FINAL

A STUDY OF THE BENTHIC MACROINVERTEBRATE COMMUNITY IN SELECTED CHICAGO METROPOLITAN AREA WATERWAYS DURING 2009

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1. INTRODUCTION

The Upper Illinois River watershed consists of several natural, constructed, and altered waterways and their tributaries. The major waterways of the Chicago Metropolitan Area within the Upper Illinois River watershed include, in part, the Calumet River, Calumet-Sag Channel, North Branch of the Chicago River, South Branch of the Chicago River, Chicago Sanitary and Ship Canal, and Des Plaines River. Through their comprehensive ambient water quality monitoring program (AWQM), the Metropolitan Water Reclamation District of Greater Chicago (District) has collected a substantial amount of physicochemical and biological data describing the condition of these waterways since 1972. These data provide the Illinois Environmental Protection Agency (IEPA) with current information to assess the quality of the waterways within the District's service area as well as offering the unique opportunity to examine trends via the District's long-term database.

In an effort to support and strengthen their AWQM program, the District has implemented an ancillary monitoring program to evaluate the biological resources, sediment quality, and habitat condition on waterways within their service area. As part of this initiative, a benthic macroinvertebrate sampling program began in 2001 to collect samples at established stations in five watersheds: North Branch Chicago River, South Branch Chicago River and Chicago Sanitary and Ship Canal, Calumet River, Fox River, and Des Plaines River. Each of these watersheds will be sampled on a four-year rotation. In addition to the target watersheds, a core group of stations throughout the District's service area will be evaluated annually. The first four year cycle was completed in 2004 (EA 2006) and a new cycle began in 2005 (EA 2007). This report presents the study design and benthic macroinvertebrate data for the 2009 program year, which begins the third four-year study cycle.

2. METHODS

In 2009, benthic macroinvertebrate samples were collected at 27 stations on 13 Chicago Metropolitan Area waterways. All stations were located in the Calumet River, North Branch of the Chicago River, and Chicago Sanitary and Ship Canal (CSSC), and Des Plaines River watersheds (Table 2-1). Of the 27 stations, 15 have been sampled during every year of the program. Field sampling was conducted by District personnel using a combination of Hester-Dendy (HD) artificial substrates and Ponar grabs. Figure 2-1 presents the benthic macroinvertebrate sampling locations for the District's ambient water quality program.

Each HD sampler consisted of nine, three-inch square plates with uniform spacing. The total surface area of one HD sampler, excluding the bolt and spacers was 0.031 m^2. At each location, groups of three HD samplers (sampler array) were deployed near shore in the littoral zone and mid-channel of the waterway. Each HD sampler array was constructed of a 10-16" length of 2" diameter transparent, schedule 80 PVC pipe secured to the top of an 18 pound river anchor by placing a ¼" stainless steel bolt through the anchor eye and two holes drilled in the pipe (Figure 2-2). Three-inch stainless steel eyebolts are located radially, approximately 120 degrees apart, through holes drilled one-inch from the top of the PVC pipe. The HD arrays were suspended from the eyebolts approximately 12-18" off the bottom using nylon cable ties. Separate sampler arrays were deployed in the channel center and side at each station and one cable was used to anchor both arrays to a structure on shore.

The District attempts to retrieve the HD samplers after a six to eight week colonization period. The two HD sampler arrays at each station were retrieved by using the shore-attachment cable to lift the samplers into a custom-made dipnet with an attached plankton bucket. The mesh size of both the dipnet and plankton bucket was Standard Testing No. 60 (250µ) mesh (Figure 2-3). The cable tie connecting each HD sampler to the anchoring system was cut and each sampler was placed, fully assembled into a one-gallon plastic sample pail. The dipnet was thoroughly rinsed with river water and contents of the plankton bucket were transferred to the sample pail. The contents of each sample pail were fixed with approximately 10% formalin before the lid was attached. Retrieval dates for the HD samples in each watershed were as follows:

Watershed	**Retrieved**
Calumet	14-30 July
North Branch Chicago River	13 July – 21 August
SBCR and CSSC	16-21 July
Des Plaines River	30 June – 22 July

HD samples were collected from the near-shore and mid-channel area at 26 of the 27 sample stations. The samplers set at Albany Avenue on the NBCR were not recovered during retrieval in early August.

Ponar grab samples were collected at each ambient station in conjunction with the HD retrieval. All grab samples were collected using a 6" X 6" Petite-Ponar sampler. As with the HD sampling, two Ponar samples were collected at each ambient station, one from a near shore area and one from mid-channel. Each ambient Ponar sample consisted of three grabs. Ambient

Ponar grab samples were collected at each station in conjunction with the HD retrieval. The grab samples were collected using a 6" X 6" Petite-Ponar sampler. As with the HD sampling, Ponar samples were collected from two areas at each station, one from a near shore area and one from mid-channel. Each Ponar sample consisted of three grabs. All Ponar samples were collected within 30 to 50 feet of the HD samplers. All three grabs for each sample were combined in the field and washed in a No. 60 (250μ) mesh sieving bucket to remove most of the fine sediment. The sample was then transferred to a one-gallon bottle and preserved with 10% formalin. Ponar samples were collected from all stations during 2009.

The HD and Ponar samples were delivered to the District laboratory. After 30-days, the samples were transferred from 10% formalin to 70% Ethanol. The samples were individually processed by first pouring the contents of a sample bottle into a No. 60 mesh sieve where it could be rinsed. Under a stream of water, the individual HD plates and hardware were scrubbed with a 2-inch paintbrush into the sieve. The sample was then rinsed from the sieve into a white plastic tray partially filled with water. Sample aliquots were removed from the tray and placed in a small petri dish for counting under a dissecting microscope with 15X to 40X magnification. The District enumerates and removes Oligochaeta from the samples while placing the remaining benthic macroinvertebrates in separate vials for each sample. For samples with large numbers of (roughly >3,000) of any single taxon (usually oligochaetes), a subsampling device was employed by the District to estimate abundance. Following counting, the samples were preserved with 70% Ethanol/5% Glycerol solution. These samples (excluding oligochaetes) were delivered to EA Engineering, Science, and Technology, Inc. (EA) in Deerfield, Illinois for further processing and taxonomic identification.

Upon arrival at EA's laboratory, the samples were logged in. Except for Oligochaeta, macroinvertebrate identifications were made to the lowest practical taxonomic level using the most current literature available (see Section 5). If necessary, Chironomidae larvae were subsampled by placing them in a grided petri dish. Squares were randomly chosen until at least 100 larvae were removed. Chironomid larvae were then cleared in 10% potassium hydroxide and permanently mounted in CMC-10. All specimens were identified, enumerated, and coded on EA's standard laboratory bench sheet for data processing.

Each slide-mounted chironomid specimen was examined for a variety of head capsule deformities. The use of chironomid head capsule deformities as indicators of benthic community quality has become widely accepted throughout the world (Burt et al. 2003, Canfield et al. 1996, De Pauw and Heylen 2001, Jeyasingham and Ling 2000, Lenat 1993). However, factors such as seasonal, temporal, and climatic variability, as well as limited baseline information and poorly understood relationships with a variety of contaminants may complicate the interpretation of deformity results (Servia et al. 2000, Servia et al. 2004, Burt et al 2003). Nonetheless, the relationship between increasing levels of environmental perturbation and incidence of chironomid deformities has been thoroughly documented. Recent studies have linked several agents found in industrial and domestic waste to midge deformities. These include endocrine disruptors (e.g., detergents; Kwak and Lee 2005, Vazquez-Duhalt et al. 2005, Vermeulen et al. 2000), heavy metals (e.g., Cu, Hg, Pb, Zn; Janssens de Bisthoven and Ollevier 1998, Janssens de Bisthoven et al. 1998, Martinez et al. 2004, Swansburg et al. 2002), polynuclear aromatic hydrocarbons (e.g., coal tar; Dickman et al. 1992, Hudson and Ciborowski 1996a), organochlorine compounds (e.g., pesticides; Hudson and Ciborowski 1996b) and radionuclides

(e.g., radium and uranium refining; Warwick et al. 1987). Given the abundance of information linking deformities to a variety of contaminants, it is clear that deformity analysis is a useful supplementary "tool" in benthic macroinvertebrate bioassessment studies.

For Orthocladiinae, Chironomini, and Tanytarsini specimens, the structures examined for deformities included the mentum, mandibles, premandibles, and pecten epipharyngis (Sæther 1980). Tanypodinae structures included the ligula, dorsomentum, mandibles, paraligula, and pecten hypopharyngis (Sæther 1980). Guidance as to what constituted a deformity as well as descriptions of deformities for the structures and taxa listed above was derived from a variety of sources, most notably Bird (1994), Dermott (1991), Dickman et al. (1992), Groenendijk et al. (1998), Hudson and Ciborowski (1996b), MacDonald and Taylor (2006), Nazarova et al. (2004), Warwick (1985 and 1991), Warwick and Tisdale (1988), and Warwick et al. (1987). A conservative approach was used to distinguish deformities or malformations from broken or severely worn larval structures. In general, deformities and malformations were easily distinguished from worn or damaged structures for the specimens examined during this study. However, if any suspicion existed as to the cause of an irregular structure, that irregularity was not counted as a deformity.

Whenever possible, for the waterways with multiple sampling stations, comparisons were made longitudinally among monitoring stations. Metrics compared included density, relative abundance (percent), and total taxa richness, number of Ephemeroptera + Plecoptera + Trichoptera (EPT) taxa, dominant taxa composition, and percent Chironomidae head capsule deformities. In some instances, notable differences in the benthic macroinvertebrate community were observed among the stations. These differences could be the result of differences in water or sediment quality related to point and non-point sources, differences in habitat quality, or natural variability within the benthic community. However, since the causative factors were unclear, the differences were described in varying degrees of "stress", which is intended to encompass all potential impact types. For the purpose of summarizing and discussing the results, the center and near shore samples were combined for each site by sample type. However, the center and near shore data are presented separately for each station and sample type in Appendix A.

3. RESULTS AND DISCUSSION

3.1 2009 Benthic Macroinvertebrate Results

During 2009, 52 HD samples and 54 Ponar samples were collected from 27 stations in 13 different waterways (Table 2-1). Combined, these samples yielded 110 total taxa and 16 relatively pollution sensitive EPT taxa (Table 3-1). Chironomidae was the most taxa rich group with 52 taxa followed by Ephemeroptera and Trichoptera each with eight taxa. The taxa that are underlined in Table 3-1 represent those that are considered highly tolerant of pollution caused stressors. For the purposes of this study, several literature sources were considered to determine the tolerance of any particular taxon including Barbour et al. (1999), Illinois Environmental Protection Agency (IEPA) (1987), Ohio Environmental Protection Agency (OEPA) (1988), and Simpson and Bode (1980). Taxa were regarded as highly tolerant if they were listed as such in the literature and/or their assigned tolerance values from various regions in the U.S. averaged eight or greater on a zero to ten or eleven scale with ten/eleven being the most tolerant.

3.1.1 Calumet Watershed

Three stations were sampled in the Calumet watershed during 2009: one station in the Calumet River, one station in the Little Calumet River (LCR), and one station in the Cal-Sag Channel (Cal-Sag) (Table 2-1).

Overall, the HD and Ponar samples from the Calumet watershed were dominated by either dreissenid mussels (Dreissena polymorpha and/or D. bugensis) or highly tolerant taxa (e.g., Oligochaeta). In addition to the abundance of tolerant taxa, chironomid head capsule deformities were observed at two of the three 2009 sampling stations.

3.1.1.1 Calumet River

Combined, 14 total taxa were collected in the Calumet River (Station 55) HD and Ponar samples (Tables 3-2 and 3-3). EPT taxa were not present in either sample type. The HD samples yielded 12 total taxa while six total taxa were observed in the Ponar samples. Total density in the HD samples was more than two times higher than in the Ponar samples. The higher density in the HD samples was almost exclusively due to the abundance of zebra mussels, which prefer hard surfaces, like the HD samplers for attachment (Table 3-2). Zebra mussel was the most dominant HD taxon, representing nearly 85 percent of the total density. The side swimmer *Gammarus* was the next most abundant taxon representing six percent of the total abundance. As with the HD samples, zebra mussel also was the most abundant taxon by percent in the Ponars (Table 3-3). Quagga mussel and Oligochaeta were also relatively abundant and together with zebra mussel, these three taxa accounted for more than 99 percent of the total organisms in the Ponar samples.

No chironomid deformities were observed in either the HD or Ponar samples. However, the benthic community represented in both the HD and Ponar samples largely consisted of taxa that are considered moderately to extremely tolerant of pollution. Of the 14 taxa, six are typically classified as tolerant (Table 3-1). Combined with the low taxa richness and lack of EPT taxa,

these data suggest a moderate to high level of environmental stress is affecting the benthic community at Station 55.

3.1.1.2 Little Calumet River (LCR)

Combined, the HD and Ponar samples from the single station in the LCR (Station 76) yielded 31 total taxa and one EPT taxon (Tables 3-4 and 3-5). Total taxa richness ranged from 26 taxa in the HD samples to 10 taxa in the Ponar samples. The single EPT taxon was collected in HD samples. Although zebra mussel was the most abundant taxon by percent in the HD samples, nine of the 26 taxa collected were represented by more than one percent of the total density (Table 3-4). In contrast, total Ponar density was substantially higher than HD density due to the abundance of Oligochaeta, which represented over 99 percent of the total density (Table 3-5).

Chironomid head capsule deformities were observed in the HD and Ponar samples (Tables 3-6 and 3-7). In the HD samples, deformities were observed in 4.1 percent (n=122) of *Dicrotendipes lucifer* and 6.7 (n=89) of *D. simpsoni* examined from Station 76 (Table 3-6). In contrast, a single deformed specimen of *Chironomus* (n=9) was observed in the Ponar samples (Table 3-7).

Baseline deformity levels have not been established for Chironomidae in the Chicago Metropolitan Area waterways. In the Great Lakes, three to five percent incidence of deformities has been considered representative of background conditions for susceptible taxa (Dermott 1991, Hudson and Ciborowski 1996a, and Burt et al. 2003) while two percent is representative of background in the Great Lakes for all taxa combined (Burt et al. 2003). Although deformity incidence among the Little Calumet River samples were not substantially higher than potential reference levels, the total incidence of deformities in the HDs relative to a fairly large sample size and the fact that deformities were observed in both sample types may be indicative of an impact.

Of the 31 taxa observed at Station 76, 12 taxa are considered highly tolerant to disturbance (Table 3-1). Together, the incidence of head capsule deformities, number of tolerant taxa, and the fact that tolerant taxa contributed over 40 percent of the total HD abundance and nearly all of the Ponar density suggests that the benthic community at Station 76 is moderately to highly stressed.

3.1.1.3 Calumet-Sag Channel (CSC)

Combined, the HD and Ponar samples from the single station in the Cal-Sag (Station 59) yielded 21 total taxa and one EPT taxon (Tables 3-8 and 3-9). There were 19 total taxa and one EPT taxon in the HD samples while only four total taxa were present in the Ponar samples. The total richness at Station 59 was the lowest observed among all sites and sample types in 2009. Of the 21 total taxa, 12 are considered highly tolerant (Table 3-1). In addition, the highly tolerant taxa Oligochaeta and *Dicrotendipes lucifer* represented nearly 60 percent of the total abundance in the HDs (Table 3-8). Total density in the Ponar samples was over two times greater than in the HDs almost entirely due to the abundance of Oligochaeta, which accounted for nearly 98 percent of the total (Table 3-9).

A single specimen of *Dicrotendipes lucifer* in the HDs and a single specimen of *Procladius* in the Ponars were the only deformities observed at Station 59 (Table 3-6 and 3-7) and likely are representative of expected background levels (Burt et al. 2003). Although the incidence of head capsule deformities does not provide clear evidence, the abundance of tolerant taxa at Station 59 suggests that the benthic community is moderately to highly stressed.

3.1.2 North Branch Chicago River Watershed

Sampling was conducted at 15 stations in the North Branch of the Chicago River watershed during 2009: two stations in the West Fork of the North Branch of the Chicago River (WFNBCR), one station in the Middle Fork of the North Branch of the Chicago River (MFNBCR), two stations in the Skokie River, four stations in the North Shore Channel (NSC), and six stations in the North Branch of the Chicago River (NBCR) (Table 2-1).

The tolerant taxon Oligochaeta was the most abundant organism in nearly half of the HD samples and nearly all of the Ponar samples collected from the North Branch Chicago River watershed. Chironomidae deformities were observed at nine of the 15 locations in the watershed with some incidence levels being among the highest observed in the 2009 samples. Based on the dominance of a single taxon, dominance by tolerant taxa, total richness, EPT richness, and/or head capsule deformities, several stations in the watershed exhibited varying degrees of stress in 2009.

3.1.2.1 West Fork of the North Branch of the Chicago River (WFNBCR)

Together, the HD and Ponar samples from the two WFNBCR stations (Stations 106 and 103) yielded 52 total taxa and three EPT taxa (Tables 3-10 and 3-11). HD total taxa richness at Station 106 was slightly less but similar to Station 103 (Table 3-9). The only EPT taxon observed in the HD samples was the caddisfly *Cheumatopsyche* and it was collected at both locations. As with taxa richness, total density was more similar between the two stations (Table 3-9). The crustacean *Caecidotea* was the most abundant taxon at both locations. However, while Caecidotea was clearly the dominant taxon at Station 106, the chironomid *Paratanytarsus* was nearly equal to *Caecidotea* in abundance at Station 103.

Results from the Ponar samples differed somewhat from the HD samples. Ponar total taxa richness was noticeably higher at Station 106 with 38 taxa compared to 18 taxa at Station 103 (Table 3-10). In addition, three EPT taxa were collected at Station 106 while none was observed at Station 103. Total density was similar between the two stations; however, the Asiatic clam *Corbicula fluminea* was the dominant organism at Station 106 while Oligochaeta was dominant at Station 103.

Chironomid head capsule deformities in the WFNBCR were restricted to *Procladius*. A single deformed specimen was observed in the HD samples from Station 106 and, again in the Ponar samples from Station 103 (Tables 3-6 and 3-7). Due to small sample size, the percent incidence was somewhat inflated for Station 106 HD while the percent incidence from the Station 103 Ponar is well below published background levels for *Procladius* in the Great Lakes (Dermott 1991, Hudson and Ciborowski 1996a, and Burt et al. 2003).

While the low number of deformed specimens, relatively high overall total richness, and presence of EPT taxa suggest that Stations 106 and 103 may be moderately stressed, the lower total richness, abundance of tolerant taxa, and lack of EPT taxa in the Station Ponar samples suggests that Station 106 is comparatively less stressed.

3.1.2.2 Middle Fork of the North Branch of the Chicago River (MFNBCR)

Combined, the HD and Ponar samples from the single station in the MFNBCR (Station 31) yielded 39 total taxa (Tables 3-12 and 3-13). Thirty-one total and five EPT taxa were observed in the HD samples while 27 total taxa and one EPT taxon were present in the Ponar samples. Total density in the HD and Ponar samples was similar though slightly higher in the Ponars. *Caecidotea* was the most abundant taxon in the HD samples followed by Turbellaria and *Cheumatopsyche* (Table 3-12) However, in the Ponar samples, the tolerant taxon Oligochaeta was most abundant followed by the tolerant chironomid *Polypedilum illinoense* (Table 3-13).

Chironomidae head capsule deformities were not observed at Station 31 in 2009. Although roughly one third of the taxa observed at Station 31 are considered tolerant to perturbation (Table 3-1) and total richness was moderate compared to other locations in the North Branch of the Chicago River watershed, EPT richness was the highest in the watershed and, outside of the Des Plaines River, was among the highest observed for a single station in 2009. Based on these results it appears the benthic community at Station 31 is moderately stressed.

3.1.2.3 Skokie River

Combined, the HD and Ponar samples from the two Skokie River stations (Stations 32 and 105) yielded 57 total taxa and three EPT taxa (Tables 3-14 and 3-15). HD total taxa richness was higher at the upstream Station 105 (38 taxa) compared to Station 32 (24 taxa) (Table 3-14). In addition, two EPT taxa were collected at Station 32 while no EPT taxa were observed in the Station 105 HDs. The total richness at Station 32 was the highest observed among all sites and sample types in 2009. Total density was very similar between the two stations however, dominance differed somewhat (Table 3-14). The tolerant taxon Oligochaeta was dominant at Station 32 and the side swimmer *Gammarus* was the dominant taxon at Station 105.

Ponar richness was similar with 26 and 20 total taxa at Stations 32 and 105, respectively (Table 3-15). However, three EPT taxa were observed at Station 32 while none was collected at Station 105. As with the HD samples, Ponar total density was nearly identical and Oligochaeta was similarly abundant at the two stations (Table 3-15).

Chironomid head capsule deformities were restricted to a single *Chironomus* specimen in the Ponar samples from Station 32. The incidence level for *Chironomus* at Station 32 is likely inflated due to small sample size whereas incidence for all midges was well below documented background levels for the Great Lakes (Burt et al 2003).

Overall, results from Stations 32 and 105 were largely similar. Some differences were apparent, for example, EPT taxa were absent from Station 105 and highly tolerant Oligochaeta was the dominant taxon in both sample types at Station 32. However, based on general composition and

relative abundance of tolerant taxa (Tables 3-1, 3-14, and 3-15), the benthic communities at both stations could be characterized as relatively pollution tolerant and moderately stressed.

3.1.2.4 North Shore Channel (NSC)

HD and Ponar samples from the four NSC stations (Stations 35, 102, 36, and 101) yielded a combined 49 total taxa (Tables 3-16 and 3-17). The four EPT taxa observed in the NSC were restricted to the HD samples from three of the four stations. HD total taxa richness was noticeably higher upstream at Station 35 where 32 total taxa were observed compared to 22 to 25 taxa at Stations 102, 36, and 101 (Table 3-16). EPT richness was more similar among stations with two taxa at Stations 35, 36, and 101 while no EPT taxa were collected at Station 102. Total density was similarly lower at Stations 35 and 101 but two to five times higher at Stations 102 and 36, respectively (Table 3-16). This difference was partly due to higher densities of the tolerant taxa Oligochaeta, *Dicrotendipes lucifer*, and *D. simpsoni* at Stations 102 and 36 compared to Stations 35 and 101. In terms of relative abundance, zebra mussel was the dominant taxon at Station 35, Oligochaeta was dominant at Stations 102 and 36, and *D. simpsoni* was co-dominant with Oligochaeta at Station 101.

The Ponar samples yielded 26 total taxa compared to 45 taxa in the HDs. Of the 26 taxa observed in the Ponar samples, more than half are considered highly tolerant (Table 3-1). Ponar total taxa richness was similarly lower at Stations 35 and 102 with five and nine taxa, respectively, and higher at Stations 36 and 101 where 19 and 15 taxa were collected (Table 3-17). Similarly, total Ponar density did not exhibit any discernable longitudinal pattern. Total density was substantially higher at Station 102, moderate at Station 101, and noticeably lower at Stations 35 and 36 (Table 3-17). At all stations, total density was almost exclusively driven by variability of the dominant taxon, Oligochaeta, which represented between 83 and 98 percent of the total density among the four stations.

Chironomid head capsule deformities were observed in HD and Ponar samples from Stations 35, 36, and 101(Tables 3-6 and 3-7). In the HD samples, one or two deformed specimens of *Ablabesmyia janta*, *Chironomus*, *Dicrotendipes lucifer*, *D. modestus*, *Parachironomus*, *Micropsectra*, and *Paratanytarsus* were observed among the three stations (Table 3-6). Incidence levels for individual taxa were generally low considering the small sample size and total incidence rates were equal to or below documented background levels for the Great Lakes (Burt et al. 2003). Nonetheless, the three afflicted taxa at Station 35 was the highest observed for any single location and the seven taxa with deformities in the NSC was the highest number of affected taxa observed for any single waterway sampled in 2009.

In the Ponar samples, chironomid deformity incidence was lowest at Station 101, moderate at Station 36, and substantially higher at Station 35 (Table 3-7). Given the small sample size at Station 101, it is problematic to speculate as to what this level of incidence represents. In contrast, three taxa and 66 individual specimens exhibited deformities at Stations 35 and 36, collectively (Table 3-7). Incidence was most common among the *Chironomus* collected from each station and was substantially higher at Station 35 with 37 percent (n=159). Of the deformities observed, all involved extra teeth or malformed teeth. Deformities of this nature have been linked to elevated levels of organochlorines, polynuclear aromatic hydrocarbons, and

heavy metals (Janssens de Bisthoven and Ollevier 1998, Janssens de Bisthoven et al. 1998, Dermont 1991, Hudson and Ciborowski 1996a, Hudson and Ciborowski 1996b, Swansburg et al. 2002). Burt et al. (2003) found that reference deformity levels for *Chironomus* were 2.15 percent in the Great Lakes. Other investigators have reported background levels from zero to 14 percent for *Chironomus* (Bird 1994, Burt et al. 2003, Lenat 1993, Swansburg et al. 2002). Despite the lack of consensus regarding reference levels, the incidence of deformities observed at Station 35 are substantially greater than previously identified background levels.

Based on the number of tolerant taxa and abundance of tolerant taxa (Table 3-1), particularly in the Ponar samples, combined with the levels of chironomid deformities as well as the number of taxa affected, the benthic community of the NSC could be characterized as moderately to highly stressed.

3.1.2.5 North Branch of the Chicago River (NBCR)

The combined number of taxa collected in the HD and Ponar samples from the six NBCR (Stations 104, 34, 96, 37, 73, and 46) were 48 total and three EPT taxa (Tables 3-18 and 3-19). HD samples were collected from five of the six NCBR stations as the samplers set at Station 96 NBCR were not recovered during retrieval in early August. HD total taxa richness ranged from 25 taxa at Station 34 to 17 taxa at the most upstream Station 104 (Table 3-18). Total richness was similar among the four downstream stations and slightly lower at Station 104. One or two EPT taxa were collected at each of the five stations and no discernable longitudinal trend was evident. As with EPT richness, no trends were observed in total density, which was lowest at Stations 34, 37, and 73 and nearly four to seven times higher at Stations 104 and 46 (Table 3-18). At Stations 104 and 46, the higher densities were due to greater numbers of several taxa including *Hydra* and the tolerant taxa Oligochaeta, *Dicrotendipes lucifer*, *D. simpsoni,* and *Ferrissia*. Similarly, there was no single dominant taxon among the majority of the NBCR stations. Seven different taxa achieved greater than 10 percent of the relative abundance among the five stations. Most notable of these was the abundance of the tolerant taxa. Of these seven taxa, six are considered highly tolerant to environmental perturbation (Table 3-1).

Ponar samples were collected from all six NCBR stations. Ponar total taxa richness was generally higher among the four upstream stations, ranging from 12 to 22 taxa, and noticeably lower at the two downstream stations with six and five taxa, respectively (Table 3-19). EPT taxa were absent from the NBCR Ponar collections. Oligochaeta was the most abundant taxon at all stations and the dominant taxon at four stations where it represented between 94 percent and nearly 100 percent of the total density (Table 3-19). Total Ponar density was variable among the seven stations and was dictated largely by Oligochaeta density.

Chironomid head capsule deformities were observed in the HD sample from Station 73 and in the Ponar samples from Stations 104, 37, and 73 (Tables 3-6 and 3-7). Three different taxa exhibited deformities. However, in all cases the deformity involved a single specimen.

Overall, tolerant taxa were dominant or among the most abundant taxa at each of the six sampling stations and in both sample types (Table 3-1). In addition, 16 of the 48 taxa observed in the NBCR samples are considered highly tolerant. Although discernable longitudinal trends

were limited and chironomid head capsule deformities were low or inconclusive, the number of tolerant taxa and the abundance of tolerant taxa suggest that the benthic communities at each of the six stations were at least moderately stressed during 2009.

3.1.3 Chicago Sanitary and Ship Canal Watershed

Benthic macroinvertebrate sampling was conducted at three stations all within the Chicago Sanitary and Ship Canal (CSSC) (Table 2-1). Deformity incidence was inconclusive due to small sample size however; tolerant taxa were an integral component at all stations and in both sample types.

3.1.3.1 Chicago Sanitary and Ship Canal (CSSC)

Together, the HD and Ponar samples from the three CSSC stations (Stations 75, 41, and 92) yielded 33 total taxa and two EPT taxa (Tables 3-20 and 3-21). HD total taxa richness increased consecutively from upstream to downstream and ranged from nine taxa at Station 75 to 24 taxa at Station 92 (Table 3-20). Two EPT taxa were observed among the CSSC HD samples and both were collected at Station 92. Total density was highest at Station 41 and lowest at Station 92 and largely reflected Oligochaeta density (Table 3-20). The tolerant taxon Oligochaeta was the most abundant taxon at each station but was noticeably less abundant at Station 92.

In contrast to the HD results, Ponar total richness decreased slightly from upstream to downstream (Table 3-21). No EPT taxa were observed in the Ponar samples. Like the HD samples, total density was again highest at Station 41 and Oligochaeta abundance represented over 97 percent of the density at each of the three stations.

A single *Chironomus* specimen from the Station 92 HD samples exhibited deformed teeth. Despite the lack of deformities among the CSSC stations, the dominance by tolerant taxa at all stations and both sample types suggests that the benthic communities among the CSSC stations were moderately to highly stressed in 2009 (Table 3-1).

3.1.4 Des Plaines River Watershed

Sampling was conducted at six stations in the Des Plaines River watershed during 2009: one station in Higgins Creek, one station in Salt Creek, one station in the West Branch of the DuPage River (WBDPR), and three stations in the Des Plaines River (Table 2-1).

The benthic community in the Des Plaines River watershed exhibited a substantial amount of variability relative to other watersheds sampled in 2009. In the HDs, abundance was more evenly distributed among most of the stations. In fact, the most abundant taxon was different for each of the stations except two and in those cases; an EPT taxon was most abundant. However, the tolerant taxon Oligochaeta was a major component among the Ponar samples from the watershed. Nonetheless, positive benthic community characteristics were more the norm than negative attributes during 2009. The incidence of chironomid deformities was generally low and the highest EPT richness for any station or waterway was observed in the Des Plaines River watershed.

3.1.4.1 West Branch of the DuPage River (WBDPR)

The benthic macroinvertebrate community in the WBDPR at Station 64 was represented by 39 total taxa and three EPT taxa in the HD and Ponar samples (Tables 3-22 and 3-23). The HD samples yielded 31 total and three EPT taxa while Ponar richness was slightly lower with 25 total taxa and one EPT taxon. Total density was very similar between the HDs and Ponars and was dominated by tolerant taxa. The most abundant taxa in both the HD and Ponar samples were Oligochaeta and *Polypedilum illinoense* while overall tolerant taxa represented 63 and 86 percent of the total HD and Ponar density, respectively.

Chironomid head capsule deformities were observed in both the HD and Ponar samples (Tables 3-6 and 3-7). In the HD samples, deformities were observed in low numbers of *Procladius* and *Polypedilum illinoense* (Table 3-6). Incidence was elevated somewhat for *Procladius* in the Ponars (Table 3-7). Although the higher level of deformities in the Ponars suggests impairment, sample size was fairly low and the incidence level for all taxa combined was consistent with background levels (Burt et al. 2003). Nonetheless, given that tolerant organisms accounted for 15 of the 39 taxa and composed the majority of the total density in both sample types, it is reasonable to characterize the WBDPR benthic community at Station 64 as moderately stressed.

3.1.4.2 Salt Creek

HD and Ponar samples from the single station in Salt Creek (Station 18) yielded 43 total taxa and six EPT taxa (Tables 3-24 and 3-25). The HD samples yielded 33 total taxa and six EPT taxa while Ponar richness was noticeably lower with 20 total and two EPT taxa. Turbellaria and the EPT taxon *Cheumatopsyche* were equally abundant in the HD samples while the tolerant taxon Oligochaeta was the most abundant organism in the Ponar samples. Total density in the HDs was more than double the Ponar total density and this difference was directly related to the greater abundance of Turbellaria and *Cheumatopsyche* in the HD samples.

No chironomid head capsule deformities were observed at Station 18 in 2009 and overall results were mixed. The facts that tolerant taxa only accounted for 11 of the 43 total taxa, tolerant taxa represented less than 10 percent of the total HD density, EPT richness was the third highest among all stations sampled in 2009, and the EPT taxon *Cheumatopsyche* was one of the most abundant taxa in the HDs are all positive community attributes. However, the abundance of tolerant taxa in the Ponar samples (60 percent of the total density) suggests some impairment. Together, these results indicate that the benthic community at Station 18 was slightly to moderately stressed in 2009.

3.1.4.3 Higgins Creek

Combined, the HD and Ponar samples from the single station in Higgins Creek (Station 78) yielded 22 total taxa (Tables 3-26 and 3-27). Sixteen total taxa were observed in the HD samples while 17 taxa were present in the Ponar samples. Tolerant taxa composed one-half or more of the total taxa for each sample type and for sample types combined (Table 3-1). Total density was over ten times higher in the Ponar samples compared to the HDs due to the abundance of *Caecidotea*, which was the dominant taxon in both sample types.

No chironomid head capsule deformities were observed in Higgins Creek. Although highly tolerant taxa represented a substantial portion of the total richness, these taxa represented less than 25 percent of the total density in the HD samples and less than 10 percent of the density in the Ponars (Tables 3-26 and 3-27). This suggests that despite the low richness in the HD samples and lack of EPT taxa, pollution type stress may be relatively low in Higgins Creek.

3.1.4.4 Des Plaines River

Combined, the HD and Ponar samples from the three Des Plaines River Stations 13, 22, and 91 yielded 58 total taxa and 14 EPT taxa (Tables 3-28 and 3-29). These were the highest richness values observed among all the waterways sampled in 2009. HD total taxa richness decreased upstream to downstream among the three stations from 30 taxa at Station 13 to 16 taxa at Station 91 (Table 3-28). Likewise, EPT taxa richness was highest at the upstream Station 13 with 10 taxa compared to seven and five EPT taxa at Stations 22 and 91, respectively. Contrary to taxa richness, total density increased from upstream to downstream. The most abundant taxon at Stations 13 and 22 was the EPT taxon *Cheumatopsyche* while the tanytarsini chironomid *Paratanytarsus* was the most abundant taxon at Station 91 (Table 3-28). Overall, environmentally sensitive EPT taxa were noticeably more abundant than tolerant taxa at each station (Table 3-1). EPT composed 48 to 68 percent of the total density among the three stations while tolerant taxa represented one to eight percent.

Ponar total and EPT taxa richness was similar among the three stations with total richness ranging from 19 to 21 taxa and EPT richness ranging two to three taxa (Table 3-29). Total density was very similar between Stations 13 and 22 and more than ten times greater at Station 91. Although the tolerant taxon Oligochaeta was abundant at all the stations, it never represented more than 53 percent of the total density among the three locations. In addition to Oligochaeta, *Polypedilum halterale* grp. was common at Station 13, Cheumatopsyche was abundant at Station 22, and *Rheotanytarsus* was most abundant at Station 91 (Table 3-29).

No chironomid head capsule deformities were observed in either the HD or Ponar samples. Overall, no clear pattern emerged in the Des Plaines River benthic macroinvertebrate results. There appeared to be a consistent longitudinal trend based HD richness measures and composition. However, this trend was largely reversed among the Ponar samples. Station 13 had the highest total and EPT richness in both the HD and Ponar samples. In contrast, the Station 13 HD samples had the highest number and percentage of tolerant taxa (Table 3-1). Station 91 consistently had the lowest number of total and EPT taxa in the HDs and Ponars but had the lowest percentage of tolerant taxa in the HDs. Overall, it appears that the benthic community at all three stations is affected by environmental perturbation in varying degrees of severity and/or types of disturbance. However, based on the collection of positive community attributes expressed at Station 13, it appears that the benthic community at the two downstream Stations 22 and 91 is generally more stressed compared to Station 13.

Chironomid head capsule deformities were not observed among the Des Plaines River sampling stations. Based on abundance, tolerant taxa were a relatively minor component in the HD samples compared to the Ponars. This suggests a level of disparity between water and sediment quality. Despite the lack of consistent patterns, these data suggest that the Des Plaines River at

Stations 13, 22, and 91 is slightly to moderately stressed. However, environmental stress in the Des Plaines River appears to be less than many of the stations sampled during 2009.

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FIGURES

Figure 2-1: Sampling stations for the MWRDGC benthic macroinvertebrate program.

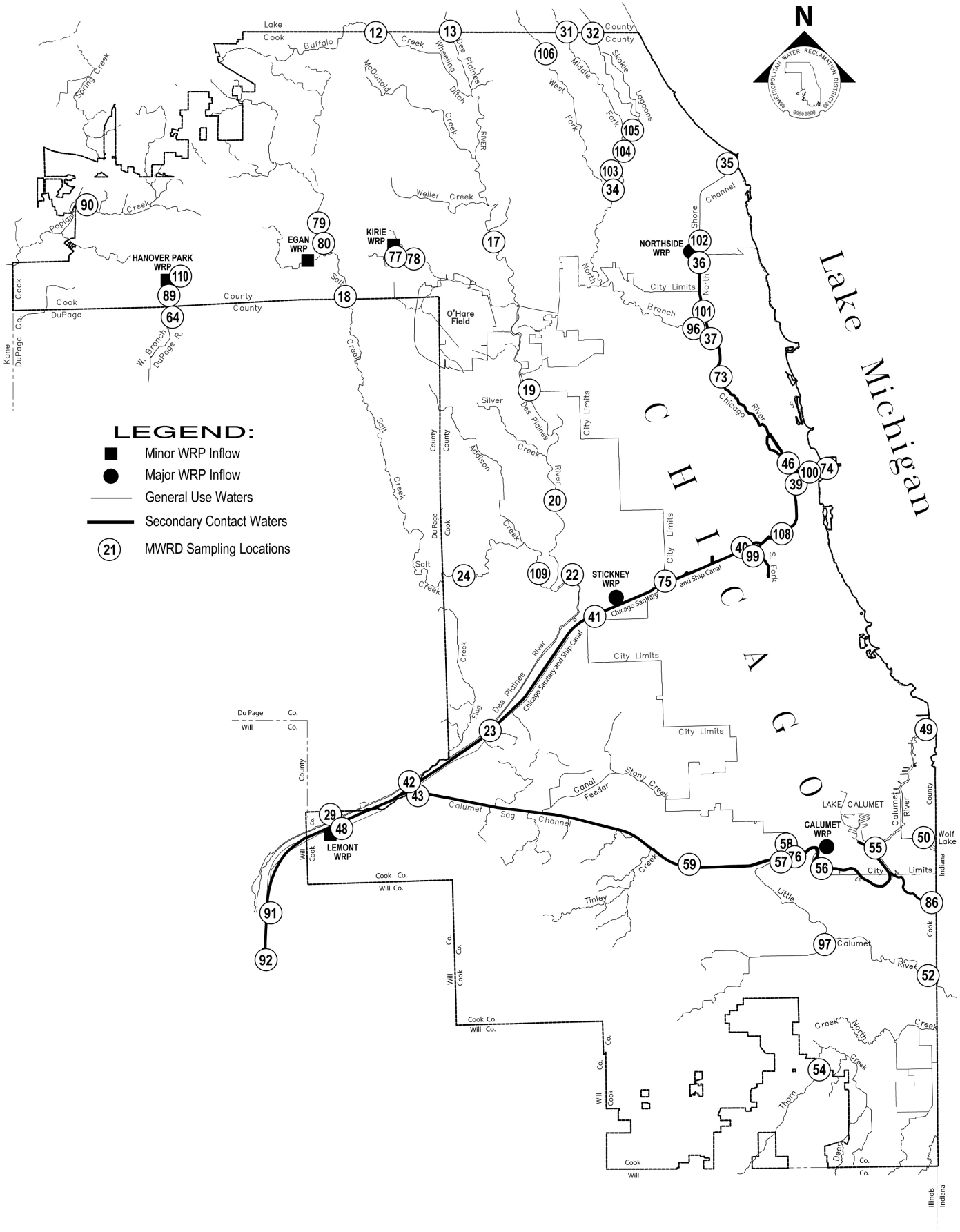


Figure 2-2. Hester-Dendy sampling array.

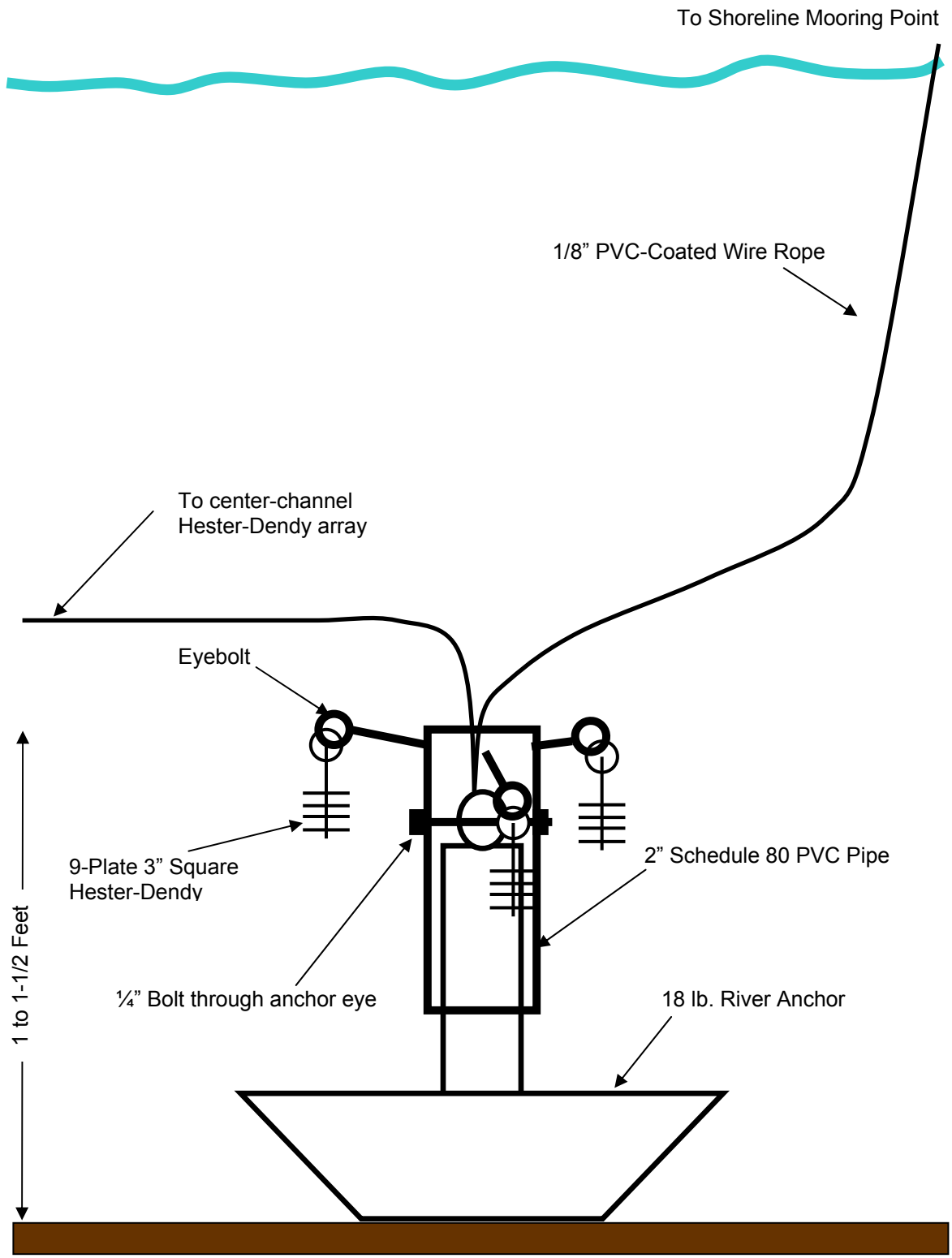
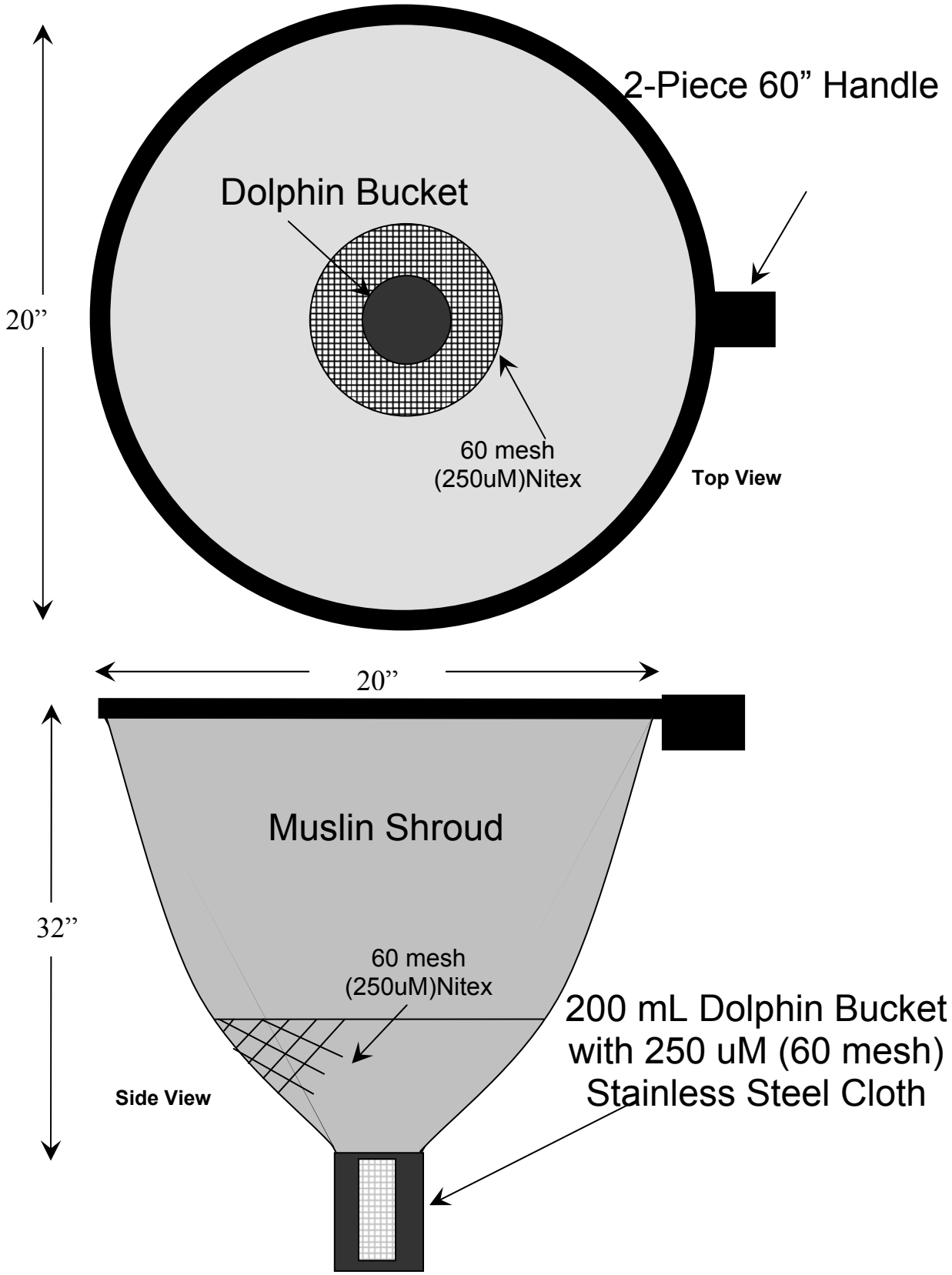


Figure 2-3. Dipnet for Hester-Dendy sampler retrieval.



TABLES

Table 2-1. Description of benthic macroinvertebrate monitoring stations sampled during 2009. Stations arranged by major watershed, upstream to downstream within each waterway. Highlighted stations were sampled every year from 2001 to 2009.

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
Calumet	**55- 130th St.**	**Calumet River**	**41° 39' 33.9"N 87° 34' 20.1"W**	**50' upstream of 130th St. (40' from east bank and center channel**
	76- Halsted St.	**Little Calumet River**	**41° 39' 25.9"N 87° 38' 27.3"W**	**20' upstream of Halsted St. (20' from south bank and center channel)**
	59- Cicero Ave.	**Calumet-Sag Channel**	**41° 359' 19.4"N 87° 44' 15.6"W**	**150' upstream of Cicero Ave. (30' from north bank and center channel)**
North Branch Chicago River	106- Dundee Rd.	W. Fork N. Branch Chicago R.	42° 08' 19.03"N 87° 50' 5.07"W	0.1 mile downstream of Dundee Rd. (5' from west bank and center channel)
	103- Golf Rd.	W. Fork N. Branch Chicago R.	42° 03' 19.21"N 87° 46' 54.99"W	20' upstream of Golf Rd. (5' from east bank and center channel)
	31- Lake-Cook Rd.	Middle Fork N. Branch Chicago R.	42° 08' 56.5"N 87° 48' 51.0"W	900' above I-94, 75' below diversion channel to Middle Fork Reservoir (5' from west bank and center channel)
	32- Lake-Cook Rd.	Skokie River	42° 09' 9.7"N 87° 47' 38.0"W	10' upstream of Lake-Cook Rd. (10' from east bank and center channel)
	105- Frontage Rd.	Skokie River	42° 05' 16.1"N 87° 45' 38.2"W	100' downstream of Frontage Rd. (10' from south bank and center channel)
	35- Central St.	N. Shore Channel	42° 3' 52.93"N 87° 41' 13.97"W	30' feet upstream of Central St. (15' from east bank and center channel)
	102- Oakton St.	N. Shore Channel	42° 01' 35.50"N 87° 42' 35.96"W	75' upstream of Oakton St. (15' from east bank and center channel)
	36- Touhy Ave.	**N. Shore Channel**	**42° 00' 43.7"N 87° 42' 37.2"W**	**10' upstream of Touhy Ave. (15' from east bank and center channel)**
	101- Foster Ave.	N. Shore Channel	41° 58' 32.59"N 87° 42' 16.61"W	50' upstream of Foster Ave. (10' from west bank and center channel)

Table 2-1 - Continued

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
North Branch Chicago River	104- Glenview Rd.	N. Branch Chicago R.	42° 04' 8.33"N 87° 46' 27.47"W	100' upstream of Glenview Rd. (5' from east bank and center channel)
	34- Dempster St.	N. Branch Chicago R.	42° 02' 30.9"N 87° 47' 16.9"W	500' upstream of Dempster St. (5' from east bank and center channel)
	96- Albany Ave.	**N. Branch Chicago R.**	**41° 58' 21.7"N 87° 42' 44.3"W**	**250' downstream of Kimball Ave. (5' from south bank and center channel)**
	37- Wilson Ave.	N. Branch Chicago R.	41° 57' 52.66"N 87° 41' 50.50"W	10' upstream of Wilson Ave. (10' from west bank and center channel)
	73- Diversey Pkwy.	N. Branch Chicago R.	41° 55' 55.79"N 87° 40' 56.89"W	50' upstream of Diversey Ave. (30' from east bank and center channel)
	46- Grand Ave.	**N. Branch Chicago R.**	**41° 53' 29.16" N 87° 38' 9.29" W**	**50' upstream of Grand Ave. (40' from east bank and center channel)**
CSSC [1]	**75- Cicero Ave.**	**Chicago Sanitary and Ship Canal**	**41° 49' 11.4"N 87° 44' 35.7"W**	**20' upstream of Cicero Ave. (70' from north bank and center channel)**
	41- Harlem Ave.	**Chicago Sanitary and Ship Canal**	**41° 48' 4.01"N 87° 48' 5.64"W**	**50' upstream of Harlem Ave. (50' from south bank and center channel)**
	92- Lockport (16th St.)	**Chicago Sanitary and Ship Canal**	**41° 34' 58"N 88° 04' 09.4"W**	**75' upstream of former Division St. bridge location (20' from west bank and center channel)**
Des Plaines River	**64- Lake St.**	**W Branch Du Page R.**	**41° 58'43.1"N 88° 07' 59.4"W**	**75' upstream of Lake St. (5' from west bank and center channel)**
	18- Devon Ave.	**Salt Cr.**	**41° 59'34.6"N 87° 59' 42.9"W**	**150' feet upstream of Devon Ave. (10' from west bank and center channel)**
	78- Wille Road	**Higgins Cr.**	**42° 01' 7.24"N 87° 56' 12.03"W**	**200' downstream of Wille Rd., inside entrance to culvert (5' from west bank and center channel)**

[1]CSSC = Chicago Sanitary and Ship Canal.

Table 2-1 - Continued

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
Des Plaines River	13- Lake-Cook Rd.	Des Plaines R.	42° 09' 9.8"N 87° 54' 36.2"W	20' downstream of Lake-Cook Rd. (20' from west bank and center channel)
	22- Ogden Ave.	Des Plaines R.	41° 49'14.4"N 87° 48' 38.2"W	50' upstream of Ogden Ave. (20' from east bank and center channel)
	91- Material Service Rd.	Des Plaines R.	41° 35' 29.3"N 88° 4' 8.30"W	20' upstream of Material Service Rd. (20' from east bank and center channel)

Table 3-1. List of benthic macroinvertebrate taxa collected in Hester-Dendy and Ponar samples from several Chicago Metropolitan Area waterways (EA 2004, 2006, 2007, and 2010). Underlined taxa are those considered to be highly tolerant based on literature sources.

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
PORIFERA (Sponges)									X									
COELENTERATA (Hydroids)																		
Hydra	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PLATYHELMINTHES (Flat worms)																		
Turbellaria	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
NEMERTEA (Proboscis Worms)											X		X					
NEMATODA (Round worms)							X	X										
ENTOPROCTA (Moss Animalcules)																		
Urnatella gracilis		X					X	X	X	X					X			
ECTOPROCTA (Bryozoans)																		
Plumatella	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	
ANNELLIDA																		
Oligochaeta (Aquatic Worms)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hirudinea (Leeches)																		
Glossiphoniidae[1]			X[1]	X[1]														
Desserobdella phalera									X		X							
Helobdella[1]	X[1]						X[1]	X[1]	X[1]		X[1]	X[1]	X[1]		X[1]	X[1]	X[1]	X[1]
Helobdella papillata							X						X	X	X			
Helobdella stagnalis	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Helobdella triserialis	X	X	X		X	X			X	X	X	X	X	X	X			
Placobdella[1]			X										X	X				X
Placobdella montifera									X									
Placobdella papillifera															X		X	
Placobdella pediculata							X	X							X			
Haemopis																X		
Erpobdella punctata punctata	X	X		X	X	X	X	X	X	X			X	X	X		X	X
Mooreobdella bucera								X										

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Hirudinea (cont.)																		
Mooreobdella microstoma	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRUSTACEA																		
Ostracoda (Seed Shrimp)		X					X	X			X	X	X	X	X		X	X
Isopoda (Sow Bugs)																		
Caecidotea	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Amphipoda (Side Swimmers)																		
Hyalella azteca							X	X	X	X	X		X	X	X	X	X	X
Gammarus [1]				X[1]	X[1]	X[1]			X	X	X	X	X	X	X	X	X	X
Gammarus fasciatus	X	X	X	X	X	X	X	X										
Crangonyx							X		X				X	X				
Echinogammarus ischusa											X	X	X		X	X	X	
Decapoda (Crayfish)																		
Cambarus bartonii							X											
Orconectes [1]					X[1]	X			X	X	X[1]	X			X[1]	X[1]		
Orconectes rusticus													X		X	X		
Orconectes immunis		X									X							
Orconectes virilis	X			X	X												X	
Procambarus													X			X		
Procambarus acutus									X									
ARACHNOIDEA																		
Hydracarina (Water Mites)	X	X					X		X	X	X		X	X	X	X	X	
INSECTA																		
Collembola (Springtails)									X	X					X	X		
Ephemeroptera (Mayflies)																		
Isonychia	X		X						X									
Baetis flavistriga							X	X										
Baetis intercalaris	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Baetis [1]							X[1]											

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Ephemeroptera (cont.)																		
Callibaetis							X											
Centroptilum									X	X			X					
Pseudocloeon ephippiatum	X																	
Heptageniidae[1]	X[1]	X[1]															X[1]	
Heptagenia	X		X						X									
Leucrocuta	X		X								X				X		X	
Maccaffertium [1]	X[1]	X																
Maccaffertium exiguum					X													
Maccaffertium integrum	X		X		X		X		X		X		X		X		X	
Maccaffertium terminatum	X		X				X	X	X						X	X	X	
Stenacron	X		X		X		X	X	X	X	X	X	X		X	X	X	
Stenonema femoratum									X								X	
Tricorythodes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Caenis		X			X	X	X	X		X	X	X		X	X	X		
Anthopotamus myops grp.					X		X	X		X			X		X		X	
Hexagenia [1]					X	X[1]							X	X				
Hexagenia bilineata				X														
Hexagenia limbata						X												
Ephoron												X						
Odonata (Damselflies and Dragonflies)																		
Zygoptera[1]										X[1]								
Calopteryx	X														X			
Hetaerina															X	X		
Coenagrionidae[1]						X[1]	X[1]		X[1]									X[1]
Argia	X		X		X		X		X		X	X	X	X	X	X	X	
Enallagma	X	X	X		X	X	X		X	X	X	X	X		X	X	X	X
Lestes						X									X			
Aeshna															X			

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Odonata (cont.)																		
Boyeria vinosa											X							
Gomphidae[1]																X[1]		
Argiogomphus																X		
Stylurus		X						X				X						X
Libellulidae								X						X				
Somatochlora			X				X											
Plecoptera (Stoneflies)																		
Perlesta					X													
Hemiptera (True Bugs)																		
Metrobates																	X	
Rheumatobates									X				X					
Trepobates			X				X								X		X	
Rhagovelia															X			
Corixidae			X	X		X	X	X	X				X	X		X		
Palmacorixa		X																
Megaloptera (Dobsonflies and Alderflies)																		
Chauliodes															X	X		
Corydalus cornutus						X												
Sialis							X						X		X			
Neuroptera (Spongillaflies)																		
Sisyridae									X									
Trichoptera (Caddisflies)																		
Chimarra																	X	
Cyrnellus fraternus	X	X	X		X		X		X		X		X	X	X	X	X	
Hydropsychidae[1]				X[1]				X[1]										
Ceratopsyche morosa	X		X		X		X	X	X		X		X		X	X	X	X
Cheumatopsyche	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hydropsyche	X		X		X		X		X		X		X					

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Trichoptera (cont.)																		
Hydropsyche betteni	X	X	X		X		X		X		X		X		X			
Hydropsyche bidens	X		X		X		X		X		X		X		X	X		
Hydropsyche orris	X		X		X		X		X		X		X		X	X		
Hydropsyche simulans	X		X		X		X		X		X	X	X		X	X	X	
Potamyia flava	X	X	X	X	X													
Hydroptila	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oxyethira										X								
Ceraclea [1]					X		X											
Ceraclea maculata									X					X	X			
Nectopsyche											X		X	X	X		X	
Oecetis						X	X	X	X	X				X	X	X	X	X
Lepidoptera (Aquatic Moths)																		
Petrophila	X		X				X		X									X
Noctuidae										X								
Coleoptera (Beetles)																		
Agabus							X											
Copelatus			X															
Laccophilus maculosus			X				X							X				
Dineutus															X			
Peltodytes								X					X		X	X		X
Ancyronyx variegata					X		X											
Dubiraphia	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X
Macronychus glabratus	X	X	X		X	X	X	X	X		X	X	X		X		X	
Stenelmis	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Berosus	X	X			X					X								
Enochrus									X									
Paracymus					X													
Tropisternus			X				X										X	

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Coleoptera (cont.)																		
Ectopria								X								X		
Diptera (True Flies)																		
Ceratopogonidae					X	X			X	X	X	X	X		X			
Atrichopogon					X													
Bezzia		X					X	X										
Ceratopogon							X	X										
Culicoides							X	X										
Serromyia							X											
Chaoborus	X	X								X								
Culicidae					X													
Culex																	X	
Hemerodromia	X					X	X	X	X		X		X		X	X		
Rhamphomyia							X											
Muscidae										X								
Pericoma								X										
Psychoda									X									
Simulium	X	X			X	X	X	X	X		X	X	X	X	X	X	X	X
Tipulidae						X												
Tipula			X		X													
Chironomidae (Midges)[1]	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]												
Alotanypus									X		X							
Clinotanypus		X														X		
Coelotanypus				X		X		X		X		X		X		X		
Procladius	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Psectrotanypus								X		X				X				
Tanypus		X			X	X	X	X	X	X			X	X	X	X		X
Ablabesmyia							X		X									
Ablabesmyia annulata									X			X						

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Chironomidae (cont.)																		
Ablabesmyia janta	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	
Ablabesmyia mallochi	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Labrundinia															X	X	X	
Labrundinia neopilosella										X								
Larsia										X								
Natarsia								X										
Natarsia sp. A		X					X											X
Nilotanypus															X			
Nilotanypus fimbriatus	X		X				X											
Pentaneura									X	X								
Thienemannimyia grp.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Acricotopus																X		
Brillia													X		X			
Corynoneura	X	X			X		X		X		X		X					
Corynoneura lobata							X	X							X		X	X
Cricotopus							X	X		X								
Cricotopus bicinctus grp.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cricotopus sylvestris grp.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cricotopus tremulus grp.	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cricotopus trifascia grp.			X	X		X		X		X		X				X		X
Cricotopus/Orthocladius							X	X										
Euryhapsis					X													
Heterotrissocladius			X								X							
Hydrobaenus														X				
Nanocladius [1]		X[1]					X[1]		X[1]		X[1]		X[1]					
Nanocladius crassicornus/rectinervis	X	X	X		X		X	X	X		X	X			X	X	X	X
Nanocladius distinctus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Chironomidae (cont.)																		
Nanocladius minimus													X					
Nanocladius spiniplenus									X									
Orthocladius							X	X										
Parakiefferiella							X	X	X	X								
Psectrocladius										X								
Rheocricotopus robacki	X		X		X	X	X	X	X	X	X	X	X	X	X		X	X
Thienemanniella lobapodema											X	X						
Thienemanniella n. sp. 3								X										
Thienemanniella similis	X	X			X	X			X	X	X	X	X	X	X		X	
Thienemanniella xena	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tvetenia discoloripes grp							X								X		X	
Chironomini[1]							X[1]											
Chironomus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cladopelma		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Cryptochironomus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cryptotendipes								X	X	X	X		X		X	X		
Cryptotendipes sp. 15						X												
Dicrotendipes [1]					X[1]	X[1]	X[1]	X[1]		X[1]								
Dicrotendipes fumidus					X	X			X	X	X	X	X	X	X	X	X	X
Dicrotendipes lucifer											X	X	X	X	X	X	X	X
Dicrotendipes modestus									X	X	X	X	X	X	X	X	X	X
Dicrotendipes neomodestus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dicrotendipes nervosus															X			
Dicrotendipes simpsoni	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Einfeldia natchitocheae														X				
Endochironomus nigricans	X				X	X	X	X	X		X	X	X	X	X	X	X	X
Glyptotendipes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Harnischia							X	X	X	X	X	X	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Chironomidae (cont.)																		
Microchironomus		X	X			X					X			X		X		
Microtendipes		X		X		X	X	X	X		X	X	X	X	X	X	X	X
Parachironomus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Paracladopelma	X	X		X	X	X		X								X		X
Paralauterborniella nigrohalteralis										X						X	X	X
Paratendipes							X	X	X	X	X	X	X	X	X	X	X	X
Phaenopsectra [1]	X									X[1]			X[1]					
Phaenopsectra flavipes													X		X	X	X	X
Phaenopsectra obediens									X	X	X	X			X	X	X	X
Phaenopsectra punctipes					X				X	X	X							
Polypedilum fallax grp.	X	X	X		X	X	X		X		X		X		X		X	
Polypedilum flavum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Polypedilum halterale grp.	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Polypedilum illinoense	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Polypedilum scalaenum grp.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pseudochironomus							X	X	X	X	X	X		X	X	X		
Saetheria						X		X								X		
Stenochironomus	X	X	X		X		X	X	X	X	X		X		X	X	X	
Stictochironomus						X	X	X		X	X	X	X		X	X	X	X
Tribelos fuscicorne					X	X	X	X					X					
Tribelos jucundum											X				X			
Xenochironomus xenolabis			X		X	X	X		X		X		X				X	
Cladotanytarsus [1]						X[1]												
Cladotanytarsus mancus grp.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cladotanytarsus vanderwulpi grp.		X				X		X	X	X	X	X			X	X		X
Micropsectra			X				X	X							X		X	X
Paratanytarsus	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
Chironomidae (cont.)																		
Rheotanytarsus	X	X	X		X	X	X	X	X		X	X	X		X	X	X	X
Tanytarsus			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tanytarsus glabrescens grp.				X	X				X		X		X	X	X	X	X	X
Tanytarsus sepp	X	X	X			X			X	X	X		X	X	X	X	X	X
GASTROPODA (Snails)																		
Ferrissia	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bithynia tentaculata									X	X			X		X		X	
Amnicola		X		X	X	X	X	X	X	X		X	X	X	X	X	X	X
Physa	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Gyraulus							X	X	X									
Helisoma					X	X	X	X	X	X	X	X	X	X	X	X	X	X
Menetus	X	X	X				X	X	X	X		X	X	X	X	X	X	X
Planorbella							X											
Pleurocera	X	X			X	X	X	X	X	X	X	X			X	X		
Valvata						X	X	X						X				
Campeloma decisum								X										
Viviparidae[1]															X	X		
Viviparus							X	X										
PELECYPODA (Mussels and Clams)[1]	X[1]																	
Corbicula fluminea	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dreissena bugensis											X	X	X	X	X	X	X	X
Dreissena polymorpha	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sphaeriidae[1]								X[1]										
Eupera cubensis											X		X	X	X			
Sphaerium [1]							X	X[1]	X	X					X	X	X	X
Sphaerium simile		X						X										
Musculium	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Pisidium [1]	X	X[1]			X	X		X	X	X	X	X		X	X	X	X	X

Table 3-1 (cont.)

Taxa	HD 2001	Ponar 2001	HD 2002	Ponar 2002	HD 2003	Ponar 2003	HD 2004	Ponar 2004	HD 2005	Ponar 2005	HD 2006	Ponar 2006	HD 2007	Ponar 2007	HD 2008	Ponar 2008	HD 2009	Ponar 2009
PELECYPODA (cont.)																		
Pisidium compressum		X																
Pisidium nitidum				X														
Elliptio dilatata																X		
Lasmigona complanata		X						X										
TOTAL RICHNESS[2]	82	74	81	50	89	80	121	105	118	94	103	80	106	86	127	106	101	81
EPT RICHNESS[2]	19	8	18	5	20	7	20	11	20	10	16	8	17	10	19	13	16	6
TOTAL RICHNESS BY YEAR[2]	100		90		108		139		135		110		120		142		110	
EPT RICHNESS BY YEAR[2]	20		19		21		20		23		17		20		19		16	

[1]Taxon unidentifiable beyond level indicated. Not counted as a discreet taxon for all samples and years combined. May be counted as a discreet taxon for individual samples, sample types, stations, or locations if it is the only representative of that taxonomic order, family, or genus.

[2]Data between sample years 2001, 2005 and 2009; 2002 and 2006; 2003 and 2007; and 2004 and 2008 are comparable. However, other inter-year comparisons are problematic since most sampling stations differed.

TABLE 3-2. HESTER-DENDY DENSITIES AT SAMPLING STATION 55 WITHIN THE CALUMET RIVER, JULY 2009.

TAXA	55 130TH ST. #/m2	%
Oligochaeta	251.2	3.47
Gammarus	466.5	6.44
Echinogammarus ischusa	17.9	0.25
Nanocladius distinctus	35.9	0.50
Dicrotendipes neomodestus	17.9	0.25
Dicrotendipes lucifer	71.8	0.99
Glyptotendipes	17.9	0.25
Polypedilum flavum	17.9	0.25
Paratanytarsus	89.7	1.24
Rheotanytarsus	17.9	0.25
Dreissena polymorpha	6,144.6	84.88
Dreissena bugensis	89.7	1.24
TOTAL BENTHOS	7,239.0	100.00
TOTAL TAXA RICHNESS	12	
EPT TAXA RICHNESS	0	

TABLE 3-3. PETITE PONAR DENSITIES AT SAMPLING STATION 55 WITHIN THE CALUMET RIVER, JULY 2009.

TAXA	55 130TH ST. #/m2	%
Oligochaeta	861.2	23.72
Cryptochironomus	7.2	0.20
Dicrotendipes neomodestus	7.2	0.20
Polypedilum halterale grp.	7.2	0.20
Dreissena polymorpha	1,715.2	47.23
Dreissena bugensis	1,033.4	28.46
TOTAL BENTHOS	3,631.4	100.00
TOTAL TAXA RICHNESS	6	
EPT TAXA RICHNESS	0	

TABLE 3-4. HESTER-DENDY DENSITIES AT SAMPLING STATION 76 WITHIN THE LITTLE CALUMET RIVER, JULY 2009.

	76	
	HALSTED ST.	
TAXA	#/m2	%
Hydra	760.7	7.78
Turbellaria	147.1	1.50
Plumatella	3.6	0.04
Oligochaeta	358.8	3.67
Helobdella stagnalis	12.6	0.13
Mooreobdella microstoma	5.4	0.06
Caecidotea	3.6	0.04
Hyalella azteca	70.0	0.72
Gammarus	96.9	0.99
Cyrnellus fraternus	392.9	4.02
Cricotopus bicinctus grp.	17.9	0.18
Nanocladius distinctus	35.9	0.37
Dicrotendipes neomodestus	17.9	0.18
Dicrotendipes lucifer	1,905.3	19.48
Dicrotendipes simpsoni	1,415.5	14.47
Glyptotendipes	17.9	0.18
Parachironomus	14.4	0.15
Xenochironomus xenolabis	17.9	0.18
Bithynia tentaculata	1.8	0.02
Amnicola	3.6	0.04
Physa	256.5	2.62
Helisoma	206.3	2.11
Menetus	7.2	0.07
Ferrissia	1.8	0.02
Musculium	3.6	0.04
Dreissena polymorpha	4,007.9	40.97
TOTAL BENTHOS	9,782.9	100.00
TOTAL TAXA RICHNESS	26	
EPT TAXA RICHNESS	1	

TABLE 3-5. PETITE PONAR DENSITIES AT SAMPLING STATION 76 WITHIN THE LITTLE CALUMET RIVER, JULY 2009.

	76	
	HALSTED ST.	
TAXA	#/m2	%
Oligochaeta	113,189.9	99.51
Procladius	150.7	0.13
Thienemannimyia grp.	7.2	0.01
Nanocladius distinctus	7.2	0.01
Chironomus	64.6	0.06
Cryptochironomus	222.5	0.20
Dicrotendipes lucifer	21.5	0.02
Glyptotendipes	7.2	0.01
Ferrissia	7.2	0.01
Pisidium	71.8	0.06
TOTAL BENTHOS	113,749.7	100.00
TOTAL TAXA RICHNESS	10	
EPT TAXA RICHNESS	0	

Table 3-6. Incidence of head capsule deformities observed on Chironomidae from the Hester-Dendy samples collected from various waterways in the Chicago area, 2009.

Waterbody	Station	Taxa	Per Taxon # Examined	# Deformed	%	Per Station Total Midges Examined	Total Midges Deformed	%
LCR	76	Dicrotendipes lucifer	122	5	4.1	218	11	5.0
		Dicrotendipes simpsoni	89	6	6.7			
CSC	59	Dicrotendipes lucifer	130	1	0.8	224	1	0.4
WFNBCR	106	Procladius	5	1	20.0	210	1	0.5
NSC	35	Chironomus	16	2	12.5	191	5	2.6
		Dicrotendipes lucifer	93	1	1.1			
		Paratanytarsus	7	2	28.6			
NSC	36	Dicrotendipes modestus	4	1	25.0	207	2	1.0
		Parachironomus	8	1	12.5			
NSC	101	Ablabesmyia janta	1	1	100.0	223	2	0.9
		Micropsectra	1	1	100.0			
NBCR	73	Dicrotendipes lucifer	75	1	1.3	218	1	0.5
CSSC	92	Chironomus	1	1	100.0	197	1	0.5
WB DuPage R.	64	Procladius	2	1	50.0	225	3	1.3
		Polypedilum illinoense	115	2	1.7			

Table 3-7. Incidence of head capsule deformities observed on Chironomidae from the Ponar samples collected from various waterways in the Chicago area, 2009.

			Per Taxon			Per Station		
Waterbody	Station	Taxa	# Examined	# Deformed	%	Total Midges Examined	Total Midges Deformed	%
LCR	76	Chironomus	9	1	11.1	40	1	2.5
CSC	59	Procladius	21	1	4.8	21	1	4.8
WFNBCR	103	Procladius	86	1	1.2	215	1	0.5
Skokie R.	32	Chironomus	20	1	5.0	158	1	0.6
NSC	35	Chironomus	159	59	37.1	212	59	27.8
NSC	36	Chironomus	69	5	7.2	171	7	4.1
		Dicrotendipes simpsoni	19	2	10.5			
NSC	101	Chironomus	8	1	12.5	73	1	1.4
NBCR	104	Dicrotendipes neomodestus	133	1	0.8	195	1	0.5
NBCR	37	Chironomus	11	1	9.1	123	1	0.8
NBCR	73	Chironomus	2	1	50.0	9	1	11.1
WB Du Page R.	64	Procladius	18	4	22.2	155	4	2.6

TABLE 3-8. HESTER-DENDY DENSITIES AT SAMPLING STATION 59 WITHIN THE CAL-SAG CHANNEL, JULY 2009.

	59	
	CICERO AVE.	
TAXA	#/m2	%
Oligochaeta	556.2	26.47
Caecidotea	120.2	5.72
Gammarus	215.3	10.25
Cyrnellus fraternus	3.6	0.17
Cricotopus bicinctus grp.	53.8	2.56
Nanocladius distinctus	111.2	5.29
Chironomus	3.6	0.17
Dicrotendipes neomodestus	19.7	0.94
Dicrotendipes lucifer	672.8	32.02
Dicrotendipes simpsoni	66.4	3.16
Glyptotendipes	3.6	0.17
Polypedilum fallax grp.	21.5	1.02
Polypedilum flavum	9.0	0.43
Polypedilum illinoense	37.7	1.79
Polypedilum scalaenum grp.	44.9	2.13
Paratanytarsus	70.0	3.33
Tanytarsus	3.6	0.17
Ferrissia	1.8	0.09
Dreissena polymorpha	86.1	4.10
TOTAL BENTHOS	2,100.8	100.00
TOTAL TAXA RICHNESS	19	
EPT TAXA RICHNESS	1	

TABLE 3-9. PETITE PONAR DENSITIES AT SAMPLING STATION 59 WITHIN THE CAL-SAG CHANNEL, JULY 2009.

	59	
	CICERO AVE.	
TAXA	#/m2	%
Oligochaeta	7,435.0	97.83
Caecidotea	7.2	0.09
Procladius	150.7	1.98
Corbicula fluminea	7.2	0.09
TOTAL BENTHOS	7,600.1	100.00
TOTAL TAXA RICHNESS	4	
EPT TAXA RICHNESS	0	

TABLE 3-10. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE WEST FORK NORTH BRANCH CHICAGO RIVER, JULY 2009.

TAXA	106 DUNDEE RD.		103 GOLF RD.	
	#/m2	%	#/m2	%
Hydra	118.4	2.10	132.8	1.77
Turbellaria	891.6	15.84	53.8	0.72
Oligochaeta	145.3	2.58	735.6	9.79
Helobdella	1.8	0.03	--	--
Helobdella stagnalis	34.1	0.61	107.6	1.43
Erpobdella punctata punctata	--	--	23.3	0.31
Mooreobdella microstoma	62.8	1.12	--	--
Caecidotea	2,291.0	40.69	2,124.1	28.27
Gammarus	--	--	23.3	0.31
Metrobates	--	--	5.4	0.07
Trepobates	--	--	5.4	0.07
Cheumatopsyche	529.2	9.40	5.4	0.07
Tropisternus	--	--	5.4	0.07
Procladius	34.1	0.61	59.2	0.79
Ablabesmyia mallochi	7.2	0.13	--	--
Thienemannimyia grp.	215.3	3.82	--	--
Corynoneura lobata	7.2	0.13	41.3	0.55
Thienemanniella xena	--	--	89.7	1.19
Cricotopus sylvestris grp.	14.4	0.25	23.3	0.31
Chironomus	7.2	0.13	--	--
Cryptochironomus	71.8	1.27	59.2	0.79
Dicrotendipes neomodestus	324.7	5.77	627.9	8.36
Dicrotendipes lucifer	--	--	353.4	4.70
Dicrotendipes simpsoni	--	--	197.3	2.63
Glyptotendipes	30.5	0.54	179.4	2.39
Parachironomus	--	--	35.9	0.48
Polypedilum fallax grp.	--	--	23.3	0.31
Polypedilum flavum	118.4	2.10	53.8	0.72
Polypedilum illinoense	118.4	2.10	120.2	1.60
Polypedilum scalaenum grp.	82.5	1.47	197.3	2.63
Stictochironomus	5.4	0.10	--	--
Micropsectra	14.4	0.25	--	--
Paratanytarsus	224.3	3.98	1,727.7	22.99
Tanytarsus glabrescens grp.	32.3	0.57	23.3	0.31
Physa	3.6	0.06	174.0	2.32
Ferrissia	64.6	1.15	292.4	3.89
Sphaerium	175.8	3.12	12.6	0.17
Pisidium	3.6	0.06	--	--
TOTAL BENTHOS	5,629.7	100.00	7,513.5	100.00
TOTAL TAXA RICHNESS	28		30	
EPT TAXA RICHNESS	1		1	

TABLE 3-11. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE WEST FORK NORTH BRANCH CHICAGO RIVER, JULY 2009.

TAXA	106 DUNDEE RD.		103 GOLF RD.	
	#/m2	%	#/m2	%
Hydra	50.2	0.28	--	--
Turbellaria	35.9	0.20	7.2	0.05
Oligochaeta	1,543.0	8.72	8,561.7	53.91
Helobdella stagnalis	14.4	0.08	21.5	0.14
Placobdella	--	--	7.2	0.05
Erpobdella punctata punctata	7.2	0.04	172.2	1.08
Mooreobdella microstoma	660.3	3.73	14.4	0.09
Caecidotea	796.6	4.50	502.4	3.16
Gammarus	--	--	35.9	0.23
Coenagrionidae	7.2	0.04	--	--
Cheumatopsyche	143.5	0.81	--	--
Hydroptila	7.2	0.04	--	--
Oecetis	35.9	0.20	--	--
Procladius	279.9	1.58	2,346.8	14.78
Ablabesmyia mallochi	14.4	0.08	--	--
Thienemannimyia grp.	724.8	4.09	--	--
Thienemanniella xena	114.8	0.65	--	--
Cricotopus bicinctus grp.	86.1	0.49	--	--
Nanocladius crassicornus/rectinervis	86.1	0.49	--	--
Chironomus	28.7	0.16	--	--
Cryptochironomus	129.2	0.73	782.3	4.93
Dicrotendipes neomodestus	602.8	3.40	1,062.1	6.69
Dicrotendipes fumidus	57.4	0.32	--	--
Glyptotendipes	14.4	0.08	--	--
Harnischia	28.7	0.16	--	--
Phaenopsectra flavipes	14.4	0.08	--	--
Polypedilum flavum	839.7	4.74	--	--
Polypedilum illinoense	215.3	1.22	114.8	0.72
Polypedilum scalaenum grp.	315.8	1.78	1,758.3	11.07
Stictochironomus	28.7	0.16	--	--
Paratanytarsus	667.4	3.77	366.0	2.30
Tanytarsus	--	--	107.6	0.68
Tanytarsus glabrescens grp.	21.5	0.12	--	--
Simulium	71.8	0.41	--	--
Menetus	14.4	0.08	--	--
Ferrissia	--	--	7.2	0.05
Corbicula fluminea	--	--	7.2	0.05
Sphaerium	8,784.2	49.61	--	--
Musculium	--	--	7.2	0.05
Pisidium	1,263.1	7.13	--	--
TOTAL BENTHOS	17,704.8	100.00	15,881.9	100.00
TOTAL TAXA RICHNESS	34		18	
EPT TAXA RICHNESS	3		0	

TABLE 3-12. HESTER-DENDY DENSITIES AT SAMPLING STATION 31 WITHIN THE MIDDLE FORK NORTH BRANCH CHICAGO RIVER, JULY 2009.

	31 LAKE COOK RD.	
TAXA	#/m2	%
Turbellaria	484.4	10.34
Oligochaeta	132.8	2.83
Helobdella stagnalis	16.1	0.34
Caecidotea	2,380.7	50.82
Baetis intercalaris	5.4	0.11
Maccaffertium integrum	5.4	0.11
Tricorythodes	5.4	0.11
Argia	5.4	0.11
Cheumatopsyche	453.9	9.69
Hydropsyche simulans	39.5	0.84
Procladius	5.4	0.11
Thienemannimyia grp.	59.2	1.26
Corynoneura lobata	23.3	0.50
Thienemanniella xena	5.4	0.11
Cricotopus sylvestris grp.	52.0	1.11
Nanocladius distinctus	70.0	1.49
Rheocricotopus robacki	10.8	0.23
Cryptochironomus	10.8	0.23
Dicrotendipes neomodestus	39.5	0.84
Dicrotendipes lucifer	62.8	1.34
Harnischia	39.5	0.84
Paratendipes	28.7	0.61
Phaenopsectra flavipes	62.8	1.34
Polypedilum flavum	134.6	2.87
Polypedilum illinoense	77.1	1.65
Polypedilum scalaenum grp.	114.8	2.45
Paratanytarsus	285.3	6.09
Rheotanytarsus	16.1	0.34
Tanytarsus	10.8	0.23
Physa	23.3	0.50
Ferrissia	23.3	0.50
TOTAL BENTHOS	4,684.2	100.00
TOTAL TAXA RICHNESS	31	
EPT TAXA RICHNESS	5	

TABLE 3-13. PETITE PONAR DENSITIES AT SAMPLING STATION 31 WITHIN THE MIDDLE FORK NORTH BRANCH CHICAGO RIVER, JULY 2009.

	31 LAKE COOK RD.	
TAXA	#/m2	%
Oligochaeta	2,928.1	46.68
Helobdella stagnalis	136.4	2.17
Mooreobdella microstoma	229.7	3.66
Caecidotea	315.8	5.03
Cheumatopsyche	21.5	0.34
Tanypus	7.2	0.11
Procladius	129.2	2.06
Thienemannimyia grp.	21.5	0.34
Cricotopus bicinctus grp.	35.9	0.57
Cricotopus sylvestris grp.	50.2	0.80
Chironomus	165.1	2.63
Cryptochironomus	35.9	0.57
Dicrotendipes modestus	21.5	0.34
Dicrotendipes neomodestus	380.4	6.06
Paratendipes	200.9	3.20
Phaenopsectra flavipes	14.4	0.23
Phaenopsectra obediens	14.4	0.23
Polypedilum flavum	35.9	0.57
Polypedilum illinoense	466.5	7.44
Polypedilum scalaenum grp.	21.5	0.34
Paratanytarsus	523.9	8.35
Tanytarsus	7.2	0.11
Tanytarsus sepp	21.5	0.34
Physa	236.8	3.78
Ferrissia	7.2	0.11
Sphaerium	193.8	3.09
Pisidium	50.2	0.80
TOTAL BENTHOS	6,272.4	100.00
TOTAL TAXA RICHNESS	27	
EPT TAXA RICHNESS	1	

TABLE 3-14. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE SKOKIE RIVER, JULY AND AUGUST 2009.

TAXA	32 LAKE COOK RD.		105 FRONTAGE RD.	
	#/m2	%	#/m2	%
Hydra	--	--	215.3	7.43
Turbellaria	9.0	0.30	57.4	1.98
Oligochaeta	1,219.9	41.46	522.1	18.02
Helobdella stagnalis	3.6	0.12	1.8	0.06
Erpobdella punctata punctata	7.2	0.24	--	--
Mooreobdella microstoma	10.8	0.37	1.8	0.06
Ostracoda	--	--	53.8	1.86
Caecidotea	154.3	5.24	1.8	0.06
Gammarus	177.6	6.04	1,386.8	47.86
Hydracarina	1.8	0.06	--	--
Baetis intercalaris	3.6	0.12	--	--
Argia	--	--	1.8	0.06
Cheumatopsyche	26.9	0.91	--	--
Procladius	9.0	0.30	10.8	0.37
Thienemannimyia grp.	39.5	1.34	--	--
Corynoneura lobata	82.5	2.80	--	--
Cricotopus bicinctus grp.	5.4	0.18	--	--
Cricotopus sylvestris grp.	17.9	0.61	1.8	0.06
Nanocladius distinctus	43.1	1.46	--	--
Nanocladius crassicornus/rectinervis	17.9	0.61	--	--
Rheocricotopus robacki	9.0	0.30	--	--
Chironomus	32.3	1.10	17.9	0.62
Cryptochironomus	52.0	1.77	--	--
Dicrotendipes modestus	14.4	0.49	--	--
Dicrotendipes neomodestus	202.7	6.89	41.3	1.42
Dicrotendipes fumidus	25.1	0.85	--	--
Dicrotendipes lucifer	71.8	2.44	148.9	5.14
Dicrotendipes simpsoni	152.5	5.18	84.3	2.91
Endochironomus nigricans	14.4	0.49	--	--
Glyptotendipes	14.4	0.49	3.6	0.12
Parachironomus	--	--	19.7	0.68
Paralauterborniella nigrohalteralis	9.0	0.30	--	--
Paratendipes	77.1	2.62	--	--
Phaenopsectra flavipes	37.7	1.28	--	--
Phaenopsectra obediens	34.1	1.16	--	--
Polypedilum halterale grp.	9.0	0.30	7.2	0.25
Polypedilum illinoense	59.2	2.01	3.6	0.12
Polypedilum scalaenum grp.	26.9	0.91	--	--
Micropsectra	9.0	0.30	--	--
Paratanytarsus	163.3	5.55	--	--
Tanytarsus sepp	73.6	2.50	1.8	0.06
Physa	25.1	0.85	12.6	0.43
Helisoma	--	--	52.0	1.80
Ferrissia	--	--	122.0	4.21
Corbicula fluminea	--	--	127.4	4.40
TOTAL BENTHOS	2,942.2	100.00	2,897.4	100.00
TOTAL TAXA RICHNESS	38		24	
EPT TAXA RICHNESS	2		0	

TABLE 3-15. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE SKOKIE RIVER, JULY AND AUGUST 2009.

TAXA	32 LAKE COOK RD.		105 FRONTAGE RD.	
	#/m2	%	#/m2	%
Turbellaria	--	--	7.2	0.13
Oligochaeta	3,301.3	61.83	4,614.6	86.54
Helobdella	--	--	7.2	0.13
Helobdella stagnalis	--	--	7.2	0.13
Mooreobdella microstoma	--	--	7.2	0.13
Ostracoda	--	--	21.5	0.40
Caecidotea	--	--	7.2	0.13
Gammarus	57.4	1.08	315.8	5.92
Baetis intercalaris	7.2	0.13	--	--
Enallagma	7.2	0.13	--	--
Cheumatopsyche	21.5	0.40	--	--
Oecetis	7.2	0.13	--	--
Procladius	136.4	2.55	43.1	0.81
Thienemannimyia grp.	14.4	0.27	--	--
Cricotopus bicinctus grp.	14.4	0.27	--	--
Nanocladius distinctus	14.4	0.27	--	--
Chironomus	143.5	2.69	157.9	2.96
Cladopelma	7.2	0.13	7.2	0.13
Cryptochironomus	394.7	7.39	21.5	0.40
Dicrotendipes neomodestus	93.3	1.75	21.5	0.40
Dicrotendipes lucifer	--	--	7.2	0.13
Dicrotendipes simpsoni	7.2	0.13	--	--
Endochironomus nigricans	14.4	0.27	--	--
Harnischia	7.2	0.13	--	--
Parachironomus	14.4	0.27	--	--
Paracladopelma	14.4	0.27	--	--
Paralauterborniella nigrohalteralis	294.2	5.51	--	--
Phaenopsectra obediens	28.7	0.54	--	--
Polypedilum flavum	--	--	7.2	0.13
Polypedilum halterale grp.	--	--	7.2	0.13
Polypedilum scalaenum grp.	279.9	5.24	7.2	0.13
Stictochironomus	229.7	4.30	--	--
Rheotanytarsus	143.5	2.69	--	--
Tanytarsus	--	--	7.2	0.13
Tanytarsus sepp	71.8	1.34	--	--
Corbicula fluminea	--	--	43.1	0.81
Sphaerium	14.4	0.27	--	--
Pisidium	--	--	14.4	0.27
TOTAL BENTHOS	5,339.4	100.00	5,332.2	100.00
TOTAL TAXA RICHNESS	26		20	
EPT TAXA RICHNESS	3		0	

TABLE 3-16. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH SHORE CHANNEL, AUGUST 2009.

TAXA	35 CENTRAL ST.		102 OAKTON ST.		36 TOUHY AVE.		101 FOSTER AVE.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	1,813.8	24.30	394.7	2.68	--	--	--	--
Turbellaria	--	--	53.8	0.37	71.8	0.19	12.6	0.17
Oligochaeta	979.5	13.12	6,153.6	41.78	22,138.5	59.30	1,517.8	20.44
Helobdella stagnalis	32.3	0.43	--	--	17.9	0.05	--	--
Erpobdella punctata punctata	--	--	--	--	53.8	0.14	--	--
Ostracoda	--	--	--	--	89.7	0.24	91.5	1.23
Caecidotea	3.6	0.05	538.2	3.65	3,964.8	10.62	627.9	8.46
Hyalella azteca	--	--	53.8	0.37	592.0	1.59	116.6	1.57
Gammarus	263.7	3.53	89.7	0.61	35.9	0.10	--	--
Stenonema femoratum	12.6	0.17	--	--	--	--	--	--
Cyrnellus fraternus	--	--	--	--	107.6	0.29	141.7	1.91
Cheumatopsyche	--	--	--	--	--	--	73.6	0.99
Hydroptila	1.8	0.02	--	--	35.9	0.10	--	--
Procladius	48.4	0.65	35.9	0.24	--	--	17.9	0.24
Ablabesmyia janta	--	--	--	--	--	--	17.9	0.24
Thienemannimyia grp.	50.2	0.67	--	--	--	--	--	--
Thienemanniella xena	--	--	161.5	1.10	53.8	0.14	251.2	3.38
Cricotopus bicinctus grp.	5.4	0.07	322.9	2.19	502.3	1.35	272.7	3.67
Cricotopus sylvestris grp.	3.6	0.05	143.5	0.97	125.6	0.34	39.5	0.53
Nanocladius distinctus	37.7	0.50	197.3	1.34	412.6	1.11	540.0	7.27
Chironomus	57.4	0.77	17.9	0.12	161.5	0.43	--	--
Cladopelma	3.6	0.05	--	--	--	--	--	--
Dicrotendipes modestus	--	--	--	--	161.5	0.43	--	--
Dicrotendipes neomodestus	5.4	0.07	--	--	--	--	--	--
Dicrotendipes fumidus	39.5	0.53	53.8	0.37	--	--	--	--
Dicrotendipes lucifer	330.1	4.42	3,677.8	24.97	2,511.7	6.73	728.4	9.81
Dicrotendipes simpsoni	35.9	0.48	2,206.7	14.98	3,516.3	9.42	1,695.4	22.84
Endochironomus nigricans	5.4	0.07	--	--	--	--	--	--
Glyptotendipes	9.0	0.12	--	--	1,812.0	4.85	755.3	10.17
Microtendipes	3.6	0.05	--	--	--	--	--	--
Parachironomus	5.4	0.07	53.8	0.37	466.5	1.25	165.1	2.22
Paratendipes	3.6	0.05	--	--	--	--	--	--
Phaenopsectra flavipes	5.4	0.07	--	--	35.9	0.10	--	--
Polypedilum flavum	--	--	89.7	0.61	--	--	--	--
Polypedilum illinoense	14.4	0.19	197.3	1.34	161.5	0.43	127.4	1.72
Stenochironomus	--	--	17.9	0.12	--	--	--	--
Micropsectra	--	--	--	--	--	--	17.9	0.24
Paratanytarsus	26.9	0.36	--	--	125.6	0.34	21.5	0.29
Tanytarsus glabrescens grp.	9.0	0.12	--	--	--	--	--	--
Tanytarsus sepp	12.6	0.17	--	--	--	--	--	--
Physa	55.6	0.75	--	--	--	--	--	--
Helisoma	10.8	0.14	107.6	0.73	35.9	0.10	--	--
Menetus	--	--	--	--	--	--	5.4	0.07
Ferrissia	1.8	0.02	71.8	0.49	143.5	0.38	186.6	2.51
Dreissena polymorpha	3,577.3	47.92	89.7	0.61	--	--	--	--
TOTAL BENTHOS	7,465.0	100.00	14,729.1	100.00	37,334.1	100.00	7,423.8	100.00
TOTAL TAXA RICHNESS	32		22		25		22	
EPT TAXA RICHNESS	2		0		2		2	

TABLE 3-17. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH SHORE CHANNEL, AUGUST 2009.

TAXA	35 CENTRAL ST.		102 OAKTON ST.		36 TOUHY AVE.		101 FOSTER AVE.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Turbellaria	--	--	--	--	7.2	0.03	--	--
Oligochaeta	18,444.0	87.77	115,256.7	98.29	22,104.0	82.91	66,276.2	98.24
Mooreobdella microstoma	--	--	71.8	0.06	--	--	--	--
Caecidotea	--	--	--	--	35.9	0.13	--	--
Hyalella azteca	--	--	--	--	71.8	0.27	--	--
Procladius	394.7	1.88	1,004.7	0.86	50.2	0.19	--	--
Thienemanniella xena	--	--	--	--	--	--	150.7	0.22
Cricotopus bicinctus grp.	--	--	143.5	0.12	466.5	1.75	--	--
Cricotopus sylvestris grp.	--	--	--	--	78.9	0.30	--	--
Nanocladius distinctus	--	--	--	--	35.9	0.13	7.2	0.01
Chironomus	2,131.5	10.14	215.3	0.18	1,112.4	4.17	445.0	0.66
Cladopelma	--	--	215.3	0.18	129.2	0.48	--	--
Cryptochironomus	--	--	71.8	0.06	78.9	0.30	43.1	0.06
Dicrotendipes modestus	--	--	--	--	150.7	0.57	--	--
Dicrotendipes neomodestus	14.4	0.07	--	--	--	--	7.2	0.01
Dicrotendipes lucifer	--	--	--	--	265.5	1.00	71.8	0.11
Dicrotendipes simpsoni	--	--	71.8	0.06	724.8	2.72	179.4	0.27
Glyptotendipes	--	--	--	--	265.5	1.00	100.5	0.15
Parachironomus	--	--	--	--	1,033.4	3.88	28.7	0.04
Polypedilum flavum	--	--	--	--	--	--	7.2	0.01
Polypedilum illinoense	--	--	--	--	35.9	0.13	7.2	0.01
Polypedilum scalaenum grp.	--	--	--	--	7.2	0.03	114.8	0.17
Micropsectra	--	--	--	--	--	--	7.2	0.01
Helisoma	--	--	--	--	7.2	0.03	--	--
Ferrissia	--	--	--	--	--	--	14.4	0.02
Pisidium	28.7	0.14	215.3	0.18	--	--	--	--
TOTAL BENTHOS	21,013.2	100.00	117,266.2	100.00	26,661.2	100.00	67,460.4	100.00
TOTAL TAXA RICHNESS	5		9		19		15	
EPT TAXA RICHNESS	0		0		0		0	

TABLE 3-18. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH BRANCH CHICAGO RIVER, JULY AND AUGUST 2009.

TAXA	104 GLENVIEW RD.		34 DEMPSTER ST.		37 WILSON AVE.		73 DIVERSEY PKWY.		46 GRAND AVE.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	12,737.7	41.09	75.3	1.66	--	--	--	--	1,533.9	5.50
Turbellaria	457.5	1.48	10.8	0.24	9.0	0.11	139.9	2.64	346.3	1.24
Oligochaeta	3,937.9	12.70	116.6	2.57	1,333.0	16.29	1,964.5	36.99	13,383.6	48.01
Helobdella	--	--	--	--	--	--	--	--	5.4	0.02
Helobdella stagnalis	--	--	--	--	--	--	--	--	62.8	0.23
Caecidotea	1,785.1	5.76	516.7	11.39	183.0	2.24	32.3	0.61	893.4	3.21
Hyalella azteca	--	--	--	--	--	--	193.8	3.65	6,476.5	23.23
Gammarus	80.7	0.26	215.3	4.75	--	--	10.8	0.20	--	--
Stenacron	--	--	1.8	0.04	--	--	--	--	--	--
Trepobates	35.9	0.12	--	--	--	--	--	--	--	--
Cyrnellus fraternus	--	--	--	--	122.0	1.49	28.7	0.54	17.9	0.06
Cheumatopsyche	35.9	0.12	--	--	59.2	0.72	5.4	0.10	--	--
Procladius	--	--	5.4	0.12	17.9	0.22	--	--	5.4	0.02
Thienemannimyia grp.	--	--	3.6	0.08	--	--	--	--	--	--
Corynoneura lobata	--	--	1.8	0.04	--	--	--	--	--	--
Thienemanniella xena	--	--	314.0	6.92	380.3	4.65	9.0	0.17	--	--
Thienemanniella similis	--	--	--	--	62.8	0.77	--	--	--	--
Cricotopus bicinctus grp.	--	--	3.6	0.08	974.2	11.90	62.8	1.18	--	--
Cricotopus sylvestris grp.	--	--	--	--	227.8	2.78	62.8	1.18	14.4	0.05
Nanocladius distinctus	--	--	--	--	488.0	5.96	86.1	1.62	53.8	0.19
Dicrotendipes neomodestus	529.2	1.71	93.3	2.06	--	--	--	--	--	--
Dicrotendipes lucifer	143.5	0.46	98.7	2.18	1,273.8	15.56	884.5	16.66	2,430.9	8.72
Dicrotendipes simpsoni	--	--	16.1	0.36	1,578.8	19.29	1,047.7	19.73	2,068.5	7.42
Glyptotendipes	--	--	--	--	514.9	6.29	32.3	0.61	--	--
Parachironomus	--	--	1.8	0.04	453.9	5.55	104.1	1.96	166.8	0.60
Paratendipes	9.0	0.03	--	--	--	--	--	--	--	--
Polypedilum flavum	107.6	0.35	25.1	0.55	188.4	2.30	--	--	--	--
Polypedilum illinoense	--	--	10.8	0.24	156.1	1.91	224.3	4.22	113.0	0.41
Polypedilum scalaenum grp.	9.0	0.03	16.1	0.36	--	--	104.1	1.96	35.9	0.13
Paratanytarsus	17.9	0.06	28.7	0.63	107.6	1.32	32.3	0.61	--	--
Rheotanytarsus	--	--	1.8	0.04	44.9	0.55	--	--	--	--
Tanytarsus glabrescens grp.	--	--	3.6	0.08	--	--	--	--	--	--
Culex	--	--	--	--	--	--	1.8	0.03	--	--
Amnicola	26.9	0.09	--	--	--	--	--	--	--	--
Physa	--	--	1.8	0.04	--	--	--	--	23.3	0.08
Helisoma	--	--	3.6	0.08	--	--	26.9	0.51	44.9	0.16
Ferrissia	10,782.2	34.78	2,927.9	64.56	9.0	0.11	125.6	2.36	53.8	0.19
Corbicula fluminea	287.0	0.93	41.3	0.91	--	--	116.6	2.20	143.5	0.51
Musculium	17.9	0.06	--	--	--	--	--	--	--	--
Dreissena polymorpha	--	--	--	--	--	--	14.4	0.27	--	--
TOTAL BENTHOS	31,001.1	100.00	4,535.3	100.00	8,184.4	100.00	5,310.4	100.00	27,874.1	100.00
TOTAL TAXA RICHNESS	17		25		20		23		20	
EPT TAXA RICHNESS	1		1		2		2		1	

TABLE 3-19. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH BRANCH CHICAGO RIVER, JULY AND AUGUST 2009.

	104		34		96		37		73		46	
	GLENVIEW RD.		DEMPSTER ST.		ALBANY AVE.		WILSON AVE.		DIVERSEY PKWY.		GRAND AVE.	
TAXA	#/m2	%	#/m2	%	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	114.8	0.99	--	--	--	--	--	--	--	--	--	--
Turbellaria	78.9	0.68	--	--	--	--	21.5	0.02	--	--	--	--
Oligochaeta	4,542.8	39.07	6,631.2	94.09	373.2	24.30	122,986.0	97.42	73,818.9	99.60	7,413.5	95.83
Helobdella	35.9	0.31	--	--	--	--	--	--	--	--	--	--
Helobdella stagnalis	--	--	--	--	--	--	--	--	--	--	7.2	0.09
Mooreobdella microstoma	143.5	1.23	107.6	1.53	7.2	0.47	--	--	--	--	--	--
Ostracoda	--	--	--	--	--	--	7.2	0.01	--	--	--	--
Caecidotea	918.6	7.90	14.4	0.20	567.0	36.92	28.7	0.02	--	--	--	--
Hyalella azteca	--	--	--	--	--	--	14.4	0.01	--	--	--	--
Gammarus	1,033.4	8.89	150.7	2.14	50.2	3.27	--	--	--	--	--	--
Procladius	7.2	0.06	--	--	--	--	143.5	0.11	21.5	0.03	78.9	1.02
Corynoneura lobata	--	--	--	--	14.4	0.93	71.8	0.06	--	--	--	--
Thienemanniella xena	--	--	--	--	--	--	100.5	0.08	--	--	--	--
Cricotopus bicinctus grp.	--	--	--	--	143.5	9.35	71.8	0.06	--	--	--	--
Cricotopus sylvestris grp.	--	--	--	--	--	--	100.5	0.08	--	--	--	--
Nanocladius distinctus	--	--	7.2	0.10	--	--	--	--	--	--	--	--
Chironomus	14.4	0.12	--	--	78.9	5.14	459.3	0.36	14.4	0.02	--	--
Cladopelma	--	--	--	--	--	--	215.3	0.17	--	--	--	--
Cryptochironomus	--	--	--	--	28.7	1.87	64.6	0.05	--	--	--	--
Dicrotendipes neomodestus	1,248.7	10.74	71.8	1.02	7.2	0.47	--	--	--	--	--	--
Dicrotendipes lucifer	215.3	1.85	--	--	--	--	172.2	0.14	--	--	--	--
Dicrotendipes simpsoni	--	--	--	--	--	--	129.2	0.10	--	--	--	--
Parachironomus	--	--	--	--	--	--	100.5	0.08	21.5	0.03	--	--
Paratendipes	86.1	0.74	--	--	--	--	--	--	--	--	--	--
Polypedilum flavum	57.4	0.49	--	--	--	--	14.4	0.01	--	--	--	--
Polypedilum illinoense	--	--	7.2	0.10	--	--	14.4	0.01	--	--	--	--
Polypedilum scalaenum grp.	244.0	2.10	7.2	0.10	107.6	7.01	1,377.9	1.09	71.8	0.10	--	--
Paratanytarsus	--	--	--	--	--	--	143.5	0.11	--	--	--	--
Tanytarsus	--	--	--	--	21.5	1.40	--	--	--	--	--	--
Tanytarsus sepp	14.4	0.12	--	--	--	--	--	--	--	--	--	--
Simulium	--	--	7.2	0.10	--	--	--	--	--	--	--	--
Amnicola	1,643.4	14.14	--	--	--	--	--	--	--	--	--	--
Physa	28.7	0.25	--	--	--	--	--	--	--	--	--	--
Ferrissia	567.0	4.88	7.2	0.10	78.9	5.14	--	--	--	--	--	--
Corbicula fluminea	71.8	0.62	21.5	0.31	--	--	7.2	0.01	--	--	71.8	0.93
Musculium	545.4	4.69	14.4	0.20	57.4	3.74	--	--	--	--	--	--
Pisidium	7.2	0.06	--	--	--	--	--	--	165.1	0.22	165.1	2.13
Dreissena polymorpha	7.2	0.06	--	--	--	--	--	--	--	--	--	--
TOTAL BENTHOS	11,626.1	100.00	7,047.5	100.00	1,535.8	100.00	126,244.2	100.00	74,113.1	100.00	7,736.4	100.00
TOTAL TAXA RICHNESS	22		12		13		21		6		5	
EPT TAXA RICHNESS	0		0		0		0		0		0	

TABLE 3-20. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO SANITARY AND SHIP CANAL, JULY 2009.

TAXA	75 CICERO AVE.		41 HARLEM AVE.		92 LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%
Hydra	--	--	861.1	1.95	--	--
Turbellaria	1,937.6	12.97	2,090.1	4.74	197.3	4.90
Oligochaeta	10,862.9	72.69	37,387.9	84.77	1,609.3	39.99
Helobdella	17.9	0.12	17.9	0.04	--	--
Helobdella stagnalis	89.7	0.60	53.8	0.12	--	--
Erpobdella punctata punctata	--	--	35.9	0.08	--	--
Caecidotea	--	--	789.4	1.79	46.6	1.16
Hyalella azteca	861.1	5.76	419.8	0.95	260.1	6.46
Gammarus	35.9	0.24	--	--	434.2	10.79
Cyrnellus fraternus	--	--	--	--	21.5	0.53
Cheumatopsyche	--	--	--	--	5.4	0.13
Procladius	--	--	9.0	0.02	--	--
Ablabesmyia janta	--	--	--	--	12.6	0.31
Ablabesmyia mallochi	--	--	--	--	28.7	0.71
Thienemannimyia grp.	--	--	--	--	37.7	0.94
Cricotopus sylvestris grp.	--	--	107.6	0.24	23.3	0.58
Nanocladius distinctus	71.8	0.48	520.3	1.18	122.0	3.03
Chironomus	--	--	--	--	1.8	0.04
Dicrotendipes modestus	--	--	--	--	1.8	0.04
Dicrotendipes neomodestus	--	--	--	--	12.6	0.31
Dicrotendipes lucifer	314.0	2.10	511.3	1.16	644.1	16.01
Dicrotendipes simpsoni	753.5	5.04	1,282.7	2.91	366.0	9.09
Glyptotendipes	--	--	9.0	0.02	100.5	2.50
Phaenopsectra flavipes	--	--	--	--	12.6	0.31
Polypedilum fallax grp.	--	--	--	--	12.6	0.31
Polypedilum illinoense	--	--	--	--	12.6	0.31
Stenochironomus	--	--	--	--	12.6	0.31
Cladotanytarsus mancus grp.	--	--	9.0	0.02	--	--
Rheotanytarsus	--	--	--	--	12.6	0.31
Ferrissia	--	--	--	--	35.9	0.89
TOTAL BENTHOS	14,944.4	100.00	44,104.8	100.00	4,024.0	100.00
TOTAL TAXA RICHNESS	9		15		24	
EPT TAXA RICHNESS	0		0		2	

TABLE 3-21. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO SANITARY AND SHIP CANAL, JULY 2009.

TAXA	75 CICERO AVE.		41 HARLEM AVE.		92 LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%
Hydra	--	--	35.9	0.05	--	--
Turbellaria	--	--	71.8	0.10	--	--
Oligochaeta	13,858.1	97.43	69,864.5	99.64	36,041.1	99.64
Helobdella stagnalis	57.4	0.40	35.9	0.05	--	--
Erpobdella punctata punctata	7.2	0.05	--	--	--	--
Mooreobdella microstoma	--	--	35.9	0.05	--	--
Caecidotea	--	--	35.9	0.05	--	--
Hyalella azteca	215.3	1.51	--	--	--	--
Gammarus	7.2	0.05	--	--	21.5	0.06
Procladius	50.2	0.35	--	--	71.8	0.20
Cricotopus sylvestris grp.	--	--	--	--	14.4	0.04
Dicrotendipes modestus	--	--	--	--	14.4	0.04
Dicrotendipes lucifer	--	--	35.9	0.05	--	--
Dicrotendipes simpsoni	7.2	0.05	--	--	--	--
Helisoma	7.2	0.05	--	--	--	--
Ferrissia	7.2	0.05	--	--	--	--
Corbicula fluminea	--	--	--	--	7.2	0.02
Sphaerium	7.2	0.05	--	--	--	--
TOTAL BENTHOS	14,224.1	100.00	70,115.7	100.00	36,170.2	100.00
TOTAL TAXA RICHNESS	10		7		6	
EPT TAXA RICHNESS	0		0		0	

TABLE 3-22. HESTER-DENDY DENSITIES AT SAMPLING STATION 64 WITHIN THE WEST BRANCH DUPAGE RIVER, JUNE 2009.

	64 LAKE ST.	
TAXA	#/m2	%
Turbellaria	1,300.7	16.03
Oligochaeta	2,316.1	28.55
Helobdella	1.8	0.02
Erpobdella punctata punctata	10.8	0.13
Caecidotea	132.8	1.64
Heptageniidae	9.0	0.11
Argia	14.4	0.18
Enallagma	3.6	0.04
Cheumatopsyche	287.0	3.54
Oecetis	1.8	0.02
Procladius	48.4	0.60
Thienemannimyia grp.	328.3	4.05
Thienemanniella xena	53.8	0.66
Cricotopus bicinctus grp.	26.9	0.33
Nanocladius distinctus	184.8	2.28
Nanocladius crassicornus/rectinervis	231.4	2.85
Chironomus	14.4	0.18
Cryptochironomus	61.0	0.75
Dicrotendipes simpsoni	34.1	0.42
Endochironomus nigricans	34.1	0.42
Glyptotendipes	355.2	4.38
Phaenopsectra obediens	26.9	0.33
Polypedilum fallax grp.	7.2	0.09
Polypedilum flavum	287.0	3.54
Polypedilum illinoense	2,041.6	25.17
Polypedilum scalaenum grp.	89.7	1.11
Cladotanytarsus mancus grp.	41.3	0.51
Paratanytarsus	53.8	0.66
Rheotanytarsus	26.9	0.33
Tanytarsus	34.1	0.42
Simulium	53.8	0.66
TOTAL BENTHOS	8,112.7	100.00
TOTAL TAXA RICHNESS	31	
EPT TAXA RICHNESS	3	

TABLE 3-23. PETITE PONAR DENSITIES AT SAMPLING STATION 64 WITHIN THE WEST BRANCH DUPAGE RIVER, JUNE 2009.

	64 LAKE ST.	
TAXA	#/m2	%
Oligochaeta	5,777.2	67.99
Erpobdella punctata punctata	14.4	0.17
Caecidotea	7.2	0.08
Cheumatopsyche	21.5	0.25
Peltodytes	7.2	0.08
Procladius	143.5	1.69
Thienemannimyia grp.	114.8	1.35
Cricotopus tremulus grp.	21.5	0.25
Cricotopus bicinctus grp.	208.1	2.45
Cricotopus sylvestris grp.	57.4	0.68
Nanocladius distinctus	50.2	0.59
Rheocricotopus robacki	21.5	0.25
Chironomus	28.7	0.34
Cryptochironomus	200.9	2.36
Dicrotendipes modestus	28.7	0.34
Dicrotendipes lucifer	28.7	0.34
Glyptotendipes	21.5	0.25
Polypedilum flavum	57.4	0.68
Polypedilum illinoense	746.4	8.78
Polypedilum scalaenum grp.	416.2	4.90
Cladotanytarsus mancus grp.	93.3	1.10
Paratanytarsus	14.4	0.17
Simulium	308.6	3.63
Corbicula fluminea	93.3	1.10
Sphaerium	14.4	0.17
TOTAL BENTHOS	8,497.1	100.00
TOTAL TAXA RICHNESS	25	
EPT TAXA RICHNESS	1	

TABLE 3-24. HESTER-DENDY DENSITIES AT SAMPLING STATION 18 WITHIN SALT CREEK, JULY 2009.

TAXA	18 DEVON AVE. #/m2	%
Turbellaria	3,232.9	32.92
Oligochaeta	410.8	4.18
Caecidotea	16.1	0.16
Baetis intercalaris	1.8	0.02
Maccaffertium integrum	5.4	0.05
Tricorythodes	57.4	0.58
Cheumatopsyche	3,202.4	32.61
Hydroptila	7.2	0.07
Nectopsyche	10.8	0.11
Dubiraphia	3.6	0.04
Stenelmis	39.5	0.40
Ablabesmyia janta	102.3	1.04
Thienemannimyia grp.	536.4	5.46
Corynoneura lobata	17.9	0.18
Thienemanniella xena	26.9	0.27
Cricotopus bicinctus grp.	35.9	0.37
Cricotopus sylvestris grp.	17.9	0.18
Nanocladius distinctus	50.2	0.51
Nanocladius crassicornus/rectinervis	143.5	1.46
Cryptochironomus	44.9	0.46
Dicrotendipes neomodestus	758.9	7.73
Dicrotendipes fumidus	50.2	0.51
Dicrotendipes lucifer	59.2	0.60
Paratendipes	17.9	0.18
Phaenopsectra flavipes	17.9	0.18
Phaenopsectra obediens	17.9	0.18
Polypedilum flavum	464.7	4.73
Polypedilum illinoense	138.1	1.41
Polypedilum scalaenum grp.	215.3	2.19
Stenochironomus	59.2	0.60
Stictochironomus	9.0	0.09
Rheotanytarsus	44.9	0.46
Simulium	3.6	0.04
TOTAL BENTHOS	9,820.6	100.00
TOTAL TAXA RICHNESS	33	
EPT TAXA RICHNESS	6	

TABLE 3-25. PETITE PONAR DENSITIES AT SAMPLING STATION 18 WITHIN SALT CREEK, JULY 2009.

TAXA	18 DEVON AVE. #/m2	%
Turbellaria	7.2	0.15
Oligochaeta	1,851.6	37.83
Erpobdella punctata punctata	7.2	0.15
Tricorythodes	28.7	0.59
Cheumatopsyche	150.7	3.08
Procladius	43.1	0.88
Thienemannimyia grp.	100.5	2.05
Chironomus	64.6	1.32
Cryptochironomus	961.7	19.65
Dicrotendipes neomodestus	617.2	12.61
Harnischia	14.4	0.29
Phaenopsectra obediens	14.4	0.29
Polypedilum scalaenum grp.	488.0	9.97
Stictochironomus	14.4	0.29
Cladotanytarsus mancus grp.	358.8	7.33
Tanytarsus	43.1	0.88
Tanytarsus sepp	28.7	0.59
Ferrissia	21.5	0.44
Corbicula fluminea	28.7	0.59
Sphaerium	50.2	1.03
TOTAL BENTHOS	4,894.5	100.00
TOTAL TAXA RICHNESS	20	
EPT TAXA RICHNESS	2	

TABLE 3-26. HESTER-DENDY DENSITIES AT SAMPLING STATION 78 WITHIN HIGGINS CREEK, JUNE 2009.

TAXA	78 WILLE RD. #/m2	%
Turbellaria	292.4	4.54
Oligochaeta	256.5	3.98
Helobdella stagnalis	23.3	0.36
Placobdella papillifera	5.4	0.08
Erpobdella punctata punctata	102.3	1.59
Caecidotea	4,598.1	71.39
Gammarus	5.4	0.08
Orconectes virilis	5.4	0.08
Thienemannimyia grp.	23.3	0.36
Cricotopus tremulus grp.	238.6	3.70
Cricotopus bicinctus grp.	669.2	10.39
Cricotopus sylvestris grp.	113.0	1.75
Tvetenia discoloripes grp.	5.4	0.08
Polypedilum illinoense	48.4	0.75
Simulium	48.4	0.75
Physa	5.4	0.08
TOTAL BENTHOS	6,440.6	100.00
TOTAL TAXA RICHNESS	16	
EPT TAXA RICHNESS	0	

TABLE 3-27. PETITE PONAR DENSITIES AT SAMPLING STATION 78 WITHIN HIGGINS CREEK, JUNE 2009.

TAXA	78 WILLE RD. #/m2	%
Turbellaria	2,002.3	2.99
Oligochaeta	2,519.0	3.76
Erpobdella punctata punctata	122.0	0.18
Mooreobdella microstoma	14.4	0.02
Caecidotea	59,917.7	89.34
Gammarus	7.2	0.01
Thienemannimyia grp.	35.9	0.05
Cricotopus tremulus grp.	344.5	0.51
Cricotopus bicinctus grp.	1,772.6	2.64
Cricotopus trifascia grp.	14.4	0.02
Cricotopus sylvestris grp.	200.9	0.30
Chironomus	14.4	0.02
Cryptochironomus	7.2	0.01
Dicrotendipes neomodestus	7.2	0.01
Polypedilum illinoense	71.8	0.11
Micropsectra	7.2	0.01
Paratanytarsus	7.2	0.01
TOTAL BENTHOS	67,065.6	100.00
TOTAL TAXA RICHNESS	17	
EPT TAXA RICHNESS	0	

TABLE 3-28. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE DES PLAINES RIVER, JULY 2009.

TAXA	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	#/m2	%	#/m2	%	#/m2	%
Turbellaria	229.6	2.65	--	--	687.1	4.31
Plumatella	--	--	--	--	1.8	0.01
Oligochaeta	674.6	7.80	93.3	2.87	129.2	0.81
Helobdella stagnalis	1.8	0.02	--	--	--	--
Caecidotea	9.0	0.10	9.0	0.28	9.0	0.06
Gammarus	197.3	2.28	34.1	1.05	5.4	0.03
Baetis intercalaris	1,180.5	13.64	87.9	2.71	2,658.8	16.69
Leucrocuta	--	--	25.1	0.77	--	--
Stenacron	12.6	0.15	1.8	0.06	--	--
Maccaffertium integrum	976.0	11.28	--	--	--	--
Maccaffertium terminatum	32.3	0.37	3.6	0.11	--	--
Tricorythodes	113.0	1.31	--	--	--	--
Anthopotamus myops grp.	44.9	0.52	--	--	--	--
Argia	19.7	0.23	9.0	0.28	--	--
Chimarra	1.8	0.02	--	--	--	--
Cyrnellus fraternus	--	--	1.8	0.06	--	--
Cheumatopsyche	2,999.6	34.67	1,803.0	55.52	3,055.3	19.18
Hydropsyche simulans	98.7	1.14	--	--	274.5	1.72
Ceratopsyche morosa	--	--	292.4	9.01	1,650.5	10.36
Hydroptila	--	--	--	--	12.6	0.08
Oecetis	9.0	0.10	--	--	--	--
Dubiraphia	7.2	0.08	--	--	--	--
Macronychus glabratus	70.0	0.81	--	--	--	--
Ablabesmyia mallochi	--	--	3.6	0.11	--	--
Labrundinia	17.9	0.21	10.8	0.33	--	--
Thienemannimyia grp.	89.7	1.04	39.5	1.22	--	--
Corynoneura lobata	330.1	3.82	116.6	3.59	--	--
Thienemanniella xena	--	--	--	--	71.8	0.45
Thienemanniella similis	1.8	0.02	32.3	0.99	--	--
Cricotopus sylvestris grp.	--	--	--	--	35.9	0.23
Nanocladius distinctus	--	--	50.2	1.55	--	--
Rheocricotopus robacki	145.3	1.68	190.2	5.86	35.9	0.23
Chironomus	17.9	0.21	--	--	--	--
Cryptochironomus	--	--	9.0	0.28	--	--
Glyptotendipes	1.8	0.02	--	--	--	--
Microtendipes	17.9	0.21	--	--	--	--
Phaenopsectra obediens	17.9	0.21	--	--	--	--
Polypedilum flavum	843.2	9.74	46.6	1.44	382.1	2.40
Polypedilum scalaenum grp.	14.4	0.17	66.4	2.04	--	--
Paratanytarsus	--	--	3.6	0.11	--	--
Rheotanytarsus	477.2	5.52	288.8	8.90	6,108.7	38.36
Tanytarsus glabrescens grp.	--	--	7.2	0.22	--	--
Tanytarsus sepp	--	--	9.0	0.28	--	--
Simulium	--	--	12.6	0.39	807.3	5.07
TOTAL BENTHOS	8,652.7	100.00	3,247.2	100.00	15,925.7	100.00
TOTAL TAXA RICHNESS	30		26		16	
EPT TAXA RICHNESS	10		7		5	

TABLE 3-29. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE DES PLAINES RIVER, JULY 2009.

TAXA	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	#/m2	%	#/m2	%	#/m2	%
Turbellaria	7.2	0.33	--	--	43.1	0.14
Oligochaeta	703.3	32.56	1,428.2	52.93	11,798.4	38.06
Helobdella stagnalis	--	--	--	--	78.9	0.25
Caecidotea	--	--	28.7	1.06	35.9	0.12
Gammarus	78.9	3.65	--	--	43.1	0.14
Baetis intercalaris	--	--	7.2	0.27	--	--
Tricorythodes	28.7	1.33	--	--	--	--
Stylurus	14.4	0.66	--	--	--	--
Cheumatopsyche	150.7	6.98	846.8	31.38	330.1	1.06
Ceratopsyche morosa	--	--	71.8	2.66	35.9	0.12
Petrophila	--	--	--	--	7.2	0.02
Dubiraphia	28.7	1.33	--	--	--	--
Stenelmis	7.2	0.33	28.7	1.06	--	--
Procladius	14.4	0.66	14.4	0.53	--	--
Natarsia sp. A	--	--	14.4	0.53	--	--
Thienemannimyia grp.	35.9	1.66	28.7	1.06	--	--
Thienemanniella xena	--	--	--	--	179.4	0.58
Cricotopus bicinctus grp.	--	--	28.7	1.06	21.5	0.07
Rheocricotopus robacki	21.5	1.00	7.2	0.27	--	--
Cladopelma	--	--	7.2	0.27	--	--
Cryptochironomus	50.2	2.33	28.7	1.06	7.2	0.02
Dicrotendipes neomodestus	--	--	--	--	258.4	0.83
Microtendipes	35.9	1.66	--	--	--	--
Paracladopelma	222.5	10.30	--	--	--	--
Paratendipes	--	--	--	--	179.4	0.58
Polypedilum flavum	--	--	7.2	0.27	545.4	1.76
Polypedilum halterale grp.	523.9	24.25	--	--	--	--
Polypedilum scalaenum grp.	--	--	78.9	2.93	617.2	1.99
Cladotanytarsus vanderwulpi grp.	122.0	5.65	--	--	7.2	0.02
Rheotanytarsus	14.4	0.66	14.4	0.53	14,338.9	46.25
Tanytarsus sepp	--	--	14.4	0.53	--	--
Simulium	--	--	--	--	2,397.0	7.73
Corbicula fluminea	--	--	35.9	1.33	7.2	0.02
Sphaerium	64.6	2.99	--	--	35.9	0.12
Pisidium	35.9	1.66	7.2	0.27	35.9	0.12
TOTAL BENTHOS	2,160.2	100.00	2,698.4	100.00	31,003.1	100.00
TOTAL TAXA RICHNESS	19		19		21	
EPT TAXA RICHNESS	2		3		2	

Appendix A

WATERWAY= C.S.C.,
LOCATION= CICERO AVE.,
STATION= 59,
and DATE= 14JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	36	129.2	10.26	274	983.1	33.41
Caecidotea	7	25.1	1.99	60	215.3	7.32
Gammarus	43	154.3	12.25	77	276.3	9.39
Cyrnellus fraternus	0	0.0	0.00	2	7.2	0.24
Cricotopus bicinctus grp.	13	46.6	3.70	17	61.0	2.07
Nanocladius distinctus	38	136.3	10.83	24	86.1	2.93
Chironomus	2	7.2	0.57	0	0.0	0.00
Dicrotendipes neomodestus	4	14.4	1.14	7	25.1	0.85
Dicrotendipes lucifer	114	409.0	32.48	261	936.5	31.83
Dicrotendipes simpsoni	23	82.5	6.55	14	50.2	1.71
Glyptotendipes	2	7.2	0.57	0	0.0	0.00
Polypedilum fallax grp.	2	7.2	0.57	10	35.9	1.22
Polypedilum flavum	2	7.2	0.57	3	10.8	0.37
Polypedilum illinoense	11	39.5	3.13	10	35.9	1.22
Polypedilum scalaenum grp.	4	14.4	1.14	21	75.3	2.56
Paratanytarsus	15	53.8	4.27	24	86.1	2.93
Tanytarsus	2	7.2	0.57	0	0.0	0.00
Ferrissia	0	0.0	0.00	1	3.6	0.12
Dreissena polymorpha	33	118.4	9.40	15	53.8	1.83
TOTAL BENTHOS	351	1,259.4	100.00	820	2,942.2	100.00

WATERWAY= C.S.S.C.,
LOCATION= CICERO AVE.,
STATION= 75,
and DATE= 20JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	540	1,937.6	13.14	540	1,937.6	12.80
Oligochaeta	3,330	11,948.3	81.02	2,725	9,777.5	64.57
Helobdella	10	35.9	0.24	0	0.0	0.00
Helobdella stagnalis	50	179.4	1.22	0	0.0	0.00
Hyalella azteca	150	538.2	3.65	330	1,184.1	7.82
Gammarus	10	35.9	0.24	10	35.9	0.24
Nanocladius distinctus	0	0.0	0.00	40	143.5	0.95
Dicrotendipes lucifer	10	35.9	0.24	165	592.0	3.91
Dicrotendipes simpsoni	10	35.9	0.24	410	1,471.1	9.72
TOTAL BENTHOS	4,110	14,747.0	100.00	4,220	15,141.7	100.00

WATERWAY= C.S.S.C.,
LOCATION= HARLEM AVE.,
STATION= 41,
and DATE= 21JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	380	1,363.5	5.86	100	358.8	0.55
Turbellaria	1,015	3,641.9	15.65	150	538.2	0.83
Oligochaeta	4,090	14,675.3	63.08	16,750	60,100.5	92.54
Helobdella	10	35.9	0.15	0	0.0	0.00
Helobdella stagnalis	30	107.6	0.46	0	0.0	0.00
Erpobdella punctata punctata	20	71.8	0.31	0	0.0	0.00
Caecidotea	440	1,578.8	6.79	0	0.0	0.00
Hyalella azteca	184	660.2	2.84	50	179.4	0.28
Procladius	5	17.9	0.08	0	0.0	0.00
Cricotopus sylvestris grp.	10	35.9	0.15	50	179.4	0.28
Nanocladius distinctus	40	143.5	0.62	250	897.0	1.38
Dicrotendipes lucifer	85	305.0	1.31	200	717.6	1.10
Dicrotendipes simpsoni	165	592.0	2.54	550	1,973.4	3.04
Glyptotendipes	5	17.9	0.08	0	0.0	0.00
Cladotanytarsus mancus grp.	5	17.9	0.08	0	0.0	0.00
TOTAL BENTHOS	6,484	23,265.2	100.00	18,100	64,944.4	100.00

WATERWAY= C.S.S.C., LOCATION= LOCKPORT, STATION= 92,
and DATE= 16JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	110	394.7	13.84	0	0.0	0.00
Oligochaeta	434	1,557.2	54.59	463	1,661.3	31.98
Caecidotea	16	57.4	2.01	10	35.9	0.69
Hyalella azteca	5	17.9	0.63	140	502.3	9.67
Gammarus	91	326.5	11.45	151	541.8	10.43
Cyrnellus fraternus	0	0.0	0.00	12	43.1	0.83
Cheumatopsyche	0	0.0	0.00	3	10.8	0.21
Ablabesmyia janta	7	25.1	0.88	0	0.0	0.00
Ablabesmyia mallochi	3	10.8	0.38	13	46.6	0.90
Thienemannimyia grp.	1	3.6	0.13	20	71.8	1.38
Cricotopus sylvestris grp.	0	0.0	0.00	13	46.6	0.90
Nanocladius distinctus	8	28.7	1.01	60	215.3	4.14
Chironomus	1	3.6	0.13	0	0.0	0.00
Dicrotendipes modestus	1	3.6	0.13	0	0.0	0.00
Dicrotendipes neomodestus	0	0.0	0.00	7	25.1	0.48
Dicrotendipes lucifer	86	308.6	10.82	273	979.5	18.85
Dicrotendipes simpsoni	24	86.1	3.02	180	645.9	12.43
Glyptotendipes	3	10.8	0.38	53	190.2	3.66
Phaenopsectra flavipes	0	0.0	0.00	7	25.1	0.48
Polypedilum fallax grp.	0	0.0	0.00	7	25.1	0.48
Polypedilum illinoense	0	0.0	0.00	7	25.1	0.48
Stenochironomus	0	0.0	0.00	7	25.1	0.48
Rheotanytarsus	0	0.0	0.00	7	25.1	0.48
Ferrissia	5	17.9	0.63	15	53.8	1.04
TOTAL BENTHOS	795	2,852.5	100.00	1,448	5,195.6	100.00

WATERWAY= CALUMET R., LOCATION= 130TH ST., STATION= 55,
and DATE= 23JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	110	394.7	11.64	30	107.6	0.97
Gammarus	170	610.0	17.99	90	322.9	2.91
Echinogammarus ischusa	10	35.9	1.06	0	0.0	0.00
Nanocladius distinctus	10	35.9	1.06	10	35.9	0.32
Dicrotendipes neomodestus	0	0.0	0.00	10	35.9	0.32
Dicrotendipes lucifer	20	71.8	2.12	20	71.8	0.65
Glyptotendipes	0	0.0	0.00	10	35.9	0.32
Polypedilum flavum	0	0.0	0.00	10	35.9	0.32
Paratanytarsus	0	0.0	0.00	50	179.4	1.62
Rheotanytarsus	0	0.0	0.00	10	35.9	0.32
Dreissena polymorpha	575	2,063.2	60.85	2,850	10,226.0	92.23
Dreissena bugensis	50	179.4	5.29	0	0.0	0.00
TOTAL BENTHOS	945	3,390.7	100.00	3,090	11,087.2	100.00

WATERWAY= DES PLAINES R., LOCATION= LAKE COOK RD., STATION= 13,
and DATE= 10JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	70	251.2	1.83	58	208.1	5.81
Oligochaeta	60	215.3	1.57	316	1,133.8	31.66
Helobdella stagnalis	0	0.0	0.00	1	3.6	0.10
Caecidotea	5	17.9	0.13	0	0.0	0.00
Gammarus	100	358.8	2.61	10	35.9	1.00
Baetis intercalaris	620	2,224.6	16.21	38	136.3	3.81
Stenacron	5	17.9	0.13	2	7.2	0.20
Maccaffertium integrum	360	1,291.7	9.41	184	660.2	18.44
Maccaffertium terminatum	10	35.9	0.26	8	28.7	0.80
Tricorythodes	60	215.3	1.57	3	10.8	0.30
Anthopotamus myops grp.	15	53.8	0.39	10	35.9	1.00
Argia	10	35.9	0.26	1	3.6	0.10
Chimarra	0	0.0	0.00	1	3.6	0.10
Cheumatopsyche	1,460	5,238.6	38.17	212	760.7	21.24
Hydropsyche simulans	55	197.3	1.44	0	0.0	0.00
Oecetis	5	17.9	0.13	0	0.0	0.00
Dubiraphia	0	0.0	0.00	4	14.4	0.40
Macronychus glabratus	25	89.7	0.65	14	50.2	1.40
Labrundinia	10	35.9	0.26	0	0.0	0.00
Thienemannimyia grp.	45	161.5	1.18	5	17.9	0.50
Corynoneura lobata	155	556.2	4.05	29	104.1	2.91
Thienemanniella similis	0	0.0	0.00	1	3.6	0.10
Rheocricotopus robacki	80	287.0	2.09	1	3.6	0.10
Chironomus	10	35.9	0.26	0	0.0	0.00
Glyptotendipes	0	0.0	0.00	1	3.6	0.10
Microtendipes	10	35.9	0.26	0	0.0	0.00
Phaenopsectra obediens	10	35.9	0.26	0	0.0	0.00
Polypedilum flavum	465	1,668.5	12.16	5	17.9	0.50
Polypedilum scalaenum grp.	0	0.0	0.00	8	28.7	0.80
Rheotanytarsus	180	645.9	4.71	86	308.6	8.62
TOTAL BENTHOS	3,825	13,724.4	100.00	998	3,580.9	100.00

APPENDIX A - 2009 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R., LOCATION= MATERIAL SERVICE RD., STATION= 91,
and DATE= 09JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	103	369.6	2.88	280	1,004.7	5.28
Plumatella	0	0.0	0.00	1	3.6	0.02
Oligochaeta	27	96.9	0.76	45	161.5	0.85
Caecidotea	0	0.0	0.00	5	17.9	0.09
Gammarus	3	10.8	0.08	0	0.0	0.00
Baetis intercalaris	547	1,962.7	15.30	935	3,354.9	17.64
Cheumatopsyche	513	1,840.7	14.35	1,190	4,269.8	22.45
Hydropsyche simulans	43	154.3	1.20	110	394.7	2.08
Ceratopsyche morosa	200	717.6	5.59	720	2,583.4	13.58
Hydroptila	7	25.1	0.20	0	0.0	0.00
Thienemanniella xena	20	71.8	0.56	20	71.8	0.38
Cricotopus sylvestris grp.	0	0.0	0.00	20	71.8	0.38
Rheocricotopus robacki	0	0.0	0.00	20	71.8	0.38
Polypedilum flavum	103	369.6	2.88	110	394.7	2.08
Rheotanytarsus	1,880	6,745.6	52.57	1,525	5,471.8	28.77
Simulium	130	466.5	3.64	320	1,148.2	6.04
TOTAL BENTHOS	3,576	12,831.0	100.00	5,301	19,020.5	100.00

WATERWAY= DES PLAINES R., LOCATION= OGDEN AVE., STATION= 22,
and DATE= 02JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	0	0.0	0.00	52	186.6	7.77
Caecidotea	4	14.4	0.35	1	3.6	0.15
Gammarus	3	10.8	0.26	16	57.4	2.39
Baetis intercalaris	41	147.1	3.59	8	28.7	1.20
Leucrocuta	4	14.4	0.35	10	35.9	1.49
Stenacron	1	3.6	0.09	0	0.0	0.00
Maccaffertium terminatum	1	3.6	0.09	1	3.6	0.15
Argia	2	7.2	0.18	3	10.8	0.45
Cyrnellus fraternus	0	0.0	0.00	1	3.6	0.15
Cheumatopsyche	727	2,608.5	63.72	278	997.5	41.55
Ceratopsyche morosa	122	437.7	10.69	41	147.1	6.13
Ablabesmyia mallochi	0	0.0	0.00	2	7.2	0.30
Labrundinia	4	14.4	0.35	2	7.2	0.30
Thienemannimyia grp.	6	21.5	0.53	16	57.4	2.39
Corynoneura lobata	30	107.6	2.63	35	125.6	5.23
Thienemanniella similis	13	46.6	1.14	5	17.9	0.75
Nanocladius distinctus	2	7.2	0.18	26	93.3	3.89
Rheocricotopus robacki	62	222.5	5.43	44	157.9	6.58
Cryptochironomus	0	0.0	0.00	5	17.9	0.75
Polypedilum flavum	17	61.0	1.49	9	32.3	1.35
Polypedilum scalaenum grp.	0	0.0	0.00	37	132.8	5.53
Paratanytarsus	2	7.2	0.18	0	0.0	0.00
Rheotanytarsus	94	337.3	8.24	67	240.4	10.01
Tanytarsus glabrescens grp.	2	7.2	0.18	2	7.2	0.30
Tanytarsus sepp	0	0.0	0.00	5	17.9	0.75
Simulium	4	14.4	0.35	3	10.8	0.45
TOTAL BENTHOS	1,141	4,094.0	100.00	669	2,400.4	100.00

WATERWAY= HIGGINS CR., LOCATION= WILLE RD., STATION= 78,
and DATE= 29JUN09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	63	226.0	3.25	100	358.8	6.06
Oligochaeta	73	261.9	3.76	70	251.2	4.24
Helobdella stagnalis	3	10.8	0.15	10	35.9	0.61
Placobdella papillifera	3	10.8	0.15	0	0.0	0.00
Erpobdella punctata punctata	17	61.0	0.88	40	143.5	2.42
Caecidotea	1,273	4,567.6	65.62	1,290	4,628.6	78.18
Gammarus	3	10.8	0.15	0	0.0	0.00
Orconectes virilis	3	10.8	0.15	0	0.0	0.00
Thienemannimyia grp.	3	10.8	0.15	10	35.9	0.61
Cricotopus tremulus grp.	93	333.7	4.79	40	143.5	2.42
Cricotopus bicinctus grp.	323	1,159.0	16.65	50	179.4	3.03
Cricotopus sylvestris grp.	33	118.4	1.70	30	107.6	1.82
Tvetenia discoloripes grp.	3	10.8	0.15	0	0.0	0.00
Polypedilum illinoense	17	61.0	0.88	10	35.9	0.61
Simulium	27	96.9	1.39	0	0.0	0.00
Physa	3	10.8	0.15	0	0.0	0.00
TOTAL BENTHOS	1,940	6,960.9	100.00	1,650	5,920.3	100.00

WATERWAY= L.C.R.,
LOCATION= HALSTED ST.,
STATION= 76,
and DATE= 30JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	84	301.4	5.61	340	1,219.9	8.59
Turbellaria	32	114.8	2.14	50	179.4	1.26
Plumatella	1	3.6	0.07	1	3.6	0.03
Oligochaeta	135	484.4	9.02	65	233.2	1.64
Helobdella stagnalis	7	25.1	0.47	0	0.0	0.00
Mooreobdella microstoma	3	10.8	0.20	0	0.0	0.00
Caecidotea	2	7.2	0.13	0	0.0	0.00
Hyalella azteca	14	50.2	0.94	25	89.7	0.63
Gammarus	14	50.2	0.94	40	143.5	1.01
Cyrnellus fraternus	4	14.4	0.27	215	771.4	5.43
Cricotopus bicinctus grp.	0	0.0	0.00	10	35.9	0.25
Nanocladius distinctus	0	0.0	0.00	20	71.8	0.51
Dicrotendipes neomodestus	0	0.0	0.00	10	35.9	0.25
Dicrotendipes lucifer	537	1,926.8	35.87	525	1,883.7	13.27
Dicrotendipes simpsoni	324	1,162.5	21.64	465	1,668.5	11.75
Glyptotendipes	0	0.0	0.00	10	35.9	0.25
Parachironomus	8	28.7	0.53	0	0.0	0.00
Xenochironomus xenolabis	0	0.0	0.00	10	35.9	0.25
Bithynia tentaculata	1	3.6	0.07	0	0.0	0.00
Amnicola	2	7.2	0.13	0	0.0	0.00
Physa	3	10.8	0.20	140	502.3	3.54
Helisoma	110	394.7	7.35	5	17.9	0.13
Menetus	4	14.4	0.27	0	0.0	0.00
Ferrissia	1	3.6	0.07	0	0.0	0.00
Musculium	2	7.2	0.13	0	0.0	0.00
Dreissena polymorpha	209	749.9	13.96	2,025	7,265.9	51.19
TOTAL BENTHOS	1,497	5,371.4	100.00	3,956	14,194.5	100.00

WATERWAY= M.F.N.B.C.R.,
LOCATION= LAKE COOK RD.,
STATION= 31,
and DATE= 15JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	97	348.0	8.43	173	620.7	11.85
Oligochaeta	63	226.0	5.47	11	39.5	0.75
Helobdella stagnalis	7	25.1	0.61	2	7.2	0.14
Caecidotea	830	2,978.1	72.11	497	1,783.3	34.04
Baetis intercalaris	3	10.8	0.26	0	0.0	0.00
Maccaffertium integrum	3	10.8	0.26	0	0.0	0.00
Tricorythodes	3	10.8	0.26	0	0.0	0.00
Argia	0	0.0	0.00	3	10.8	0.21
Cheumatopsyche	23	82.5	2.00	230	825.3	15.75
Hydropsyche simulans	0	0.0	0.00	22	78.9	1.51
Procladius	3	10.8	0.26	0	0.0	0.00
Thienemannimyia grp.	0	0.0	0.00	33	118.4	2.26
Corynoneura lobata	7	25.1	0.61	6	21.5	0.41
Thienemanniella xena	3	10.8	0.26	0	0.0	0.00
Cricotopus sylvestris grp.	7	25.1	0.61	22	78.9	1.51
Nanocladius distinctus	33	118.4	2.87	6	21.5	0.41
Rheocricotopus robacki	0	0.0	0.00	6	21.5	0.41
Cryptochironomus	0	0.0	0.00	6	21.5	0.41
Dicrotendipes neomodestus	0	0.0	0.00	22	78.9	1.51
Dicrotendipes lucifer	7	25.1	0.61	28	100.5	1.92
Harnischia	0	0.0	0.00	22	78.9	1.51
Paratendipes	10	35.9	0.87	6	21.5	0.41
Phaenopsectra flavipes	7	25.1	0.61	28	100.5	1.92
Polypedilum flavum	3	10.8	0.26	72	258.3	4.93
Polypedilum illinoense	10	35.9	0.87	33	118.4	2.26
Polypedilum scalaenum grp.	3	10.8	0.26	61	218.9	4.18
Paratanytarsus	10	35.9	0.87	149	534.6	10.21
Rheotanytarsus	3	10.8	0.26	6	21.5	0.41
Tanytarsus	0	0.0	0.00	6	21.5	0.41
Physa	3	10.8	0.26	10	35.9	0.68
Ferrissia	13	46.6	1.13	0	0.0	0.00
TOTAL BENTHOS	1,151	4,129.9	100.00	1,460	5,238.6	100.00

WATERWAY= N.B.C.R., LOCATION= DEMPSTER ST., STATION= 34,
and DATE= 05AUG09

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Hydra	31	111.2	1.65	11	39.5	1.68
Turbellaria	6	21.5	0.32	0	0.0	0.00
Oligochaeta	9	32.3	0.48	56	200.9	8.58
Caecidotea	192	688.9	10.24	96	344.5	14.70
Gammarus	6	21.5	0.32	114	409.0	17.46
Stenacron	1	3.6	0.05	0	0.0	0.00
Procladius	0	0.0	0.00	3	10.8	0.46
Thienemannimyia grp.	2	7.2	0.11	0	0.0	0.00
Corynoneura lobata	0	0.0	0.00	1	3.6	0.15
Thienemanniella xena	169	606.4	9.01	6	21.5	0.92
Cricotopus bicinctus grp.	2	7.2	0.11	0	0.0	0.00
Dicrotendipes neomodestus	2	7.2	0.11	50	179.4	7.66
Dicrotendipes lucifer	14	50.2	0.75	41	147.1	6.28
Dicrotendipes simpsoni	0	0.0	0.00	9	32.3	1.38
Parachironomus	0	0.0	0.00	1	3.6	0.15
Polypedilum flavum	14	50.2	0.75	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	6	21.5	0.92
Polypedilum scalaenum grp.	0	0.0	0.00	9	32.3	1.38
Paratanytarsus	14	50.2	0.75	2	7.2	0.31
Rheotanytarsus	0	0.0	0.00	1	3.6	0.15
Tanytarsus glabrescens grp.	0	0.0	0.00	2	7.2	0.31
Physa	1	3.6	0.05	0	0.0	0.00
Helisoma	0	0.0	0.00	2	7.2	0.31
Ferrissia	1,389	4,983.9	74.08	243	871.9	37.21
Corbicula fluminea	23	82.5	1.23	0	0.0	0.00
TOTAL BENTHOS	1,875	6,727.7	100.00	653	2,343.0	100.00

WATERWAY= N.B.C.R., LOCATION= DIVERSEY PKWY., STATION= 73,
and DATE= 17AUG09

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Turbellaria	0	0.0	0.00	78	279.9	3.80
Oligochaeta	220	789.4	24.26	875	3,139.6	42.62
Caecidotea	8	28.7	0.88	10	35.9	0.49
Hyalella azteca	90	322.9	9.92	18	64.6	0.88
Gammarus	6	21.5	0.66	0	0.0	0.00
Cyrnellus fraternus	8	28.7	0.88	8	28.7	0.39
Cheumatopsyche	0	0.0	0.00	3	10.8	0.15
Thienemanniella xena	5	17.9	0.55	0	0.0	0.00
Cricotopus bicinctus grp.	10	35.9	1.10	25	89.7	1.22
Cricotopus sylvestris grp.	10	35.9	1.10	25	89.7	1.22
Nanocladius distinctus	5	17.9	0.55	43	154.3	2.09
Dicrotendipes lucifer	218	782.2	24.04	275	986.7	13.40
Dicrotendipes simpsoni	274	983.1	30.21	310	1,112.3	15.10
Glyptotendipes	10	35.9	1.10	8	28.7	0.39
Parachironomus	5	17.9	0.55	53	190.2	2.58
Polypedilum illinoense	5	17.9	0.55	120	430.6	5.85
Polypedilum scalaenum grp.	15	53.8	1.65	43	154.3	2.09
Paratanytarsus	10	35.9	1.10	8	28.7	0.39
Culex	1	3.6	0.11	0	0.0	0.00
Helisoma	0	0.0	0.00	15	53.8	0.73
Ferrissia	7	25.1	0.77	63	226.0	3.07
Corbicula fluminea	0	0.0	0.00	65	233.2	3.17
Dreissena polymorpha	0	0.0	0.00	8	28.7	0.39
TOTAL BENTHOS	907	3,254.4	100.00	2,053	7,366.3	100.00

WATERWAY= N.B.C.R., LOCATION= GLENVIEW RD., STATION= 104,
and DATE= 29JUL09

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Hydra	4,210	15,105.8	41.72	2,890	10,369.6	40.19
Turbellaria	220	789.4	2.18	35	125.6	0.49
Oligochaeta	990	3,552.2	9.81	1,205	4,323.6	16.76
Caecidotea	590	2,117.0	5.85	405	1,453.2	5.63
Gammarus	10	35.9	0.10	35	125.6	0.49
Trepobates	20	71.8	0.20	0	0.0	0.00
Cheumatopsyche	20	71.8	0.20	0	0.0	0.00
Dicrotendipes neomodestus	150	538.2	1.49	145	520.3	2.02
Dicrotendipes lucifer	70	251.2	0.69	10	35.9	0.14
Paratendipes	0	0.0	0.00	5	17.9	0.07
Polypedilum flavum	60	215.3	0.59	0	0.0	0.00
Polypedilum scalaenum grp.	0	0.0	0.00	5	17.9	0.07
Paratanytarsus	0	0.0	0.00	10	35.9	0.14
Amnicola	0	0.0	0.00	15	53.8	0.21
Ferrissia	3,710	13,311.8	36.77	2,300	8,252.6	31.99
Corbicula fluminea	30	107.6	0.30	130	466.5	1.81
Musculium	10	35.9	0.10	0	0.0	0.00
TOTAL BENTHOS	10,090	36,203.8	100.00	7,190	25,798.3	100.00

WATERWAY= N.B.C.R.,
LOCATION= GRAND AVE.,
STATION= 46,
and DATE= 17AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	825	2,960.2	43.95	30	107.6	0.22
Turbellaria	173	620.7	9.22	20	71.8	0.15
Oligochaeta	180	645.9	9.59	7,280	26,121.3	53.29
Helobdella	3	10.8	0.16	0	0.0	0.00
Helobdella stagnalis	35	125.6	1.86	0	0.0	0.00
Caecidotea	488	1,751.0	26.00	10	35.9	0.07
Hyalella azteca	30	107.6	1.60	3,580	12,845.4	26.21
Cyrnellus fraternus	0	0.0	0.00	10	35.9	0.07
Procladius	3	10.8	0.16	0	0.0	0.00
Cricotopus sylvestris grp.	8	28.7	0.43	0	0.0	0.00
Nanocladius distinctus	30	107.6	1.60	0	0.0	0.00
Dicrotendipes lucifer	15	53.8	0.80	1,340	4,808.0	9.81
Dicrotendipes simpsoni	13	46.6	0.69	1,140	4,090.4	8.35
Parachironomus	43	154.3	2.29	50	179.4	0.37
Polypedilum illinoense	13	46.6	0.69	50	179.4	0.37
Polypedilum scalaenum grp.	0	0.0	0.00	20	71.8	0.15
Physa	3	10.8	0.16	10	35.9	0.07
Helisoma	5	17.9	0.27	20	71.8	0.15
Ferrissia	10	35.9	0.53	20	71.8	0.15
Corbicula fluminea	0	0.0	0.00	80	287.0	0.59
TOTAL BENTHOS	1,877	6,734.8	100.00	13,660	49,013.3	100.00

WATERWAY= N.B.C.R.,
LOCATION= WILSON AVE.,
STATION= 37,
and DATE= 18AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	5	17.9	0.15	0	0.0	0.00
Oligochaeta	670	2,404.0	19.51	73	261.9	6.48
Caecidotea	85	305.0	2.47	17	61.0	1.51
Cyrnellus fraternus	65	233.2	1.89	3	10.8	0.27
Cheumatopsyche	20	71.8	0.58	13	46.6	1.15
Procladius	0	0.0	0.00	10	35.9	0.89
Thienemanniella xena	145	520.3	4.22	67	240.4	5.94
Thienemanniella similis	25	89.7	0.73	10	35.9	0.89
Cricotopus bicinctus grp.	380	1,363.5	11.06	163	584.9	14.46
Cricotopus sylvestris grp.	70	251.2	2.04	57	204.5	5.06
Nanocladius distinctus	215	771.4	6.26	57	204.5	5.06
Dicrotendipes lucifer	500	1,794.0	14.56	210	753.5	18.63
Dicrotendipes simpsoni	670	2,404.0	19.51	210	753.5	18.63
Glyptotendipes	240	861.1	6.99	47	168.6	4.17
Parachironomus	120	430.6	3.49	133	477.2	11.80
Polypedilum flavum	95	340.9	2.77	10	35.9	0.89
Polypedilum illinoense	50	179.4	1.46	37	132.8	3.28
Paratanytarsus	50	179.4	1.46	10	35.9	0.89
Rheotanytarsus	25	89.7	0.73	0	0.0	0.00
Ferrissia	5	17.9	0.15	0	0.0	0.00
TOTAL BENTHOS	3,435	12,325.1	100.00	1,127	4,043.8	100.00

WATERWAY= N.S.C.,
LOCATION= CENTRAL ST.,
STATION= 35,
and DATE= 21AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	798	2,863.3	62.49	213	764.3	7.39
Oligochaeta	215	771.4	16.84	331	1,187.7	11.48
Helobdella stagnalis	0	0.0	0.00	18	64.6	0.62
Caecidotea	0	0.0	0.00	2	7.2	0.07
Gammarus	23	82.5	1.80	124	444.9	4.30
Stenonema femoratum	5	17.9	0.39	2	7.2	0.07
Hydroptila	0	0.0	0.00	1	3.6	0.03
Procladius	13	46.6	1.02	14	50.2	0.49
Thienemannimyia grp.	28	100.5	2.19	0	0.0	0.00
Cricotopus bicinctus grp.	3	10.8	0.23	0	0.0	0.00
Cricotopus sylvestris grp.	0	0.0	0.00	2	7.2	0.07
Nanocladius distinctus	18	64.6	1.41	3	10.8	0.10
Chironomus	15	53.8	1.17	17	61.0	0.59
Cladopelma	0	0.0	0.00	2	7.2	0.07
Dicrotendipes neomodestus	0	0.0	0.00	3	10.8	0.10
Dicrotendipes fumidus	10	35.9	0.78	12	43.1	0.42
Dicrotendipes lucifer	80	287.0	6.26	104	373.2	3.61
Dicrotendipes simpsoni	3	10.8	0.23	17	61.0	0.59
Endochironomus nigricans	3	10.8	0.23	0	0.0	0.00
Glyptotendipes	3	10.8	0.23	2	7.2	0.07
Microtendipes	0	0.0	0.00	2	7.2	0.07
Parachironomus	3	10.8	0.23	0	0.0	0.00
Paratendipes	0	0.0	0.00	2	7.2	0.07
Phaenopsectra flavipes	3	10.8	0.23	0	0.0	0.00
Polypedilum illinoense	8	28.7	0.63	0	0.0	0.00
Paratanytarsus	8	28.7	0.63	7	25.1	0.24
Tanytarsus glabrescens grp.	5	17.9	0.39	0	0.0	0.00
Tanytarsus sepp	5	17.9	0.39	2	7.2	0.07
Physa	28	100.5	2.19	3	10.8	0.10
Helisoma	0	0.0	0.00	6	21.5	0.21
Ferrissia	0	0.0	0.00	1	3.6	0.03
Dreissena polymorpha	0	0.0	0.00	1,994	7,154.6	69.14
TOTAL BENTHOS	1,277	4,582.0	100.00	2,884	10,348.0	100.00

WATERWAY= N.S.C.,
LOCATION= FOSTER AVE.,
STATION= 101,
and DATE= 18AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	7	25.1	0.28	0	0.0	0.00
Oligochaeta	773	2,773.6	30.52	73	261.9	4.55
Ostracoda	50	179.4	1.97	1	3.6	0.06
Caecidotea	230	825.3	9.08	120	430.6	7.48
Hyalella azteca	27	96.9	1.07	38	136.3	2.37
Cyrnellus fraternus	53	190.2	2.09	26	93.3	1.62
Cheumatopsyche	33	118.4	1.30	8	28.7	0.50
Procladius	10	35.9	0.39	0	0.0	0.00
Ablabesmyia janta	10	35.9	0.39	0	0.0	0.00
Thienemanniella xena	93	333.7	3.67	47	168.6	2.93
Cricotopus bicinctus grp.	93	333.7	3.67	59	211.7	3.68
Cricotopus sylvestris grp.	10	35.9	0.39	12	43.1	0.75
Nanocladius distinctus	207	742.7	8.17	94	337.3	5.86
Dicrotendipes lucifer	217	778.6	8.57	189	678.1	11.78
Dicrotendipes simpsoni	367	1,316.8	14.49	578	2,073.9	36.01
Glyptotendipes	173	620.7	6.83	248	889.8	15.45
Parachironomus	33	118.4	1.30	59	211.7	3.68
Polypedilum illinoense	47	168.6	1.86	24	86.1	1.50
Micropsectra	10	35.9	0.39	0	0.0	0.00
Paratanytarsus	0	0.0	0.00	12	43.1	0.75
Menetus	3	10.8	0.12	0	0.0	0.00
Ferrissia	87	312.2	3.43	17	61.0	1.06
TOTAL BENTHOS	2,533	9,088.6	100.00	1,605	5,758.9	100.00

WATERWAY= N.S.C.,
LOCATION= OAKTON ST.,
STATION= 102,
and DATE= 19AUG09

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Hydra	50	179.4	1.20	170	610.0	4.19
Turbellaria	10	35.9	0.24	20	71.8	0.49
Oligochaeta	3,300	11,840.7	79.52	130	466.5	3.20
Caecidotea	280	1,004.7	6.75	20	71.8	0.49
Hyalella azteca	0	0.0	0.00	30	107.6	0.74
Gammarus	0	0.0	0.00	50	179.4	1.23
Procladius	20	71.8	0.48	0	0.0	0.00
Thienemanniella xena	20	71.8	0.48	70	251.2	1.72
Cricotopus bicinctus grp.	40	143.5	0.96	140	502.3	3.45
Cricotopus sylvestris grp.	10	35.9	0.24	70	251.2	1.72
Nanocladius distinctus	0	0.0	0.00	110	394.7	2.71
Chironomus	10	35.9	0.24	0	0.0	0.00
Dicrotendipes fumidus	30	107.6	0.72	0	0.0	0.00
Dicrotendipes lucifer	140	502.3	3.37	1,910	6,853.2	47.04
Dicrotendipes simpsoni	170	610.0	4.10	1,060	3,803.4	26.11
Parachironomus	0	0.0	0.00	30	107.6	0.74
Polypedilum flavum	20	71.8	0.48	30	107.6	0.74
Polypedilum illinoense	0	0.0	0.00	110	394.7	2.71
Stenochironomus	10	35.9	0.24	0	0.0	0.00
Helisoma	0	0.0	0.00	60	215.3	1.48
Ferrissia	30	107.6	0.72	10	35.9	0.25
Dreissena polymorpha	10	35.9	0.24	40	143.5	0.99
TOTAL BENTHOS	4,150	14,890.6	100.00	4,060	14,567.6	100.00

WATERWAY= N.S.C.,
LOCATION= TOUHY AVE.,
STATION= 36,
and DATE= 19AUG09

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Turbellaria	40	143.5	0.35	0	0.0	0.00
Oligochaeta	7,310	26,228.9	63.62	5,030	18,048.1	53.97
Helobdella stagnalis	0	0.0	0.00	10	35.9	0.11
Erpobdella punctata punctata	30	107.6	0.26	0	0.0	0.00
Ostracoda	20	71.8	0.17	30	107.6	0.32
Caecidotea	2,100	7,535.0	18.28	110	394.7	1.18
Hyalella azteca	20	71.8	0.17	310	1,112.3	3.33
Gammarus	10	35.9	0.09	10	35.9	0.11
Cyrnellus fraternus	20	71.8	0.17	40	143.5	0.43
Hydroptila	10	35.9	0.09	10	35.9	0.11
Thienemanniella xena	0	0.0	0.00	30	107.6	0.32
Cricotopus bicinctus grp.	40	143.5	0.35	240	861.1	2.58
Cricotopus sylvestris grp.	0	0.0	0.00	70	251.2	0.75
Nanocladius distinctus	100	358.8	0.87	130	466.5	1.39
Chironomus	20	71.8	0.17	70	251.2	0.75
Dicrotendipes modestus	60	215.3	0.52	30	107.6	0.32
Dicrotendipes lucifer	1,000	3,588.1	8.70	400	1,435.2	4.29
Dicrotendipes simpsoni	370	1,327.6	3.22	1,590	5,705.1	17.06
Glyptotendipes	230	825.3	2.00	780	2,798.7	8.37
Parachironomus	20	71.8	0.17	240	861.1	2.58
Phaenopsectra flavipes	20	71.8	0.17	0	0.0	0.00
Polypedilum illinoense	20	71.8	0.17	70	251.2	0.75
Paratanytarsus	0	0.0	0.00	70	251.2	0.75
Helisoma	10	35.9	0.09	10	35.9	0.11
Ferrissia	40	143.5	0.35	40	143.5	0.43
TOTAL BENTHOS	11,490	41,227.1	100.00	9,320	33,441.0	100.00

WATERWAY= SALT CR.,
LOCATION= DEVON AVE.,
STATION= 18,
and DATE= 22JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	2	7.2	0.18	1,800	6,458.6	41.49
Oligochaeta	42	150.7	3.70	187	671.0	4.31
Caecidotea	9	32.3	0.79	0	0.0	0.00
Baetis intercalaris	1	3.6	0.09	0	0.0	0.00
Maccaffertium integrum	0	0.0	0.00	3	10.8	0.07
Tricorythodes	19	68.2	1.67	13	46.6	0.30
Cheumatopsyche	562	2,016.5	49.47	1,223	4,388.2	28.19
Hydroptila	1	3.6	0.09	3	10.8	0.07
Nectopsyche	6	21.5	0.53	0	0.0	0.00
Dubiraphia	2	7.2	0.18	0	0.0	0.00
Stenelmis	22	78.9	1.94	0	0.0	0.00
Ablabesmyia janta	0	0.0	0.00	57	204.5	1.31
Thienemannimyia grp.	106	380.3	9.33	193	692.5	4.45
Corynoneura lobata	0	0.0	0.00	10	35.9	0.23
Thienemanniella xena	5	17.9	0.44	10	35.9	0.23
Cricotopus bicinctus grp.	10	35.9	0.88	10	35.9	0.23
Cricotopus sylvestris grp.	10	35.9	0.88	0	0.0	0.00
Nanocladius distinctus	5	17.9	0.44	23	82.5	0.53
Nanocladius crassicornus/rectinervis	0	0.0	0.00	80	287.0	1.84
Cryptochironomus	25	89.7	2.20	0	0.0	0.00
Dicrotendipes neomodestus	126	452.1	11.09	297	1,065.7	6.85
Dicrotendipes fumidus	5	17.9	0.44	23	82.5	0.53
Dicrotendipes lucifer	0	0.0	0.00	33	118.4	0.76
Paratendipes	10	35.9	0.88	0	0.0	0.00
Phaenopsectra flavipes	10	35.9	0.88	0	0.0	0.00
Phaenopsectra obediens	10	35.9	0.88	0	0.0	0.00
Polypedilum flavum	66	236.8	5.81	193	692.5	4.45
Polypedilum illinoense	20	71.8	1.76	57	204.5	1.31
Polypedilum scalaenum grp.	40	143.5	3.52	80	287.0	1.84
Stenochironomus	0	0.0	0.00	33	118.4	0.76
Stictochironomus	5	17.9	0.44	0	0.0	0.00
Rheotanytarsus	15	53.8	1.32	10	35.9	0.23
Simulium	2	7.2	0.18	0	0.0	0.00
TOTAL BENTHOS	1,136	4,076.1	100.00	4,338	15,565.1	100.00

WATERWAY= SKOKIE R.,
LOCATION= FRONTAGE RD.,
STATION= 105,
and DATE= 04AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	88	315.8	9.81	32	114.8	4.46
Turbellaria	13	46.6	1.45	19	68.2	2.65
Oligochaeta	144	516.7	16.05	147	527.4	20.47
Helobdella stagnalis	0	0.0	0.00	1	3.6	0.14
Mooreobdella microstoma	1	3.6	0.11	0	0.0	0.00
Ostracoda	0	0.0	0.00	30	107.6	4.18
Caecidotea	0	0.0	0.00	1	3.6	0.14
Gammarus	360	1,291.7	40.13	413	1,481.9	57.52
Argia	1	3.6	0.11	0	0.0	0.00
Procladius	6	21.5	0.67	0	0.0	0.00
Cricotopus sylvestris grp.	1	3.6	0.11	0	0.0	0.00
Chironomus	8	28.7	0.89	2	7.2	0.28
Dicrotendipes neomodestus	16	57.4	1.78	7	25.1	0.97
Dicrotendipes lucifer	63	226.0	7.02	20	71.8	2.79
Dicrotendipes simpsoni	26	93.3	2.90	21	75.3	2.92
Glyptotendipes	1	3.6	0.11	1	3.6	0.14
Parachironomus	10	35.9	1.11	1	3.6	0.14
Polypedilum halterale grp.	2	7.2	0.22	2	7.2	0.28
Polypedilum illinoense	2	7.2	0.22	0	0.0	0.00
Tanytarsus sepp	1	3.6	0.11	0	0.0	0.00
Physa	2	7.2	0.22	5	17.9	0.70
Helisoma	26	93.3	2.90	3	10.8	0.42
Ferrissia	59	211.7	6.58	9	32.3	1.25
Corbicula fluminea	67	240.4	7.47	4	14.4	0.56
TOTAL BENTHOS	897	3,218.5	100.00	718	2,576.2	100.00

WATERWAY= SKOKIE R., LOCATION= LAKE COOK RD., STATION= 32,
and DATE= 13JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	5	17.9	0.87
Oligochaeta	443	1,589.5	41.71	237	850.4	41.00
Helobdella stagnalis	2	7.2	0.19	0	0.0	0.00
Erpobdella punctata punctata	4	14.4	0.38	0	0.0	0.00
Mooreobdella microstoma	0	0.0	0.00	6	21.5	1.04
Caecidotea	66	236.8	6.21	20	71.8	3.46
Gammarus	69	247.6	6.50	30	107.6	5.19
Hydracarina	1	3.6	0.09	0	0.0	0.00
Baetis intercalaris	0	0.0	0.00	2	7.2	0.35
Cheumatopsyche	13	46.6	1.22	2	7.2	0.35
Procladius	0	0.0	0.00	5	17.9	0.87
Thienemannimyia grp.	19	68.2	1.79	3	10.8	0.52
Corynoneura lobata	38	136.3	3.58	8	28.7	1.38
Cricotopus bicinctus grp.	0	0.0	0.00	3	10.8	0.52
Cricotopus sylvestris grp.	10	35.9	0.94	0	0.0	0.00
Nanocladius distinctus	24	86.1	2.26	0	0.0	0.00
Nanocladius crassicornus/rectinervis	5	17.9	0.47	5	17.9	0.87
Rheocricotopus robacki	5	17.9	0.47	0	0.0	0.00
Chironomus	10	35.9	0.94	8	28.7	1.38
Cryptochironomus	24	86.1	2.26	5	17.9	0.87
Dicrotendipes modestus	5	17.9	0.47	3	10.8	0.52
Dicrotendipes neomodestus	72	258.3	6.78	41	147.1	7.09
Dicrotendipes fumidus	14	50.2	1.32	0	0.0	0.00
Dicrotendipes lucifer	29	104.1	2.73	11	39.5	1.90
Dicrotendipes simpsoni	34	122.0	3.20	51	183.0	8.82
Endochironomus nigricans	5	17.9	0.47	3	10.8	0.52
Glyptotendipes	0	0.0	0.00	8	28.7	1.38
Paralauterborniella nigrohalteralis	5	17.9	0.47	0	0.0	0.00
Paratendipes	24	86.1	2.26	19	68.2	3.29
Phaenopsectra flavipes	5	17.9	0.47	16	57.4	2.77
Phaenopsectra obediens	14	50.2	1.32	5	17.9	0.87
Polypedilum halterale grp.	0	0.0	0.00	5	17.9	0.87
Polypedilum illinoense	14	50.2	1.32	19	68.2	3.29
Polypedilum scalaenum grp.	10	35.9	0.94	5	17.9	0.87
Micropsectra	5	17.9	0.47	0	0.0	0.00
Paratanytarsus	72	258.3	6.78	19	68.2	3.29
Tanytarsus sepp	19	68.2	1.79	22	78.9	3.81
Physa	2	7.2	0.19	12	43.1	2.08
TOTAL BENTHOS	1,062	3,810.5	100.00	578	2,073.9	100.00

WATERWAY= W.B. DUPAGE R., LOCATION= LAKE ST., STATION= 64,
and DATE= 30JUN09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	725	2,601.4	20.19	0	0.0	0.00
Oligochaeta	820	2,942.2	22.84	471	1,690.0	50.54
Helobdella	0	0.0	0.00	1	3.6	0.11
Erpobdella punctata punctata	0	0.0	0.00	6	21.5	0.64
Caecidotea	65	233.2	1.81	9	32.3	0.97
Heptageniidae	5	17.9	0.14	0	0.0	0.00
Argia	0	0.0	0.00	8	28.7	0.86
Enallagma	0	0.0	0.00	2	7.2	0.21
Cheumatopsyche	160	574.1	4.46	0	0.0	0.00
Oecetis	0	0.0	0.00	1	3.6	0.11
Procladius	0	0.0	0.00	27	96.9	2.90
Thienemannimyia grp.	145	520.3	4.04	38	136.3	4.08
Thienemanniella xena	30	107.6	0.84	0	0.0	0.00
Cricotopus bicinctus grp.	15	53.8	0.42	0	0.0	0.00
Nanocladius distinctus	65	233.2	1.81	38	136.3	4.08
Nanocladius crassicornus/rectinervis	110	394.7	3.06	19	68.2	2.04
Chironomus	0	0.0	0.00	8	28.7	0.86
Cryptochironomus	30	107.6	0.84	4	14.4	0.43
Dicrotendipes simpsoni	15	53.8	0.42	4	14.4	0.43
Endochironomus nigricans	15	53.8	0.42	4	14.4	0.43
Glyptotendipes	160	574.1	4.46	38	136.3	4.08
Phaenopsectra obediens	0	0.0	0.00	15	53.8	1.61
Polypedilum fallax grp.	0	0.0	0.00	4	14.4	0.43
Polypedilum flavum	160	574.1	4.46	0	0.0	0.00
Polypedilum illinoense	915	3,283.1	25.49	223	800.1	23.93
Polypedilum scalaenum grp.	50	179.4	1.39	0	0.0	0.00
Cladotanytarsus mancus grp.	15	53.8	0.42	8	28.7	0.86
Paratanytarsus	30	107.6	0.84	0	0.0	0.00
Rheotanytarsus	15	53.8	0.42	0	0.0	0.00
Tanytarsus	15	53.8	0.42	4	14.4	0.43
Simulium	30	107.6	0.84	0	0.0	0.00
TOTAL BENTHOS	3,590	12,881.2	100.00	932	3,344.1	100.00

WATERWAY= W.F.N.B.C.R.,
LOCATION= DUNDEE RD.,
STATION= 106,
and DATE= 28JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	26	93.3	2.03	40	143.5	2.16
Turbellaria	137	491.6	10.69	360	1,291.7	19.40
Oligochaeta	9	32.3	0.70	72	258.3	3.88
Helobdella	1	3.6	0.08	0	0.0	0.00
Helobdella stagnalis	17	61.0	1.33	2	7.2	0.11
Mooreobdella microstoma	29	104.1	2.26	6	21.5	0.32
Caecidotea	585	2,099.0	45.63	692	2,483.0	37.28
Cheumatopsyche	137	491.6	10.69	158	566.9	8.51
Procladius	5	17.9	0.39	14	50.2	0.75
Ablabesmyia mallochi	0	0.0	0.00	4	14.4	0.22
Thienemannimyia grp.	54	193.8	4.21	66	236.8	3.56
Corynoneura lobata	0	0.0	0.00	4	14.4	0.22
Cricotopus sylvestris grp.	0	0.0	0.00	8	28.7	0.43
Chironomus	0	0.0	0.00	4	14.4	0.22
Cryptochironomus	26	93.3	2.03	14	50.2	0.75
Dicrotendipes neomodestus	159	570.5	12.40	22	78.9	1.19
Glyptotendipes	3	10.8	0.23	14	50.2	0.75
Polypedilum flavum	0	0.0	0.00	66	236.8	3.56
Polypedilum illinoense	0	0.0	0.00	66	236.8	3.56
Polypedilum scalaenum grp.	20	71.8	1.56	26	93.3	1.40
Stictochironomus	3	10.8	0.23	0	0.0	0.00
Micropsectra	0	0.0	0.00	8	28.7	0.43
Paratanytarsus	5	17.9	0.39	120	430.6	6.47
Tanytarsus glabrescens grp.	0	0.0	0.00	18	64.6	0.97
Physa	0	0.0	0.00	2	7.2	0.11
Ferrissia	14	50.2	1.09	22	78.9	1.19
Sphaerium	50	179.4	3.90	48	172.2	2.59
Pisidium	2	7.2	0.16	0	0.0	0.00
TOTAL BENTHOS	1,282	4,599.9	100.00	1,856	6,659.5	100.00

WATERWAY= W.F.N.B.C.R.,
LOCATION= GOLF RD.,
STATION= 103,
and DATE= 27JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	47	168.6	2.36	27	96.9	1.23
Turbellaria	3	10.8	0.15	27	96.9	1.23
Oligochaeta	263	943.7	13.23	147	527.4	6.68
Helobdella stagnalis	57	204.5	2.87	3	10.8	0.14
Erpobdella punctata punctata	10	35.9	0.50	3	10.8	0.14
Caecidotea	767	2,752.1	38.58	417	1,496.2	18.95
Gammarus	0	0.0	0.00	13	46.6	0.59
Metrobates	0	0.0	0.00	3	10.8	0.14
Trepobates	0	0.0	0.00	3	10.8	0.14
Cheumatopsyche	0	0.0	0.00	3	10.8	0.14
Tropisternus	0	0.0	0.00	3	10.8	0.14
Procladius	20	71.8	1.01	13	46.6	0.59
Corynoneura lobata	0	0.0	0.00	23	82.5	1.05
Thienemanniella xena	37	132.8	1.86	13	46.6	0.59
Cricotopus sylvestris grp.	0	0.0	0.00	13	46.6	0.59
Cryptochironomus	20	71.8	1.01	13	46.6	0.59
Dicrotendipes neomodestus	80	287.0	4.02	270	968.8	12.27
Dicrotendipes lucifer	37	132.8	1.86	160	574.1	7.27
Dicrotendipes simpsoni	0	0.0	0.00	110	394.7	5.00
Glyptotendipes	13	46.6	0.65	87	312.2	3.95
Parachironomus	7	25.1	0.35	13	46.6	0.59
Polypedilum fallax grp.	0	0.0	0.00	13	46.6	0.59
Polypedilum flavum	30	107.6	1.51	0	0.0	0.00
Polypedilum illinoense	20	71.8	1.01	47	168.6	2.14
Polypedilum scalaenum grp.	37	132.8	1.86	73	261.9	3.32
Paratanytarsus	460	1,650.5	23.14	503	1,804.8	22.86
Tanytarsus glabrescens grp.	0	0.0	0.00	13	46.6	0.59
Physa	20	71.8	1.01	77	276.3	3.50
Ferrissia	53	190.2	2.67	110	394.7	5.00
Sphaerium	7	25.1	0.35	0	0.0	0.00
TOTAL BENTHOS	1,988	7,133.1	100.00	2,200	7,893.8	100.00

WATERWAY= C.S.C., LOCATION= CICERO AVE.,
STATION= 59,
and DATE= 14JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	445	6,387.2	100.00	591	8,482.8	96.25
Caecidotea	0	0.0	0.00	1	14.4	0.16
Procladius	0	0.0	0.00	21	301.4	3.42
Corbicula fluminea	0	0.0	0.00	1	14.4	0.16
TOTAL BENTHOS	445	6,387.2	100.00	614	8,812.9	100.00

WATERWAY= C.S.S.C., LOCATION= CICERO AVE.,
STATION= 75,
and DATE= 20JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	1,772	25,434.0	97.52	159	2,282.2	96.36
Helobdella stagnalis	8	114.8	0.44	0	0.0	0.00
Erpobdella punctata punctata	1	14.4	0.06	0	0.0	0.00
Hyalella azteca	28	401.9	1.54	2	28.7	1.21
Gammarus	0	0.0	0.00	1	14.4	0.61
Procladius	7	100.5	0.39	0	0.0	0.00
Dicrotendipes simpsoni	0	0.0	0.00	1	14.4	0.61
Helisoma	0	0.0	0.00	1	14.4	0.61
Ferrissia	0	0.0	0.00	1	14.4	0.61
Sphaerium	1	14.4	0.06	0	0.0	0.00
TOTAL BENTHOS	1,817	26,079.9	100.00	165	2,368.3	100.00

WATERWAY= C.S.S.C., LOCATION= HARLEM AVE.,
STATION= 41,
and DATE= 21JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	5	71.8	0.23	0	0.0	0.00
Turbellaria	10	143.5	0.45	0	0.0	0.00
Oligochaeta	2,175	31,218.4	98.42	7,560	108,510.7	100.00
Helobdella stagnalis	5	71.8	0.23	0	0.0	0.00
Mooreobdella microstoma	5	71.8	0.23	0	0.0	0.00
Caecidotea	5	71.8	0.23	0	0.0	0.00
Dicrotendipes lucifer	5	71.8	0.23	0	0.0	0.00
TOTAL BENTHOS	2,210	31,720.7	100.00	7,560	108,510.7	100.00

WATERWAY= C.S.S.C., LOCATION= LOCKPORT,
STATION= 92,
and DATE= 16JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	2,740	39,328.0	99.67	2,282	32,754.2	99.61
Gammarus	0	0.0	0.00	3	43.1	0.13
Procladius	8	114.8	0.29	2	28.7	0.09
Cricotopus sylvestris grp.	0	0.0	0.00	2	28.7	0.09
Dicrotendipes modestus	0	0.0	0.00	2	28.7	0.09
Corbicula fluminea	1	14.4	0.04	0	0.0	0.00
TOTAL BENTHOS	2,749	39,457.1	100.00	2,291	32,883.3	100.00

WATERWAY= CALUMET R., LOCATION= 130TH ST.,
STATION= 55,
and DATE= 23JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	107	1,535.8	27.44	13	186.6	11.21
Cryptochironomus	0	0.0	0.00	1	14.4	0.86
Dicrotendipes neomodestus	1	14.4	0.26	0	0.0	0.00
Polypedilum halterale grp.	0	0.0	0.00	1	14.4	0.86
Dreissena polymorpha	167	2,397.0	42.82	72	1,033.4	62.07
Dreissena bugensis	115	1,650.6	29.49	29	416.2	25.00
TOTAL BENTHOS	390	5,597.8	100.00	116	1,665.0	100.00

WATERWAY= DES PLAINES R., LOCATION= LAKE COOK RD., STATION= 13,
and DATE= 10JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	1	14.4	0.53	0	0.0	0.00
Oligochaeta	24	344.5	12.63	74	1,062.1	66.67
Gammarus	1	14.4	0.53	10	143.5	9.01
Tricorythodes	0	0.0	0.00	4	57.4	3.60
Stylurus	0	0.0	0.00	2	28.7	1.80
Cheumatopsyche	20	287.1	10.53	1	14.4	0.90
Dubiraphia	0	0.0	0.00	4	57.4	3.60
Stenelmis	1	14.4	0.53	0	0.0	0.00
Procladius	0	0.0	0.00	2	28.7	1.80
Thienemannimyia grp.	5	71.8	2.63	0	0.0	0.00
Rheocricotopus robacki	3	43.1	1.58	0	0.0	0.00
Cryptochironomus	3	43.1	1.58	4	57.4	3.60
Microtendipes	5	71.8	2.63	0	0.0	0.00
Paracladopelma	31	445.0	16.32	0	0.0	0.00
Polypedilum halterale grp.	69	990.4	36.32	4	57.4	3.60
Cladotanytarsus vanderwulpi grp.	17	244.0	8.95	0	0.0	0.00
Rheotanytarsus	2	28.7	1.05	0	0.0	0.00
Sphaerium	8	114.8	4.21	1	14.4	0.90
Pisidium	0	0.0	0.00	5	71.8	4.50
TOTAL BENTHOS	190	2,727.1	100.00	111	1,593.2	100.00

WATERWAY= DES PLAINES R., LOCATION= MATERIAL SERVICE RD., STATION= 91,
and DATE= 09JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	1	14.4	0.19	5	71.8	0.13
Oligochaeta	469	6,731.7	87.66	1,175	16,865.1	31.04
Helobdella stagnalis	1	14.4	0.19	10	143.5	0.26
Caecidotea	0	0.0	0.00	5	71.8	0.13
Gammarus	1	14.4	0.19	5	71.8	0.13
Cheumatopsyche	6	86.1	1.12	40	574.1	1.06
Ceratopsyche morosa	0	0.0	0.00	5	71.8	0.13
Petrophila	1	14.4	0.19	0	0.0	0.00
Thienemanniella xena	0	0.0	0.00	25	358.8	0.66
Cricotopus bicinctus grp.	3	43.1	0.56	0	0.0	0.00
Cryptochironomus	1	14.4	0.19	0	0.0	0.00
Dicrotendipes neomodestus	11	157.9	2.06	25	358.8	0.66
Paratendipes	0	0.0	0.00	25	358.8	0.66
Polypedilum flavum	1	14.4	0.19	75	1,076.5	1.98
Polypedilum scalaenum grp.	11	157.9	2.06	75	1,076.5	1.98
Cladotanytarsus vanderwulpi grp.	1	14.4	0.19	0	0.0	0.00
Rheotanytarsus	18	258.4	3.36	1,980	28,419.5	52.31
Simulium	4	57.4	0.75	330	4,736.6	8.72
Corbicula fluminea	1	14.4	0.19	0	0.0	0.00
Sphaerium	5	71.8	0.93	0	0.0	0.00
Pisidium	0	0.0	0.00	5	71.8	0.13
TOTAL BENTHOS	535	7,679.0	100.00	3,785	54,327.1	100.00

WATERWAY= DES PLAINES R., LOCATION= OGDEN AVE., STATION= 22,
and DATE= 02JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	1	14.4	0.64	198	2,841.9	90.41
Caecidotea	1	14.4	0.64	3	43.1	1.37
Baetis intercalaris	1	14.4	0.64	0	0.0	0.00
Cheumatopsyche	117	1,679.3	74.52	1	14.4	0.46
Ceratopsyche morosa	10	143.5	6.37	0	0.0	0.00
Stenelmis	4	57.4	2.55	0	0.0	0.00
Procladius	0	0.0	0.00	2	28.7	0.91
Natarsia sp. A	0	0.0	0.00	2	28.7	0.91
Thienemannimyia grp.	2	28.7	1.27	2	28.7	0.91
Cricotopus bicinctus grp.	4	57.4	2.55	0	0.0	0.00
Rheocricotopus robacki	1	14.4	0.64	0	0.0	0.00
Cladopelma	0	0.0	0.00	1	14.4	0.46
Cryptochironomus	1	14.4	0.64	3	43.1	1.37
Polypedilum flavum	1	14.4	0.64	0	0.0	0.00
Polypedilum scalaenum grp.	7	100.5	4.46	4	57.4	1.83
Rheotanytarsus	2	28.7	1.27	0	0.0	0.00
Tanytarsus sepp	2	28.7	1.27	0	0.0	0.00
Corbicula fluminea	2	28.7	1.27	3	43.1	1.37
Pisidium	1	14.4	0.64	0	0.0	0.00
TOTAL BENTHOS	157	2,253.5	100.00	219	3,143.4	100.00

WATERWAY= HIGGINS CR.,
LOCATION= WILLE RD.,
STATION= 78,
and DATE= 29JUN09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	252	3,617.0	3.02	27	387.5	2.71
Oligochaeta	336	4,822.7	4.02	15	215.3	1.51
Erpobdella punctata punctata	6	86.1	0.07	11	157.9	1.10
Mooreobdella microstoma	2	28.7	0.02	0	0.0	0.00
Caecidotea	7,718	110,778.5	92.44	631	9,056.9	63.35
Gammarus	0	0.0	0.00	1	14.4	0.10
Thienemannimyia grp.	2	28.7	0.02	3	43.1	0.30
Cricotopus tremulus grp.	1	14.4	0.01	47	674.6	4.72
Cricotopus bicinctus grp.	23	330.1	0.28	224	3,215.1	22.49
Cricotopus trifascia grp.	2	28.7	0.02	0	0.0	0.00
Cricotopus sylvestris grp.	0	0.0	0.00	28	401.9	2.81
Chironomus	2	28.7	0.02	0	0.0	0.00
Cryptochironomus	1	14.4	0.01	0	0.0	0.00
Dicrotendipes neomodestus	1	14.4	0.01	0	0.0	0.00
Polypedilum illinoense	1	14.4	0.01	9	129.2	0.90
Micropsectra	1	14.4	0.01	0	0.0	0.00
Paratanytarsus	1	14.4	0.01	0	0.0	0.00
TOTAL BENTHOS	8,349	119,835.4	100.00	996	14,295.9	100.00

WATERWAY= L.C.R.,
LOCATION= HALSTED ST.,
STATION= 76,
and DATE= 30JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	13,010	186,736.0	99.69	2,762	39,643.7	98.64
Procladius	20	287.1	0.15	1	14.4	0.04
Thienemannimyia grp.	0	0.0	0.00	1	14.4	0.04
Nanocladius distinctus	0	0.0	0.00	1	14.4	0.04
Chironomus	0	0.0	0.00	9	129.2	0.32
Cryptochironomus	10	143.5	0.08	21	301.4	0.75
Dicrotendipes lucifer	0	0.0	0.00	3	43.1	0.11
Glyptotendipes	0	0.0	0.00	1	14.4	0.04
Ferrissia	0	0.0	0.00	1	14.4	0.04
Pisidium	10	143.5	0.08	0	0.0	0.00
TOTAL BENTHOS	13,050	187,310.2	100.00	2,800	40,189.2	100.00

WATERWAY= M.F.N.B.C.R.,
LOCATION= LAKE COOK RD.,
STATION= 31,
and DATE= 15JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	205	2,942.4	36.67	203	2,913.7	64.44
Helobdella stagnalis	15	215.3	2.68	4	57.4	1.27
Mooreobdella microstoma	17	244.0	3.04	15	215.3	4.76
Caecidotea	23	330.1	4.11	21	301.4	6.67
Cheumatopsyche	3	43.1	0.54	0	0.0	0.00
Tanypus	0	0.0	0.00	1	14.4	0.32
Procladius	0	0.0	0.00	18	258.4	5.71
Thienemannimyia grp.	3	43.1	0.54	0	0.0	0.00
Cricotopus bicinctus grp.	5	71.8	0.89	0	0.0	0.00
Cricotopus sylvestris grp.	7	100.5	1.25	0	0.0	0.00
Chironomus	23	330.1	4.11	0	0.0	0.00
Cryptochironomus	5	71.8	0.89	0	0.0	0.00
Dicrotendipes modestus	3	43.1	0.54	0	0.0	0.00
Dicrotendipes neomodestus	53	760.7	9.48	0	0.0	0.00
Paratendipes	23	330.1	4.11	5	71.8	1.59
Phaenopsectra flavipes	0	0.0	0.00	2	28.7	0.63
Phaenopsectra obediens	0	0.0	0.00	2	28.7	0.63
Polypedilum flavum	5	71.8	0.89	0	0.0	0.00
Polypedilum illinoense	65	933.0	11.63	0	0.0	0.00
Polypedilum scalaenum grp.	3	43.1	0.54	0	0.0	0.00
Paratanytarsus	73	1,047.8	13.06	0	0.0	0.00
Tanytarsus	0	0.0	0.00	1	14.4	0.32
Tanytarsus sepp	3	43.1	0.54	0	0.0	0.00
Physa	2	28.7	0.36	31	445.0	9.84
Ferrissia	1	14.4	0.18	0	0.0	0.00
Sphaerium	15	215.3	2.68	12	172.2	3.81
Pisidium	7	100.5	1.25	0	0.0	0.00
TOTAL BENTHOS	559	8,023.5	100.00	315	4,521.3	100.00

WATERWAY= N.B.C.R., LOCATION= ALBANY AVE., STATION= 96,
and DATE= 06AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	1	14.4	2.22	51	732.0	30.18
Mooreobdella microstoma	0	0.0	0.00	1	14.4	0.59
Caecidotea	15	215.3	33.33	64	918.6	37.87
Gammarus	2	28.7	4.44	5	71.8	2.96
Corynoneura lobata	2	28.7	4.44	0	0.0	0.00
Cricotopus bicinctus grp.	16	229.7	35.56	4	57.4	2.37
Chironomus	0	0.0	0.00	11	157.9	6.51
Cryptochironomus	0	0.0	0.00	4	57.4	2.37
Dicrotendipes neomodestus	1	14.4	2.22	0	0.0	0.00
Polypedilum scalaenum grp.	1	14.4	2.22	14	200.9	8.28
Tanytarsus	1	14.4	2.22	2	28.7	1.18
Ferrissia	6	86.1	13.33	5	71.8	2.96
Musculium	0	0.0	0.00	8	114.8	4.73
TOTAL BENTHOS	45	645.9	100.00	169	2,425.7	100.00

WATERWAY= N.B.C.R., LOCATION= DEMPSTER ST., STATION= 34,
and DATE= 05AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	2	28.7	12.50	922	13,233.7	95.45
Mooreobdella microstoma	0	0.0	0.00	15	215.3	1.55
Caecidotea	1	14.4	6.25	1	14.4	0.10
Gammarus	0	0.0	0.00	21	301.4	2.17
Nanocladius distinctus	0	0.0	0.00	1	14.4	0.10
Dicrotendipes neomodestus	10	143.5	62.50	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.10
Polypedilum scalaenum grp.	1	14.4	6.25	0	0.0	0.00
Simulium	1	14.4	6.25	0	0.0	0.00
Ferrissia	0	0.0	0.00	1	14.4	0.10
Corbicula fluminea	1	14.4	6.25	2	28.7	0.21
Musculium	0	0.0	0.00	2	28.7	0.21
TOTAL BENTHOS	16	229.7	100.00	966	13,865.3	100.00

WATERWAY= N.B.C.R., LOCATION= DIVERSEY PKWY., STATION= 73,
and DATE= 17AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	3,326	47,739.0	99.67	6,960	99,898.8	99.57
Procladius	3	43.1	0.09	0	0.0	0.00
Chironomus	2	28.7	0.06	0	0.0	0.00
Parachironomus	3	43.1	0.09	0	0.0	0.00
Polypedilum scalaenum grp.	0	0.0	0.00	10	143.5	0.14
Pisidium	3	43.1	0.09	20	287.1	0.29
TOTAL BENTHOS	3,337	47,896.9	100.00	6,990	100,329.4	100.00

WATERWAY= N.B.C.R., LOCATION= GLENVIEW RD., STATION= 104,
and DATE= 29JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	15	215.3	1.44	1	14.4	0.17
Turbellaria	11	157.9	1.06	0	0.0	0.00
Oligochaeta	438	6,286.7	42.16	195	2,798.9	33.56
Helobdella	5	71.8	0.48	0	0.0	0.00
Mooreobdella microstoma	6	86.1	0.58	14	200.9	2.41
Caecidotea	128	1,837.2	12.32	0	0.0	0.00
Gammarus	136	1,952.0	13.09	8	114.8	1.38
Procladius	0	0.0	0.00	1	14.4	0.17
Chironomus	0	0.0	0.00	2	28.7	0.34
Dicrotendipes neomodestus	112	1,607.6	10.78	62	889.9	10.67
Dicrotendipes lucifer	30	430.6	2.89	0	0.0	0.00
Paratendipes	5	71.8	0.48	7	100.5	1.20
Polypedilum flavum	8	114.8	0.77	0	0.0	0.00
Polypedilum scalaenum grp.	28	401.9	2.69	6	86.1	1.03
Tanytarsus sepp	2	28.7	0.19	0	0.0	0.00
Amnicola	0	0.0	0.00	229	3,286.9	39.41
Physa	0	0.0	0.00	4	57.4	0.69
Ferrissia	78	1,119.6	7.51	1	14.4	0.17
Corbicula fluminea	6	86.1	0.58	4	57.4	0.69
Musculium	29	416.2	2.79	47	674.6	8.09
Pisidium	1	14.4	0.10	0	0.0	0.00
Dreissena polymorpha	1	14.4	0.10	0	0.0	0.00
TOTAL BENTHOS	1,039	14,913.0	100.00	581	8,339.2	100.00

WATERWAY= N.B.C.R., LOCATION= GRAND AVE.,
STATION= 46,
and DATE= 17AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	880	12,630.9	98.32	153	2,196.1	83.61
Helobdella stagnalis	1	14.4	0.11	0	0.0	0.00
Procladius	4	57.4	0.45	7	100.5	3.83
Corbicula fluminea	0	0.0	0.00	10	143.5	5.46
Pisidium	10	143.5	1.12	13	186.6	7.10
TOTAL BENTHOS	895	12,846.2	100.00	183	2,626.6	100.00

WATERWAY= N.B.C.R., LOCATION= WILSON AVE.,
STATION= 37,
and DATE= 18AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	3	43.1	0.29	0	0.0	0.00
Oligochaeta	737	10,578.4	71.48	16,400	235,393.6	99.03
Ostracoda	1	14.4	0.10	0	0.0	0.00
Caecidotea	4	57.4	0.39	0	0.0	0.00
Hyalella azteca	2	28.7	0.19	0	0.0	0.00
Procladius	0	0.0	0.00	20	287.1	0.12
Corynoneura lobata	0	0.0	0.00	10	143.5	0.06
Thienemanniella xena	14	200.9	1.36	0	0.0	0.00
Cricotopus bicinctus grp.	0	0.0	0.00	10	143.5	0.06
Cricotopus sylvestris grp.	14	200.9	1.36	0	0.0	0.00
Chironomus	14	200.9	1.36	50	717.7	0.30
Cladopelma	0	0.0	0.00	30	430.6	0.18
Cryptochironomus	9	129.2	0.87	0	0.0	0.00
Dicrotendipes lucifer	14	200.9	1.36	10	143.5	0.06
Dicrotendipes simpsoni	18	258.4	1.75	0	0.0	0.00
Parachironomus	14	200.9	1.36	0	0.0	0.00
Polypedilum flavum	2	28.7	0.19	0	0.0	0.00
Polypedilum illinoense	2	28.7	0.19	0	0.0	0.00
Polypedilum scalaenum grp.	182	2,612.3	17.65	10	143.5	0.06
Paratanytarsus	0	0.0	0.00	20	287.1	0.12
Corbicula fluminea	1	14.4	0.10	0	0.0	0.00
TOTAL BENTHOS	1,031	14,798.2	100.00	16,560	237,690.1	100.00

WATERWAY= N.S.C., LOCATION= CENTRAL ST.,
STATION= 35,
and DATE= 21AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	1,311	18,817.1	92.85	1,259	18,070.8	83.05
Procladius	49	703.3	3.47	6	86.1	0.40
Chironomus	48	689.0	3.40	249	3,574.0	16.42
Dicrotendipes neomodestus	0	0.0	0.00	2	28.7	0.13
Pisidium	4	57.4	0.28	0	0.0	0.00
TOTAL BENTHOS	1,412	20,266.8	100.00	1,516	21,759.6	100.00

WATERWAY= N.S.C., LOCATION= FOSTER AVE.,
STATION= 101,
and DATE= 18AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	8,770	125,878.2	98.87	465	6,674.3	87.74
Thienemanniella xena	20	287.1	0.23	1	14.4	0.19
Nanocladius distinctus	0	0.0	0.00	1	14.4	0.19
Chironomus	60	861.2	0.68	2	28.7	0.38
Cryptochironomus	0	0.0	0.00	6	86.1	1.13
Dicrotendipes neomodestus	0	0.0	0.00	1	14.4	0.19
Dicrotendipes lucifer	0	0.0	0.00	10	143.5	1.89
Dicrotendipes simpsoni	20	287.1	0.23	5	71.8	0.94
Glyptotendipes	0	0.0	0.00	14	200.9	2.64
Parachironomus	0	0.0	0.00	4	57.4	0.75
Polypedilum flavum	0	0.0	0.00	1	14.4	0.19
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.19
Polypedilum scalaenum grp.	0	0.0	0.00	16	229.7	3.02
Micropsectra	0	0.0	0.00	1	14.4	0.19
Ferrissia	0	0.0	0.00	2	28.7	0.38
TOTAL BENTHOS	8,870	127,313.5	100.00	530	7,607.2	100.00

WATERWAY= N.S.C.,
LOCATION= OAKTON ST.,
STATION= 102,
and DATE= 19AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	12,660	181,712.4	98.98	3,400	48,801.1	95.77
Mooreobdella microstoma	0	0.0	0.00	10	143.5	0.28
Procladius	40	574.1	0.31	100	1,435.3	2.82
Cricotopus bicinctus grp.	10	143.5	0.08	10	143.5	0.28
Chironomus	30	430.6	0.23	0	0.0	0.00
Cladopelma	30	430.6	0.23	0	0.0	0.00
Cryptochironomus	10	143.5	0.08	0	0.0	0.00
Dicrotendipes simpsoni	10	143.5	0.08	0	0.0	0.00
Pisidium	0	0.0	0.00	30	430.6	0.85
TOTAL BENTHOS	12,790	183,578.3	100.00	3,550	50,954.1	100.00

WATERWAY= N.S.C.,
LOCATION= TOUHY AVE.,
STATION= 36,
and DATE= 19AUG09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	0	0.0	0.00	1	14.4	0.10
Oligochaeta	2,677	38,423.7	97.56	403	5,784.4	41.50
Caecidotea	0	0.0	0.00	5	71.8	0.51
Hyalella azteca	0	0.0	0.00	10	143.5	1.03
Procladius	2	28.7	0.07	5	71.8	0.51
Cricotopus bicinctus grp.	1	14.4	0.04	64	918.6	6.59
Cricotopus sylvestris grp.	0	0.0	0.00	11	157.9	1.13
Nanocladius distinctus	0	0.0	0.00	5	71.8	0.51
Chironomus	49	703.3	1.79	106	1,521.4	10.92
Cladopelma	2	28.7	0.07	16	229.7	1.65
Cryptochironomus	11	157.9	0.40	0	0.0	0.00
Dicrotendipes modestus	0	0.0	0.00	21	301.4	2.16
Dicrotendipes lucifer	0	0.0	0.00	37	531.1	3.81
Dicrotendipes simpsoni	0	0.0	0.00	101	1,449.7	10.40
Glyptotendipes	0	0.0	0.00	37	531.1	3.81
Parachironomus	1	14.4	0.04	143	2,052.5	14.73
Polypedilum illinoense	0	0.0	0.00	5	71.8	0.51
Polypedilum scalaenum grp.	1	14.4	0.04	0	0.0	0.00
Helisoma	0	0.0	0.00	1	14.4	0.10
TOTAL BENTHOS	2,744	39,385.4	100.00	971	13,937.0	100.00

WATERWAY= SALT CR.,
LOCATION= DEVON AVE.,
STATION= 18,
and DATE= 22JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	0	0.0	0.00	1	14.4	0.22
Oligochaeta	11	157.9	4.78	247	3,545.3	54.65
Erpobdella punctata punctata	0	0.0	0.00	1	14.4	0.22
Tricorythodes	4	57.4	1.74	0	0.0	0.00
Cheumatopsyche	21	301.4	9.13	0	0.0	0.00
Procladius	0	0.0	0.00	6	86.1	1.33
Thienemannimyia grp.	10	143.5	4.35	4	57.4	0.88
Chironomus	0	0.0	0.00	9	129.2	1.99
Cryptochironomus	64	918.6	27.83	70	1,004.7	15.49
Dicrotendipes neomodestus	35	502.4	15.22	51	732.0	11.28
Harnischia	2	28.7	0.87	0	0.0	0.00
Phaenopsectra obediens	2	28.7	0.87	0	0.0	0.00
Polypedilum scalaenum grp.	25	358.8	10.87	43	617.2	9.51
Stictochironomus	0	0.0	0.00	2	28.7	0.44
Cladotanytarsus mancus grp.	44	631.5	19.13	6	86.1	1.33
Tanytarsus	6	86.1	2.61	0	0.0	0.00
Tanytarsus sepp	4	57.4	1.74	0	0.0	0.00
Ferrissia	2	28.7	0.87	1	14.4	0.22
Corbicula fluminea	0	0.0	0.00	4	57.4	0.88
Sphaerium	0	0.0	0.00	7	100.5	1.55
TOTAL BENTHOS	230	3,301.3	100.00	452	6,487.7	100.00

WATERWAY= SKOKIE R.,
LOCATION= FRONTAGE RD.,
STATION= 105,
and DATE= 04AUG09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	1	14.4	0.59
Oligochaeta	518	7,435.0	90.24	125	1,794.2	73.96
Helobdella	1	14.4	0.17	0	0.0	0.00
Helobdella stagnalis	1	14.4	0.17	0	0.0	0.00
Mooreobdella microstoma	1	14.4	0.17	0	0.0	0.00
Ostracoda	2	28.7	0.35	1	14.4	0.59
Caecidotea	1	14.4	0.17	0	0.0	0.00
Gammarus	20	287.1	3.48	24	344.5	14.20
Procladius	3	43.1	0.52	3	43.1	1.78
Chironomus	15	215.3	2.61	7	100.5	4.14
Cladopelma	1	14.4	0.17	0	0.0	0.00
Cryptochironomus	3	43.1	0.52	0	0.0	0.00
Dicrotendipes neomodestus	3	43.1	0.52	0	0.0	0.00
Dicrotendipes lucifer	1	14.4	0.17	0	0.0	0.00
Polypedilum flavum	0	0.0	0.00	1	14.4	0.59
Polypedilum halterale grp.	0	0.0	0.00	1	14.4	0.59
Polypedilum scalaenum grp.	1	14.4	0.17	0	0.0	0.00
Tanytarsus	1	14.4	0.17	0	0.0	0.00
Corbicula fluminea	0	0.0	0.00	6	86.1	3.55
Pisidium	2	28.7	0.35	0	0.0	0.00
TOTAL BENTHOS	574	8,238.8	100.00	169	2,425.7	100.00

WATERWAY= SKOKIE R.,
LOCATION= LAKE COOK RD.,
STATION= 32,
and DATE= 13JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	171	2,454.4	44.53	289	4,148.1	80.28
Gammarus	8	114.8	2.08	0	0.0	0.00
Baetis intercalaris	1	14.4	0.26	0	0.0	0.00
Enallagma	1	14.4	0.26	0	0.0	0.00
Cheumatopsyche	2	28.7	0.52	1	14.4	0.28
Oecetis	1	14.4	0.26	0	0.0	0.00
Procladius	9	129.2	2.34	10	143.5	2.78
Thienemannimyia grp.	2	28.7	0.52	0	0.0	0.00
Cricotopus bicinctus grp.	2	28.7	0.52	0	0.0	0.00
Nanocladius distinctus	2	28.7	0.52	0	0.0	0.00
Chironomus	9	129.2	2.34	11	157.9	3.06
Cladopelma	0	0.0	0.00	1	14.4	0.28
Cryptochironomus	45	645.9	11.72	10	143.5	2.78
Dicrotendipes neomodestus	13	186.6	3.39	0	0.0	0.00
Dicrotendipes simpsoni	0	0.0	0.00	1	14.4	0.28
Endochironomus nigricans	2	28.7	0.52	0	0.0	0.00
Harnischia	0	0.0	0.00	1	14.4	0.28
Parachironomus	2	28.7	0.52	0	0.0	0.00
Paracladopelma	2	28.7	0.52	0	0.0	0.00
Paralauterborniella nigrohalteralis	29	416.2	7.55	12	172.2	3.33
Phaenopsectra obediens	4	57.4	1.04	0	0.0	0.00
Polypedilum scalaenum grp.	27	387.5	7.03	12	172.2	3.33
Stictochironomus	25	358.8	6.51	7	100.5	1.94
Rheotanytarsus	20	287.1	5.21	0	0.0	0.00
Tanytarsus sepp	7	100.5	1.82	3	43.1	0.83
Sphaerium	0	0.0	0.00	2	28.7	0.56
TOTAL BENTHOS	384	5,511.7	100.00	360	5,167.2	100.00

WATERWAY= W.B. DUPAGE R.,
LOCATION= LAKE ST.,
STATION= 64,
and DATE= 30JUN09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	212	3,042.9	39.92	593	8,511.5	90.81
Erpobdella punctata punctata	2	28.7	0.38	0	0.0	0.00
Caecidotea	1	14.4	0.19	0	0.0	0.00
Cheumatopsyche	3	43.1	0.56	0	0.0	0.00
Peltodytes	0	0.0	0.00	1	14.4	0.15
Procladius	3	43.1	0.56	17	244.0	2.60
Thienemannimyia grp.	15	215.3	2.82	1	14.4	0.15
Cricotopus tremulus grp.	3	43.1	0.56	0	0.0	0.00
Cricotopus bicinctus grp.	28	401.9	5.27	1	14.4	0.15
Cricotopus sylvestris grp.	8	114.8	1.51	0	0.0	0.00
Nanocladius distinctus	5	71.8	0.94	2	28.7	0.31
Rheocricotopus robacki	3	43.1	0.56	0	0.0	0.00
Chironomus	3	43.1	0.56	1	14.4	0.15
Cryptochironomus	23	330.1	4.33	5	71.8	0.77
Dicrotendipes modestus	3	43.1	0.56	1	14.4	0.15
Dicrotendipes lucifer	3	43.1	0.56	1	14.4	0.15
Glyptotendipes	3	43.1	0.56	0	0.0	0.00
Polypedilum flavum	8	114.8	1.51	0	0.0	0.00
Polypedilum illinoense	89	1,277.4	16.76	15	215.3	2.30
Polypedilum scalaenum grp.	58	832.5	10.92	0	0.0	0.00
Cladotanytarsus mancus grp.	5	71.8	0.94	8	114.8	1.23
Paratanytarsus	0	0.0	0.00	2	28.7	0.31
Simulium	43	617.2	8.10	0	0.0	0.00
Corbicula fluminea	8	114.8	1.51	5	71.8	0.77
Sphaerium	2	28.7	0.38	0	0.0	0.00
TOTAL BENTHOS	531	7,621.6	100.00	653	9,372.7	100.00

WATERWAY= W.F.N.B.C.R.,
LOCATION= DUNDEE RD.,
STATION= 106,
and DATE= 28JUL09

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	0	0.0	0.00	7	100.5	0.53
Turbellaria	0	0.0	0.00	5	71.8	0.38
Oligochaeta	32	459.3	2.78	183	2,626.6	13.92
Helobdella stagnalis	0	0.0	0.00	2	28.7	0.15
Erpobdella punctata punctata	0	0.0	0.00	1	14.4	0.08
Mooreobdella microstoma	22	315.8	1.91	70	1,004.7	5.32
Caecidotea	10	143.5	0.87	101	1,449.7	7.68
Coenagrionidae	0	0.0	0.00	1	14.4	0.08
Cheumatopsyche	18	258.4	1.56	2	28.7	0.15
Hydroptila	0	0.0	0.00	1	14.4	0.08
Oecetis	0	0.0	0.00	5	71.8	0.38
Procladius	3	43.1	0.26	36	516.7	2.74
Ablabesmyia mallochi	2	28.7	0.17	0	0.0	0.00
Thienemannimyia grp.	32	459.3	2.78	69	990.4	5.25
Thienemanniella xena	0	0.0	0.00	16	229.7	1.22
Cricotopus bicinctus grp.	0	0.0	0.00	12	172.2	0.91
Nanocladius crassicornus/rectinervis	0	0.0	0.00	12	172.2	0.91
Chironomus	0	0.0	0.00	4	57.4	0.30
Cryptochironomus	2	28.7	0.17	16	229.7	1.22
Dicrotendipes neomodestus	40	574.1	3.47	44	631.5	3.35
Dicrotendipes fumidus	0	0.0	0.00	8	114.8	0.61
Glyptotendipes	2	28.7	0.17	0	0.0	0.00
Harnischia	0	0.0	0.00	4	57.4	0.30
Phaenopsectra flavipes	2	28.7	0.17	0	0.0	0.00
Polypedilum flavum	32	459.3	2.78	85	1,220.0	6.46
Polypedilum illinoense	2	28.7	0.17	28	401.9	2.13
Polypedilum scalaenum grp.	12	172.2	1.04	32	459.3	2.43
Stictochironomus	0	0.0	0.00	4	57.4	0.30
Paratanytarsus	32	459.3	2.78	61	875.5	4.64
Tanytarsus glabrescens grp.	3	43.1	0.26	0	0.0	0.00
Simulium	0	0.0	0.00	10	143.5	0.76
Menetus	1	14.4	0.09	1	14.4	0.08
Sphaerium	739	10,607.1	64.15	485	6,961.3	36.88
Pisidium	166	2,382.6	14.41	10	143.5	0.76
TOTAL BENTHOS	1,152	16,535.0	100.00	1,315	18,874.5	100.00

APPENDIX A - 2009 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= W.F.N.B.C.R.,
LOCATION= GOLF RD.,
STATION= 103,
and DATE= 27JUL09

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	1	14.4	0.10	0	0.0	0.00
Oligochaeta	422	6,057.1	44.23	771	11,066.4	61.24
Helobdella stagnalis	1	14.4	0.10	2	28.7	0.16
Placobdella	1	14.4	0.10	0	0.0	0.00
Erpobdella punctata punctata	0	0.0	0.00	24	344.5	1.91
Mooreobdella microstoma	2	28.7	0.21	0	0.0	0.00
Caecidotea	8	114.8	0.84	62	889.9	4.92
Gammarus	0	0.0	0.00	5	71.8	0.40
Procladius	69	990.4	7.23	258	3,703.1	20.49
Cryptochironomus	98	1,406.6	10.27	11	157.9	0.87
Dicrotendipes neomodestus	123	1,765.5	12.89	25	358.8	1.99
Polypedilum illinoense	5	71.8	0.52	11	157.9	0.87
Polypedilum scalaenum grp.	191	2,741.5	20.02	54	775.1	4.29
Paratanytarsus	15	215.3	1.57	36	516.7	2.86
Tanytarsus	15	215.3	1.57	0	0.0	0.00
Ferrissia	1	14.4	0.10	0	0.0	0.00
Corbicula fluminea	1	14.4	0.10	0	0.0	0.00
Musculium	1	14.4	0.10	0	0.0	0.00
TOTAL BENTHOS	954	13,693.0	100.00	1,259	18,070.8	100.00