

Polecat Creek Investigation Biological Monitoring 1995 Annual Report

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INTRODUCTION

This report details work conducted during the second year of study on the biomonitoring network of the Water Quality Monitoring Program designed by the Chesapeake Bay Local Assistance Department (CBLAD) for the Polecat Creek watershed. The objectives of the study were to provide a continuing biological assessment of stream macroinvertebrate and fish assemblages, as well as to conduct an assessment of channel and riparian habitat, and water quality, in streams throughout the watershed. In addition, the study provides a data base that will enable detection of changes in stream water quality and biotic integrity as the result of changed land use patterns. Meeting these objectives will enhance our ability to determine the efficacy of regulations designed to protect water quality and biodiversity from the potential effects of watershed development and changes in landscape scale patterns.

SITE DESCRIPTIONS

Trend monitoring sites (Table 1) exhibited physico-chemical characteristics that were typical of streams of the lower piedmont and upper coastal plain in the mid-Atlantic region (Smock and Gilinsky 1992; Garman and Nielsen 1992). The substrate at most sites was a mixture of sand and gravel, with occasional cobble and bedrock in areas of moderate gradient. Sites ranged in size from first- (e.g. Polecat Creek, site A) to fourth-order

Table 1. Study site descriptions for biological/habitat trend monitoring and reference locations. The CBLAD site codes are provided in parentheses following the site name.

| Stream | Description |
|-------------------------------|---|
| <u>Monitoring sites</u> | |
| Polecat Creek (site A) | at Rt. 601, south of Lake Caroline; first order |
| Stevens Mill Run (site B) | at Rt. 601, outfall from Lake Caroline; second order |
| Unnamed tributary (site C) | on Atkinson property and adjacent to I-95; second order |
| Polecat Creek (site D) | at Rt. 652; third order |
| Polecat Creek (site E) | at Rt. 601 near Penola, Virginia; third order |
| Reedy Swamp (site F) | at Rt. 601, a tributary of Polecat Creek exhibiting extensive nontidal wetlands; second order |
| Mattaponi River (site R) | at the confluence with Polecat Creek; fourth order |
| <u>Reference sites</u> | |
| Higgins Stream (site H) | southeast of Waverly, Virginia; first order; Surry County |
| Unnamed tributary (site W) | at Rt. 658, north of Partlow, Virginia; second order stream exhibiting extensive nontidal wetlands; Spotsylvania County |
| South River (site S) | at Rt. 603, second order |
| Matta River (site M) | at Rt. 632, third order |

(e.g. Mattaponi River, site R). Two sites (Reedy Swamp, site F and unnamed tributary, site W) exhibited extensive nontidal wetlands, and were selected to represent this potentially important habitat type. Reference sites (Table 1) were chosen to represent "least-impaired" conditions (Karr et al. 1986) across a range of stream orders, based on extensive field surveys for relatively undisturbed locations. In one case (Higgins Stream, site H), a suitable first-order reference stream could not be located within the York River drainage and a site in Surry County was selected.

A standardized collection coding system, consisting of five alpha-numeric fields, was developed for aquatic macroinvertebrate sampling. The first three spaces designate the stream name (e.g. POL = Polecat Creek), the fourth and fifth characters identify replication (Y=yes, N=no) and sample type (D=net, W=wood, A=artificial substrate), respectively. The final six characters identify the CBLAD site code (see Table 1), and the season and year of the collection. These codes will appear only in Appendices A-D.

HABITAT ASSESSMENT

The primary focus of the habitat assessment of the streams followed the Environmental Protection Agency (EPA) guidelines detailed by Plafkin et al. (1989). This included scoring of twelve metrics that focused on riparian and channel characteristics. The metric scores for each stream were compared

to reference streams to provide an assessment of stream condition based on the habitat parameters.

METHODS

Habitat Assessment Scoring

The twelve metrics used to score habitat condition at each stream focused on in-channel and riparian characteristics that impact biological communities. The parameters included those that evaluated characteristics that are important at both the micro- and macro-scale in the stream channel and also those that evaluated riparian areas. The metrics used were those developed for streams with few to no riffles but rather with a prevalent glide/pool geomorphology. All parameters were measured at each station during the autumn 1994 and summer 1995. No appropriate habitat parameters have been developed for wetland sites and thus those sites were not included in the habitat assessment.

A copy of the habitat assessment form used is provided in Table 2. The following parameters were measured for the assessment:

1. *Instream cover* - the abundance of submerged logs, undercut banks and other forms of stable habitat.
2. *Epifaunal substrate* - the abundance of the "most productive benthic habitat," typically riffle areas and/or submerged snags.
3. *Pool substrate* - the abundance of a gravel, sand and macrophyte substrate in pools versus a substrate predominately of mud or clay.
4. *Pool variability* - the presence of both deep and shallow pools.

RAPID HABITAT ASSESSMENT FORM - GUIDE/POOL STREAMS (continued)

| HABITAT PARAMETER | CATEGORY | | | |
|--|---|---|--|--|
| | OPTIMAL | SUB-OPTIMAL | MARGINAL | POOR |
| 7. CHANNEL SINUOSITY | The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. | The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line. | The bends in the stream increase the stream length between 1 and 2 times longer than if it was in a straight line. | Channel is straight; waterway has been channelized for a long distance. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 8. CHANNEL FLOW STATUS | Water reaches the base of both lower banks and a minimal amount of channel substrate is exposed. | Water fills more than 75% of the available channel; or less than 25% of the channel substrate is exposed. | Water fills 25 to 75% of the available channel and/or riffle substrates are mostly exposed. | Very little water in channel, and mostly present as standing pools. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 9. CONDITION OF BANKS | Banks stable; no evidence of erosion or bank failure; | Banks moderately stable; infrequent, small areas of erosion mostly healed over. | Moderately unstable; up to 60% of banks in reach have areas of erosion | Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; side slopes 60 to 100% of bank has erosional scars. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 10. BANK VEGETATIVE PROTECTION | Over 90% of the streambank surfaces is covered by vegetation. | 70 to 89% of the streambank surfaces is covered by vegetation. | 50 to 79% of the streambank surfaces is covered by vegetation. | Less than 50% of the streambank surfaces are covered by vegetation. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 11. GRAZING OR OTHER DISRUPTIVE PRESSURE | Vegetative disruption minimal or not evident; almost all plants are allowed to grow naturally. | Disruption is evident but is not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining. | Disruption is obvious; patches of bare soil or closely cropped vegetation are common; less than one-half of the potential plant stubble height remaining | Disruption of streambank vegetation is very high; vegetation has been removed to 2 inches or less in average stubble height. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 12. RIPARIAN VEGETATION ZONE WIDTH (LEAST BUFFERED SIDE) | Width of riparian zone is greater than 18 meters; human activities (e.g., parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone | Width of riparian zone is between 12 and 18 meters; human activities have only minimally impacted this zone. | Width of riparian zone is between 6 and 12 meters; human activities have impacted the zone a great deal. | Width of riparian zone is less than 6 meters; little or no riparian vegetation due to human activities |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |

REVIEWED BY (INITIAL): _____

| RAPID HABITAT ASSESSMENT FORM - GLIDE POOL PREVALANCE | | | | |
|---|--|--|--|--|
| STREAM NAME: | | DATE OF VISIT: / / 93 | | |
| STREAM ID: S | | TEAM ID (circle): 1 2 3 4 5 6 R | | |
| TOTAL SCORE | | | | |
| HABITAT PARAMETER | CATEGORY | | | |
| | OPTIMAL | SUB-OPTIMAL | MARGINAL | POOR |
| 1. INSTREAM COVER | Greater than 50% mix of snags, submerged logs, undercut banks, or other stable habitat; rubble or gravel may be present. | 30 to 50% mix of stable habitat; adequate habitat for maintenance of populations. | 10 to 30% mix of stable habitat; habitat availability is less than desirable. | Less than 10% stable habitat; lack of habitat is obvious. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 2. EPIFAUNAL SUBSTRATE | Preferred benthic substrate (to be sampled) is abundant throughout stream site and at a stage to allow for full colonization potential (i.e., logs and snags that are <u>not</u> new fall and <u>not</u> transient). | Substrate is common but is not prevalent nor well-suited for full colonization potential. | Substrate frequently disturbed or removed. | Substrate is unstable or lacking. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 3. POOL SUBSTRATE CHARACTERIZATION | Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation are common. | Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation are present. | All mud or clay or sand bottom; little or no root mat; no submerged vegetation. | Hard-pan clay or bedrock; no root mat or vegetation. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 4. POOL VARIABILITY | Even mix of large-shallow, large-deep, small-shallow, and small-deep pools are present. | The majority of pools are large and deep; very few shallow. | Shallow pools much more prevalent than deep pools. | Majority of pools are small-shallow or pools are absent. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 5. CHANNEL ALTERATION | No channelization of dredging present. | Some channelization is present, usually in areas of bridge abutment; evidence of past channelization, i.e., dredging (greater than past 20 yr) may be present, but recent channelization is not present. | New embankments are present on both banks; channelization may be extensive, usually in urban areas or drainage areas of agricultural lands; and more than 80% of the stream reach is channelized or disrupted. | Extensive channelization; banks shored with gabion or cement; heavily urbanized areas; instream habitat greatly altered or removed entirely. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |
| 6. SEDIMENT DEPOSITION | Less than 20% of the bottom is affected; minor accumulation of fine and coarse material at snags and submerged vegetation; little or no enlargement of islands or point bars. | 20 to 50% affected; moderate accumulation; substantial sediment movement only during major storm events; some new increase in bar formation. | 50 to 80% affected; major deposition; pools shallow and heavily sited; embankments may be present on both banks; frequent and substantial sediment movement during storm events. | Channelized; mud, silt, and/or sand in braided or non-braided channels; pools almost absent due to deposition. |
| SCORE: | 20 19 18 17 16 | 15 14 13 12 11 | 10 9 8 7 6 | 5 4 3 2 1 0 |

REVIEWED BY (INITIAL):

5. *Channel alteration* - evidence of stream channelization.
6. *Sediment deposition* - degree of embeddedness of the sediment.
7. *Channel sinuosity* - prevalence of channel meanders.
8. *Channel flow status* - percentage of the channel bed that was wetted.
9. *Condition of banks* - evidence of bank stability versus erosion.
10. *Bank vegetative cover* - percentage of bank that was covered with vegetation.
11. *Grazing pressure* - degree of disruption of riparian vegetation by grazing or other processes.
12. *Riparian vegetation zone width* - width of riparian zone that was vegetated and with minimal human disturbance; measured on the least buffered side of the stream.

All metrics were scored on a 20 point basis, with 20 points indicating the best or preferred condition. The Habitat Assessment Form (Table 2) provides stream condition categories (optimal to poor) according to the scores for each metric. The actual data analysis consisted of totaling the scores for all metrics for a stream and comparing that value to the total score for the reference site. The station was then classified as to the condition of its habitat based on its percent comparability to the reference site (Table 3).

Quality Assurance

Quality assurance protocols followed those detailed by Tingler (1993). All data were checked for transcriptional

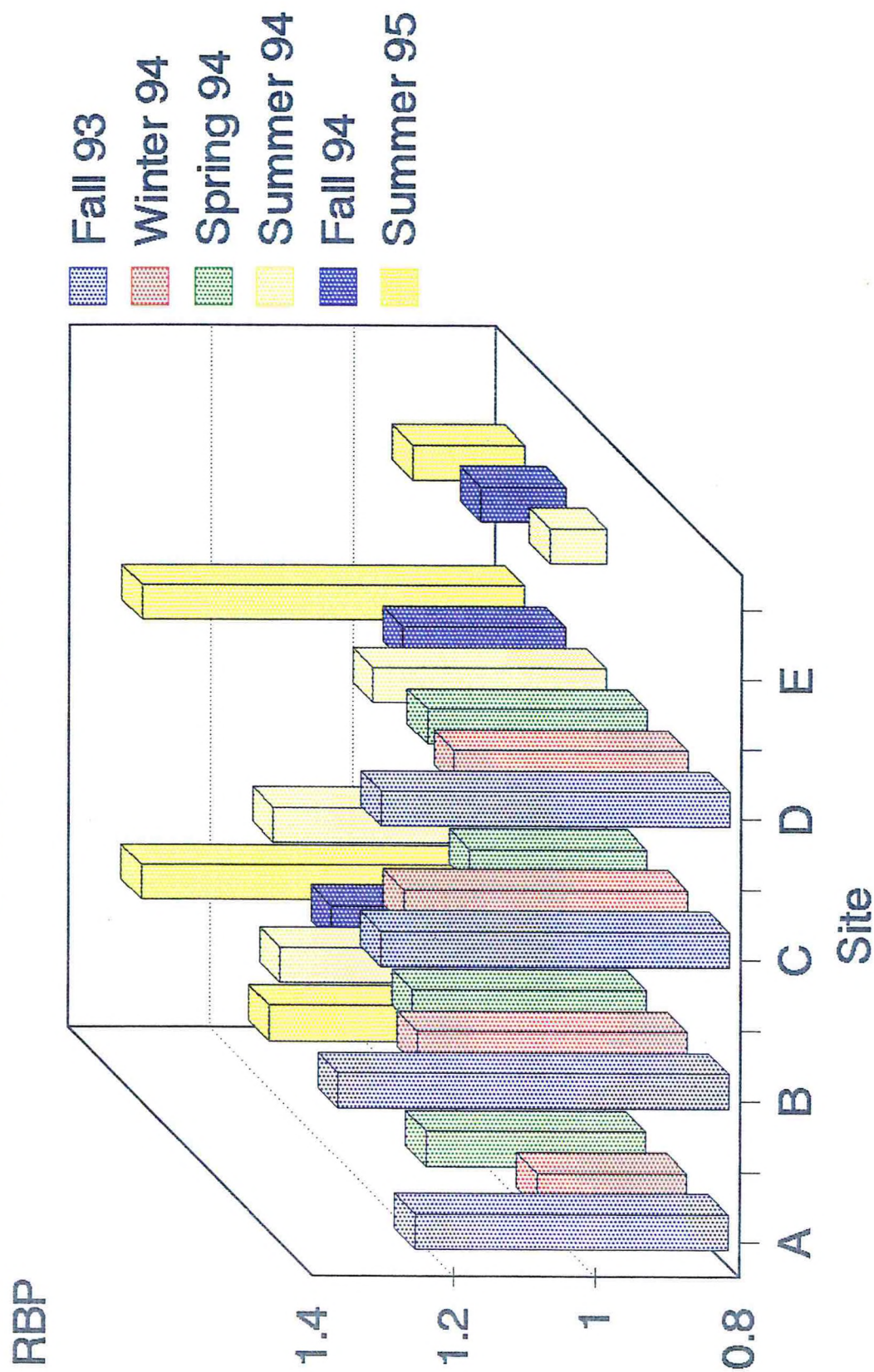
errors following their entry into the computer data base. Copies of the field data sheets are archived in files at Virginia Commonwealth University. Replicate metric scoring was conducted by two trained individuals at three sites during the fall 1994 sampling to check the replicability of the habitat assessment. Data from the replicate sampling were used solely to meet quality assurance objectives; they are included in the archived data base but were not used as part of the metric assessment calculations.

Table 3. Habitat assessment categories based on percent comparability to a reference station and a streams apparent potential to support an acceptable, healthy biological community. From Plafkin et al. (1989).

| <u>Assessment Category</u> | <u>Percent Comparability</u> |
|---------------------------------|------------------------------|
| Comparable to Reference Station | ≥ 90% |
| Supporting | 75-88% |
| Partially Supporting | 60-73% |
| Non-Supporting | ≤ 58% |

Figure 1. Habitat assessment scores for streams in the Polecat Creek drainage. A score of 1.0 indicates habitat quality equal to that of the reference site.

Polecat Creek Project Habitat Assessment



RESULTS

Scores for the twelve habitat metrics are given in Appendix A according to station and sampling date. Similar to the results from the habitat assessment conducted during 1993-94 (Smock et al. 1994), all stations had a high percent comparability relative to their reference stations, the lowest comparability being 92% at Station E (Fig. 1). Station E had the lowest scores during both sampling dates. There was no trend of any one metric consistently being scored higher or lower than the others across stations or sampling dates.

Overall, the habitat assessment indicates no obvious degradation of the physical, chemical, geomorphic or riparian habitat at any of the stations relative to that at the reference stations. The assessment categories, based on EPA criteria (Table 3), are "Comparable to Reference Station" for all stations.

Quality Assurance

Scoring of the habitat metrics had high replicability when measured at the same site on the same day by two different investigators. The mean difference in the summed scores of the twelve metrics over the three sites was only 3%, well within the threshold acceptance level of 10% established *a priori*. The metrics for instream cover and pool variability had the highest variability in scoring over the year.

BENTHIC MACROINVERTEBRATES

The sampling program for benthic macroinvertebrates was the same both conceptually and procedurally as during the first year of the project (Smock et al. 1994). Methodology for the analysis of benthic macroinvertebrate communities followed the procedures of the Environmental Protection Agency's Rapid Bioassessment Protocol III (RBP; Plafkin et al. 1989) with some enhancements. RBP III was chosen because its greater level of taxonomic resolution (genus versus family level) provides a better discrimination of degrees of water quality among sites.

The RBP III protocol calls for sampling benthic invertebrates in the most productive habitat in a set of streams. This usually is the riffle-run habitat. Not all of the streams in the Polecat Creek drainage, however, have a well-developed riffle-run geomorphology. In such cases, the protocol and subsequent modifications for low-gradient streams suggest sampling submerged wood, which provides a stable substrate and often supports high invertebrate productivity (Benke et al. 1984, Smock et al. 1985). In order to provide the most complete biomonitoring data within the framework of the RBP protocol, we sampled both riffles and runs (hereafter referred to as the sediment) and submerged wood and analyzed the data from each separately. We thus have two independent estimates of water quality using benthic invertebrates.

METHODS

Sampling Protocol

The sampling protocol was identical to that employed during the first year of the study. Sampling was conducted quarterly over the year, thereby providing a comprehensive seasonal baseline data set. Sampling of the sediment was accomplished with a net (mesh size = 425 μm) in both riffles, when present, and in cobble and pebble runs. The top layer of rocks was disturbed and large rocks were then rubbed by hand to remove closely attached organisms. All samples from the sediment at a given station were composited into one sample.

Wood samples consisted of invertebrates adhering to the surfaces of logs submerged in the stream. Logs that clearly had been only recently submerged were avoided. The surfaces of the logs were washed into a bucket and a visual examination was made for adhering organisms. All samples from individual logs at a given station were composited into one sample.

Sampling of coarse particulate organic matter (CPOM) is required for one of the RBP metrics. We sampled leaf packs in debris dams and on the sediment surface. Recently submerged leaves were avoided. During the summer, when leaf packs were rare, we sampled whatever aggregations of processed leaf litter were present.

All samples (sediment, wood and CPOM) were preserved in the field with isopropyl alcohol. Invertebrates were removed from the sample under a stereo-microscope after addition of Rose Bengal to facilitate the sorting process. The first 200

organisms randomly picked from the samples were identified and thus constituted the data base for calculating the metrics for a given station. Invertebrates in the CPOM samples were simply designated as shredders or non-shredders. All functional feeding group designations were made according to information in Merritt and Cummins (1984) and Pennak (1989).

There are no standard protocols for rapid bioassessment in wetlands using benthic invertebrates. Problems encountered in the bioassessment of wetlands include the lack of any tested metrics using invertebrates and the necessity for a standard habitat that is easily sampled but also is representative of substrates in the wetlands system.

We used an artificial substrate to provide a common substrate in both the reference and study wetlands. Since macrophytes are an important substrate for invertebrates in marsh wetlands, we used artificial macrophytes based on the design of Gilinsky (1984). They were constructed of braided polypropylene rope (6-mm diameter) that floats within the water column. Each substrate, consisting of 36 strands of 41-cm-long rope attached to a base of netting, was held in the water column on a metal frame driven into the sediment. Substrates remained constantly in place in the wetlands until sampled, providing time for complete colonization by invertebrates. The substrates were sampled by lifting them out of the water column, washing the rope strands into a bucket, passing the material through a sieve and preserving the sample. Substrates were then placed back into the wetland for sampling the following quarter.

Data Analysis

The RBP III uses eight criteria for the analysis of stream condition at a site. All eight metrics were calculated for the sediment samples. Metric #8, which used the data from the CPOM samples, was not included in the analysis of the wood samples. Using those data for both the sediment and wood analyses would violate the assumption of independence of the data for statistical analyses comparing the sediment and wood samples.

1. *Taxa richness* - the total number of taxa identified.
2. *Modified Hilsenhoff Biotic Index (HBI)* - provides a quantitative assessment of the tolerance of each invertebrate taxon to general water quality degradation.

$$HBI = \sum (x_i t_i/n)$$

where x_i = number of individuals of taxon i in a sample;

t_i = tolerance value of taxon i ;

n = total number of organisms in the sample.

The RBP document (Plafkin et al. 1989) provides tolerance values for some species, but they were derived for species in the western Great Lakes states and New York. To provide tolerance values that are regionally more accurate, we primarily used values developed and tested by the North Carolina Division of Environmental Management (Lenat 1993). Tolerance values for some taxa not listed by Lenat (1993) were taken from Pflakin et al. (1989); values for a few rare taxa for which no values have been published were estimated based on the PIs' experience in using invertebrates for water quality assessment.

3. *Ratio of scrapers to collector-filterers* - the total number of individuals of taxa designated as scrapers divided by the total number of individuals of taxa designated as collector-filterers.
4. *Ratio of EPT's to chironomids* - the total number of individuals of taxa of Ephemeroptera (mayflies), Plecoptera (stoneflies) and Trichoptera (caddisflies) divided by the total number of Chironomidae.
5. *Percent contribution of the dominant taxon* - the number of individuals of the most abundant taxon divided by the total number of individuals.
6. *EPT index* - the total number of taxa of Ephemeroptera, Plecoptera and Trichoptera.
7. *Community loss index* - a measure of community similarity, measuring the difference in the taxonomic composition between the study station and the reference station:

$$\text{Community Loss Index} = \frac{b - a}{c}$$

where a = number of taxa common to both stations;

b = total number of taxa in the reference station sample;

c = total number of taxa in the test station sample.

8. *Ratio of shredders to total taxa* - the number of shredders divided by the total number of individuals in the CPOM sample.

Following calculation of the eight metrics, a Biological Condition Score was assigned to each metric based on comparison of the metric score for the study station to that of the reference station (Table 4). Biological Condition Scores for each metric were then summed and a Biological Condition Category was assigned for the study station based on the percent comparability with the reference station score (Table 5).

Table 4. Biological condition scoring criteria for RBP III metrics. From Plafkin et al. (1989).

| Metric | <u>Biological Condition Scoring Criteria</u> | | | |
|---|--|----------|----------|----------|
| | <u>6</u> | <u>4</u> | <u>2</u> | <u>0</u> |
| 1. Taxa Richness ^a | >80% | 60-80% | 40-60% | <40% |
| 2. Hilsenhoff Biotic Index (modified) ^b | >85% | 70-85% | 50-70% | <50% |
| 3. Ratio of Scrapers/Filterers Collectors ^(a,c) | >50% | 35-50% | 20-35% | <20% |
| 4. Ratio of EPT and Chironomid Abundances ^(a) | >75% | 50-75% | 25-50% | <25% |
| 5. % Contribution of Dominant Taxon ^(d) | <20% | 20-30% | 30-40% | >40% |
| 6. EPT Index ^(a) | >90% | 80-90% | 70-80% | <70% |
| 7. Community Loss Index ^(e) | <0.5 | 0.5-1.5 | 1.5-4.0 | >4.0 |
| 8. Ratio of Shredders/Total ^(a,c) | >50% | 35-50% | 20-35% | <20% |

(a) Score is a ratio of study site to reference site X 100.

(b) Score is a ratio of reference site to study site X 100.

(c) Determination of Functional Feeding group is independent of taxonomic grouping.

(d) Scoring criteria evaluate actual percent contribution, not percent comparability to the reference station.

(e) Range of values obtained. A comparison to the reference station is incorporated in these indices.

Table 5. Bioassessment categories based on percent comparability of study stream to reference stream. From Pflakin et al. (1989).

| Percent Comparability to Reference Score ^(a) | BIOASSESSMENT | |
|--|----------------------------------|---|
| | Biological Condition Category | Attributes |
| >83% | Nonimpaired | Comparable to the best situation to be expected within an ecoregion. Balanced trophic structure. Optimum community structure (composition and dominance) for stream size and habitat quality. |
| 54-79% | Slightly impaired | Community structure less than expected. Composition (species richness) lower than expected due to loss of some intolerant forms. Percent contribution of tolerant forms increases. |
| 21-50% | Moderately impaired | Fewer species due to loss of most intolerant forms. Reduction in EPT index. |
| <17% | Severely impaired | Few species present. If high densities of organisms, then dominated by one or two taxa. |

(a) Percentage values obtained that are intermediate to the above ranges will require subjective judgement as to the correct placement. Use of the habitat assessment and physicochemical data may be necessary to aid in the decision process.

Only a subset of the eight metrics are appropriate for analysis of the data from the wetlands station: taxa richness, percent contribution of dominant taxon, community loss index and the HBI. Those four metrics were used to compare the study station to the reference wetlands station.

Quality Assurance

Quality assurance protocols followed those detailed by Tingler (1993). Appropriate chain of custody procedures were employed for the samples. All samples are permanently archived at the Aquatic Ecology Laboratory at Virginia Commonwealth University. All data were checked for transcriptional errors following their entry into the computer data base. Copies of the field and laboratory data sheets are archived in files at Virginia Commonwealth University. Replicate sampling and sample processing were conducted to check the accuracy of the field collection efforts. Data from the replicate sampling were used solely to meet quality assurance objectives; they are included in the archived data base but were not used as part of the metric assessment calculations. Additionally, a laboratory audit, with an acceptance criteria of 10%, was conducted on 5% of the benthic samples, thereby validating taxonomic identifications and numbers of individuals in those samples.

RESULTS

Species Composition

During the first year of the study a total of 87 taxa were identified from the streams and wetland sites (Smock et al. 1994). An additional fifty taxa were observed for the first time during this year's sampling, giving a total of 137 taxa collected at the sites. Of those, 24 were Trichoptera, 20 were Plecoptera and 13 were Ephemeroptera, or a total of 57 EPT taxa. Chironomidae and Simuliidae as species groups continued to be the dominant taxa in the streams in terms of numbers collected. A complete list of the taxa collected during both years of this study is provided in Table 6.

The species collected were from a variety of functional feeding groups (Table 6). The most common shredders in the streams were Tipulidae and Plecoptera, primarily of the families Capniidae and Nemouridae but also Leuctridae and Taeniopterygidae. Blackflies and hydropsychid caddisflies were the primary filter-feeders. A wide variety of collector-gatherers occurred in the streams. As during last year, scrapers were not common in the streams, no doubt due to low periphyton growth resulting from the full canopy that existed at most sites.

The species composition at the wetland sites was, as expected, very different from that in the streams. Chironomidae, Oligochaeta and Ceratopogonidae were by far the most abundant taxa. In contrast to last year, however, when only one EPT taxon was collected from the wetlands, 14 EPT taxa were collected this year, although none was abundant. The taxa included a variety of

Table 6. List of Macroinvertebrate taxa collected, their functional feeding groups and tolerance values. Functional feeding group designations are: CF = collector-filterer; CG = collector-gatherer; PI = piercer; PR = predator; SC = scraper; SH = shredder.

| CODE | ORDER | FAMILY | GENUS | SPECIES | FD GLD | HBI |
|------|---------------|-----------------|---------------------|---------------------|--------|-------|
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | SH | 6.90 |
| AHXX | Annelida | Hirudinea | | | CG | 8.20 |
| AOXX | Annelida | Oligochaetae | | | CG | 8.20 |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | CF | 6.30 |
| BSMU | Bivalvia | Sphaeriidae | <u>Musculium</u> | sp. | CF | 7.60 |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | CF | 6.80 |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | CF | 7.70 |
| BUEL | Bivalvia | Unionidae | <u>Elliptio</u> | <u>complanata</u> | CF | 5.40 |
| CDHE | Coleoptera | Dryopidae | <u>Helichus</u> | sp. | SC | 5.40 |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | PR | 8.90 |
| CDLA | Coleoptera | Dytiscidae | <u>Laccornis</u> | sp. | PI | 8.00 |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | CG | 6.90 |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | CG | 6.40 |
| CEHE | Coleoptera | Elmidae | <u>Helichus</u> | sp. | SC | 5.40 |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | SH | 4.70 |
| CEOU | Coleoptera | Elmidae | <u>Oulinus</u> | <u>latiusculus</u> | SC | 1.80 |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | SC | 5.40 |
| CGDI | Coleoptera | Gyrinidae | <u>Dineutes</u> | sp. | PR | 5.50 |
| CGGY | Coleoptera | Gyrinidae | <u>Gyrinus</u> | spp. | PR | 6.30 |
| CHPE | Coleoptera | Halplidae | <u>Peltodytes</u> | sp. | PR | 8.50 |
| CHBE | Coleoptera | Hydrophilidae | <u>Berosus</u> | sp. | PI | 8.60 |
| CHTR | Coleoptera | Hydrophilidae | <u>Tropisternus</u> | sp. | PR | 9.80 |
| DCAX | Decapoda | Cambaridae | | | SH | 6.80 |
| DPPA | Decapoda | Palaemonidae | <u>Palaemonetes</u> | <u>paludosus</u> | SH | 6.70 |
| DCER | Diptera | Ceratopogonidae | | | PR | 6.70 |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | PR | 6.50 |
| DCPA | Diptera | Ceratopogonidae | <u>Palponia</u> | spp. | PR | 6.90 |
| DCCH | Diptera | Chaoboridae | <u>Chaoborus</u> | <u>punctapennis</u> | PR | 8.50 |
| DCXX | Diptera | Chironomidae | | | CG | 7.00 |
| DCCL | Diptera | Culicidae | <u>Culex</u> | sp. | CF | 10.00 |
| DEMX | Diptera | Empididae | | | PR | 8.10 |
| DEHE | Diptera | Empididae | <u>Hemerodromia</u> | sp. | PR | 8.10 |
| DEXX | Diptera | Ephydriidae | | | CG | 6.00 |
| DPPE | Diptera | Psychodidae | <u>Pericoma</u> | sp. | CG | 9.00 |
| DSXX | Diptera | Simuliidae | | | CF | 5.10 |
| DTCH | Diptera | Tabanidae | <u>Chrysops</u> | spp. | CG | 7.30 |
| DTIM | Diptera | Tabanidae | <u>Imatura</u> | | PR | 8.50 |
| DTTA | Diptera | Tabanidae | <u>Tabanus</u> | spp. | PR | 9.70 |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | CG | 4.60 |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | PR | 0.00 |
| DTHE | Diptera | Tipulidae | <u>Hexatona</u> | spp. | PR | 4.70 |
| DTLI | Diptera | Tipulidae | <u>Limonia</u> | spp. | SH | 10.00 |
| DTOR | Diptera | Tipulidae | <u>Ormosia</u> | spp. | CG | 6.20 |
| DTPI | Diptera | Tipulidae | <u>Pilaria</u> | spp. | PR | 6.20 |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | SH | 7.70 |
| EBXX | Ephemeroptera | Baetidae | | | CG | 1.00 |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | CG | 5.40 |
| EBCE | Ephemeroptera | Baetidae | <u>Centroptilum</u> | sp. | CG | 6.30 |

Table 6. continued.

| CODE | ORDER | FAMILY | GENUS | SPECIES | FD GLD | HBI |
|------|---------------|-----------------|-------------------------|-----------------------|--------|------|
| EBPS | Ephemeroptera | Baetidae | <u>Pseudocloeon</u> | spp. | CG | 4.40 |
| EBBT | Ephemeroptera | Baetiscidae | <u>Baetisca</u> | sp. | CG | 1.90 |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | CG | 7.60 |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | CG | 1.00 |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | CG | 4.60 |
| EESE | Ephemeroptera | Ephemerellidae | <u>Seratella</u> | sp. | CG | 1.70 |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | CG | 7.10 |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | CG | 5.80 |
| ELLE | Ephemeroptera | Leptophlebiidae | <u>Leptophlebia</u> | sp. | CG | 6.40 |
| ELPA | Ephemeroptera | Leptophlebiidae | <u>Paraleptophlebia</u> | sp. | CG | 1.20 |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | CF | 3.80 |
| GAFE | Gastropoda | Ancylidae | <u>Ferrissia</u> | sp. | SC | 6.90 |
| GHSO | Gastropoda | Hydrobiidae | <u>Somatogyrus</u> | spp. | SC | 6.50 |
| GLLY | Gastropoda | Lymnaeidae | <u>Lymnaea</u> | sp. | SC | 6.00 |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | SC | 9.10 |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | SC | 8.00 |
| GPHE | Gastropoda | Planorbidae | <u>Helisoma</u> | sp. | SC | 6.50 |
| GPPL | Gastropoda | Planorbidae | <u>Planorbula</u> | sp. | SC | 8.00 |
| GPEL | Gastropoda | Pleuroceridae | <u>Elinia</u> | sp. | SC | 2.50 |
| GVVI | Gastropoda | Viviparidae | <u>Viviparus</u> | sp. | SC | 4.60 |
| GVCA | Gastropoda | Vivparidae | <u>Campelona</u> | sp. | SC | 6.70 |
| HBBE | Hemiptera | Belostomatidae | <u>Belostona</u> | sp. | PR | 9.80 |
| HCTR | Hemiptera | Corixidae | <u>Tricorixa</u> | sp. | PI | 9.00 |
| HXXX | Hydracarina | | | | PR | 5.70 |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | SH | 9.40 |
| LXXX | Lepidoptera | | | | SH | 5.00 |
| MCCH | Megaloptera | Corydalidae | <u>Chauliodes</u> | sp. | PR | 5.80 |
| MCCO | Megaloptera | Corydalidae | <u>Corydalus</u> | <u>cornutus</u> | PR | 5.60 |
| MCNI | Megaloptera | Corydalidae | <u>Nigronia</u> | <u>serricornis</u> | PR | 5.50 |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | PR | 7.50 |
| NXXX | Nematoda | | | | CG | 8.50 |
| OABA | Odonata | Aeshnidae | <u>Basiaeschna</u> | sp. | PR | 7.70 |
| OABO | Odonata | Aeshnidae | <u>Boveria</u> | <u>vinosa</u> | PR | 6.30 |
| OAEP | Odonata | Aeshnidae | <u>Epiaeschna</u> | sp. | PR | 7.30 |
| OCCA | Odonata | Calopterygidae | <u>Calopteryx</u> | spp. | PR | 8.30 |
| OCEN | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | PR | 9.00 |
| OCIM | Odonata | Coenagrionidae | <u>Innatura</u> | | PR | 9.00 |
| OCEP | Odonata | Corduliidae | <u>Epithea</u> | sp. | PR | 5.50 |
| OCHE | Odonata | Corduliidae | <u>Helocordulia</u> | sp. | PR | 5.00 |
| OCTE | Odonata | Corduliidae | <u>Tetragoneuria</u> | spp. | PR | 8.50 |
| OGXX | Odonata | Gomphidae | | | PR | 6.00 |
| OGAG | Odonata | Gomphidae | <u>Arigomphus</u> | sp. | PR | 6.00 |
| OGDR | Odonata | Gomphidae | <u>Dromogomphus</u> | sp. | PR | 6.30 |
| OGHA | Odonata | Gomphidae | <u>Hagenius</u> | <u>brevistylus</u> | PR | 4.00 |
| OGLA | Odonata | Gomphidae | <u>Lanthus</u> | sp. | PR | 2.70 |
| OGPR | Odonata | Gomphidae | <u>Progomphus</u> | <u>obscurus</u> | PR | 8.70 |
| OLLI | Odonata | Libellulidae | <u>Libellula</u> | spp. | PR | 9.80 |
| OLPA | Odonata | Libellulidae | <u>Pachydiplax</u> | <u>longipenis</u> | PR | 9.60 |

Table 6. continued.

| CODE | ORDER | FAMILY | GENUS | SPECIES | FD GLD | HBI |
|------|-------------|-------------------|-----------------------|------------------|--------|------|
| OLSO | Odonata | Libellulidae | <u>Sonatochlora</u> | spp. | PR | 8.90 |
| OMMA | Odonata | Macroniidae | <u>Macronia</u> | spp. | PR | 6.70 |
| OXXX | Ostracoda | | | | CF | 6.00 |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | SH | 2.80 |
| PCHA | Plecoptera | Chloroperlidae | <u>Haploperia</u> | sp. | PR | 1.30 |
| PCSU | Plecoptera | Chloroperlidae | <u>Suwalia</u> | sp. | PR | 0.00 |
| PIMM | Plecoptera | Immature | | | PR | 4.00 |
| PLLE | Plecoptera | Leuctridae | <u>Leuctra</u> | sp. | SH | 0.70 |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | SH | 3.40 |
| PNNE | Plecoptera | Nemouridae | <u>Nemoura</u> | spp. | SH | 3.40 |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | SH | 6.10 |
| PNSH | Plecoptera | Nemouridae | <u>Shipsa</u> | <u>rotunda</u> | SH | 0.30 |
| PPAG | Plecoptera | Perlidae | <u>Agnetina</u> | sp. | PR | 0.00 |
| PPBE | Plecoptera | Perlidae | <u>Beloneuria</u> | sp. | PR | 0.00 |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | PR | 4.10 |
| PPHA | Plecoptera | Perlidae | <u>Hansonoperla</u> | sp. | PR | 1.80 |
| PERL | Plecoptera | Perlidae | <u>Immature</u> | | PR | 3.50 |
| PPNE | Plecoptera | Perlidae | <u>Neoperla</u> | sp. | PR | 1.60 |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | PR | 4.90 |
| PPPN | Plecoptera | Perlidae | <u>Perlinella</u> | sp. | PR | 0.00 |
| PPCL | Plecoptera | Perlodidae | <u>Clioberla</u> | <u>clio</u> | PR | 4.80 |
| PPDI | Plecoptera | Perlodidae | <u>Diploperia</u> | sp. | PR | 2.00 |
| PPIM | Plecoptera | Perlodidae | <u>Immature</u> | | PR | 2.00 |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | PR | 2.00 |
| PTST | Plecoptera | Taeniopterygidae | <u>Strophoteryx</u> | sp. | SH | 2.50 |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | SH | 6.30 |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | CF | 1.10 |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | CF | 6.60 |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | CF | 4.00 |
| THMA | Trichoptera | Hydropsychidae | <u>Macrostemum</u> | sp. | CF | 3.60 |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | PI | 6.20 |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | PI | 7.20 |
| TLLE | Trichoptera | Lepidostomatidae | <u>Lepidostoma</u> | sp. | SH | 1.00 |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | CG | 2.30 |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | SH | 4.10 |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | PR | 5.70 |
| TLIM | Trichoptera | Linnephilidae | <u>Immature</u> | | SH | 3.70 |
| TLIR | Trichoptera | Linnephilidae | <u>Ironoquia</u> | spp. | SH | 7.30 |
| TLLI | Trichoptera | Linnephilidae | <u>Linniphilus</u> | sp. | SH | 3.70 |
| TLNO | Trichoptera | Linnephilidae | <u>Neophylax</u> | spp. | CF | 1.40 |
| TLPY | Trichoptera | Linnephilidae | <u>Pycnopsyche</u> | spp. | SH | 2.30 |
| TOPS | Trichoptera | Odontoceridae | <u>Psilotreta</u> | sp. | SC | 0.00 |
| TPCH | Trichoptera | Philopotamidae | <u>Chinarra</u> | sp. | CF | 2.30 |
| TPWO | Trichoptera | Philopotamidae | <u>Wormaldia</u> | sp. | CF | 0.40 |
| TPYX | Trichoptera | Phryganeidae | | | SH | 6.70 |
| TPPT | Trichoptera | Phryganeidae | <u>Ptilostomis</u> | sp. | SH | 6.70 |
| TPNE | Trichoptera | Polycentropodidae | <u>Neureclipsis</u> | sp. | CF | 4.40 |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | CF | 0.90 |

Table 6. continued.

| <u>CODE</u> | <u>ORDER</u> | <u>FAMILY</u> | <u>GENUS</u> | <u>SPECIES</u> | <u>FD GLD</u> | <u>HBI</u> |
|-------------|--------------|-------------------|-----------------------|----------------|---------------|------------|
| TPPH | Trichoptera | Polycentropodidae | <u>Phylocentropus</u> | sp. | CF | 5.60 |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | CF | 3.50 |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | CG | 4.30 |
| TRRH | Trichoptera | Rhyacophilidae | <u>Rhyacophila</u> | sp. | PR | 0.80 |
| TPDU | Turbellaria | Planariidae | <u>Dugesia</u> | <u>tigrina</u> | PR | 7.50 |

Ephemeroptera and Trichoptera as well as three Plecoptera, an order of insects not known for occurring in slow-flowing water such as in most wetlands. It is possible that the wetlands experienced greater flow conditions this year, allowing colonization by stream-dwelling EPT taxa through drift.

Metric Scores

The number of individuals of each taxon collected according to station, substrate and sampling period (Appendix B) were used to calculate the metrics for the RBPIII analysis. Metric values, the comparability of each metric to the reference station and biological condition scores for each metric for each station, substrate and sampling period are given in Appendix C.

Biological condition scores are based on the criteria presented in Table 4. Annual mean percent comparabilities for each metric were calculated for the sediment and wood samples from each station as the mean of the values from the quarterly sampling periods, thereby providing a synthesis of the metric scores over the year for each station (Tables 7 and 8). Metric values for wood are not available for the winter sampling at Stations A and E; no wood occurred in the channel at Station A in the winter and high water precluded sampling wood at the Matta River, which is the reference station for Station E.

1. *Taxa richness* values ranged from 55% to 86% of those at the reference stations for the sediment samples and from 51% to 85% for the wood samples. The lower richness values primarily were

Table 7. Annual mean comparability (COMP) relative to the reference station and annual mean biological condition scores (BCS) for sediment samples, calculated as the mean of the quarterly sampling periods.

| | Sediment | | | | | | | | | | | |
|------------|----------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| | A | | B | | C | | D | | E | | F | |
| | COMP | BGS | COMP | BGS | COMP | BGS | COMP | BGS | COMP | BGS | COMP | BGS |
| Richness | 55 | 2 | 73 | 4 | 69 | 4 | 86 | 6 | 79 | 4 | 81 | 6 |
| HBI | 86 | 6 | 94 | 6 | 91 | 6 | 96 | 6 | 78 | 4 | 100 | 6 |
| SCR/FIL | 83 | 6 | 83 | 6 | 72 | 6 | 95 | 6 | 100 | 6 | | |
| EPT/CHIR | 2.3 | 0 | 61 | 4 | 22 | 0 | 47 | 2 | 6.2 | 0 | | |
| Dominance | 74 | 0 | 41 | 0 | 65 | 0 | 54 | 0 | 58 | 0 | 82 | 0 |
| EPT | 17 | 0 | 65 | 0 | 55 | 0 | 89 | 4 | 36 | 0 | | |
| Loss Index | 1.8 | 2 | 0.9 | 4 | 1.1 | 4 | 0.5 | 4 | 0.9 | 4 | 0.7 | 4 |
| Shredder | 77 | 6 | 47 | 4 | 90 | 6 | 80 | 6 | 100 | 6 | | |

Table 8. Annual mean comparability (COMP) relative to the reference station and annual mean biological condition scores (BCS) for wood samples, calculated as the mean of the quarterly sampling periods.

| | Wood | | | | | | | | | | | | | |
|------------|------|-----|--|------|-----|--|------|-----|--|------|-----|--|------|-----|
| | A | | | B | | | C | | | D | | | E | |
| | COMP | BGS | | COMP | BGS | | COMP | BGS | | COMP | BGS | | COMP | BGS |
| Richness | 51 | 2 | | 70 | 4 | | 67 | 4 | | 85 | 6 | | 84 | 6 |
| HBI | 87 | 6 | | 97 | 6 | | 95 | 6 | | 97 | 6 | | 81 | 4 |
| SCR/FIL | 100 | 6 | | 52 | 6 | | 100 | 6 | | 70 | 6 | | 100 | 6 |
| EPT/CHIR | 3.5 | 0 | | 80 | 6 | | 53 | 4 | | 56 | 4 | | 27 | 2 |
| DOMINANCE | 62 | 0 | | 57 | 0 | | 71 | 0 | | 71 | 0 | | 70 | 0 |
| EPT | 13 | 0 | | 71 | 2 | | 41 | 0 | | 83 | 4 | | 56 | 0 |
| Loss Index | 2.4 | 2 | | 0.9 | 4 | | 1.0 | 4 | | 0.6 | 4 | | 0.8 | 4 |

the result of fewer rare species occurring at some stations rather than certain groups of species not being present. Lowest comparability (51-55%) consistently occurred at Station A. Percent comparability of richness was lower for both sediment and wood samples at most stations this year compared to 1993-1994. The decline averaged 14% for the sediment samples and 13% for the wood. Comparison of this and the other EPT-based metrics between years was strongly influenced by a much higher relative abundance of EPT taxa at the reference stations this year than last. Early instars of EPT taxa were common especially at the South River reference station during several sampling periods, suggesting recent hatches and resulting in lower percent comparability scores for the study stations.

2. As during last year, *HBI* values typically ranged from 5-7 at all stations, reflecting a predominance of taxa with moderate tolerance values. Values were slightly lower than last year, the mean percent comparability to the reference stations being 99% for both the sediment and wood samples last year, but decreasing to 91% this year. No taxa indicative of highly degraded environments were found at any of the stations.

3. Percent comparability to the reference stations for the *scraper to filterer ratio* ranged from 72-100% for the sediment and 52-100% for the wood. Since scrapers were generally uncommon at all stations, including the reference stations, this metric is not very useful in evaluating water quality of streams in the Polecat watershed.

4. The *EPT to chironomid ratio* was highly variable for both the sediment and wood samples. Percent comparability ranged from 2-61% for the sediment samples and 4-80% for the wood samples. Stations A and E had the lowest comparability for both substrates, but the metric values from the sediment and wood did not consistently provide similar comparisons for the other stations. Variability in the number of EPT taxa, rather than in the number of chironomids, was the reason for the high variability in this metric among stations.

Percent comparability to the reference station for this metric decreased considerably compared to last year. The mean comparability in 1993-94 was 86-90% for the two substrates, but decreased to 28-44% in 1994-95.

5. The *percent dominance* metric ranged from 41% to 82% for the sediment and 57% to 71% for the wood. Comparability to the reference stations decreased slightly from last year at most stations. Blackflies or chironomids composed the majority of individuals in most samples, dominating the macroinvertebrate community in terms of numbers of individuals present and thus giving low values for this metric. The Chironomidae and Simuliidae require separation to the genus level to make this metric more useful.

6. The *EPT index* also showed a decline in the number of EPT taxa at most stations (both in the sediments and on wood) compared to the reference stations. This decrease in comparability was caused by both a greater abundance of EPT taxa

at the reference stations compared to last year and also fewer EPT taxa occurring at the study stations.

7. The *community loss index* metric indicated a fairly similar species composition at the study stations compared to their reference stations except for Station A. The biological condition score of 2 from both the sediment and wood samples for that station indicates that very different taxa occurred there relative to the South River reference station.

8. The *shredder* metric showed percent comparabilities of 47-100% of the study and reference stations. Percent comparability was lowest at Station B. Values were similar to those reported for last year.

Comparison of Sediment and Wood Metric Scores

Metric scores for the sediment and wood samples from a given station were generally highly correlated. Spearman rank correlation coefficients were greater than 0.90 for all but the scraper/filterer and dominance metrics (Table 9). Insufficient sampling of wood during the first year of the monitoring program precludes a similar analysis of the 1993-94 data. Although most metric were highly correlated, it can not be determined at this time if the sampling effort for this program can be reduced to just one substrate without reducing the ability of the program to provide an accurate estimate of water and habitat quality in these streams. This aspect will continue to be evaluated as additional data from both substrates are collected.

Table 9. Spearman rank correlation coefficients from the comparison of metric values calculated from sediment and wood samples among all stations.

| Metric | Correlation Coefficient | P Value |
|---------------|-------------------------|---------|
| Taxa richness | 1.00 | 0.00 |
| HBI | 0.97 | 0.005 |
| SCR/FIL | -0.06 | 0.93 |
| EPT/CHIR | 1.00 | 0.00 |
| Dominance | 0.21 | 0.74 |
| EPT | 0.90 | 0.04 |
| Loss Index | 0.97 | 0.005 |

Summary Metric Scores

Overall percent comparabilities were calculated for each station based on the values for all metrics during each seasonal sampling period (Table 10). There were no clear seasonal trends in the percent comparabilities, highest values occurring during different seasons at different stations and depending on the substrate. This contrasts with the 1993-94 data, which showed pronounced seasonal differences in the comparability scores, highest scores generally occurring during the winter and lowest scores during the autumn.

Median percent comparability values for the sediment ranged from 42% at Station A to 77% at Station D (Fig. 2) and from 42% at Station A to 64% at Station D for the wood (Fig. 3). Based on the median percent comparabilities for both the sediment and wood and the bioassessment criteria presented in Table 5, Stations B, C, D and F all can be considered as having biological characteristics that are Slightly Impaired relative to their reference stations. Station E is classified as being Slightly to Moderately Impaired based on the wood and sediment data, respectively. Station A, which along with all other stations was classified as being Slightly Impaired based on the 1993-94 data, is downgraded to a classification of Moderately Impaired based on data from both the sediment and wood.

The downgrading of the bioassessments for Stations A and E most likely result from the extensive beaver activity in those sites. The RBPIII metrics are structured such that decreased flow and greater siltation, two of the primary effects of beavers

Table 10. Seasonal mean percent comparabilities for sampling stations.

| | <u>Sediment</u> | | | |
|---|-----------------|---------------|---------------|---------------|
| | <u>Fall</u> | <u>Winter</u> | <u>Spring</u> | <u>Summer</u> |
| A | 54 | 42 | 42 | 37 |
| B | 67 | 54 | 58 | 67 |
| C | 50 | 42 | 58 | 67 |
| D | 79 | 58 | 75 | 83 |
| E | 50 | 37 | 46 | 62 |
| F | 75 | 67 | 58 | 58 |

| | <u>Wood</u> | | | |
|---|-------------|---------------|---------------|---------------|
| | <u>Fall</u> | <u>Winter</u> | <u>Spring</u> | <u>Summer</u> |
| A | 29 | -- | 52 | 43 |
| B | 52 | 71 | 67 | 52 |
| C | 38 | 62 | 52 | 62 |
| D | 62 | 67 | 67 | 62 |
| E | 38 | -- | 62 | 57 |

Figure 2. Macroinvertebrate assessment scores for sediment sampling streams in the Polecat Creek drainage. The median, maximum and minimum values are from the four quartely sampling periods.

Polecat Creek Project Macroinvertebrate Assessment (1994-1995) Sediment Habitat

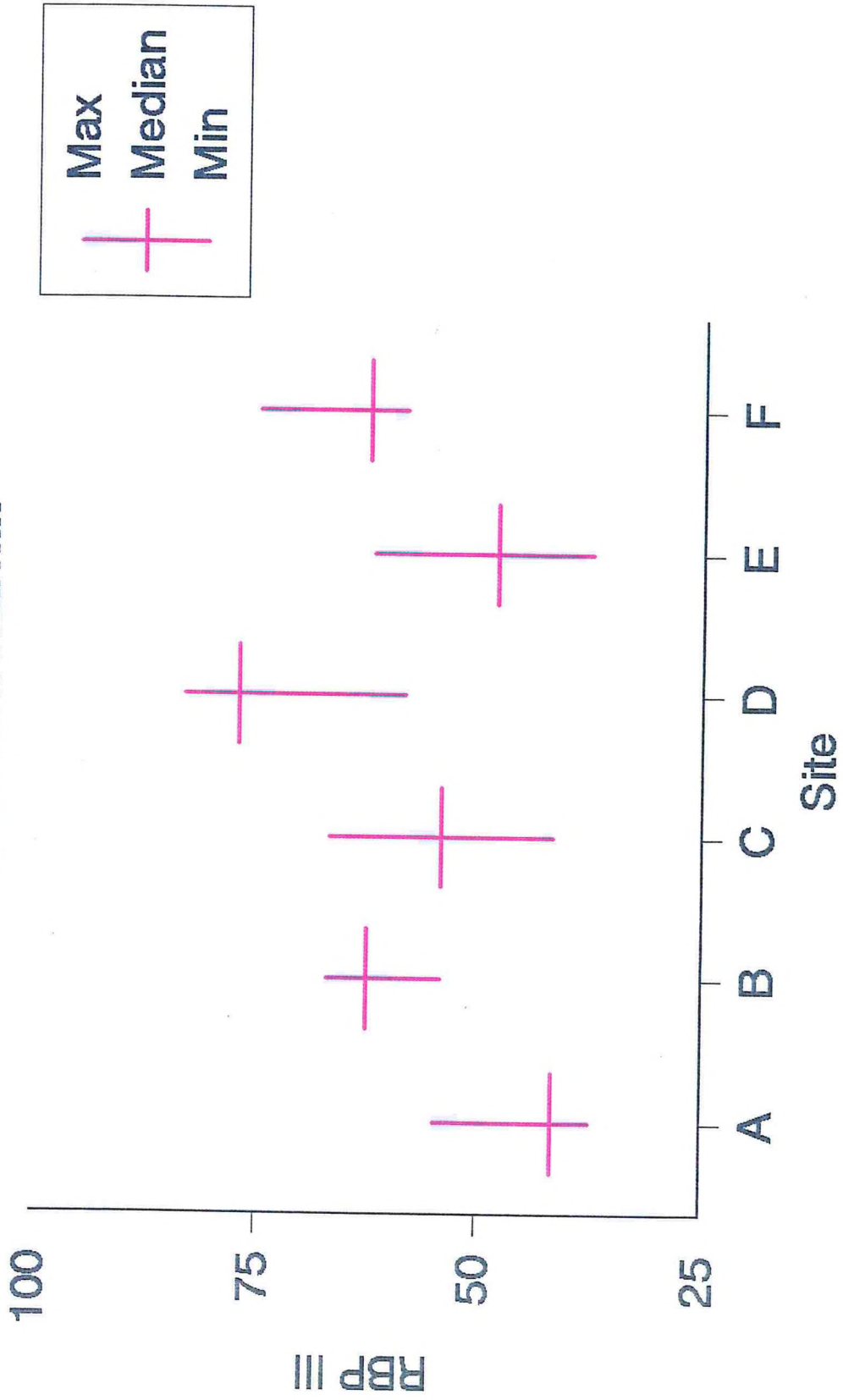
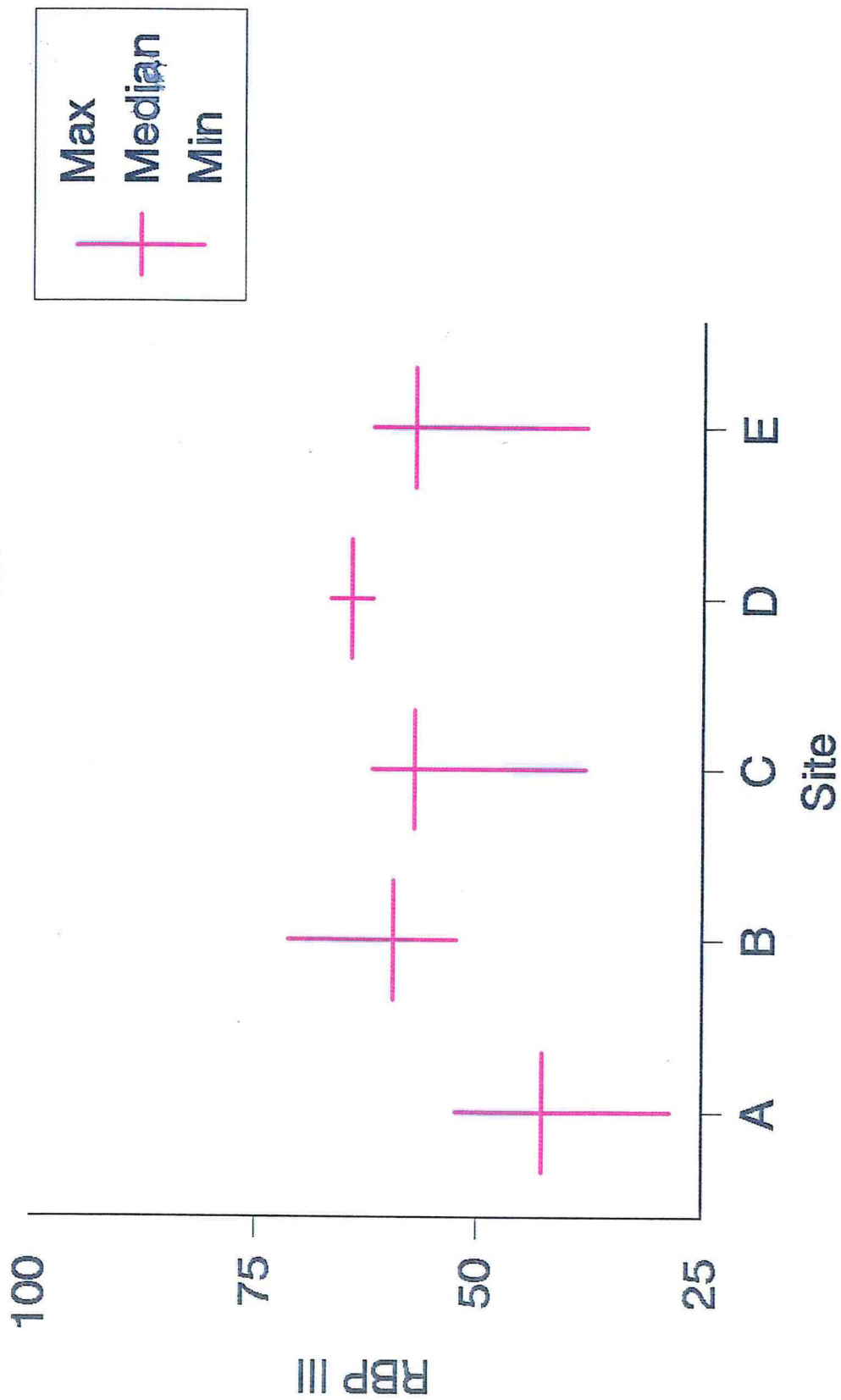


Figure 3. Macroinvertebrate assessment scores for wood sampling streams in the Polecat Creek drainage. The median, maximum and minimum values are from the four quarterly sampling periods.

Polecat Creek Project Macroinvertebrate Assessment (1994-1995) Wood Habitat



on streams, indicates lower water quality. While it is true that more "tolerant" macroinvertebrate species become established under such conditions, it is not appropriate that the effects of the activity of beavers, a species that historically has had a natural and major impact on the hydrology and geomorphology of streams, should be considered as an indication of degraded water quality. Rather, the lower metric scores should be viewed in this case as being indicative of the stream and its macroinvertebrate community having been changed to a new (and natural) ecological state.

Quality Assurance

Comparison of metric scores from replicate samples collected during each of the four sampling periods from both the sediment and wood showed fairly high variability (data in Appendix D). The replicate samples from the sediment had percent comparabilities that differed by a mean of 17% over the year; the mean difference for the wood samples was 29% (Table 11). The HBI metric varied by a mean of only 4-5% on both substrates, by far the lowest variability among the metrics. The scraper to filterer metric and the EPT to chironomid metric had the highest variability, the means ranging from 30% to 385%. Variability in these two metrics was greatly affected by natural variation in the spatial distribution of blackflies (filterers) and chironomids, which are highly patchily distributed in streams.

Although the variability in the replicate samples produced somewhat high variation in the individual metric scores, the

Table 11. Comparison of metric scores between replicate samples ((Station i score/Station k score)(100%)). The site used as the replicate given in parentheses.

| | <u>Fall (D)</u> | | <u>Winter (B)</u> | | <u>Spring (D)</u> | | <u>Summer (C)</u> | |
|--------|-----------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|
| | <u>SED</u> | <u>WOOD</u> | <u>SED</u> | <u>WOOD</u> | <u>SED</u> | <u>WOOD</u> | <u>SED</u> | <u>WOOD</u> |
| TXR | 100 | 71 | 118 | 185 | 112 | 95 | 116 | 114 |
| HBI | 92 | 98 | 104 | 115 | 103 | 100 | 97 | 102 |
| SC/F | 49 | 17 | 100 | 7 | 48 | 17 | 253 | 75 |
| EPT/CH | 145 | 76 | 130 | 1560 | 113 | 135 | 69 | 78 |
| DOM | 84 | 107 | 95.3 | 59 | 71 | 95 | 111 | 124 |
| EPT | 93 | 75 | 140 | 200 | 100 | 100 | 100 | 200 |
| CLI* | .259 | .583 | .308 | .077 | .316 | .421 | .364 | .250 |
| CPOM | 24 | N/A | 127 | N/A | 53 | N/A | 24 | N/A |

*For the CLI metric, any value below 0.5 is considered to be optimal, i.e. high correspondence between communities.

overall percent comparabilities (combining all of the metrics) and the resulting bioassessments produced by those metrics were quite similar. The replicate sediment samples had overall percent comparabilities that varied by a mean of only 6% over the four sampling periods; the mean for the wood samples was 18% (Table 12). Replicability was thus considerably greater for the sediment samples compared to the wood samples.

Table 12. Overall percent comparabilities between replicate samples $((\text{station i score}/\text{reference station score})/(\text{station k score}/\text{reference station score})) (100\%)$.

Sediment

| <u>Fall</u> | <u>Winter</u> | <u>Spring</u> | <u>Summer</u> |
|-------------|---------------|---------------|---------------|
| 105% | 108% | 100% | 88% |

Wood

| <u>Fall</u> | <u>Winter</u> | <u>Spring</u> | <u>Summer</u> |
|-------------|---------------|---------------|---------------|
| 69% | 136% | 107% | 100% |

STREAM FISH ASSESSMENT

METHODS

Methodology for the analysis of stream fish communities generally followed the procedures of the Environmental Protection Agency's Rapid Bioassessment Protocol, and specifically the Index of Biotic Integrity (IBI; Karr 1981; Plafkin et al. 1989), with minor changes. Because of zoogeographic differences in fish assemblage structure and taxonomic composition, IBI metrics were modified to be most appropriate for the Polecat Creek watershed (York River drainage), but are equivalent in approach, intent, and design to those originally proposed by Karr (1981) and Karr et al. (1986). The following fish community metrics and scoring criteria for the IBI were developed using a variety of sources, including distributional references (e.g. Hocutt et al. 1986; Garman and Nielsen 1992; Jenkins and Burkhead 1994; Weaver and Garman 1994) and were reviewed by regional fishery biologists and ichthyologists. Fish community metrics and scoring criteria follow:

Metric 1 Species richness Total number of (native) species in the sample, not including hybrids. A total of 49 nonmigratory (resident) species and 13 diadromous/estuarine species are possible within the drainage; sampling by VCU has resulted in the collection of 41 resident species from monitoring and reference sites. The number of introduced (i.e., non-indigenous) species will be considered by metric 11.

| | | | |
|---------------|----|------|-----|
| Score | 1 | 3 | 5 |
| 1st/2nd order | ≤4 | 5-7 | ≥8 |
| 3rd/4th order | ≤8 | 9-11 | ≥12 |

Metric 2 Total individuals Total number of individuals in sample, expressed as catch per unit of effort (CPUE), where effort is backpack electrofishing time (minutes).

| | | | |
|------------|-----|-------|-----|
| Score | 1 | 3 | 5 |
| all orders | ≤30 | 31-60 | ≥61 |

Metric 3 Darter species Total number of darter (Etheostoma & Percina spp. only for York drainage) species per sample. Four species are possible.

| | | | |
|---------------|---|-----|----|
| Score | 1 | 3 | 5 |
| 1st/2nd order | 0 | 1-2 | ≥3 |
| 3rd/4th order | 1 | 2-3 | 4 |

Metric 4 Sunfish species Total number of centrarchid species, exclusive of Micropterus spp.; 12 species (native and introduced) possible from the York drainage.

| | | | |
|---------------|----|-----|----|
| Score | 1 | 3 | 5 |
| 1st/2nd order | ≤1 | 2-4 | ≥5 |
| 3rd/4th order | ≤2 | 3-7 | ≥8 |

Metric 5 Sucker species Total number of catostomid species in the sample; four species possible from the York drainage.

| | | | |
|---------------|----|-----|----|
| Score | 1 | 3 | 5 |
| 1st/2nd order | 0 | 1-2 | ≥3 |
| 3rd/4th order | ≤1 | 2-3 | 4 |

Metric 6 Intolerant species Total number of species, per sample, classified as "intolerant" of degraded stream conditions. Intolerant species will include: Lampetra appendix, L. aepytera, northern hogsucker, tadpole madtom, shield darter, and stripeback darter.

| | | | |
|---------------|----|-----|----|
| Score | 1 | 3 | 5 |
| 1st/2nd order | 0 | 1-2 | ≥3 |
| 3rd/4th order | ≤1 | 2-3 | ≥4 |

Metric 7 Tolerant species Percentage of individuals classified as "tolerant" of degraded stream conditions. This metric will use the relative abundance of a guild of species to replace the "green sunfish" metric of Karr (1981), as suggested by Karr et al. (1986). Tolerant species will include: golden shiner, pumpkinseed sunfish, bluegill, creek chubsucker, brown bullhead, yellow bullhead, and tessellated darter.

| | | | |
|---------------|-----|-------|-----|
| Score | 1 | 3 | 5 |
| 1st-4th order | <10 | 10-25 | >25 |

Metric 8 Omnivorous species Percentage of individuals per sample classified as omnivores; species will include: common carp, Nocomis spp., white sucker, channel catfish, and bluntnose minnow.

| | | | |
|---------------|-----|-------|-----|
| Score | 1 | 3 | 5 |
| 1st-4th order | >45 | 20-45 | <20 |

Metric 9 Insectivorous cyprinids Percentage of cyprinid individuals per sample classified as insectivores; species will include: satinfish shiner, swallowtail shiner, common shiner, comely shiner, rosyface shiner, bridle shiner, rosieside dace.

| | | | |
|---------------|-----|-------|-----|
| Score | 1 | 3 | 5 |
| 1st-4th order | <20 | 20-45 | >45 |

Metric 10 Piscivores Percentage of individuals per sample classified as facultative piscivores (apex predators); species will include: redbfin pickerel, chain pickerel, smallmouth bass, largemouth bass, black crappie.

| | | | |
|---------------|----|-----|----|
| Score | 1 | 3 | 5 |
| 1st-4th order | <1 | 1-5 | >5 |

Metric 11 Introduced species Percentage of individuals per sample classified as non-indigenous species. Hocutt and Wiley (1986) report 12 introduced species from the York drainage. This

metric replaces the "hybrid" metric of Karr (1981) because hybrid identifications are often problematic, especially in the field. Moreover, the numerical dominance of exotic taxa in disturbed ecosystems is well-documented in the literature. Both the new "introduced" metric and the old "hybrid" metric influence the overall IBI score most significantly under "poor" and "fair" stream conditions.

| | | | |
|---------------|----|-----|----|
| Score | 1 | 3 | 5 |
| 1st-4th order | >5 | 1-5 | <1 |

Metric 12 Anomalies Percentage of individuals per sample exhibiting external parasites, infections, or skeletal abnormalities.

| | | | |
|---------------|----|-----|----|
| Score | 1 | 3 | 5 |
| 1st-4th order | >5 | 2-5 | <2 |

Stream fish communities were sampled by backpack and modified boat electrofishing during Fall, 1994, and Spring and Summer, 1995, following standard fisheries protocols. Fish were identified to species in the field by Mr. Mark King or Dr. Greg Garman; small voucher collections for each species were placed into VCU's Fish Collection in the Life Sciences building, 816 Park Avenue, Richmond, Virginia. Voucher collections were

catalogued and later verified by Drs. Steven McIninch (Virginia Commonwealth University) and Robert Jenkins (Roanoke College). Data were entered into VCU's **ASSESS** relational database application, which has been developed to calculate IBI metrics and scores for individual collections. All activities followed the Quality Assurance Project Plan prepared by CBLAD.

FISH COMMUNITY STRUCTURE

During the period October 1, 1994 - August 31, 1995, a total of 34 fish samples were collected from trend monitoring and reference sites. Forty species, representing 11 taxonomic families, were identified from all samples (Table 13); the current species list includes 82 percent of the non-migratory taxa known to occur in the Mattaponi (York) River drainage. The family Cyprinidae (the minnows) contributed the greatest number of species (n=11), followed by the sunfishes (Centrarchidae; n=9). Fish assemblage composition at all sites was characteristic of mid-Atlantic coastal plain and piedmont streams (Garman and Nielsen 1992). Although no new species were collected during 1994-1995, 32 additional records for individual sites were documented (Table 13) in the second year of sampling. Otherwise, fish communities, as reflected by 1993-1994 and 1994-1995 collections, showed little between-year variation.

Table 13. Fish species list for the Polecat Creek Watershed Study, based on electrofishing collections made during the period Summer, 1993 - Summer, 1995. An "n" indicates a new site-specific record based on 1994-1994 sampling. Site names are provided in Table 1.

| Species | Sites | | | | | | | | | | |
|---|-------|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | R | S | M | W | H |
| Petromyzon marinus sea lamprey | | | | | | | | | x | | |
| Lampetra appendix brook lamprey | | | x | | x | | x | | x | | |
| Lampetra aepyptera least brook lamprey | | | x | | x | | x | x | x | | |
| Lampetra spp. n | | | | | | | | | | | |
| Amia calva bowfin | | | | n | x | | | | | | |
| Anguilla rostrata American eel | x | | x | x | x | x | x | x | x | | x |
| Umbra pygmaea eastern mudminnow | x | | x | x | x | x | x | x | | n | x |
| Esox americana redfin pickerel | x | | x | | x | x | x | x | | | x |
| Esox niger chain pickerel | x | | n | x | x | x | x | x | x | x | x |
| Nocomis micropogon river chub | | | | | | | x | x | | n | |
| Nocomis leptocephalus bluehead chub | | x | x | x | | | | n | | | |
| Semotilus atromaculatus creek chub | n | | n | | | | x | x | | x | x |

Table 13 (cont.). Fish species list for the Polecat Creek Watershed Study, based on electrofishing collections made during the period Summer, 1993 - Summer, 1995. An "n" indicates a new site-specific record based on 1994-1994 sampling. Site names are provided in Table 1.

| Species | Sites | | | | | | | | | | |
|---|-------|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | R | S | M | W | H |
| <i>Semotilus corporalis</i> fallfish | | | x | x | x | | | | x | | |
| <i>Clinostomus funduloides</i> rosyside dace | | | x | x | | | | x | | | |
| <i>Cyprinella analostana</i> satinfin shiner | | x | | | | | x | | x | | |
| <i>Luxilus cornutus</i> common shiner | | x | x | x | | | x | x | x | | |
| <i>Notropis procne</i> swallowtail shiner | | x | | n | x | | x | x | x | | |
| <i>Notemigonus crysoleucas</i> golden shiner | x | | x | | x | x | x | x | | x | |
| <i>Notropis rubellus</i> rosefin shiner | | | | | x | | x | | | | |
| <i>Notropis amoenus</i> comely shiner | | | | | | | | | x | | |
| <i>Notropis</i> sp. | | x | | | | | | | n | n | |
| <i>Erimyzon oblongus</i> creek chubsucker | x | x | n | x | x | x | x | x | n | x | x |
| <i>Catostomus commersoni</i> white sucker | | | | | | | | x | n | | |
| <i>Noturus insignis</i> margined madtom | | x | x | x | x | | x | | x | | |

Table 13 (cont.). Fish species list for the Polecat Creek Watershed Study, based on electrofishing collections made during the period Summer, 1993 - Summer, 1995. An "n" indicates a new site-specific record based on 1994-1994 sampling. Site names are provided in Table 1.

| Species | Sites | | | | | | | | | | |
|-------------------------|-------|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | R | S | M | W | H |
| Noturus gyrinus | | | | | x | x | | | | | |
| tadpole madtom | | | | | | | | | | | |
| Ameiurus natalis | x | x | x | n | | x | x | | n | | x |
| yellow bullhead | | | | | | | | | | | |
| Ameiurus nebulosus | x | | | | | | | | | | |
| brown bullhead | | | | | | | | | | | |
| Aphrododerus sayanus | x | | x | x | x | x | x | | x | | x |
| pirate perch | | | | | | | | | | | |
| Lepomis auritus | | x | x | x | x | | x | | x | | |
| redbreasted sunfish | | | | | | | | | | | |
| Lepomis gulosus | x | n | x | x | x | x | x | | | | x |
| warmouth | | | | | | | | | | | |
| Lepomis macrochirus | | x | x | x | x | x | x | | x | | x |
| bluegill | | | | | | | | | | | |
| Lepomis gibbosus | x | n | x | x | x | n | x | | x | | x |
| pumpkinseed sunfish | | | | | | | | | | | |
| Micropterus salmoides | | x | | | x | | n | | | | |
| largemouth bass | | | | | | | | | | | |
| Acantharcus pomotis | x | x | x | x | x | x | n | n | n | | x |
| mud sunfish | | | | | | | | | | | |
| Enneacanthus gloriosus | | x | n | x | x | x | n | x | | x | x |
| bluespotted sunfish | | | | | | | | | | | |
| Enneacanthus obesus | | x | | | | | | | | | |
| banded sunfish | | | | | | | | | | | |
| Centrarchus macropterus | x | x | x | x | n | n | | | | | |
| flier | | | | | | | | | | | |

Table 13 (cont.). Fish species list for the Polecat Creek Watershed Study, based on electrofishing collections made during the period Summer, 1993 - Summer, 1995. An "n" indicates a new site-specific record based on 1994-1994 sampling. Site names are provided in Table 1.

| Species | Sites | | | | | | | | | | |
|---------------------|-------|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | R | S | M | W | H |
| Perca flavescens | | | | | n | | x | | | | |
| yellow perch | | | | | | | | | | | |
| Percina notogramma | | x | x | x | n | | x | | x | | |
| stripebacked darter | | | | | | | | | | | |
| Percina peltata | | | | x | x | | x | | x | | |
| shield darter | | | | | | | | | | | |
| Etheostoma olmstedi | x | x | x | x | n | x | x | x | n | x | |
| tesselated darter | | | | | | | | | | | |
| Etheostoma vitreum | | | | | | | x | | | | |
| glassy darter | | | | | | | | | x | | |

With the exception of the sea lamprey (Petromyzon marinus), no anadromous fishes were collected during the 1994-1995 sampling period. Species richness ranged widely among sites and seasons (Fig. 4), but few trends were present. Compared to stream sites, sampling at wetland sites (F and W) consistently collected fewer species, many of which (e.g. eastern mudminnow, mud sunfish, pirate perch) are preadapted to hypoxic conditions. Fish species richness at reference sites was generally higher, compared to trend monitoring sites of equivalent stream order (Fig. 4). Median values for species richness (1993-1994 collection year; Fig. 4) showed a slight, increasing trend with stream order, and were consistent with the results of seasonal sampling during the current (1994-1995) year.

At trend monitoring sites species richness for 1994-1995 collections ranged between 1 (unnamed site W, Summer 1995) and 14 (Stevens Mill Run, Fall 1994). Only a single species (creek chubsucker) was present at all locations, but several taxa, including chain pickerel, bluegill, and mud sunfish were present at 10 of 11 sites (Table 13). In contrast, three taxa (i.e., sea lamprey, comely shiner, and brown bullhead) were collected at a single site. No state or federally-listed fish species were collected from monitoring or reference sites, although two of the sampled taxa (mud sunfish Acantharchus pomotis and banded sunfish Enneacanthus obesus) are classified as "special concern" by Virginia Natural Heritage (DCR). Both of these fishes were, however, locally abundant at several trend monitoring sites and Virginia's Committee on Endangered Species does not consider

Figure 4. Fish community species richness, as a function of sampling location and season, for the Polecat Creek watershed and reference sites. Data were collected during the period 1994-1995; explanation of site codes is provided in Table 1.

Polecat Creek Project Fish Species Richness (1994-1995)

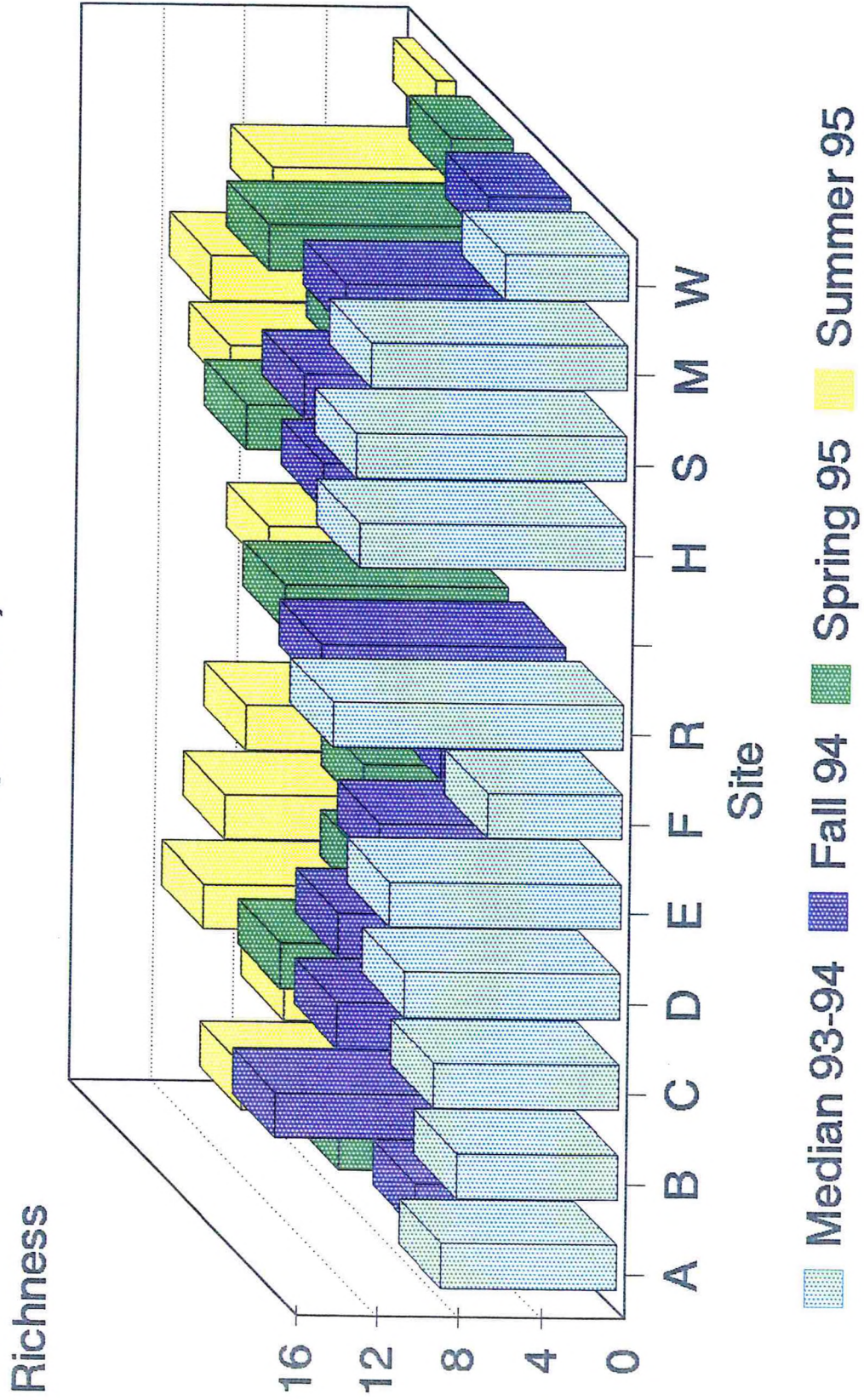
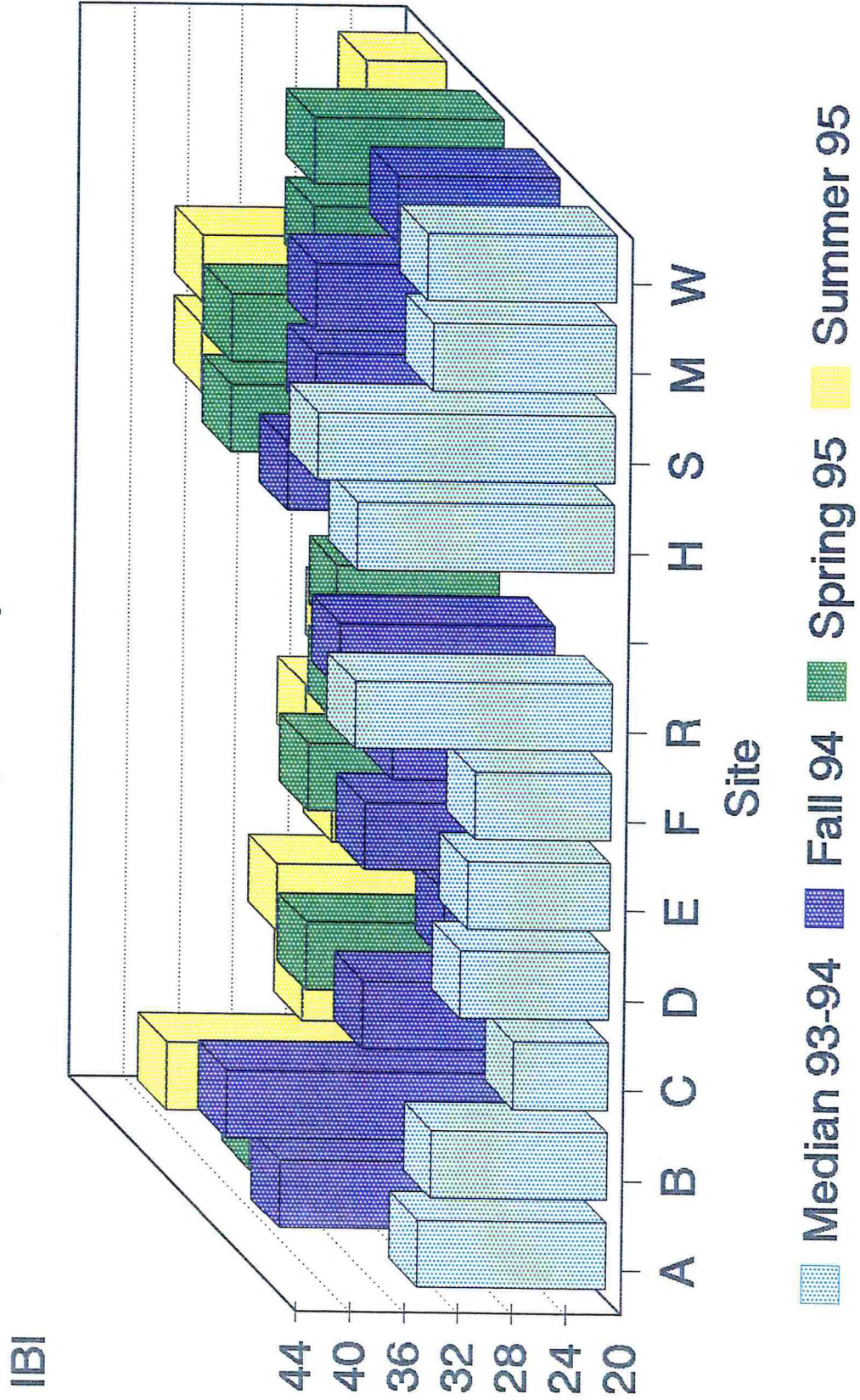


Figure 5. Index of Biotic Integrity (IBI) values, as a function of sampling location and season, for the Polecat Creek watershed and reference sites. Data were collected during the period 1993-1995; explanation of site codes is provided in Table 1.

Polecat Creek Project Index of Biotic Integrity (1994-1995)



either species deserving of special protective status. Species-level identifications for Lampetra spp. (Petromyzontidae) should be considered tentative and subject to verification.

Index of Biotic Integrity (IBI) values also ranged widely among sites and seasons, and even within sites (Fig. 5). Fish community IBI scores were consistently high (≥ 34) at reference locations, compared to trend monitoring sites of equivalent stream order, suggesting that reference locations do indeed represent relatively undisturbed conditions. IBI scores from the fourth-order and wetland reference locations (Mattaponi river and unnamed site W) were substantially lower than values for other reference locations (Fig. 5). Recent beaver activity at site W has resulted in substantial alterations to the fish habitat, and may have compromised the utility of the site as a reference location.

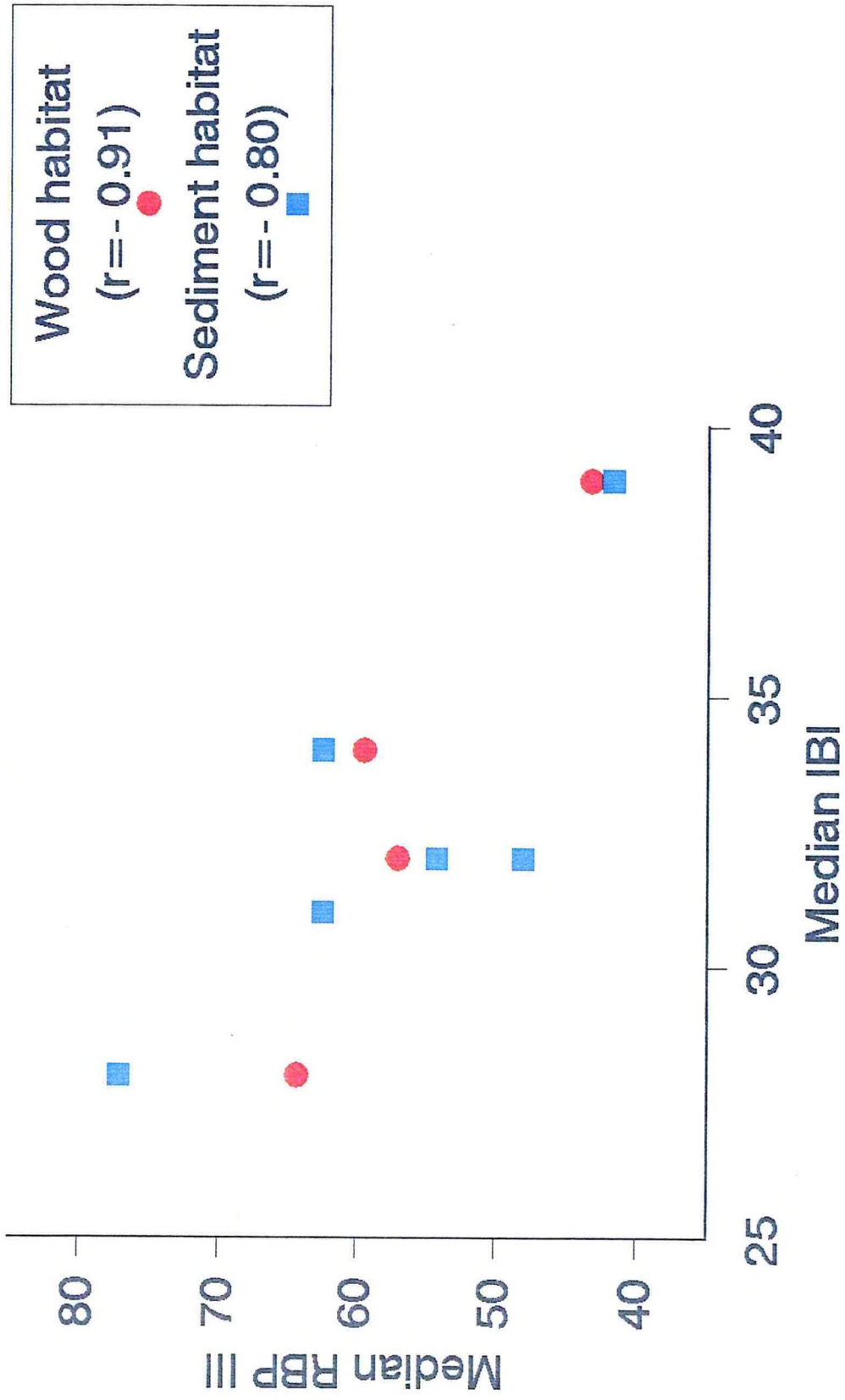
Among the monitoring sites, no obvious seasonal or longitudinal trends in IBI scores were present (Fig. 5), and values ranged from 24 (Polecat Creek site D, Spring 1995) to 46 (Steven Mill Run, Fall 1994). Based on fish community metrics, biotic integrity at the monitoring sites ranged from "fair" to "good" during the study period, and from "good" to "excellent" at reference locations during the same period. These data should provide a suitable baseline for evaluating future changes in fish community structure and biotic integrity as the result of development and other landuse impacts within the Polecat Creek watershed. As additional data are acquired in subsequent years, it will also be possible to more fully evaluate both temporal and

spatial trends in fish community metrics and IBI scores. Individual collection reports providing IBI metric scores and index values are provided in Appendix E, and fish community description reports are provided in Appendix F.

The two biomonitoring protocols in the present study (IBI vs. RBP III) use data on different components of the stream community (i.e., fish vs. aquatic macroinvertebrates) to assess biotic integrity within a particular stream reach. A synoptic analysis (Spearman's Rank Correlation) of these two approaches for trend monitoring sites during 1994-1995 (Fig. 6) resulted in significant ($P < 0.05$), but negative, correlations when median IBI and median RBP III values were compared at each site and for two different habitat types. This result suggests that the fish and macroinvertebrate assemblages at each site do not respond similarly to a wide range of habitat and water quality parameters. However, additional sampling over several consecutive years will be required to more fully evaluate the relationship between these two rapid bioassessment protocols. This study should eventually provide an extremely valuable database to evaluate the relative merits of these widely-used approaches to biomonitoring. To the best of our knowledge, there exist no other investigations that compare RBP III and IBI synoptic results for temperate stream ecosystems.

Figure 6. Synoptic comparison of two biomonitoring tools: RBP III (stream macroinvertebrate assemblage) and IBI (stream fish assemblage) for trend monitoring sites of the Polecat Creek watershed. Data were collected during the period 1994-1995 and represent median (n=4) values for two habitat types; explanation of site codes is provided in Table 1.

**Polecat Creek Project
RBP III versus IBI
(1994-1995)**



RELATED ACTIVITIES

During this project period, VCU biologists have been involved in several additional, project-related activities. Graduate student Lowell Ballard and Research Associate Mark King continued development of a relational database (dBASE version 5.0) application for the PC that manipulates bioassessment data and calculates habitat, RBP, and IBI metric scores and index values for major mid-Atlantic drainages. Mr. Ballard has presented this application at several professional meetings, where it generated considerable interest. Another graduate student, Robert Greenlee, is developing a dataset as part of his thesis project that will allow construction of model reference streams in terms of macroinvertebrate community structure. Such a model will circumvent the problem of using less than pristine reference sites in the RBP-III metric analysis.

A third VCU graduate student, Ms. Holly Hopey, is conducting a thesis project that will focus on the ecological role of beavers as significant agents of landscape and stream alteration within the Polecat Creek watershed. Three of the Polecat Creek trend monitoring sites (A, B, and D) are the focus of a year-long study that is evaluating changes in stream chemistry, instream and riparian habitat, and fish assemblage structure, as the result of beaver activity. Monthly sampling at these sites began in April, 1995 and will continue for approximately 12 months. The project will also attempt to use GIS to quantify in landuse,

riparian integrity, and other landscape-scale patterns at reference and beaver-influence sites. All of the above projects have benefitted from the assistance of Ms. Jean Tingler, CBLAD Project Coordinator.

The Principal Investigators have made presentations on the Polecat Creek study to a number of groups, including the Department of Fisheries and Wildlife Sciences at Virginia Tech and the Legislative Task-Force on Non-point Source Pollution, the Virginia Water Resources Conference, and the Virginia Wildlife Federation.

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APPENDIX A

Habitat metric scores and comparison to reference stations

 HABITAT METRICS 1-12 REPORT FOR:
 LOCATION CODE: POLNEASUM95
 REFERENCE SITE: POLNESSUM95

| | METRIC NUMBERS | | | | | | | | | | | | |
|-----------|----------------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOT |
| SITE | | | | | | | | | | | | | |
| VALUE: | 15 | 11 | 11 | 13 | 20 | 14 | 13 | 15 | 15 | 9 | 20 | 20 | 176 |
| REFERENCE | | | | | | | | | | | | | |
| VALUE: | 14 | 11 | 10 | 8 | 20 | 11 | 12 | 8 | 12 | 13 | 20 | 13 | 152 |
| SITE/REF | | | | | | | | | | | | | |
| VALUE: | 1.07 | 1.00 | 1.10 | 1.63 | 1.00 | 1.27 | 1.08 | 1.88 | 1.25 | 0.69 | 1.00 | 1.54 | |
| SCORE: | 1.16 | | | | | | | | | | | | |

 HABITAT METRICS 1-12 REPORT FOR:
 LOCATION CODE: POLNEESUM95
 REFERENCE SITE: POLNEMSUM95

| | METRIC NUMBERS | | | | | | | | | | | | |
|-----------|----------------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOT |
| SITE | | | | | | | | | | | | | |
| VALUE: | 11 | 12 | 13 | 15 | 13 | 16 | 14 | 19 | 16 | 15 | 18 | 15 | 177 |
| REFERENCE | | | | | | | | | | | | | |
| VALUE: | 15 | 16 | 8 | 17 | 20 | 12 | 12 | 19 | 14 | 12 | 20 | 20 | 185 |
| SITE/REF | | | | | | | | | | | | | |
| VALUE: | 0.73 | 0.75 | 1.63 | 0.88 | 0.65 | 1.33 | 1.17 | 1.00 | 1.14 | 1.25 | 0.90 | 0.75 | |
| SCORE: | 0.96 | | | | | | | | | | | | |

 HABITAT METRICS 1-12 REPORT FOR:
 LOCATION CODE: POLNEEFAL94
 REFERENCE SITE: POLNEMFAL94

| | METRIC NUMBERS | | | | | | | | | | | | |
|-----------|----------------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOT |
| SITE | | | | | | | | | | | | | |
| VALUE: | 9 | 10 | 10 | 11 | 20 | 13 | 7 | 18 | 16 | 15 | 16 | 18 | 163 |
| REFERENCE | | | | | | | | | | | | | |
| VALUE: | 15 | 11 | 9 | 16 | 20 | 13 | 12 | 16 | 12 | 13 | 20 | 20 | 177 |
| SITE/REF | | | | | | | | | | | | | |
| VALUE: | 0.60 | 0.91 | 1.11 | 0.69 | 1.00 | 1.00 | 0.58 | 1.13 | 1.33 | 1.15 | 0.80 | 0.90 | |
| SCORE: | 0.92 | | | | | | | | | | | | |

APPENDIX B

Numbers of macroinvertebrates collected

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDAFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-------------------------|---------|-----|------|-------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 4 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCER | Diptera | Ceratopogonidae | | | 2 | PR | 6.70 | |
| DCXX | Diptera | Chironomidae | | | 143 | CG | 7.00 | |
| DEMX | Diptera | Empididae | | | 1 | PR | 8.10 | |
| DTLI | Diptera | Tipulidae | <u>Limonia</u> | spp. | 3 | SH | 10.00 | |
| DTTA | Diptera | Tabanidae | <u>Tabanus</u> | spp. | 1 | PR | 9.70 | |
| ELPA | Ephemeroptera | Leptophlebiidae | <u>Paraleptophlebia</u> | sp. | 1 | CG | 1.20 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 2 | SH | 9.40 | |
| LXXX | Lepidoptera | | | | 1 | SH | 5.00 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| PIMM | Plecoptera | Immature | | | 1 | PR | 4.00 | |
| TPPT | Trichoptera | Phryganeidae | <u>Ptilostomis</u> | sp. | 1 | SH | 6.70 | |

INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNWAFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-----------|-----------------|------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 1 | CG | 8.20 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 3 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 123 | CG | 7.00 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDBFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|---------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 2 | SH | 6.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCCH | Diptera | Chaoboridae | <u>Chaoborus</u> | <u>punctapennis</u> | 2 | PR | 8.50 | |
| DCXX | Diptera | Chironomidae | | | 46 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 10 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 3 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 91 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | 6.10 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 4 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 12 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 8 | CF | 4.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 35 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWBFA194

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|---------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 8 | SH | 4.70 | |
| DCCH | Diptera | Chaoboridae | <u>Chaoborus</u> | <u>punctapennis</u> | 1 | PR | 8.50 | |
| DCXY | Diptera | Chironomidae | | | 27 | CG | 7.00 | |
| DEHE | Diptera | Empididae | <u>Hemerodromia</u> | sp. | 2 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 4 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 3 | SH | 7.70 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 30 | CG | 5.80 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 1 | SC | 8.00 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 1 | SH | 9.40 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 40 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 6 | CF | 4.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 57 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDCFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|------------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 4 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| DCXX | Diptera | Chironomidae | | | 119 | CG | 7.00 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 2 | SH | 7.70 | |
| HXXX | Hydracarina | | | | 4 | PR | 5.70 | |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 1 | SH | 2.80 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 7 | SH | 6.10 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 1 | PR | 4.10 | |
| PPXX | | | | | 1 | | 0.00 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 2 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 11 | CF | 6.60 | |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | 1 | SH | 4.10 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWCAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|------------------|---------------------|--------------------|-----|------|------|-----|
| | | | | | | GLD | HBI | SIZ |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 2 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 2 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 146 | CG | 7.00 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 4 | SH | 7.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | 6.30 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | 1 | SH | 4.10 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDDFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 2 | SH | 6.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 4 | CG | 6.40 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 3 | PR | 6.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomylia</u> | spp. | 7 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 81 | CG | 7.00 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 1 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 5 | CG | 5.40 | |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 3 | CG | 7.60 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 22 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 11 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 3 | PR | 5.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| PCHA | Plecoptera | Chloroperlidae | <u>Haploperla</u> | sp. | 3 | PR | 1.30 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 2 | PR | 4.10 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 1 | PR | 4.90 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 7 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 10 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 2 | CF | 4.00 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TOPS | Trichoptera | Odontoceridae | <u>Psilotreta</u> | sp. | 1 | SC | 0.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 1 | CF | 2.80 | |

INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNDDFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|---------------|-------------|----------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| TPLY | Trichoptera | Psychomyiidae | <u>Lyde</u> | <u>diversa</u> | 1 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|---------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| CEAN | Coleoptera | Elmidae | <u>Ancronyx</u> | <u>variegatus</u> | 2 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 5 | SH | 4.70 | |
| CEOU | Coleoptera | Elmidae | <u>Oulinnius</u> | <u>latiusculus</u> | 1 | SC | 1.80 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 195 | CG | 7.00 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 9 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 12 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| GPCY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 1 | SC | 8.00 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 4 | SC | 9.10 | |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 2 | SH | 2.80 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 2 | CG | 2.30 | |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | 1 | SH | 4.10 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 21 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDEFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-------------------------|-------------------|-----|------|------|-----|
| | | | | | | GLD | HBI | SI2 |
| AOXX | Annelida | Oligochaetae | | | 9 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 3 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 10 | PR | 8.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 1 | SC | 5.40 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 4 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 83 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 1 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| ELPA | Ephemeroptera | Leptophlebiidae | <u>Paraleptophlebia</u> | sp. | 7 | CG | 1.20 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 1 | SH | 9.40 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 5 | CF | 3.50 | |

PAGE NO. 1
 PRODUCED ON: 10/26/95

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWEFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 4 | CG | 6.90 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 1 | SC | 5.40 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 2 | PR | 6.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 86 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 1 | CF | 5.10 | |
| DTCH | Diptera | Tabanidae | <u>Chrysops</u> | spp. | 1 | CG | 7.30 | |
| TLIM | Trichoptera | Limnephilidae | <u>Immature</u> | | 1 | SH | 3.70 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 5 | CG | 4.30 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNAFFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|-----------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 2 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 14 | CG | 8.20 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 9 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 124 | CG | 7.00 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 3 | PR | 7.50 | |
| TPPH | Trichoptera | Polycentropodidae | <u>Phylocentropus</u> | sp. | 2 | CF | 5.60 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDSFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|------------------|-----|------|------|----|
| | | | | | | GLD | HBI | SI |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 2 | PR | 6.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 2 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 71 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 2 | CF | 5.10 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 2 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 29 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 1 | CG | 1.00 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 41 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| OCEN | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | 1 | PR | 9.00 | |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 26 | SH | 2.80 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | 6.10 | |
| PPDI | Plecoptera | Perlodidae | <u>Diploperla</u> | sp. | 3 | PR | 2.00 | |
| PPEC | Plecoptera | Perlidae | <u>Eccopectura</u> | <u>xanthenes</u> | 2 | PR | 4.10 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 21 | CF | 6.60 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 25 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWSFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|---------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 5 | SH | 6.90 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 2 | PR | 8.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 4 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| CGGY | Coleoptera | Gyrinidae | <u>Gyrinus</u> | spp. | 1 | PR | 6.30 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 102 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 6 | CG | 5.40 | |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 1 | CG | 7.60 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 12 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 35 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 7 | CG | 5.80 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 1 | SC | 8.00 | |
| OCCA | Odonata | Calopterygidae | <u>Calopteryx</u> | spp. | 1 | PR | 8.30 | |
| OCEM | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | 2 | PR | 9.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 1 | CF | 2.80 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 15 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDMFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|-----------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 110 | CF | 6.30 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| CDHE | Coleoptera | Dryopidae | <u>Helichus</u> | sp. | 1 | SC | 5.40 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 16 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 2 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EBBT | Ephemeroptera | Baetiscidae | <u>Baetisca</u> | sp. | 2 | CG | 1.90 | |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 3 | CG | 7.60 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 31 | CG | 1.00 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 19 | CG | 5.80 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 1 | CF | 3.80 | |
| HXXX | Hydracarina | | | | 3 | PR | 5.70 | |
| OGPR | Odonata | Gomphidae | <u>Progomphus</u> | <u>obscurus</u> | 1 | PR | 8.70 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 2 | PR | 2.00 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 5 | SH | 6.30 | |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | 1 | CF | 1.10 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| THMA | Trichoptera | Hydropsychidae | <u>Macrostemum</u> | sp. | 1 | CF | 3.60 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 2 | CG | 2.30 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TLPY | Trichoptera | Limnephilidae | <u>Pycnopsyche</u> | spp. | 2 | SH | 2.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWMFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 4 | CF | 6.30 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 57 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 1 | CF | 5.10 | |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 1 | CG | 7.60 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 48 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 19 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 6 | PR | 5.70 | |
| MCCO | Megaloptera | Corydalidae | <u>Corydalis</u> | <u>cornutus</u> | 1 | PR | 5.60 | |
| PPCL | Plecoptera | Perlodidae | <u>Clioperla</u> | <u>clio</u> | 1 | PR | 4.80 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 13 | SH | 6.30 | |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | 38 | CF | 1.10 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 11 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 1 | CF | 4.00 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 1 | CF | 2.80 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 6 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDRFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 76 | CF | 6.30 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 2 | CF | 7.70 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 3 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 14 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 1 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 2 | CG | 5.40 | |
| EBBT | Ephemeroptera | Baetiscidae | <u>Baetisca</u> | sp. | 7 | CG | 1.90 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 1 | CG | 1.00 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 6 | CG | 5.80 | |
| GLLY | Gastropoda | Lymnaeidae | <u>Lymnaea</u> | sp. | 3 | SC | 6.00 | |
| HXXX | Hydracarina | | | | 4 | PR | 5.70 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 57 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 1 | CF | 6.60 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWRPAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 5 | SH | 4.70 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 5 | SC | 5.40 | |
| DCYX | Diptera | Chironomidae | | | 113 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 3 | CG | 5.40 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 3 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 12 | PR | 5.70 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 2 | SH | 6.10 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 6 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 7 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 7 | CF | 4.00 | |
| THMA | Trichoptera | Hydropsychidae | <u>Macrostemum</u> | sp. | 1 | CF | 3.60 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 5 | CF | 2.80 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

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INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNAWFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-----------|-----------------|--------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 7 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 419 | CG | 7.00 | |
| HCTR | Hemiptera | Corixidae | <u>Tricorixa</u> | sp. | 2 | PI | 9.00 | |
| OLPA | Odonata | Libellulidae | <u>Pachydiplax</u> | <u>longipenis</u> | 1 | PR | 9.60 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRDDFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|---------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 2 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 6 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 5 | CF | 7.70 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 105 | CG | 7.00 | |
| DEHE | Diptera | Empididae | <u>Hemerodromia</u> | sp. | 1 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 3 | CF | 5.10 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 1 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 12 | CG | 5.40 | |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 1 | CG | 7.60 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 12 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 9 | CG | 4.60 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 2 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 1 | CF | 3.80 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| HXXX | Hydracarina | | | | 5 | PR | 5.70 | |
| MCNI | Megaloptera | Corydalidae | <u>Nigronia</u> | <u>serricornis</u> | 1 | PR | 5.50 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| PPDI | Plecoptera | Perlodidae | <u>Diploperla</u> | sp. | 3 | PR | 2.00 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 2 | PR | 4.10 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 44 | SH | 6.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRDDFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|----------------|-----------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 32 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 12 | CF | 4.00 | |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | 2 | SH | 4.10 | |
| TOPS | Trichoptera | Odontoceridae | <u>Psilotreta</u> | sp. | 1 | SC | 0.00 | |

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 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRWDFAL94

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|---------------------|-------------------|-----|------|------|-----|
| | | | | | | GLD | HBI | SIZ |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| CEAN | Coleoptera | Elmidae | <u>Ancryonyx</u> | <u>variegatus</u> | 2 | CG | 6.90 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponya</u> | spp. | 4 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 188 | CG | 7.00 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 8 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 4 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| PIMM | Plecoptera | Immature | | | 2 | PR | 4.00 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 20 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDAWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-----------|--------------|-------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 10 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| DCYX | Diptera | Chironomidae | | | 36 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 207 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 2 | CG | 4.60 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 5 | SH | 9.40 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDBWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|---------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| DCCH | Diptera | Chaoboridae | <u>Chaoborus</u> | <u>punctapennis</u> | 2 | PR | 8.50 | |
| DCYX | Diptera | Chironomidae | | | 35 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 55 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 2 | SH | 7.70 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 66 | CG | 5.80 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 13 | CF | 6.60 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 5 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWBWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|-----------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 4 | CG | | 8.20 |
| DCXX | Diptera | Chironomidae | | | 89 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 4 | CF | | 5.10 |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | | 5.80 |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 1 | CF | | 6.60 |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | 2 | PI | | 7.20 |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | | 3.50 |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDCWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|----------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| DCYX | Diptera | Chironomidae | | | 29 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 378 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 8 | CF | 6.60 | |
| TLNO | Trichoptera | Limnephilidae | <u>Neophylax</u> | spp. | 1 | CF | 1.40 | |

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 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWCWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|----------------|-----------------------|------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 7 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 8 | CF | 6.80 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 67 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 7 | CF | 5.10 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 3 | SC | 9.10 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 20 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDDWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 16 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 226 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 10 | CG | 5.40 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 1 | CF | 3.80 | |
| OCCA | Odonata | Calopterygidae | <u>Calopteryx</u> | spp. | 1 | PR | 8.30 | |
| PPCL | Plecoptera | Perlodidae | <u>Clioperla</u> | <u>clio</u> | 1 | PR | 4.80 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 6 | PR | 4.10 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 3 | PR | 2.00 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 12 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 2 | CF | 4.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TRRH | Trichoptera | Rhyacophilidae | <u>Rhyacophila</u> | sp. | 1 | PR | 0.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWDWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|---------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 2 | SH | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 62 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 126 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 2 | CG | 5.40 | |
| EBPS | Ephemeroptera | Baetidae | <u>Pseudocloeon</u> | spp. | 1 | CG | 4.40 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| PPIH | Plecoptera | Perlodidae | <u>Immature</u> | | 2 | PR | 2.00 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 2 | PR | 2.00 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 3 | SH | 6.30 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 10 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDEWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 5 | CF | 6.80 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 7 | PR | 8.90 | |
| DCXX | Diptera | Chironomidae | | | 112 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 1 | CF | 5.10 | |
| DTTA | Diptera | Tabanidae | <u>Tabanus</u> | spp. | 1 | PR | 9.70 | |
| EEEE | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| ELLE | Ephemeroptera | Leptophlebiidae | <u>Leptophlebia</u> | sp. | 5 | CG | 6.40 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 1 | SH | 9.40 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| PPCL | Plecoptera | Perlodidae | <u>Clioperla</u> | <u>clio</u> | 1 | PR | 4.80 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 3 | CF | 3.50 | |

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INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNWEWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|---------------------|-------------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 7 | CG | | 8.20 |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | | 6.90 |
| DCXX | Diptera | Chironomidae | | | 169 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 4 | CF | | 5.10 |
| EEEE | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | | 4.60 |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | | 6.10 |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | | 0.90 |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNAFWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 4 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 9 | CG | 8.20 | |
| DCYX | Diptera | Chironomidae | | | 282 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 50 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 12 | CG | 5.80 | |
| OCEN | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | 1 | PR | 9.00 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | 6.10 | |
| PPCL | Plecoptera | Perlodidae | <u>Clioperla</u> | <u>clio</u> | 1 | PR | 4.80 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | 6.30 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |
| TPPT | Trichoptera | Phryganeidae | <u>Ptilostomis</u> | sp. | 3 | SH | 6.70 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDSWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| CDHE | Coleoptera | Dryopidae | <u>Helichus</u> | sp. | 1 | SC | 5.40 | |
| DCXX | Diptera | Chironomidae | | | 8 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 181 | CF | 5.10 | |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 7 | PR | 0.00 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 1 | PR | 4.70 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 15 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 1 | CG | 1.00 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 1 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 14 | CG | 5.80 | |
| MCNI | Megaloptera | Corydalidae | <u>Nigronia</u> | <u>serricornis</u> | 1 | PR | 5.50 | |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 2 | SH | 2.80 | |
| PIMM | Plecoptera | Immature | | | 2 | PR | 4.00 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 8 | SH | 6.10 | |
| PPCL | Plecoptera | Perlodidae | <u>Clioperla</u> | <u>clio</u> | 1 | PR | 4.80 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 2 | PR | 4.10 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 2 | PR | 2.00 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 5 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 1 | CF | 4.00 | |
| TLPY | Trichoptera | Limnephilidae | <u>Pycnopsyche</u> | spp. | 1 | SH | 2.30 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chinarra</u> | sp. | 6 | CF | 2.80 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 2 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWSWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| CDHE | Coleoptera | Dryopidae | <u>Helichus</u> | sp. | 1 | SC | 5.40 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 4 | SH | 4.70 | |
| DCYX | Diptera | Chironomidae | | | 114 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 3 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 3 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 2 | CG | 5.80 | |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 1 | SH | 2.80 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 1 | CF | 6.60 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 2 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDMWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|--------------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 3 | CG | | 8.20 |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 1 | CF | | 6.30 |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 1 | PR | | 8.90 |
| DCXX | Diptera | Chironomidae | | | 15 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 39 | CF | | 5.10 |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | | 7.70 |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 1 | CG | | 7.60 |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 1 | CG | | 1.00 |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Furylophella</u> | <u>temporalis</u> | 14 | CG | | 4.60 |
| HXXX | Hydracarina | | | | 1 | PR | | 5.70 |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 37 | SH | | 6.10 |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 3 | PR | | 2.00 |
| PTST | Plecoptera | Taeniopterygidae | <u>Strophoteryx</u> | sp. | 1 | SH | | 2.50 |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | | 6.30 |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | 6 | CF | | 1.10 |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | | 6.60 |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 1 | CF | | 2.80 |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 1 | CG | | 4.30 |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | | 3.50 |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDRWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|---------------------|-------------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 5 | CG | | 8.20 |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 9 | CF | | 6.80 |
| DCXX | Diptera | Chironomidae | | | 48 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 110 | CF | | 5.10 |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 6 | CG | | 5.40 |
| EEEE | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 4 | CG | | 1.00 |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 6 | CG | | 4.60 |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 2 | CG | | 5.80 |
| ELLE | Ephemeroptera | Leptophlebiidae | <u>Leptophlebia</u> | sp. | 2 | CG | | 6.40 |
| HXXX | Hydracarina | | | | 2 | PR | | 5.70 |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 3 | SH | | 2.80 |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 7 | SH | | 6.10 |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 3 | PR | | 2.00 |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 4 | SH | | 6.30 |
| TLLE | Trichoptera | Lepidostomatidae | <u>Lepidostoma</u> | sp. | 1 | SH | | 1.00 |

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 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWRWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|---------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 5 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 3 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 160 | CG | 7.00 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 7 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 5 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 1 | SH | 9.40 | |
| OLSO | Odonata | Libellulidae | <u>Somatochlora</u> | spp. | 1 | PR | 8.90 | |
| PCAL | Plecoptera | Capniidae | <u>Allocapnia</u> | sp. | 1 | SH | 2.80 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 12 | SH | 6.10 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 2 | PR | 2.00 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 2 | SH | 6.30 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TLLC | Trichoptera | Lepidostomatidae | <u>Lepidostoma</u> | sp. | 1 | SH | 1.00 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNAWWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-------------------|---------------------|-----|------|------|-----|
| | | | | | | GLD | HBI | SIZ |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 26 | SH | 6.90 | |
| AOXY | Annelida | Oligochaetae | | | 236 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 3 | CF | 6.80 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 2 | PR | 8.90 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCCH | Diptera | Chaoboridae | <u>Chaoborus</u> | <u>punctapennis</u> | 2 | PR | 8.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 5 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 260 | CG | 7.00 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 3 | CG | 4.60 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 4 | CG | 5.40 | |
| GLLY | Gastropoda | Lymnaeidae | <u>Lymnaea</u> | sp. | 2 | SC | 6.00 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 1 | SC | 8.00 | |
| HBBE | Hemiptera | Belostomatidae | <u>Belostoma</u> | sp. | 1 | PR | 9.80 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 14 | SH | 9.40 | |
| OAEP | Odonata | Aeshnidae | <u>Epiaeschna</u> | sp. | 1 | PR | 7.30 | |
| OZEN | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | 1 | PR | 9.00 | |
| OCEP | Odonata | Corduliidae | <u>Epithea</u> | sp. | 3 | PR | 5.50 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 2 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRDBWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|-----------------------|-------------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | | 8.20 |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | | 6.80 |
| DCXX | Diptera | Chironomidae | | | 24 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 56 | CF | | 5.10 |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 1 | PR | | 0.00 |
| EEEE | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | | 4.60 |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 56 | CG | | 5.80 |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | | 6.30 |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | | 6.10 |
| PPIM | Plecoptera | Perlodidae | <u>Immature</u> | | 1 | PR | | 2.00 |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | | 6.30 |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 9 | CF | | 6.60 |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 7 | CF | | 2.80 |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRWBWIN95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | SIZE |
|-------------|---------------|-------------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | |
| AOXX | Annelida | Oligochaetae | | | 3 | CG | 8.20 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 103 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 2 | CF | 5.10 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 7 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 4 | CG | 5.80 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 30 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 32 | CF | 4.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 14 | CF | 2.80 | |
| TPNE | Trichoptera | Polycentropodidae | <u>Neureclipsis</u> | sp. | 1 | CF | 4.40 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |
| TRRH | Trichoptera | Rhyacophilidae | <u>Rhyacophila</u> | sp. | 1 | PR | 0.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDASPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-----------------|--------------------|---------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 28 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 4 | CG | 8.20 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 3 | PR | 8.90 | |
| DCCH | Diptera | Chaoboridae | <u>Chaoborus</u> | <u>punctapennis</u> | 1 | PR | 8.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 4 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 27 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 130 | CF | 5.10 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 19 | SH | 9.40 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 4 | SH | 3.40 | |
| TLIR | Trichoptera | Limnephilidae | <u>Ironoquia</u> | spp. | 1 | SH | 7.30 | |
| TPWO | Trichoptera | Philopotamidae | <u>Wormaldia</u> | sp. | 2 | CF | 0.40 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWASPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 78 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 4 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 12 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 67 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 6 | CF | 5.10 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 40 | SH | 9.40 | |
| MCCH | Megaloptera | Corydalidae | <u>Chauliodes</u> | sp. | 1 | PR | 5.80 | |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | 6.30 | |
| OLPA | Odonata | Libellulidae | <u>Pachydiplax</u> | <u>longipenis</u> | 1 | PR | 9.60 | |
| TLIR | Trichoptera | Limnephilidae | <u>Ironoquia</u> | spp. | 2 | SH | 7.30 | |
| TLLE | Trichoptera | Lepidostomatidae | <u>Lepidostoma</u> | sp. | 1 | SH | 1.00 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDBSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|--------------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | | 8.20 |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | | 6.80 |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | | 7.70 |
| DCXX | Diptera | Chironomidae | | | 75 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 89 | CF | | 5.10 |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 1 | CG | | 4.60 |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | | 7.70 |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 28 | CG | | 5.40 |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 12 | CG | | 5.80 |
| GVCA | Gastropoda | Vivparidae | <u>Campelema</u> | sp. | 2 | SC | | 6.70 |
| OGPR | Odonata | Gomphidae | <u>Progomphus</u> | <u>obscurus</u> | 1 | PR | | 8.70 |
| PERL | Plecoptera | Perlidae | <u>Immature</u> | | 1 | PR | | 3.50 |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 1 | CF | | 6.60 |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 4 | CF | | 4.00 |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | 1 | PI | | 7.20 |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 3 | CF | | 2.80 |
| TPWO | Trichoptera | Philopotamidae | <u>Wormaldia</u> | sp. | 1 | CF | | 0.40 |
| TRRH | Trichoptera | Rhyacophilidae | <u>Rhyacophila</u> | sp. | 1 | PR | | 0.80 |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWBSR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 1 | PR | 8.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 2 | SH | 4.70 | |
| DCYX | Diptera | Chironomidae | | | 119 | CG | 7.00 | |
| DEHE | Diptera | Epididae | <u>Hemerodromia</u> | sp. | 1 | PR | 8.10 | |
| DSYX | Diptera | Simuliidae | | | 65 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 8 | CG | 5.40 | |
| ECCA | Ephemeroptera | Caenidae | <u>Caenis</u> | sp. | 2 | CG | 7.60 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 9 | CG | 5.80 | |
| GHSO | Gastropoda | Hydrobiidae | <u>Somatogyrus</u> | spp. | 1 | SC | 6.50 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| OCOE | Odonata | Coenagrionidae | <u>Immature</u> | | 1 | PR | 9.00 | |
| PLLE | Plecoptera | Leuctridae | <u>Leuctra</u> | sp. | 1 | SH | 0.70 | |
| PPNE | Plecoptera | Perlidae | <u>Neoperla</u> | sp. | 1 | PR | 1.60 | |
| TLIR | Trichoptera | Limnephilidae | <u>Ironoquia</u> | spp. | 1 | SH | 7.30 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 2 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDCSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 3 | CF | 7.70 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 2 | CG | 6.40 | |
| DCAX | Decapoda | Cambaridae | | | 2 | SH | 6.80 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 72 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 122 | CF | 5.10 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 1 | PR | 4.70 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 4 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 9 | CG | 5.40 | |
| PCHA | Plecoptera | Chloroperlidae | <u>Haploperla</u> | sp. | 3 | PR | 1.30 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 5 | SH | 3.40 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 1 | PR | 4.10 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 3 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 12 | CF | 6.60 | |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | 1 | PI | 7.20 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 1 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWCSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 7 | SH | 6.90 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 5 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 2 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 186 | CG | 7.00 | |
| DEHE | Diptera | Empididae | <u>Hemerodromia</u> | sp. | 1 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 9 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 1 | CG | 4.60 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 1 | SH | 3.40 | |
| PPIM | Plecoptera | Perlodidae | <u>Immature</u> | | 1 | PR | 2.00 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 6 | CF | 6.60 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 19 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDDSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 1 | SC | 5.40 | |
| DCXX | Diptera | Chironomidae | | | 57 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 15 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 1 | CG | 4.60 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 85 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 5 | CG | 1.00 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 1 | SH | 3.40 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 1 | PR | 4.10 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 15 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 4 | CF | 6.60 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | 1 | PI | 7.20 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWDSR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 5 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 1 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 11 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 1 | PR | 8.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 3 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 167 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 15 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 4 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 2 | CG | 1.00 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 1 | SC | 8.00 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 4 | SC | 9.10 | |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | 6.30 | |
| OCEN | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | 1 | PR | 9.00 | |
| PPNE | Plecoptera | Perlidae | <u>Neoperla</u> | sp. | 2 | PR | 1.60 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | 2 | PI | 7.20 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 1 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDESPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-------------------|-----------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 18 | CG | 8.20 | |
| BSMU | Bivalvia | Sphaeriidae | <u>Musculium</u> | sp. | 1 | CF | 7.60 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 23 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 11 | CF | 7.70 | |
| CDEY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 4 | PR | 8.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 2 | CG | 6.40 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 1 | SC | 5.40 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 2 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 112 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 1 | CF | 5.10 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 4 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 5 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| GVCA | Gastropoda | Vivparidae | <u>Campeloma</u> | sp. | 1 | SC | 6.70 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 8 | SH | 9.40 | |
| OMMA | Odonata | Macromiidae | <u>Macromia</u> | spp. | 1 | PR | 6.70 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWESPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|---------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 5 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 3 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 6 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 2 | PR | 8.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CHPE | Coleoptera | Haliplidae | <u>Peltodytes</u> | sp. | 2 | PR | 8.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 1 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 140 | CG | 7.00 | |
| DPPA | Decapoda | Palaemonidae | <u>Palaemonetes</u> | <u>paludosus</u> | 1 | SH | 6.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 13 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 1 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 5 | CG | 5.80 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 2 | SC | 9.10 | |
| GVCA | Gastropoda | Viviparidae | <u>Campeloma</u> | sp. | 2 | SC | 6.70 | |
| GVVI | Gastropoda | Viviparidae | <u>Viviparus</u> | sp. | 1 | SC | 4.60 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 18 | SH | 9.40 | |
| OABA | Odonata | Aeshnidae | <u>Basiaeschna</u> | sp. | 1 | PR | 7.70 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 2 | CG | 2.30 | |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | 1 | SH | 4.10 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 1 | CG | 4.30 | |

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PRODUCED ON: 10/26/95

INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNWESPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|----------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 4 | CF | 0.90 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 2 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNAFSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-----------------|--------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 15 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 4 | PR | 8.90 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 2 | PR | 6.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 7 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 395 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 3 | CF | 5.10 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| OCCA | Odonata | Calopterygidae | <u>Calopteryx</u> | spp. | 1 | PR | 8.30 | |
| TLIR | Trichoptera | Limnephilidae | <u>Ironoquia</u> | spp. | 1 | SH | 7.30 | |
| TLLI | Trichoptera | Limnephilidae | <u>Limniphilus</u> | sp. | 8 | SH | 3.70 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDSSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 2 | CF | 7.70 | |
| CDHE | Coleoptera | Dryopidae | <u>Helichus</u> | sp. | 1 | SC | 5.40 | |
| DCXX | Diptera | Chironomidae | | | 31 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 69 | CF | 5.10 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 7 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 93 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 4 | CG | 5.80 | |
| GPHE | Gastropoda | Planorbidae | <u>Helisoma</u> | sp. | 1 | SC | 6.50 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| PCHA | Plecoptera | Chloroperlidae | <u>Haploperla</u> | sp. | 6 | PR | 1.30 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 4 | SH | 3.40 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 3 | PR | 4.10 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 7 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| TLIR | Trichoptera | Limnephilidae | <u>Ironoquia</u> | spp. | 3 | SH | 7.30 | |
| TLNO | Trichoptera | Limnephilidae | <u>Neophylax</u> | spp. | 3 | CF | 1.40 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |
| TPWO | Trichoptera | Philopotamidae | <u>Wormaldia</u> | sp. | 1 | CF | 0.40 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWSSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|---------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 1 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 3 | CF | 7.70 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 1 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 93 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 38 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 77 | CG | 5.40 | |
| EEEE | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 2 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 11 | CG | 5.80 | |
| GPPL | Gastropoda | Planorbidae | <u>Planorbula</u> | sp. | 1 | SC | 8.00 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 2 | PR | 4.90 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 4 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDMSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 4 | CF | 6.30 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| CHBE | Coleoptera | Hydrophilidae | <u>Berosus</u> | sp. | 1 | PI | 8.60 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCXX | Diptera | Chironomidae | | | 29 | CG | 7.00 | |
| DEMX | Diptera | Empididae | | | 2 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 92 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 16 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 22 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Furylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 7 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| OGPR | Odonata | Gomphidae | <u>Progomphus</u> | <u>obscurus</u> | 1 | PR | 8.70 | |
| PIHM | Plecoptera | Immature | | | 1 | PR | 4.00 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 2 | SH | 3.40 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | 6.10 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 7 | PR | 2.00 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 2 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 4 | CF | 6.60 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 11 | CF | 2.80 | |
| TPWO | Trichoptera | Philopotamidae | <u>Wormaldia</u> | sp. | 3 | CF | 0.40 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWMSR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 4 | CF | 6.30 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 3 | CF | 6.80 | |
| DCYX | Diptera | Chironomidae | | | 88 | CG | 7.00 | |
| DEHE | Diptera | Empididae | <u>Hemerodromia</u> | sp. | 2 | PR | 8.10 | |
| DEMX | Diptera | Empididae | | | 1 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 53 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 27 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 13 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 4 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 3 | PR | 5.70 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 1 | SH | 3.40 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | 6.10 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 1 | PR | 4.10 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 7 | PR | 2.00 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 4 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 1 | CF | 6.60 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 1 | CF | 4.00 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDRSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 25 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 6 | CF | 6.30 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 3 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 4 | CF | 7.70 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 1 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 41 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 3 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 23 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 3 | CG | 1.00 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 1 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 16 | CG | 5.80 | |
| GPEL | Gastropoda | Pleuroceridae | <u>Elinia</u> | sp. | 1 | SC | 2.50 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| OGHA | Odonata | Gomphidae | <u>Hagenius</u> | <u>brevistylus</u> | 1 | PR | 4.00 | |
| OMMA | Odonata | Macromiidae | <u>Macromia</u> | spp. | 2 | PR | 6.70 | |
| PIHM | Plecoptera | Immature | | | 1 | PR | 4.00 | |
| PNAM | Plecoptera | Nemouridae | <u>Amphinemura</u> | <u>wui</u> | 1 | SH | 3.40 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 2 | PR | 2.00 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 2 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWRSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|------------------|----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 8 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| DCXX | Diptera | Chironomidae | | | 136 | CG | 7.00 | |
| DEMX | Diptera | Empididae | | | 2 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 5 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 25 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 5 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 10 | CG | 5.80 | |
| GVCA | Gastropoda | Vivparidae | <u>Campeloma</u> | sp. | 1 | SC | 6.70 | |
| OCTE | Odonata | Corduliidae | <u>Tetragoneuria</u> | spp. | 1 | PR | 8.50 | |
| OMMA | Odonata | Macromiidae | <u>Macromia</u> | spp. | 2 | PR | 6.70 | |
| PNPR | Plecoptera | Nemouridae | <u>Prostoia</u> | sp. | 1 | SH | 6.10 | |
| PPIS | Plecoptera | Perlodidae | <u>Isoperla</u> | spp. | 3 | PR | 2.00 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 6 | PR | 4.90 | |
| PTTA | Plecoptera | Taeniopterygidae | <u>Taeniopteryx</u> | spp. | 1 | SH | 6.30 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 5 | CF | 4.00 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 2 | CG | 2.30 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNAWSPR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 4 | PR | 8.90 | |
| CHTR | Coleoptera | Hydrophilidae | <u>Tropisternus</u> | sp. | 1 | PR | 9.80 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 8 | PR | 6.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 98 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 120 | CG | 7.00 | |
| EEEE | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| HBBE | Hemiptera | Belostomatidae | <u>Belostoma</u> | sp. | 2 | PR | 9.80 | |
| HCTR | Hemiptera | Corixidae | <u>Tricorixa</u> | sp. | 2 | PI | 9.00 | |
| HXXX | Hydracarina | | | | 6 | PR | 5.70 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 3 | SH | 9.40 | |
| OCTE | Odonata | Corduliidae | <u>Tetragoneuria</u> | spp. | 2 | PR | 8.50 | |
| OLLI | Odonata | Libellulidae | <u>Libellula</u> | spp. | 1 | PR | 9.80 | |
| OLPA | Odonata | Libellulidae | <u>Pachydiplax</u> | <u>longipennis</u> | 1 | PR | 9.60 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRDDS95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 3 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 1 | PR | 8.90 | |
| DCYX | Diptera | Chironomidae | | | 45 | CG | 7.00 | |
| DSYX | Diptera | Simuliidae | | | 30 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 12 | CG | 4.60 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 4 | SH | 7.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 64 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 7 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 4 | CG | 4.60 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 1 | CG | 7.10 | |
| PPEC | Plecoptera | Perlidae | <u>Eccoptura</u> | <u>xanthenes</u> | 5 | PR | 4.10 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 12 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 4 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 4 | CF | 4.00 | |
| TLIR | Trichoptera | Limnephilidae | <u>Ironoquia</u> | spp. | 1 | SH | 7.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRWDSR95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|----------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 4 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 2 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 5 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 18 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 4 | PR | 8.90 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponia</u> | spp. | 4 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 149 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 6 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 3 | CG | 5.40 | |
| EEEP | Ephemeroptera | Ephemerellidae | <u>Ephemerella</u> | spp. | 3 | CG | 1.00 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 3 | CG | 7.10 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 2 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDASUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-------------------|---------------|-----|------|-------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 1 | CG | 8.20 | |
| AOXX | Annelida | Oligochaetae | | | 17 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 5 | CF | 6.80 | |
| DCCL | Diptera | Culicidae | <u>Culex</u> | sp. | 7 | CF | 10.00 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 1 | PR | 6.50 | |
| DCYX | Diptera | Chironomidae | | | 138 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 2 | CG | 5.40 | |
| HCTR | Hemiptera | Corixidae | <u>Tricorixa</u> | sp. | 4 | PI | 9.00 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 5 | PR | 7.50 | |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | 6.30 | |
| OCEN | Odonata | Coenagrionidae | <u>Enallagma</u> | spp. | 1 | PR | 9.00 | |

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 PRODUCED ON: 10/26/95

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWASUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-----------------|--------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 61 | CG | 8.20 | |
| D CPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 2 | PR | 6.90 | |
| DCXY | Diptera | Chironomidae | | | 106 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 1 | CF | 5.10 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 4 | SC | 8.00 | |
| HCTR | Hemiptera | Corixidae | <u>Tricorixa</u> | sp. | 1 | PI | 9.00 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 6 | SH | 9.40 | |
| MCNI | Megaloptera | Corydalidae | <u>Nigronia</u> | <u>serricornis</u> | 1 | PR | 5.50 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 4 | PR | 7.50 | |
| OLPA | Odonata | Libellulidae | <u>Pachydiplax</u> | <u>longipenis</u> | 1 | PR | 9.60 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDBSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-----------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 3 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 1 | CF | 6.30 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 1 | CF | 7.70 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 95 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 9 | CF | 5.10 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 1 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 34 | CG | 5.80 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 1 | CF | 3.80 | |
| HXXX | Hydracarina | | | | 7 | PR | 5.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 5 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 25 | CF | 4.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 13 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWBSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|----------------|-----------------------|-------------------|-----|------|-----|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 1 | CG | | 8.20 |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 5 | CG | | 6.90 |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 8 | SH | | 4.70 |
| DCXX | Diptera | Chironomidae | | | 85 | CG | | 7.00 |
| DSXX | Diptera | Simuliidae | | | 13 | CF | | 5.10 |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 14 | CG | | 5.80 |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | | 9.10 |
| HXXX | Hydracarina | | | | 16 | PR | | 5.70 |
| OCCA | Odonata | Calopterygidae | <u>Calopteryx</u> | spp. | 1 | PR | | 8.30 |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 9 | CF | | 6.60 |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 3 | CF | | 4.00 |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | | 5.70 |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDCSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-----------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 19 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 4 | CF | 6.80 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 2 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 96 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 20 | CF | 5.10 | |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 1 | PR | 0.00 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 4 | PR | 4.70 | |
| DTPI | Diptera | Tipulidae | <u>Pilaria</u> | spp. | 8 | PR | 6.20 | |
| DTTI | Diptera | Tipulidae | <u>Tipula</u> | <u>abdominalis</u> | 1 | SH | 7.70 | |
| HXXX | Hydracarina | | | | 8 | PR | 5.70 | |
| MCCO | Megaloptera | Corydalidae | <u>Corydalus</u> | <u>cornutus</u> | 1 | PR | 5.60 | |
| PPAG | Plecoptera | Perlidae | <u>Agnetina</u> | sp. | 1 | PR | 0.00 | |
| PPHA | Plecoptera | Perlidae | <u>Hansonoperla</u> | sp. | 1 | PR | 1.80 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 34 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 11 | CF | 4.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TOPS | Trichoptera | Odontoceridae | <u>Psilotreta</u> | sp. | 3 | SC | 0.00 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWC SUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-----------------|--------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 28 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 5 | CF | 7.70 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 2 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 2 | SH | 4.70 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 3 | PR | 6.50 | |
| D CPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 98 | CG | 7.00 | |
| DPPE | Diptera | Psychodidae | <u>Pericoma</u> | sp. | 2 | CG | 9.00 | |
| DTPI | Diptera | Tipulidae | <u>Pilaria</u> | spp. | 2 | PR | 6.20 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 21 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDDSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 9 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 2 | CF | 7.70 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 3 | SC | 5.40 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 1 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 102 | CG | 7.00 | |
| DEMX | Diptera | Empididae | | | 1 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 13 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 4 | CG | 4.60 | |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 3 | PR | 0.00 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 2 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 3 | CG | 5.40 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 5 | CG | 5.80 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 2 | CF | 3.80 | |
| HXXX | Hydracarina | | | | 17 | PR | 5.70 | |
| MCCO | Megaloptera | Corydalidae | <u>Corydalis</u> | <u>cornutus</u> | 3 | PR | 5.60 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 2 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 25 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 8 | CF | 4.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |

INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNDDSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|----------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| TOPS | Trichoptera | Odontoceridae | <u>Psilotreta</u> | sp. | 9 | SC | 0.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWDSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|-----------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 3 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 2 | CF | 7.70 | |
| CDHY | Coleoptera | Dytiscidae | <u>Hydroporus</u> | spp. | 1 | PR | 8.90 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 2 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 140 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 3 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 2 | PR | 7.50 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 4 | CF | 6.60 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 2 | PR | 5.70 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 10 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 7 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDESUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 2 | CG | 8.20 | |
| AOXX | Annelida | Oligochaetae | | | 43 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 25 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 21 | CF | 7.70 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 2 | CG | 6.40 | |
| CGDI | Coleoptera | Gyrinidae | <u>Dineutes</u> | sp. | 1 | PR | 5.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 4 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 56 | CG | 7.00 | |
| DPPA | Decapoda | Palaemonidae | <u>Palaemonetes</u> | <u>paludosus</u> | 1 | SH | 6.70 | |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 1 | PR | 0.00 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 1 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 4 | CG | 5.40 | |
| GHSO | Gastropoda | Hydrobiidae | <u>Somatogyrus</u> | spp. | 1 | SC | 6.50 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 2 | SC | 8.00 | |
| GPHE | Gastropoda | Planorbidae | <u>Helisoma</u> | sp. | 1 | SC | 6.50 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 8 | PR | 7.50 | |
| OGDR | Odonata | Gomphidae | <u>Dromoqomphus</u> | sp. | 1 | PR | 6.30 | |
| OGHA | Odonata | Gomphidae | <u>Hagenius</u> | <u>brevistylus</u> | 1 | PR | 4.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 2 | PR | 5.70 | |
| TPPH | Trichoptera | Polycentropodidae | <u>Phylocentropus</u> | sp. | 1 | CF | 5.60 | |

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COLLECTION DATA REPORT FOR: POLNDESUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|----------------------|---------|-----|------|------|-----|
| | | | | | | GLD | HBI | SIZ |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWESUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 3 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 3 | CG | 8.20 | |
| AOXX | Annelida | Oligochaetae | | | 5 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 15 | CF | 7.70 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 3 | CG | 6.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 3 | CG | 6.40 | |
| DCXX | Diptera | Chironomidae | | | 148 | CG | 7.00 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 1 | CG | 5.80 | |
| GVCA | Gastropoda | Vivparidae | <u>Cameloma</u> | sp. | 11 | SC | 6.70 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 20 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 11 | CF | 0.90 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 10 | CF | 3.50 | |

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INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNAFSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-----------------|------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 52 | CG | 8.20 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 5 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 264 | CG | 7.00 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 2 | PR | 7.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDSSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-----------------------|--------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZI |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 3 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 9 | CF | 7.70 | |
| CEHE | Coleoptera | Elmidae | <u>Helichus</u> | sp. | 1 | SC | 5.40 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 1 | SC | 5.40 | |
| CGDI | Coleoptera | Gyrinidae | <u>Dineutes</u> | sp. | 2 | PR | 5.50 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 2 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 116 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 15 | CF | 5.10 | |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 2 | PR | 0.00 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 6 | PR | 4.70 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 11 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 28 | CG | 5.80 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 6 | CF | 3.80 | |
| HXXX | Hydracarina | | | | 9 | PR | 5.70 | |
| MCNI | Megaloptera | Corydalidae | <u>Nigronia</u> | <u>serricornis</u> | 4 | PR | 5.50 | |
| OGLA | Odonata | Gomphidae | <u>Lanthus</u> | sp. | 1 | PR | 2.70 | |
| PPHA | Plecoptera | Perlidae | <u>Hansonoperla</u> | sp. | 2 | PR | 1.80 | |
| PPPE | Plecoptera | Perlidae | <u>Perlesta</u> | sp. | 1 | PR | 4.90 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 34 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 16 | CF | 4.00 | |

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INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
COLLECTION DATA REPORT FOR: POLNDSSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|----------------|-----------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 1 | CF | 2.80 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWSSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-------------------------|-----------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXY | Annelida | Oligochaetae | | | 8 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 10 | CF | 7.70 | |
| CDHE | Coleoptera | Dryopidae | <u>Helichus</u> | sp. | 1 | SC | 5.40 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 2 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 2 | SH | 4.70 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 2 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 124 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 12 | CF | 5.10 | |
| EHSI | Ephemeroptera | Heptageniidae | <u>Stenacron</u> | <u>interpunctatum</u> | 6 | CG | 7.10 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 8 | CG | 5.80 | |
| ELPA | Ephemeroptera | Leptophlebiidae | <u>Paraleptophlebia</u> | sp. | 1 | CG | 1.20 | |
| EOIS | Ephemeroptera | Oligoneuridae | <u>Isonychia</u> | sp. | 1 | CF | 3.80 | |
| GPHE | Gastropoda | Planorbidae | <u>Helisoma</u> | sp. | 2 | SC | 6.50 | |
| HXXX | Hydracarina | | | | 3 | PR | 5.70 | |
| MCNI | Megaloptera | Corydalidae | <u>Nigronia</u> | <u>serricornis</u> | 1 | PR | 5.50 | |
| OCIM | Odonata | Coenagrionidae | <u>Immature</u> | | 1 | PR | 9.00 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 5 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 1 | CF | 4.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 4 | PR | 5.70 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 2 | CG | 4.30 | |
| TPNY | Trichoptera | Polycentropodidae | <u>Nyctiophylax</u> | sp. | 1 | CF | 0.90 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDMSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 4 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 47 | CF | 6.30 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 7 | CF | 6.80 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 4 | SH | 4.70 | |
| DCCU | Diptera | Ceratopogonidae | <u>Culicoides</u> | spp. | 1 | PR | 6.50 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palponyia</u> | spp. | 7 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 47 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 2 | CF | 5.10 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 1 | CG | 5.40 | |
| EBBT | Ephemeroptera | Baetiscidae | <u>Baetisca</u> | sp. | 1 | CG | 1.90 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 2 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 13 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | 6.30 | |
| OGPR | Odonata | Gomphidae | <u>Progomphus</u> | <u>obscurus</u> | 1 | PR | 8.70 | |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | 1 | CF | 1.10 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 20 | CF | 6.60 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 2 | PR | 5.70 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWMSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXY | Annelida | Oligochaetae | | | 9 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 4 | CF | 6.30 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 1 | CG | 6.90 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 9 | SH | 4.70 | |
| DCXX | Diptera | Chironomidae | | | 80 | CG | 7.00 | |
| DSXX | Diptera | Simuliidae | | | 3 | CF | 5.10 | |
| DTDI | Diptera | Tipulidae | <u>Dicranota</u> | spp. | 1 | PR | 0.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 2 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 5 | CG | 5.80 | |
| HXXX | Hydracarina | | | | 13 | PR | 5.70 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 37 | CF | 6.60 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 1 | CF | 4.00 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 2 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNDRSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | SIZE |
|-------------|---------------|-------------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | |
| AOXX | Annelida | Oligochaetae | | | 39 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 5 | CF | 6.30 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 30 | CF | 7.70 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 16 | CG | 6.40 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 4 | SH | 4.70 | |
| CHBE | Coleoptera | Hydrophilidae | <u>Berosus</u> | sp. | 1 | PI | 8.60 | |
| DCYX | Diptera | Chironomidae | | | 20 | CG | 7.00 | |
| DTOR | Diptera | Tipulidae | <u>Ormosia</u> | spp. | 1 | CG | 6.20 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 7 | CG | 5.40 | |
| EEEU | Ephemeroptera | Ephemerellidae | <u>Eurylophella</u> | <u>temporalis</u> | 1 | CG | 4.60 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 2 | CG | 5.80 | |
| GHSO | Gastropoda | Hydrobiidae | <u>Somatogyrus</u> | spp. | 21 | SC | 6.50 | |
| GPGY | Gastropoda | Planorbidae | <u>Gyraulus</u> | spp. | 4 | SC | 8.00 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| HXXX | Hydracarina | | | | 2 | PR | 5.70 | |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | 1 | CF | 1.10 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| THHD | Trichoptera | Hydroptilidae | <u>Hydroptila</u> | sp. | 1 | PI | 6.20 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 3 | CF | 4.00 | |
| THOX | Trichoptera | Hydroptilidae | <u>Oxythira</u> | sp. | 1 | PI | 7.20 | |
| TLNE | Trichoptera | Leptoceridae | <u>Nectopsyche</u> | sp. | 18 | SH | 4.10 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 9 | PR | 5.70 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 2 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNWRSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-------------------|-----------------------|------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 6 | CG | 8.20 | |
| BCCO | Bivalvia | Corbiculidae | <u>Corbicula</u> | <u>fluminea</u> | 1 | CF | 6.30 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 15 | CF | 7.70 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 3 | CG | 6.40 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 2 | SH | 4.70 | |
| CHBE | Coleoptera | Hydrophilidae | <u>Berosus</u> | sp. | 1 | PI | 8.60 | |
| DCXX | Diptera | Chironomidae | | | 43 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 4 | CG | 5.40 | |
| EHST | Ephemeroptera | Heptageniidae | <u>Stenonema</u> | <u>modestum</u> | 7 | CG | 5.80 | |
| GHSO | Gastropoda | Hydrobiidae | <u>Somatogyryus</u> | spp. | 33 | SC | 6.50 | |
| GPHE | Gastropoda | Planorbidae | <u>Helisoma</u> | sp. | 1 | SC | 6.50 | |
| HXXX | Hydracarina | | | | 1 | PR | 5.70 | |
| TBBR | Trichoptera | Brachycentridae | <u>Brachycentrus</u> | sp. | 1 | CF | 1.10 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 10 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 2 | CF | 4.00 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 2 | PR | 5.70 | |
| TPCH | Trichoptera | Philopotamidae | <u>Chimarra</u> | sp. | 2 | CF | 2.80 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 4 | CF | 3.50 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLNAWSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|---------------|-----------------|-------------------|---------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AOXX | Annelida | Oligochaetae | | | 96 | CG | 8.20 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 2 | CF | 6.80 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCYX | Diptera | Chironomidae | | | 52 | CG | 7.00 | |
| EBBA | Ephemeroptera | Baetidae | <u>Baetis</u> | spp. | 2 | CG | 5.40 | |
| IACA | Isopoda | Asellidae | <u>Caecidotea</u> | sp. | 6 | SH | 9.40 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRDCSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|----------------|-----------------------|----------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 4 | SH | 6.90 | |
| AHXX | Annelida | Hirudinea | | | 1 | CG | 8.20 | |
| AOXX | Annelida | Oligochaetae | | | 19 | CG | 8.20 | |
| BSMU | Bivalvia | Sphaeriidae | <u>Musculium</u> | sp. | 1 | CF | 7.60 | |
| BSPI | Bivalvia | Sphaeriidae | <u>Pisidium</u> | sp. | 1 | CF | 6.80 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 8 | CF | 7.70 | |
| CEST | Coleoptera | Elmidae | <u>Stenelmis</u> | spp. | 2 | SC | 5.40 | |
| DCAX | Decapoda | Cambaridae | | | 1 | SH | 6.80 | |
| DCXX | Diptera | Chironomidae | | | 95 | CG | 7.00 | |
| DEMXX | Diptera | Empididae | | | 1 | PR | 8.10 | |
| DSXX | Diptera | Simuliidae | | | 7 | CF | 5.10 | |
| DTAN | Diptera | Tipulidae | <u>Antocha</u> | spp. | 1 | CG | 4.60 | |
| DTHE | Diptera | Tipulidae | <u>Hexatoma</u> | spp. | 8 | PR | 4.70 | |
| HXXX | Hydracarina | | | | 7 | PR | 5.70 | |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | 6.30 | |
| OGXX | Odonata | Gomphidae | | | 1 | PR | 6.00 | |
| THCH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 21 | CF | 6.60 | |
| THHY | Trichoptera | Hydropsychidae | <u>Hydropsyche</u> | spp. | 8 | CF | 4.00 | |
| TLCE | Trichoptera | Leptoceridae | <u>Ceraclea</u> | sp. | 1 | CG | 2.30 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TOPS | Trichoptera | Odontoceridae | <u>Psilotreta</u> | sp. | 3 | SC | 0.00 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 1 | CG | 4.30 | |

 INVERTEBRATE ASSESSMENT APPLICATION (RBP III)
 COLLECTION DATA REPORT FOR: POLRWCSUM95

| BUG CODE | ORDER | FAMILY | GENUS | SPECIES | QTY | FEED | | |
|-------------|-------------|-------------------|-----------------------|-------------------|-----|------|------|------|
| | | | | | | GLD | HBI | SIZE |
| AGGA | Amphipoda | Gammaridae | <u>Gammarus</u> | sp. | 1 | SH | 6.90 | |
| AOXX | Annelida | Oligochaetae | | | 7 | CG | 8.20 | |
| BSSP | Bivalvia | Sphaeriidae | <u>Sphaerium</u> | sp. | 5 | CF | 7.70 | |
| CEAN | Coleoptera | Elmidae | <u>Ancyronyx</u> | <u>variegatus</u> | 3 | CG | 6.90 | |
| CEDU | Coleoptera | Elmidae | <u>Dubiraphia</u> | spp. | 1 | CG | 6.40 | |
| CEMA | Coleoptera | Elmidae | <u>Macronychus</u> | <u>glabratus</u> | 3 | SH | 4.70 | |
| DCPA | Diptera | Ceratopogonidae | <u>Palpomyia</u> | spp. | 1 | PR | 6.90 | |
| DCXX | Diptera | Chironomidae | | | 119 | CG | 7.00 | |
| DTIM | Diptera | Tabanidae | <u>Immature</u> | | 1 | PR | 8.50 | |
| GPPH | Gastropoda | Physidae | <u>Physa</u> | sp. | 1 | SC | 9.10 | |
| MSSI | Megaloptera | Sialidae | <u>Sialis</u> | sp. | 1 | PR | 7.50 | |
| OABO | Odonata | Aeshnidae | <u>Boyeria</u> | <u>vinosa</u> | 1 | PR | 6.30 | |
| TECH | Trichoptera | Hydropsychidae | <u>Cheumatopsyche</u> | spp. | 2 | CF | 6.60 | |
| TLOE | Trichoptera | Leptoceridae | <u>Oecetis</u> | spp. | 1 | PR | 5.70 | |
| TPLY | Trichoptera | Psychomyiidae | <u>Lype</u> | <u>diversa</u> | 17 | CG | 4.30 | |
| TPPO | Trichoptera | Polycentropodidae | <u>Polycentropus</u> | spp. | 1 | CF | 3.50 | |

APPENDIX C

Macroinvertebrate metric scores

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDAFAL94

REFERENCE SITE: POLNDSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|----------|----------------|--------|--------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 15 | 7.042 | 1.000 | 0.021 | 0.867 | 3 | N/A | 0.095 | 27 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 18 | 5.471 | 0.020 | 2.113 | 0.306 | 10 | N/A | 0.080 | 37 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 83.333 | 77.691 | 5000.000 | 0.994 | 86.700 | 30.000 | 1.067 | 118.750 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 4 | 6 | 0 | 0 | 0 | 4 | 6 | 26 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 54.17 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDBFAL94

REFERENCE SITE: POLNSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|--------|----------------|--------|--------|-------|--------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 15 | 5.595 | 0.015 | 3.304 | 0.416 | 7 | N/A | 0.027 | 31 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 18 | 5.471 | 0.020 | 2.113 | 0.306 | 10 | N/A | 0.080 | 37 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 83.333 | 97.784 | 75.000 | 156.365 | 41.600 | 70.000 | 0.600 | 33.750 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 6 | 0 | 2 | 4 | 2 | 32 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 66.67 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDCFAL94

REFERENCE SITE: POLNDSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|---------|------|-----|
| | | | | EPT/C | DOM | EPT | | | | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 12 | 6.831 | 0.063 | 0.193 | 0.763 | 6 | N/A | 0.147 | 26 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 18 | 5.471 | 0.020 | 2.113 | 0.306 | 10 | N/A | 0.080 | 37 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 66.667 | 80.091 | 315.000 | 9.134 | 76.300 | 60.000 | 0.833 | 183.750 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 4 | 4 | 6 | 0 | 0 | 0 | 4 | 6 | 24 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 50.00 | | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDDFAL94

REFERENCE SITE: POLNDSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|---------|--------|---------|----------------|--------|---------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 24 | 5.649 | 0.077 | 0.877 | 0.466 | 15 | N/A | 0.140 | 46 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 18 | 5.471 | 0.020 | 2.113 | 0.306 | 10 | N/A | 0.080 | 36 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 133.333 | 96.849 | 385.000 | 41.505 | 46.600 | 150.000 | 0.250 | 175.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 2 | 0 | 6 | 6 | 6 | 38 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 79.17 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDEFAL94

REFERENCE SITE: POLNDMFAL94

| | TXR ---- | HBI ---- | SC/F ---- | METRIC NUMBERS | | | | CLI ---- | CPOM ---- | TOT ---- |
|--|-------------|-------------|--------------|----------------|-------------|-------------|-------|-------------|--------------|-------------|
| | | | | EPT/C ---- | DOM ---- | EPT ---- | | | | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 15 | 6.733 | 0.250 | 0.181 | 0.643 | 5 | N/A | 0.014 | 28 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 22 | 5.322 | 0.008 | 4.563 | 0.526 | 14 | N/A | 0.018 | 48 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 68.182 | 79.044 | 3125.000 | 3.967 | 64.300 | 35.714 | 1.200 | 77.778 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 4 | 4 | 6 | 0 | 0 | 0 | 4 | 6 | 24 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 50.00 | | | | | |

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
 SAMPLE SITE: POLNAFFAL94
 REFERENCE SITE: POLNAWFAL94

METRIC NUMBERS

| | <u>TXR</u> | <u>HBI</u> | <u>DOM</u> | <u>CLI</u> | <u>TOT</u> |
|---|------------|------------|------------|------------|------------|
| SAMPLE SITE VALUE: | 6 | 7.094 | 0.805 | N/A | 14 |
| REFERENCE SITE VALUE: | 6 | 7.016 | 0.968 | N/A | 14 |
| SITE TO REFERENCE %age COMPARABILITY VALUE: | 100.000 | 98.900 | 80.500 | 0.333 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE: | 6 | 6 | 0 | 6 | 18 |
| % COMPARABILITY TO REFERENCE SCORE: | | | 75.00 | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDAWIN95

REFERENCE SITE: POLNDSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|-------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 6 | 5.532 | 0.005 | 0.028 | 0.790 | 0 | N/A | 0.083 | 12 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 23 | 5.014 | 0.005 | 7.875 | 0.686 | 15 | N/A | 0.034 | 55 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 26.087 | 90.636 | 100.000 | 0.356 | 79.000 | 0.000 | 3.500 | 244.118 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 0 | 6 | 6 | 0 | 0 | 0 | 2 | 6 | 20 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 41.67 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDBWIN95

REFERENCE SITE: POLNDSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 11 | 5.845 | 0.014 | 2.457 | 0.363 | 5 | N/A | 0.074 | 25 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 23 | 5.014 | 0.005 | 7.875 | 0.686 | 15 | N/A | 0.034 | 53 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 47.826 | 85.783 | 280.000 | 31.200 | 36.300 | 33.333 | 1.545 | 217.647 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 2 | 2 | 0 | 2 | 6 | 26 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 54.17 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDCWIN95

REFERENCE SITE: POLNDSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|--------|----------------|--------|--------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 8 | 5.280 | 0.003 | 0.310 | 0.896 | 2 | N/A | 0.087 | 17 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 23 | 5.014 | 0.005 | 7.875 | 0.686 | 15 | N/A | 0.034 | 54 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 34.783 | 94.962 | 60.000 | 3.937 | 89.600 | 13.333 | 2.375 | 255.882 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 0 | 6 | 6 | 0 | 0 | 0 | 2 | 6 | 20 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 41.67 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDDWIN95

REFERENCE SITE: POLNDSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TOT |
|--|--------|--------|--------|----------------|--------|--------|-------|--------|------|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 14 | 5.223 | 0.004 | 2.375 | 0.801 | 10 | N/A | 0.024 | 32 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 23 | 5.014 | 0.005 | 7.875 | 0.686 | 15 | N/A | 0.034 | 53 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 60.870 | 95.998 | 80.000 | 30.159 | 80.100 | 66.667 | 1.071 | 70.588 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 2 | 0 | 0 | 4 | 6 | 28 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 58.33 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDEWIN95

REFERENCE SITE: POLNDMWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 13 | 6.985 | 0.111 | 0.098 | 0.789 | 4 | N/A | 0.021 | 25 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 5.392 | 0.020 | 4.600 | 0.300 | 12 | N/A | 0.316 | 43 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 68.421 | 77.194 | 555.000 | 2.130 | 78.900 | 33.333 | 1.000 | 6.646 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 4 | 6 | 0 | 0 | 0 | 4 | 0 | 18 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 37.50 | | | | |

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNAFWIN95

REFERENCE SITE: POLNAWWIN95

METRIC NUMBERS

| | <u>TXR</u> | <u>HBI</u> | <u>DOM</u> | <u>CLI</u> | <u>TOT</u> |
|---|------------|------------|------------|------------|------------|
| SAMPLE SITE VALUE: | 15 | 6.698 | 0.762 | N/A | 22 |
| REFERENCE SITE VALUE: | 18 | 7.530 | 0.459 | N/A | 26 |
| SITE TO REFERENCE %age COMPARABILITY VALUE: | 83.333 | 112.422 | 76.200 | 0.867 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE: | 6 | 6 | 0 | 4 | 16 |
| % COMPARABILITY TO REFERENCE SCORE: | | | 66.67 | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDASPR95

REFERENCE SITE: POLNDSSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|--------|----------------|--------|--------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 11 | 6.014 | 0.008 | 0.259 | 0.583 | 3 | N/A | 0.362 | 21 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 5.319 | 0.025 | 4.129 | 0.384 | 11 | N/A | 0.105 | 41 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 57.895 | 88.444 | 32.000 | 6.273 | 58.300 | 27.273 | 1.273 | 344.762 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 2 | 6 | 2 | 0 | 0 | 0 | 4 | 6 | 20 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 41.67 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDBSPR95

REFERENCE SITE: POLNDSSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|--------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 18 | 5.802 | 0.020 | 0.693 | 0.397 | 9 | N/A | 0.009 | 34 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 5.319 | 0.025 | 4.129 | 0.384 | 11 | N/A | 0.105 | 41 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 94.737 | 91.675 | 80.000 | 16.784 | 39.700 | 81.818 | 0.556 | 8.571 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 0 | 2 | 4 | 4 | 0 | 28 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 58.33 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDCSPR95

REFERENCE SITE: POLNDSSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|--------|--------|----------------|--------|--------|-------|--------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 18 | 5.791 | 0.007 | 0.486 | 0.496 | 8 | N/A | 0.071 | 33 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 19 | 5.319 | 0.025 | 4.129 | 0.384 | 11 | N/A | 0.105 | 40 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 94.737 | 91.849 | 28.000 | 11.770 | 49.600 | 72.727 | 0.444 | 67.619 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 6 | 6 | 2 | 0 | 0 | 2 | 6 | 6 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 58.33 | | | | 28 | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDDSPR95

REFERENCE SITE: POLNDSSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|--------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 17 | 5.742 | 0.048 | 2.018 | 0.443 | 10 | N/A | 0.053 | 35 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 5.319 | 0.025 | 4.129 | 0.384 | 11 | N/A | 0.105 | 41 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 89.474 | 92.633 | 192.000 | 48.874 | 44.300 | 90.909 | 0.588 | 50.476 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 2 | 0 | 6 | 4 | 6 | 36 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 75.00 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDESPR95

REFERENCE SITE: POLNDMSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 18 | 7.136 | 0.056 | 0.054 | 0.569 | 2 | N/A | 0.113 | 28 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 23 | 4.805 | 0.009 | 2.690 | 0.434 | 12 | N/A | 0.029 | 44 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 78.261 | 67.335 | 622.222 | 2.007 | 56.900 | 16.667 | 0.944 | 389.655 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 2 | 6 | 0 | 0 | 0 | 4 | 6 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 45.83 | | | | 22 |

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNAFSPR95

REFERENCE SITE: POLNAWSPR95

METRIC NUMBERS

| | <u>TXR</u> | <u>HBI</u> | <u>DOM</u> | <u>CLI</u> | <u>TOT</u> |
|---|------------|------------|------------|------------|------------|
| SAMPLE SITE VALUE: | 11 | 6.947 | 0.900 | N/A | 19 |
| REFERENCE SITE VALUE: | 15 | 7.045 | 0.474 | N/A | 22 |
| SITE TO REFERENCE %age COMPARABILITY VALUE: | 73.333 | 101.411 | 90.000 | 0.818 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE: | 4 | 6 | 0 | 4 | 14 |
| % COMPARABILITY TO REFERENCE SCORE: | | | 58.33 | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDASUM95

REFERENCE SITE: POLNDSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 13 | 7.250 | 0.083 | 0.014 | 0.738 | 1 | N/A | 0.005 | 22 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 24 | 6.179 | 0.024 | 0.853 | 0.425 | 8 | N/A | 0.077 | 41 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 54.167 | 85.228 | 345.833 | 1.641 | 73.800 | 12.500 | 1.385 | 6.494 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 0 | 0 | 0 | 4 | 0 | 18 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 37.50 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDBSUM95

REFERENCE SITE: POLNDSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CPOM | TOT |
|--|--------|---------|--------|----------------|--------|--------|-------|-------|-----|
| | | | | EPT/C | DOM | EPT | CLI | | |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 16 | 6.005 | 0.018 | 0.832 | 0.477 | 6 | N/A | 0.000 | |
| | | | | | | | | 29 | |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 24 | 6.179 | 0.024 | 0.853 | 0.425 | 8 | N/A | 0.077 | |
| | | | | | | | | 40 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 66.667 | 102.898 | 75.000 | 97.538 | 47.700 | 75.000 | 0.750 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 6 | 0 | 2 | 4 | 0 | |
| | | | | | | | | 28 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 66.67 | | | | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDCSUM95

REFERENCE SITE: POLNDSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|--------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 19 | 6.393 | 0.043 | 0.531 | 0.442 | 6 | N/A | 0.071 | 32 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 24 | 6.179 | 0.024 | 0.853 | 0.425 | 8 | N/A | 0.077 | 40 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 79.167 | 96.653 | 179.167 | 62.251 | 44.200 | 75.000 | 0.632 | 92.208 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 4 | 0 | 2 | 4 | 6 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | | 66.67 | | | 32 | |

PRODUCED ON: 11/01/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNDDSUM95

REFERENCE SITE: POLNDSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|---------|---------|---------|----------------|--------|---------|-------|---------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 26 | 6.054 | 0.222 | 0.578 | 0.455 | 11 | N/A | 0.096 | 44 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 24 | 6.179 | 0.024 | 0.853 | 0.425 | 8 | N/A | 0.077 | 40 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 108.333 | 102.065 | 925.000 | 67.761 | 45.500 | 137.500 | 0.231 | 124.675 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 4 | 0 | 6 | 6 | 6 | 40 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 83.33 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLNDESUM95
REFERENCE SITE: POLNDMSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CPOM | TOT |
|--|---------|--------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 24 | 7.207 | 0.104 | 0.143 | 0.306 | 4 | N/A | 0.011 | 36 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 6.454 | 0.013 | 0.851 | 0.287 | 7 | N/A | 0.000 | 34 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 126.316 | 89.552 | 800.000 | 16.804 | 30.600 | 57.143 | 0.458 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 0 | 2 | 0 | 6 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | 26 |

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
 SAMPLE SITE: POLNAFSUM95
 REFERENCE SITE: POLNAWSUM95

METRIC NUMBERS

| | <u>TXR</u> | <u>HBI</u> | <u>DOM</u> | <u>CLI</u> | <u>TOT</u> |
|---|------------|------------|------------|------------|------------|
| SAMPLE SITE VALUE: | 4 | 7.195 | 0.817 | N/A | 12 |
| REFERENCE SITE VALUE: | 6 | 7.792 | 0.604 | N/A | 14 |
| SITE TO REFERENCE %age COMPARABILITY VALUE: | 66.667 | 108.297 | 81.700 | 0.750 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE: | 4 | 6 | 0 | 4 | 14 |
| % COMPARABILITY TO REFERENCE SCORE: | | | 58.33 | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWAFAL94

REFERENCE SITE: POLNWSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | | TOT |
|--|--------|--------|---------|----------------|--------|-------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | CPOM | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 4 | 7.005 | 1.000 | 0.008 | 0.946 | 0 | N/A | 0.000 | 13 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 22 | 6.329 | 0.250 | 0.794 | 0.502 | 10 | N/A | 0.000 | 45 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 18.182 | 90.350 | 400.000 | 1.008 | 94.600 | 0.000 | 4.750 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 28.57 | | | | 12 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWBFA194

REFERENCE SITE: POLNWSFA194

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|---------|-------|----------------|--------|--------|-------|-------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 14 | 5.214 | 0.009 | 4.926 | 0.313 | 4 | N/A | 0.000 | 28 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 22 | 6.329 | 0.250 | 0.794 | 0.502 | 10 | N/A | 0.000 | 41 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 63.636 | 121.385 | 3.600 | 620.403 | 31.300 | 40.000 | 1.143 | 0.000 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 4 | 6 | 0 | 6 | 2 | 0 | 4 | 0 | 22 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 52.38 | | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWCAL94

REFERENCE SITE: POLNWSAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|-----|
| | | | | EPT/C | DOM | EPT | CLI | | |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 9 | 6.938 | 1.000 | 0.021 | 0.918 | 3 | N/A | 0.000 | 21 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 22 | 6.329 | 0.250 | 0.794 | 0.502 | 10 | N/A | 0.000 | 42 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 40.909 | 91.222 | 400.000 | 2.645 | 91.800 | 30.000 | 2.000 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 0 | 0 | 0 | 2 | 0 | 16 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 38.10 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWDFAL94

REFERENCE SITE: POLNWSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TOT |
|--|--------|---------|----------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 17 | 6.329 | 3.000 | 0.251 | 0.750 | 8 | N/A | 0.000 | 35 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 22 | 6.329 | 0.250 | 0.794 | 0.502 | 10 | N/A | 0.000 | 40 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 77.273 | 100.000 | 1200.000 | 31.612 | 75.000 | 80.000 | 0.588 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 2 | 0 | 4 | 4 | 0 | 26 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWEFAL94

REFERENCE SITE: POLNWMFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | | TOT |
|--|--------|--------|----------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | CPOM | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 12 | 6.749 | 0.500 | 0.093 | 0.819 | 4 | N/A | 0.000 | 24 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 18 | 4.182 | 0.018 | 2.474 | 0.270 | 12 | N/A | 0.000 | 38 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 66.667 | 61.965 | 2777.778 | 3.759 | 81.900 | 33.333 | 1.167 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 2 | 6 | 0 | 0 | 0 | 4 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 38.10 | | | | 16 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWBWIN95

REFERENCE SITE: POLNWSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|---------|-------|-------|------|-----|
| | | | | EPT/C | DOM | EPT | | | | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 7 | 6.926 | 0.167 | 0.056 | 0.873 | 4 | N/A | 0.000 | 19 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 12 | 6.749 | 0.167 | 0.053 | 0.838 | 4 | N/A | 0.000 | 25 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 58.333 | 97.444 | 100.000 | 105.660 | 87.300 | 100.000 | 1.000 | 0.000 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 6 | 0 | 6 | 4 | 0 | 30 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 71.43 | | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWCWIN95

REFERENCE SITE: POLNWSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|---------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 9 | 6.438 | 0.176 | 0.328 | 0.578 | 2 | N/A | 0.000 | 19 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 12 | 6.749 | 0.167 | 0.053 | 0.838 | 4 | N/A | 0.000 | 24 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 75.000 | 104.831 | 105.389 | 618.868 | 57.800 | 50.000 | 0.556 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 6 | 0 | 0 | 4 | 0 | 26 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWDWIN95

REFERENCE SITE: POLNWSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|---------|---------|-------|----------------|--------|---------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 12 | 5.602 | 0.008 | 0.339 | 0.592 | 7 | N/A | 0.000 | 26 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 12 | 6.749 | 0.167 | 0.053 | 0.838 | 4 | N/A | 0.000 | 25 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 100.000 | 120.475 | 4.790 | 639.623 | 59.200 | 175.000 | 0.750 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 0 | 6 | 0 | 6 | 4 | 0 | 28 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 66.67 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWASPR95

REFERENCE SITE: POLNWSSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 13 | 7.332 | 0.111 | 0.060 | 0.361 | 3 | N/A | 0.000 | 24 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 16 | 6.050 | 0.024 | 1.065 | 0.391 | 8 | N/A | 0.000 | 32 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 81.250 | 82.515 | 462.500 | 5.634 | 36.100 | 37.500 | 0.923 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 4 | 6 | 0 | 2 | 0 | 4 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 52.38 | | | | 22 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWBSR95

REFERENCE SITE: POLNWSSR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TOT |
|--|---------|--------|--------|----------------|--------|---------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 18 | 6.184 | 0.015 | 0.210 | 0.543 | 8 | N/A | 0.000 | 33 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 16 | 6.050 | 0.024 | 1.065 | 0.391 | 8 | N/A | 0.000 | 32 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 112.500 | 97.833 | 62.500 | 19.718 | 54.300 | 100.000 | 0.500 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 0 | 0 | 6 | 4 | 0 | 28 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 66.67 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWCSPP95

REFERENCE SITE: POLNWSSPP95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 14 | 6.637 | 0.056 | 0.151 | 0.769 | 5 | N/A | 0.000 | 27 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 16 | 6.050 | 0.024 | 1.065 | 0.391 | 8 | N/A | 0.000 | 32 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 87.500 | 91.156 | 233.333 | 14.178 | 76.900 | 62.500 | 0.643 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 0 | 0 | 0 | 4 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 52.38 | | | | 22 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWDSR95

REFERENCE SITE: POLNWSSR95

| | TXR ---- | HBI ---- | SC/F ---- | METRIC NUMBERS | | | CLI ---- | CPOM ---- | TOT --- |
|--|-------------|-------------|--------------|----------------|-------------|-------------|-------------|--------------|------------|
| | | | | EPT/C ---- | DOM ---- | EPT ---- | | | |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 20 | 6.816 | 0.172 | 0.084 | 0.739 | 7 | N/A | 0.000 | 35 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 16 | 6.050 | 0.024 | 1.065 | 0.391 | 8 | N/A | 0.000 | 32 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 125.000 | 88.762 | 716.667 | 7.887 | 73.900 | 87.500 | 0.350 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 0 | 0 | 4 | 6 | 0 | 28 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 66.67 | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLNWESPR95
REFERENCE SITE: POLNWMSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CPOM | TOT |
|--|---------|--------|----------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 25 | 6.877 | 0.333 | 0.221 | 0.645 | 10 | N/A | 0.000 | 43 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 20 | 5.651 | 0.016 | 0.716 | 0.406 | 13 | N/A | 0.000 | 40 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 125.000 | 82.172 | 2081.250 | 30.866 | 64.500 | 76.923 | 0.480 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 4 | 6 | 2 | 0 | 2 | 6 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | 26 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWASUM95

REFERENCE SITE: POLNWSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|--------|----------|----------------|--------|-------|-------|-------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 11 | 7.503 | 4.000 | 0.009 | 0.564 | 0 | N/A | 0.000 | 23 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 21 | 6.711 | 0.100 | 0.234 | 0.629 | 9 | N/A | 0.000 | 39 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 52.381 | 89.444 | 4000.000 | 3.846 | 56.400 | 0.000 | 1.455 | 0.000 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 0 | 0 | 0 | 4 | 0 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 42.86 | | | | 18 | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWBSUM95

REFERENCE SITE: POLNWSSUM95

| | TXR ----- | HBI ----- | SC/F ----- | METRIC NUMBERS | | | | CLI ----- | CPOM ----- | TOT ----- |
|--|--------------|--------------|---------------|----------------|--------------|--------------|-------|--------------|---------------|--------------|
| | | | | EPT/C ----- | DOM ----- | EPT ----- | | | | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 12 | 6.424 | 0.040 | 0.318 | 0.541 | 4 | N/A | 0.000 | 23 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 21 | 6.711 | 0.100 | 0.234 | 0.629 | 9 | N/A | 0.000 | 39 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 57.143 | 104.468 | 40.000 | 135.897 | 54.100 | 44.444 | 0.917 | 0.000 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 2 | 6 | 4 | 6 | 0 | 0 | 4 | 0 | 22 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 52.38 | | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWCSUM95

REFERENCE SITE: POLNWSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 14 | 6.853 | 0.167 | 0.224 | 0.583 | 2 | N/A | 0.000 | 24 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 21 | 6.711 | 0.100 | 0.234 | 0.629 | 9 | N/A | 0.000 | 39 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 66.667 | 97.928 | 167.000 | 95.726 | 58.300 | 22.222 | 0.929 | 0.000 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 6 | 0 | 0 | 4 | 0 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | 26 | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWDSUM95

REFERENCE SITE: POLNWSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|--------|---------|--------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 14 | 6.592 | 0.077 | 0.193 | 0.769 | 6 | N/A | 0.000 | 28 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 21 | 6.711 | 0.100 | 0.234 | 0.629 | 9 | N/A | 0.000 | 38 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 66.667 | 101.805 | 77.000 | 82.479 | 76.900 | 66.667 | 0.786 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 6 | 0 | 0 | 4 | 0 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | 26 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLNWESUM95

REFERENCE SITE: POLNWMSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CPOM | TOT |
|--|--------|---------|----------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 13 | 6.391 | 0.306 | 0.284 | 0.632 | 4 | N/A | 0.000 | 25 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 15 | 6.496 | 0.020 | 0.625 | 0.471 | 7 | N/A | 0.000 | 30 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 86.667 | 101.643 | 1530.000 | 45.440 | 63.200 | 57.143 | 0.769 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 2 | 0 | 0 | 4 | 0 | 24 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 57.14 | | | | |

APPENDIX D

Macroinvertebrate metric scores - Quality Assurance Data

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRDDFAL94

REFERENCE SITE: POLNDSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TC |
|--|---------|--------|---------|----------------|--------|---------|-------|--------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | --- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 27 | 6.131 | 0.038 | 1.276 | 0.393 | 14 | N/A | 0.033 | 49 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 18 | 5.471 | 0.020 | 2.113 | 0.306 | 10 | N/A | 0.080 | 36 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 150.000 | 89.235 | 190.000 | 60.388 | 39.300 | 140.000 | 0.185 | 41.250 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 4 | 2 | 6 | 6 | 4 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 83.33 | | | | 40 |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRDBWIN95

REFERENCE SITE: POLNDSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | | | |
|--|--------|--------|---------|----------------|--------|--------|-------|---------|------|--|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | CPOM | TOT | |
| | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 13 | 5.620 | 0.014 | 3.208 | 0.346 | 7 | N/A | 0.094 | 29 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 23 | 5.014 | 0.005 | 7.875 | 0.686 | 15 | N/A | 0.034 | 53 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 56.522 | 89.217 | 280.000 | 40.737 | 34.600 | 46.667 | 1.154 | 276.471 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 2 | 2 | 0 | 4 | 6 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 58.33 | | | | 28 | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLRDDSPR95
REFERENCE SITE: POLNDSSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TC |
|--|---------|--------|--------|----------------|--------|--------|-------|--------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | --- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 19 | 5.565 | 0.023 | 2.289 | 0.315 | 10 | N/A | 0.028 | 37 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 5.319 | 0.025 | 4.129 | 0.384 | 11 | N/A | 0.105 | 40 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 100.000 | 95.580 | 92.000 | 55.437 | 31.500 | 90.909 | 0.526 | 26.667 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 4 | 2 | 6 | 4 | 2 | 36 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 75.00 | | | | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRDCSUM95

REFERENCE SITE: POLNDSSUM95

| | <u>TXR</u> | <u>HBI</u> | <u>SC/F</u> | METRIC NUMBERS | | <u>EPT</u> | <u>CLI</u> | <u>CPOM</u> | <u>TO</u> |
|--|------------|------------|-------------|----------------|------------|------------|------------|-------------|-----------|
| | | | | <u>EPT/C</u> | <u>DOM</u> | | | | |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 22 | 6.587 | 0.109 | 0.368 | 0.492 | 6 | N/A | 0.017 | 36 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 24 | 6.179 | 0.024 | 0.853 | 0.425 | 8 | N/A | 0.077 | 40 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 91.667 | 93.806 | 454.167 | 43.142 | 49.200 | 75.000 | 0.545 | 22.078 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 2 | 0 | 2 | 4 | 2 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 58.33 | | | | 28 |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRWDFAL94

REFERENCE SITE: POLNWSFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | CLI | CPOM | TOT |
|--|------|------|------|----------------|-----|-----|------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | --- |

| | | | | | | | | | |
|-------------|----|-------|-------|-------|-------|---|-----|-------|----|
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 12 | 6.469 | 0.500 | 0.191 | 0.807 | 6 | N/A | 0.000 | 26 |

| | | | | | | | | | |
|----------------|----|-------|-------|-------|-------|----|-----|-------|----|
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 22 | 6.329 | 0.250 | 0.794 | 0.502 | 10 | N/A | 0.000 | 41 |

| | | | | | | | | | |
|--------------------------------------|--------|--------|---------|--------|--------|--------|-------|-------|--|
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 54.545 | 97.836 | 200.000 | 24.055 | 80.700 | 60.000 | 1.000 | 0.000 | |

| | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|--|
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 2 | 6 | 6 | 0 | 0 | 0 | 4 | 0 | |

| | | | | | | | | | |
|--|--|--|--|--|-------|--|--|--|----|
| <u>COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 42.86 | | | | 18 |
|--|--|--|--|--|-------|--|--|--|----|

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRWBWIN95

REFERENCE SITE: POLNWSWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TOT |
|--|---------|---------|-------|----------------|--------|---------|-------|-------|------|-----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 13 | 5.988 | 0.013 | 0.874 | 0.515 | 8 | N/A | 0.000 | 28 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 12 | 6.749 | 0.167 | 0.053 | 0.838 | 4 | N/A | 0.000 | 24 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 108.333 | 112.709 | 7.784 | 1649.057 | 51.500 | 200.000 | 0.462 | 0.000 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 6 | 6 | 0 | 6 | 0 | 6 | 6 | 0 | 30 | |
| <u>COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 71.43 | | | | | |

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLRWDSR95
REFERENCE SITE: POLNWSSR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | | |
|--|------|------|------|----------------|------|------|------|------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | CPOM | TOT |
| | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |

| | | | | | | | | | |
|-------------|----|-------|-------|-------|-------|---|-----|-------|----|
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 19 | 6.812 | 0.030 | 0.114 | 0.703 | 8 | N/A | 0.000 | 35 |

| | | | | | | | | | |
|----------------|----|-------|-------|-------|-------|---|-----|-------|----|
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 16 | 6.050 | 0.024 | 1.065 | 0.391 | 8 | N/A | 0.000 | 32 |

| | | | | | | | | | |
|--------------------------------------|---------|--------|---------|--------|--------|---------|-------|-------|--|
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 118.750 | 88.814 | 125.000 | 10.704 | 70.300 | 100.000 | 0.368 | 0.000 | |

| | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|----|
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 0 | 0 | 6 | 6 | 0 | 30 |

% COMPARABILITY TO REFERENCE SCORE: 71.43

PRODUCED ON: 11/07/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRWCSUM95

REFERENCE SITE: POLNWSSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | | TOT |
|--|--------|--------|---------|----------------|--------|--------|-------|-------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | CPOM | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 16 | 6.732 | 0.125 | 0.176 | 0.721 | 4 | N/A | 0.000 | 28 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 21 | 6.711 | 0.100 | 0.234 | 0.629 | 9 | N/A | 0.000 | 38 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 76.190 | 99.688 | 125.000 | 75.214 | 72.100 | 44.444 | 0.750 | 0.000 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 4 | 6 | 6 | 6 | 0 | 0 | 4 | 0 | 26 |
| <u>COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 61.90 | | | | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRDDFAL94

REFERENCE SITE: POLNDDFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | EPT | CLI | CPOM | TO |
|--|---------|--------|--------|----------------|--------|--------|-------|--------|------|----|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 27 | 6.131 | 0.038 | 1.276 | 0.393 | 14 | N/A | 0.033 | 49 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 24 | 5.649 | 0.077 | 0.877 | 0.466 | 15 | N/A | 0.140 | 46 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 112.500 | 92.138 | 49.351 | 145.496 | 39.300 | 93.333 | 0.259 | 23.571 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 6 | 6 | 4 | 6 | 2 | 6 | 6 | 2 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 79.17 | | | | 38 | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRDBWIN95

REFERENCE SITE: POLNDBWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | CLI | CPOM | TC |
|--|---------|---------|---------|----------------|--------|---------|-------|---------|------|----|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 13 | 5.620 | 0.014 | 3.208 | 0.346 | 7 | N/A | 0.094 | 25 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 11 | 5.845 | 0.014 | 2.457 | 0.363 | 5 | N/A | 0.074 | 25 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 118.182 | 104.004 | 100.000 | 130.566 | 34.600 | 140.000 | 0.308 | 127.027 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | | 91.67 | | | 44 | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLRDDSPR95
REFERENCE SITE: POLNDDSPR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TOE |
|--|---------|---------|--------|----------------|--------|---------|-------|--------|------|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 19 | 5.565 | 0.023 | 2.289 | 0.315 | 10 | N/A | 0.028 | 37 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 17 | 5.742 | 0.048 | 2.018 | 0.443 | 10 | N/A | 0.053 | 36 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 111.765 | 103.181 | 47.917 | 113.429 | 31.500 | 100.000 | 0.316 | 52.830 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 4 | 6 | 2 | 6 | 6 | 6 | 42 |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 87.50 | | | | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLRDCSUM95
REFERENCE SITE: POLNDCSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | EPT | CLI | CPOM | TO |
|--|---------|--------|---------|----------------|--------|---------|-------|--------|------|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 22 | 6.587 | 0.109 | 0.368 | 0.492 | 6 | N/A | 0.017 | 36 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 19 | 6.393 | 0.043 | 0.531 | 0.442 | 6 | N/A | 0.071 | 33 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 115.789 | 97.055 | 253.488 | 69.303 | 49.200 | 100.000 | 0.364 | 23.944 | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 4 | 0 | 6 | 6 | 2 | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | 75.00 | | | | 36 |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:
SAMPLE SITE: POLRWDFAL94
REFERENCE SITE: POLNWDFAL94

| | TXR | HBI | SC/F | METRIC NUMBERS | | | EPT | CLI | CPOM | TO |
|--|--------|--------|--------|----------------|--------|--------|-------|------|------|----|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 12 | 6.469 | 0.500 | 0.191 | 0.807 | 6 | N/A | | 26 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 17 | 6.329 | 3.000 | 0.251 | 0.750 | 8 | N/A | | 36 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 70.588 | 97.836 | 16.667 | 76.096 | 80.700 | 75.000 | 0.583 | | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 4 | 6 | 0 | 6 | 0 | 2 | 4 | | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | | | | | | |
| | | | | | 52.38 | | | | 22 | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRWBWIN95

REFERENCE SITE: POLNWBWIN95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | | | |
|--|---------|---------|-------|----------------|--------|---------|-------|------|------|
| | ---- | ---- | ---- | EPT/C | DOM | EPT | CLI | CPOM | TC |
| | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| SAMPLE SITE | | | | | | | | | |
| VALUE: | 13 | 5.988 | 0.013 | 0.874 | 0.515 | 8 | N/A | | 28 |
| REFERENCE SITE | | | | | | | | | |
| VALUE: | 7 | 6.926 | 0.167 | 0.056 | 0.873 | 4 | N/A | | 19 |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | |
| VALUE: | 185.714 | 115.665 | 7.784 | 1560.714 | 51.500 | 200.000 | 0.077 | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | |
| SCORE: | 6 | 6 | 0 | 6 | 0 | 6 | 6 | | |
| <u>3/4 COMPARABILITY TO REFERENCE SCORE:</u> | | | | | | | | | 30 |
| | | | | | 71.43 | | | | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRWDSR95

REFERENCE SITE: POLNWDSR95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | EPT | CLI | CPOM | TO |
|--|--------|---------|--------|----------------|--------|---------|-------|------|------|----|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 19 | 6.812 | 0.030 | 0.114 | 0.703 | 8 | N/A | | 35 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 20 | 6.816 | 0.172 | 0.084 | 0.739 | 7 | N/A | | 35 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 95.000 | 100.059 | 17.442 | 135.714 | 70.300 | 114.286 | 0.421 | | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 6 | 6 | 0 | 6 | 0 | 6 | 6 | | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | | | | | | |
| | | | | | 71.43 | | | | 30 | |

PRODUCED ON: 11/02/95

RBPIII INVERTEBRATE METRICS 1-8 REPORT FOR:

SAMPLE SITE: POLRWCSUM95

REFERENCE SITE: POLNWCSUM95

| | TXR | HBI | SC/F | METRIC NUMBERS | | | EPT | CLI | CPOM | TC |
|--|---------|---------|--------|----------------|--------|---------|-------|------|------|----|
| | ---- | ---- | ---- | EPT/C | DOM | ---- | ---- | ---- | ---- | |
| SAMPLE SITE | | | | | | | | | | |
| VALUE: | 16 | 6.732 | 0.125 | 0.176 | 0.721 | 4 | N/A | | 28 | |
| REFERENCE SITE | | | | | | | | | | |
| VALUE: | 14 | 6.853 | 0.167 | 0.224 | 0.583 | 2 | N/A | | 24 | |
| SITE TO REFERENCE %age COMPARABILITY | | | | | | | | | | |
| VALUE: | 114.286 | 101.797 | 74.850 | 78.571 | 72.100 | 200.000 | 0.250 | | | |
| SITE TO REFERENCE BIOLOGICAL CONDITION SCORE | | | | | | | | | | |
| SCORE: | 6 | 6 | 6 | 6 | 0 | 6 | 6 | | | |
| <u>% COMPARABILITY TO REFERENCE SCORE:</u> | | | | | | | | | | |
| | | | | | 85.71 | | | | 36 | |

APPENDIX E

Fish Community Metrics

Fish Community (IBI) Metrics for Polecat Creek site A, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 7 | 2.18 | 2 | 2 | 1 | 0 | 0.37 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | |
| SCORE: | 3 | 1 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 5 | 5 | 5 | 40 |

Fish Community (IBI) Metrics for Stevens Mill, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 14 | 10.0 | 3 | 6 | 1 | 1 | 0.34 | 0.12 | 0.30 | 0.00 | 0.22 | 0.02 | |
| SCORE: | 5 | 5 | 5 | 5 | 3 | 3 | 5 | 5 | 3 | 1 | 1 | 5 | 46 |

Fish Community (IBI) Metrics for Matta River, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 11 | 6.53 | 4 | 2 | 1 | 2 | 0.07 | 0.01 | 0.48 | 0.00 | 0.01 | 0.03 | |
| SCORE: | 3 | 5 | 5 | 1 | 1 | 3 | 1 | 5 | 5 | 1 | 5 | 3 | 38 |

Fish Community (IBI) Metrics for South River, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 13 | 14.4 | 3 | 3 | 2 | 0 | 0.55 | 0.06 | 0.25 | 0.01 | 0.05 | 0.10 | |
| SCORE: | 5 | 5 | 5 | 3 | 3 | 1 | 5 | 5 | 3 | 1 | 1 | 1 | 38 |

Fish Community (IBI) Metrics for Unnamed Site W, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 4 | 5.01 | 2 | 1 | 0 | 0 | 0.60 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | |
| SCORE: | 1 | 3 | 3 | 1 | 1 | 1 | 5 | 5 | 1 | 1 | 5 | 5 | 32 |

Fish Community (IBI) Metrics for Mattaponi River, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 12 | 6.96 | 4 | 3 | 0 | 2 | 0.09 | 0.00 | 0.46 | 0.00 | 0.06 | 0.22 | |
| SCORE: | 5 | 5 | 5 | 3 | 1 | 3 | 1 | 5 | 5 | 1 | 1 | 1 | 36 |

Fish Community (IBI) Metrics for Reedy Swamp, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 6 | 1.32 | 2 | 3 | 1 | 0 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.44 | |
| SCORE: | 3 | 1 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 1 | 5 | 1 | 32 |

Fish Community (IBI) Metrics for Polecat Creek Site E, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 9 | 1.06 | 3 | 0 | 0 | 2 | 0.29 | 0.00 | 0.06 | 0.12 | 0.00 | 0.12 | |
| SCORE: | 3 | 1 | 3 | 1 | 1 | 3 | 5 | 5 | 1 | 5 | 5 | 1 | 34 |

Fish Community (IBI) Metrics for Polecat Creek Site D, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 11 | 2.99 | 3 | 3 | 1 | 0 | 0.39 | 0.12 | 0.05 | 0.02 | 0.24 | 0.10 | |
| SCORE: | 3 | 1 | 3 | 3 | 1 | 1 | 5 | 5 | 1 | 3 | 1 | 1 | 28 |

Fish Community (IBI) Metrics for Unnamed Site C, Fall 1994.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 11 | 4.07 | 3 | 1 | 0 | 1 | 0.13 | 0.42 | 0.09 | 0.02 | 0.00 | 0.11 | |
| SCORE: | 5 | 3 | 5 | 1 | 1 | 3 | 3 | 3 | 1 | 3 | 5 | 1 | 34 |

Fish Community (IBI) Metrics for South River, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 8 | 9.40 | 3 | 3 | 1 | 0 | 0.60 | 0.00 | 0.18 | 0.00 | 0.02 | 0.04 | |
| SCORE: | 5 | 5 | 5 | 3 | 3 | 1 | 5 | 5 | 1 | 1 | 3 | 3 | 40 |

Fish Community (IBI) Metrics for Unnamed Site W, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 3 | 20.0 | 2 | 2 | 1 | 0 | 1.00 | 0.00 | 0.00 | 0.00 | 0.33 | 0.01 | |
| SCORE: | 1 | 5 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 1 | 1 | 5 | 34 |

Fish Community (IBI) Metrics for Mattaponi River, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 11 | 2.23 | 3 | 4 | 0 | 2 | 0.39 | 0.00 | 0.00 | 0.12 | 0.06 | 0.18 | |
| SCORE: | 3 | 1 | 3 | 3 | 1 | 3 | 5 | 5 | 1 | 5 | 1 | 1 | 32 |

Fish Community (IBI) Metrics for Reedy Swamp, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 7 | 2.74 | 2 | 2 | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.03 | |
| SCORE: | 3 | 1 | 3 | 3 | 1 | 1 | 1 | 5 | 1 | 5 | 5 | 3 | 32 |

Fish Community (IBI) Metrics for Polecat Creek Site E, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 7 | 1.70 | 3 | 3 | 0 | 1 | 0.30 | 0.00 | 0.00 | 0.17 | 0.04 | 0.00 | |
| SCORE: | 1 | 1 | 3 | 3 | 1 | 1 | 5 | 5 | 1 | 5 | 3 | 5 | 34 |

Fish Community (IBI) Metrics for Polecat Creek Site D, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 7 | 3.00 | 3 | 1 | 0 | 0 | 0.36 | 0.26 | 0.00 | 0.00 | 0.00 | 0.16 | |
| SCORE: | 1 | 1 | 3 | 1 | 1 | 1 | 5 | 3 | 1 | 1 | 5 | 1 | 24 |

Fish Community (IBI) Metrics for Unnamed Site C, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 11 | 7.04 | 3 | 1 | 1 | 0 | 0.24 | 0.35 | 0.13 | 0.00 | 0.00 | 0.16 | |
| SCORE: | 5 | 5 | 5 | 1 | 3 | 1 | 3 | 3 | 1 | 1 | 5 | 1 | 34 |

Fish Community (IBI) Metrics for Stevens Mill Run, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 6 | 4.18 | 3 | 1 | 0 | 0 | 0.21 | 0.45 | 0.08 | 0.00 | 0.00 | 0.06 | |
| SCORE: | 3 | 3 | 5 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 5 | 1 | 26 |

Fish Community (IBI) Metrics for Polecat Creek Site A, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 8 | 1.36 | 2 | 2 | 1 | 0 | 0.50 | 0.00 | 0.00 | 0.08 | 0.00 | 0.08 | |
| SCORE: | 5 | 1 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 5 | 5 | 1 | 38 |

Fish Community (IBI) Metrics for Matta River, Spring 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 12 | 5.33 | 4 | 1 | 1 | 1 | 0.18 | 0.09 | 0.23 | 0.00 | 0.00 | 0.26 | |
| SCORE: | 5 | 3 | 5 | 1 | 1 | 1 | 3 | 5 | 3 | 1 | 5 | 1 | 34 |

Fish Community (IBI) Metrics for Polecat Creek Site A, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 10 | 4.20 | 2 | 4 | 1 | 0 | 0.40 | 0.00 | 0.00 | 0.02 | 0.00 | 0.03 | |
| SCORE: | 5 | 3 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 3 | 5 | 3 | 40 |

Fish Community (IBI) Metrics for Stevens Mill Run, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 8 | 4.96 | 3 | 3 | 0 | 0 | 0.17 | 0.25 | 0.14 | 0.00 | 0.02 | 0.08 | |
| SCORE: | 5 | 3 | 5 | 3 | 1 | 1 | 3 | 3 | 1 | 1 | 3 | 1 | 30 |

Fish Community (IBI) Metrics for Unnamed Site C, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 12 | 6.49 | 3 | 3 | 0 | 0 | 0.17 | 0.30 | 0.04 | 0.00 | 0.04 | 0.06 | |
| SCORE: | 5 | 5 | 5 | 3 | 1 | 1 | 3 | 3 | 1 | 1 | 3 | 1 | 32 |

Fish Community (IBI) Metrics for Polecat Creek Site D, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 11 | 6.10 | 3 | 2 | 0 | 1 | 0.26 | 0.25 | 0.00 | 0.01 | 0.03 | 0.11 | |
| SCORE: | 3 | 5 | 3 | 1 | 1 | 1 | 5 | 3 | 1 | 1 | 3 | 1 | 28 |

Fish Community (IBI) Metrics for Polecat Creek Site E, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 10 | 2.88 | 2 | 5 | 1 | 0 | 0.28 | 0.00 | 0.00 | 0.12 | 0.08 | 0.08 | |
| SCORE: | 3 | 1 | 3 | 3 | 1 | 1 | 5 | 5 | 1 | 5 | 1 | 1 | 30 |

Fish Community (IBI) Metrics for Reedy Swamp, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 5 | 2.09 | 2 | 4 | 1 | 0 | 0.71 | 0.00 | 0.00 | 0.00 | 0.12 | 0.12 | |
| SCORE: | 3 | 1 | 3 | 3 | 3 | 1 | 5 | 5 | 1 | 1 | 1 | 1 | 28 |

Fish Community (IBI) Metrics for Mattaponi River, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 9 | 2.57 | 3 | 2 | 0 | 0 | 0.20 | 0.00 | 0.05 | 0.18 | 0.18 | 0.05 | |
| SCORE: | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 5 | 1 | 5 | 1 | 1 | 26 |

Fish Community (IBI) Metrics for Unnamed Site W, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 1 | 0.44 | 2 | 0 | 0 | 0 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | |
| SCORE: | 1 | 1 | 3 | 1 | 1 | 1 | 5 | 5 | 1 | 1 | 5 | 1 | 26 |

Fish Community (IBI) Metrics for South River, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | TOTAL |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| VALUE: | 12 | 30.9 | 3 | 4 | 1 | 0 | 0.65 | 0.01 | 0.14 | 0.00 | 0.04 | 0.12 | |
| SCORE: | 5 | 5 | 5 | 3 | 3 | 1 | 5 | 5 | 1 | 1 | 3 | 1 | 38 |

Fish Community (IBI) Metrics for Matta River, Summer 1995.

| | METRIC NUMBERS | | | | | | | | | | | | |
|--------|----------------|------|---|---|---|---|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
| VALUE: | 9 | 2.21 | 3 | 2 | 0 | 1 | 0.12 | 0.00 | 0.26 | 0.00 | 0.00 | 0.18 | |
| SCORE: | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 5 | 3 | 1 | 5 | 1 | 28 |

APPENDIX F

Fish Community Descriptions

Fish Community (IBI) Metrics for South River, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|-------------------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 2 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | F | 0 | 0 | |
| CCO | CATOSTOMUS | commersoni | 6 | OM | M | F | 0 | 0 | |
| CFU | CLINOSTOMUS | funduloides | 29 | CI | M | F | 0 | 0 | |
| EGL | ENNEACANTHUS | gloriosus | 2 | MI | M | F | 0 | 0 | |
| ENI | ESOX | niger | 1 | PI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 17 | MI | T | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 2 | MI | T | T | 0 | 0 | black spot present |
| EOL | ETHEOSTOMA | olmstedii | 20 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 3 | MI | T | T | 0 | 0 | yellow grub present |
| LGI | LEPOMIS | gibbosus | 9 | MI | T | F | 0 | 0 | |
| LGI | LEPOMIS | gibbosus | 4 | MI | T | T | 0 | 0 | black spot present |
| LMA | LEPOMIS | macrochirus | 5 | MI | T | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | T | 0 | 0 | black spot present |
| NCR | NOTEMIGONUS | crysoleucas | 2 | MI | T | T | 0 | 0 | 1 w/ black spot 1 w/ yellow grub |
| NLE | NOCOMIS | leptocephalus | 1 | OM | M | F | 0 | 0 | |
| SAT | SEMOTILUS | atromaculatus | 3 | MI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 7 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Matta River, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|------------|-------------|-----|------|-----|-------|---------------|------------------|--------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 1 | MI | M | F | 0 | 0 | |
| CCO | CATOSTOMUS | commersoni | 1 | OM | M | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 4 | MI | T | F | 0 | 0 | |
| EVI | ETHEOSTOMA | vitreum | 5 | MI | M | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 2 | MI | M | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | F | 0 | 0 | |
| LSP | LAMPETRA | species | 3 | MI | I | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 24 | CI | M | F | 0 | 0 | |
| NPR | NOTROPIS | procne | 8 | CI | M | F | 0 | 0 | |
| NSP | NOCOMIS | species | 7 | MI | M | F | 0 | 0 | |
| NSP | NOCOMIS | species | 1 | MI | M | T | 0 | 0 | fungus present |
| NSX | NOTROPIS | species | 8 | MI | M | F | 0 | 0 | |
| PPE | PERCINA | peltata | 1 | MI | I | F | 0 | 0 | |
| PPE | PERCINA | peltata | 1 | MI | I | T | 0 | 0 | black spot present |

Fish Community (IBI) Metrics for Unnamed Site W, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|-------------|-------------|-----|------|-----|---|-------|---------------|------------------|----------------|
| | | | | GLD | TOL | | | | | |
| ANA | AMEIURUS | natalis | 1 | MI | T | T | | 0 | 0 | fungus present |
| LWA | LEPOMIS | macrochirus | 1 | MI | T | F | | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 38 | MI | T | F | | 0 | 0 | |
| HSX | NOTROPIS | species | 6 | MI | H | F | | 0 | 0 | |
| UPY | UMBRA | pygmaea | 21 | MI | H | F | | 0 | 0 | |

Fish Community (IBI) Metrics for Mattaponi River, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE | POOLED | NOTES |
|--------------|---------|---------|-----|------|-----|-------|-------|--------|--------------------|-------|
| | | | | GLD | TOL | CLASS | | WEIGHT | | |
| PPE | PERCINA | peltata | 2 | MI | I | T | 0 | 0 | black spot present | |

Fish Community (IBI) Metrics for Mattaponi River, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|---|
| | | | | GLD | TOL | ANMLY | | | |
| APO | ACANTHARCHUS | ponotis | 1 | MI | M | F | 0 | 0 | |
| ARO | ANGUILLA | rostrata | 13 | MI | M | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | T | 0 | 0 | black spot present |
| EVI | ETHEOSTOMA | vitreum | 3 | MI | M | F | 0 | 0 | |
| EVI | ETHEOSTOMA | vitreum | 5 | MI | M | T | 0 | 0 | black spot present |
| LAU | LEPOMIS | auritus | 2 | MI | M | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 4 | MI | M | T | 0 | 0 | 2 w/ leeches 1 w/ yellow grub 1 w/ black spot |
| LMA | LEPOMIS | macrochirus | 5 | MI | T | F | 0 | 0 | |
| LSP | LAMPETRA | species | 1 | MI | I | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 28 | CI | M | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 2 | CI | M | T | 0 | 0 | 1 w/ yellow grub 1 w/ black spot |
| NCO | NOTROPIS | cornutus | 2 | CI | M | F | 0 | 0 | |
| NCO | NOTROPIS | cornutus | 2 | CI | M | T | 0 | 0 | black spot present |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 1 | MI | M | T | 0 | 0 | ectoparasite present |
| NPR | NOTROPIS | procne | 2 | CI | M | F | 0 | 0 | |
| NSP | NOCOMIS | species | 1 | MI | M | F | 0 | 0 | |
| PPE | PERCINA | peltata | 2 | MI | I | F | 0 | 0 | |

Fish Community (IBI) Metrics for Reedy Swamp, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|----------|-----|------|-----|-------|---------------|------------------|--------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 2 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 3 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | T | 0 | 0 | black spot present |
| EBB | ENNEACANTHUS | obesus | 2 | MI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 1 | MI | T | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 7 | MI | T | T | 0 | 0 | black spot present |
| LGI | LEPOMIS | gibbosus | 1 | MI | T | F | 0 | 0 | |
| LGU | LEPOMIS | gulosus | 1 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Polecat Creek Site E, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|--|-------|---------------|------------------|--------------------|
| | | | | GLD | TOL | | | | | |
| ARO | ANGUILLA | rostrata | 1 | MI | M | | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 3 | MI | M | | F | 0 | 0 | |
| ENI | ESOX | niger | 1 | PI | M | | F | 0 | 0 | |
| ENI | ESOX | niger | 1 | PI | M | | T | 0 | 0 | black spot present |
| EOL | ETHEOSTOMA | olmstedii | 3 | MI | T | | F | 0 | 0 | |
| LSP | LAMPETRA | species | 3 | MI | I | | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 1 | MI | T | | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 1 | MI | T | | T | 0 | 0 | black spot present |
| NPR | NOTROPIS | procne | 1 | CI | M | | F | 0 | 0 | |
| PFL | PERCA | flavescens | 1 | MI | M | | F | 0 | 0 | |
| PNO | PERCINA | notogramma | 1 | MI | I | | F | 0 | 0 | |

Fish Community (IBI) Metrics for Polecat Creek Site D, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FRED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|------------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 1 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 4 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 1 | MI | M | F | 0 | 0 | |
| ENI | ESOX | niger | 1 | PI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 1 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 4 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | T | 0 | 0 | black spot present |
| LAU | LEPOMIS | auritus | 5 | MI | M | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 2 | MI | M | T | 0 | 0 | 1 w/ infection 1 w/ leech |
| LWA | LEPOMIS | macrochirus | 10 | MI | T | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 2 | MI | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 4 | OM | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 1 | OM | M | T | 0 | 0 | cyst present |
| NPR | NOTROPIS | procne | 2 | CI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 2 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Unnamed Site C, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|---|-------|---------------|-----------------------------------|-------|
| | | | | GLD | TOL | | | | | |
| ANA | AMEIURUS | natalis | 1 | MI | T | T | 0 | 0 | red spots on chin | |
| ANA | AMEIURUS | natalis | 1 | MI | T | F | 0 | 0 | | |
| ASY | APEREDODERUS | sayanus | 2 | MI | M | F | 0 | 0 | | |
| CFU | CLINOSTOMUS | funduloides | 1 | CI | M | F | 0 | 0 | | |
| ENI | ESOX | niger | 1 | PI | M | F | 0 | 0 | | |
| EOL | ETHEOSTOMA | olmstedii | 4 | MI | T | F | 0 | 0 | | |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | T | 0 | 0 | black spot present | |
| LAU | LEPOMIS | auritus | 11 | MI | M | F | 0 | 0 | | |
| LAU | LEPOMIS | auritus | 1 | MI | M | T | 0 | 0 | black spot present | |
| LSP | LAMPETRA | species | 1 | MI | I | F | 0 | 0 | | |
| NCO | NOTROPIS | cornutus | 3 | CI | M | F | 0 | 0 | | |
| NCO | NOTROPIS | cornutus | 1 | CI | M | T | 0 | 0 | black spot present | |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | | |
| NLE | NOCOMIS | leptocephalus | 21 | OM | M | F | 0 | 0 | | |
| NLE | NOCOMIS | leptocephalus | 2 | OM | M | T | 0 | 0 | 1 w/black spot 1 w/yellow grub | |
| SCO | SEMOTILUS | corporalis | 3 | MI | M | F | 0 | 0 | | |

Fish Community (IBI) Metrics for Stevens Mill Run, Fall 1994.

| FISH CODE | GENUS | SPECIES | QTY | FRED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|--------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 4 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 8 | MI | M | F | 0 | 0 | |
| EGL | ENNEACANTHUS | gloriosus | 1 | MI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 7 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olastedi | 2 | MI | T | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 4 | MI | M | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 1 | MI | M | T | 0 | 0 | black spot present |
| LGI | LEPOMIS | gibbosus | 2 | MI | T | F | 0 | 0 | |
| LGU | LEPOMIS | gulosus | 2 | MI | M | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 27 | MI | T | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 20 | CI | M | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 3 | MI | T | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 1 | MI | T | T | 0 | 0 | black spot present |
| NIN | NOTURUS | insignis | 7 | MI | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 15 | OM | M | F | 0 | 0 | |
| NPR | NOTROPIS | procne | 17 | CI | M | F | 0 | 0 | |
| PNO | PERCINA | notogramma | 2 | MI | I | F | 0 | 0 | |

Fish Community (IBI) Metrics for Polecat Creek Site A, Fall 1994.

| FISH CODE | GENUS | SPECIES | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|------|-----|-----|-------|---------------|------------------|-------|
| | | | QTY | GLD | TOL | | | | |
| ANE | AMEIURUS | nebulosus | 3 | MI | T | F | 0 | 0 | |
| APO | ACANTHARCHUS | ponotis | 3 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 5 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 2 | MI | M | F | 0 | 0 | |
| EAM | ESOX | americanus | 1 | PI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 4 | MI | T | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 1 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Matta River, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|------------|-------------|-----|------|-----|-------|---------------|------------------|-----------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 8 | MI | H | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 1 | MI | T | F | 0 | 0 | adult w/tubes |
| EOB | ERIMYZON | oblongus | 1 | MI | T | T | 0 | 0 | scoliosis |
| EOL | ETHEOSTOMA | olnstedii | 8 | MI | T | T | 0 | 0 | black spot present, kept 4 |
| EVI | ETHEOSTOMA | vitreum | 1 | MI | H | T | 0 | 0 | black spot present, kept |
| LAU | LEPOMIS | auritus | 4 | MI | H | F | 0 | 0 | |
| LSP | LAMPETRA | species | 2 | MI | I | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 5 | CI | H | F | 0 | 0 | 1-kept |
| NCO | NOTROPIS | cornutus | 2 | CI | H | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 3 | MI | H | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 5 | MI | H | T | 0 | 0 | yellow grub present, kept 2 |
| NMI | NOCOMIS | micropogon | 5 | OM | H | F | 0 | 0 | 2-kept |
| NPR | NOTROPIS | procne | 6 | CI | H | F | 0 | 0 | |
| SCO | SEMOTILUS | corporalis | 6 | MI | H | F | 0 | 0 | 2-kept |

Fish Community (IBI) Metrics for South River, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|---|-------|---------------|---------------------|-------|
| | | | | GLD | TOL | | | | | |
| ASY | APHREDODERUS | sayanus | 1 | MI | H | F | 0 | 0 | kept | |
| CFU | CLINOSTOMUS | funduloides | 10 | CI | H | F | 0 | 0 | | |
| EBB | ENNEACANTHUS | obesus | 2 | MI | H | F | 0 | 0 | 1 - kept | |
| EOB | ERIMYZON | oblongus | 10 | MI | T | F | 0 | 0 | 1 - kept | |
| EOL | ETHEOSTOMA | olmstedii | 14 | MI | T | F | 0 | 0 | 1 - kept | |
| EOL | ETHEOSTOMA | olmstedii | 2 | MI | T | T | 0 | 0 | yellow grub present | |
| LGI | LEPOMIS | gibbosus | 7 | MI | T | F | 0 | 0 | 1 - kept | |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | F | 0 | 0 | kept | |
| SAT | SEWOTILUS | atroraculatus | 8 | MI | H | F | 0 | 0 | 1 - kept | |
| UPY | UMBRA | pygmaea | 2 | MI | H | F | 0 | 0 | 1 - kept | |

Fish Community (IBI) Metrics for Unnamed Site W, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|-------------|-------------|-----|------|-----|---|-------|---------------|--------------------|-------|
| | | | | GLD | TOL | | | | | |
| EOB | ERIMYZON | oblongus | 1 | MI | T | F | 0 | 0 | kept | |
| LGI | LEPOMIS | gibbosus | 6 | MI | T | F | 0 | 0 | 1 - kept | |
| LMA | LEPOMIS | macrochirus | 42 | MI | T | F | 0 | 0 | 1 - kept | |
| NCR | NOTEMIGONUS | crysoleucas | 77 | MI | T | F | 0 | 0 | 1 - kept | |
| NCR | NOTEMIGONUS | crysoleucas | 1 | MI | T | T | 0 | 0 | black spot present | |

Fish Community (IBI) Metrics for Mattaponi River, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|--|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 2 | MI | M | F | 0 | 0 | backwater |
| ARO | ANGUILLA | rostrata | 11 | MI | M | F | 0 | 0 | sandy shore, 1-kept |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | F | 0 | 0 | backwater, kept |
| EAM | ESOX | americanus | 1 | PI | M | F | 0 | 0 | backwater, kept |
| EGL | ENNEACANTHUS | gloriosus | 1 | MI | M | F | 0 | 0 | backwater, kept |
| ENI | ESOX | niger | 5 | PI | M | F | 0 | 0 | backwater, 1-kept |
| EOL | ETHEOSTOMA | olmstedii | 13 | MI | T | F | 0 | 0 | sandy shore, 2-kept |
| EOL | ETHEOSTOMA | olmstedii | 3 | MI | T | T | 0 | 0 | sandy shore, black spot present |
| LAU | LEPOMIS | auritus | 2 | MI | M | T | 0 | 0 | backwater, black spot present, kept both |
| LGU | LEPOMIS | gulosus | 2 | MI | M | F | 0 | 0 | backwater, 1-kept |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | F | 0 | 0 | backwater, kept |
| LMA | LEPOMIS | macrochirus | 2 | MI | T | T | 0 | 0 | backwater, black spot present |
| LSP | LAMPETRA | species | 1 | MI | I | F | 0 | 0 | backwater, kept |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | sandy shore, kept |
| PPE | PERCINA | peltata | 2 | MI | I | T | 0 | 0 | sandy shore, 1-kept |

Fish Community (IBI) Metrics for Reedy Swamp, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|------------|-----|------|-----|-------|---------------|------------------|------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| APO | ACANTHARCHUS | ponotis | 4 | MI | M | F | 0 | 0 | 1-kept |
| ARO | ANGUILLA | rostrata | 1 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | F | 0 | 0 | kept |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | T | 0 | 0 | parasite present, kept |
| EAM | ESOX | americanus | 2 | PI | M | F | 0 | 0 | 1-kept |
| EBB | ENNEACANTHUS | obesus | 14 | MI | M | F | 0 | 0 | 1-kept |
| ENI | ESOX | niger | 1 | PI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 5 | MI | M | F | 0 | 0 | 1-kept |

Fish Community (IBI) Metrics for Polecat Creek Site E, Spring
1995.

| FLSH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|--|-------|---------------|------------------|----------|
| | | | | GLD | TOL | | | | | |
| ARO | ANGUILLA | rostrata | 7 | MI | M | | F | 0 | 0 | 1 - kept |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | | F | 0 | 0 | |
| EGL | ENNEACANTHUS | gloriosus | 2 | MI | M | | F | 0 | 0 | 1 - kept |
| ENI | ESOX | niger | 4 | PI | M | | F | 0 | 0 | 1 - kept |
| EOL | ETHEOSTOMA | olmstedii | 6 | MI | T | | F | 0 | 0 | 3 - kept |
| LAU | LEPOMIS | auritus | 1 | MI | M | | F | 0 | 0 | kept |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | | F | 0 | 0 | |
| LSP | LAMPETRA | species | 1 | MI | I | | F | 0 | 0 | kept |

Fish Community (IBI) Metrics for Polecat Creek Site D, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|---------------|---------------|-----|------|-----|-------|---------------|------------------|---------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 5 | MI | M | F | 0 | 0 | |
| ASY | APHERODODERUS | sayanus | 3 | MI | M | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 18 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 4 | MI | T | T | 0 | 0 | black spot present |
| LAU | LEPOMIS | auritus | 6 | MI | M | F | 0 | 0 | 1 - kept |
| NIN | NOTURUS | insignis | 3 | MI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 3 | MI | M | T | 0 | 0 | yellow grub present |
| NLE | NOCOMIS | leptocephalus | 13 | OM | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 3 | OM | M | T | 0 | 0 | yellow grub present |
| UPY | UMBRA | pygmaea | 3 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Polecat Creek Site D, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE | POOLED | NOTES |
|--------------|-------|---------|-----|------|-----|-------|-------|--------|----------|-------|
| | | | | GLD | TOL | CLASS | | WEIGHT | | |
| UPY | UMBRA | pygmaea | 3 | MI | M | F | 0 | 0 | 1 - kept | |

Fish Community (IBI) Metrics for Unnamed Site C, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|-------------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 4 | MI | M | F | 0 | 0 | 1 - kept |
| ASY | APHREDODERUS | sayanus | 2 | MI | M | F | 0 | 0 | 1 - kept |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | T | 0 | 0 | scale parasites present, kept |
| CFU | CLINOSTOMUS | funduloides | 3 | CI | M | F | 0 | 0 | kept |
| EOB | ERIMYZON | oblongus | 1 | MI | T | F | 0 | 0 | kept |
| EOL | ETHEOSTOMA | olmstedii | 10 | MI | T | F | 0 | 0 | 1 kept |
| EOL | ETHEOSTOMA | olmstedii | 2 | MI | T | T | 0 | 0 | black spot present |
| LAU | LEPOMIS | auritus | 2 | MI | M | F | 0 | 0 | 1 - kept |
| NCO | NOTROPIS | cornutus | 2 | CI | M | F | 0 | 0 | 1 - kept |
| NCO | NOTROPIS | cornutus | 2 | CI | M | T | 0 | 0 | black spot present |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 1 | MI | M | T | 0 | 0 | yellow grub present, kept |
| NLE | NOCOMIS | leptocephalus | 16 | OM | M | F | 0 | 0 | 5 - kept 6 - kept (tubes) |
| NLE | NOCOMIS | leptocephalus | 2 | OM | M | T | 0 | 0 | yellow grub present, kept |
| NLE | NOCOMIS | leptocephalus | 1 | OM | M | T | 0 | 0 | parasite present |
| SCO | SEMOTILUS | corporalis | 2 | MI | M | F | 0 | 0 | 2 - kept |

Fish Community (IBI) Metrics for Stevens Mill Run, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|------------|---------------|-----|------|-----|-------|---------------|------------------|---------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 7 | MI | M | F | 0 | 0 | |
| EOL | ETHEOSTOML | olmstedii | 13 | MI | T | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 6 | MI | M | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 2 | MI | M | T | 0 | 0 | bug-eyed |
| NAN | NOTROPIS | analostanus | 5 | CI | M | F | 0 | 0 | 2 kept |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 26 | OM | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 2 | OM | M | T | 0 | 0 | yellow grub present |

Fish Community (IBI) Metrics for Polecat Creek Site A, Spring 1995.

| FISH CODE | GENUS | SPECIES | QTY | FRED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|-------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ANA | AMEIURUS | natalis | 1 | MI | T | F | 0 | 0 | |
| APO | ACANTHARCHUS | pomotis | 2 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | T | 0 | 0 | yellow grub present |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 1 | MI | M | F | 0 | 0 | |
| EAM | ESOX | americanus | 2 | PI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 10 | MI | T | F | 0 | 0 | |
| NCR | NOTHEMIGONUS | crysoleucas | 1 | MI | T | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 4 | MI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 1 | MI | M | T | 0 | 0 | 1 w/ big bite on caudal |

Fish Community (IBI) Metrics for Matta River, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|---------------------|
| | | | | GLD | TOL | ANMLY | | | |
| APO | ACANTHARCHUS | ponotis | 1 | MI | M | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 3 | MI | T | T | 0 | 0 | black spot |
| LAU | LEPOMIS | auritus | 14 | MI | M | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 4 | CI | M | F | 0 | 0 | |
| NCO | NOTROPIS | cornutus | 2 | CI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 1 | MI | M | T | 0 | 0 | yellow grub present |
| NPR | NOTROPLS | procne | 3 | CI | M | F | 0 | 0 | |
| PPE | PERCINA | peltata | 2 | MI | I | T | 0 | 0 | black spot present |
| SCO | SEMOTILLUS | corporalis | 3 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for South River, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|---|
| | | | | GLD | TOL | ANMLY | | | |
| ANA | AMEIURUS | natalis | 1 | MI | T | F | 0 | 0 | |
| ANA | AMEIURUS | natalis | 1 | MI | T | T | 0 | 0 | infection present |
| APO | ACANTHARCHUS | ponotis | 2 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 9 | MI | M | F | 0 | 0 | |
| CFU | CLINOSTOMUS | funduloides | 25 | CI | M | F | 0 | 0 | |
| CFU | CLINOSTOMUS | funduloides | 3 | CI | M | T | 0 | 0 | yellow grub present |
| EGL | ENNEACANTHUS | gloriosus | 4 | MI | M | F | 0 | 0 | |
| EGL | ENNEACANTHUS | gloriosus | 1 | MI | M | T | 0 | 0 | yellow grub |
| EOB | ERIMYZON | oblongus | 18 | MI | T | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 2 | MI | T | T | 0 | 0 | black spot present |
| EOL | ETHEOSTOMA | olmstedii | 77 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 8 | MI | T | T | 0 | 0 | yellow grub present |
| LGI | LEPOMIS | gibbosus | 8 | MI | T | F | 0 | 0 | |
| LGI | LEPOMIS | gibbosus | 5 | MI | T | T | 0 | 0 | 2 infection present, 2 black spot, 1 lesions & black spot |
| LMA | LEPOMIS | macrochirus | 5 | MI | T | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 2 | MI | T | T | 0 | 0 | yellow grub present |
| NCR | NOTEMIGONUS | crysoleucas | 2 | MI | T | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 1 | OM | M | F | 0 | 0 | |
| SAT | SEMOTILUS | atromaculatus | 17 | MI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 4 | MI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 2 | MI | M | T | 0 | 0 | black spot present |

Fish Community (IBI) Metrics for Unnamed Site W, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|-------------|-------------|-----|------|-----|-------|---------------|------------------|--------------------|
| | | | | GLD | TOL | ANMLY | | | |
| NCR | NOTEMIGONUS | crysoleucas | 3 | MI | T | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 3 | MI | T | T | 0 | 0 | black spot present |

Fish Community (IBI) Metrics for Mattaponi River, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FRED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|------------------|
| | | | | GLD | TOL | ANMLY | | | |
| APO | ACANTHARCHUS | ponotis | 1 | MI | M | F | 0 | 0 | |
| ARO | ANGUILLA | rostrata | 15 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 3 | MI | M | F | 0 | 0 | |
| ENI | ESOX | niger | 4 | PI | M | F | 0 | 0 | |
| ENI | ESOX | niger | 1 | PI | M | T | 0 | 0 | infected eye |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 7 | MI | T | F | 0 | 0 | |
| MSA | MICROPTERUS | salmoides | 2 | PI | M | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 1 | CI | M | F | 0 | 0 | |
| NCO | NOTROPIS | cornutus | 1 | CI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 3 | MI | M | F | 0 | 0 | |
| NSP | NOCOMIS | species | 1 | MI | M | T | 0 | 0 | black spot, kept |

Fish Community (IBI) Metrics for Reedy Swamp, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|------------|
| | | | | GLD | TOL | ANMLY | | | |
| APO | ACANTHARCHUS | ponotis | 1 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 3 | MI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 8 | MI | T | F | 0 | 0 | |
| LGU | LEPOMIS | gulosus | 1 | MI | M | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 2 | MI | T | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 2 | MI | T | T | 0 | 0 | black spot |

Fish Community (IBI) Metrics for Polecat Creek Site E, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|-------------|-----|------|-----|-------|---------------|------------------|----------------|
| | | | | GLD | TOL | ANMLY | | | |
| APO | ACANTHARCHUS | ponotis | 2 | MI | M | T | 0 | 0 | exit parasites |
| ARO | ANGUILLA | rostrata | 1 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 5 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 2 | MI | M | F | 0 | 0 | |
| EGL | ENNEACANTHUS | gloriosus | 1 | MI | M | F | 0 | 0 | |
| ENI | ESOX | niger | 3 | PI | M | F | 0 | 0 | |
| EOB | ERIMYZON | oblongus | 2 | MI | T | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 2 | MI | M | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 2 | MI | T | F | 0 | 0 | |
| NCR | NOTEMIGONUS | crysoleucas | 3 | MI | T | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 2 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Polecat Creek Site D, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | ANMLY | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|---|-------|---------------|---|-------|
| | | | | GLD | TOL | | | | | |
| ACA | AMIA | calva | 1 | MI | M | F | 0 | 0 | | |
| ACA | AMIA | calva | 1 | MI | M | T | 0 | 0 | infection present | |
| ANA | AMEIURUS | natalis | 2 | MI | T | F | 0 | 0 | | |
| ARO | ANGUILLA | rostrata | 9 | MI | M | F | 0 | 0 | | |
| ASY | APHREDODERUS | sayanus | 1 | MI | M | F | 0 | 0 | | |
| ENI | ESOX | niger | 1 | PI | M | F | 0 | 0 | | |
| EOL | ETHEOSTOMA | olmstedii | 15 | MI | T | F | 0 | 0 | | |
| EOL | ETHEOSTOMA | olmstedii | 1 | MI | T | T | 0 | 0 | black spot present | |
| LAU | LEPOMIS | auritus | 10 | MI | M | F | 0 | 0 | | |
| LAU | LEPOMIS | auritus | 3 | MI | M | T | 0 | 0 | 1 infection present, 1 black spot, 1 lernia | |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | F | 0 | 0 | | |
| LMA | LEPOMIS | macrochirus | 1 | MI | T | T | 0 | 0 | infection present | |
| NIN | NOTURUS | insignis | 7 | MI | M | F | 0 | 0 | | |
| NIN | NOTURUS | insignis | 1 | MI | M | T | 0 | 0 | yellow grub present | |
| NLE | NOCOMIS | leptocephalus | 18 | OM | M | F | 0 | 0 | | |
| NLE | NOCOMIS | leptocephalus | 1 | OM | M | T | 0 | 0 | black spot present | |
| PNO | PERCINA | notogramma | 1 | MI | I | F | 0 | 0 | | |
| SCO | SEMOTILUS | corporalis | 2 | MI | M | F | 0 | 0 | | |

Fish Community (IBI) Metrics for Unnamed Site C, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|----------------|
| | | | | GLD | TOL | ANMLY | | | |
| ANA | AMEIURUS | natalis | 1 | MI | T | F | 0 | 0 | |
| ANA | AMEIURUS | natalis | 2 | MI | T | T | 0 | 0 | exit parasites |
| ARO | ANGUILLA | rostrata | 1 | MI | M | F | 0 | 0 | |
| ASY | APHREDODERUS | sayanus | 5 | MI | M | F | 0 | 0 | |
| CFU | CLINOSTOMUS | funduloides | 1 | CI | M | F | 0 | 0 | |
| EGL | ENNEACANTHUS | gloriosus | 3 | MI | M | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 4 | MI | T | F | 0 | 0 | |
| LAU | LEPOMIS | auritus | 7 | MI | M | F | 0 | 0 | |
| LMA | LEPOMIS | macrochirus | 2 | MI | T | F | 0 | 0 | |
| NCO | NOTROPIS | cornutus | 1 | CI | M | T | 0 | 0 | parasite |
| NIN | NOTURUS | insignis | 5 | MI | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 16 | OM | M | F | 0 | 0 | |
| SAT | SEMOTILUS | atromaculatus | 1 | MI | M | F | 0 | 0 | |
| UPY | UMBRA | pygmaea | 4 | MI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Stevens Mill Run, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|-------------|---------------|-----|------|-----|-------|---------------|------------------|---------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ARO | ANGUILLA | rostrata | 16 | MI | M | F | 0 | 0 | |
| CMA | CENTRARCHUS | macropterus | 2 | MI | M | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 6 | MI | T | F | 0 | 0 | |
| EOL | ETHEOSTOMA | olmstedii | 3 | MI | T | T | 0 | 0 | yellow grub present |
| LAU | LEPOMIS | auritus | 7 | MI | M | F | 0 | 0 | |
| LWA | LEPOMIS | macrochirus | 1 | MI | T | F | 0 | 0 | |
| NAN | NOTROPIS | analostanus | 5 | CI | M | F | 0 | 0 | |
| NIN | NOTURUS | insignis | 1 | MI | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 13 | OM | M | F | 0 | 0 | |
| NLE | NOCOMIS | leptocephalus | 2 | OM | M | T | 0 | 0 | yellow grub present |
| NPR | NOTROPIS | procne | 3 | CI | M | F | 0 | 0 | |

Fish Community (IBI) Metrics for Polecat Creek Site A, Summer 1995.

| FISH CODE | GENUS | SPECIES | QTY | FEED | | | SIZE CLASS | POOLED WEIGHT | NOTES |
|--------------|--------------|---------------|-----|------|-----|-------|---------------|------------------|---------------------------|
| | | | | GLD | TOL | ANMLY | | | |
| ANE | AMEIURUS | nebulosus | 4 | MI | T | F | 0 | 0 | above dan |
| ANE | AMEIURUS | nebulosus | 1 | MI | T | T | 0 | 0 | yellow grub present |
| APO | ACANTHARCHUS | pomotis | 15 | MI | M | F | 0 | 0 | 3 below dan, 12 above dan |
| APO | ACANTHARCHUS | pomotis | 1 | MI | M | T | 0 | 0 | yellow grub present |
| ASY | APHREODERUS | sayanus | 7 | MI | M | F | 0 | 0 | 1 below dan, 6 above dan |
| CMA | CENTRARCHUS | macropterus | 3 | MI | M | F | 0 | 0 | 2 below dan, 1 above dan |
| EAM | ESOX | americanus | 1 | PI | M | F | 0 | 0 | above dan |
| EOB | ERIMYZON | oblongus | 16 | MI | T | F | 0 | 0 | 2 below dan, 14 above dan |
| LGI | LEPOMIS | gibbosus | 3 | MI | T | F | 0 | 0 | 1 below dan, 2 above dan |
| LGU | LEPOMIS | gulosus | 2 | MI | M | F | 0 | 0 | |
| SAT | SEMOTILUS | atronaculatus | 1 | MI | M | F | 0 | 0 | above dan |
| UPY | UMBRA | pygmaea | 6 | MI | M | F | 0 | 0 | 1 below dan, 5 above dan |