DESCRIPTION: UPSTREAM OF LAKE LILLINONAH, 25 M ABOVE ALBERT HILL RD., NEWTOWN. (SHALLOW COBBLE)
SAMPLE LENGTH : 50. SAMPLE DATE: 07/30/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:21.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 9.50	0.10
WATER TEMP. . .	:20.00 (C)	pH	: 7.47	0.06
VELOCITY. . . .	: 0.140 (m/s)	COND . . . . . (uS/cm3). .	:132.33	2.31
DISCHARGE . . .	: 0.017 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	22.83	0.51

	MEAN	STD	
WIDTH.	2.16	0.57	(m)
DEPTH.	5.63	4.22	(cm)

DOMINANT SUBSTRATE TYPE. . :	3	POOL/RIFFLE RATIO . .:	0.25
TYPE THREE SUBSTRATE . . . :	41.2 (%)	AIR/WATER TEMP. RATIO:	1.05
EMBEDDEDNESS OF TYPE THREE :	45.00 (%)		
OVERHEAD CANOPY. . . . . :	0.99 (%)		
INSTREAM SHELTER . . . . . :	0.300 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	92.	0.0
Salvelinus fontinalis	92.	0.0
Rhinichthys atratulus	1018.	0.0
Unknown centrarchid	1759.	119.4
Semotilus atromaculatus		
Micropterus salmoides	185.	0.0

STREAM NAME : **TRIB TO DEEP BROOK** SITE #: 3127
SITE DESCRIPTION: UPSTREAM OF HEAD OF MEADOW RD., NEWTOWN.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/22/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 10.40	0.00
WATER TEMP. . .	:20.00 (C)	pH	:	
VELOCITY. . . .	: 0.115 (m/s)	COND . . . . . (uS/cm3). .	: 92.00	0.00
DISCHARGE . . .	: 0.017 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	31.53	0.76

	MEAN	STD	
WIDTH.	1.43	0.49	(m)
DEPTH.	9.20	7.97	(cm)

DOMINANT SUBSTRATE TYPE. . :	2	POOL/RIFFLE RATIO . .:	0.79
TYPE THREE SUBSTRATE . . . :	23.1 (%)	AIR/WATER TEMP. RATIO:	1.10
EMBEDDEDNESS OF TYPE THREE :	18.33 (%)		
OVERHEAD CANOPY. . . . . :	1.00 (%)		
INSTREAM SHELTER . . . . . :	2.075 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1958.	0.0
Rhinichthys atratulus	13426.	310.7
Semotilus atromaculatus	3916.	0.0

STREAM NAME : NORTH BRANCH POOTATUCK RIVER SITE #: 3128
SITE DESCRIPTION: UPSTREAM OF HUNTINGTOWN RD., NEWTOWN.

SAMPLE LENGTH : 102. SAMPLE DATE: 09/19/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). . :	11.07	0.31
WATER TEMP. . .	19.00	(C)	pH . . . . . :		
VELOCITY. . . . :		(m/s)	COND . . . . . (uS/cm3). . :	127.67	2.52
DISCHARGE . . . :		(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH. . . . . :	3.71	1.41	(m)
DEPTH. . . . . :	11.65	11.59	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.70
TYPE THREE SUBSTRATE . . . :	0.0	(%)	AIR/WATER TEMP. RATIO:	1.26
EMBEDDEDNESS OF TYPE THREE :	18.33	(%)		
OVERHEAD CANOPY. . . . . :		(%)		
INSTREAM SHELTER . . . . . :	3.320	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	0.	0.0
Salvelinus fontinalis	554.	0.0
Rhinichthys atratulus	1796.	0.0
Salmo trutta	634.	0.0
Semotilus atromaculatus	264.	0.0
Luxilus cornutus	26.	0.0
Notemigonus crysoleucas	26.	0.0
Rhinichthys cataractae	528.	0.0
Micropterus salmoides	26.	0.0
Lepomis gibbosus	26.	0.0
Catostomus commersoni	158.	0.0

STREAM NAME : STRAITSVILLE BROOK SITE #: 3129
SITE DESCRIPTION: UPSTREAM OF RTE 63, NAUGATUCK.
(GRAVEL OPERATION 1/4 MILE UPSTREAM OF SITE)
SAMPLE LENGTH : 50. SAMPLE DATE: 08/13/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00	(C)	DISSOLVED OXYGEN (mg/l). . :	9.77	0.15
WATER TEMP. . .	22.00	(C)	pH . . . . . :	6.40	0.30
VELOCITY. . . . :	0.062	(m/s)	COND . . . . . (uS/cm3). . :	261.67	11.55
DISCHARGE . . . :	0.003	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	53.47	0.45

	MEAN	STD	
WIDTH. . . . . :	1.27	0.60	(m)
DEPTH. . . . . :	3.83	2.89	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	0.00
TYPE THREE SUBSTRATE . . . :	58.3	(%)	AIR/WATER TEMP. RATIO:	1.23
EMBEDDEDNESS OF TYPE THREE :	35.71	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	0.000	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus	14330.	0.0

STREAM NAME : HANCOCK BROOK SITE #: 3130
SITE DESCRIPTION: UPSTREAM OF TOWNLINE RD., PLYMOUTH.

SAMPLE LENGTH : 45. SAMPLE DATE: 06/26/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .	8.13	1.27
WATER TEMP. . .	18.00	(C)	pH	7.67	0.21
VELOCITY. . . .	0.033	(m/s)	COND . . . . . (uS/cm3). .	71.33	0.58
DISCHARGE . . .	0.004	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	6.83	0.55

	MEAN	STD			
WIDTH.	1.47	0.65	(m)		
DEPTH.	6.50	12.10	(cm)		
DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:		0.92
TYPE THREE SUBSTRATE . . .	7.1	(%)	AIR/WATER TEMP. RATIO:		1.22
EMBEDDEDNESS OF TYPE THREE	95.00	(%)			
OVERHEAD CANOPY.	1.00	(%)			
INSTREAM SHELTER	5.530	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	604.	0.0
Rhinichthys atratulus	11035.	0.0
Semotilus atromaculatus	1511.	0.0

STREAM NAME : TRIB TO CURTIS BROOK SITE #: 3132
SITE DESCRIPTION: UPSTREAM OF RTE 108, SHELTON.
(STREAM INTERMITTENT-ONLY TWO POOLS IN 50 M)
SAMPLE LENGTH : 1. SAMPLE DATE: 07/01/1991

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. . . . . :	1.00	(%)			
INSTREAM SHELTER . . . . . :	0.000	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Rhinichthys atratulus		

STREAM NAME : **FOURMILE BROOK** SITE #: **3135**
SITE DESCRIPTION: PARALLEL TO GREAT HILL RD., SEYMOUR.
(SHIFTING SAND)
SAMPLE LENGTH : 50. SAMPLE DATE: 09/14/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .		10.97	0.15
WATER TEMP. . .	19.00	(C)	pH			
VELOCITY. . . .	0.064	(m/s)	COND . . . . . (uS/cm3). .		118.00	0.00
DISCHARGE . . .	0.004	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD			
WIDTH.	1.33	0.57	(m)		
DEPTH.	3.78	3.34	(cm)		
DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:		2.33
TYPE THREE SUBSTRATE . . .	7.1	(%)	AIR/WATER TEMP. RATIO:		1.11
EMBEDDEDNESS OF TYPE THREE	90.00	(%)			
OVERHEAD CANOPY.	1.00	(%)			
INSTREAM SHELTER	0.625	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	1954.	0.0
Rhinichthys atratulus	902.	0.0

STREAM NAME : **HOPP BROOK** SITE #: **3136**
SITE DESCRIPTION: UPSTREAM OF HOP BROOK RD., BETHANY.

SAMPLE LENGTH : 70. SAMPLE DATE: 08/13/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	22.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.93	0.06
WATER TEMP. . .	20.00	(C)	pH		6.07	0.15
VELOCITY. . . .	0.057	(m/s)	COND . . . . . (uS/cm3). .		93.33	1.15
DISCHARGE . . .	0.019	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		20.13	0.31

	MEAN	STD			
WIDTH.	3.61	1.32	(m)		
DEPTH.	9.25	5.86	(cm)		
DOMINANT SUBSTRATE TYPE. .	4		POOL/RIFFLE RATIO . .:		0.19
TYPE THREE SUBSTRATE . . .	0.0	(%)	AIR/WATER TEMP. RATIO:		1.10
EMBEDDEDNESS OF TYPE THREE	90.00	(%)			
OVERHEAD CANOPY.	1.00	(%)			
INSTREAM SHELTER	10.230	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	4426.	103.9
Rhinichthys atratulus	2964.	152.9
Semotilus atromaculatus	671.	0.0
Catostomus commersoni	39.	0.0

STREAM NAME : JERICHO BROOK SITE #: 3137
SITE DESCRIPTION: 40 M UPSTREAM OF RTE 8, WATERTOWN.
(HEMLOCK GORGE BEDROCK AND BOULDERS)
SAMPLE LENGTH : 100. SAMPLE DATE: 06/26/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	22.00 (C)	DISSOLVED OXYGEN (mg/l). .	10.10	0.00
WATER TEMP. . .	17.00 (C)	pH	7.43	0.06
VELOCITY. . . .	0.067 (m/s)	COND . . . . . (uS/cm3). .	77.00	1.73
DISCHARGE . . .	0.008 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	13.17	1.42

	MEAN	STD			
WIDTH.	1.51	0.48	(m)		
DEPTH.	7.50	6.68	(cm)		
DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:		0.54
TYPE THREE SUBSTRATE . . .	16.7	(%)	AIR/WATER TEMP. RATIO:		1.29
EMBEDDEDNESS OF TYPE THREE	65.00	(%)			
OVERHEAD CANOPY.	1.00	(%)			
INSTREAM SHELTER	0.520	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	3642.	121.2

STREAM NAME : IVY BROOK SITE #: 3138
SITE DESCRIPTION: PARALLEL TO CONSTITUTION BLVD., SHELTON.

SAMPLE LENGTH : 61. SAMPLE DATE: 06/25/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	27.00 (C)	DISSOLVED OXYGEN (mg/l). .	7.83	0.23
WATER TEMP. . .	19.00 (C)	pH	7.80	0.00
VELOCITY. . . .	0.055 (m/s)	COND . . . . . (uS/cm3). .	161.33	10.26
DISCHARGE . . .	0.009 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	28.07	1.26

	MEAN	STD			
WIDTH.	2.04	0.89	(m)		
DEPTH.	6.43	6.00	(cm)		
DOMINANT SUBSTRATE TYPE. .	3		POOL/RIFFLE RATIO . .:		0.97
TYPE THREE SUBSTRATE . . .	52.9	(%)	AIR/WATER TEMP. RATIO:		1.42
EMBEDDEDNESS OF TYPE THREE	83.33	(%)			
OVERHEAD CANOPY.	0.86	(%)			
INSTREAM SHELTER	1.940	(m2)			

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata	241.	0.0
Salvelinus fontinalis	80.	0.0
Rhinichthys atratulus	21295.	350.3

STREAM NAME : **TRIB TO LAKE LILLINONAH** SITE #: 3139
SITE DESCRIPTION: DOWNSTREAM OF HEMLOCK RD., BRIDGEWATER.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/23/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:19.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.27	0.06
WATER TEMP. . .	:17.00 (C)	pH . . . . . :		
VELOCITY. . . .	: 0.094 (m/s)	COND . . . . . (uS/cm3). . :	68.33	0.58
DISCHARGE . . .	: 0.012 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	14.63	0.57

	MEAN	STD	
WIDTH. . . . . :	1.98	1.03	(m)
DEPTH. . . . . :	7.57	6.08	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.45
TYPE THREE SUBSTRATE . . . :	13.3 (%)	AIR/WATER TEMP. RATIO:	1.12
EMBEDDEDNESS OF TYPE THREE :	10.00 (%)		
OVERHEAD CANOPY. . . . . :	0.99 (%)		
INSTREAM SHELTER . . . . . :	4.410 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	5757.	0.0

STREAM NAME : **TRIB TO TRANSYLVANIA BROOK** SITE #: 3140
SITE DESCRIPTION: PARALLEL TO FLAG SWAMP RD., 200 M UPSTREAM OF NO NAME TRIB CONFLUENCE, SOUTHBURY.
SAMPLE LENGTH : 50. SAMPLE DATE: 07/30/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:18.00 (C)	DISSOLVED OXYGEN (mg/l). . :	9.60	0.10
WATER TEMP. . .	:16.00 (C)	pH . . . . . :	7.07	0.06
VELOCITY. . . .	: 0.059 (m/s)	COND . . . . . (uS/cm3). . :	61.33	0.58
DISCHARGE . . .	: 0.093 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	9.50	0.20

	MEAN	STD	
WIDTH. . . . . :	1.12	0.74	(m)
DEPTH. . . . . :	10.20	13.85	(cm)

DOMINANT SUBSTRATE TYPE. . :	7	POOL/RIFFLE RATIO . .:	0.52
TYPE THREE SUBSTRATE . . . :	18.2 (%)	AIR/WATER TEMP. RATIO:	1.13
EMBEDDEDNESS OF TYPE THREE :	25.00 (%)		
OVERHEAD CANOPY. . . . . :	1.00 (%)		
INSTREAM SHELTER . . . . . :	7.490 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	5535.	0.0
Rhinichthys atratulus	3928.	0.0

STREAM NAME : **TRIB TO TRANSYLVANIA BROOK** SITE #: 3141
SITE DESCRIPTION: PARALLEL TO RTE 67, UPSTREAM FROM ROXBURY-WOODBURY TOWN LINE, ROXBURY.
SAMPLE LENGTH : 50. SAMPLE DATE: 07/30/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	20.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.50	0.10
WATER TEMP. . .	16.00	(C)	pH		7.10	0.00
VELOCITY. . . .	0.063	(m/s)	COND . . . . . (uS/cm3). .		69.33	0.58
DISCHARGE . . .	0.008	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		10.53	0.46

	MEAN	STD	
WIDTH.	2.82	1.75	(m)
DEPTH.	5.05	4.26	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.47
TYPE THREE SUBSTRATE . . . :	17.4	(%)	AIR/WATER TEMP. RATIO:	1.25
EMBEDDEDNESS OF TYPE THREE :	47.50	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	5.420	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	6808.	0.0
Rhinichthys atratulus	283.	0.0

STREAM NAME : **SECOND HILL BROOK** SITE #: 3142
SITE DESCRIPTION: 100 M DOWNSTREAM OF ROXBURY RD., BRIDGEWATER.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/22/1991

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . .	18.00	(C)	DISSOLVED OXYGEN (mg/l). .		9.13	0.06
WATER TEMP. . .	17.00	(C)	pH			
VELOCITY. . . .	0.184	(m/s)	COND . . . . . (uS/cm3). .		145.33	1.15
DISCHARGE . . .	0.045	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		42.63	0.21

	MEAN	STD	
WIDTH.	2.59	0.73	(m)
DEPTH.	9.93	9.87	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	1.16
TYPE THREE SUBSTRATE . . . :	35.0	(%)	AIR/WATER TEMP. RATIO:	1.06
EMBEDDEDNESS OF TYPE THREE :	5.71	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	2.390	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	926.	0.0
Rhinichthys atratulus	154.	0.0
Unknown cyprinid	231.	0.0

STREAM NAME : FENN BROOK SITE #: 3143
SITE DESCRIPTION: UPSTREAM OF RTE 67, ROXBURY.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/12/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:24.00 (C)	DISSOLVED OXYGEN (mg/l). .	: 11.57	0.23
WATER TEMP. . .	:19.00 (C)	pH	: 6.13	0.25
VELOCITY. . . .	: 0.121 (m/s)	COND . . . . . (uS/cm3). .	:211.33	1.15
DISCHARGE . . .	: 0.017 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	33.37	0.15

	MEAN	STD	
WIDTH.	1.84	0.73	(m)
DEPTH.	8.23	6.94	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.47
TYPE THREE SUBSTRATE . . . :	7.7 (%)	AIR/WATER TEMP. RATIO:	1.26
EMBEDDEDNESS OF TYPE THREE :	30.00 (%)		
OVERHEAD CANOPY. . . . . :	0.99 (%)		
INSTREAM SHELTER . . . . . :	1.472 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Ameiurus nebulosus	0.	0.0
Salvelinus fontinalis	652.	0.0
Rhinichthys atratulus	2500.	0.0
Salmo trutta	326.	0.0
Unknown centrarchid	108.	0.0
Semotilus atromaculatus	543.	0.0
Lepomis gibbosus	0.	0.0

STREAM NAME : TRIB TO SHEPAUG RIVER SITE #: 3144
SITE DESCRIPTION: 100 M UPSTREAM OF WALKER BROOK RD., ROXBURY.

SAMPLE LENGTH : 100. SAMPLE DATE: 08/27/1991

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . .	:22.00 (C)	DISSOLVED OXYGEN (mg/l). .	:	
WATER TEMP. . .	:16.00 (C)	pH	: 7.23	0.06
VELOCITY. . . .	: 0.198 (m/s)	COND . . . . . (uS/cm3). .	:123.67	1.15
DISCHARGE . . .	: 0.105 (m3/s)	ALKALINITY .(mg CaCO3 eq/l):	40.27	0.72

	MEAN	STD	
WIDTH.	3.67	1.02	(m)
DEPTH.	14.50	13.38	(cm)

DOMINANT SUBSTRATE TYPE. . :	4	POOL/RIFFLE RATIO . .:	0.28
TYPE THREE SUBSTRATE . . . :	22.9 (%)	AIR/WATER TEMP. RATIO:	1.38
EMBEDDEDNESS OF TYPE THREE :	33.75 (%)		
OVERHEAD CANOPY. . . . . :	0.90 (%)		
INSTREAM SHELTER . . . . . :	8.560 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	190.	0.0
Rhinichthys atratulus	1553.	64.8
Salmo trutta	5013.	137.9
Semotilus atromaculatus	681.	0.0
Luxilus cornutus	81.	0.0
Unknown cyprinid	27.	0.0
Rhinichthys cataractae	1689.	79.5

STREAM NAME : TRIB TO WALKER BROOK SITE #: 3145
SITE DESCRIPTION: 50 M UPSTREAM OF WALKER BROOK RD., NEW MILFORD.

SAMPLE LENGTH : 50. SAMPLE DATE: 08/13/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :		(C)	DISSOLVED OXYGEN (mg/l). . :	8.77	0.12
WATER TEMP. . . :		(C)	pH . . . . . :	7.00	0.00
VELOCITY. . . . :	0.043	(m/s)	COND . . . . . (uS/cm3). . :	98.67	3.21
DISCHARGE . . . :	0.004	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	12.27	0.68

	MEAN	STD	
WIDTH. . . . . :	1.39	0.84	(m)
DEPTH. . . . . :	5.18	6.30	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.70
TYPE THREE SUBSTRATE . . . :	16.7	(%)	AIR/WATER TEMP. RATIO:	
EMBEDDEDNESS OF TYPE THREE :	15.00	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	0.837	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	287.	0.0
Salmo trutta	719.	0.0

STREAM NAME : POGOND BROOK SITE #: 3146
SITE DESCRIPTION: PARALLEL AND UPSTREAM OF OLD BETHEL RD., NEWTOWN.
(SINGLE PASS)
SAMPLE LENGTH : 100. SAMPLE DATE: 08/22/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :	24.00	(C)	DISSOLVED OXYGEN (mg/l). . :	10.27	0.06
WATER TEMP. . . :	20.00	(C)	pH . . . . . :		
VELOCITY. . . . :	0.278	(m/s)	COND . . . . . (uS/cm3). . :	130.00	0.00
DISCHARGE . . . :	0.136	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	20.37	0.15

	MEAN	STD	
WIDTH. . . . . :	4.39	1.34	(m)
DEPTH. . . . . :	11.35	7.69	(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	0.30
TYPE THREE SUBSTRATE . . . :	20.5	(%)	AIR/WATER TEMP. RATIO:	1.20
EMBEDDEDNESS OF TYPE THREE :	58.75	(%)		
OVERHEAD CANOPY. . . . . :	0.99	(%)		
INSTREAM SHELTER . . . . . :	11.570	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Esox americanus	45.	0.0
Catostomus commersoni	68.	0.0

STREAM NAME : HOUSATONIC RIVER SITE #: 3150
SITE DESCRIPTION: BELOW DERBY DAM, SHELTON-DERBY.
(LOW TIDE SAMPLE OF UNDEFINED AREA)
SAMPLE LENGTH : 200. SAMPLE DATE: 07/25/1991

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 . . . . . :	0.000 (m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Anguilla rostrata		
Unknown centrarchid		
Notemigonus crysoleucas		
Trinectes maculatus		
Micropterus salmoides		
Lepomis gibbosus		
Lepomis auritus		
Micropterus dolomieui		
Notropis hudsonius		
Etheostoma olmstedi		
Morone americanus		
Catostomus commersoni		

STREAM NAME : NO NAME TRIB TO SQUANTZ POND SITE #: 3155
SITE DESCRIPTION: SMALL TRIB IN SQUANTZ POND STATE PARK, NEW FAIRFIELD.
(STEEP BOULDER AREA)
SAMPLE LENGTH : 50. SAMPLE DATE: 08/05/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . . :	21.00	(C)	DISSOLVED OXYGEN (mg/l). . :	10.17	0.12
WATER TEMP. . . :	18.00	(C)	pH . . . . . :	7.60	0.00
VELOCITY. . . . :	0.023	(m/s)	COND . . . . . (uS/cm3). . :	89.00	1.73
DISCHARGE . . . :	6.E-4	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):	20.63	0.42

	MEAN	STD	
WIDTH. . . . . :	1.03	0.51	(m)
DEPTH. . . . . :	2.83	2.60	(cm)

DOMINANT SUBSTRATE TYPE. . :	3		POOL/RIFFLE RATIO . .:	0.22
TYPE THREE SUBSTRATE . . . :	40.0	(%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE :	82.50	(%)		
OVERHEAD CANOPY. . . . . :	1.00	(%)		
INSTREAM SHELTER . . . . . :	0.090	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Lepomis macrochirus	388.	0.0
Salvelinus fontinalis	388.	0.0
Ambloplites rupestris	776.	0.0
Lepomis auritus	2912.	0.0
Micropterus dolomieui	194.	0.0

STREAM NAME : TRIB TO CANDLEWOOD LAKE SITE #: 3156
SITE DESCRIPTION: TRIB AT END OF COVE ON NORTH SIDE OF LITTLE NECK PENINSULA, NEW FAIRFIELD.
SAMPLE LENGTH : 35. SAMPLE DATE: 08/05/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	24.00	(C)	DISSOLVED OXYGEN (mg/l). .	9.60	0.17
WATER TEMP. . .	15.00	(C)	pH	7.80	0.00
VELOCITY. . . .	0.033	(m/s)	COND . . . . . (uS/cm3). .	106.67	0.58
DISCHARGE . . .	7.E-4	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	0.93	0.69	(m)
DEPTH.	2.25	1.81	(cm)

DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:	0.00
TYPE THREE SUBSTRATE . . .	25.0	(%)	AIR/WATER TEMP. RATIO:	1.60
EMBEDDEDNESS OF TYPE THREE	7.50	(%)		
OVERHEAD CANOPY.	1.00	(%)		
INSTREAM SHELTER	0.200	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
NO FISH	0.	0.0

STREAM NAME : CANLDEWOOD LAKE TRIB (PRISON) SITE #: 3157
SITE DESCRIPTION: IMMEDIATELY UPSTREAM OF LAKE ON DANBURY FEDERAL PRISON PROPERTY, DANBURY.
SAMPLE LENGTH : 50. SAMPLE DATE: 08/05/1991

PHYSICAL			CHEMICAL	MEAN	STD
AIR TEMP. . . .	21.00	(C)	DISSOLVED OXYGEN (mg/l). .	9.33	0.06
WATER TEMP. . .	18.00	(C)	pH	6.80	0.78
VELOCITY. . . .	0.025	(m/s)	COND . . . . . (uS/cm3). .	246.00	1.00
DISCHARGE . . .	0.008	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):		

	MEAN	STD	
WIDTH.	2.32	0.93	(m)
DEPTH.	14.35	13.72	(cm)

DOMINANT SUBSTRATE TYPE. .	5		POOL/RIFFLE RATIO . .:	1.66
TYPE THREE SUBSTRATE . . .	29.4	(%)	AIR/WATER TEMP. RATIO:	1.17
EMBEDDEDNESS OF TYPE THREE	4.00	(%)		
OVERHEAD CANOPY.	0.99	(%)		
INSTREAM SHELTER	7.240	(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
Salvelinus fontinalis	431.	0.0
Rhinichthys atratulus	86.	0.0
Salmo trutta	431.	0.0
Oncorhynchus mykiss	172.	0.0

STREAM NAME : **HAVILAND MILLPOND OUTFLOW** SITE #: 3158
SITE DESCRIPTION: Candlewood Lake Trib., Btween Havialnd Millpond and the lake (NO Fish)
SAMPLE LENGTH : 25 . SAMPLE DATE:08/05/91

PHYSICAL			CHEMICAL		MEAN	STD
AIR TEMP. . . . :	21.00	(C)	DISSOLVED OXYGEN (mg/l). . :			
WATER TEMP. . . :	21.00	(C)	pH . . . . . :			
VELOCITY. . . . :	0.049	(m/s)	COND . . . . . (uS/cm3). . :		81.00	0.00
DISCHARGE . . . :	0.001	(m3/s)	ALKALINITY .(mg CaCO3 eq/l):			

	MEAN	STD	
WIDTH. . . . . :	2.63	0.68	(m)
DEPTH. . . . . :			(cm)

DOMINANT SUBSTRATE TYPE. . :	4		POOL/RIFFLE RATIO . .:	
TYPE THREE SUBSTRATE . . . :	25.0	(%)	AIR/WATER TEMP. RATIO:	1.0
EMBEDDEDNESS OF TYPE THREE :	0.0	(%)		
OVERHEAD CANOPY. . . . . :	100	(%)		
INSTREAM SHELTER . . . . . :		(m2)		

BIOLOGICAL

SPECIES	POPULATION SIZE (Number/ha)	STANDARD ERROR (Number/ha)
No Fish		

STREAM NAME : **POOTATUCK RIVER** SITE #: 3159
SITE DESCRIPTION: IMMEDIATELY DOWNSTREAM OF MILE HILL RD., NEWTOWN. (POOTATUCK FISH AND GAME CLUB PROPERTY-LOWER SECTION)
SAMPLE LENGTH : 253. 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)
Ameiurus nebulosus		
Lepomis macrochirus		
Salvelinus fontinalis		
Rhinichthys atratulus		
Salmo trutta		
Semotilus atromaculatus		
Luxilus cornutus		
Semotilus corporalis		
Notemigonus crysoleucas		
Rhinichthys cataractae		
Micropterus salmoides		
Lepomis gibbosus		
Oncorhynchus mykiss		
Etheostoma olmstedi		
Catostomus commersoni		

STREAM NAME : **TRANSYLVANIA BROOK** SITE #: 3161
SITE DESCRIPTION: AT MCMILLEN PARK, SOUTHBURY.
(SINGLE PASS, BACKPACK WAS INEFFECTIVE)
SAMPLE LENGTH : 150. SAMPLE DATE:

PHYSICAL		CHEMICAL	MEAN	STD
AIR TEMP. . . . :	(C)	DISSOLVED OXYGEN (mg/l). . :		
WATER TEMP. . . :	(C)	pH . . . . . :	7.80	
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		
Salvelinus fontinalis		
Rhinichthys atratulus		
Salmo trutta		
Unknown centrarchid		
Semotilus atromaculatus		
Luxilus cornutus		
Unknown cyprinid		
Semotilus corporalis		
Notemigonus crysoleucas		
Rhinichthys cataractae		
Micropterus salmoides		
Lepomis gibbosus		
Etheostoma olmstedi		
Catostomus commersoni		