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DIVISION OF ENVIRONMENTAL PROTECTION

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The Bureau of Water Quality Planning (Bureau) is pleased to distribute the attached electronic report entitled *Biological Condition Index Development for the Truckee River: Benthic Macroinvertebrate Assemblage* prepared by Tetra Tech, Inc. in Owings Mills, Maryland. The development of the macroinvertebrate index is the first in a series of several aquatic life indexes for the Truckee River.

The indexes will be used as one tool to evaluate and assess aquatic life for the Truckee River. The index should not be considered as a "final product" or interpreted as water quality standards. Additional work in the future will need to be completed whereas; the indexes will be re-calibrated and assessed as more information becomes available.

The Bureau would like to thank U.S. EPA, Tetra Tech and the numerous stakeholders who participated in the Truckee River Bioassessment Group that led to the development of the macroinvertebrate index. Written comments on this report should be received no later than September 17, 2004 and directed to Karen Vargas, Bureau of Water Quality Planning, 333 W. Nye Lane, Carson City, NV 89706.

Sincerely,

Tom Porta, P.E.
Chief, Nevada Bureau of Water Quality Planning

Biological Condition Index Development for the Truckee River: Benthic Macroinvertebrate Assemblage

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Nevada Division of Environmental Protection

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Executive Summary

The objective of our analysis was to develop a biological index for benthic macroinvertebrates for the Nevada portion of the mainstem of the Truckee River using preexisting data. We analyzed data collected by four separate entities, Nevada Division of Environmental Protection (NDEP), Pyramid Lake Paiute Tribe (PLPT), Truckee Meadows Water Reclamation Facility (TMWRF), and Desert Research Institute (DRI).

To develop a common dataset from collections of multiple entities, an evaluation of the field and/or lab methodological differences was performed to minimize non-random error. A common index period was designated as low flow (July to October), all replicates were combined, and the number of individuals per sample was set to 500 organisms (samples with more organisms were randomly sampled with a computer to 500).

A multimetric index was developed from the data set and comprised six metrics or attributes of the benthic macroinvertebrate assemblage; total taxa, percent Ephemeroptera, percent Chironomidae, percent dominant taxon, percent filterers, and percent clingers. In an assessment, each metric value is converted to a standard score ranging between 0 and 100 (100 being closest to reference or optimal value). The scores for all six metrics are averaged to obtain an aggregated index score and compared to thresholds or break points based on percentages of the overall score and expected conditions for a good quality benthic macroinvertebrate community.

Application of the benthic index to the mainstem of the Truckee River indicated the biological condition was of higher quality in the upper reaches and declined in quality as the river approaches Pyramid Lake. A more definitive assessment is pending the results of the analyses on companion assemblages of the aquatic community, namely the fish and algal assemblages.

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Introduction

The Truckee River basin extends from its headwaters in the Sierra Nevada Mountains above Lake Tahoe in California to its terminus at Pyramid Lake in Nevada and encompasses an area of approximately 3,060 miles² (Figure 1). Approximately 760 miles² (about 25%) of the basin lies within the State of California and the remainder is contained within Nevada (Figure 2). The Truckee River is approximately 105 miles long extending from Lake Tahoe to Pyramid Lake (Horton 1997).

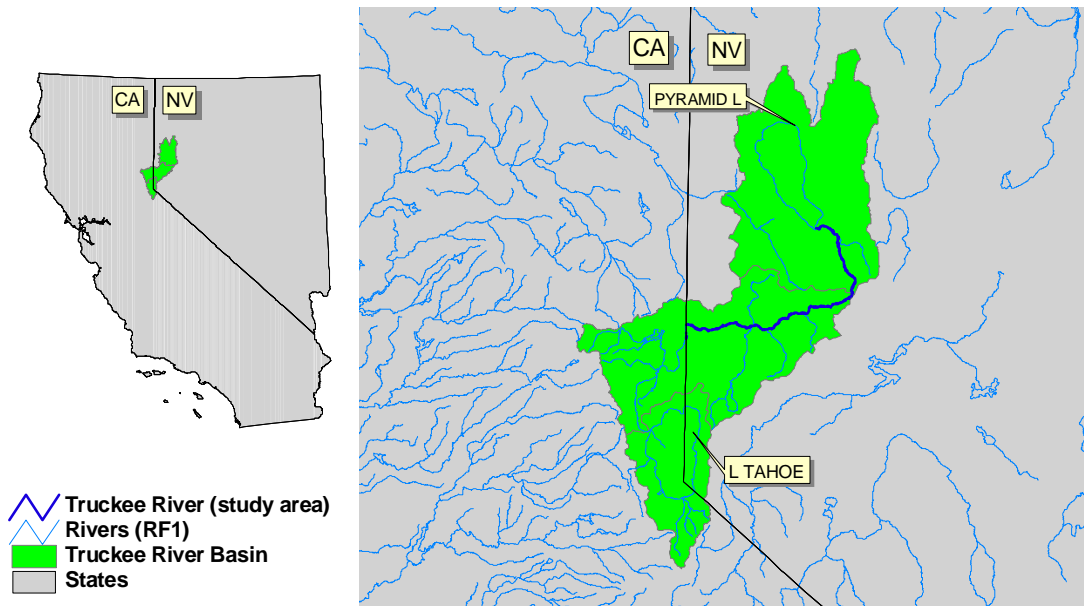


Figure 1. Location of Truckee River basin.

The Nevada Division of Environmental Protection (NDEP) has set a goal to: “Use biological indicators to provide an overall assessment of ecological condition and monitor trends for effectively managing the cumulative stressors to the Truckee River” (Truckee River Workgroup 2003). The physical, chemical, and hydrologic characteristics of a waterbody make up the environment in which stream biota live. Since benthic macroinvertebrates, fish, and periphyton communities are specifically adapted to those environmental conditions, physical and chemical changes in waterbodies can result in changes in biota (Barbour et al. 1999).

Indices of biotic condition attempt to quantify environmental conditions through careful measurement of key attributes of biological communities. The biological attributes to be measured represent different aspects of a biological community, such as total number of taxa or percent individuals of a particular order, and

A *metric* is a characteristic of the biota that changes in some predictable way with increased human influence.

An *index* provides a means of integrating information from a composite of the various measures of biological attributes.

are referred to as metrics. A metric is defined as a characteristic of the biota that changes in some predictable manner with increased human influence (Gibson 1996).

A multimetric index consists of several metrics that represent different attributes of an assemblage. Metrics are selected that together characterize a stable and proper functioning assemblage, are sensitive to stressors, and are easily translated for making informed management decisions. Metrics can be classified into several groups based upon the attributes they measure; richness (indications of diversity), composition (identity and proportional representation), tolerance/sensitivity (based upon knowledge of ecology of taxa), functional feeding groups (feeding strategies), and habits (behavior and adaptive morphology).

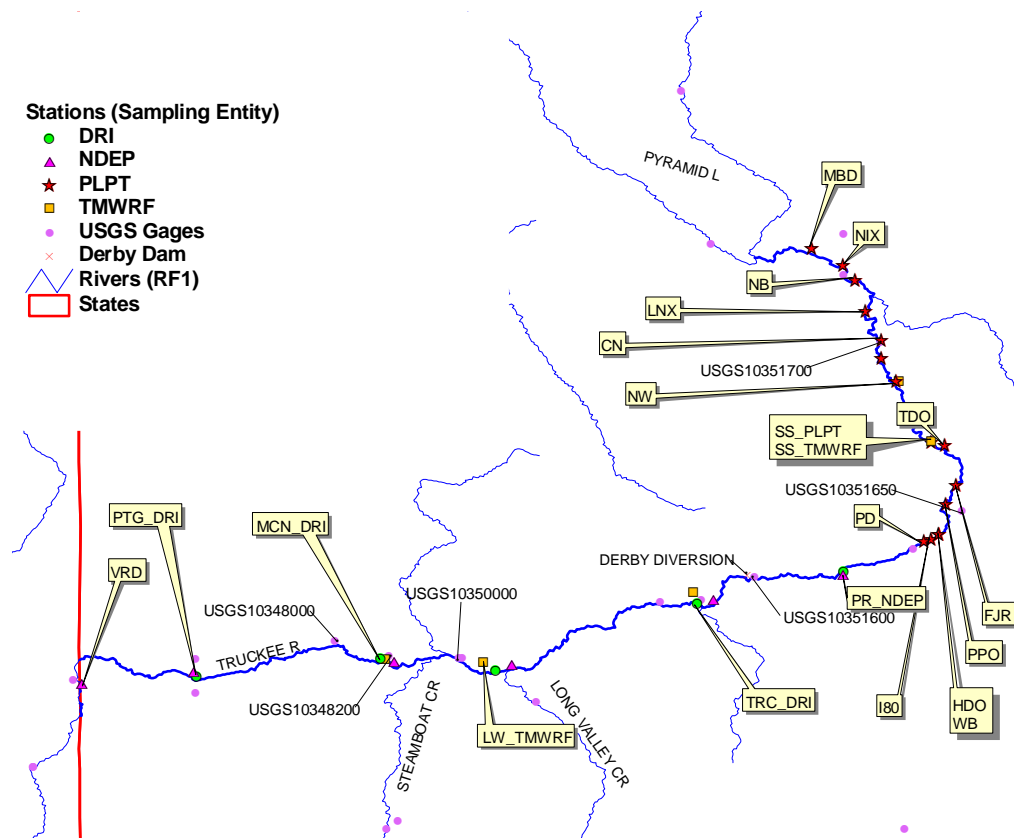


Figure 2. Locations of sampling locations and USGS gages on the Truckee River, Nevada. Site names listed in Appendix A.

This report addresses the development of a biological condition index for the benthic macroinvertebrate assemblage. The advantages of using benthic macroinvertebrates are that they are a good indication of local water quality conditions or aquatic health. Because many benthic macroinvertebrates have limited migration patterns, or a sessile mode of life, they are well suited to assessing site-specific impacts. They integrate the effects of short-term environmental variations (e.g., flood, drought, or toxic spill) and as a community are comprised of members with a broad range of trophic levels and pollution

tolerances. Benthic macroinvertebrates also serve as a primary food source for fish, including many recreationally and commercially important species (Barbour et al. 1999).

Data Processing and Aggregation

The Truckee River’s aquatic health is of vital importance to many stakeholders and many entities have collected benthic macroinvertebrate data along the mainstem over the past 20 years. Data from four such entities, Nevada Division of Environmental Protection (NDEP), Pyramid Lake Paiute Tribe (PLPT), Truckee Meadows Water Reclamation Facility (TMWRF), and Desert Research Institute (DRI), were used in this study. There were a total of 354 samples collected along the river by these four entities used in this study ranging from 1981 to 2003. Each entity collects data according to it’s own Standard Operating Procedures (SOPs) that meet it’s own management and data quality objectives (MQO and DQOs) and while these methods (both field and laboratory) were similar, there were some differences that needed to be resolved prior to data analysis (Table 1). To alleviate any real or potential field and laboratory differences and to ensure data comparability a common set of parameters had to be developed in order to combine all 354 samples. Using all samples and methods as reported by each entity would introduce and increase the variability (non-random error) and would limit the types of analyses to be performed on the aggregate data. For example, half of the sampling entities sort and identify the a random subsample of 500 organisms while the other two sort and identify every organism resulting in some samples with thousands of organisms.

Table 1. Highlights of sampling and processing methods (by entity).

	Sampling Entity			
	TMWRF	PLPT	NDEP	DRI
Mesh size (µm)	500	500	500	500
Habitat sampled	riffles	riffles	riffles	riffles
Field replication	3 (combined)	1-4 (kept separate)	9 (combined)	3 (combined)
Lab sorting	Total	Total	500	500
Organism identifications (midges)	family	genus	genus species	sub-family
Organism identifications (non-midges)	genus	genus	genus	genus

It was determined that all replicates for a given sample would be combined as three of the four sampling entities combined replicates in the field. Combining replicates along with differences in laboratory processing (some entities subsampling and others not) lead to great differences in numbers of organisms per sample. Research has shown that sample size has an affect on richness metrics (Barbour and Gerritsen 1996). Therefore, all samples were subsampled via computer manipulation to 500 organisms (i.e., samples were rarefied to 500 organism counts). Another difference in processing was in the level of taxonomic identification of the organisms. The samples for this study were analyzed such that midges (Chironomidae) were identified at the family level and all other organisms to the lowest taxonomic unit (typically genus-level). This standardization was

done to ensure that samples collected by an entity that identified all midges would not inherently have more taxa than a sample identified to a different taxonomic level by another entity.

Before analysis of the samples could begin, it was imperative to delineate the sampling locations and identify common sites along the mainstem. No coordination among the agencies/entities collecting data has been in place to ensure that station names are consistent. After analyzing the locations in a GIS it was determined that some entity's sampling sites overlapped while others were distinct locations but had the same name (Figure 2). Therefore, sites were designated as distinct locations if a tributary entered the Truckee between the locations or more than 500 meters separated the locations.

Once the various sampling and laboratory problems were resolved the data was combined and analyzed in the Ecological Data Application System (EDAS), a relational database, in Access. EDAS was chosen for its flexibility in handling large datasets, and its ability to calculate the necessary benthic macroinvertebrate metrics. Using a relational database also allowed for the data to be displayed in a GIS for mapping.

In addition, flow was evaluated as a potential covariate influencing the benthic data. USGS gaging station data were gathered and monthly mean data was used for the time period of the 1980 to present. Six gages were used along the mainstem (Figure 3). To reduce the possible influence of flow on the benthic macroinvertebrate data only low flow conditions were examined as this provided the largest number of samples over the longest period of time. The base flow period was defined as July through October (Figure 3). This decision resulted in a final tally of 157 samples for analysis, which is less than half of all samples in the dataset. The low flow period was chosen because this time period represented the largest number of samples and inter-year variability in flow was lowest. Flows during high flow periods were deemed too variable from year to year to allow for consistent results. That is, changes detected in the biota during high flow periods may be related to flow conditions rather than to other instream influences.

Truckee River Flow Data (1999-2002)

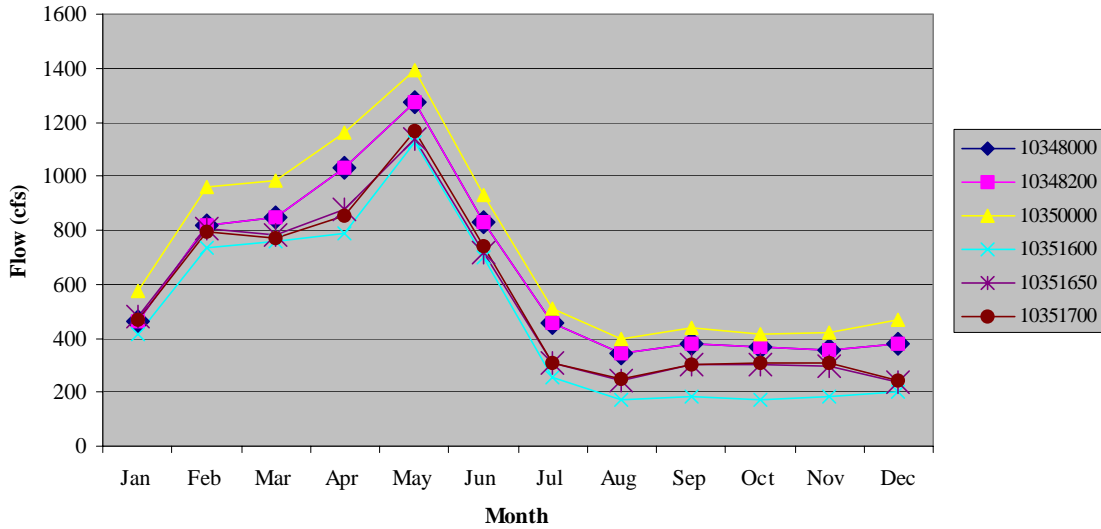


Figure 3. Select USGS gage monthly mean data for the Truckee River. Gages arranged top to bottom as upstream to downstream (map of locations in Figure 2).

Benthic Metric Selection

Candidate metrics included over 70 metrics (Appendix C). To narrow the focus on the most robust metrics it was decided to concentrate on those that were identified from peer-reviewed literature (Table 2) in the Rapid Bioassessment Protocols (RBPs) (Barbour et al. 1999).

Table 2. Candidate metrics and expected response to perturbation.

Category	Metric	Predicted response to increasing perturbation
Richness measures	Total No. taxa	Decrease
	No. EPT* taxa	Decrease
	No. Ephemeroptera Taxa	Decrease
	No. Plecoptera Taxa	Decrease
	No. Trichoptera Taxa	Decrease
Composition measures	% EPT*	Decrease
	% Ephemeroptera	Decrease
Tolerance & Intolerance measures	No. of Intolerant Taxa	Decrease
	% Tolerant Organisms	Increase
	% Dominant Taxon	Increase
Feeding measures	% Filterers	Variable
	% Grazers and Scrapers	Decrease
Habit measures	Number of Clinger Taxa	Decrease
	% Clingers	Decrease

*EPT = Ephemeroptera, Plecoptera, and Trichoptera

In 2002, a report entitled “Biological indicator development for the Truckee River macroinvertebrate assemblage, Pyramid Lake Paiute Tribe” was prepared by Tetra Tech. This project was to develop an index on the portion on the Truckee River on the Pyramid Lake Paiute Tribe Reservation. The resulting index was based on the Tribe’s data and included four metrics (total taxa, percent Ephemeroptera, Plecoptera, and Trichoptera [EPT] individuals, percent tolerant individuals, and percent dominant taxon). The results of this earlier study was integrated into the analysis presented here on the entire mainstem Truckee River.

Metric Categories

- *Taxonomic richness* – counts of distinct taxa within selected taxonomic groups.
- *Taxonomic composition* – proportions of individuals belonging to specific selected taxonomic groups.
- *Degree of tolerance* – counts, proportions, or weighted scores of taxa based on ability to survive exposure to pollutants.
- *Functional feeding group* – dominant mode of feeding, though not the specific nutritional source or benefits (e.g., suspension feeder, predator, etc.).
- *Habit* – dominant behavior of an animal for moving and maintaining physical position in its habitat (e.g., sprawling, clinging, etc.).

Because the data analysis is constrained to the Truckee River mainstem, we relied on a biological condition gradient to calibrate metrics. We used biological metrics that were monotonic, i.e., responded linearly to increasing disturbance or perturbation. The 90th percentile of all valid samples was used to represent best available conditions. The maximum values for each metric were not used as these could be considered outliers and not representative of the condition of the river.

Metrics for the current study were selected for the final index and the selected metrics were standardized on a “best” value (Table 3). The best value was the 90th percentile of the total distribution of all valid samples, for those metrics that decrease in value with perturbation (e.g., total taxa) (Appendix E). The 90th percentile was used to eliminate unusual outliers as a scoring standard and to avoid skewing the resultant scores. All scores greater than or equal to the standard value were assigned a score of 100, those less than the standard were scored as a percentage of the standard:

$$\text{Standardized Score} = \frac{X - X_{\min}}{X_{90} - X_{\min}} * 100$$

Where X is the metric value; X₉₀ is the 90th percentile value; and X_{min} is the minimum possible score (usually 0). An example converting metric values to scores is illustrated in Table 3.

For those selected metrics that increase in value with an increase in perturbation (e.g., percent dominant taxon) the 10th percentile of the entire dataset was used as a standard. All values less than or equal to this standard were assigned a score of 100; and values greater than the standard were assigned scores based on the percentage of the range from the maximum (worst) value to the 10th percentile (best) value:

$$\text{Standardized Score} = \frac{X_{\max} - X}{X_{\max} - X_{10}} * 100$$

Where X is the metric value; X₁₀ is the 10th percentile value; and X_{max} is the maximum possible score (e.g., 100 for percentage metrics).

Six metrics were selected as core metrics for inclusion in the final index (Table 3). After the selection of the core metrics the standard (“best”) values were derived and the final index calculated. All calculations were performed within the EDAS database.

Table 3. Core metrics and example of metric standardization (measured values from Verdi, October 14, 2002).

Metric	Expected Response to Perturbation	Percentile Used	Standard (“best”) Value	Measured Metric Value	Standardized Metric Score
Total Taxa	Decrease	90 th	15	28	100
% Ephemeroptera	Decrease	90 th	54.3	28.2	51.9
% Chironomidae	Increase	10 th	2.2	3.8	98.4
% Dominant Taxon	Increase	10 th	29.8	27.8	100
% Filterers	Increase	10 th	1.4	22.4	78.7
% Clingers	Decrease	90 th	9.9	13.1	100
<i>Final Index Score</i>					96.2

The final core metrics (Table 3) were selected from the candidate metrics such that redundancy was avoided. Metrics that were highly correlated with one another were avoided because they are responding in the same way to the stressors in the river. Final metrics were also chosen from the range of categories to avoid over representation of metrics from any one category (Table 2). Metrics that had a narrow range of values from the minimum to the maximum scores were also excluded from the final index, as this reduces scale used to assign scores. Attempts were made to avoid the selection of metrics that measured the same portion of the community (e.g., the metric Ephemeroptera taxa and the metric Ephemeroptera, Plecoptera, and Trichoptera [EPT] taxa).

The ability of a biological metric to *discriminate* between “known” reference conditions and “known” stressed conditions (defined by physical and chemical characteristics) is crucial in the selection of core metrics for assessments.

Benthic Index Development

The Truckee River changes in character from a cobble dominated stream bottom at the most upstream site at Verdi (near the California – Nevada border) to a more gravel dominated stream bottom at the mouth of the river at Pyramid Lake near Nixon, Nevada (Figure 4). However, the biological samples were not found to be significantly different due to substrate differences.

narrative categories should communicate a similar naming scheme. Using six narrative condition categories, an assessment can be made of each location along the Truckee River mainstem (Table 4). The number of categories and descriptor were chosen based on work done in other states but can be changed to accommodate local conditions. The specific actions needed is not based solely on the index score but by analysis of the component metrics, in addition to raw data and integrated into other ecological data (Barbour et al. 1999) The final index values for all sites for the period 1999 to 2003 are illustrated in Figure 5 (along with the proposed narrative descriptions).

Table 4. Proposed (i.e., tentative) narrative descriptions categories for final index.

Narrative Description	Final Index Scoring Range
Excellent	80-100
Very Good	70-79
Good	60-69
Fair	50-59
Poor	40-49
Very Poor	0-39

The index categories and narrative descriptions proposed here are tentative and should be examined by NDEP to ensure that each level conveys the proper meaning and is in line with what action may be necessary. Many states use a similar naming scheme for their benthic macroinvertebrate index, e.g., Arizona DEQ uses 4 categories (exceptional, good, fair, and poor) for its coldwater index based upon the distribution of reference sites (Leppo and Gerritsen 2000).

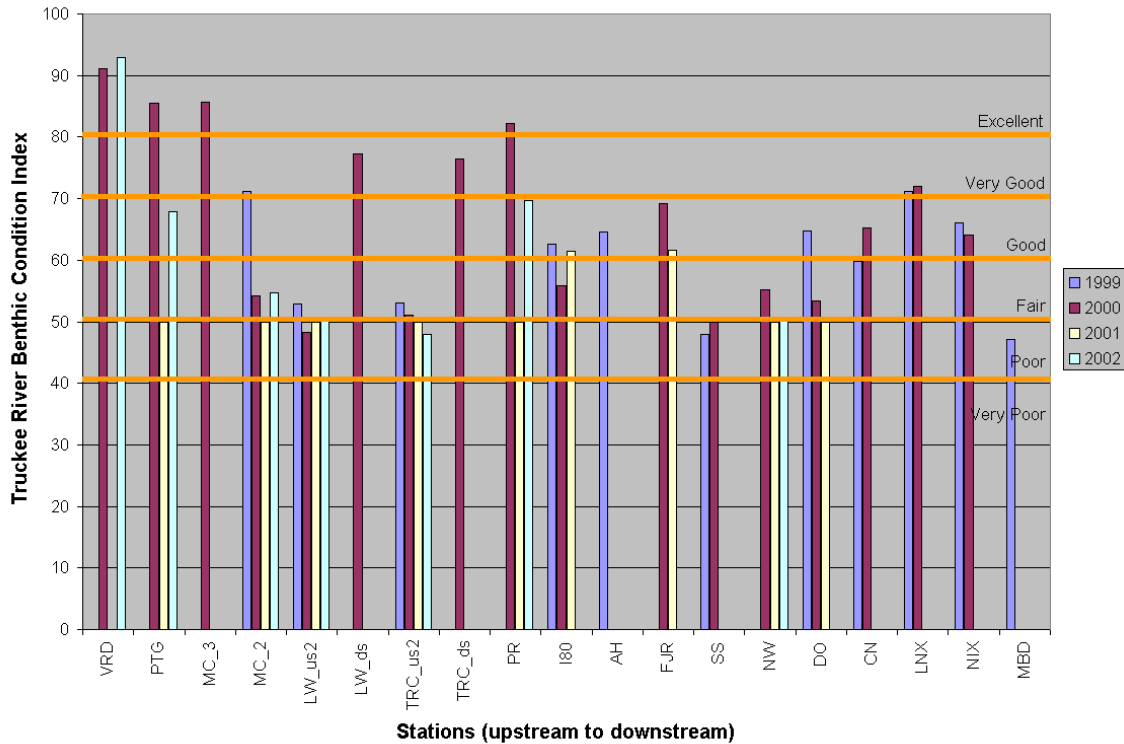


Figure 5. Final benthic index values and proposed (tentative) narrative descriptions for the mainstem Truckee River 1999 - 2002.

The final benthic index score indicates a general trend of sites rating in better condition in the upper reaches of the river in contrast to lower overall scores at many of the sites in nearer proximity to Pyramid Lake. The Lockwood site upstream of Long Valley Creek and the most upstream Tracy-Clark site are upstream of Derby Dam and consistently scored the lowest.

Recommendations

In summary, several recommendations can be made to further refine the biological assessment procedures and validate the benthic index from these analyses:

- Consider sampling only during low flow periods to minimize temporal influences in assessments and reduce variability in interpretation. If more data are collected in other time periods, the potential for adjusting the endpoints for seasonality can be evaluated. To do this, data will be required from multiple locations taken over the entire course of the river for multiple years and spread out over different times of the year.
- Test further the adequacy of the 80th percentile threshold for excellent conditions, and review other assessment thresholds (i.e., very good, good, fair, poor, very poor) for appropriate interpretation of condition categories. That is, should any site or reach of the mainstem Truckee River be considered in excellent condition

or should this best category be defined differently? And consider what action should be taken based on a site's index score.

- Pursue characterization of reference conditions (perhaps by ecoregion or from sites in the upper reaches of the watershed, e.g., in California) that would establish a more robust benchmark for assessment. Determine the availability of biological, physical habitat, and water chemistry data for this purpose would allow for a more accurately calibrated index to reflect the conditions of the entire river.
- As more data become available, recalibrate and validate the benthic index.
- Precision estimates were not calculated for this analysis due to lack of replication. Replicate sampling within and among entities to calculate precision of the individual methods. Currently only PLPT agencies collect and analyses separate replicate samples. Comparability among groups could also be examined using samples collected by different entities at the same locations during the same time periods.
- Taxonomic consistency for sharing of data is a concern for data analysis. Awareness of methodological differences will have to be re-evaluated for any future data analysis.
- Investigate potential stressor sources at the Lockwood and Tracy-Clark sites. There are several sampling points at each of these locations where the benthic community responds differently.

Literature Cited

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APPENDIX A

SAMPLING ENTITIES AND LOCATIONS

PLPT = Pyramid Lake Paiute Tribe

TMWRF = Truckee Meadows Water Reclamation Facility

DRI = Desert Research Institute

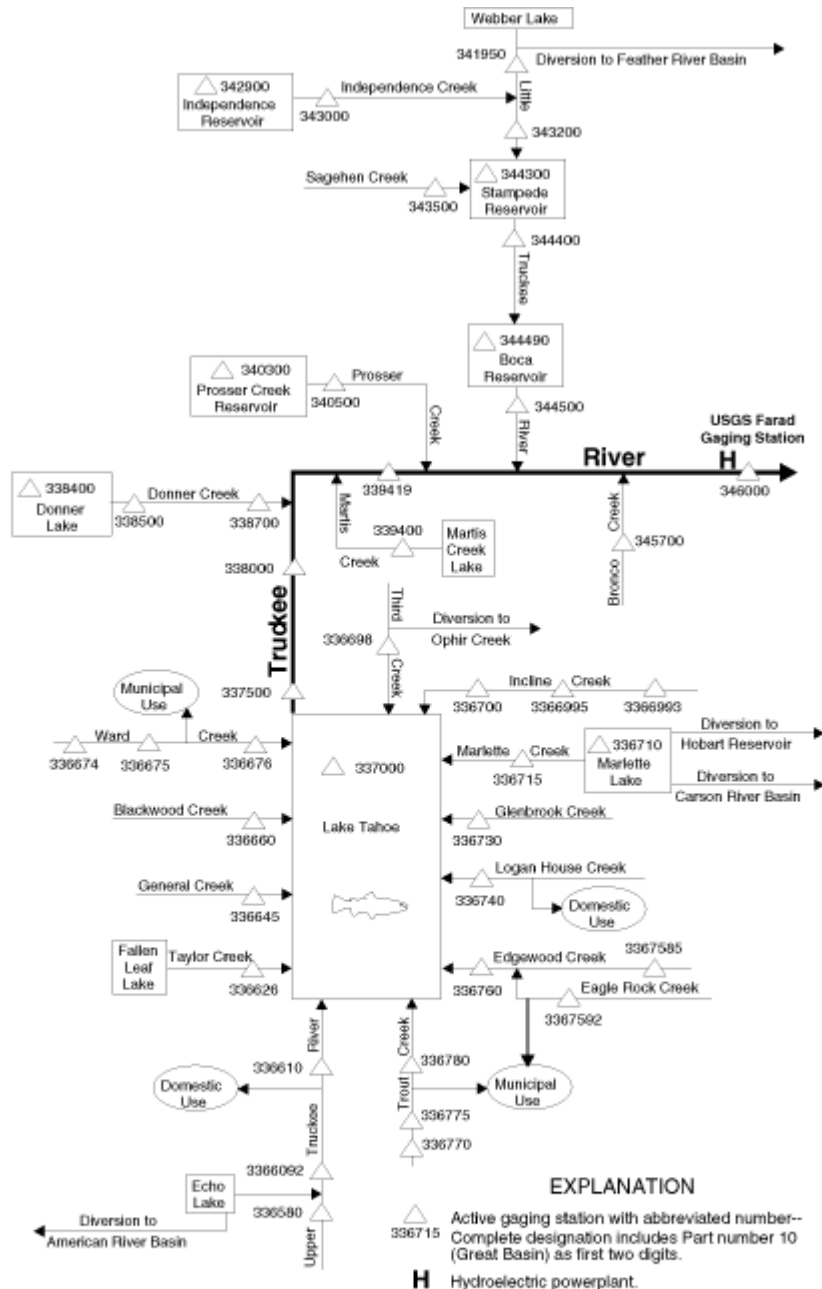
NDEP = Nevada Division of Environmental Protection

Sampling Entity	Entity Station ID	Unique Station ID	Project Station ID	WaterbodyName	Location	Latitude	Longitude	Comments	Nearest USGS Gage	Distance to Mouth (feet)
PLPT	MBD	MBD	MBD	Marble Bluff Dam		39.855628	-119.393740		USGS10351700	16020
PLPT	NIX	NIX	NIX	Lower Nixon		39.841967	-119.368050		USGS10351700	25515
PLPT	NB	NB	NB	Nixon Bridge		39.829896	-119.357850		USGS10351700	31995
PLPT	LNx	LNx	LNx	Little Nixon		39.803714	-119.349490		USGS10351700	43290
PLPT	CN	CN	CN	Canyon		39.780450	-119.336270		USGS10351700	55845
PLPT	DO	DO_PLPT	DO	Dead Ox		39.765102	-119.336580		USGS10351650	61155
PLPT	NW	NW	NW	Numana Wetlands Outlet		39.746540	-119.324190		USGS10351700	70110
TMWRF	7	DO_TMWRF	NW	Dead Ox Site	Station 7, after 2000-08	39.745556	-119.322222		USGS10351650	70560
PLPT	SS	SS_PLPT	SS	S bar S Ranch	This site sampled by TMWRF 1985-1999.	39.696667	-119.295556	gave same Lat-Long as TMWRF site (SS, #7 prior to 2000-08)	USGS10351650	90405
TMWRF	7	SS_TMWRF	SS	S Bar S Site	Station 7, prior to 2000-08	39.696667	-119.295556		USGS10351650	90405
PLPT		TDO	TDO	Tile Drain Outlet		39.693757	-119.284180		USGS10351650	94005
PLPT	FJR	FJR	FJR	Fred John's Ranch		39.660692	-119.274650		USGS10351650	107235
PLPT		PPO	PPO	Paiute Pit Outlet		39.645549	-119.283750		USGS10351650	113625
PLPT		HDO	HDO	Herman Ditch outlet		39.620504	-119.289210		USGS10351650	124155
PLPT	WB	WB	WB	Wadsworth Bridge		39.620504	-119.289210		USGS10351650	124155
PLPT	I80	I80	I80	Interstate 80 bridge		39.616664	-119.295700		USGS10351650	126405
PLPT		PD	PD	Pierson Dam		39.614386	-119.301070			128520
DRI		PR_DRI	PR	PAIN (Painted Rock)		39.589394	-119.367287		USGS10351600	150615
NDEP		PR_NDEP	PR	TR @Painted Rock		39.587778	-119.368333		USGS10351600	151425
NDEP		TRC_NDEP	TRC_ds	TR below Tracy/Clark		39.566944	-119.474722	below trib	USGS10351600	189225
DRI		TRC_DRI	TRC_us1	TRAC (Tracy/Clark)		39.563202	-119.488037	above trib 2	USGS10350400	195075
TMWRF	5	TRC_TMWRF	TRC_us2	Clark Site	Location #268; 75m west of Tracy-Clark bridge, and is sampled by TMWRF per their NDEP permit.	39.572222	-119.491389	above trib 1	USGS10350400	195705
DRI		LW_DRI	LW_us1	LOCK (Lockwood)		39.508396	-119.653595	above trib	USGS10350000	250515
NDEP		LW_NDEP	LW_ds	TR @Lockwood	downstream of bridge prior to 2003, in 2003 moved upstream of bridge closer to TMWRF location.	39.513056	-119.640833	below trib		255015
TMWRF	4	LW_TMWRF	LW_us2	Lockwood Site	This site is located 3 miles below TMWRF effluent discharge point, and is sampled by the TMWRF per their NDEP permit.	39.515000	-119.663889	above trib	USGS10350000	257805
NDEP	T3	MC_NDEP	MC_3	TR below McCarran Bridge		39.515833	-119.737500		USGS10348200	283140
TMWRF	3	MC_TMWRF	MC_2	McCarran Site	~75 m ds of of E. McCarran bridge, 2000-08 to 2002-11 sampled by DRI at diff location (EMCC)	39.517222	-119.744722	est of East McCarren Blvd bridge. This site is above the North Tahoe drain and Steamboat Creek from which tertiary treated effluent is discharged. Samples are collected by the TMWRF	USGS10348200	285705
DRI		MCN_DRI	MC_1	EMCC (East McCarran)		39.517708	-119.748177		USGS10348200	286650
DRI		PTG_DRI	PTG	PATA (Patagonia)		39.503647	-119.899124	Historical Site	USGS10348000	337050
NDEP		PTG_NDEP	PTG	TR @Patagonia		39.507222	-119.902222		USGS10348000	338760
NDEP		VRD	VRD	TR above Verdi		39.496944	-119.993889		USGS10348000	376425
PLPT	AH	AH	AH	Abandoned House						
PLPT	ND	ND	ND	Numana Dam					USGS10351700	

APPENDIX B

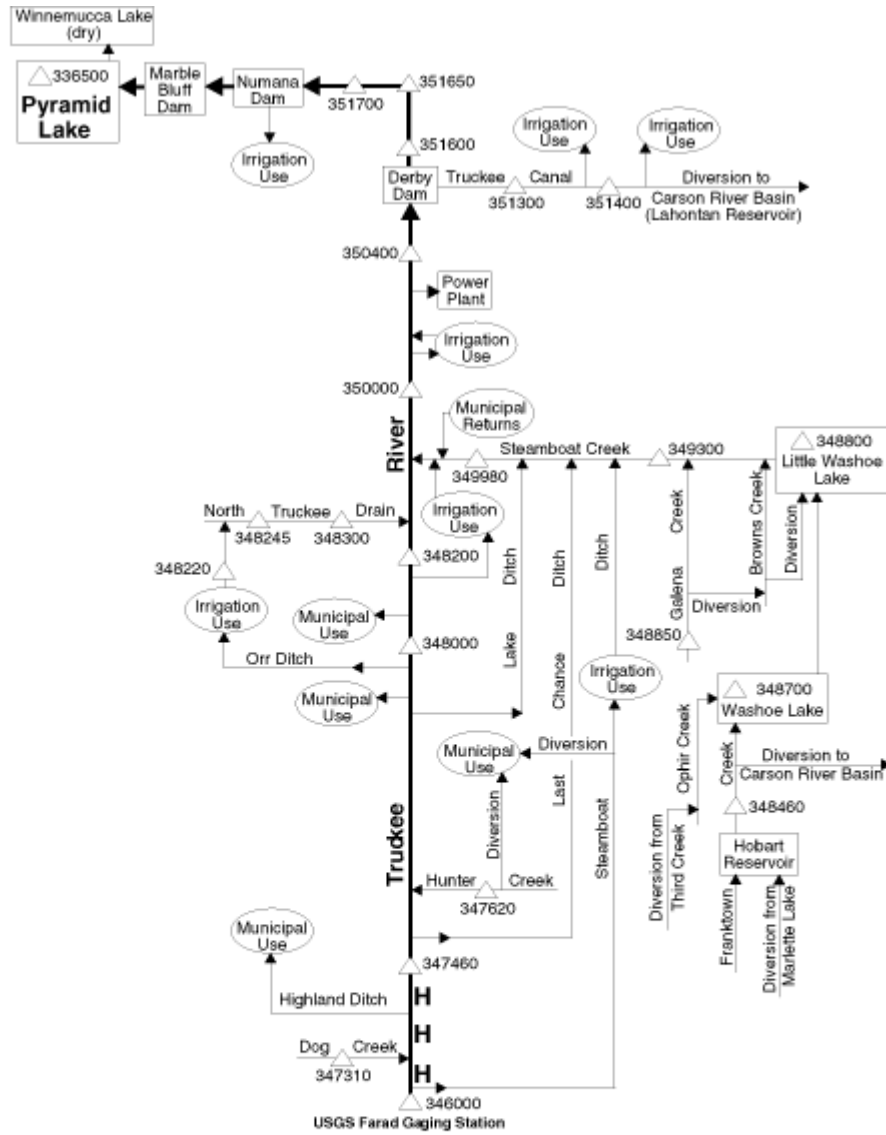
**FLOW SCHEMATIC
OF THE TRUCKEE RIVER**

(From Horton 1997)



Lake Tahoe and Upper Truckee River Flow Schematic
 Lake Tahoe and Truckee River Basins Listing of USGS Gaging Stations

Schematic diagram provided courtesy of
 U.S. Geological Survey, Water Resources
 Division, Carson City, Nevada, 1996



EXPLANATION

- △ Active gaging station with abbreviated number—
Complete designation includes Part number 10
(Great Basin) as first two digits.
- H Hydroelectric powerplant.

Lower Truckee River Flow Schematic
Truckee River Basin Listing of USGS Gaging Stations

Schematic diagram provided courtesy of
U.S. Geological Survey, Water Resources
Division, Carson City, Nevada, 1996

APPENDIX C

POTENTIAL CANDIDATE BENTHIC METRICS

EDAS = Ecological Data Application System, which was used to organize and query the data for analysis

First table is a listing of the potential metrics, their categorization into ecologically informative groupings, their expected response to increasing disturbance or perturbation, their validity in previous studies, and an indication of sufficient data to be considered for the Truckee River.

Second table presents the range in values of each metric and break points determined by relative percentages.

EDAS Field in EDAS Query	Metric Title	Ecological Information Group	Expected Response to Perturbation	RBP Core Metric	Used for PLPT Index	Sufficient Data
Shan_e	Shannon-Weiner Index (base e)	Composition	Decrease			
Shan_2	Shannon-Weiner Index (base 2)	Composition	Decrease			
Shan_10	Shannon-Weiner Index (base 10)	Composition	Decrease			
AmphPct	Percent Amphipoda	Composition	Decrease			
BivalPct	Percent Bivalvia	Composition	Decrease			
ChiroPct	Percent Chironomidae	Composition	Increase			
ColeoPct	Percent Coleoptera	Composition	Decrease			
CorbPct	Percent Corbicula	Composition	Decrease			
CrCh2ChiPct	Percent Cricotopus+Chironomus of Chironomidae	Composition	Decrease			No
CrMolPct	Percent Crustacea+Mollusca	Composition	Decrease			
DipPct	Percent Diptera	Composition	Increase			
EphemPct	Percent Ephemeroptera	Composition	Decrease	Yes		
EPTPct	Percent Ephemeroptera+Plecoptera+Trichoptera	Composition	Decrease	Yes	Yes	
GastrPct	Percent Gastropoda	Composition	Decrease			
IsoPct	Percent Isopoda	Composition	Decrease			
NonInPct	Percent Non-Insect	Composition	Increase			
OdonPct	Percent Odonata	Composition	Decrease			
OligoPct	Percent Oligochaeta	Composition	Increase			
Orth2ChiPct	Percent Orthocladiinae of Chironomidae	Composition	Decrease			No
PlecoPct	Percent Plecoptera	Composition	Decrease			
TanytPct	Percent Tanytarsini	Composition	Decrease			No
Tnyt2ChiPct	Percent Tanytarsini of Chironomidae	Composition	Decrease			No
TrichPct	Percent Trichoptera	Composition	Decrease			

EDAS Field in EDAS Query	Metric Title	Ecological Information Group	Expected Response to Perturbation	RBP Core Metric	Used for PLPT Index	Sufficient Data
BrrwrPct	Percent Burrower	Habit	Decrease			
CImbrPct	Percent Climber	Habit	Decrease			
CIngrPct	Percent Clinger	Habit	Decrease	Yes		
SprwlPct	Percent Sprawler	Habit	Decrease			
SwmmrPct	Percent Swimmer	Habit	Decrease			
BrrwrTax	Burrower Taxa	Habit	Decrease			
CImbrTax	Climber Taxa	Habit	Decrease			
CIngrTax	Clinger Taxa	Habit	Decrease	Yes		
SprwlTax	Sprawler Taxa	Habit	Decrease			
SwmmrTax	Swimmer Taxa	Habit	Decrease			
ChiroTax	Chironomidae Taxa	Richness	Decrease			
ColeoTax	Coleoptera Taxa	Richness	Decrease			
CrMolTax	Crustacea+Mollusca Taxa	Richness	Decrease			
DipTax	Diptera Taxa	Richness	Decrease			
EphemTax	Ephemeroptera Taxa	Richness	Decrease	Yes		
EPTTax	Ephemeroptera+Plecoptera+Trichoptera Taxa	Richness	Decrease	Yes		
OligoTax	Oligochaeta Taxa	Richness	Decrease			
OrthoTax	Orthocladinae Taxa	Richness	Decrease			No
PlecoTax	Plecoptera Taxa	Richness	Decrease	Yes		
PteroTax	Pteronarcys Taxa	Richness	Decrease			
TanytTax	Tanytarsini Taxa	Richness	Decrease			No
TotalTax	Total Taxa	Richness	Decrease	Yes	Yes	
TrichTax	Trichoptera Taxa	Richness	Decrease	Yes		

EDAS Field in EDAS Query	Metric Title	Ecological Information Group	Expected Response to Perturbation	RBP Core Metric	Used for PLPT Index	Sufficient Data
BeckBI	Beck's Biotic Index	Tolerance/Intolerance	Decrease			
HBI	Hilsenhoff Biotic Index	Tolerance/Intolerance	Increase	Yes		
Baet2EphPct	Percent Baetidae of Ephemeroptera	Tolerance/Intolerance	Decrease			
Dom01Pct	Percent Dominant Taxon	Tolerance/Intolerance	Increase	Yes	Yes	
Hyd2EPTPct	Percent Hydropsychidae of Ephemeroptera+Plecoptera+Trichoptera	Tolerance/Intolerance	Increase			
Hyd2TriPct	Percent Hydropsychidae of Trichoptera	Tolerance/Intolerance	Increase			
IntolPct	Percent Intolerant Individuals	Tolerance/Intolerance	Decrease			
TolerPct	Percent Tolerant Individuals	Tolerance/Intolerance	Increase	Yes	Yes	
IntolTax	Intolerant Taxa	Tolerance/Intolerance	Decrease	Yes		
InMolTax	Intolerant Mollusca Taxa	Tolerance/Intolerance	Decrease			
TolerTax	Tolerant Taxa	Tolerance/Intolerance	Decrease			
ClctPct	Percent Collector	Trophic	Decrease			
FiltrPct	Percent Filterer	Trophic	Increase	Yes		
PredPct	Percent Predator	Trophic	Decrease			
ScrapPct	Percent Scraper	Trophic	Decrease	Yes		
ShredPct	Percent Shredder	Trophic	Decrease			
ClctTax	Collector Taxa	Trophic	Decrease			
FiltrTax	Filterer Taxa	Trophic	Decrease			
PredTax	Predator Taxa	Trophic	Decrease			
ScrapTax	Scraper Taxa	Trophic	Decrease			
ShredTax	Shredder Taxa	Trophic	Decrease			
MltVolPct	Percent Multivoltine	Life Cycle	Increase			No
SemVolPct	Percent Semivoltine	Life Cycle	Decrease			No
UniVolPct	Percent Univoltine	Life Cycle	Decrease			No
SemVolTax	Semivoltine Taxa	Life Cycle	Decrease			No
TotalInd	Total Individuals	Miscellaneous	--			--

		Metric Statistics (percentiles) All data (N = 157)								
EDAS Field in EDAS Query	Metric Title	min	5	10	25	50	75	90	95	max
Shan_e	Shannon-Weiner Index (base e)	0.4	0.8	0.9	1.1	1.4	1.7	1.9	2.0	2.5
Shan_2	Shannon-Weiner Index (base 2)	0.5	1.1	1.2	1.6	2.0	2.5	2.8	2.9	3.6
Shan_10	Shannon-Weiner Index (base 10)	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.1
AmphPct	Percent Amphipoda	0.0	0.0	0.0	0.0	0.0	0.6	21.0	40.9	92.1
BivalPct	Percent Bivalvia	0.0	0.0	0.0	0.0	0.0	0.7	9.7	35.4	73.0
ChiroPct	Percent Chironomidae	0.0	1.5	2.2	5.3	12.5	22.9	44.1	52.2	84.5
ColeoPct	Percent Coleoptera	0.0	0.0	0.0	0.0	0.4	2.4	6.1	12.1	35.2
CorbPct	Percent Corbicula	0.0	0.0	0.0	0.0	0.0	0.4	9.7	35.4	73.0
CrCh2ChiPct	Percent Cricotopus+Chironomus of Chironomidae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CrMolPct	Percent Crustacea+Mollusca	0.0	0.0	0.0	0.0	0.2	8.8	48.2	72.2	92.2
DipPct	Percent Diptera	0.0	1.7	2.6	6.1	14.2	24.1	46.2	54.5	85.2
EphemPct	Percent Ephemeroptera	0.0	0.3	1.6	8.2	19.9	38.7	54.2	67.3	80.2
EPTPct	Percent Ephemeroptera+Plecoptera+Trichoptera	0.0	1.5	6.8	21.0	62.8	82.4	91.2	93.8	97.5
GastrPct	Percent Gastropoda	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1	42.9
IsoPct	Percent Isopoda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NonInPct	Percent Non-Insect	0.0	0.0	0.0	0.3	3.2	33.4	79.5	89.2	99.5
OdonPct	Percent Odonata	0.0	0.0	0.0	0.0	0.0	0.0	1.4	3.7	11.4
OligoPct	Percent Oligochaeta	0.0	0.0	0.0	0.0	0.0	0.4	2.6	6.8	19.9
Orth2ChiPct	Percent Orthoclaadiinae of Chironomidae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PlecoPct	Percent Plecoptera	0.0	0.0	0.0	0.0	0.0	0.9	4.7	13.1	50.0
TanytPct	Percent Tanytarsini	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tnyt2ChiPct	Percent Tanytarsini of Chironomidae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TrichPct	Percent Trichoptera	0.0	0.0	0.2	2.1	21.5	48.2	73.3	80.8	92.2

		Metric Statistics (percentiles) All data (N = 157)								
EDAS Field in EDAS Query	Metric Title	min	5	10	25	50	75	90	95	max
BrrwrPct	Percent Burrower	0.0	1.5	2.2	5.3	13.0	22.9	44.1	52.2	84.5
CimbrPct	Percent Climber	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.8	10.3
CingrPct	Percent Clinger	0.0	0.0	0.0	0.0	0.4	2.1	9.9	13.3	31.8
SprwlPct	Percent Sprawler	0.0	0.0	0.0	0.0	0.0	1.7	7.5	21.5	69.2
SwmmrPct	Percent Swimmer	0.0	0.8	2.2	6.6	16.8	30.0	57.3	71.8	92.1
BrrwrTax	Burrower Taxa	0.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0
CimbrTax	Climber Taxa	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	2.0
CingrTax	Clinger Taxa	0.0	0.0	0.0	0.0	1.0	2.0	3.0	5.0	9.0
SprwlTax	Sprawler Taxa	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0
SwmmrTax	Swimmer Taxa	0.0	1.0	1.0	1.0	1.0	2.0	2.0	3.0	3.0
ChiroTax	Chironomidae Taxa	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ColeoTax	Coleoptera Taxa	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	4.0
CrMolTax	Crustacea+Mollusca Taxa	0.0	0.0	0.0	0.0	1.0	2.0	3.0	3.0	5.0
DipTax	Diptera Taxa	0.0	1.0	1.0	1.0	2.0	2.0	3.0	4.0	6.0
EphemTax	Ephemeroptera Taxa	0.0	1.0	1.0	2.0	2.0	4.0	5.0	5.0	8.0
EPTTax	Ephemeroptera+Plecoptera+Trichoptera Taxa	0.0	1.8	2.0	3.0	5.0	8.0	9.4	12.0	23.0
OligoTax	Oligochaeta Taxa	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0
OrthoTax	Orthocladinae Taxa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PlecoTax	Plecoptera Taxa	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	5.0
PteroTax	Pteronarcys Taxa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TanytTax	Tanytarsini Taxa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TotalTax	Total Taxa	3.0	5.0	6.0	8.0	11.0	13.0	15.0	18.0	34.0
TrichTax	Trichoptera Taxa	0.0	0.0	1.0	1.0	2.0	3.0	5.0	6.0	12.0

		Metric Statistics (percentiles) All data (N = 157)								
EDAS Field in EDAS Query	Metric Title	min	5	10	25	50	75	90	95	max
BeckBI	Beck's Biotic Index	0.0	0.0	1.0	1.0	3.0	5.0	8.0	10.2	23.0
HBI	Hilsenhoff Biotic Index	2.6	4.5	5.2	5.9	6.5	6.9	7.1	7.7	8.3
Baet2EphPct	Percent Baetidae of Ephemeroptera	0.0	0.0	12.1	43.3	85.3	96.4	100.0	100.0	100.0
Dom01Pct	Percent Dominant Taxon	22.3	26.3	29.8	36.8	50.0	65.0	76.0	81.0	92.1
Hyd2EPTPct	Percent Hydropsychidae of Ephemeroptera+Plecoptera+Trichoptera	0.0	0.0	0.0	3.8	31.1	62.3	86.3	87.9	96.2
Hyd2TriPct	Percent Hydropsychidae of Trichoptera	0.0	0.0	0.0	36.2	94.7	99.8	100.0	100.0	100.0
IntolPct	Percent Intolerant Individuals	0.0	0.0	0.0	0.0	0.6	3.8	14.2	19.2	50.0
TolerPct	Percent Tolerant Individuals	0.0	4.2	8.3	21.7	49.4	72.1	82.0	88.8	95.0
IntolTax	Intolerant Taxa	0.0	0.0	0.0	0.0	1.0	3.0	4.0	6.0	12.0
InMolTax	Intolerant Mollusca Taxa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TolerTax	Tolerant Taxa	0.0	1.0	1.0	2.0	2.0	3.0	4.0	4.0	5.0
ClctPct	Percent Collector	3.7	12.4	16.7	29.7	50.3	72.4	81.5	88.3	97.0
FiltrPct	Percent Filterer	0.0	0.4	1.4	5.9	23.3	51.0	72.7	80.2	90.5
PredPct	Percent Predator	0.0	0.0	0.0	0.2	1.1	3.8	11.6	17.9	50.0
ScrapPct	Percent Scraper	0.0	0.0	0.0	0.0	0.5	1.6	8.3	17.6	42.9
ShredPct	Percent Shredder	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.7	13.9
ClctTax	Collector Taxa	1.0	2.0	2.0	4.0	4.0	5.0	6.0	7.0	10.0
FiltrTax	Filterer Taxa	0.0	1.0	1.0	1.0	2.0	3.0	3.0	4.0	4.0
PredTax	Predator Taxa	0.0	0.0	0.0	1.0	1.0	2.0	3.0	4.0	8.0
ScrapTax	Scraper Taxa	0.0	0.0	0.0	0.0	1.0	2.0	3.0	3.2	9.0
ShredTax	Shredder Taxa	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0
MltVolPct	Percent Multivoltine									
SemVolPct	Percent Semivoltine									
UniVolPct	Percent Univoltine									
SemVolTax	Semivoltine Taxa									
TotalInd	Total Individuals	8.0	49.4	78.8	271.0	459.0	524.0	547.0	551.0	560.0

APPENDIX D

CORRELATION MATRIX OF CANDIDATE METRICS (REDUCED NUMBER FROM POTENTIAL METRICS)

**A correlation (r) of 0.80 is considered to indicate redundancy.
Those redundant metric pairs are shaded.**

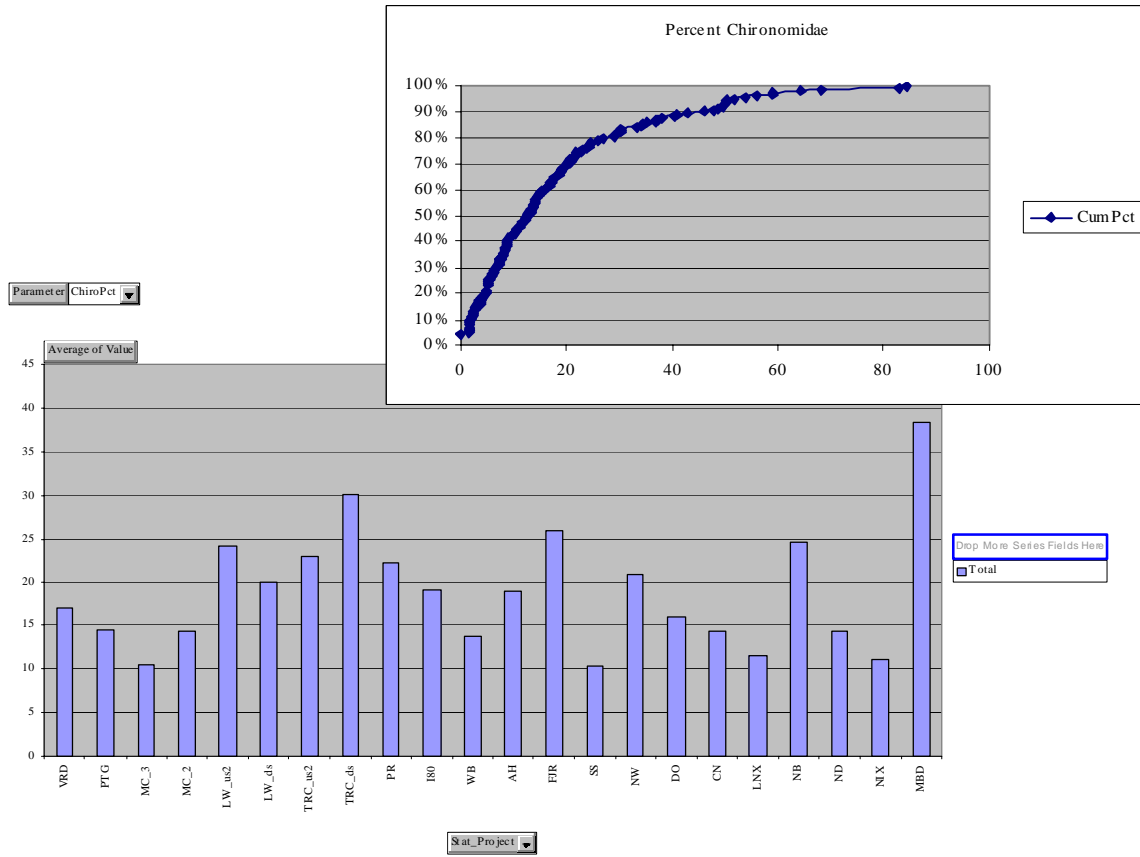
	% Ephemeroptera	% EPT	% Filterer	% Scraper	% Clinger	No. Clinger Taxa	No. Ephemeroptera Taxa	No. EPT Taxa	No. Plecoptera Taxa	No. Total Taxa	No. Trichoptera Taxa	% 1 Dominant	% Tolerant	No. Intolerant Taxa	Total Individuals	% Chiromidae	Hilsenhoff Biotic Index
% Ephemeroptera	1.00																
% EPT	0.48	1.00															
% Filterer	-0.31	0.55	1.00														
% Scraper	-0.03	-0.09	-0.17	1.00													
% Clinger	0.22	0.22	-0.06	0.31	1.00												
No. Clinger Taxa	0.18	0.35	0.10	0.26	0.59	1.00											
No. Ephemeroptera Taxa	0.44	0.45	0.07	0.12	0.42	0.59	1.00										
No. EPT Taxa	0.28	0.49	0.16	0.20	0.45	0.76	0.81	1.00									
No. Plecoptera Taxa	0.07	0.46	0.28	0.18	0.39	0.64	0.40	0.67	1.00								
No. Total Taxa	0.12	0.14	-0.01	0.33	0.35	0.67	0.63	0.85	0.49	1.00							
No. Trichoptera Taxa	0.13	0.33	0.11	0.18	0.31	0.63	0.51	0.88	0.45	0.82	1.00						
% 1 Dominant	-0.24	-0.02	0.27	-0.30	-0.37	-0.29	-0.38	-0.39	-0.14	-0.43	-0.34	1.00					
% Tolerant	0.25	0.58	0.41	-0.25	-0.14	-0.02	0.07	0.07	0.15	-0.13	0.00	0.34	1.00				
No. Intolerant Taxa	0.20	0.36	0.10	0.26	0.49	0.80	0.70	0.85	0.70	0.73	0.68	-0.30	0.04	1.00			
Total Individuals	0.01	0.15	0.18	-0.06	-0.04	0.22	0.37	0.42	0.11	0.47	0.41	0.07	0.11	0.27	1.00		
% Chiromidae	-0.07	-0.28	-0.31	-0.12	0.08	0.09	0.04	0.04	-0.07	0.10	0.06	-0.10	-0.37	0.00	0.14	1.00	
Hilsenhoff Biotic Index	-0.04	-0.12	-0.02	-0.26	-0.50	-0.31	-0.27	-0.28	-0.29	-0.15	-0.16	0.34	0.54	-0.33	0.18	-0.03	1.00

APPENDIX E

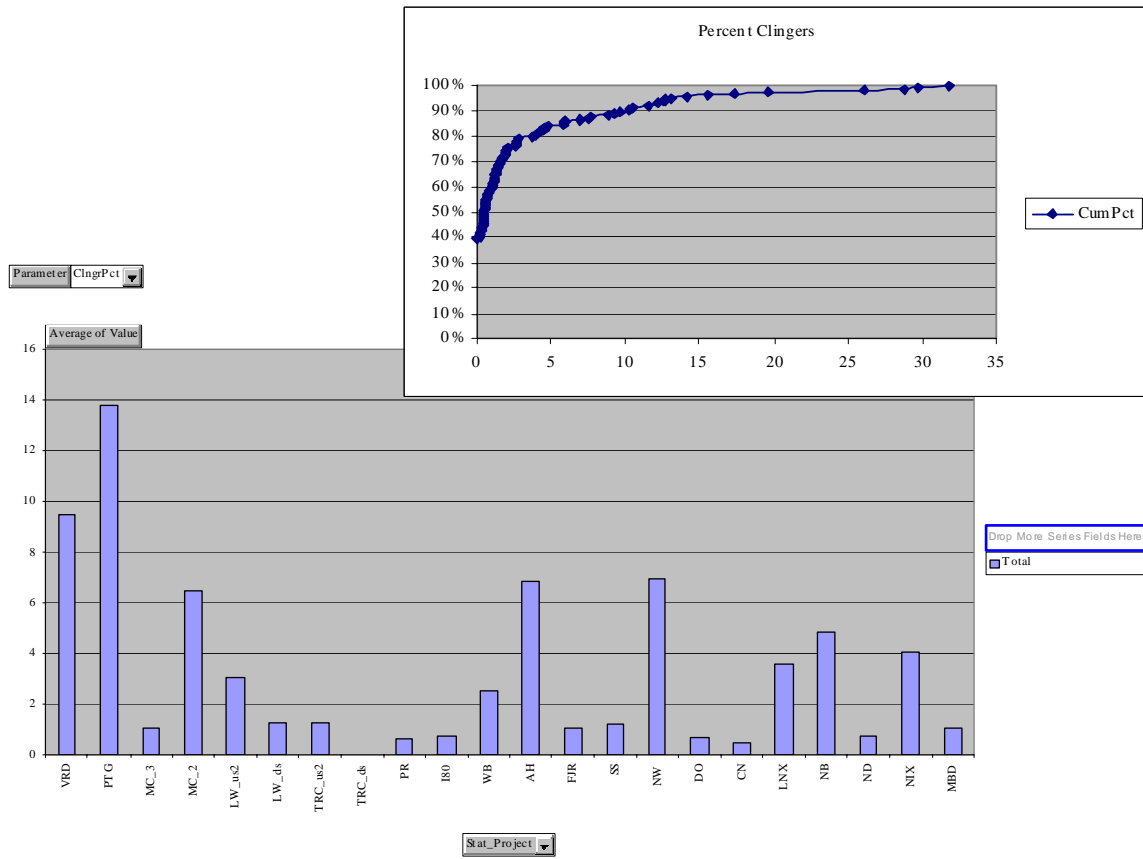
CANDIDATE METRIC DISTRIBUTION

Two graphs are presented for each of the candidate metrics. The bar chart is the average value for each sample from all years at each of the sampling locations (arranged left to right as upstream to downstream).

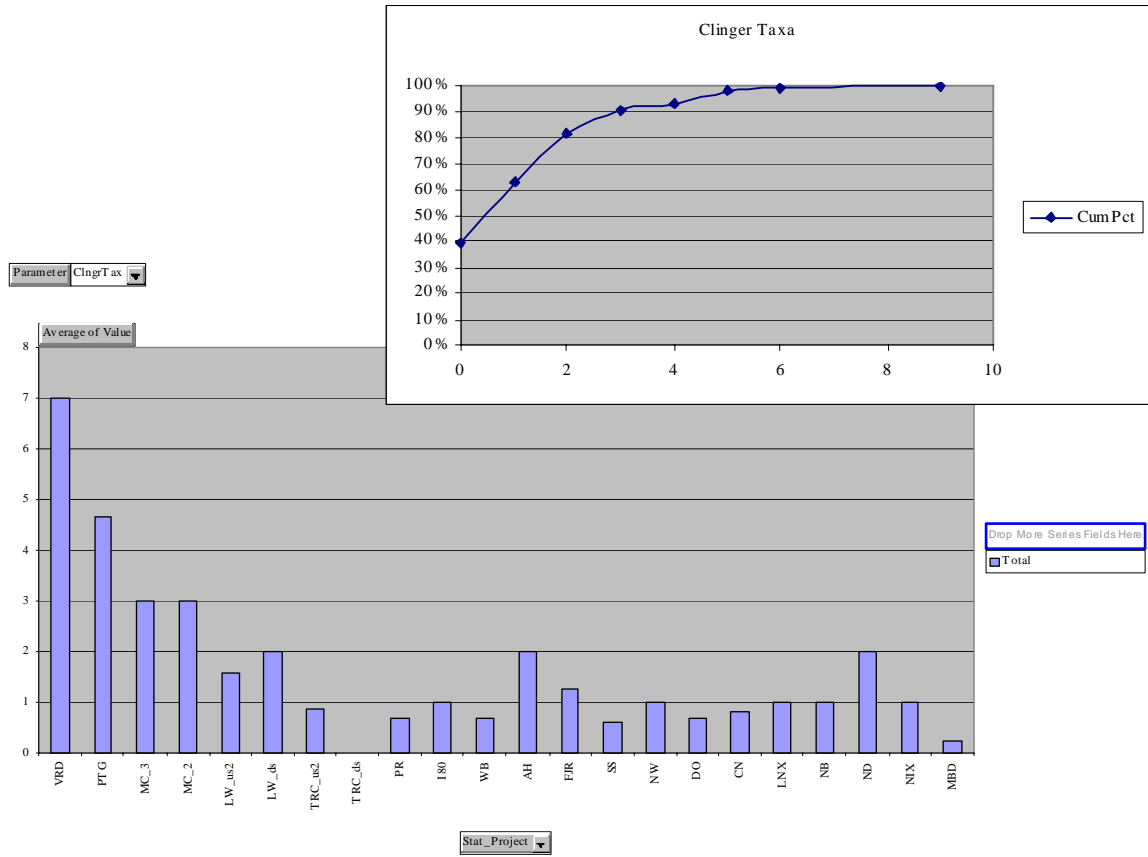
The scatter plot is a cumulative distribution frequency (CDF) graph displaying the range of values for each metric for all samples. The vertical axis is percent cumulation and the horizontal axis is the range in values of the metric. The core metrics are those that represented a distinct gradient of values and provided the most robust distinction of condition among sites on the Truckee River. CDFs that are too steep indicate insufficient range of values in a metric to be an effective discriminator of impairment.



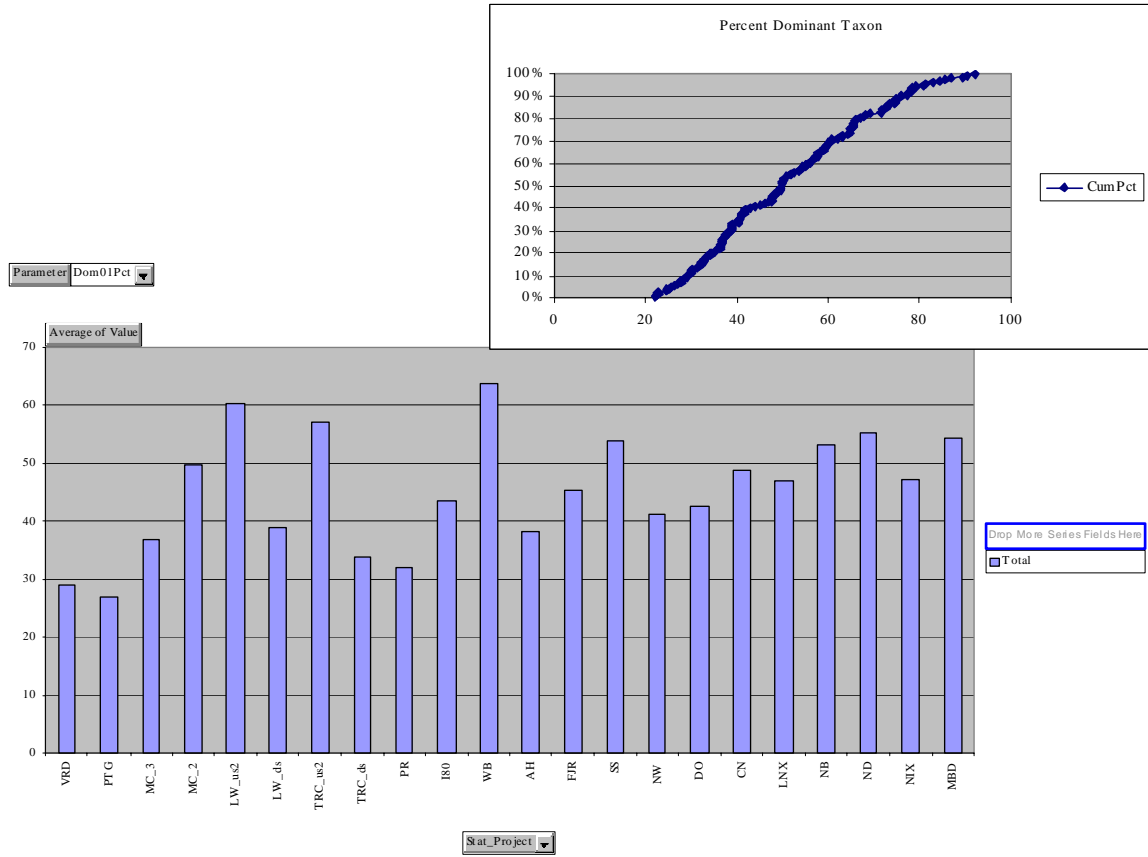
(Core metric)



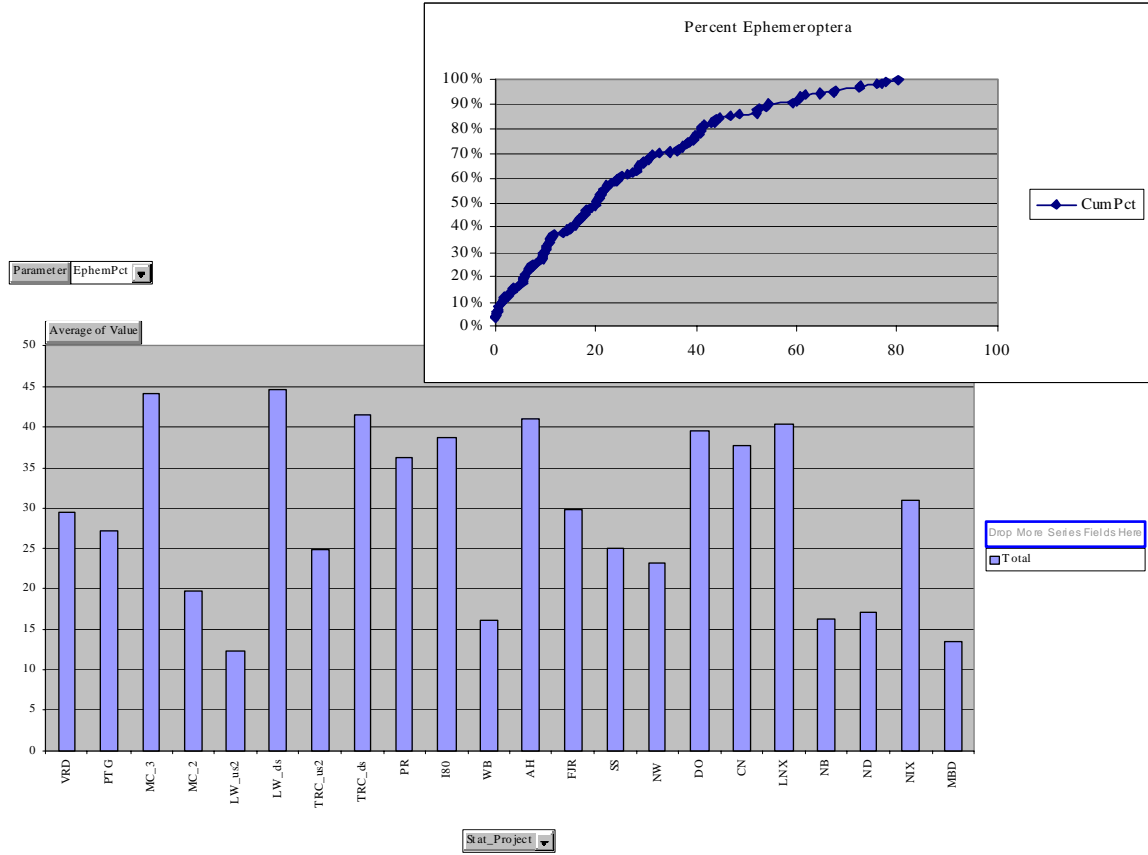
(Core metric)



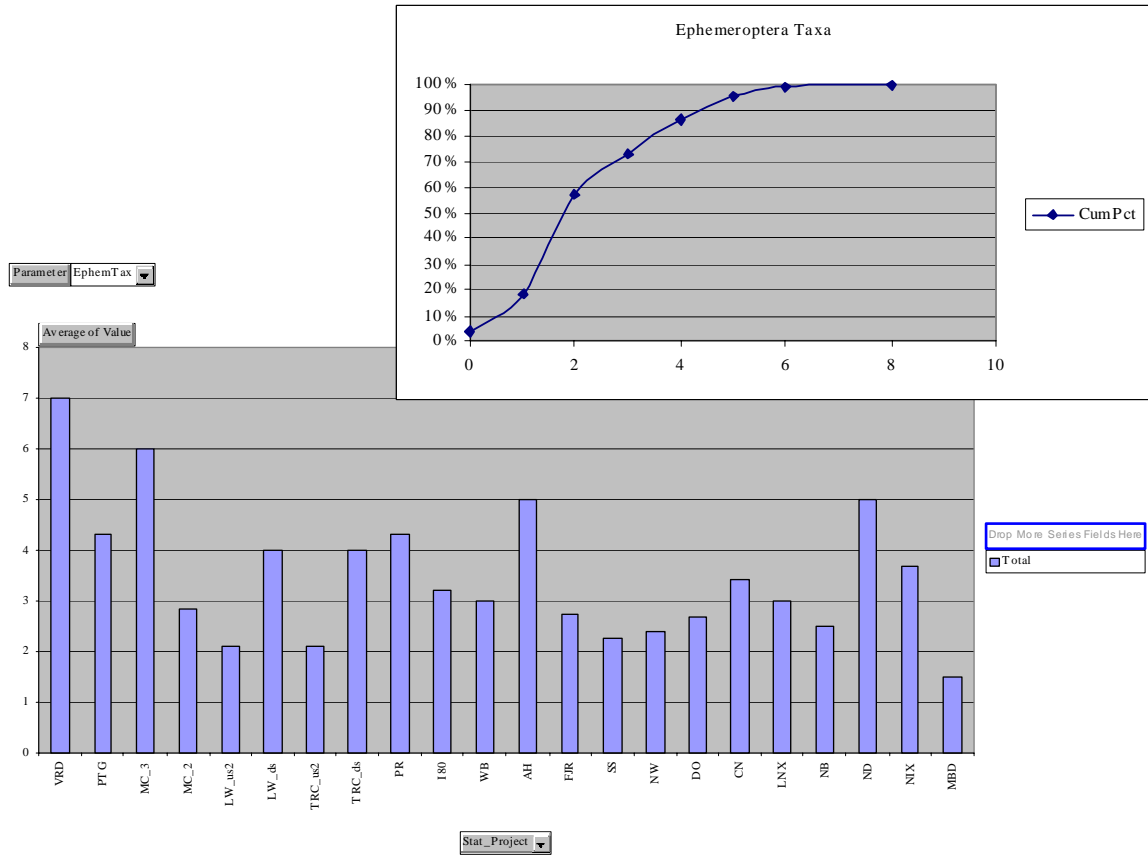
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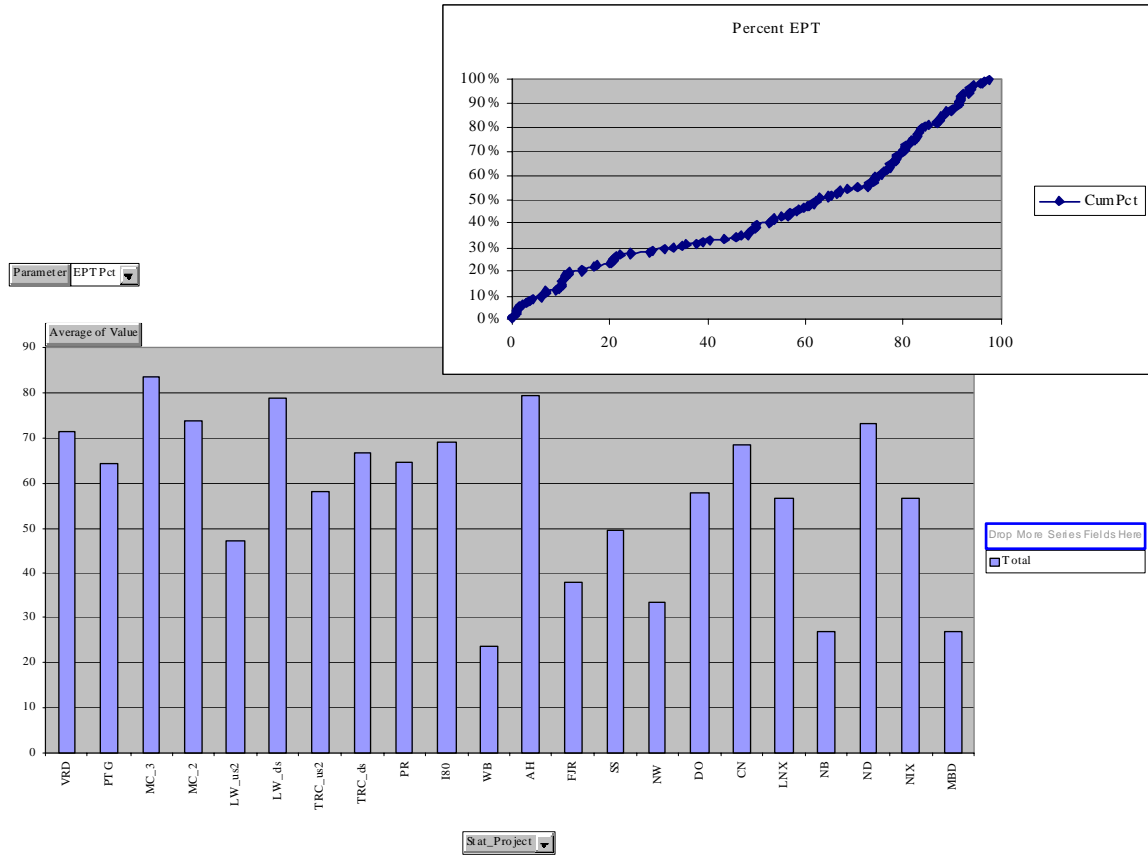
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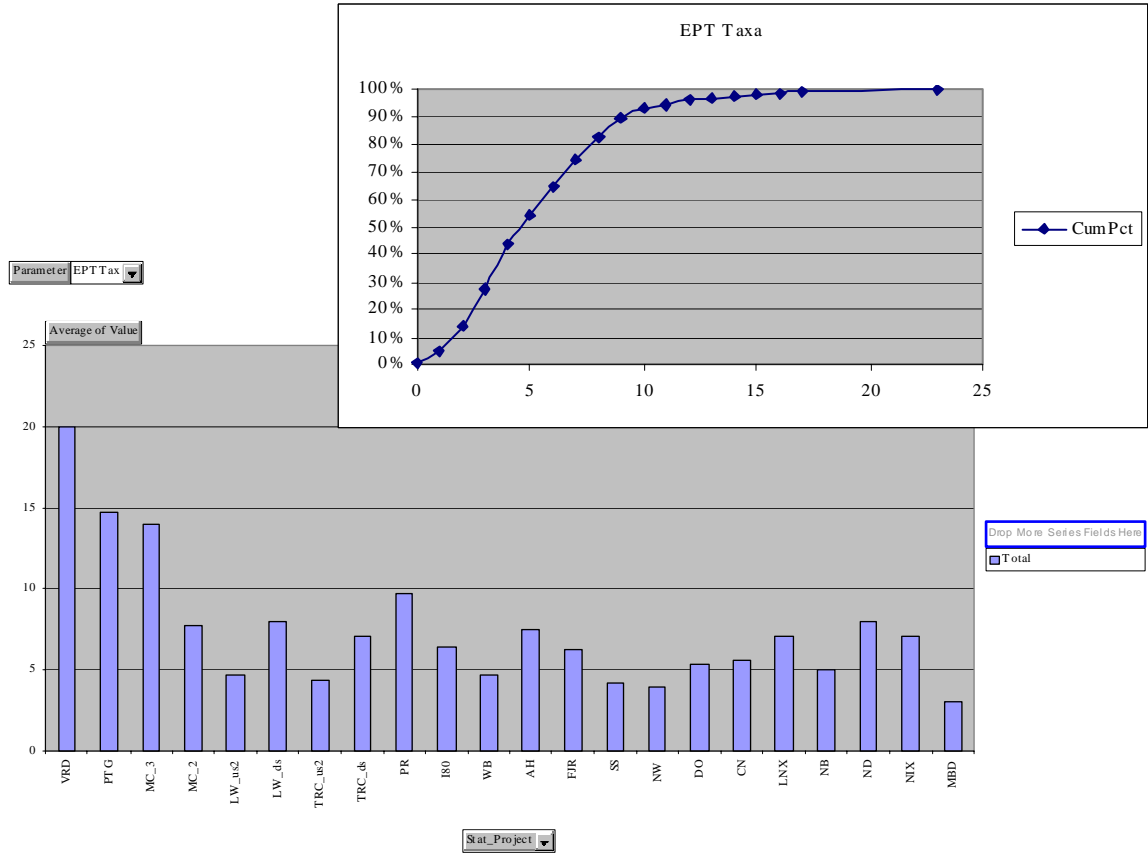
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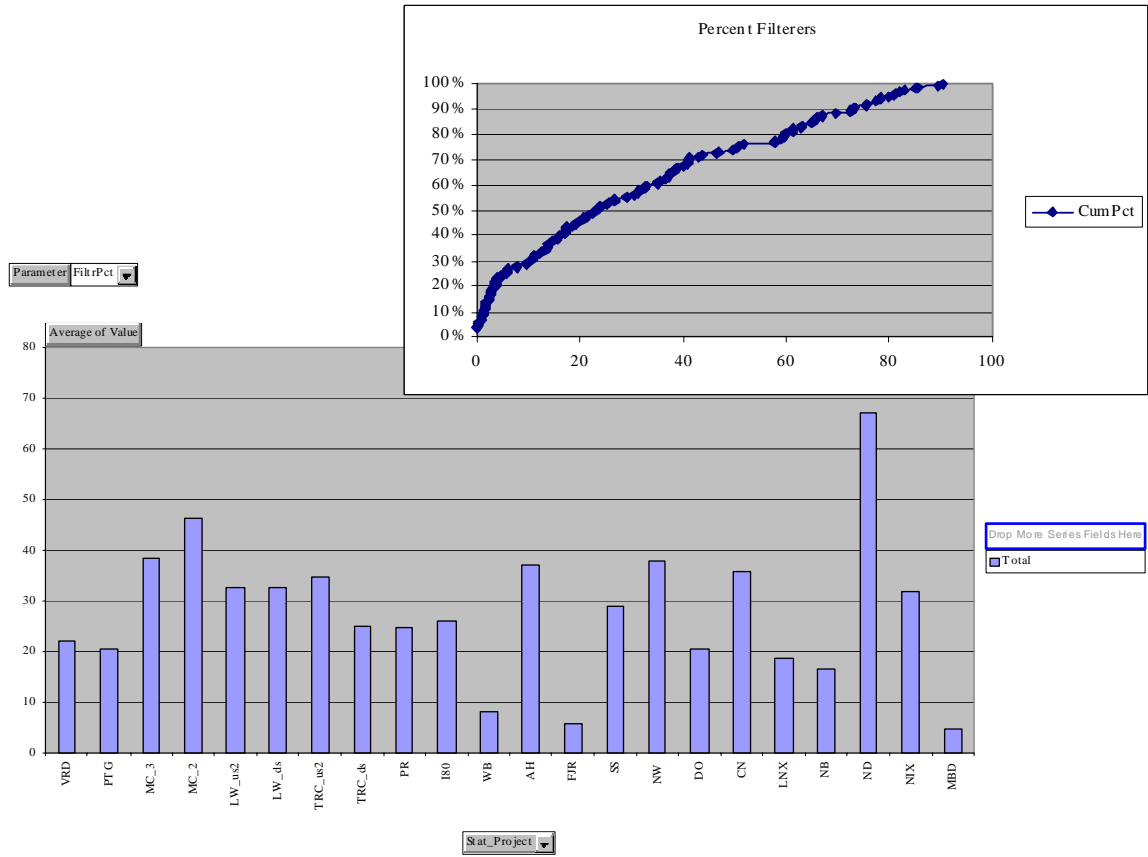
(Core metric)



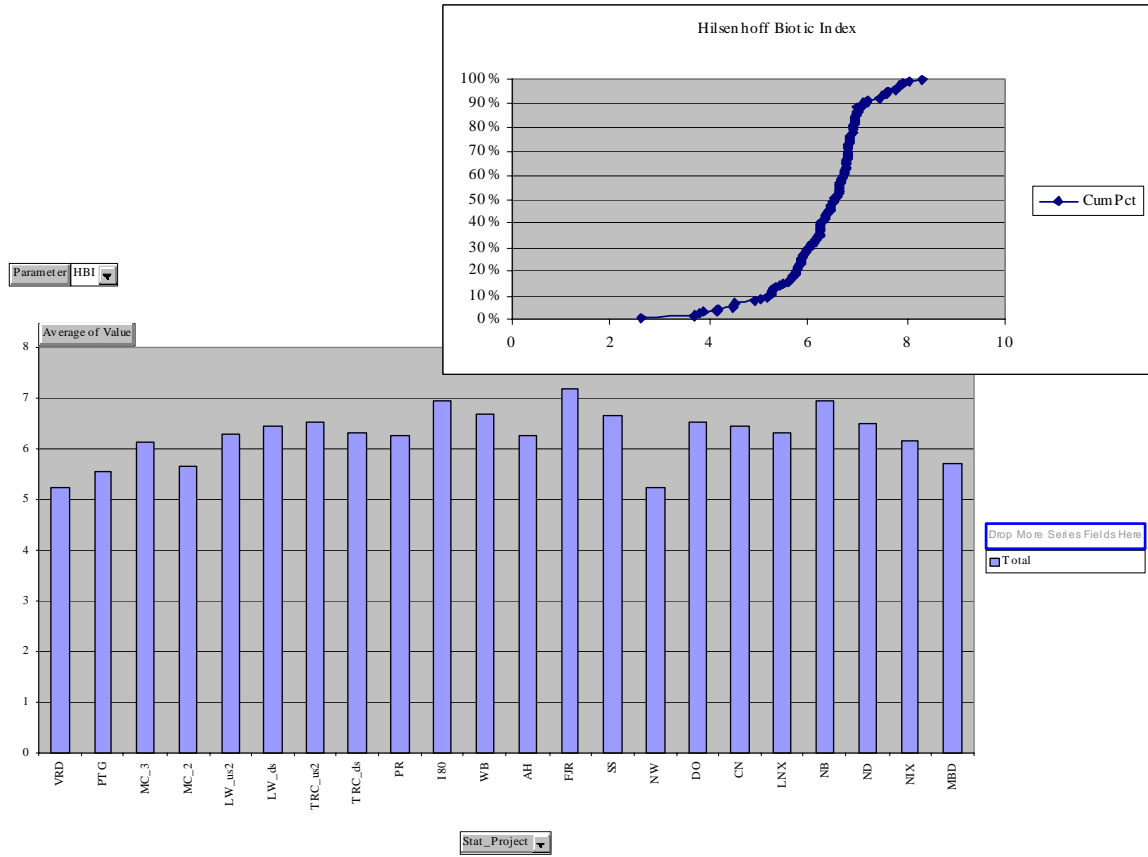
(Core metric)



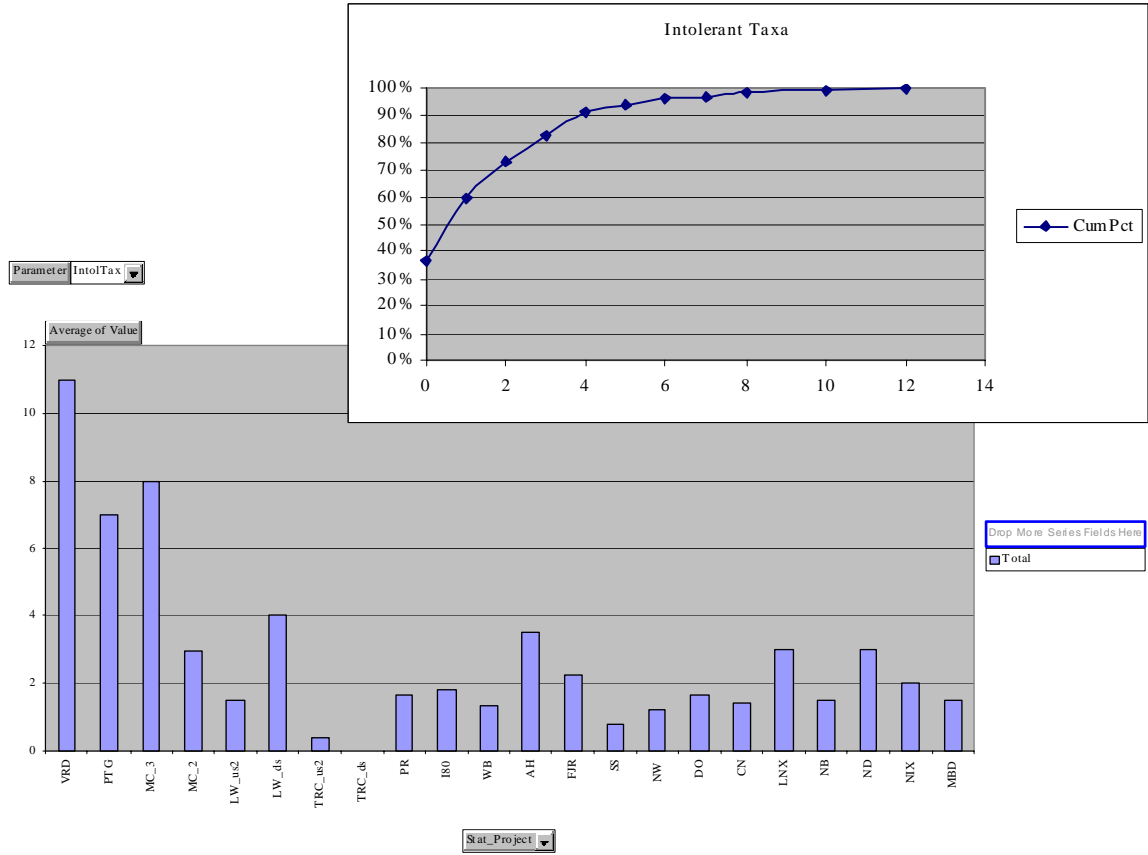
(Core metric)



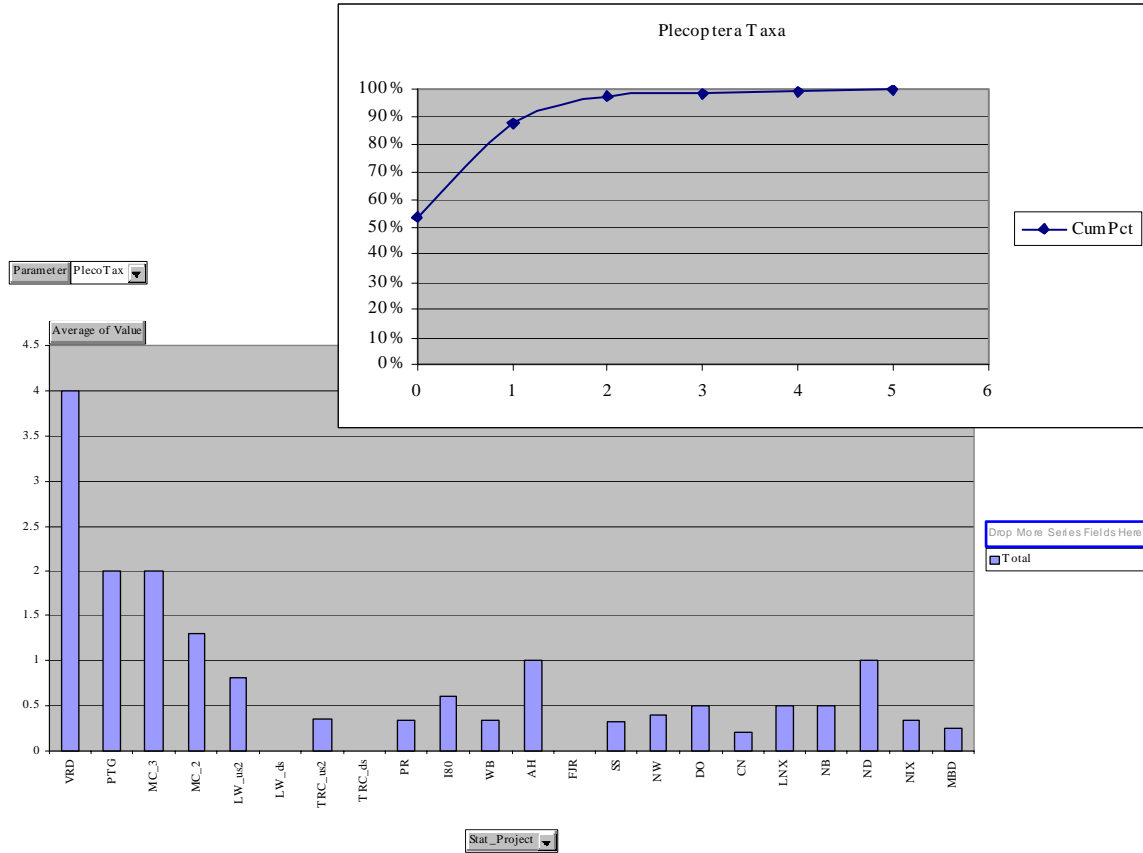
(Core metric)



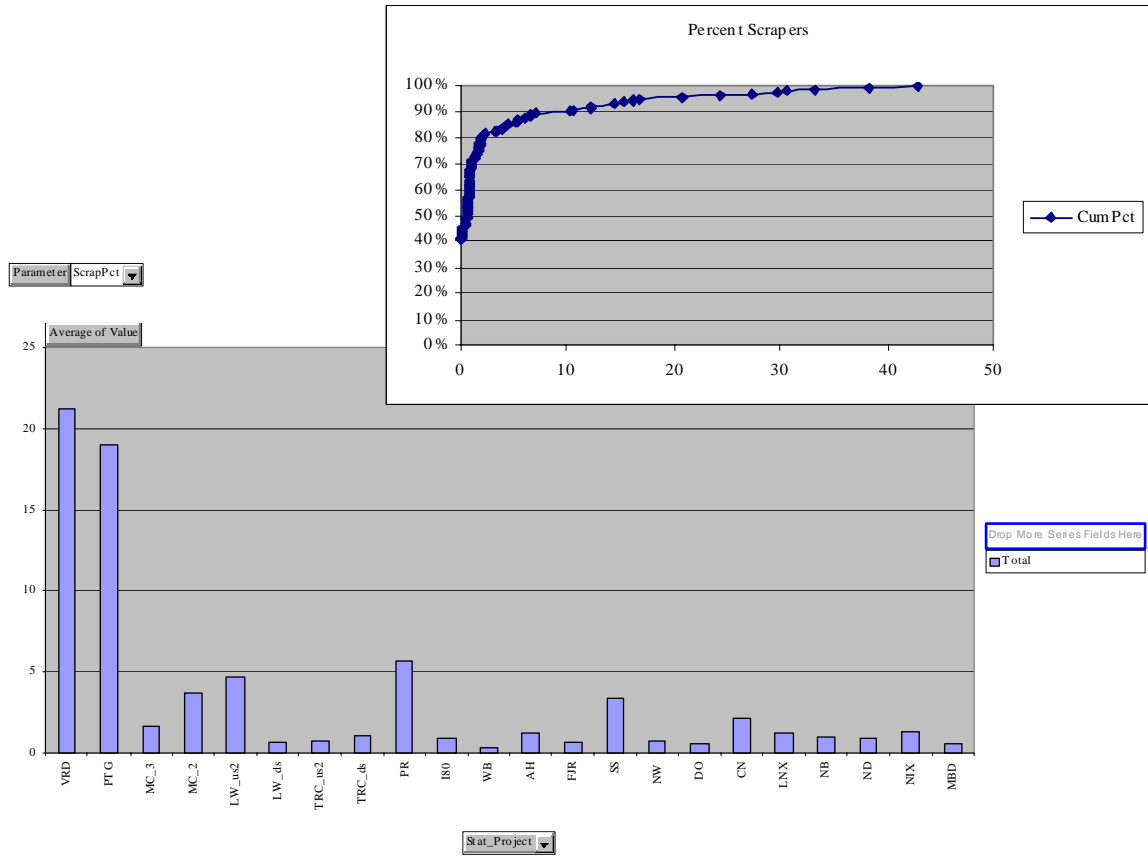
(Core metric)



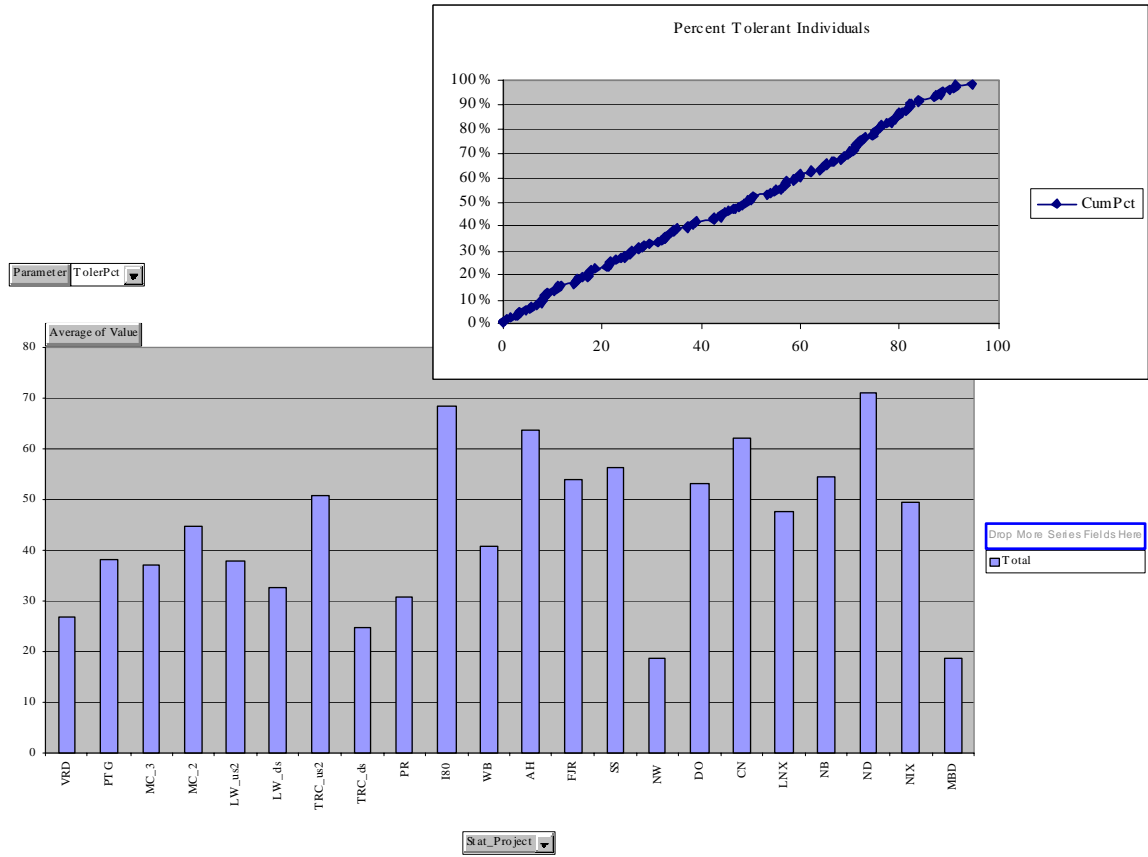
(Core metric)



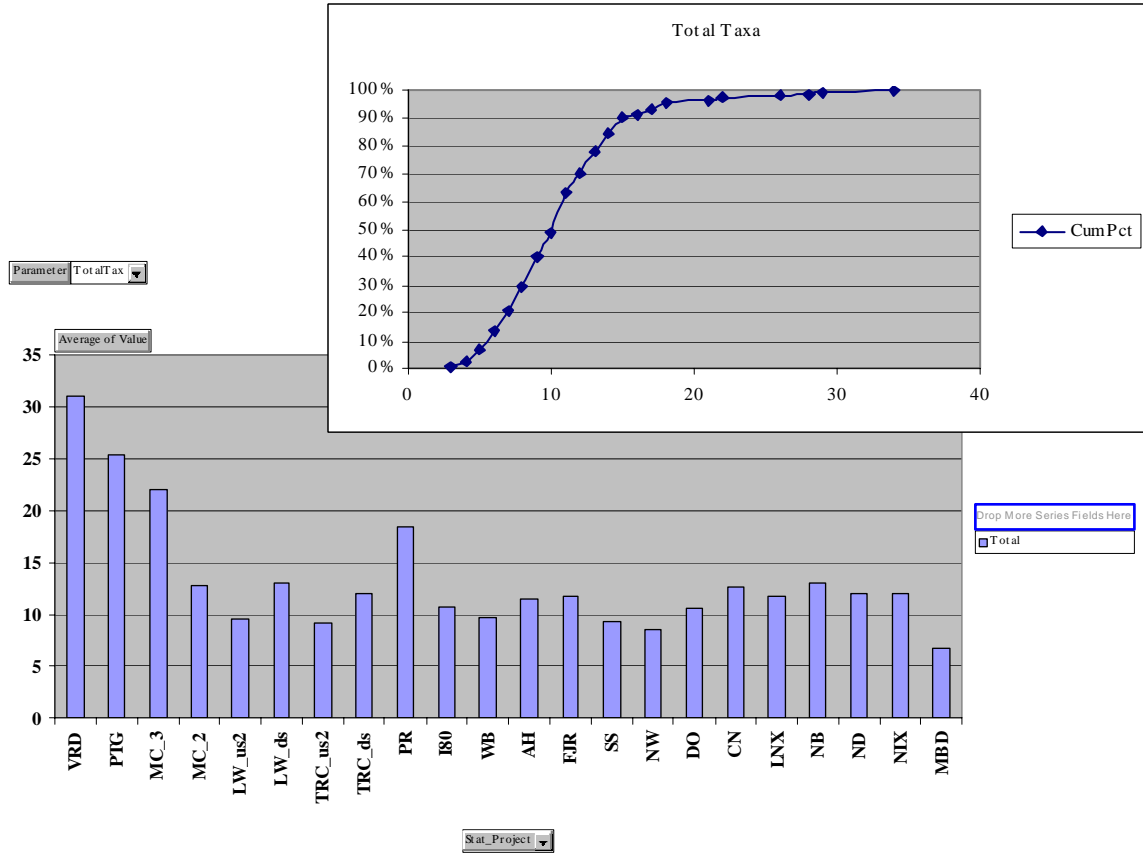
(Core metric)



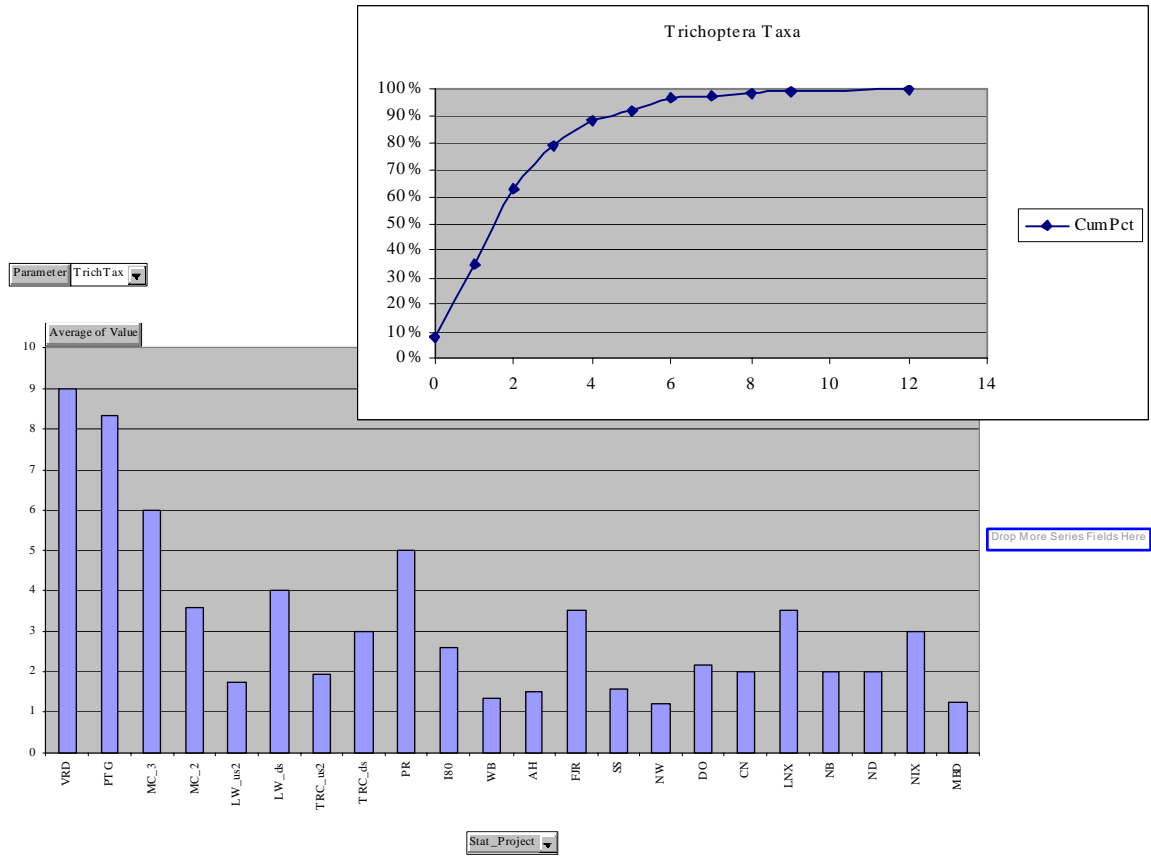
(Core metric)



(Core metric)



(Core metric)



(Core metric)

APPENDIX F

SUMMARY OF BENTHIC METRIC DATA FOR EACH SAMPLING SITE AND COLLECTION DATE

Collection method

Ben = Benthic

S = Surber

H – Hess

0500 = 500 organism subsample

0600 = 600 organism subsample

Tt1 = Total pick

Comp = Total pick

Entity Station ID (see Appendix A)

Project Station ID = Combined station identifiers across entities

Collection Date	Collection Method	Entity Station ID	Project Station ID	Nearest USGS gage	Monthly mean discharge (cfs)	Distance to Mouth (miles)	Percent Ephemeroptera		Percent EPT	
							value	score	value	score
07-01-1981	Ben_S_Ttl	CN	CN	USGS10351700	33.1	10.6	24.2	44.7	90.0	98.7
07-01-1981	Ben_S_Ttl	DO_PLPT	DO	USGS10351650	32.4	11.6	36.3	66.9	70.8	77.6
07-01-1981	Ben_S_Ttl	FJR	FJR	USGS10351650	32.4	20.3	21.4	39.4	37.8	41.5
08-01-1981	Ben_S_Ttl	I80	I80	USGS10351650	29.3	23.9	28.5	52.5	53.6	58.8
07-08-1981	Ben_S_Ttl	LNX	LNX	USGS10351700	33.1	8.2	80.2	100.0	87.4	95.7
08-18-1986	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	150	17.1	37.9	69.9	82.6	90.6
08-29-1988	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	28.1	51.7	28.1	30.8
10-28-1988	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	75.9	100.0	76.9	84.2
09-25-1989	Ben_S_Ttl	DO_PLPT	DO	USGS10351650		11.6	5.3	9.7	7.0	7.7
09-25-1989	Ben_S_Ttl	FJR	FJR	USGS10351650		20.3	7.2	13.3	10.1	11.1
09-25-1989	Ben_S_Ttl	MBD	MBD	USGS10351700	42.3	3.0	0.0	0.0	20.0	21.9
09-25-1989	Ben_S_Ttl	NB	NB	USGS10351700	42.3	6.1	0.0	0.0	1.3	1.4
09-25-1989	Ben_S_Ttl	NW	NW	USGS10351700	42.3	13.3	10.0	18.4	10.0	11.0
08-29-1989	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	10.6	19.5	10.8	11.8
10-20-1989	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	41.0	75.6	45.7	50.1
09-25-1989	Ben_S_Ttl	WB	WB	USGS10351650		23.5	0.2	0.4	0.5	0.5
07-24-1990	Ben_S_Ttl	CN	CN	USGS10351700	32.8	10.6	41.1	75.7	56.9	62.4
07-24-1990	Ben_S_Ttl	DO_PLPT	DO	USGS10351650		11.6	54.4	100.0	58.7	64.4
07-24-1990	Ben_S_Ttl	LNX	LNX	USGS10351700	32.8	8.2	1.1	2.1	1.5	1.7
07-24-1990	Ben_S_Ttl	MBD	MBD	USGS10351700	32.8	3.0	0.6	1.0	14.4	15.8
07-24-1990	Ben_S_Ttl	NIX	NIX	USGS10351700	32.8	4.8	9.5	17.6	10.3	11.2
10-10-1990	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	0.6	1.1	0.8	0.9
07-24-1990	Ben_S_Ttl	WB	WB	USGS10351650		23.5	9.7	17.9	10.2	11.2
09-05-1991	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	5.5	10.0	6.6	7.2
10-29-1991	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	0.2	0.4	0.8	0.9
09-09-1992	Ben_H_Ttl	SS_PLPT	SS	USGS10351650		17.1	16.7	30.7	16.7	18.3
10-01-1993	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	59.3	17.1	52.2	96.2	73.9	81.0
08-24-1994	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	16.8	17.1	10.3	19.0	10.9	12.0
10-04-1994	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	1.72	17.1	19.9	36.7	21.0	23.1
08-16-1995	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	577	17.1	72.5	100.0	83.0	91.0
08-01-1996	Ben_S_Ttl	AH	AH				41.0	75.6	80.6	88.3
08-01-1996	Ben_S_Ttl	CN	CN	USGS10351700	296	10.6	21.6	39.8	67.0	73.5
08-01-1996	Ben_S_Ttl	I80	I80	USGS10351650	262	23.9	22.0	40.6	81.0	88.8
08-01-1996	Ben_S_Ttl	MBD	MBD	USGS10351700	296	3.0	29.5	54.4	48.8	53.5
08-01-1996	Ben_S_Ttl	NB	NB	USGS10351700	296	6.1	32.7	60.2	52.8	57.8
08-01-1996	Ben_S_Ttl	ND	ND	USGS10351700	296	6.0	17.2	31.6	73.2	80.2
08-01-1996	Ben_S_Ttl	NW	NW	USGS10351700	296	13.3	60.4	100.0	68.6	75.1
08-01-1996	Ben_S_Ttl	SS_PLPT	SS	USGS10351650	262	17.1	37.0	68.3	76.7	84.0
10-25-1996	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	353	17.1	25.0	46.1	93.8	100.0
08-01-1996	Ben_S_Ttl	WB	WB	USGS10351650	262	23.5	38.7	71.4	60.6	66.4
07-10-1997	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	307	17.1	19.9	36.7	87.6	96.1
10-21-1998	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	601	17.1	18.0	33.2	80.4	88.1

Collection Date	Collection Method	Entity Station ID	Project Station ID	Nearest USGS gage	Monthly mean discharge (cfs)	Distance to Mouth (miles)	Percent Ephemeroptera		Percent EPT	
							value	score	value	score
08-01-1999	Ben_S_Ttl	AH	AH				40.8	75.3	78.4	85.9
08-01-1999	Ben_S_Ttl	CN	CN	USGS10351700	446	10.6	61.7	100.0	78.7	86.3
08-01-1999	Ben_S_Ttl	DO_PLPT	DO	USGS10351650	423	11.6	59.2	100.0	86.8	95.1
08-01-1999	Ben_S_Ttl	I80	I80	USGS10351650	423	23.9	39.7	73.2	81.6	89.5
08-01-1999	Ben_S_Ttl	LNX	LNX	USGS10351700	446	8.2	48.5	89.3	76.2	83.5
08-01-1999	Ben_S_Ttl	MBD	MBD	USGS10351700	446	3.0	24.2	44.5	24.2	26.5
08-01-1999	Ben_S_Ttl	NIX	NIX	USGS10351700	446	4.8	39.5	72.8	79.8	87.4
07-27-1999	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	710	17.1	22.2	40.9	91.1	99.8
10-21-1999	Ben_H_Ttl	SS_PLPT	SS	USGS10351650	403	17.1	14.9	27.4	93.5	100.0
07-04-2000	Ben_S_Ttl	CN	CN	USGS10351700	282	10.6	39.6	72.9	50.0	54.8
07-04-2000	Ben_S_Ttl	DO_PLPT	DO	USGS10351650	290	11.6	60.8	100.0	73.8	80.9
08-19-2000	Ben_H_Ttl	DO_PLPT	DO	USGS10351650	316	11.6	21.2	39.1	49.6	54.4
07-04-2000	Ben_S_Ttl	FJR	FJR	USGS10351650	290	20.3	53.9	99.4	62.8	68.8
07-04-2000	Ben_S_Ttl	I80	I80	USGS10351650	290	23.9	60.3	100.0	80.5	88.3
07-04-2000	Ben_S_Ttl	LNX	LNX	USGS10351700	282	8.2	31.5	58.1	61.8	67.7
07-04-2000	Ben_S_Ttl	NIX	NIX	USGS10351700	282	4.8	43.7	80.6	79.9	87.6
08-28-2001	Ben_S_Ttl	FJR	FJR	USGS10351650	118	20.3	36.5	67.2	40.4	44.3
08-28-2001	Ben_S_Ttl	I80	I80	USGS10351650	118	23.9	43.2	79.6	48.1	52.7
10-30-2000	Ben_H_0500	PTG_DRI	PTG	USGS10348000	399	63.8	23.1	42.6	49.0	53.7
08-13-2002	Ben_H_0500	PR_DRI	PR	USGS10351600	45.4	28.5	10.9	20.1	58.0	63.5
10-14-2002	Ben_H_0500	PR_NDEP	PR	USGS10351600		28.7	43.7	80.5	56.9	62.4
08-07-2002	Ben_H_0500	PTG_DRI	PTG	USGS10348000	201	63.8	30.9	57.0	65.2	71.4
10-14-2002	Ben_H_0500	VRD	VRD	USGS10348000		71.3	28.2	51.9	81.3	89.2
09-09-2000	Ben_K_0600	LW_NDEP	LW_ds			48.3	44.5	82.1	78.7	86.2
09-08-2000	Ben_K_0600	MC_NDEP	MC_3	USGS10348200	434	53.6	44.1	81.3	83.5	91.5
09-11-2000	Ben_K_0600	PR_NDEP	PR	USGS10351600	132	28.7	54.2	99.9	78.6	86.1
09-08-2000	Ben_K_0600	PTG_NDEP	PTG	USGS10348000	434	64.2	27.4	50.5	78.7	86.3
09-11-2000	Ben_K_0600	TRC_NDEP	TRC_ds	USGS10351600	132	35.8	41.5	76.6	66.6	73.0
09-05-2000	Ben_K_0600	VRD	VRD	USGS10348000	434	71.3	30.6	56.4	61.8	67.7
10-21-1999	Ben_H_Comp	SS_TMWRF	SS	USGS10351650	403	17.1	13.5	24.8	91.8	100.0
10-21-1999	Ben_H_Comp	TRC_TMWRF	TRC_us2	USGS10350400		37.1	16.5	30.3	79.3	86.9
10-20-1999	Ben_H_Comp	LW_TMWRF	LW_us2	USGS10350000	462	48.8	9.7	17.9	96.6	100.0
10-20-1999	Ben_H_Comp	MC_TMWRF	MC_2	USGS10348200	396	54.1	6.1	11.3	77.3	84.7
07-27-1999	Ben_H_Comp	SS_TMWRF	SS	USGS10351650	710	17.1	22.2	40.9	91.1	99.8
07-27-1999	Ben_H_Comp	TRC_TMWRF	TRC_us2	USGS10350400		37.1	67.3	100.0	73.1	80.1
07-26-1999	Ben_H_Comp	LW_TMWRF	LW_us2	USGS10350000	774	48.8	23.8	43.8	75.7	83.0
07-26-1999	Ben_H_Comp	MC_TMWRF	MC_2	USGS10348200	727	54.1	15.7	29.0	74.1	81.2
10-21-1998	Ben_H_Comp	SS_TMWRF	SS	USGS10351650	601	17.1	18.1	33.3	80.5	88.3
10-21-1998	Ben_H_Comp	LW_TMWRF	LW_us2	USGS10350000	634	48.8	28.5	52.5	46.6	51.1
10-20-1998	Ben_H_Comp	TRC_TMWRF	TRC_us2	USGS10350400		37.1	37.3	68.8	88.6	97.2
10-20-1998	Ben_H_Comp	MC_TMWRF	MC_2	USGS10348200	511	54.1	6.3	11.6	88.8	97.3
07-31-1998	Ben_H_Comp	MC_TMWRF	MC_2	USGS10348200	1224	54.1	46.6	85.9	82.4	90.3

Collection Date	Collection Method	Entity Station ID	Project Station ID	Nearest USGS gage	Monthly mean discharge (cfs)	Distance to Mouth (miles)	Percent Ephemeroptera		Percent EPT	
							value	score	value	score
07-30-1998	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400		37.1	72.6	100.0	75.5	82.7
07-27-1998	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	1481	48.8	10.1	18.6	88.4	96.9
10-15-1997	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400		37.1	8.2	15.2	84.5	92.6
10-15-1997	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	290	54.1	3.3	6.1	85.0	93.2
07-10-1997	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	307	17.1	19.8	36.4	87.0	95.3
07-10-1997	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400		37.1	77.7	100.0	92.3	100.0
07-10-1997	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	518	48.8	67.6	100.0	91.9	100.0
07-10-1997	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	397	54.1	52.7	97.2	89.7	98.3
10-25-1996	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	353	17.1	25.0	46.1	93.8	100.0
10-25-1996	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	430	37.1	11.7	21.5	93.8	100.0
10-23-1996	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	438	48.8	5.2	9.6	96.1	100.0
10-23-1996	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	383	54.1	3.4	6.3	97.5	100.0
10-30-1995	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	410	48.8	7.6	14.0	91.8	100.0
08-16-1995	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	577	17.1	72.5	100.0	83.0	91.0
08-16-1995	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	650	54.1	77.0	100.0	91.4	100.0
08-15-1995	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	752	37.1	39.6	73.1	56.3	61.6
08-15-1995	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	733	48.8	20.5	37.8	34.7	38.1
10-12-1994	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	69.2	37.1	26.5	48.8	49.9	54.7
10-12-1994	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	51.2	48.8	0.4	0.7	0.4	0.4
10-04-1994	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	1.72	17.1	19.3	35.6	20.4	22.3
08-24-1994	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	47.7	48.8	0.0	0.0	0.0	0.0
08-24-1994	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	16.8	17.1	10.0	18.4	10.6	11.6
08-23-1994	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	50.4	37.1	29.2	53.8	77.4	84.8
10-01-1993	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	59.3	17.1	52.2	96.2	73.9	81.0
10-01-1993	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	175	37.1	20.7	38.1	31.0	34.0
10-01-1993	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	161	48.8	0.0	0.0	87.5	95.9
10-01-1993	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	89	54.1	0.0	0.0	94.4	100.0
09-30-1992	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	66.9	48.8	4.2	7.7	4.2	4.6
09-28-1992	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	65	37.1	30.8	56.7	32.8	36.0
09-09-1992	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	14.3	26.3	14.3	15.7
10-29-1991	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	0.9	1.6	2.2	2.5
10-29-1991	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	62.7	37.1	52.0	95.8	55.1	60.4
09-05-1991	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	4.8	8.9	6.1	6.7
09-05-1991	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	67.9	37.1	18.6	34.3	38.9	42.6
09-05-1991	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	76.5	48.8	7.5	13.8	9.6	10.5
09-05-1991	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	38.6	54.1	6.7	12.3	67.1	73.5
10-11-1990	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	93.9	37.1	10.9	20.1	10.9	12.0
10-11-1990	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	87.8	48.8	3.0	5.5	3.6	4.0
10-11-1990	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	61	54.1	17.9	33.0	60.8	66.6
10-10-1990	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	0.6	1.1	0.8	0.9
10-20-1989	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	10.4	19.2	11.8	12.9
10-20-1989	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	418	37.1	14.9	27.4	87.7	96.1

Collection Date	Collection Method	Entity Station ID	Project Station ID	Nearest USGS gage	Monthly mean discharge (cfs)	Distance to Mouth (miles)	Percent Ephemeroptera		Percent EPT	
							value	score	value	score
10-20-1989	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	413	48.8	8.7	16.1	10.3	11.2
10-20-1989	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	342	54.1	16.1	29.7	52.9	58.0
08-30-1989	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	273	54.1	9.1	16.8	74.9	82.1
08-29-1989	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	6.7	12.4	7.0	7.7
08-29-1989	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	311	37.1	5.6	10.3	35.5	38.9
08-29-1989	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	307	48.8	1.3	2.4	1.5	1.6
10-28-1988	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	64.5	100.0	64.5	70.7
10-28-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	98	37.1	10.1	18.5	83.2	91.2
10-28-1988	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	96.2	48.8	1.9	3.5	50.0	54.8
10-28-1988	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	49.4	54.1	5.6	10.3	72.8	79.8
08-29-1988	Ben_H_Comp	SS_TMWRP	SS	USGS10351650		17.1	20.8	38.3	20.8	22.8
08-29-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	342	37.1	0.0	0.0	20.5	22.5
08-29-1988	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	326	48.8	6.1	11.2	9.1	10.0
08-29-1988	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	329	54.1	9.5	17.5	21.3	23.4
09-28-1987	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	255	54.1	1.7	3.2	83.8	91.8
08-18-1986	Ben_H_Comp	SS_TMWRP	SS	USGS10351650	150	17.1	41.3	76.2	91.2	100.0
08-18-1986	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400	388	37.1	10.7	19.8	94.1	100.0
08-18-1986	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	399	48.8	20.2	37.3	95.9	100.0
08-18-1986	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	279	54.1	29.2	53.9	82.9	90.9
09-09-2003	Ben_H_Comp	DO_TMWRP	NW	USGS10351650		13.4	15.7	29.0	17.4	19.1
09-09-2003	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200		54.1	38.2	70.5	77.8	85.3
08-29-2003	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400		37.1	1.5	2.7	3.0	3.3
08-29-2003	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000		48.8	21.7	39.9	22.2	24.4
08-15-2002	Ben_H_Comp	DO_TMWRP	NW	USGS10351650	112	13.4	11.8	21.7	11.8	12.9
08-13-2002	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400		37.1	3.7	6.8	6.1	6.7
08-12-2002	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	211	48.8	2.7	5.0	28.7	31.5
08-12-2002	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	201	54.1	14.5	26.8	53.6	58.7
08-19-2000	Ben_H_Comp	DO_TMWRP	NW	USGS10351650	316	13.4	17.4	32.1	59.7	65.4
08-09-2000	Ben_H_Comp	LW_TMWRP	LW_us2	USGS10350000	434	48.8	17.6	32.5	91.3	100.0
08-08-2000	Ben_H_Comp	TRC_TMWRP	TRC_us2	USGS10350400		37.1	2.8	5.1	62.4	68.4
07-25-2000	Ben_H_Comp	MC_TMWRP	MC_2	USGS10348200	379	54.1	34.8	64.2	43.5	47.7

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Filterers		Scraper Taxa		Percent Clingers		Clinger Taxa	
				value	score	value	score	value	score	value	score
07-01-1981	Ben_S_Ttl	CN	CN	66.0	34.5	0.0	0.0	0.0	0.0	0	0.0
07-01-1981	Ben_S_Ttl	DO_PLPT	DO	19.6	81.5	0.0	0.0	0.0	0.0	0	0.0
07-01-1981	Ben_S_Ttl	FJR	FJR	15.5	85.7	0.0	0.0	0.0	0.0	0	0.0
08-01-1981	Ben_S_Ttl	I80	I80	6.0	95.4	0.0	0.0	0.0	0.0	0	0.0
07-08-1981	Ben_S_Ttl	LNX	LNX	0.8	100.0	0.0	0.0	0.0	0.0	0	0.0
08-18-1986	Ben_H_Ttl	SS_PLPT	SS	26.7	74.3	16.1	100.0	2.1	21.4	3	100.0
08-29-1988	Ben_H_Ttl	SS_PLPT	SS	3.5	97.9	5.3	63.6	0.0	0.0	0	0.0
10-28-1988	Ben_H_Ttl	SS_PLPT	SS	4.0	97.3	0.0	0.0	0.0	0.0	0	0.0
09-25-1989	Ben_S_Ttl	DO_PLPT	DO	35.1	65.8	0.0	0.0	0.0	0.0	0	0.0
09-25-1989	Ben_S_Ttl	FJR	FJR	0.0	100.0	0.0	0.0	0.0	0.0	0	0.0
09-25-1989	Ben_S_Ttl	MBD	MBD	0.0	100.0	0.0	0.0	0.0	0.0	0	0.0
09-25-1989	Ben_S_Ttl	NB	NB	10.0	91.3	0.0	0.0	0.0	0.0	0	0.0
09-25-1989	Ben_S_Ttl	NW	NW	51.7	49.0	0.0	0.0	0.0	0.0	0	0.0
08-29-1989	Ben_H_Ttl	SS_PLPT	SS	73.0	27.4	0.2	2.3	0.0	0.0	0	0.0
10-20-1989	Ben_H_Ttl	SS_PLPT	SS	4.7	96.7	0.0	0.0	0.0	0.0	0	0.0
09-25-1989	Ben_S_Ttl	WB	WB	1.2	100.0	0.0	0.0	0.0	0.0	0	0.0
07-24-1990	Ben_S_Ttl	CN	CN	16.2	84.9	0.0	0.0	0.0	0.0	0	0.0
07-24-1990	Ben_S_Ttl	DO_PLPT	DO	1.1	100.0	0.0	0.0	0.0	0.0	0	0.0
07-24-1990	Ben_S_Ttl	LNX	LNX	4.9	96.4	0.0	0.0	0.0	0.0	0	0.0
07-24-1990	Ben_S_Ttl	MBD	MBD	1.3	100.0	0.0	0.0	0.0	0.0	0	0.0
07-24-1990	Ben_S_Ttl	NIX	NIX	12.5	88.8	0.0	0.0	0.0	0.0	0	0.0
10-10-1990	Ben_H_Ttl	SS_PLPT	SS	65.7	34.8	0.0	0.0	0.0	0.0	0	0.0
07-24-1990	Ben_S_Ttl	WB	WB	1.5	99.9	0.0	0.0	0.0	0.0	0	0.0
09-05-1991	Ben_H_Ttl	SS_PLPT	SS	2.3	99.1	0.8	9.1	0.4	3.8	1	33.3
10-29-1991	Ben_H_Ttl	SS_PLPT	SS	0.4	100.0	0.0	0.0	0.0	0.0	0	0.0
09-09-1992	Ben_H_Ttl	SS_PLPT	SS	11.1	90.1	0.0	0.0	0.0	0.0	0	0.0
10-01-1993	Ben_H_Ttl	SS_PLPT	SS	17.4	83.8	0.0	0.0	0.0	0.0	0	0.0
08-24-1994	Ben_H_Ttl	SS_PLPT	SS	1.7	99.7	0.6	7.6	0.0	0.0	0	0.0
10-04-1994	Ben_H_Ttl	SS_PLPT	SS	0.0	100.0	0.0	0.0	0.0	0.0	0	0.0
08-16-1995	Ben_H_Ttl	SS_PLPT	SS	16.0	85.2	0.5	6.0	1.0	10.1	2	66.7
08-01-1996	Ben_S_Ttl	AH	AH	39.0	61.8	0.9	11.0	12.7	100.0	3	100.0
08-01-1996	Ben_S_Ttl	CN	CN	59.8	40.8	0.7	9.0	0.6	5.6	2	66.7
08-01-1996	Ben_S_Ttl	I80	I80	59.8	40.8	0.6	6.7	0.3	2.8	1	33.3
08-01-1996	Ben_S_Ttl	MBD	MBD	17.5	83.7	2.2	26.7	4.0	40.5	1	33.3
08-01-1996	Ben_S_Ttl	NB	NB	22.8	78.3	2.0	23.9	9.7	97.8	2	66.7
08-01-1996	Ben_S_Ttl	ND	ND	67.2	33.3	0.9	11.0	0.7	7.4	2	66.7
08-01-1996	Ben_S_Ttl	NW	NW	3.9	97.4	1.1	12.9	26.1	100.0	2	66.7
08-01-1996	Ben_S_Ttl	SS_PLPT	SS	32.9	68.0	0.2	2.6	10.2	100.0	2	66.7
10-25-1996	Ben_H_Ttl	SS_PLPT	SS	65.0	35.5	0.0	0.0	0.0	0.0	0	0.0
08-01-1996	Ben_S_Ttl	WB	WB	21.3	79.8	0.9	11.1	7.5	75.9	2	66.7
07-10-1997	Ben_H_Ttl	SS_PLPT	SS	41.0	59.8	0.8	9.6	1.6	16.1	2	66.7
10-21-1998	Ben_H_Ttl	SS_PLPT	SS	61.3	39.2	0.0	0.0	0.0	0.0	0	0.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Filterers		Scraper Taxa		Percent Clingers		Clinger Taxa	
				value	score	value	score	value	score	value	score
08-01-1999	Ben_S_Ttl	AH	AH	35.0	65.9	1.5	17.5	0.9	9.2	1	33.3
08-01-1999	Ben_S_Ttl	CN	CN	23.3	77.8	5.3	64.3	1.7	16.7	2	66.7
08-01-1999	Ben_S_Ttl	DO_PLPT	DO	23.9	77.2	0.9	11.1	2.0	20.4	2	66.7
08-01-1999	Ben_S_Ttl	I80	I80	40.0	60.8	1.9	23.2	0.5	5.5	2	66.7
08-01-1999	Ben_S_Ttl	LNX	LNX	30.6	70.4	1.0	12.4	14.2	100.0	3	100.0
08-01-1999	Ben_S_Ttl	MBD	MBD	0.0	100.0	0.0	0.0	0.0	0.0	0	0.0
08-01-1999	Ben_S_Ttl	NIX	NIX	46.3	54.4	3.4	41.3	12.2	100.0	3	100.0
07-27-1999	Ben_H_Ttl	SS_PLPT	SS	51.0	49.7	0.0	0.0	0.0	0.0	0	0.0
10-21-1999	Ben_H_Ttl	SS_PLPT	SS	77.6	22.7	0.0	0.0	0.0	0.0	0	0.0
07-04-2000	Ben_S_Ttl	CN	CN	13.7	87.5	4.4	53.1	0.0	0.0	0	0.0
07-04-2000	Ben_S_Ttl	DO_PLPT	DO	13.9	87.3	1.5	17.7	0.7	7.4	1	33.3
08-19-2000	Ben_H_Ttl	DO_PLPT	DO	29.2	71.8	0.8	9.6	1.2	12.0	1	33.3
07-04-2000	Ben_S_Ttl	FJR	FJR	3.7	97.7	1.3	15.5	0.4	3.7	2	66.7
07-04-2000	Ben_S_Ttl	I80	I80	19.2	82.0	1.1	13.2	0.0	0.0	0	0.0
07-04-2000	Ben_S_Ttl	LNX	LNX	38.7	62.1	4.0	47.9	0.2	1.8	1	33.3
07-04-2000	Ben_S_Ttl	NIX	NIX	36.7	64.2	0.5	6.5	0.0	0.0	0	0.0
08-28-2001	Ben_S_Ttl	FJR	FJR	3.7	97.6	1.1	13.2	3.7	37.4	3	100.0
08-28-2001	Ben_S_Ttl	I80	I80	5.9	95.5	0.9	11.3	2.8	28.4	2	66.7
10-30-2000	Ben_H_0500	PTG_DRI	PTG	10.9	90.3	12.2	100.0	10.4	100.0	5	100.0
08-13-2002	Ben_H_0500	PR_DRI	PR	41.4	59.4	10.5	100.0	1.4	14.3	1	33.3
10-14-2002	Ben_H_0500	PR_NDEP	PR	13.0	88.2	0.2	2.4	0.4	4.0	1	33.3
08-07-2002	Ben_H_0500	PTG_DRI	PTG	14.6	86.6	29.7	100.0	29.7	100.0	6	100.0
10-14-2002	Ben_H_0500	VRD	VRD	22.4	78.7	38.3	100.0	13.1	100.0	5	100.0
09-09-2000	Ben_K_0600	LW_NDEP	LW_ds	32.7	68.2	0.6	7.5	1.2	12.5	2	66.7
09-08-2000	Ben_K_0600	MC_NDEP	MC_3	38.4	62.5	1.6	19.7	1.0	10.3	3	100.0
09-11-2000	Ben_K_0600	PR_NDEP	PR	20.0	81.1	6.2	74.3	0.0	0.0	0	0.0
09-08-2000	Ben_K_0600	PTG_NDEP	PTG	35.7	65.2	15.2	100.0	1.1	11.5	3	100.0
09-11-2000	Ben_K_0600	TRC_NDEP	TRC_ds	25.1	76.0	1.0	12.3	0.0	0.0	0	0.0
09-05-2000	Ben_K_0600	VRD	VRD	21.5	79.6	4.2	50.6	5.9	59.5	9	100.0
10-21-1999	Ben_H_Comp	SS_TMWRF	SS	78.1	22.2	0.0	0.0	0.0	0.0	0	0.0
10-21-1999	Ben_H_Comp	TRC_TMWRF	TRC_us2	57.8	42.8	0.0	0.0	1.1	10.6	1	33.3
10-20-1999	Ben_H_Comp	LW_TMWRF	LW_us2	85.5	14.7	0.6	7.2	0.6	6.0	1	33.3
10-20-1999	Ben_H_Comp	MC_TMWRF	MC_2	67.2	33.3	1.6	19.1	4.0	39.9	5	100.0
07-27-1999	Ben_H_Comp	SS_TMWRF	SS	51.0	49.7	0.0	0.0	0.0	0.0	0	0.0
07-27-1999	Ben_H_Comp	TRC_TMWRF	TRC_us2	5.8	95.5	0.0	0.0	0.6	6.3	2	66.7
07-26-1999	Ben_H_Comp	LW_TMWRF	LW_us2	37.1	63.8	6.5	78.9	8.9	89.6	3	100.0
07-26-1999	Ben_H_Comp	MC_TMWRF	MC_2	17.1	84.0	33.2	100.0	19.6	100.0	5	100.0
10-21-1998	Ben_H_Comp	SS_TMWRF	SS	61.5	39.1	0.0	0.0	0.4	4.1	1	33.3
10-21-1998	Ben_H_Comp	LW_TMWRF	LW_us2	14.5	86.7	0.0	0.0	2.1	20.9	2	66.7
10-20-1998	Ben_H_Comp	TRC_TMWRF	TRC_us2	49.7	51.0	0.0	0.0	0.5	5.5	1	33.3
10-20-1998	Ben_H_Comp	MC_TMWRF	MC_2	78.6	21.7	0.8	9.5	1.3	13.2	4	100.0
07-31-1998	Ben_H_Comp	MC_TMWRF	MC_2	25.7	75.4	12.2	100.0	31.8	100.0	4	100.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Filterers		Scraper Taxa		Percent Clingers		Clinger Taxa	
				value	score	value	score	value	score	value	score
07-30-1998	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2.8	98.5	0.9	11.4	0.0	0.0	0	0.0
07-27-1998	Ben_H_Comp	LW_TMWRWF	LW_us2	85.0	15.3	0.6	6.7	7.7	77.7	2	66.7
10-15-1997	Ben_H_Comp	TRC_TMWRWF	TRC_us2	75.3	25.0	0.0	0.0	0.0	0.0	0	0.0
10-15-1997	Ben_H_Comp	MC_TMWRWF	MC_2	80.0	20.3	0.6	6.7	0.6	5.6	1	33.3
07-10-1997	Ben_H_Comp	SS_TMWRWF	SS	40.7	60.1	0.8	9.6	1.6	15.9	2	66.7
07-10-1997	Ben_H_Comp	TRC_TMWRWF	TRC_us2	13.5	87.7	0.5	6.6	1.1	11.0	2	66.7
07-10-1997	Ben_H_Comp	LW_TMWRWF	LW_us2	10.8	90.4	5.4	65.3	12.6	100.0	4	100.0
07-10-1997	Ben_H_Comp	MC_TMWRWF	MC_2	18.5	82.7	6.5	78.8	28.8	100.0	3	100.0
10-25-1996	Ben_H_Comp	SS_TMWRWF	SS	65.0	35.5	0.0	0.0	0.0	0.0	0	0.0
10-25-1996	Ben_H_Comp	TRC_TMWRWF	TRC_us2	82.1	18.2	0.0	0.0	0.4	3.9	1	33.3
10-23-1996	Ben_H_Comp	LW_TMWRWF	LW_us2	89.6	10.6	0.0	0.0	0.2	2.3	1	33.3
10-23-1996	Ben_H_Comp	MC_TMWRWF	MC_2	90.5	9.7	2.1	25.4	2.7	27.0	3	100.0
10-30-1995	Ben_H_Comp	LW_TMWRWF	LW_us2	81.0	19.3	0.2	2.4	1.4	14.2	6	100.0
08-16-1995	Ben_H_Comp	SS_TMWRWF	SS	16.0	85.2	0.5	6.0	7.0	70.6	3	100.0
08-16-1995	Ben_H_Comp	MC_TMWRWF	MC_2	7.9	93.4	1.4	16.6	5.8	58.9	3	100.0
08-15-1995	Ben_H_Comp	TRC_TMWRWF	TRC_us2	17.5	83.7	0.7	8.6	2.0	19.8	2	66.7
08-15-1995	Ben_H_Comp	LW_TMWRWF	LW_us2	20.5	80.6	0.9	11.3	15.6	100.0	5	100.0
10-12-1994	Ben_H_Comp	TRC_TMWRWF	TRC_us2	24.0	77.1	0.4	4.6	0.8	7.6	1	33.3
10-12-1994	Ben_H_Comp	LW_TMWRWF	LW_us2	0.4	100.0	42.9	100.0	0.0	0.0	0	0.0
10-04-1994	Ben_H_Comp	SS_TMWRWF	SS	0.0	100.0	1.8	21.6	0.0	0.0	0	0.0
08-24-1994	Ben_H_Comp	LW_TMWRWF	LW_us2	1.2	100.0	14.4	100.0	0.2	2.3	1	33.3
08-24-1994	Ben_H_Comp	SS_TMWRWF	SS	1.6	99.8	3.3	39.4	0.0	0.0	0	0.0
08-23-1994	Ben_H_Comp	TRC_TMWRWF	TRC_us2	50.4	50.3	0.0	0.0	0.0	0.0	0	0.0
10-01-1993	Ben_H_Comp	SS_TMWRWF	SS	17.4	83.8	0.0	0.0	0.0	0.0	0.0	0.0
10-01-1993	Ben_H_Comp	TRC_TMWRWF	TRC_us2	1.7	99.7	0.0	0.0	1.7	17.4	1.0	33.3
10-01-1993	Ben_H_Comp	LW_TMWRWF	LW_us2	37.5	63.4	0.0	0.0	0.0	0.0	0.0	0.0
10-01-1993	Ben_H_Comp	MC_TMWRWF	MC_2	81.5	18.8	0.0	0.0	0.0	0.0	0.0	0.0
09-30-1992	Ben_H_Comp	LW_TMWRWF	LW_us2	0.9	100.0	0.0	0.0	0.3	3.0	1.0	33.3
09-28-1992	Ben_H_Comp	TRC_TMWRWF	TRC_us2	1.5	99.9	0.0	0.0	0.4	4.2	1.0	33.3
09-09-1992	Ben_H_Comp	SS_TMWRWF	SS	9.5	91.8	0.0	0.0	0.0	0.0	0.0	0.0
10-29-1991	Ben_H_Comp	SS_TMWRWF	SS	0.4	100.0	0.0	0.0	0.0	0.0	0.0	0.0
10-29-1991	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2.4	99.0	0.8	9.5	0.8	7.9	1.0	33.3
09-05-1991	Ben_H_Comp	SS_TMWRWF	SS	3.4	98.0	0.6	7.6	0.4	4.2	1.0	33.3
09-05-1991	Ben_H_Comp	TRC_TMWRWF	TRC_us2	20.6	80.5	0.0	0.0	0.0	0.0	0.0	0.0
09-05-1991	Ben_H_Comp	LW_TMWRWF	LW_us2	2.8	98.6	0.0	0.0	0.7	7.1	1.0	33.3
09-05-1991	Ben_H_Comp	MC_TMWRWF	MC_2	57.9	42.7	0.0	0.0	0.2	1.8	1.0	33.3
10-11-1990	Ben_H_Comp	TRC_TMWRWF	TRC_us2	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
10-11-1990	Ben_H_Comp	LW_TMWRWF	LW_us2	10.7	90.6	0.6	7.7	0.0	0.0	0.0	0.0
10-11-1990	Ben_H_Comp	MC_TMWRWF	MC_2	40.9	59.9	0.9	10.3	1.5	15.1	3.0	100.0
10-10-1990	Ben_H_Comp	SS_TMWRWF	SS	63.3	37.2	0.0	0.0	0.0	0.0	0.0	0.0
10-20-1989	Ben_H_Comp	SS_TMWRWF	SS	38.1	62.7	24.4	100.0	0.0	0.0	0.0	0.0
10-20-1989	Ben_H_Comp	TRC_TMWRWF	TRC_us2	72.5	27.9	0.0	0.0	0.0	0.0	0.0	0.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Filterers		Scraper Taxa		Percent Clingers		Clinger Taxa	
				value	score	value	score	value	score	value	score
10-20-1989	Ben_H_Comp	LW_TMWRWF	LW_us2	2.6	98.8	0.5	6.2	1.0	10.3	1.0	33.3
10-20-1989	Ben_H_Comp	MC_TMWRWF	MC_2	31.3	69.7	0.3	3.9	1.6	16.3	2.0	66.7
08-30-1989	Ben_H_Comp	MC_TMWRWF	MC_2	65.2	35.3	0.8	10.0	2.7	27.2	2.0	66.7
08-29-1989	Ben_H_Comp	SS_TMWRWF	SS	31.5	69.5	30.6	100.0	0.3	3.1	1.0	33.3
08-29-1989	Ben_H_Comp	TRC_TMWRWF	TRC_us2	29.0	72.0	0.0	0.0	2.0	20.0	2.0	66.7
08-29-1989	Ben_H_Comp	LW_TMWRWF	LW_us2	0.6	100.0	0.0	0.0	0.0	0.0	0.0	0.0
10-28-1988	Ben_H_Comp	SS_TMWRWF	SS	2.1	99.2	16.8	100.0	0.5	5.4	1.0	33.3
10-28-1988	Ben_H_Comp	TRC_TMWRWF	TRC_us2	69.8	30.6	3.9	47.3	4.5	45.1	2.0	66.7
10-28-1988	Ben_H_Comp	LW_TMWRWF	LW_us2	59.6	41.0	0.0	0.0	11.5	100.0	1.0	33.3
10-28-1988	Ben_H_Comp	MC_TMWRWF	MC_2	61.3	39.2	1.0	12.6	4.5	45.7	3.0	100.0
08-29-1988	Ben_H_Comp	SS_TMWRWF	SS	2.6	98.8	20.8	100.0	1.3	13.1	1.0	33.3
08-29-1988	Ben_H_Comp	TRC_TMWRWF	TRC_us2	10.3	91.0	10.3	100.0	10.3	100.0	1.0	33.3
08-29-1988	Ben_H_Comp	LW_TMWRWF	LW_us2	3.0	98.3	27.3	100.0	0.0	0.0	0.0	0.0
08-29-1988	Ben_H_Comp	MC_TMWRWF	MC_2	12.1	89.1	0.0	0.0	2.6	26.5	1.0	33.3
09-28-1987	Ben_H_Comp	MC_TMWRWF	MC_2	72.3	28.1	0.0	0.0	1.3	13.5	2.0	66.7
08-18-1986	Ben_H_Comp	SS_TMWRWF	SS	31.1	69.9	0.0	0.0	17.3	100.0	2.0	66.7
08-18-1986	Ben_H_Comp	TRC_TMWRWF	TRC_us2	83.0	17.3	0.0	0.0	0.4	3.7	1.0	33.3
08-18-1986	Ben_H_Comp	LW_TMWRWF	LW_us2	75.7	24.7	0.4	5.3	0.4	4.4	1.0	33.3
08-18-1986	Ben_H_Comp	MC_TMWRWF	MC_2	41.0	59.8	1.8	21.9	9.3	93.4	5.0	100.0
09-09-2003	Ben_H_Comp	DO_TMWRWF	NW	43.3	57.5	1.7	20.4	4.5	45.3	1.0	33.3
09-09-2003	Ben_H_Comp	MC_TMWRWF	MC_2	32.4	68.6	7.0	84.0	0.8	8.1	3.0	100.0
08-29-2003	Ben_H_Comp	TRC_TMWRWF	TRC_us2	59.1	41.5	0.0	0.0	0.0	0.0	0.0	0.0
08-29-2003	Ben_H_Comp	LW_TMWRWF	LW_us2	2.5	98.9	1.4	16.8	1.1	11.2	1.0	33.3
08-15-2002	Ben_H_Comp	DO_TMWRWF	NW	47.1	53.7	0.0	0.0	0.0	0.0	0.0	0.0
08-13-2002	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.1	95.2	0.2	2.2	0.0	0.0	0.0	0.0
08-12-2002	Ben_H_Comp	LW_TMWRWF	LW_us2	26.8	74.3	0.6	7.0	1.9	19.4	2.0	66.7
08-12-2002	Ben_H_Comp	MC_TMWRWF	MC_2	36.7	64.2	2.1	25.5	5.8	58.6	5.0	100.0
08-19-2000	Ben_H_Comp	DO_TMWRWF	NW	43.8	57.0	0.6	6.9	4.2	42.4	2.0	66.7
08-09-2000	Ben_H_Comp	LW_TMWRWF	LW_us2	73.3	27.1	0.2	2.2	0.4	3.7	2.0	66.7
08-08-2000	Ben_H_Comp	TRC_TMWRWF	TRC_us2	62.8	37.8	0.2	2.3	2.6	26.3	1.0	33.3
07-25-2000	Ben_H_Comp	MC_TMWRWF	MC_2	7.8	93.5	1.7	20.1	4.8	48.6	5.0	100.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Ephemeroptera Taxa		EPT Taxa		Plecoptera Taxa		Total Taxa		Trichoptera Taxa	
				value	score	value	score	value	score	value	score	value	score
07-01-1981	Ben_S_Ttl	CN	CN	2	40	4	42.6	0	0	8	53.3	2	40
07-01-1981	Ben_S_Ttl	DO_PLPT	DO	3	60	5	53.2	0	0	9	60.0	2	40
07-01-1981	Ben_S_Ttl	FJR	FJR	2	40	4	42.6	0	0	9	60.0	2	40
08-01-1981	Ben_S_Ttl	I80	I80	2	40	3	31.9	0	0	7	46.7	1	20
07-08-1981	Ben_S_Ttl	LNX	LNX	3	60	6	63.8	0	0	8	53.3	3	60
08-18-1986	Ben_H_Ttl	SS_PLPT	SS	4	80	11	100.0	1	50	15	100.0	6	100
08-29-1988	Ben_H_Ttl	SS_PLPT	SS	2	40	2	21.3	0	0	8	53.3	0	0
10-28-1988	Ben_H_Ttl	SS_PLPT	SS	2	40	3	31.9	0	0	11	73.3	1	20
09-25-1989	Ben_S_Ttl	DO_PLPT	DO	1	20	2	21.3	0	0	7	46.7	1	20
09-25-1989	Ben_S_Ttl	FJR	FJR	1	20	2	21.3	0	0	5	33.3	1	20
09-25-1989	Ben_S_Ttl	MBD	MBD	0	0	2	21.3	1	50	5	33.3	1	20
09-25-1989	Ben_S_Ttl	NB	NB	0	0	1	10.6	0	0	8	53.3	1	20
09-25-1989	Ben_S_Ttl	NW	NW	1	20	1	10.6	0	0	6	40.0	0	0
08-29-1989	Ben_H_Ttl	SS_PLPT	SS	2	40	3	31.9	0	0	10	66.7	1	20
10-20-1989	Ben_H_Ttl	SS_PLPT	SS	2	40	3	31.9	0	0	7	46.7	1	20
09-25-1989	Ben_S_Ttl	WB	WB	1	20	2	21.3	0	0	5	33.3	1	20
07-24-1990	Ben_S_Ttl	CN	CN	3	60	5	53.2	0	0	13	86.7	2	40
07-24-1990	Ben_S_Ttl	DO_PLPT	DO	2	40	4	42.6	0	0	10	66.7	2	40
07-24-1990	Ben_S_Ttl	LNX	LNX	2	40	3	31.9	0	0	8	53.3	1	20
07-24-1990	Ben_S_Ttl	MBD	MBD	1	20	2	21.3	0	0	8	53.3	1	20
07-24-1990	Ben_S_Ttl	NIX	NIX	3	60	5	53.2	0	0	11	73.3	2	40
10-10-1990	Ben_H_Ttl	SS_PLPT	SS	2	40	3	31.9	0	0	9	60.0	1	20
07-24-1990	Ben_S_Ttl	WB	WB	3	60	4	42.6	0	0	10	66.7	1	20
09-05-1991	Ben_H_Ttl	SS_PLPT	SS	3	60	5	53.2	0	0	11	73.3	2	40
10-29-1991	Ben_H_Ttl	SS_PLPT	SS	1	20	3	31.9	0	0	7	46.7	2	40
09-09-1992	Ben_H_Ttl	SS_PLPT	SS	1	20	1	10.6	0	0	7	46.7	0	0
10-01-1993	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	0	0	6	40.0	2	40
08-24-1994	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	0	0	13	86.7	2	40
10-04-1994	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	0	0	9	60.0	2	40
08-16-1995	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	0	0	6	40.0	2	40
08-01-1996	Ben_S_Ttl	AH	AH	6	100	8	85.1	1	50	11	73.3	1	20
08-01-1996	Ben_S_Ttl	CN	CN	5	100	7	74.5	1	50	14	93.3	1	20
08-01-1996	Ben_S_Ttl	I80	I80	4	80	6	63.8	1	50	9	60.0	1	20
08-01-1996	Ben_S_Ttl	MBD	MBD	3	60	6	63.8	0	0	10	66.7	3	60
08-01-1996	Ben_S_Ttl	NB	NB	5	100	9	95.7	1	50	18	100.0	3	60
08-01-1996	Ben_S_Ttl	ND	ND	5	100	8	85.1	1	50	12	80.0	2	40
08-01-1996	Ben_S_Ttl	NW	NW	5	100	8	85.1	1	50	11	73.3	2	40
08-01-1996	Ben_S_Ttl	SS_PLPT	SS	4	80	7	74.5	1	50	9	60.0	2	40
10-25-1996	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	1	50	6	40.0	1	20
08-01-1996	Ben_S_Ttl	WB	WB	5	100	8	85.1	1	50	14	93.3	2	40
07-10-1997	Ben_H_Ttl	SS_PLPT	SS	5	100	7	74.5	1	50	8	53.3	1	20
10-21-1998	Ben_H_Ttl	SS_PLPT	SS	2	40	5	53.2	1	50	11	73.3	2	40

Collection Date	Collection Method	Entity Station ID	Project Station ID	Ephemeroptera Taxa		EPT Taxa		Plecoptera Taxa		Total Taxa		Trichoptera Taxa	
				value	score	value	score	value	score	value	score	value	score
08-01-1999	Ben_S_Ttl	AH	AH	4	80	7	74.5	1	50	12	80.0	2	40
08-01-1999	Ben_S_Ttl	CN	CN	5	100	8	85.1	0	0	14	93.3	3	60
08-01-1999	Ben_S_Ttl	DO_PLPT	DO	5	100	9	95.7	1	50	15	100.0	3	60
08-01-1999	Ben_S_Ttl	I80	I80	4	80	9	95.7	1	50	12	80.0	4	80
08-01-1999	Ben_S_Ttl	LNX	LNX	4	80	9	95.7	1	50	13	86.7	4	80
08-01-1999	Ben_S_Ttl	MBD	MBD	2	40	2	21.3	0	0	4	26.7	0	0
08-01-1999	Ben_S_Ttl	NIX	NIX	6	100	8	85.1	0	0	11	73.3	2	40
07-27-1999	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	1	50	5	33.3	1	20
10-21-1999	Ben_H_Ttl	SS_PLPT	SS	2	40	4	42.6	1	50	7	46.7	1	20
07-04-2000	Ben_S_Ttl	CN	CN	2	40	4	42.6	0	0	14	93.3	2	40
07-04-2000	Ben_S_Ttl	DO_PLPT	DO	3	60	6	63.8	1	50	12	80.0	2	40
08-19-2000	Ben_H_Ttl	DO_PLPT	DO	2	40	6	63.8	1	50	10	66.7	3	60
07-04-2000	Ben_S_Ttl	FJR	FJR	4	80	10	100.0	0	0	18	100.0	6	100
07-04-2000	Ben_S_Ttl	I80	I80	2	40	7	74.5	1	50	11	73.3	4	80
07-04-2000	Ben_S_Ttl	LNX	LNX	3	60	10	100.0	1	50	18	100.0	6	100
07-04-2000	Ben_S_Ttl	NIX	NIX	2	40	8	85.1	1	50	14	93.3	5	100
08-28-2001	Ben_S_Ttl	FJR	FJR	4	80	9	95.7	0	0	15	100.0	5	100
08-28-2001	Ben_S_Ttl	I80	I80	4	80	7	74.5	0	0	15	100.0	3	60
10-30-2000	Ben_H_0500	PTG_DRI	PTG	3	60	15	100.0	4	100	26	100.0	8	100
08-13-2002	Ben_H_0500	PR_DRI	PR	5	100	12	100.0	1	50	22	100.0	6	100
10-14-2002	Ben_H_0500	PR_NDEP	PR	3	60	7	74.5	0	0	18	100.0	4	80
08-07-2002	Ben_H_0500	PTG_DRI	PTG	4	80	13	100.0	1	50	29	100.0	8	100
10-14-2002	Ben_H_0500	VRD	VRD	6	100	17	100.0	5	100	28	100.0	6	100
09-09-2000	Ben_K_0600	LW_NDEP	LW_ds	4	80	8	85.1	0	0	13	86.7	4	80
09-08-2000	Ben_K_0600	MC_NDEP	MC_3	6	100	14	100.0	2	100	22	100.0	6	100
09-11-2000	Ben_K_0600	PR_NDEP	PR	5	100	10	100.0	0	0	15	100.0	5	100
09-08-2000	Ben_K_0600	PTG_NDEP	PTG	6	100	16	100.0	1	50	21	100.0	9	100
09-11-2000	Ben_K_0600	TRC_NDEP	TRC_ds	4	80	7	74.5	0	0	12	80.0	3	60
09-05-2000	Ben_K_0600	VRD	VRD	8	100	23	100.0	3	100	34	100.0	12	100
10-21-1999	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	0	0	6	40.0	2	40
10-21-1999	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	6	63.8	2	100	10	66.7	2	40
10-20-1999	Ben_H_Comp	LW_TMWRWF	LW_us2	2	40	6	63.8	1	50	8	53.3	3	60
10-20-1999	Ben_H_Comp	MC_TMWRWF	MC_2	3	60	10	100.0	2	100	14	93.3	5	100
07-27-1999	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	1	50	5	33.3	1	20
07-27-1999	Ben_H_Comp	TRC_TMWRWF	TRC_us2	3	60	5	53.2	1	50	8	53.3	1	20
07-26-1999	Ben_H_Comp	LW_TMWRWF	LW_us2	3	60	9	95.7	2	100	11	73.3	4	80
07-26-1999	Ben_H_Comp	MC_TMWRWF	MC_2	4	80	9	95.7	1	50	17	100.0	4	80
10-21-1998	Ben_H_Comp	SS_TMWRWF	SS	2	40	5	53.2	1	50	11	73.3	2	40
10-21-1998	Ben_H_Comp	LW_TMWRWF	LW_us2	2	40	6	63.8	2	100	11	73.3	2	40
10-20-1998	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	5	53.2	2	100	9	60.0	1	20
10-20-1998	Ben_H_Comp	MC_TMWRWF	MC_2	4	80	9	95.7	1	50	14	93.3	4	80
07-31-1998	Ben_H_Comp	MC_TMWRWF	MC_2	6	100	12	100.0	2	100	14	93.3	4	80

Collection Date	Collection Method	Entity Station ID	Project Station ID	Ephemeroptera Taxa		EPT Taxa		Plecoptera Taxa		Total Taxa		Trichoptera Taxa	
				value	score	value	score	value	score	value	score	value	score
07-30-1998	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	3	31.9	0	0	5	33.3	1	20
07-27-1998	Ben_H_Comp	LW_TMWRWF	LW_us2	2	40	5	53.2	1	50	9	60.0	2	40
10-15-1997	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	6	63.8	0	0	11	73.3	4	80
10-15-1997	Ben_H_Comp	MC_TMWRWF	MC_2	3	60	7	74.5	1	50	11	73.3	3	60
07-10-1997	Ben_H_Comp	SS_TMWRWF	SS	5	100	7	74.5	1	50	9	60.0	1	20
07-10-1997	Ben_H_Comp	TRC_TMWRWF	TRC_us2	4	80	6	63.8	1	50	8	53.3	1	20
07-10-1997	Ben_H_Comp	LW_TMWRWF	LW_us2	5	100	8	85.1	2	100	9	60.0	1	20
07-10-1997	Ben_H_Comp	MC_TMWRWF	MC_2	4	80	8	85.1	2	100	10	66.7	2	40
10-25-1996	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	1	50	6	40.0	1	20
10-25-1996	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	5	53.2	1	50	8	53.3	2	40
10-23-1996	Ben_H_Comp	LW_TMWRWF	LW_us2	1	20	6	63.8	3	100	9	60.0	2	40
10-23-1996	Ben_H_Comp	MC_TMWRWF	MC_2	5	100	12	100.0	2	100	17	100.0	5	100
10-30-1995	Ben_H_Comp	LW_TMWRWF	LW_us2	4	80	9	95.7	2	100	16	100.0	3	60
08-16-1995	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	0	0	6	40.0	2	40
08-16-1995	Ben_H_Comp	MC_TMWRWF	MC_2	4	80	7	74.5	1	50	10	66.7	2	40
08-15-1995	Ben_H_Comp	TRC_TMWRWF	TRC_us2	3	60	5	53.2	0	0	9	60.0	2	40
08-15-1995	Ben_H_Comp	LW_TMWRWF	LW_us2	4	80	9	95.7	1	50	15	100.0	4	80
10-12-1994	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	4	42.6	0	0	10	66.7	2	40
10-12-1994	Ben_H_Comp	LW_TMWRWF	LW_us2	1	20	1	10.6	0	0	7	46.7	0	0
10-04-1994	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	0	0	11	73.3	2	40
08-24-1994	Ben_H_Comp	LW_TMWRWF	LW_us2	0	0	0	0.0	0	0	7	46.7	0	0
08-24-1994	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	0	0	13	86.7	2	40
08-23-1994	Ben_H_Comp	TRC_TMWRWF	TRC_us2	3	60	4	42.6	0	0	8	53.3	1	20
10-01-1993	Ben_H_Comp	SS_TMWRWF	SS	2	40	4	42.6	0	0	6	40.0	2	40
10-01-1993	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	3	31.9	0	0	7	46.7	1	20
10-01-1993	Ben_H_Comp	LW_TMWRWF	LW_us2	0	0	2	21.3	1	50	3	20.0	1	20
10-01-1993	Ben_H_Comp	MC_TMWRWF	MC_2	0	0	2	21.3	1	50	4	26.7	1	20
09-30-1992	Ben_H_Comp	LW_TMWRWF	LW_us2	2	40	2	21.3	0	0	9	60.0	0	0
09-28-1992	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	5	53.2	0	0	12	80.0	3	60
09-09-1992	Ben_H_Comp	SS_TMWRWF	SS	1	20	1	10.6	0	0	8	53.3	0	0
10-29-1991	Ben_H_Comp	SS_TMWRWF	SS	1	20	3	31.9	0	0	10	66.7	2	40
10-29-1991	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	4	42.6	0	0	13	86.7	2	40
09-05-1991	Ben_H_Comp	SS_TMWRWF	SS	3	60	6	63.8	0	0	15	100.0	3	60
09-05-1991	Ben_H_Comp	TRC_TMWRWF	TRC_us2	2	40	3	31.9	0	0	7	46.7	1	20
09-05-1991	Ben_H_Comp	LW_TMWRWF	LW_us2	2	40	3	31.9	0	0	10	66.7	1	20
09-05-1991	Ben_H_Comp	MC_TMWRWF	MC_2	2	40	7	74.5	1	50	12	80.0	4	80
10-11-1990	Ben_H_Comp	TRC_TMWRWF	TRC_us2	1	20	1	10.6	0	0	4	26.7	0	0
10-11-1990	Ben_H_Comp	LW_TMWRWF	LW_us2	1	20	3	31.9	0	0	11	73.3	2	40
10-11-1990	Ben_H_Comp	MC_TMWRWF	MC_2	2	40	9	95.7	0	0	14	93.3	7	100
10-10-1990	Ben_H_Comp	SS_TMWRWF	SS	2	40	3	31.9	0	0	12	80.0	1	20
10-20-1989	Ben_H_Comp	SS_TMWRWF	SS	2	40	3	31.9	0	0	13	86.7	1	20
10-20-1989	Ben_H_Comp	TRC_TMWRWF	TRC_us2	3	60	5	53.2	0	0	9	60.0	2	40

Collection Date	Collection Method	Entity Station ID	Project Station ID	Ephemeroptera Taxa		EPT Taxa		Plecoptera Taxa		Total Taxa		Trichoptera Taxa	
				value	score	value	score	value	score	value	score	value	score
10-20-1989	Ben_H_Comp	LW_TMWRP	LW_us2	1	20	3	31.9	1	50	11	73.3	1	20
10-20-1989	Ben_H_Comp	MC_TMWRP	MC_2	2	40	7	74.5	2	100	13	86.7	3	60
08-30-1989	Ben_H_Comp	MC_TMWRP	MC_2	2	40	6	63.8	1	50	11	73.3	3	60
08-29-1989	Ben_H_Comp	SS_TMWRP	SS	1	20	2	21.3	0	0	10	66.7	1	20
08-29-1989	Ben_H_Comp	TRC_TMWRP	TRC_us2	1	20	4	42.6	0	0	13	86.7	3	60
08-29-1989	Ben_H_Comp	LW_TMWRP	LW_us2	2	40	3	31.9	0	0	9	60.0	1	20
10-28-1988	Ben_H_Comp	SS_TMWRP	SS	1	20	1	10.6	0	0	9	60.0	0	0
10-28-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	1	20	4	42.6	0	0	9	60.0	3	60
10-28-1988	Ben_H_Comp	LW_TMWRP	LW_us2	1	20	2	21.3	0	0	6	40.0	1	20
10-28-1988	Ben_H_Comp	MC_TMWRP	MC_2	1	20	7	74.5	2	100	12	80.0	4	80
08-29-1988	Ben_H_Comp	SS_TMWRP	SS	3	60	3	31.9	0	0	11	73.3	0	0
08-29-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	0	0	3	31.9	0	0	6	40.0	3	60
08-29-1988	Ben_H_Comp	LW_TMWRP	LW_us2	1	20	2	21.3	0	0	7	46.7	1	20
08-29-1988	Ben_H_Comp	MC_TMWRP	MC_2	2	40	6	63.8	1	50	14	93.3	3	60
09-28-1987	Ben_H_Comp	MC_TMWRP	MC_2	1	20	5	53.2	0	0	11	73.3	4	80
08-18-1986	Ben_H_Comp	SS_TMWRP	SS	4	80	11	100.0	1	50	15	100.0	6	100
08-18-1986	Ben_H_Comp	TRC_TMWRP	TRC_us2	4	80	8	85.1	1	50	13	86.7	3	60
08-18-1986	Ben_H_Comp	LW_TMWRP	LW_us2	5	100	8	85.1	0	0	11	73.3	3	60
08-18-1986	Ben_H_Comp	MC_TMWRP	MC_2	3	60	10	100.0	2	100	15	100.0	5	100
09-09-2003	Ben_H_Comp	DO_TMWRP	NW	2	40	3	31.9	0	0	11	73.3	1	20
09-09-2003	Ben_H_Comp	MC_TMWRP	MC_2	3	60	8	85.1	1	50	13	86.7	4	80
08-29-2003	Ben_H_Comp	TRC_TMWRP	TRC_us2	1	20	3	31.9	0	0	11	73.3	2	40
08-29-2003	Ben_H_Comp	LW_TMWRP	LW_us2	3	60	4	42.6	0	0	13	86.7	1	20
08-15-2002	Ben_H_Comp	DO_TMWRP	NW	2	40	2	21.3	0	0	5	33.3	0	0
08-13-2002	Ben_H_Comp	TRC_TMWRP	TRC_us2	2	40	5	53.2	0	0	10	66.7	3	60
08-12-2002	Ben_H_Comp	LW_TMWRP	LW_us2	2	40	6	63.8	1	50	12	80.0	3	60
08-12-2002	Ben_H_Comp	MC_TMWRP	MC_2	3	60	7	74.5	1	50	16	100.0	3	60
08-19-2000	Ben_H_Comp	DO_TMWRP	NW	2	40	6	63.8	1	50	10	66.7	3	60
08-09-2000	Ben_H_Comp	LW_TMWRP	LW_us2	2	40	5	53.2	1	50	7	46.7	2	40
08-08-2000	Ben_H_Comp	TRC_TMWRP	TRC_us2	2	40	4	42.6	0	0	11	73.3	2	40
07-25-2000	Ben_H_Comp	MC_TMWRP	MC_2	3	60	7	74.5	2	100	13	86.7	2	40

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Dominant Taxon		Percent Tolerant		Intolerant Taxa		Total Individuals	Percent Chironomidae	
				value	score	value	score	value	score		value	score
07-01-1981	Ben_S_Ttl	CN	CN	65.2	49.5	71.2	31.4	0	0	532	6.6	95.5
07-01-1981	Ben_S_Ttl	DO_PLPT	DO	32.8	95.6	64.8	38.4	1	25	551	1.8	100.0
07-01-1981	Ben_S_Ttl	FJR	FJR	50.3	70.8	31.1	75.2	0	0	547	50.3	50.8
08-01-1981	Ben_S_Ttl	I80	I80	25.2	100.0	48.3	56.3	0	0	151	17.2	84.6
07-08-1981	Ben_S_Ttl	LNX	LNX	69.2	43.9	14.6	93.1	2	50	506	6.1	96.0
08-18-1986	Ben_H_Ttl	SS_PLPT	SS	22.7	100.0	33.9	72.1	4	100	472	15.5	86.4
08-29-1988	Ben_H_Ttl	SS_PLPT	SS	49.1	72.4	75.4	26.8	0	0	57	10.5	91.5
10-28-1988	Ben_H_Ttl	SS_PLPT	SS	74.7	36.0	88.3	12.8	0	0	324	2.5	99.7
09-25-1989	Ben_S_Ttl	DO_PLPT	DO	40.4	84.9	17.5	89.9	0	0	57	5.3	96.8
09-25-1989	Ben_S_Ttl	FJR	FJR	60.1	56.8	70.2	32.5	0	0	208	0.0	100.0
09-25-1989	Ben_S_Ttl	MBD	MBD	50.0	71.2	15.0	92.7	1	25	20	20.0	81.8
09-25-1989	Ben_S_Ttl	NB	NB	66.3	48.1	70.0	32.7	0	0	80	8.8	93.3
09-25-1989	Ben_S_Ttl	NW	NW	51.7	68.8	21.7	85.4	0	0	60	0.0	100.0
08-29-1989	Ben_H_Ttl	SS_PLPT	SS	73.0	38.4	8.1	100.0	0	0	519	7.5	94.5
10-20-1989	Ben_H_Ttl	SS_PLPT	SS	36.7	90.1	79.1	22.7	0	0	278	0.0	100.0
09-25-1989	Ben_S_Ttl	WB	WB	90.5	13.6	8.4	99.9	0	0	430	0.0	100.0
07-24-1990	Ben_S_Ttl	CN	CN	36.7	90.2	56.9	47.0	0	0	548	10.2	91.8
07-24-1990	Ben_S_Ttl	DO_PLPT	DO	29.8	99.9	44.9	60.1	1	25	550	14.2	87.7
07-24-1990	Ben_S_Ttl	LNX	LNX	59.7	57.3	59.7	43.9	2	50	529	7.9	94.1
07-24-1990	Ben_S_Ttl	MBD	MBD	53.6	66.1	10.7	97.4	2	50	541	19.4	82.4
07-24-1990	Ben_S_Ttl	NIX	NIX	61.9	54.2	7.9	100.0	2	50	546	7.0	95.1
10-10-1990	Ben_H_Ttl	SS_PLPT	SS	65.7	48.8	27.3	79.3	1	25	513	1.8	100.0
07-24-1990	Ben_S_Ttl	WB	WB	65.4	49.2	66.4	36.7	1	25	547	6.0	96.1
09-05-1991	Ben_H_Ttl	SS_PLPT	SS	38.2	88.0	44.0	61.1	1	25	532	38.2	63.2
10-29-1991	Ben_H_Ttl	SS_PLPT	SS	92.1	11.2	94.9	5.6	1	25	508	1.4	100.0
09-09-1992	Ben_H_Ttl	SS_PLPT	SS	33.3	94.9	44.4	60.6	0	0	18	5.6	96.5
10-01-1993	Ben_H_Ttl	SS_PLPT	SS	47.8	74.3	69.6	33.2	0	0	23	21.7	80.0
08-24-1994	Ben_H_Ttl	SS_PLPT	SS	67.6	46.1	76.5	25.7	0	0	476	13.4	88.5
10-04-1994	Ben_H_Ttl	SS_PLPT	SS	54.2	65.1	72.7	29.8	1	25	271	5.2	96.9
08-16-1995	Ben_H_Ttl	SS_PLPT	SS	72.0	39.9	82.0	19.6	1	25	200	11.0	91.0
08-01-1996	Ben_S_Ttl	AH	AH	39.0	86.8	55.9	48.1	4	100	551	18.5	83.3
08-01-1996	Ben_S_Ttl	CN	CN	45.3	77.9	65.4	37.8	4	100	537	16.6	85.3
08-01-1996	Ben_S_Ttl	I80	I80	57.9	60.0	78.5	23.4	3	75	363	16.8	85.0
08-01-1996	Ben_S_Ttl	MBD	MBD	49.8	71.5	28.1	78.4	2	50	498	49.8	51.3
08-01-1996	Ben_S_Ttl	NB	NB	40.4	84.9	38.8	66.8	3	75	557	40.4	60.9
08-01-1996	Ben_S_Ttl	ND	ND	55.3	63.7	71.2	31.4	3	75	548	14.4	87.5
08-01-1996	Ben_S_Ttl	NW	NW	28.9	100.0	5.4	100.0	4	100	280	28.9	72.7
08-01-1996	Ben_S_Ttl	SS_PLPT	SS	32.5	96.2	56.9	47.0	4	100	459	22.9	78.8
10-25-1996	Ben_H_Ttl	SS_PLPT	SS	65.0	49.8	88.8	12.3	1	25	80	5.0	97.1
08-01-1996	Ben_S_Ttl	WB	WB	35.4	92.0	47.5	57.2	3	75	545	35.4	66.0
07-10-1997	Ben_H_Ttl	SS_PLPT	SS	41.0	83.9	57.0	46.9	3	75	251	12.4	89.6
10-21-1998	Ben_H_Ttl	SS_PLPT	SS	60.7	55.9	79.6	22.3	1	25	489	13.9	88.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Dominant Taxon		Percent Tolerant		Intolerant Taxa		Total Individuals	Percent Chironomidae	
				value	score	value	score	value	score		value	score
08-01-1999	Ben_S_Ttl	AH	AH	37.4	89.1	71.5	31.1	3	75	551	19.4	82.4
08-01-1999	Ben_S_Ttl	CN	CN	58.3	59.3	72.1	30.4	3	75	545	9.5	92.5
08-01-1999	Ben_S_Ttl	DO_PLPT	DO	47.6	74.6	71.1	31.5	4	100	544	11.4	90.6
08-01-1999	Ben_S_Ttl	I80	I80	38.9	87.0	77.5	24.5	3	75	365	17.0	84.9
08-01-1999	Ben_S_Ttl	LNX	LNX	32.0	96.8	56.3	47.7	4	100	487	16.8	85.0
08-01-1999	Ben_S_Ttl	MBD	MBD	64.4	50.6	21.5	85.6	1	25	149	64.4	36.4
08-01-1999	Ben_S_Ttl	NIX	NIX	38.0	88.2	64.1	39.1	2	50	410	11.7	90.3
07-27-1999	Ben_H_Ttl	SS_PLPT	SS	51.0	69.8	68.9	33.9	1	25	347	8.9	93.1
10-21-1999	Ben_H_Ttl	SS_PLPT	SS	77.4	32.2	90.9	9.9	1	25	464	5.2	96.9
07-04-2000	Ben_S_Ttl	CN	CN	38.8	87.1	45.6	59.3	0	0	546	29.1	72.5
07-04-2000	Ben_S_Ttl	DO_PLPT	DO	59.7	57.4	75.1	27.2	2	50	546	17.6	84.3
08-19-2000	Ben_H_Ttl	DO_PLPT	DO	46.0	76.8	46.4	58.4	2	50	504	46.0	55.2
07-04-2000	Ben_S_Ttl	FJR	FJR	36.5	90.4	60.0	43.6	5	100	545	18.9	82.9
07-04-2000	Ben_S_Ttl	I80	I80	56.2	62.4	78.9	23.0	1	25	365	14.0	87.9
07-04-2000	Ben_S_Ttl	LNX	LNX	27.0	100.0	59.8	43.8	4	100	555	15.3	86.6
07-04-2000	Ben_S_Ttl	NIX	NIX	41.6	83.2	76.1	26.0	2	50	373	14.7	87.2
08-28-2001	Ben_S_Ttl	FJR	FJR	34.5	93.3	54.8	49.3	4	100	458	34.5	67.0
08-28-2001	Ben_S_Ttl	I80	I80	39.0	86.9	58.9	44.8	2	50	426	30.3	71.3
10-30-2000	Ben_H_0500	PTG_DRI	PTG	22.4	100.0	38.6	67.0	6	100	402	21.6	80.1
08-13-2002	Ben_H_0500	PR_DRI	PR	24.4	100.0	26.1	80.6	4	100	495	24.4	77.2
10-14-2002	Ben_H_0500	PR_NDEP	PR	29.8	99.9	49.4	55.2	1	25	506	24.1	77.6
08-07-2002	Ben_H_0500	PTG_DRI	PTG	26.4	100.0	44.1	60.9	8	100	485	8.2	93.8
10-14-2002	Ben_H_0500	VRD	VRD	27.8	100.0	35.1	70.7	10	100	504	3.8	98.4
09-09-2000	Ben_K_0600	LW_NDEP	LW_ds	38.9	87.0	32.5	73.6	4	100	483	20.1	81.7
09-08-2000	Ben_K_0600	MC_NDEP	MC_3	36.8	90.0	37.0	68.7	8	100	492	10.6	91.4
09-11-2000	Ben_K_0600	PR_NDEP	PR	41.5	83.3	17.1	90.4	0	0	504	18.1	83.8
09-08-2000	Ben_K_0600	PTG_NDEP	PTG	31.9	96.9	31.9	74.2	7	100	526	13.7	88.2
09-11-2000	Ben_K_0600	TRC_NDEP	TRC_ds	34.0	93.9	24.6	82.2	0	0	491	30.1	71.4
09-05-2000	Ben_K_0600	VRD	VRD	30.2	99.3	18.4	88.9	12	100	526	30.2	71.3
10-21-1999	Ben_H_Comp	SS_TMWRF	SS	78.1	31.1	91.2	9.6	0	0	453	6.2	95.9
10-21-1999	Ben_H_Comp	TRC_TMWRF	TRC_us2	57.8	60.1	74.9	27.4	1	25	474	14.3	87.6
10-20-1999	Ben_H_Comp	LW_TMWRF	LW_us2	85.5	20.6	94.6	5.8	2	50	504	2.8	99.4
10-20-1999	Ben_H_Comp	MC_TMWRF	MC_2	67.2	46.7	70.9	31.7	5	100	506	20.6	81.2
07-27-1999	Ben_H_Comp	SS_TMWRF	SS	51.0	69.8	68.9	33.9	1	25	347	8.9	93.1
07-27-1999	Ben_H_Comp	TRC_TMWRF	TRC_us2	65.0	49.8	70.6	32.0	2	50	480	26.0	75.6
07-26-1999	Ben_H_Comp	LW_TMWRF	LW_us2	37.1	89.6	58.7	45.0	4	100	383	24.0	77.7
07-26-1999	Ben_H_Comp	MC_TMWRF	MC_2	31.8	97.1	21.0	86.2	4	100	286	21.7	80.1
10-21-1998	Ben_H_Comp	SS_TMWRF	SS	60.9	55.7	79.5	22.3	1	25	493	14.2	87.7
10-21-1998	Ben_H_Comp	LW_TMWRF	LW_us2	48.7	73.0	42.5	62.7	2	50	193	48.7	52.4
10-20-1998	Ben_H_Comp	TRC_TMWRF	TRC_us2	49.7	71.6	83.8	17.7	1	25	185	4.9	97.3
10-20-1998	Ben_H_Comp	MC_TMWRF	MC_2	78.3	30.9	83.8	17.7	4	100	383	8.4	93.7
07-31-1998	Ben_H_Comp	MC_TMWRF	MC_2	22.3	100.0	34.5	71.5	8	100	148	14.9	87.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Dominant Taxon		Percent Tolerant		Intolerant Taxa		Total Individuals	Percent Chironomidae	
				value	score	value	score	value	score		value	score
07-30-1998	Ben_H_Comp	TRC_TMWRF	TRC_us2	71.7	40.3	74.5	27.8	0	0	106	6.6	95.5
07-27-1998	Ben_H_Comp	LW_TMWRF	LW_us2	77.6	31.9	87.3	13.8	3	75	545	3.7	98.5
10-15-1997	Ben_H_Comp	TRC_TMWRF	TRC_us2	75.0	35.7	82.4	19.1	0	0	547	7.5	94.6
10-15-1997	Ben_H_Comp	MC_TMWRF	MC_2	78.3	30.8	82.0	19.6	1	25	540	12.4	89.5
07-10-1997	Ben_H_Comp	SS_TMWRF	SS	40.7	84.4	15.8	91.8	3	75	253	12.3	89.7
07-10-1997	Ben_H_Comp	TRC_TMWRF	TRC_us2	76.1	34.0	76.1	26.1	2	50	548	7.3	94.8
07-10-1997	Ben_H_Comp	LW_TMWRF	LW_us2	55.0	64.1	55.0	49.1	3	75	111	8.1	93.9
07-10-1997	Ben_H_Comp	MC_TMWRF	MC_2	22.8	100.0	22.8	84.2	2	50	184	9.8	92.2
10-25-1996	Ben_H_Comp	SS_TMWRF	SS	65.0	49.8	88.8	12.3	1	25	80	5.0	97.1
10-25-1996	Ben_H_Comp	TRC_TMWRF	TRC_us2	80.9	27.1	91.4	9.3	1	25	257	3.9	98.2
10-23-1996	Ben_H_Comp	LW_TMWRF	LW_us2	89.6	14.9	95.0	5.4	1	25	441	2.5	99.7
10-23-1996	Ben_H_Comp	MC_TMWRF	MC_2	79.2	29.6	80.0	21.9	6	100	524	1.5	100.0
10-30-1995	Ben_H_Comp	LW_TMWRF	LW_us2	74.9	35.7	80.6	21.2	6	100	499	2.2	100.0
08-16-1995	Ben_H_Comp	SS_TMWRF	SS	72.0	39.9	82.0	19.6	1	25	200	11.0	91.0
08-16-1995	Ben_H_Comp	MC_TMWRF	MC_2	72.9	38.7	78.4	23.6	3	75	291	6.2	95.9
08-15-1995	Ben_H_Comp	TRC_TMWRF	TRC_us2	40.9	84.2	53.9	50.2	1	25	560	40.9	60.4
08-15-1995	Ben_H_Comp	LW_TMWRF	LW_us2	50.1	71.0	25.9	80.8	6	100	429	50.1	51.0
10-12-1994	Ben_H_Comp	TRC_TMWRF	TRC_us2	29.7	100.0	48.8	55.9	0	0	529	29.7	71.9
10-12-1994	Ben_H_Comp	LW_TMWRF	LW_us2	49.8	71.4	0.4	100.0	0	0	275	4.4	97.8
10-04-1994	Ben_H_Comp	SS_TMWRF	SS	52.5	67.6	17.5	90.0	0	0	280	5.0	97.1
08-24-1994	Ben_H_Comp	LW_TMWRF	LW_us2	74.9	35.7	0.0	100.0	0	0	431	8.6	93.4
08-24-1994	Ben_H_Comp	SS_TMWRF	SS	65.6	49.0	8.4	99.9	0	0	491	13.0	88.9
08-23-1994	Ben_H_Comp	TRC_TMWRF	TRC_us2	48.2	73.8	72.3	30.2	0	0	137	8.8	93.3
10-01-1993	Ben_H_Comp	SS_TMWRF	SS	47.8	74.3	65.2	37.9	0	0	23	21.7	80.0
10-01-1993	Ben_H_Comp	TRC_TMWRF	TRC_us2	36.2	90.8	17.2	90.2	0	0	58	19.0	82.8
10-01-1993	Ben_H_Comp	LW_TMWRF	LW_us2	50.0	71.2	37.5	68.2	1	25	8	12.5	89.4
10-01-1993	Ben_H_Comp	MC_TMWRF	MC_2	81.5	26.4	81.5	20.2	1	25	54	3.7	98.4
09-30-1992	Ben_H_Comp	LW_TMWRF	LW_us2	56.1	62.5	1.5	100.0	0	0	335	56.1	44.9
09-28-1992	Ben_H_Comp	TRC_TMWRF	TRC_us2	34.1	93.8	25.8	80.9	0	0	481	34.1	67.4
09-09-1992	Ben_H_Comp	SS_TMWRF	SS	28.6	100.0	33.3	72.7	0	0	21	4.8	97.4
10-29-1991	Ben_H_Comp	SS_TMWRF	SS	86.8	18.8	87.0	14.1	0	0	447	1.8	100.0
10-29-1991	Ben_H_Comp	TRC_TMWRF	TRC_us2	29.9	99.8	24.4	82.4	0	0	127	1.6	100.0
09-05-1991	Ben_H_Comp	SS_TMWRF	SS	37.3	89.2	23.7	83.2	1	25	477	37.3	64.1
09-05-1991	Ben_H_Comp	TRC_TMWRF	TRC_us2	59.1	58.2	32.8	73.3	0	0	296	59.1	41.8
09-05-1991	Ben_H_Comp	LW_TMWRF	LW_us2	84.5	22.0	3.3	100.0	0	0	427	84.5	15.8
09-05-1991	Ben_H_Comp	MC_TMWRF	MC_2	57.0	61.3	62.0	41.4	2	50	553	5.1	97.0
10-11-1990	Ben_H_Comp	TRC_TMWRF	TRC_us2	54.5	64.7	10.9	97.1	0	0	55	0.0	100.0
10-11-1990	Ben_H_Comp	LW_TMWRF	LW_us2	56.7	61.6	3.2	100.0	0	0	469	16.2	85.7
10-11-1990	Ben_H_Comp	MC_TMWRF	MC_2	33.0	95.3	50.5	53.9	1	25	469	4.1	98.1
10-10-1990	Ben_H_Comp	SS_TMWRF	SS	63.3	52.3	21.2	86.0	0	0	482	1.9	100.0
10-20-1989	Ben_H_Comp	SS_TMWRF	SS	36.8	90.0	11.8	96.2	0	0	451	7.8	94.3
10-20-1989	Ben_H_Comp	TRC_TMWRF	TRC_us2	72.5	39.2	81.8	19.8	0	0	545	1.8	100.0

Collection Date	Collection Method	Entity Station ID	Project Station ID	Percent Dominant Taxon		Percent Tolerant		Intolerant Taxa		Total Individuals	Percent Chironomidae	
				value	score	value	score	value	score		value	score
10-20-1989	Ben_H_Comp	LW_TMWRP	LW_us2	75.9	34.3	10.3	97.9	1	25	195	3.6	98.6
10-20-1989	Ben_H_Comp	MC_TMWRP	MC_2	27.7	100.0	42.6	62.6	3	75	310	13.9	88.0
08-30-1989	Ben_H_Comp	MC_TMWRP	MC_2	43.9	79.9	28.6	77.9	2	50	483	7.0	95.0
08-29-1989	Ben_H_Comp	SS_TMWRP	SS	31.5	97.5	38.2	67.4	0	0	327	13.5	88.5
08-29-1989	Ben_H_Comp	TRC_TMWRP	TRC_us2	51.7	68.7	29.7	76.6	0	0	555	51.7	49.4
08-29-1989	Ben_H_Comp	LW_TMWRP	LW_us2	54.0	65.5	0.6	100.0	0	0	465	54.0	47.0
10-28-1988	Ben_H_Comp	SS_TMWRP	SS	64.5	50.5	66.7	36.3	1	25	375	2.1	100.0
10-28-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	63.1	52.5	73.2	29.2	1	25	358	8.4	93.7
10-28-1988	Ben_H_Comp	LW_TMWRP	LW_us2	48.1	73.9	50.0	54.5	0	0	52	26.9	74.7
10-28-1988	Ben_H_Comp	MC_TMWRP	MC_2	41.8	82.8	5.6	100.0	5	100	287	3.1	99.0
08-29-1988	Ben_H_Comp	SS_TMWRP	SS	36.4	90.6	14.3	93.5	0	0	77	2.6	99.6
08-29-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	59.0	58.4	7.7	100.0	0	0	39	59.0	41.9
08-29-1988	Ben_H_Comp	LW_TMWRP	LW_us2	33.3	94.9	9.1	99.1	0	0	33	0.0	100.0
08-29-1988	Ben_H_Comp	MC_TMWRP	MC_2	50.2	71.0	11.1	96.9	1	25	305	50.2	50.9
09-28-1987	Ben_H_Comp	MC_TMWRP	MC_2	65.8	48.6	8.2	100.0	1	25	524	2.3	99.9
08-18-1986	Ben_H_Comp	SS_TMWRP	SS	24.6	100.0	34.4	71.5	0	0	479	7.3	94.8
08-18-1986	Ben_H_Comp	TRC_TMWRP	TRC_us2	59.8	57.2	68.3	34.5	0	0	540	2.6	99.6
08-18-1986	Ben_H_Comp	LW_TMWRP	LW_us2	42.0	82.6	53.3	51.0	0	0	460	0.0	100.0
08-18-1986	Ben_H_Comp	MC_TMWRP	MC_2	25.8	100.0	14.7	93.0	2	50	551	11.6	90.4
09-09-2003	Ben_H_Comp	DO_TMWRP	NW	38.8	87.2	6.7	100.0	0	0	178	18.5	83.3
09-09-2003	Ben_H_Comp	MC_TMWRP	MC_2	29.1	100.0	50.3	54.2	2	50	374	20.6	81.2
08-29-2003	Ben_H_Comp	TRC_TMWRP	TRC_us2	57.6	60.3	2.6	100.0	0	0	269	24.2	77.5
08-29-2003	Ben_H_Comp	LW_TMWRP	LW_us2	42.8	81.5	8.9	99.3	1	25	360	42.8	58.5
08-15-2002	Ben_H_Comp	DO_TMWRP	NW	47.1	75.4	2.9	100.0	0	0	136	20.6	81.2
08-13-2002	Ben_H_Comp	TRC_TMWRP	TRC_us2	82.8	24.5	4.4	100.0	0	0	541	82.8	17.6
08-12-2002	Ben_H_Comp	LW_TMWRP	LW_us2	68.4	45.0	27.2	79.4	2	50	519	68.4	32.3
08-12-2002	Ben_H_Comp	MC_TMWRP	MC_2	36.4	90.5	46.7	58.1	3	75	379	23.0	78.8
08-19-2000	Ben_H_Comp	DO_TMWRP	NW	40.3	84.9	57.2	46.7	2	50	523	36.7	64.7
08-09-2000	Ben_H_Comp	LW_TMWRP	LW_us2	73.3	38.1	90.2	10.7	1	25	550	8.5	93.5
08-08-2000	Ben_H_Comp	TRC_TMWRP	TRC_us2	59.4	57.8	62.2	41.2	0	0	537	33.3	68.1
07-25-2000	Ben_H_Comp	MC_TMWRP	MC_2	48.0	74.1	21.7	85.4	3	75	540	48.0	53.2

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				value	score	
07-01-1981	Ben_S_Ttl	CN	CN	6.6	98.6	45.5
07-01-1981	Ben_S_Ttl	DO_PLPT	DO	7.1	98.0	66.2
07-01-1981	Ben_S_Ttl	FJR	FJR	6.8	98.3	51.2
08-01-1981	Ben_S_Ttl	I80	I80	7.2	97.9	61.1
07-08-1981	Ben_S_Ttl	LNX	LNX	5.2	100.0	58.9
08-18-1986	Ben_H_Ttl	SS_PLPT	SS	6.1	99.1	77.0
08-29-1988	Ben_H_Ttl	SS_PLPT	SS	7.8	97.3	59.2
10-28-1988	Ben_H_Ttl	SS_PLPT	SS	7.1	98.1	57.7
09-25-1989	Ben_S_Ttl	DO_PLPT	DO	5.7	99.5	52.4
09-25-1989	Ben_S_Ttl	FJR	FJR	7.9	97.2	51.7
09-25-1989	Ben_S_Ttl	MBD	MBD	5.8	99.5	47.7
09-25-1989	Ben_S_Ttl	NB	NB	8.0	97.1	47.7
09-25-1989	Ben_S_Ttl	NW	NW	5.3	100.0	46.3
08-29-1989	Ben_H_Ttl	SS_PLPT	SS	4.5	100.0	44.5
10-20-1989	Ben_H_Ttl	SS_PLPT	SS	7.5	97.7	62.2
09-25-1989	Ben_S_Ttl	WB	WB	6.2	99.0	44.5
07-24-1990	Ben_S_Ttl	CN	CN	6.4	98.8	68.9
07-24-1990	Ben_S_Ttl	DO_PLPT	DO	6.4	98.7	65.7
07-24-1990	Ben_S_Ttl	LNX	LNX	7.8	97.3	56.9
07-24-1990	Ben_S_Ttl	MBD	MBD	5.8	99.4	53.6
07-24-1990	Ben_S_Ttl	NIX	NIX	5.5	99.8	61.9
10-10-1990	Ben_H_Ttl	SS_PLPT	SS	5.2	100.0	47.3
07-24-1990	Ben_S_Ttl	WB	WB	7.8	97.3	62.0
09-05-1991	Ben_H_Ttl	SS_PLPT	SS	7.2	97.9	64.6
10-29-1991	Ben_H_Ttl	SS_PLPT	SS	7.9	97.2	46.3
09-09-1992	Ben_H_Ttl	SS_PLPT	SS	6.6	98.5	58.0
10-01-1993	Ben_H_Ttl	SS_PLPT	SS	6.8	98.4	53.0
08-24-1994	Ben_H_Ttl	SS_PLPT	SS	8.3	96.8	60.2
10-04-1994	Ben_H_Ttl	SS_PLPT	SS	7.6	97.5	60.3
08-16-1995	Ben_H_Ttl	SS_PLPT	SS	6.9	98.3	51.0
08-01-1996	Ben_S_Ttl	AH	AH	5.9	99.3	84.2
08-01-1996	Ben_S_Ttl	CN	CN	6.4	98.8	67.2
08-01-1996	Ben_S_Ttl	I80	I80	6.8	98.3	54.8
08-01-1996	Ben_S_Ttl	MBD	MBD	5.9	99.3	62.3
08-01-1996	Ben_S_Ttl	NB	NB	5.9	99.4	87.0
08-01-1996	Ben_S_Ttl	ND	ND	6.5	98.7	62.0
08-01-1996	Ben_S_Ttl	NW	NW	3.7	100.0	90.6
08-01-1996	Ben_S_Ttl	SS_PLPT	SS	5.8	99.4	80.5
10-25-1996	Ben_H_Ttl	SS_PLPT	SS	6.8	98.4	43.7
08-01-1996	Ben_S_Ttl	WB	WB	6.0	99.2	84.5
07-10-1997	Ben_H_Ttl	SS_PLPT	SS	5.3	99.9	67.1
10-21-1998	Ben_H_Ttl	SS_PLPT	SS	6.8	98.4	49.4

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				value	score	
08-01-1999	Ben_S_Ttl	AH	AH	6.7	98.5	67.8
08-01-1999	Ben_S_Ttl	CN	CN	6.7	98.5	73.3
08-01-1999	Ben_S_Ttl	DO_PLPT	DO	6.4	98.8	77.1
08-01-1999	Ben_S_Ttl	I80	I80	6.9	98.3	66.4
08-01-1999	Ben_S_Ttl	LNX	LNX	5.8	99.4	86.5
08-01-1999	Ben_S_Ttl	MBD	MBD	5.3	99.9	42.3
08-01-1999	Ben_S_Ttl	NIX	NIX	6.2	99.0	84.4
07-27-1999	Ben_H_Ttl	SS_PLPT	SS	5.9	99.3	47.6
10-21-1999	Ben_H_Ttl	SS_PLPT	SS	6.9	98.3	39.8
07-04-2000	Ben_S_Ttl	CN	CN	6.3	98.8	63.4
07-04-2000	Ben_S_Ttl	DO_PLPT	DO	6.9	98.3	62.7
08-19-2000	Ben_H_Ttl	DO_PLPT	DO	6.7	98.5	53.8
07-04-2000	Ben_S_Ttl	FJR	FJR	6.8	98.3	75.8
07-04-2000	Ben_S_Ttl	I80	I80	6.9	98.2	57.6
07-04-2000	Ben_S_Ttl	LNX	LNX	6.5	98.7	68.4
07-04-2000	Ben_S_Ttl	NIX	NIX	6.8	98.4	61.3
08-28-2001	Ben_S_Ttl	FJR	FJR	7.1	98.1	79.2
08-28-2001	Ben_S_Ttl	I80	I80	6.9	98.2	77.0
10-30-2000	Ben_H_0500	PTG_DRI	PTG	6.0	99.3	88.4
08-13-2002	Ben_H_0500	PR_DRI	PR	5.7	99.5	75.2
10-14-2002	Ben_H_0500	PR_NDEP	PR	7.0	98.2	71.6
08-07-2002	Ben_H_0500	PTG_DRI	PTG	5.8	99.5	93.4
10-14-2002	Ben_H_0500	VRD	VRD	5.3	99.9	96.2
09-09-2000	Ben_K_0600	LW_NDEP	LW_ds	6.5	98.7	69.3
09-08-2000	Ben_K_0600	MC_NDEP	MC_3	6.1	99.1	75.7
09-11-2000	Ben_K_0600	PR_NDEP	PR	6.0	99.2	74.7
09-08-2000	Ben_K_0600	PTG_NDEP	PTG	4.9	100.0	77.0
09-11-2000	Ben_K_0600	TRC_NDEP	TRC_ds	6.3	98.9	66.9
09-05-2000	Ben_K_0600	VRD	VRD	5.2	100.0	85.0
10-21-1999	Ben_H_Comp	SS_TMWRP	SS	6.9	98.2	38.2
10-21-1999	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.8	98.3	51.3
10-20-1999	Ben_H_Comp	LW_TMWRP	LW_us2	6.9	98.2	39.0
10-20-1999	Ben_H_Comp	MC_TMWRP	MC_2	6.6	98.6	59.1
07-27-1999	Ben_H_Comp	SS_TMWRP	SS	6.0	99.2	47.6
07-27-1999	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.9	98.2	56.8
07-26-1999	Ben_H_Comp	LW_TMWRP	LW_us2	5.9	99.3	75.7
07-26-1999	Ben_H_Comp	MC_TMWRP	MC_2	2.6	100.0	90.2
10-21-1998	Ben_H_Comp	SS_TMWRP	SS	6.8	98.4	50.0
10-21-1998	Ben_H_Comp	LW_TMWRP	LW_us2	6.6	98.5	57.7
10-20-1998	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.8	98.4	54.2
10-20-1998	Ben_H_Comp	MC_TMWRP	MC_2	6.7	98.4	55.5
07-31-1998	Ben_H_Comp	MC_TMWRP	MC_2	3.8	100.0	92.6

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				value	score	
07-30-1998	Ben_H_Comp	TRC_TMWRWF	TRC_us2	7.0	98.1	51.3
07-27-1998	Ben_H_Comp	LW_TMWRWF	LW_us2	6.8	98.3	53.9
10-15-1997	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.8	98.4	44.8
10-15-1997	Ben_H_Comp	MC_TMWRWF	MC_2	6.9	98.2	46.6
07-10-1997	Ben_H_Comp	SS_TMWRWF	SS	3.9	100.0	68.4
07-10-1997	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.4	98.7	60.1
07-10-1997	Ben_H_Comp	LW_TMWRWF	LW_us2	5.3	100.0	84.8
07-10-1997	Ben_H_Comp	MC_TMWRWF	MC_2	3.7	100.0	86.9
10-25-1996	Ben_H_Comp	SS_TMWRWF	SS	6.8	98.4	43.7
10-25-1996	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.9	98.2	40.1
10-23-1996	Ben_H_Comp	LW_TMWRWF	LW_us2	7.0	98.2	34.6
10-23-1996	Ben_H_Comp	MC_TMWRWF	MC_2	6.5	98.6	61.0
10-30-1995	Ben_H_Comp	LW_TMWRWF	LW_us2	6.7	98.5	58.2
08-16-1995	Ben_H_Comp	SS_TMWRWF	SS	6.9	98.3	61.1
08-16-1995	Ben_H_Comp	MC_TMWRWF	MC_2	6.3	98.9	72.3
08-15-1995	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.9	98.2	61.3
08-15-1995	Ben_H_Comp	LW_TMWRWF	LW_us2	5.8	99.4	80.4
10-12-1994	Ben_H_Comp	TRC_TMWRWF	TRC_us2	7.0	98.2	60.5
10-12-1994	Ben_H_Comp	LW_TMWRWF	LW_us2	6.5	98.7	56.0
10-04-1994	Ben_H_Comp	SS_TMWRWF	SS	6.8	98.4	63.0
08-24-1994	Ben_H_Comp	LW_TMWRWF	LW_us2	6.0	99.2	46.4
08-24-1994	Ben_H_Comp	SS_TMWRWF	SS	6.7	98.5	60.7
08-23-1994	Ben_H_Comp	TRC_TMWRWF	TRC_us2	7.0	98.1	55.1
10-01-1993	Ben_H_Comp	SS_TMWRWF	SS	6.8	98.3	53.0
10-01-1993	Ben_H_Comp	TRC_TMWRWF	TRC_us2	5.9	99.3	62.9
10-01-1993	Ben_H_Comp	LW_TMWRWF	LW_us2	4.1	100.0	40.7
10-01-1993	Ben_H_Comp	MC_TMWRWF	MC_2	6.3	98.9	28.4
09-30-1992	Ben_H_Comp	LW_TMWRWF	LW_us2	6.8	98.3	51.7
09-28-1992	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.7	98.5	64.2
09-09-1992	Ben_H_Comp	SS_TMWRWF	SS	6.8	98.4	60.4
10-29-1991	Ben_H_Comp	SS_TMWRWF	SS	7.9	97.2	50.9
10-29-1991	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.2	99.0	72.2
09-05-1991	Ben_H_Comp	SS_TMWRWF	SS	7.6	97.5	69.3
09-05-1991	Ben_H_Comp	TRC_TMWRWF	TRC_us2	7.0	98.1	44.5
09-05-1991	Ben_H_Comp	LW_TMWRWF	LW_us2	6.7	98.4	41.7
09-05-1991	Ben_H_Comp	MC_TMWRWF	MC_2	6.4	98.8	53.8
10-11-1990	Ben_H_Comp	TRC_TMWRWF	TRC_us2	4.5	100.0	51.9
10-11-1990	Ben_H_Comp	LW_TMWRWF	LW_us2	6.5	98.7	55.2
10-11-1990	Ben_H_Comp	MC_TMWRWF	MC_2	6.2	99.0	66.9
10-10-1990	Ben_H_Comp	SS_TMWRWF	SS	7.5	97.6	51.6
10-20-1989	Ben_H_Comp	SS_TMWRWF	SS	6.7	98.5	62.3
10-20-1989	Ben_H_Comp	TRC_TMWRWF	TRC_us2	6.8	98.4	47.8

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				value	score	
10-20-1989	Ben_H_Comp	LW_TMWRP	LW_us2	6.6	98.6	55.9
10-20-1989	Ben_H_Comp	MC_TMWRP	MC_2	5.6	99.7	66.8
08-30-1989	Ben_H_Comp	MC_TMWRP	MC_2	5.9	99.4	58.4
08-29-1989	Ben_H_Comp	SS_TMWRP	SS	7.6	97.5	57.5
08-29-1989	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.6	98.6	52.8
08-29-1989	Ben_H_Comp	LW_TMWRP	LW_us2	6.3	98.9	52.1
10-28-1988	Ben_H_Comp	SS_TMWRP	SS	7.0	98.2	55.9
10-28-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.5	98.7	50.3
10-28-1988	Ben_H_Comp	LW_TMWRP	LW_us2	6.7	98.4	58.3
10-28-1988	Ben_H_Comp	MC_TMWRP	MC_2	4.5	100.0	61.1
08-29-1988	Ben_H_Comp	SS_TMWRP	SS	5.7	99.6	72.6
08-29-1988	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.2	99.0	55.2
08-29-1988	Ben_H_Comp	LW_TMWRP	LW_us2	4.5	100.0	60.0
08-29-1988	Ben_H_Comp	MC_TMWRP	MC_2	5.0	100.0	61.8
09-28-1987	Ben_H_Comp	MC_TMWRP	MC_2	5.7	99.6	47.2
08-18-1986	Ben_H_Comp	SS_TMWRP	SS	5.7	99.6	90.8
08-18-1986	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.6	98.6	57.4
08-18-1986	Ben_H_Comp	LW_TMWRP	LW_us2	6.3	98.9	64.2
08-18-1986	Ben_H_Comp	MC_TMWRP	MC_2	5.4	99.8	83.9
09-09-2003	Ben_H_Comp	DO_TMWRP	NW	6.2	99.0	64.4
09-09-2003	Ben_H_Comp	MC_TMWRP	MC_2	6.7	98.5	67.4
08-29-2003	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.3	98.9	45.4
08-29-2003	Ben_H_Comp	LW_TMWRP	LW_us2	6.2	98.9	66.1
08-15-2002	Ben_H_Comp	DO_TMWRP	NW	4.2	100.0	47.3
08-13-2002	Ben_H_Comp	TRC_TMWRP	TRC_us2	5.6	99.6	40.7
08-12-2002	Ben_H_Comp	LW_TMWRP	LW_us2	6.8	98.4	48.5
08-12-2002	Ben_H_Comp	MC_TMWRP	MC_2	6.1	99.1	75.3
08-19-2000	Ben_H_Comp	DO_TMWRP	NW	6.8	98.4	59.3
08-09-2000	Ben_H_Comp	LW_TMWRP	LW_us2	7.0	98.2	41.5
08-08-2000	Ben_H_Comp	TRC_TMWRP	TRC_us2	6.9	98.2	50.6
07-25-2000	Ben_H_Comp	MC_TMWRP	MC_2	6.3	98.9	69.3