FINAL

A STUDY OF THE BENTHIC MACROINVERTEBRATE COMMUNITY IN SELECTED CHICAGO METROPOLITAN AREA WATERWAYS DURING 2010

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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 (NBCR), South Branch Chicago River and Chicago Sanitary and Ship Canal (SBCR and CSSC), Calumet River, Fox River, and Des Plaines River. Each of these watersheds is sampled on a four-year rotation. In addition to the target watersheds, a core group of stations throughout the District's service area is evaluated annually. Similar to the 2002 (EA 2004) and 2006 (EA 2010) program years, the 2010 benthic macroinvertebrate sampling targeted the SBCR and CSSC watershed. This report presents the study design and benthic macroinvertebrate data for the 2010 program years, which represents the second year of the third four-year study cycle.

2. METHODS

For the 2010 program year, benthic macroinvertebrates were monitored at 23 stations on 13 Chicago Metropolitan Area waterways. All stations were located in the Calumet River, North Branch of the Chicago River (NBCR), and South Branch of the Chicago River and Chicago Sanitary and Ship Canal (SBCR and CSSC), and Des Plaines River watersheds (Table 2-1). Of the 23 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	11-19 August
North Branch Chicago River	28 July – 10 August
SBCR and CSSC	23 July – 7 September
Des Plaines River	24 June – 22 July

Near-shore and mid-channel HD samples were collected from all stations during 2010.

Ponar grab samples were collected at the stations 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 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 22 of the 23 stations during 2010. Ponars could not be collected from Station 48 at Stephen Street on the CSSC.

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 (Al-Shami et al. 2010, 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.

RESULTS AND DISCUSSION

3.1 2010 Benthic Macroinvertebrate Results

During 2010, 46 HD samples and 43 Ponar samples were collected from 23 stations in 13 different waterways (Table 2-1). Combined, these samples yielded 104 total taxa and 15 EPT taxa (Table 3-1). Chironomidae was the most taxa rich group with 48 taxa followed by Ephemeroptera and Trichoptera with seven taxa each. 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 2010: one station in the Calumet River, one station in the Little Calumet River (LCR), and one station in the Calumet-Sag Channel (Cal-Sag) (Table 2-1).

Overall, quagga mussel (*Dreissena bugensis*) and Oligochaeta were abundant in most HD samples and dominated the Ponar collections from the Calumet watershed. Although chironomid deformities were restricted to a single station, the benthic community in the Calumet watershed largely consisted of tolerant taxa.

3.1.1.1 Calumet River

Combined, the HD and Ponar samples from the single station in the Calumet River (Station 55) yielded 20 total taxa and no EPT (Tables 3-2 and 3-3). Nine total taxa were observed in the HD samples while 17 total taxa were present in the Ponar samples. Due to the abundance of quagga mussels, total density in the HD samples was substantial higher than in the Ponar samples (Tables 3-2 and 3-3). Quagga mussel was the most abundant taxon in both sample types, representing over 90 and 45 percent of the total density in the HD and Ponar samples, respectively. Although introduced to the Great Lakes in 1993 (Nalepa et al. 2001) it has more recently colonized Lake Michigan. By the 2006 program year, quagga mussel had largely replaced zebra mussel (*Dreissena polymorpha*), which had been the dominant species at Station 55 in previous years (EA 2004, EA 2006, EA 2007, and EA 2010). Other common taxa observed in the Ponar samples included Oligochaeta, *Gammarus*, and zebra mussel (Table 3-3).

Chironomidae head capsule deformities were not observed in either the HD or Ponar samples. However, based on the relatively low taxa richness in both sample types, numerical dominance by relatively few taxa, the fact that tolerant taxa composed nearly 50 percent of the total density in the Ponars (Table 3-1), and tolerant taxa composed over a third of the total richness for sample

types combined, it is reasonable to characterize the benthic community at Station 55 in the Calumet River as moderately to highly stressed.

3.1.1.2 Little Calumet River (LCR)

The HD and Ponar samples from the single station in the LCR (Station 76) yielded 26 total taxa (Tables 3-4 and 3-5). No EPT taxa were collected at Station 76 in 2010. Total taxa richness in the HD samples was slightly higher compared to the Ponars with 19 and 12 taxa, respectively. Compared to the Calumet River HDs, abundance at Station 76 was more evenly distributed. *Gammarus* was the most abundant taxon; however, Turbellaria, Oligochaeta, *Dicrotendipes lucifer* and quagga mussel were also relatively common and similarly abundant (Table 3-4). In contrast, Oligochaeta was clearly the dominant taxon in the Ponars (Table 3-5). Primarily due to the abundance of Oligochaeta, Ponar total density was nearly five times higher than the total HD density.

Given that the samples were dominated by relatively few taxa, half of the taxa represented in the HD and Ponar samples combined are considered highly tolerant (Table 3-1), as well as the numerical and relative abundance of highly tolerant taxa, these results indicate that the Station 76 benthic assemblage is moderately to highly stressed.

3.1.1.3 Calumet-Sag Channel (Cal-Sag)

Together, the HD and Ponar samples from the single station (Station 59) in the Cal-Sag combined to yield 27 total taxa and one EPT taxon (Tables 3-6 and 3-7). The HD samples yielded 22 total taxa and one EPT taxon compared to seven total taxa and no EPT taxa in the Ponar samples. The highly tolerant taxon Oligochaeta (Table 3-1) was dominant in both sample types representing 72 and 95 percent to the total density in the HD and Ponar samples, respectively. However, the abundance of Oligochaeta resulted in Ponar total density being substantially higher than HD total density.

Chironomid head capsule deformities were observed in both the HD and Ponar samples at Station 59 (Tables 3-8 and 3-9). At one percent of the total midges examined, the incidence of deformities in the HD samples was low (Table 3-8). However, nine specimens from two taxa representing 12.5 percent of the total midges examined from the Ponar samples exhibited deformities (Table 3-9). The two Ponar taxa exhibiting deformities were *Procladius* and *Chironomus*. Several studies involving chironomid deformity analysis have included *Procladius* and *Chironomus* (Burt et al. 2003, Dermott 1991, Diggins and Stewart 1998, Madden et al. 1992, Warwick and Tisdale 1988, Warwick 1991, and Warwick 1992, among others). Despite the somewhat small sample size, nearly half of the 18 *Chironomus* examined from Station 59 were deformed whereas only one individual of *Procladius* was affected.

Although many researches advocate the need for 100 specimens or more of a particular target taxon in order to define statistical significance with deformity analysis (Hudson and Ciborowski 1996a), Lenat (1993) found that a minimum of 15 specimens was adequate for his analysis of *Chironomus* deformities in impacted and unimpacted streams of North Carolina. In the Great Lakes, three to five percent incidence of deformities has been considered representative of

background conditions for susceptible taxa (Dermott 1991, and 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). As such, the 44 percent incidence of deformity for *Chironomus* and 12.5 percent of all chironomids examined in the Ponar samples from Station 59 is substantially higher than published background levels for the Great Lakes.

Given the elevated level of chironomid deformities combined with the number of tolerant taxa (Table 3-1), low taxa richness in Ponar samples, as well as the fact that both sample types were dominated by Oligochaeta, it appears that the benthic community at Station 59 in the Cal-Sag is highly stressed.

3.1.2 North Branch Chicago River Watershed

Sampling was conducted at three stations in the North Branch Chicago River (NBCR) watershed during 2010: one station in the North Shore Channel (NSC) and two stations in the NBCR (Table 2-1).

Regardless of sample type, highly tolerant taxa dominated the 2010 NBCR watershed collections (Table 3-1). Chironomid head capsule deformities ranged from absent to elevated and were observed in both HD and Ponar samples from the watershed during 2010.

3.1.2.1 North Shore Channel (NSC)

The HD and Ponar samples from the single station in the NSC (Station 36) yielded 22 total taxa and one EPT taxon (Tables 3-10 and 3-11). Total richness was similar between sample types with 18 and 14 taxa in the HD and Ponar samples, respectively. Oligochaeta was the dominant taxon in both the HD and Ponar samples. In addition, all but two of the taxa observed in the Ponars are considered highly tolerant (Table 3-1). Total density in the Ponar samples was considerably higher than in the HD samples exclusively due to the abundance of Oligochaeta, which composed nearly 99 percent of the total density in the Ponar samples compared to 31 percent in the HDs.

Chironomid deformity incidence was restricted to a single specimen in the HD samples (Table 3-8). In contrast, two taxa, *Chironomus* and *Dicrotendipes fumidus*, exhibited deformities in the Ponar samples (Table 3-9). Both the incidence level for *Chironomus* (8.1 percent) and the total incidence (6.4 percent) are well above the respective background levels of 2.65 and 2.0 percent presented in the literature for the Great Lakes (Burt et al. 2003).

The elevated incidence of chironomid deformities in the Ponars, the number of highly tolerant taxa, and abundance of highly tolerant taxa in both sample types suggests that the benthic community at Station 36 in the NSC is highly stressed.

3.1.2.2 North Branch of the Chicago River (NBCR)

The combined number of taxa collected in the HD and Ponar samples from the two NBCR stations (Stations 96 and 46) was 39 total taxa (Tables 3-12 and 3-13). EPT taxa were not

observed at the NBCR stations in 2010. HD total taxa richness was slightly higher at the shallow upstream Station 96 (25 taxa) compared to the 18 taxa observed in the deep draft waters at Station 46 (Table 3-12). Highly tolerant taxa were the most abundant at each station and for each sample type (Table 3-1). The snail *Ferrissia* was the most abundant taxon in the Station 96 HD samples along with *Gammarus*. In the Station 46 HDs, Oligochaeta was most abundant while Turbellaria, *Hyalella azteca*, *Dicrotendipes lucifer*, and *D. simpsoni* also were relatively common. Due to the higher abundance of several taxa, total density was nearly three times higher at Station 46 compared to Station 96.

Unlike the HD samples, Ponar total taxa richness was similar between the two stations with 11 and 13 total taxa at Stations 96 and 46, respectively (Table 3-13). Oligochaeta was the dominant taxon in the Ponars from both stations but was considerably more abundant downstream at Station 46 where it accounted for nearly 99 percent of the total abundance. The abundance in Oligochaeta at Station 46 resulted in total density being six times higher than at the shallow upstream Station 96.

A single specimen of *Procladius* in the Station 46 Ponar samples accounted for the only deformity observed at the NBCR stations in 2010 (Table 3-9). With the small sample size and low level of overall incidence among the NBCR samples, it is unlikely that the single deformity observed is indicative of environmental stress. However, the abundance of tolerant taxa, low total Ponar richness, and lack of EPT taxa, suggests that the benthic community at both Stations 96 and 46 are moderately to highly stressed.

3.1.3 South Branch Chicago River and Chicago Sanitary and Ship Canal Watershed

In 2010, benthic macroinvertebrate sampling was conducted at 11 stations within the South Branch of the Chicago River (SBCR) and Chicago Sanitary and Ship Canal (CSSC) watershed: two stations in the Chicago River, two stations in the SBCR, one station in the South Fork of the South Branch of the Chicago River (SFSBCR), and six stations in the CSSC (Table 2-1). HD samples were collected from all 11 stations but Ponars were not collected at Station 48 on the CSSC.

Tolerant taxa were dominant at eight of the 11 HD sampling stations and all 10 Ponar sampling stations in the SBCR and CSSC watershed during 2010 (Table 3-1). In all but one of these instances, the tolerant taxon was Oligochaeta. Chironomid deformities were exhibited at seven of the 11 stations. In general, incidence was low at the majority of stations but noticeably elevated at three sampling stations in the watershed.

3.1.3.1 Chicago River

Together, the HD and Ponar samples from the two Chicago River stations (Stations 74 and 100) yielded 26 total and no EPT taxa (Tables 3-14 and 3-15). All 26 taxa observed at the Chicago River stations were collected in the HD samples. HD total taxa richness was similar at both stations with 20 total taxa at Station 74 and 17 total taxa at Station 100 (Table 3-14). Quagga mussel was the dominant taxon at Station 74 with 76 percent of the total density while Oligochaeta was the dominant taxon at Station 100 with 57 percent of the total density. The

abundance of quagga mussel at Station 74 resulted in substantially higher total density compared to Station 100.

Ponar total taxa richness was relatively low at both stations with seven and two taxa at Stations 74 and 100, respectively (Table 3-15). Oligochaeta was the dominant taxon in the Ponar samples representing over 95 percent of the total density at both stations. However, Oligochaeta was noticeably more abundant at Station 74, which resulted in an overall higher at total density compared to Station 100.

Although chironomid deformities were not observed in the 2010 Chicago River samples, based on low taxa richness, particularly in the Ponar samples, as well as the number and abundance of tolerant taxa (Table 3-1), it appears the benthic communities at both Chicago River stations are moderately to highly stressed.

3.1.3.2 South Branch of the Chicago River (SBCR)

The HD and Ponar samples from the two SBCR stations (Stations 39 and 108) yielded 30 combined total taxa and one EPT taxon (Tables 3-16 and 3-17). HD total richness was similar between the two stations with 23 taxa at Station 39 and 22 taxa at Station 108 (Table 3-16). The single EPT taxon, *Cyrnellus fraternus* was observed only at Station 108. Oligochaeta was the dominant taxon at both stations. Due to the abundance of several taxa, particularly Oligochaeta and *Caecidotea*, total density at Station 39 was nearly double the total density at Station 108.

Like the HD results, Ponar total richness was similar between the two stations with nine total taxa at Station 39 and eight taxa at Station 108 (Table 3-17). No EPT taxa were observed at either station. Oligochaeta was clearly the dominant taxon at both stations; however, Oligochaeta at Station 39 were twice as abundant compared to Station 108. As a result, total Ponar density at Station 39 was double the density observed at Station 108.

Chironomid head capsule deformities were observed in four taxa, two in each sample type, at Station 108 (Tables 3-8 and 3-9). The six specimens in the HD samples were the second highest number of affected specimens among the 2010 HD samples while the 13 affected specimens in the Ponar samples represented the second highest among all 2010 samples. Burt et al. (2003) reported baseline levels of incidence for Great Lakes populations of *Procladius* (2.73%), *Chironomus* (2.65%), and all taxa combined (2%) while Zhang (2008) calculated the baseline incidence for *Dicrotendipes* (2.3%) from the St. Clair River, Lake St. Clair, and Detroit River. Based on these values, the taxa and total incidence levels observed in the HD and Ponar samples from Station 108 exceeded published background levels.

The benthic community at both stations could be characterized as relatively pollution tolerant based on community composition and relative abundance of tolerant taxa (Table 3-1). Combined with the elevated incidence of chironomid deformities, it appears that the benthic community at each station is equally and moderately to highly stressed.

3.1.3.3 South Fork of the South Branch of the Chicago River (SFSBCR)

The benthic macroinvertebrate community in the SFSBCR at Station 99 was represented by 13 total taxa and two EPT taxa (Tables 3-18 and 3-19). Total richness was similar between sample types with seven taxa in the HD samples and eight taxa in the Ponars. The two EPT taxa collected from Station 99 were observed only in the HD samples. Oligochaeta was the dominant taxon in both sample types composing over 95 percent of the total density. However, Oligochaeta abundance was considerably higher in the Ponar samples compared to the HDs, which was reflected in the total density for each sample type.

Chironomid head capsule deformities were restricted to *Chironomus* collected in the Ponar samples at Station 99 (Table 3-9). Although the small sample size is problematic, it is notable that five of the six examined *Chironomus* were deformed. Further, the relatively low taxa richness and abundance of tolerant taxa in both the HD and Ponar samples (Table 3-1) indicate that the benthic community at Station 99 in the SFSBCR is highly stressed.

3.1.3.4 Chicago Sanitary and Ship Canal (CSSC)

During 2010, HD samples were collected at six stations and Ponars were collected at five stations in the CSSC (Stations 40, 75, 41, 42, 48, and 92) (Table 2-1). Ponar samples were not collected from Station 48 at Stephen Street or the side location at Station 42 (Route 83), during 2010. Combined, the HDs and Ponars yielded 39 total taxa and three EPT taxa (Tables 3-20 and 3-21). Among the taxa observed in the HD samples was the non-indigenous mottled fingernail clam, *Eupera cubensis* (Table 3-20). Native to southern United States coastal plain, *E. cubensis* was first reported from CSSC Stations 41, 92, and 42 in 2006 (Sneen et al. 2009 and EA 2010). The number of occurrences decreased from three collections in 2006 to zero in 2009 (EA 2010 and EA 2011). The 2010 collections represent the first occurrence of *E. cubensis* at Stations 75 and 48 in the CSSC.

HD total taxa richness ranged from 12 taxa at Station 41 to 20 taxa at Station 48 (Table 3-20). Total richness was lower among upstream Stations 40, 75, and 41 (average 14 taxa) but slightly higher at downstream Stations 42, 48, and 92 (average 19 taxa). EPT richness was represented by one or four taxa at Stations 42, 48, and 92 while none were observed at Stations 40, 75, and 41 (Table 3-20). Community composition and total density also varied longitudinally. Among the three upstream locations, total density was noticeably higher and largely driven by the tolerant taxon Oligochaeta, which was dominant at each station. Compared to upstream, downstream Oligochaeta abundance and total density were substantially lower while Turbellaria, the EPT taxon *Cyrnellus fraternus*, and the tolerant taxon *Dicrotendipes lucifer* were most abundant at Stations 42, 48, and 92, respectively.

Ponar total taxa richness was similarly low among the four upstream stations (six to eight taxa) and noticeably higher (14 taxa) at the furthest downstream Station 92 (Table 3-21). Oligochaeta was the dominant taxon at all five stations representing more than 95 percent of the total density. Total density was highest at Station 40, similar among Stations 75, 41, and 92, and lowest at Station 42. In all cases, density was solely driven by Oligochaeta abundance.

Chironomid head capsule deformities were observed in the HD samples at five of the six stations (Table 3-8) and in the Ponar samples at three of the five stations (Table 3-9). Among the HD samples from Stations 40, 75, 48, and 92, a single specimen of each affected taxon was malformed and levels were likely below background conditions. However, in the Station 41 HD samples, deformity incidence levels for an individual taxon (*Dicrotendipes lucifer*) as well as for total Chironomidae were the highest observed in 2010 and clearly above baseline values (Burt et al. 2003 and Zhang 2008). Sample size and the number of affected specimens among the Ponars were low at Stations 40 and 75 (Table 3-9). At Station 92, sample size and incidence for *Procladius* were elevated and both taxa and total incidence were slightly higher than baseline incidence levels (Dermott 1991, Hudson and Ciborowski 1996a, and Burt et al. 2003).

In 2010, the majority of the benthic samples collected in the CSSC were dominated by highly tolerant taxa (Table 3-1). However, longitudinal differences in measures of community quality were evident, especially among the HD samples. Based on total richness, EPT richness, and head capsule deformities, it appears that the benthic community in the CSSC is moderately to highly stressed, particularly among the upstream Stations 40, 75, and 41.

3.1.4 Des Plaines River Watershed

Six stations in the Des Plaines River watershed were surveyed during 2010: one station in the West Branch of the Du Page River (WBDPR), one station in Salt Creek, one station in Higgins Creek, and three stations in the Des Plaines River (Table 2-1).

Among the six stations in 2010, highly tolerant taxa were dominant or most abundant at five of the six Ponar stations. In contrast, tolerant taxa were dominant at only one of the HD sampling stations. Chironomidae capsule deformities were restricted to Ponar samples and incidence varied among the stations.

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 one EPT taxon in the HD and Ponar samples combined (Tables 3-22 and 3-23). Total HD taxa richness was higher than Ponar total richness with 34 taxa compared to the 23 taxa, respectively. Both the HDs and Ponars had among the highest total richness values, by sample type, during 2010. Although the single EPT taxon was collected only in the HD samples, Tanytarsini chironomids (e.g., *Cladotanytarsus* and *Rheotanytarsus*) were represented by four taxa in the HDs and Ponars. Tanytarsini midges are considered relatively pollution sensitive and are often absent or decrease in abundance with minor environmental stress (Ohio EPA 1988). However, the tolerant taxon Oligochaeta was similarly dominant in both the sample types and only the facultative taxon Turbellaria in the HDs and the tolerant taxa *Cricotopus bicinctus* grp. and *Chironomus* achieved more than five percent of the total density in the respective samples. Due to the abundance of Turbellaria and Oligochaeta, HD total density was more three times higher than the Ponars.

A single taxon in the Ponar samples exhibited deformities at Station 64 (Table 3-9). Six of 55 *Chironomus* specimens and 3.2 percent of all midges examined had deformities. Although the

sample size was not especially robust, the incidence levels are higher than background thresholds by taxa and for taxa combined in the Great Lakes region (Dermott 1991, Hudson and Ciborowski 1996a, and Burt et al. 2003). Despite the relatively high total richness and presence of less tolerant Tanytarsini, the incidence of deformities and lack of EPT in the Ponar samples and the abundance of tolerant Oligochaeta in both sample types suggests that the benthic community at Station 64 was moderately stressed in 2010.

3.1.4.2 Salt Creek

HD and Ponar samples from the single station in Salt Creek (Station 18) yielded 32 total taxa and four EPT taxa (Tables 3-24 and 3-25). The HD samples produced 24 total taxa and three EPT taxa while Ponar total and EPT richness were similar with 19 and three taxa, respectively. The relatively intolerant EPT taxon *Cheumatopsyche* was most abundant in the HDs along with the facultative taxa Turbellaria and *Polypedilum flavum* and the tolerant taxon Oligochaeta. In contrast, Oligochaeta was the most abundant taxon in the Ponars along with the less tolerant taxon *Tanytarsus*. Despite differences in abundant taxa at each station, total density in the HD and Ponar samples were similar.

No chironomid deformities were observed in the Salt Creek samples. As with the WBDPR, results from the 2010 Salt Creek samples were mixed. Total richness in the HDs was lower and tolerant taxa were abundant in both sample types (Table 3-1), which suggests some degree of environmental stress is affecting the benthic community. However, the lack of deformities, abundance of EPT taxa in the HDs, presence of three EPT taxa in the Ponars, and abundance of environmentally sensitive Tanytarsini midge taxa indicates the benthic community at Station 18 in Salt Creek was slightly to moderately stressed in 2010.

3.1.4.3 Higgins Creek

The benthic macroinvertebrate community in Higgins Creek at Station 78 was represented by eight total taxa and no EPT taxa (Tables 3-26 and 3-27). The HD and Ponar samples yielded five and seven total taxa, respectively. The HD and combined total richness at Station 78 were the lowest observed among all stations in 2010. The facultative taxon *Caecidotea* was dominant in both sample types along with Turbellaria. The abundance of these two taxa resulted in higher total Ponar density compared to HD density.

Of particular note was the absence of Chironomidae from the HD and Ponar samples. Since Chironomidae are typically among the most diverse groups in the Chicago Area Waterways, the lack of midges from the samples likely reduced total richness substantially. Although the exact reason Chironomidae were apparently rare at Station 78 in 2010 is not entirely known, one contributing factor may have been the extreme abundance of *Caecidotea* and Turbellaria, which may be indicative of recent environmental stress or may have directly precluded midges from the sampling area in Higgins Creek. Regardless, the low total richness, lack of EPT, and absence of a typical benthic community component suggests that Higgins Creek at Station 78 was highly stressed in 2010.

3.1.4.4 Des Plaines River

Combined, the HD and Ponar samples from the three Des Plaines River stations (Stations 13, 22, and 91) yielded 70 total taxa and 14 EPT taxa (Tables 3-28 and 3-29). These were the highest total and EPT richness values observed among all the waterways sampled in 2010. HD total taxa richness decreased longitudinally upstream to downstream among the three stations from 34 taxa at Station 13 to 17 taxa at Station 91 (Table 3-28). Likewise, EPT taxa richness was highest at the upstream Station 13 with nine taxa compared to six and four EPT taxa at the two downstream Stations 22 and 91, respectively. The HD richness values observed at Station 13 were the highest observed among all the stations sampled during 2010. Station 13 also exhibited the most community balance among the HD samples. Although Turbellaria was the most abundant taxon at Station 13, four relatively intolerant taxa, including three EPT taxa (*Cheumatopsyche*, *Maccaffertium integrum*, and *Baetis intercalaris*) and the Tanytarsini midge *Rheotanytarsus* were among the five most abundant taxa. *Cheumatopsyche* and *Polypedilum flavum* were the most abundant taxa at Stations 22 and 91 along with the tolerant taxon *Cricotopus bicinctus* grp. (Station 22) and Turbellaria (Station 91). Total density at each of the stations was variable being highest at Station 91, moderate at Station 13, and lowest at Station 22. The abundance of several taxa resulted in total density differences among the three stations.

As with the HD samples, Ponar total and EPT taxa richness was highest at Station 13 (Table 3-29). Total richness was similar among the three stations while EPT richness decreased from upstream to downstream. Unlike the HDs, the tolerant taxon Oligochaeta was most abundant at each of the three Ponar stations. Other relatively common taxa included the EPT taxon *Tricorythodes* and chironomid *Microtendipes* at Station 13, the chironomids *Theinemannimyia* grp. and *Polypedilum scalaenum* grp at Station 22, and the tolerant *Chironomus* and facultative and *Dicrotendipes neomodestus* at Station 91. Total density was similar among the stations and like the HD samples was driven by the abundance of several taxa at each station.

Chironomidae head capsule deformities were observed in the Ponar samples from Station 22 and 91 (Table 3-9). The small sample size at Station 22 makes any conclusions problematic. However, the low total incidence suggests that the deformities at Station 22 are below background conditions (Dermott 1991, Hudson and Ciborowski 1996a, and Burt et al. 2003). In contrast, with a larger sample size at Station 91, the incidence levels for Chironomus appear to exceed published baseline values while the total incidence was equal to background conditions.

Overall, the 2010 Des Plaines River benthic community generally appeared to be of better quality relative to other waterways within the District's service area. Total and EPT richness were the highest or among the highest observed and relatively pollution sensitive taxa represented a major component of the fauna, particularly in the HD samples. Despite these positive community attributes, all three stations appear to be affected by varying degrees and/or types of environmental stress that increase longitudinally from Station 13 to Station 91.

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FIGURES

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

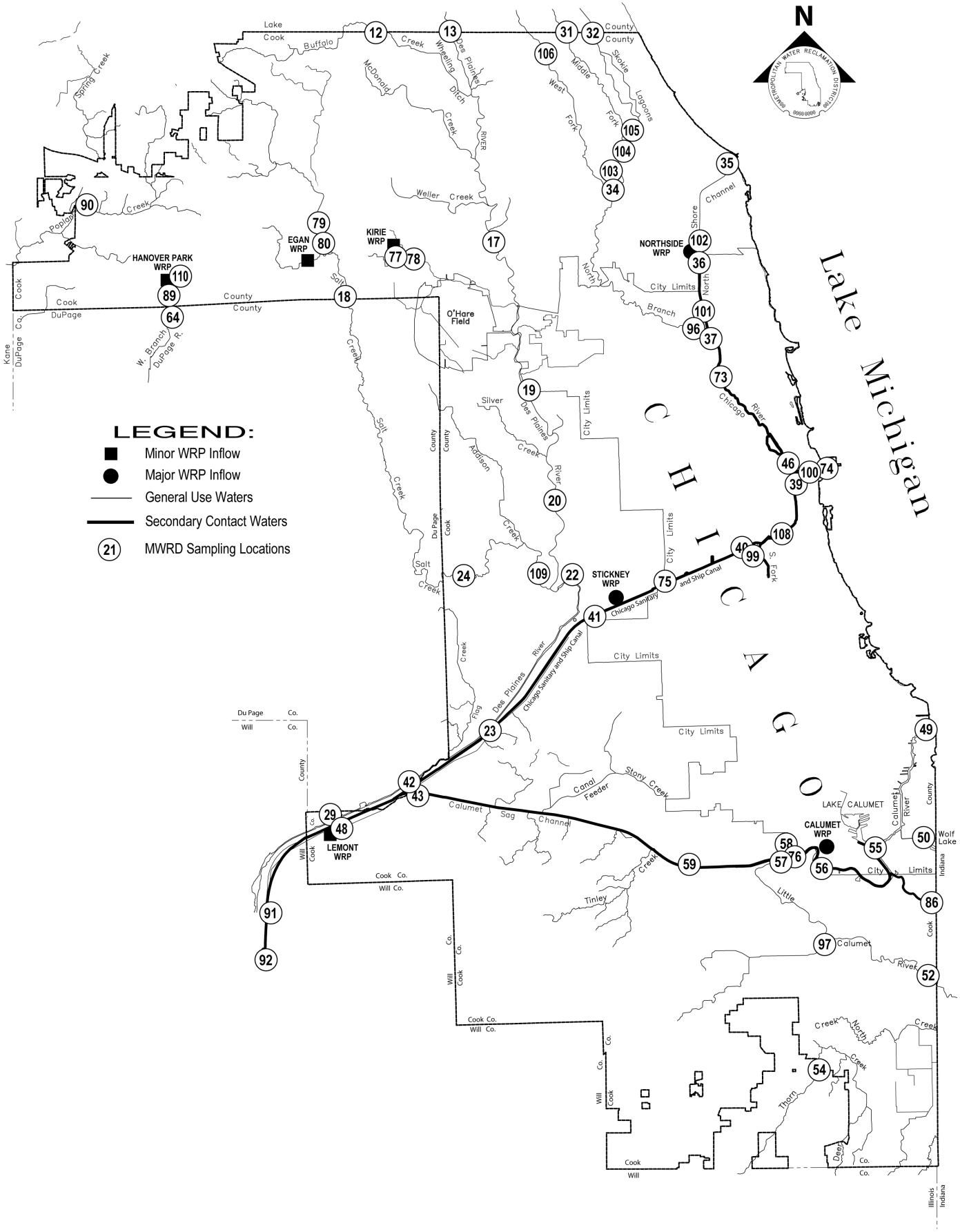


Figure 2-2. Hester-Dendy sampling array.

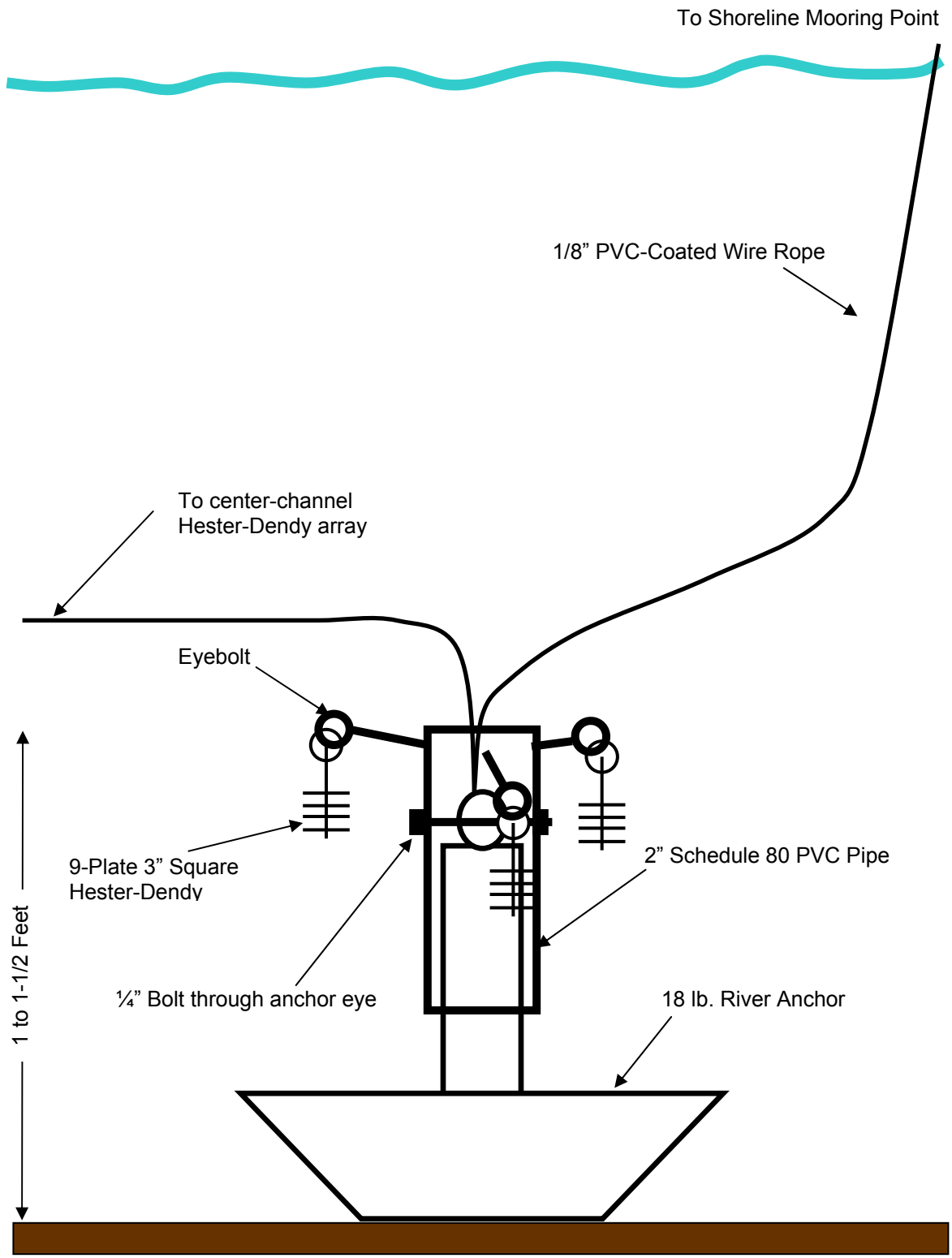
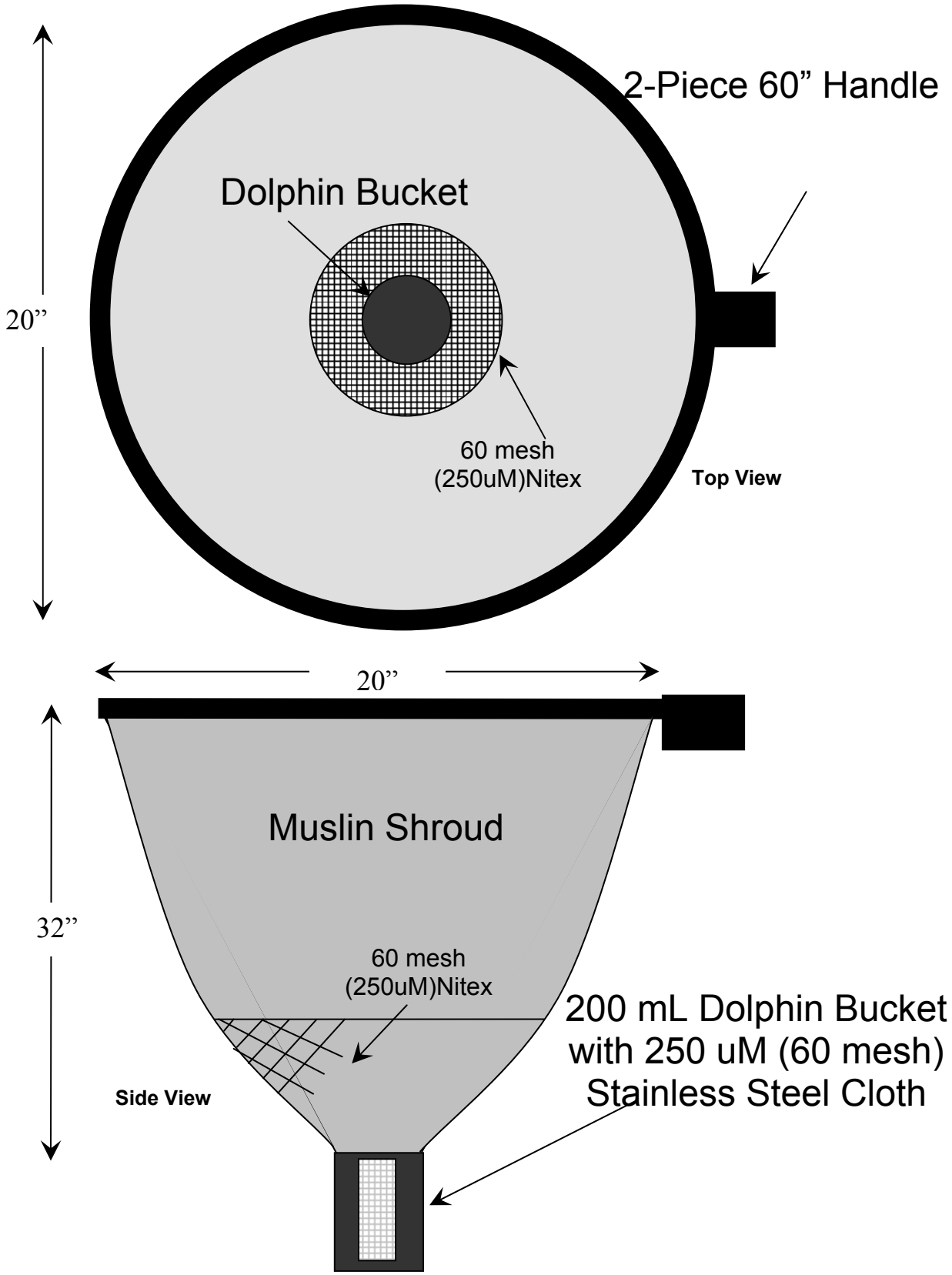


Figure 2-3. Dipnet for Hester-Dendy sampler retrieval.



TABLES

Table 2-1. Description of benthic macroinvertebrate monitoring stations sampled during 2010. Stations arranged by major watershed, upstream to downstream within each waterway. Highlighted stations were sampled every year from 2001 to 2010.

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 at center channel**
	76- Halsted St.	**Little Calumet River**	**41° 39' 25.9"N 87° 38' 27.3"W**	**75' upstream of Halsted St. (15' from south bank and at center channel)**
	59- Cicero Ave.	**Calumet-Sag Channel**	**41° 59' 19.4"N 87° 44' 15.6"W**	**75' upstream of Cicero Ave. (20' from north bank and at center channel)**
North Branch Chicago River	**36- Touhy Ave.**	**N. Shore Channel**	**42° 00' 43.7"N 87° 42' 37.2"W**	**40' upstream of Touhy Ave. (15' from east bank and at 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 at center channel)**
	46- Grand Ave.	**N. Branch Chicago R.**	**41° 53' 29.16"N 87° 38' 29.29"W**	**25' upstream of Grand Ave. (40' from east bank and at center channel)**
SBCR and CSSC (1)	74- Lake Shore Dr. (Outer Drive)	Chicago R.	41° 53' 19.9"N 87° 36' 48.6"W	50' upstream of Lake Shore Dr. (5' from north bank and at center channel)
	100- Wells St.	Chicago R.	41° 53' 16"N 87° 38' 1.2"W	40' upstream of Wells St. (30' from south bank and at center channel)
	39- Madison St.	S. Branch Chicago R.	41° 52' 55.4"N 87° 38' 18.7"W	40' upstream of Madison St. (30' from west bank and at center channel)
	108- Loomis St.	S. Branch Chicago R.	41° 50' 47.3"N 87° 39' 37.1"W	50' upstream of Loomis St. (10' from north bank and at center channel)
	99- Archer Ave.	S. Fork S. Branch Chicago River	41° 50' 18.4"N 87° 39' 50.5"W	30' upstream of Archer Ave. (20' from west bank and at center channel)

(1) SBCR=South Branch of the Chicago River, CSSC= Chicago Sanitary and Ship Canal

Table 2-1 - Continued

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
SBCR and CSSC [1]	40- Damen Ave.	Chicago Sanitary and Ship Canal	41° 50' 31.9"N 87°40' 31.1"W	40' upstream of Damen Ave. (40' from north bank and at center channel)
	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 at 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 at center channel)**
	42- Rt. 83	Chicago Sanitary and Ship Canal	41° 42' 29.5"N 87° 55' 38.6"W	4000' upstream of Rt. 83 (5' from south bank and at center channel)
	48- Stephen St.	Chicago Sanitary and Ship Canal	41° 41.127'N 87° 58.862'W	1.1 miles upstream of Stephen St. (10' from west bank and at center channel)
	92- Lockport (16th St.)	**Chicago Sanitary and Ship Canal**	**41° 34' 59.2"N 88° 04' 8.7"W**	**75' upstream of former Division St. bridge location (20' from west bank and at center**
Des Plaines River	**64- Lake St.**	**W Branch Du Page R.**	**41° 58'43.1"N 88° 07' 59.4"W**	**125' upstream of Lake St. (5' from west bank and at center channel)**
	18- Devon Ave.	**Salt Cr.**	**41° 59'34.6"N 87° 59' 42.9"W**	**200' feet upstream of Devon Ave. (10' from west bank and at 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 at center**
	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 at center channel)**
	22- Ogden Ave.	**Des Plaines R.**	**41° 49'14.4"N 87° 48' 38.2"W**	**200' upstream of Ogden Ave. (15' from east bank and at center channel)**
	91- Material Service Rd.	**Des Plaines R.**	**41° 35' 29.3"N 88° 4' 8.30"W**	**20-30' downstream of Material Service Rd. (20' from east bank and at center channel)**

(1) SBCR=South Branch of the Chicago River, CSSC= Chicago Sanitary and Ship Canal

Table 3-1. List of benthic macroinvertebrate taxa collected in Hester-Dendy and Ponar samples from several Chicago Metropolitan Area waterways during the similar program years 2002, 2006, and 2010 (EA 2004 and 2010). Underlined taxa are those considered to be highly tolerant based on literature sources.

Taxa	HD 2002	Ponar 2002	HD 2006	Ponar 2006	HD 2010	Ponar 2010
COELENTERATA (Hydroids)						
Hydra	X	X	X	X	X	X
PLATYHELMINTHES (Flat worms)						
Turbellaria	X	X	X	X	X	X
NEMERTEA (Proboscis Worms)			X			
ECTOPROCTA (Bryozoans)						
Plumatella	X	X	X			
ANNELLIDA						
Oligochaeta (Aquatic Worms)	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	X
Helobdella stagnalis	X	X	X	X	X	X
Helobdella triserialis	X		X	X		
Placobdella [1]	X					
Placobdella nuchalis					X	
Haemopis					X	X
Erpobdella punctata punctata		X			X	X
Erpobdella microstoma	X	X	X	X	X	X
CRUSTACEA						
Ostracoda (Seed Shrimp)			X	X		
Isopoda (Sow Bugs)						
Caecidotea	X	X	X	X	X	X
Amphipoda (Side Swimmers)						
Hyalella azteca			X		X	X
Gammarus [1]		X[1]	X	X	X	X
Gammarus fasciatus	X	X				
Echinogammarus ischusa			X	X	X	X
Decapoda (Crayfish)						
Orconectes [1]			X[1]	X	X	
Orconectes immunis			X			
Orconectes virilis		X				
Procambarus					X	
ARACHNOIDEA						
Hydracarina (Water Mites)			X		X	
INSECTA						
Ephemeroptera (Mayflies)						
Isonychia	X					
Baetis intercalaris	X	X	X	X	X	X
Heptagenia	X					

Table 3-1 (cont.)

Taxa	HD 2002	Ponar 2002	HD 2006	Ponar 2006	HD 2010	Ponar 2010
Ephemeroptera (cont.)						
Leucrocuta	X		X			
Maccaffertium integrum	X		X		X	
Maccaffertium terminatum	X				X	X
Stenacron	X		X	X	X	
Tricorythodes	X	X	X	X	X	X
Caenis			X	X		
Anthopotamus myops grp.						X
Hexagenia bilineata		X				
Ephoron [1]				X		
Ephoron album						X
Odonata (Damselflies and Dragonflies)						
Argia	X		X	X	X	
Enallagma	X		X	X	X	X
Aeshna					X	
Boyeria vinosa			X			
Stylurus				X		
Somatochlora	X					
Hemiptera (True Bugs)						
Trepobates	X					
Corixidae	X	X				
Trichoptera (Caddisflies)						
Cyrnellus fraternus	X		X		X	
Hydropsychidae[1]		X[1]				
Ceratopsyche morosa	X		X		X	
Cheumatopsyche	X	X	X	X	X	X
Hydropsyche	X		X			
Hydropsyche betteni	X		X			
Hydropsyche bidens	X		X		X	
Hydropsyche orris	X		X			
Hydropsyche simulans	X		X	X	X	
Potamyia flava	X	X				X
Hydroptila	X		X	X		
Nectopsyche			X		X	X
Oecetis						X
Lepidoptera (Aquatic Moths)						
Petrophila	X					
Coleoptera (Beetles)						
Copelatus	X					
Laccophilus maculosus	X					
Peltodytes					X	
Dubiraphia		X	X	X		X
Macronychus glabratus	X		X	X	X	X
Stenelmis	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	HD 2002	Ponar 2002	HD 2006	Ponar 2006	HD 2010	Ponar 2010
Coleoptera (cont.)						
Tropisternus	X					
Diptera (True Flies)						
Ceratopogonidae			X	X	X	X
Hemerodromia			X			
Pericoma					X	X
Simulium			X	X	X	
Tipula	X					X
Chironomidae (Midges)[1]	X[1]	X[1]				
Alotanypus			X			
Clinotanypus						X
Coelotanypus		X		X		
Procladius	X	X	X	X	X	X
Tanypus						X
Ablabesmyia annulata				X		
Ablabesmyia janta	X	X	X	X	X	
Ablabesmyia mallochi	X	X	X	X	X	X
Labrundinia					X	
Nilotanypus fimbriatus	X					
Thienemannimyia grp.	X	X	X	X	X	X
Corynoneura [1]			X			
Corynoneura lobata					X	
Cricotopus bicinctus grp.	X	X	X	X	X	X
Cricotopus sylvestris grp.	X	X	X	X	X	X
Cricotopus tremulus grp.	X	X	X	X	X	
Cricotopus trifascia grp.	X	X		X		
Heterotrissocladius	X		X			
Mesosmittia					X	X
Nanocladius [1]			X[1]			
Nanocladius crassicornus/rectinervis	X		X	X	X	
Nanocladius distinctus	X	X	X	X	X	X
Parakiefferiella						X
Rheocricotopus robacki	X		X	X	X	
Thienemanniella lobapodema			X	X		
Thienemanniella similis			X	X	X	X
Thienemanniella xena	X		X	X	X	X
Chironomus	X	X	X	X	X	X
Cladopelma	X		X	X	X	X
Cryptochironomus	X	X	X	X	X	X
Cryptotendipes			X			X
Dicrotendipes fumidus			X	X	X	X
Dicrotendipes lucifer			X	X	X	X
Dicrotendipes modestus			X	X		
Dicrotendipes neomodestus	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	HD 2002	Ponar 2002	HD 2006	Ponar 2006	HD 2010	Ponar 2010
Chironomidae (cont.)						
Dicrotendipes simpsoni	X	X	X	X	X	X
Endochironomus nigricans			X	X	X	
Glyptotendipes	X	X	X	X	X	X
Harnischia			X	X		
Microchironomus	X		X			
Microtendipes		X	X	X		X
Parachironomus	X	X	X	X	X	X
Paracladopelma		X			X	X
Paralauterborniella nigrohalteralis						X
Paratendipes			X	X	X	X
Phaenopsectra obediens			X	X	X	X
Phaenopsectra punctipes			X			
Polypedilum fallax grp.	X		X		X	
Polypedilum flavum	X	X	X	X	X	X
Polypedilum halterale grp.	X	X	X	X	X	X
Polypedilum illinoense	X	X	X	X	X	X
Polypedilum scalaenum grp.	X	X	X	X	X	X
Pseudochironomus			X	X		
Stenochironomus	X		X		X	
Stictochironomus			X	X		X
Tribelos jucundum			X			
Xenochironomus xenolabis	X		X		X	
Cladotanytarsus mancus grp.	X	X	X	X	X	X
Cladotanytarsus vanderwulpi grp.			X	X	X	X
Micropsectra	X					
Paratanytarsus	X	X	X	X	X	X
Rheotanytarsus	X		X	X	X	X
Tanytarsus	X	X	X	X	X	X
Tanytarsus glabrescens grp.		X	X		X	
Tanytarsus sepp	X		X			
GASTROPODA (Snails)						
Ferrissia	X	X	X	X	X	X
Amnicola		X		X	X	X
Physa	X		X	X	X	X
Helisoma			X	X		
Menetus	X			X	X	
Pleurocera			X	X		X
PELECYPODA (Mussels and Clams)						
Corbicula fluminea	X	X	X	X	X	X
Dreissena bugensis			X	X	X	X
Dreissena polymorpha	X	X	X	X	X	X
Eupera cubensis			X		X	
Sphaerium						X
Musculium	X	X	X	X		X

Table 3-1 (cont.)

Taxa	HD 2002	Ponar 2002	HD 2006	Ponar 2006	HD 2010	Ponar 2010
PELECYPODA (cont.)						
Pisidium			X	X		X
Pisidium nitidum		X				
Leptodea fragilis						X
TOTAL RICHNESS	81	50	103	80	86	76
EPT RICHNESS	18	5	16	8	11	9
TOTAL RICHNESS BY YEAR	90		110		104	
EPT RICHNESS BY YEAR	19		17		15	

[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.

TABLE 3-2. HESTER-DENDY DENSITIES AT SAMPLING STATION 55 WITHIN THE CALUMET RIVER, AUGUST 2010.

TAXA	55 130TH ST. #/m2	%
Oligochaeta	897.0	0.35
Gammarus	1,614.6	0.63
Ablabesmyia mallochi	179.4	0.07
Nanocladius distinctus	358.8	0.14
Dicrotendipes neomodestus	179.4	0.07
Dicrotendipes lucifer	179.4	0.07
Dicrotendipes simpsoni	358.8	0.14
Dreissena polymorpha	18,478.7	7.23
Dreissena bugensis	233,405.1	91.30
TOTAL BENTHOS	255,651.2	100.00
TOTAL TAXA RICHNESS	9	
EPT TAXA RICHNESS	0	

TABLE 3-3. PETITE PONAR DENSITIES AT SAMPLING STATION 55 WITHIN THE CALUMET RIVER, AUGUST 2010.

TAXA	55 130TH ST. #/m2	%
Turbellaria	7.2	0.14
Oligochaeta	2,231.9	42.72
Caecidotea	7.2	0.14
Gammarus	172.2	3.30
Echinogammarus ischusa	35.9	0.69
Tanypus	7.2	0.14
Procladius	64.6	1.24
Ablabesmyia mallochi	7.2	0.14
Cricotopus bicinctus grp.	7.2	0.14
Parakiefferiella	64.6	1.24
Cryptochironomus	21.5	0.41
Dicrotendipes neomodestus	7.2	0.14
Dicrotendipes fumidus	28.7	0.55
Polypedilum halterale grp.	43.1	0.82
Tanytarsus	21.5	0.41
Dreissena polymorpha	107.6	2.06
Dreissena bugensis	2,389.8	45.74
TOTAL BENTHOS	5,224.6	100.00
TOTAL TAXA RICHNESS	17	
EPT TAXA RICHNESS	0	

TABLE 3-4. HESTER-DENDY DENSITIES AT SAMPLING STATION 76 WITHIN THE LITTLE CALUMET RIVER, AUGUST 2010.

TAXA	76 HALSTED ST. #/m2	%
Hydra	461.1	2.98
Turbellaria	3,062.4	19.77
Oligochaeta	1,833.5	11.84
Helobdella	17.9	0.12
Helobdella stagnalis	50.2	0.32
Caecidotea	12.6	0.08
Gammarus	5,100.5	32.93
Cricotopus bicinctus grp.	9.0	0.06
Nanocladius distinctus	247.6	1.60
Dicrotendipes lucifer	1,969.9	12.72
Dicrotendipes simpsoni	669.2	4.32
Glyptotendipes	26.9	0.17
Parachironomus	25.1	0.16
Polypedilum flavum	9.0	0.06
Amnicola	39.5	0.25
Physa	73.6	0.47
Menetus	116.6	0.75
Ferrissia	59.2	0.38
Dreissena bugensis	1,706.1	11.01
TOTAL BENTHOS	15,489.8	100.00
TOTAL TAXA RICHNESS	19	
EPT TAXA RICHNESS	0	

TABLE 3-5. PETITE PONAR DENSITIES AT SAMPLING STATION 76 WITHIN THE LITTLE CALUMET RIVER, AUGUST 2010.

TAXA	76 HALSTED ST. #/m2	%
Turbellaria	71.8	0.10
Oligochaeta	73,417.0	97.52
Helobdella stagnalis	430.6	0.57
Erpobdella microstoma	358.8	0.48
Hyalella azteca	215.3	0.29
Chironomus	71.8	0.10
Cryptochironomus	71.8	0.10
Dicrotendipes fumidus	71.8	0.10
Dicrotendipes simpsoni	71.8	0.10
Corbicula fluminea	287.1	0.38
Sphaerium	143.5	0.19
Dreissena bugensis	71.8	0.10
TOTAL BENTHOS	75,282.9	100.00
TOTAL TAXA RICHNESS	12	
EPT TAXA RICHNESS	0	

TABLE 3-6. HESTER-DENDY DENSITIES AT SAMPLING STATION 59 WITHIN THE CAL-SAG CHANNEL, AUGUST 2010.

TAXA	59 CICERO AVE. #/m2	%
Hydra	227.8	1.04
Turbellaria	305.0	1.39
Oligochaeta	15,828.8	72.02
Helobdella	23.3	0.11
Caecidotea	5.4	0.02
Gammarus	1,699.0	7.73
Echinogammarus ischusa	41.3	0.19
Cyrnellus fraternus	41.3	0.19
Ablabesmyia janta	41.3	0.19
Nanocladius distinctus	471.8	2.15
Chironomus	5.4	0.02
Dicrotendipes neomodestus	41.3	0.19
Dicrotendipes lucifer	1,878.4	8.55
Dicrotendipes simpsoni	148.9	0.68
Parachironomus	53.8	0.24
Stenochironomus	17.9	0.08
Paratanytarsus	5.4	0.02
Xenochironomus xenolabis	17.9	0.08
Physa	5.4	0.02
Menetus	17.9	0.08
Ferrissia	669.2	3.04
Dreissena bugensis	430.6	1.96
TOTAL BENTHOS	21,977.0	100.00
TOTAL TAXA RICHNESS	22	
EPT TAXA RICHNESS	1	

TABLE 3-7. PETITE PONAR DENSITIES AT SAMPLING STATION 59 WITHIN THE CAL-SAG CHANNEL, AUGUST 2010.

TAXA	59 CICERO AVE. #/m2	%
Oligochaeta	116,835.6	94.71
Procladius	3,731.8	3.03
Chironomus	1,291.8	1.05
Cryptochironomus	71.8	0.06
Polypedilum scalaenum grp.	71.8	0.06
Corbicula fluminea	1,291.8	1.05
Musculium	71.8	0.06
TOTAL BENTHOS	123,366.3	100.00
TOTAL TAXA RICHNESS	7	
EPT TAXA RICHNESS	0	

Table 3-8. Incidence of head capsule deformities observed on Chironomidae from the 2010 Hester-Dendy samples collected from various waterways in the Chicago area.

			Per Taxon				Per Station			
Waterbody	Station	Taxa	# Examined	# Deformed	%	SE +/-	Total Midges Examined	Total Midges Deformed	%	SE +/-
Calumet R.	59	Dicrotendipes neomodestus	3	2	66.7	27.2	201	2	1.0	0.7
NSC	36	Glyptotendipes	120	1	0.8	0.8	187	1	0.5	0.5
SBCR	108	Dicrotendipes lucifer	125	3	2.4	1.4	208	6	2.9	1.2
		Dicrotendipes simpsoni	63	3	4.8	2.7				
CSSC	40	Dicrotendipes lucifer	50	1	2.0	2.0	106	2	1.9	1.3
		Dicrotendipes simpsoni	44	1	2.3	2.2				
CSSC	75	Dicrotendipes simpsoni	39	1	2.6	2.5	88	1	1.1	1.1
CSSC	41	Dicrotendipes lucifer	62	11	17.7	4.9	118	16	13.6	3.2
		Dicrotendipes simpsoni	48	5	10.4	4.4				
CSSC	48	Glyptotendipes	4	1	25.0	21.7	183	1	0.5	0.5
CSSC	92	Dicrotendipes simpsoni	34	1	2.9	2.9	189	1	0.5	0.5

Table 3-9. Incidence of head capsule deformities observed on Chironomidae from the 2010 Ponar samples collected from various waterways in the Chicago area.

			Per Taxon				Per Station			
Waterbody	Station	Taxa	# Examined	# Deformed	%	SE +/-	Total Midges Examined	Total Midges Deformed	%	SE +/-
Calumet R.	59	Procladius	52	1	1.9	1.9	72	9	12.5	3.9
		Chironomus	18	8	44.4	11.7				
NSC	36	Chironomus	62	5	8.1	3.5	110	7	6.4	2.3
		Dicrotendipes fumidus	6	2	33.3	19.2				
NBCR	46	Procladius	18	1	5.6	5.4	21	1	4.8	4.7
SBCR	108	Procladius	56	5	8.9	3.8	72	13	18.1	4.5
		Chironomus	15	7	46.7	12.9				
SFSBCR	99	Chironomus	6	5	83.3	15.2	11	5	45.5	15.0
CSSC	40	Chironomus	7	1	14.3	13.2	18	2	11.1	7.4
		Dicrotendipes simpsoni	3	1	33.3	27.2				
CSSC	75	Procladius	13	1	7.7	7.4	15	1	6.7	6.4
CSSC	92	Procladius	95	3	3.2	1.8	106	3	2.8	1.6
WB DuPage R.	64	Chironomus	55	6	10.9	4.2	190	6	3.2	1.3
Des Plaines R.	22	Chironomus	4	2	50.0	25.0	129	2	1.6	1.1
Des Plaines R.	91	Chironomus	74	4	5.4	2.6	195	4	2.1	1.0

TABLE 3-10. HESTER-DENDY DENSITIES AT SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL, JULY 2010.

TAXA	36 TOUHY AVE. #/m2	%
Hydra	1,040.5	3.08
Turbellaria	1,578.8	4.67
Oligochaeta	10,651.2	31.49
Helobdella	1.8	0.01
Erpobdella punctata punctata	48.4	0.14
Caecidotea	7,879.4	23.29
Hyalella azteca	2,093.6	6.19
Gammarus	394.7	1.17
Cyrnellus fraternus	52.0	0.15
Cricotopus bicinctus grp.	254.8	0.75
Nanocladius distinctus	46.6	0.14
Dicrotendipes fumidus	23.3	0.07
Dicrotendipes lucifer	549.0	1.62
Dicrotendipes simpsoni	1,440.6	4.26
Glyptotendipes	7,142.1	21.11
Parachironomus	477.2	1.41
Menetus	89.7	0.27
Ferrissia	61.0	0.18
TOTAL BENTHOS	33,824.9	100.00
TOTAL TAXA RICHNESS	18	
EPT TAXA RICHNESS	1	

TABLE 3-11. PETITE PONAR DENSITIES AT SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL, JULY 2010.

TAXA	36 TOUHY AVE. #/m2	%
Oligochaeta	151,441.3	98.58
Caecidotea	287.1	0.19
Procladius	7.2	0.00
Cricotopus bicinctus grp.	229.7	0.15
Nanocladius distinctus	7.2	0.00
Chironomus	961.7	0.63
Cryptochironomus	114.8	0.07
Dicrotendipes fumidus	122.0	0.08
Dicrotendipes lucifer	7.2	0.00
Dicrotendipes simpsoni	21.5	0.01
Glyptotendipes	258.4	0.17
Parachironomus	86.1	0.06
Polypedilum illinoense	71.8	0.05
Ferrissia	7.2	0.00
TOTAL BENTHOS	153,623.0	100.00
TOTAL TAXA RICHNESS	14	
EPT TAXA RICHNESS	0	

TABLE 3-12. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH BRANCH CHICAGO RIVER, JULY-AUGUST 2010.

TAXA	96 ALBANY AVE.		46 GRAND AVE.	
	#/m2	%	#/m2	%
Hydra	--	--	188.4	2.02
Turbellaria	129.2	3.86	1,341.9	14.37
Oligochaeta	287.0	8.58	2,366.3	25.34
Helobdella	--	--	1.8	0.02
Caecidotea	163.3	4.88	364.2	3.90
Hyalella azteca	--	--	1,015.4	10.87
Gammarus	819.9	24.52	1.8	0.02
Echinogammarus ischusa	--	--	1.8	0.02
Enallagma	1.8	0.05	--	--
Thienemannimyia grp.	1.8	0.05	--	--
Thienemanniella xena	328.3	9.82	--	--
Cricotopus bicinctus grp.	10.8	0.32	--	--
Cricotopus sylvestris grp.	5.4	0.16	37.7	0.40
Nanocladius distinctus	12.6	0.38	75.3	0.81
Rheocricotopus robacki	23.3	0.70	--	--
Cryptochironomus	1.8	0.05	--	--
Dicrotendipes neomodestus	14.4	0.43	--	--
Dicrotendipes lucifer	14.4	0.43	1,194.8	12.79
Dicrotendipes simpsoni	7.2	0.21	1,935.8	20.73
Glyptotendipes	--	--	71.8	0.77
Parachironomus	--	--	113.0	1.21
Polypedilum flavum	48.4	1.45	--	--
Polypedilum halterale grp.	--	--	1.8	0.02
Polypedilum illinoense	82.5	2.47	5.4	0.06
Polypedilum scalaenum grp.	102.3	3.06	1.8	0.02
Cladotanytarsus vanderwulpi grp.	1.8	0.05	--	--
Paratanytarsus	1.8	0.05	--	--
Rheotanytarsus	23.3	0.70	--	--
Tanytarsus	50.2	1.50	--	--
Simulium	1.8	0.05	--	--
Menetus	--	--	620.7	6.65
Ferrissia	1,209.2	36.16	--	--
Corbicula fluminea	1.8	0.05	--	--
TOTAL BENTHOS	3,344.1	100.00	9,339.8	100.00
TOTAL TAXA RICHNESS	25		18	
EPT TAXA RICHNESS	0		0	

TABLE 3-13. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH BRANCH CHICAGO RIVER, JULY-AUGUST 2010.

TAXA	96 ALBANY AVE.		46 GRAND AVE.	
	#/m2	%	#/m2	%
Turbellaria	57.4	1.59	7.2	0.03
Oligochaeta	2,432.9	67.53	21,795.4	98.80
Erpobdella microstoma	--	--	7.2	0.03
Caecidotea	7.2	0.20	21.5	0.10
Hyalella azteca	--	--	7.2	0.03
Gammarus	624.4	17.33	21.5	0.10
Echinogammarus ischusa	--	--	14.4	0.07
Procladius	--	--	129.2	0.59
Cricotopus bicinctus grp.	7.2	0.20	--	--
Chironomus	--	--	7.2	0.03
Cryptochironomus	57.4	1.59	--	--
Dicrotendipes lucifer	--	--	7.2	0.03
Polypedilum illinoense	--	--	7.2	0.03
Polypedilum scalaenum grp.	222.5	6.18	--	--
Paratanytarsus	7.2	0.20	--	--
Physa	--	--	7.2	0.03
Corbicula fluminea	21.5	0.60	28.7	0.13
Musculium	136.4	3.78	--	--
Pisidium	28.7	0.80	--	--
TOTAL BENTHOS	3,602.7	100.00	22,061.0	100.00
TOTAL TAXA RICHNESS	11		13	
EPT TAXA RICHNESS	0		0	

TABLE 3-14. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO RIVER, JULY-AUGUST 2010.

TAXA	74 LAKE SHORE DR.		100 WELLS ST.	
	#/m2	%	#/m2	%
Turbellaria	278.1	0.87	23.3	1.26
Oligochaeta	4,583.8	14.27	1,053.1	57.05
Helobdella stagnalis	17.9	0.06	1.8	0.10
Erpobdella microstoma	--	--	1.8	0.10
Caecidotea	520.3	1.62	96.9	5.25
Hyalella azteca	1,246.9	3.88	66.4	3.60
Gammarus	654.8	2.04	181.2	9.82
Procladius	44.9	0.14	9.0	0.49
Ablabesmyia mallochi	--	--	3.6	0.19
Cricotopus bicinctus grp.	26.9	0.08	--	--
Cricotopus sylvestris grp.	--	--	9.0	0.49
Nanocladius distinctus	44.9	0.14	3.6	0.19
Chironomus	17.9	0.06	--	--
Cladopelma	35.9	0.11	--	--
Dicrotendipes neomodestus	17.9	0.06	--	--
Dicrotendipes fumidus	35.9	0.11	--	--
Dicrotendipes lucifer	116.6	0.36	193.8	10.50
Dicrotendipes simpsoni	71.8	0.22	154.3	8.36
Glyptotendipes	--	--	12.6	0.68
Parachironomus	--	--	9.0	0.49
Polypedilum halterale grp.	9.0	0.03	--	--
Tanytarsus glabrescens grp.	9.0	0.03	--	--
Physa	17.9	0.06	--	--
Menetus	17.9	0.06	--	--
Ferrissia	--	--	3.6	0.19
Dreissena bugensis	24,354.1	75.82	23.3	1.26
TOTAL BENTHOS	32,122.4	100.00	1,846.1	100.00
TOTAL TAXA RICHNESS	20		17	
EPT TAXA RICHNESS	0		0	

TABLE 3-15. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO RIVER, JULY-AUGUST 2010.

TAXA	74 LAKE SHORE DR.		100 WELLS ST.	
	#/m2	%	#/m2	%
Oligochaeta	24,759.4	95.28	9,788.9	99.93
Procladius	43.1	0.17	--	--
Chironomus	--	--	7.2	0.07
Cladopelma	107.6	0.41	--	--
Dicrotendipes neomodestus	35.9	0.14	--	--
Dicrotendipes simpsoni	35.9	0.14	--	--
Polypedilum halterale grp.	35.9	0.14	--	--
Dreissena bugensis	968.8	3.73	--	--
TOTAL BENTHOS	25,986.6	100.00	9,796.1	100.00
TOTAL TAXA RICHNESS	7		2	
EPT TAXA RICHNESS	0		0	

TABLE 3-16. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE SOUTH BRANCH CHICAGO RIVER, JULY-AUGUST 2010.

TAXA	39 MADISON ST.		108 LOOMIS ST.	
	#/m2	%	#/m2	%
Hydra	618.9	5.94	39.5	0.68
Turbellaria	588.4	5.65	5.4	0.09
Oligochaeta	6,155.4	59.10	4,122.7	70.88
Helobdella	1.8	0.02	--	--
Helobdella stagnalis	7.2	0.07	7.2	0.12
Caecidotea	1,094.4	10.51	5.4	0.09
Hyalella azteca	511.3	4.91	26.9	0.46
Gammarus	89.7	0.86	1.8	0.03
Enallagma	1.8	0.02	--	--
Cyrnellus fraternus	--	--	10.8	0.19
Procladius	--	--	3.6	0.06
Ablabesmyia mallochi	--	--	3.6	0.06
Cricotopus bicinctus grp.	10.8	0.10	--	--
Mesosmittia	--	--	3.6	0.06
Nanocladius distinctus	32.3	0.31	10.8	0.19
Chironomus	--	--	48.4	0.83
Dicrotendipes neomodestus	12.6	0.12	--	--
Dicrotendipes lucifer	342.7	3.29	920.3	15.82
Dicrotendipes simpsoni	335.5	3.22	407.2	7.00
Glyptotendipes	30.5	0.29	41.3	0.71
Parachironomus	28.7	0.28	10.8	0.19
Polypedilum illinoense	7.2	0.07	--	--
Polypedilum scalaenum grp.	9.0	0.09	--	--
Pericoma	--	--	12.6	0.22
Physa	172.2	1.65	30.5	0.52
Menetus	179.4	1.72	82.5	1.42
Ferrissia	44.9	0.43	14.4	0.25
Corbicula fluminea	113.0	1.09	7.2	0.12
Dreissena bugensis	26.9	0.26	--	--
TOTAL BENTHOS	10,414.4	100.00	5,816.3	100.00
TOTAL TAXA RICHNESS	23		22	
EPT TAXA RICHNESS	0		1	

TABLE 3-17. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE SOUTH BRANCH CHICAGO RIVER, JULY-AUGUST 2010.

TAXA	39 MADISON ST.		108 LOOMIS ST.	
	#/m2	%	#/m2	%
Oligochaeta	39,363.8	99.67	18,171.2	94.20
Erpobdella punctata punctata	--	--	35.9	0.19
Hyalella azteca	7.2	0.02	--	--
Procladius	43.1	0.11	401.9	2.08
Nanocladius distinctus	7.2	0.02	--	--
Chironomus	14.4	0.04	222.5	1.15
Dicrotendipes lucifer	--	--	35.9	0.19
Parachironomus	7.2	0.02	--	--
Polypedilum scalaenum grp.	7.2	0.02	--	--
Pericoma	--	--	7.2	0.04
Corbicula fluminea	35.9	0.09	380.4	1.97
Dreissena bugensis	7.2	0.02	35.9	0.19
TOTAL BENTHOS	39,493.0	100.00	19,290.8	100.00
TOTAL TAXA RICHNESS	9		8	
EPT TAXA RICHNESS	0		0	

TABLE 3-18. HESTER-DENDY DENSITIES AT SAMPLING STATION 99 WITHIN THE SOUTH FORK SOUTH BRANCH CHICAGO RIVER, JULY 2010.

TAXA	99 ARCHER AVE. #/m2	%
Oligochaeta	439.5	96.84
Baetis intercalaris	1.8	0.40
Cheumatopsyche	1.8	0.40
Ceratopogonidae	5.4	1.19
Chironomus	1.8	0.40
Dicrotendipes lucifer	1.8	0.40
Parachironomus	1.8	0.40
TOTAL BENTHOS	453.9	100.00
TOTAL TAXA RICHNESS	7	
EPT TAXA RICHNESS	2	

TABLE 3-19. PETITE PONAR DENSITIES AT SAMPLING STATION 99 WITHIN THE SOUTH FORK SOUTH BRANCH CHICAGO RIVER, JULY 2010.

TAXA	99 ARCHER AVE. #/m2	%
Oligochaeta	64,223.7	99.72
Hyalella azteca	7.2	0.01
Procladius	14.4	0.02
Cricotopus sylvestris grp.	14.4	0.02
Mesosmittia	7.2	0.01
Chironomus	107.6	0.17
Tipula	7.2	0.01
Physa	21.5	0.03
TOTAL BENTHOS	64,403.1	100.00
TOTAL TAXA RICHNESS	8	
EPT TAXA RICHNESS	0	

TABLE 3-20. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO SANITARY AND SHIP CANAL, JULY-SEPTEMBER 2010.

TAXA	40 DAMEN AVE.		75 CICERO AVE.		41 HARLEM AVE.		42 ROUTE 83		48 STEPHEN ST.		92 LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	622.5	4.76	53.8	0.30	132.8	0.86	412.6	11.40	154.3	3.01	986.7	18.89
Turbellaria	235.0	1.80	1,255.8	7.01	4,217.8	27.22	1,420.9	39.27	50.2	0.98	152.5	2.92
Oligochaeta	11,481.9	87.78	14,729.1	82.18	9,775.7	63.09	364.2	10.06	1,063.9	20.73	321.1	6.15
Desserobdella phalera	--	--	--	--	1.8	0.01	--	--	--	--	--	--
Helobdella	--	--	--	--	--	--	5.4	0.15	1.8	0.03	--	--
Helobdella stagnalis	37.7	0.29	161.5	0.90	14.4	0.09	32.3	0.89	--	--	--	--
Erpobdella punctata punctata	21.5	0.16	--	--	--	--	1.8	0.05	--	--	--	--
Erpobdella microstoma	--	--	--	--	9.0	0.06	--	--	--	--	--	--
Caecidotea	5.4	0.04	--	--	12.6	0.08	12.6	0.35	25.1	0.49	--	--
Hyalella azteca	125.6	0.96	--	--	479.0	3.09	735.6	20.33	25.1	0.49	362.4	6.94
Gammarus	--	--	35.9	0.20	--	--	129.2	3.57	--	--	678.1	12.99
Echinogammarus ischusa	--	--	--	--	--	--	--	--	104.1	2.03	100.5	1.92
Cyrnellus fraternus	--	--	--	--	--	--	10.8	0.30	2,452.5	47.80	23.3	0.45
Ceratopsyche morosa	--	--	--	--	--	--	--	--	--	--	1.8	0.03
Cheumatopsyche	--	--	--	--	--	--	--	--	--	--	21.5	0.41
Hydropsyche simulans	--	--	--	--	--	--	--	--	--	--	3.6	0.07
Procladius	7.2	0.05	--	--	--	--	--	--	--	--	--	--
Ablabesmyia janta	--	--	--	--	--	--	17.9	0.50	199.1	3.88	12.6	0.24
Thienemannimyia grp.	--	--	--	--	--	--	--	--	43.1	0.84	--	--
Cricotopus bicinctus grp.	--	--	17.9	0.10	--	--	--	--	--	--	--	--
Nanocladius distinctus	--	--	179.4	1.00	64.6	0.42	1.8	0.05	48.4	0.94	358.8	6.87
Chironomus	3.6	0.03	--	--	--	--	--	--	--	--	--	--
Dicrotendipes neomodestus	--	--	17.9	0.10	--	--	--	--	--	--	--	--
Dicrotendipes lucifer	229.6	1.76	645.9	3.60	462.9	2.99	111.2	3.07	249.4	4.86	1,237.9	23.70
Dicrotendipes simpsoni	192.0	1.47	699.7	3.90	315.8	2.04	93.3	2.58	57.4	1.12	353.4	6.77
Glyptotendipes	71.8	0.55	--	--	--	--	--	--	12.6	0.24	12.6	0.24
Parachironomus	3.6	0.03	17.9	0.10	--	--	1.8	0.05	--	--	--	--
Polypedilum halterale grp.	--	--	--	--	--	--	1.8	0.05	--	--	--	--
Polypedilum illinoense	--	--	--	--	--	--	--	--	7.2	0.14	--	--
Stenochironomus	--	--	--	--	--	--	--	--	84.3	1.64	--	--
Physa	3.6	0.03	17.9	0.10	--	--	1.8	0.05	--	--	--	--
Menetus	39.5	0.30	--	--	--	--	--	--	--	--	--	--
Ferrissia	--	--	17.9	0.10	--	--	16.1	0.45	222.5	4.34	583.1	11.16
Corbicula fluminea	--	--	--	--	--	--	--	--	159.7	3.11	12.6	0.24
Eupera cubensis	--	--	71.8	0.40	--	--	247.6	6.84	1.8	0.03	--	--
Dreissena bugensis	--	--	--	--	9.0	0.06	--	--	168.6	3.29	--	--
TOTAL BENTHOS	13,080.4	100.00	17,922.5	100.00	15,495.2	100.00	3,618.6	100.00	5,131.0	100.00	5,222.5	100.00
TOTAL TAXA RICHNESS	15		14		12		19		20		17	
EPT TAXA RICHNESS	0		0		0		1		1		4	

TABLE 3-21. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO SANITARY AND SHIP CANAL, JULY-SEPTEMBER 2010.

TAXA	40 DAMEN AVE.		75 CICERO AVE.		41 HARLEM AVE.		42 ROUTE 83		92 LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	--	--	35.9	0.11	--	--	--	--	--	--
Turbellaria	--	--	--	--	107.6	0.29	71.8	0.52	28.7	0.07
Oligochaeta	165,364.0	99.22	31,268.6	98.02	36,995.6	99.21	13,104.5	95.80	37,806.5	97.45
Helobdella	--	--	--	--	--	--	--	--	7.2	0.02
Helobdella stagnalis	--	--	--	--	43.1	0.12	430.6	3.15	--	--
Erpobdella microstoma	--	--	--	--	--	--	--	--	43.1	0.11
Caecidotea	7.2	0.00	--	--	--	--	--	--	--	--
Hyalella azteca	64.6	0.04	--	--	--	--	14.4	0.10	14.4	0.04
Echinogammarus ischusa	--	--	--	--	--	--	--	--	14.4	0.04
Ceratopogonidae	358.8	0.22	--	--	--	--	--	--	--	--
Procladius	760.7	0.46	157.9	0.49	64.6	0.17	--	--	681.8	1.76
Thienemannimyia grp.	--	--	--	--	--	--	--	--	14.4	0.04
Nanocladius distinctus	--	--	--	--	--	--	--	--	21.5	0.06
Chironomus	50.2	0.03	--	--	43.1	0.12	--	--	--	--
Cryptotendipes	--	--	--	--	35.9	0.10	--	--	--	--
Dicrotendipes lucifer	--	--	71.8	0.22	--	--	28.7	0.21	14.4	0.04
Dicrotendipes simpsoni	21.5	0.01	--	--	--	--	14.4	0.10	14.4	0.04
Paralauterborniella nigrohalteralis	--	--	7.2	0.02	--	--	--	--	--	--
Polypedilum halterale grp.	--	--	--	--	--	--	--	--	7.2	0.02
Polypedilum illinoense	--	--	--	--	--	--	--	--	7.2	0.02
Corbicula fluminea	35.9	0.02	358.8	1.12	--	--	14.4	0.10	122.0	0.31
TOTAL BENTHOS	166,663.0	100.00	31,900.1	100.00	37,289.8	100.00	13,678.7	100.00	38,796.9	100.00
TOTAL TAXA RICHNESS	8		6		6		7		14	
EPT TAXA RICHNESS	0		0		0		0		0	

TABLE 3-22. HESTER-DENDY DENSITIES AT SAMPLING STATION 64 WITHIN THE WEST BRANCH DUPAGE RIVER, JUNE 2010.

TAXA	64 LAKE ST. #/m2	%
Turbellaria	4,246.5	16.36
Oligochaeta	16,792.2	64.71
Helobdella	48.4	0.19
Placobdella nuchalis	17.9	0.07
Erpobdella microstoma	57.4	0.22
Caecidotea	714.0	2.75
Orconectes	3.6	0.01
Procambarus	1.8	0.01
Hydracarina	89.7	0.35
Baetis intercalaris	1.8	0.01
Argia	43.1	0.17
Enallagma	1.8	0.01
Aeshna	1.8	0.01
Peltodytes	64.6	0.25
Procladius	30.5	0.12
Thienemannimyia grp.	105.8	0.41
Thienemanniella xena	17.9	0.07
Cricotopus bicinctus grp.	796.6	3.07
Cricotopus sylvestris grp.	53.8	0.21
Nanocladius distinctus	588.4	2.27
Chironomus	165.1	0.64
Dicrotendipes neomodestus	204.5	0.79
Dicrotendipes lucifer	61.0	0.24
Dicrotendipes simpsoni	172.2	0.66
Endochironomus nigricans	16.1	0.06
Glyptotendipes	202.7	0.78
Polypedilum flavum	30.5	0.12
Polypedilum illinoense	1,078.2	4.16
Polypedilum scalaenum grp.	34.1	0.13
Cladotanytarsus mancus grp.	16.1	0.06
Paratanytarsus	17.9	0.07
Rheotanytarsus	70.0	0.27
Tanytarsus	34.1	0.13
Menetus	168.6	0.65
TOTAL BENTHOS	25,949.0	100.00
TOTAL TAXA RICHNESS	34	
EPT TAXA RICHNESS	1	

TABLE 3-23. PETITE PONAR DENSITIES AT SAMPLING STATION 64 WITHIN THE WEST BRANCH DUPAGE RIVER, JUNE 2010.

TAXA	64 LAKE ST. #/m2	%
Turbellaria	7.2	0.10
Oligochaeta	5,088.2	70.55
Helobdella	7.2	0.10
Caecidotea	7.2	0.10
Procladius	28.7	0.40
Thienemannimyia grp.	57.4	0.80
Thienemanniella xena	64.6	0.90
Cricotopus bicinctus grp.	667.4	9.25
Nanocladius distinctus	35.9	0.50
Chironomus	545.4	7.56
Cryptochironomus	193.8	2.69
Cryptotendipes	28.7	0.40
Dicrotendipes neomodestus	64.6	0.90
Phaenopsectra obediens grp.	7.2	0.10
Polypedilum flavum	28.7	0.40
Polypedilum illinoense	114.8	1.59
Polypedilum scalaenum grp.	86.1	1.19
Stictochironomus	7.2	0.10
Cladotanytarsus mancus grp.	43.1	0.60
Paratanytarsus	14.4	0.20
Rheotanytarsus	14.4	0.20
Tanytarsus	86.1	1.19
Corbicula fluminea	14.4	0.20
TOTAL BENTHOS	7,212.5	100.00
TOTAL TAXA RICHNESS	23	
EPT TAXA RICHNESS	0	

TABLE 3-24. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN SALT CREEK, JULY 2010.

TAXA	18 DEVON AVE. #/m2	%
Hydra	147.1	1.03
Turbellaria	2,992.5	20.93
Oligochaeta	2,561.9	17.92
Caecidotea	645.9	4.52
Tricorythodes	801.9	5.61
Cheumatopsyche	3,180.8	22.25
Nectopsyche	9.0	0.06
Ablabesmyia janta	229.6	1.61
Thienemannimyia grp.	776.8	5.43
Thienemanniella xena	62.8	0.44
Cricotopus tremulus grp.	26.9	0.19
Cricotopus bicinctus grp.	116.6	0.82
Nanocladius distinctus	86.1	0.60
Nanocladius crassicornus/rectinervis	102.3	0.72
Dicrotendipes neomodestus	179.4	1.25
Paratendipes	35.9	0.25
Phaenopsectra obediens grp.	23.3	0.16
Polypedilum flavum	1,498.0	10.48
Polypedilum illinoense	229.6	1.61
Polypedilum scalaenum grp.	197.3	1.38
Rheotanytarsus	89.7	0.63
Tanytarsus	179.4	1.25
Tanytarsus glabrescens grp.	62.8	0.44
Ferrissia	62.8	0.44
TOTAL BENTHOS	14,298.5	100.00
TOTAL TAXA RICHNESS	24	
EPT TAXA RICHNESS	3	

TABLE 3-25. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN SALT CREEK, JULY 2010.

TAXA	18 DEVON AVE. #/m2	%
Turbellaria	7.2	0.06
Oligochaeta	3,595.5	32.30
Tricorythodes	150.7	1.35
Cheumatopsyche	86.1	0.77
Oecetis	14.4	0.13
Stenelmis	71.8	0.64
Thienemannimyia grp.	452.1	4.06
Cryptochironomus	602.8	5.42
Dicrotendipes neomodestus	466.5	4.19
Microtendipes	93.3	0.84
Paratendipes	21.5	0.19
Polypedilum flavum	21.5	0.19
Polypedilum halterale grp.	753.5	6.77
Polypedilum scalaenum grp.	1,076.5	9.67
Cladotanytarsus mancus grp.	373.2	3.35
Tanytarsus	2,676.9	24.05
Ferrissia	57.4	0.52
Corbicula fluminea	602.8	5.42
Pisidium	7.2	0.06
TOTAL BENTHOS	11,131.0	100.00
TOTAL TAXA RICHNESS	19	
EPT TAXA RICHNESS	3	

TABLE 3-26. HESTER-DENDY DENSITIES AT SAMPLING STATION 78 WITHIN HIGGINS CREEK, JULY 2010.

TAXA	78 WILLE RD. #/m2	%
Turbellaria	17,438.1	28.75
Oligochaeta	17.9	0.03
Haemopis	23.3	0.04
Erpobdella microstoma	35.9	0.06
Caecidotea	43,146.8	71.13
TOTAL BENTHOS	60,662.0	100.00
TOTAL TAXA RICHNESS	5	
EPT TAXA RICHNESS	0	

TABLE 3-27. PETITE PONAR DENSITIES AT SAMPLING STATION 78 WITHIN HIGGINS CREEK, JULY 2010.

TAXA	78 WILLE RD. #/m2	%
Turbellaria	39,579.1	39.83
Oligochaeta	315.8	0.32
Haemopis	78.9	0.08
Caecidotea	57,456.1	57.81
Hyalella azteca	7.2	0.01
Physa	35.9	0.04
Pisidium	1,909.0	1.92
TOTAL BENTHOS	99,382.0	100.00
TOTAL TAXA RICHNESS	7	
EPT TAXA RICHNESS	0	

TABLE 3-28. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE DES PLAINES RIVER, JULY 2010.

TAXA	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	#/m2	%	#/m2	%	#/m2	%
Turbellaria	5,719.4	35.68	82.5	1.66	6,221.7	20.94
Oligochaeta	41.3	0.26	188.4	3.78	425.2	1.43
Caecidotea	--	--	41.3	0.83	--	--
Hyalella azteca	--	--	--	--	21.5	0.07
Gammarus	--	--	30.5	0.61	--	--
Orconectes	--	--	1.8	0.04	--	--
Baetis intercalaris	843.2	5.26	86.1	1.73	671.0	2.26
Stenacron	224.3	1.40	64.6	1.30	--	--
Maccaffertium integrum	1,037.0	6.47	--	--	--	--
Maccaffertium terminatum	161.5	1.01	44.9	0.90	--	--
Tricorythodes	418.0	2.61	170.4	3.42	688.9	2.32
Argia	--	--	--	--	21.5	0.07
Ceratopsyche morosa	--	--	53.8	1.08	340.9	1.15
Cheumatopsyche	3,620.4	22.58	1,010.0	20.29	10,161.5	34.20
Hydropsyche bidens	125.6	0.78	--	--	--	--
Hydropsyche simulans	358.8	2.24	--	--	--	--
Nectopsyche	62.8	0.39	--	--	--	--
Macronychus glabratus	23.3	0.15	--	--	21.5	0.07
Stenelmis	5.4	0.03	1.8	0.04	--	--
Procladius	5.4	0.03	--	--	--	--
Ablabesmyia janta	125.6	0.78	--	--	--	--
Labrundinia	5.4	0.03	--	--	--	--
Thienemannimyia grp.	839.6	5.24	143.5	2.88	89.7	0.30
Corynoneura lobata	5.4	0.03	--	--	--	--
Thienemanniella similis	5.4	0.03	--	--	--	--
Cricotopus tremulus grp.	--	--	53.8	1.08	--	--
Cricotopus bicinctus grp.	274.5	1.71	970.6	19.50	873.7	2.94
Cricotopus sylvestris grp.	62.8	0.39	5.4	0.11	--	--
Nanocladius distinctus	32.3	0.20	59.2	1.19	376.7	1.27
Rheocricotopus robacki	89.7	0.56	208.1	4.18	--	--
Cryptochironomus	--	--	23.3	0.47	--	--
Dicrotendipes neomodestus	32.3	0.20	25.1	0.50	--	--
Dicrotendipes lucifer	26.9	0.17	19.7	0.40	--	--
Dicrotendipes simpsoni	89.7	0.56	--	--	--	--
Glyptotendipes	--	--	--	--	109.4	0.37
Parachironomus	--	--	--	--	89.7	0.30
Paracladopelma	5.4	0.03	--	--	--	--
Polypedilum fallax grp.	5.4	0.03	--	--	--	--
Polypedilum flavum	543.6	3.39	1,060.3	21.30	9,103.0	30.63
Polypedilum halterale grp.	5.4	0.03	--	--	--	--
Polypedilum illinoense	--	--	25.1	0.50	--	--
Polypedilum scalaenum grp.	17.9	0.11	127.4	2.56	--	--
Stenochironomus	--	--	122.0	2.45	--	--
Paratanytarsus	--	--	5.4	0.11	--	--
Rheotanytarsus	1,153.6	7.20	116.6	2.34	477.2	1.61
Tanytarsus	32.3	0.20	--	--	--	--
Tanytarsus glabrescens grp.	32.3	0.20	5.4	0.11	--	--
Simulium	--	--	--	--	21.5	0.07
Ferrissia	--	--	231.4	4.65	--	--
TOTAL BENTHOS	16,031.6	100.00	4,978.5	100.00	29,714.7	100.00
TOTAL TAXA RICHNESS	34		29		17	
EPT TAXA RICHNESS	9		6		4	

TABLE 3-29. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE DES PLAINES RIVER, JULY 2010.

TAXA	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	#/m2	%	#/m2	%	#/m2	%
Oligochaeta	7,456.5	45.95	4,758.1	44.23	5,045.2	32.71
Helobdella stagnalis	--	--	--	--	7.2	0.05
Erpobdella punctata punctata	--	--	--	--	35.9	0.23
Caecidotea	--	--	107.6	1.00	--	--
Gammarus	78.9	0.49	28.7	0.27	71.8	0.47
Baetis intercalaris	14.4	0.09	--	--	--	--
Maccaffertium terminatum	14.4	0.09	7.2	0.07	--	--
Tricorythodes	1,248.7	7.70	200.9	1.87	--	--
Anthopotamus myops grp.	14.4	0.09	--	--	--	--
Ephoron album	7.2	0.04	--	--	--	--
Enallagma	--	--	--	--	7.2	0.05
Cheumatopsyche	71.8	0.44	14.4	0.13	--	--
Potamyia flava	14.4	0.09	--	--	--	--
Nectopsyche	14.4	0.09	--	--	--	--
Oecetis	71.8	0.44	--	--	--	--
Dubiraphia	7.2	0.04	--	--	--	--
Macronychus glabratus	--	--	--	--	7.2	0.05
Stenelmis	7.2	0.04	78.9	0.73	--	--
Procladius	287.1	1.77	--	--	940.1	6.10
Clinotanypus	--	--	--	--	50.2	0.33
Ablabesmyia mallochi	--	--	--	--	35.9	0.23
Thienemannimyia grp.	617.2	3.80	933.0	8.67	--	--
Thienemanniella similis	--	--	--	--	35.9	0.23
Cricotopus bicinctus grp.	129.2	0.80	7.2	0.07	244.0	1.58
Chironomus	--	--	28.7	0.27	3,724.7	24.15
Cryptochironomus	--	--	200.9	1.87	50.2	0.33
Dicrotendipes neomodestus	818.1	5.04	165.1	1.53	3,136.2	20.34
Dicrotendipes lucifer	57.4	0.35	--	--	50.2	0.33
Dicrotendipes simpsoni	--	--	--	--	50.2	0.33
Microtendipes	1,959.2	12.07	--	--	50.2	0.33
Paracladopelma	71.8	0.44	7.2	0.07	--	--
Paralauterborniella nigrohalteralis	57.4	0.35	--	--	--	--
Polypedilum flavum	--	--	215.3	2.00	71.8	0.47
Polypedilum halterale grp.	1,062.1	6.55	--	--	--	--
Polypedilum illinoense	--	--	7.2	0.07	--	--
Polypedilum scalaenum grp.	925.8	5.71	3,373.0	31.35	86.1	0.56
Cladotanytarsus vanderwulpi grp.	818.1	5.04	244.0	2.27	--	--
Tanytarsus	57.4	0.35	107.6	1.00	--	--
Amnicola	--	--	--	--	157.9	1.02
Pleurocera	--	--	--	--	1,083.7	7.03
Physa	--	--	--	--	21.5	0.14
Ferrissia	--	--	21.5	0.20	--	--
Corbicula fluminea	78.9	0.49	222.5	2.07	401.9	2.61
Musculium	143.5	0.88	--	--	--	--
Pisidium	43.1	0.27	28.7	0.27	57.4	0.37
Leptodea fragilis	78.9	0.49	--	--	--	--
TOTAL BENTHOS	16,226.4	100.00	10,757.8	100.00	15,422.6	100.00
TOTAL TAXA RICHNESS	29		21		24	
EPT TAXA RICHNESS	9		3		0	

Appendix A

APPENDIX A - 2010 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= C.S.C.,
LOCATION= CICERO AVE.,
STATION= 59,
and DATE= 13AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	17	61.0	0.58	110	394.7	1.18
Turbellaria	160	574.1	5.46	10	35.9	0.11
Oligochaeta	1,063	3,814.1	36.28	7,760	27,843.6	83.26
Helobdella	13	46.6	0.44	0	0.0	0.00
Caecidotea	3	10.8	0.10	0	0.0	0.00
Gammarus	817	2,931.5	27.88	130	466.5	1.39
Echinogammarus ischusa	23	82.5	0.78	0	0.0	0.00
Cyrnellus fraternus	3	10.8	0.10	20	71.8	0.21
Ablabesmyia janta	3	10.8	0.10	20	71.8	0.21
Nanocladius distinctus	113	405.5	3.86	150	538.2	1.61
Chironomus	3	10.8	0.10	0	0.0	0.00
Dicrotendipes neomodestus	3	10.8	0.10	20	71.8	0.21
Dicrotendipes lucifer	287	1,029.8	9.80	760	2,726.9	8.15
Dicrotendipes simpsoni	33	118.4	1.13	50	179.4	0.54
Parachironomus	10	35.9	0.34	20	71.8	0.21
Stenochironomus	0	0.0	0.00	10	35.9	0.11
Paratanytarsus	3	10.8	0.10	0	0.0	0.00
Xenochironomus xenolabis	0	0.0	0.00	10	35.9	0.11
Physa	3	10.8	0.10	0	0.0	0.00
Menetus	0	0.0	0.00	10	35.9	0.11
Ferrissia	173	620.7	5.90	200	717.6	2.15
Dreissena bugensis	200	717.6	6.83	40	143.5	0.43
TOTAL BENTHOS	2,930	10,513.1	100.00	9,320	33,441.0	100.00

WATERWAY= C.S.S.C.,
LOCATION= CICERO AVE.,
STATION= 75,
and DATE= 20AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	30	107.6	0.65	0	0.0	0.00
Turbellaria	350	1,255.8	7.54	350	1,255.8	6.54
Oligochaeta	3,520	12,630.1	75.86	4,690	16,828.1	87.66
Helobdella stagnalis	40	143.5	0.86	50	179.4	0.93
Gammarus	10	35.9	0.22	10	35.9	0.19
Cricotopus bicinctus grp.	10	35.9	0.22	0	0.0	0.00
Nanocladius distinctus	40	143.5	0.86	60	215.3	1.12
Dicrotendipes neomodestus	10	35.9	0.22	0	0.0	0.00
Dicrotendipes lucifer	320	1,148.2	6.90	40	143.5	0.75
Dicrotendipes simpsoni	290	1,040.5	6.25	100	358.8	1.87
Parachironomus	0	0.0	0.00	10	35.9	0.19
Physa	10	35.9	0.22	0	0.0	0.00
Ferrissia	10	35.9	0.22	0	0.0	0.00
Eupera cubensis	0	0.0	0.00	40	143.5	0.75
TOTAL BENTHOS	4,640	16,648.7	100.00	5,350	19,196.3	100.00

WATERWAY= C.S.S.C.,
LOCATION= DAMEN AVE.,
STATION= 40,
and DATE= 26JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	300	1,076.4	4.93	47	168.6	3.88
Turbellaria	110	394.7	1.81	21	75.3	1.73
Oligochaeta	5,510	19,770.4	90.63	890	3,193.4	73.49
Helobdella stagnalis	20	71.8	0.33	1	3.6	0.08
Erpobdella punctata punctata	10	35.9	0.16	2	7.2	0.17
Caecidotea	0	0.0	0.00	3	10.8	0.25
Hyalella azteca	30	107.6	0.49	40	143.5	3.30
Procladius	0	0.0	0.00	4	14.4	0.33
Chironomus	0	0.0	0.00	2	7.2	0.17
Dicrotendipes lucifer	30	107.6	0.49	98	351.6	8.09
Dicrotendipes simpsoni	20	71.8	0.33	87	312.2	7.18
Glyptotendipes	30	107.6	0.49	10	35.9	0.83
Parachironomus	0	0.0	0.00	2	7.2	0.17
Physa	0	0.0	0.00	2	7.2	0.17
Menetus	20	71.8	0.33	2	7.2	0.17
TOTAL BENTHOS	6,080	21,815.6	100.00	1,211	4,345.2	100.00

WATERWAY= C.S.S.C.,
LOCATION= HARLEM AVE.,
STATION= 41,
and DATE= 16AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	14	50.2	0.62	60	215.3	0.94
Turbellaria	511	1,833.5	22.49	1,840	6,602.1	28.91
Oligochaeta	1,674	6,006.5	73.68	3,775	13,545.0	59.31
Desserobdella phalera	1	3.6	0.04	0	0.0	0.00
Helobdella stagnalis	8	28.7	0.35	0	0.0	0.00
Erpobdella microstoma	5	17.9	0.22	0	0.0	0.00
Caecidotea	7	25.1	0.31	0	0.0	0.00
Hyalella azteca	22	78.9	0.97	245	879.1	3.85
Nanocladius distinctus	1	3.6	0.04	35	125.6	0.55
Dicrotendipes lucifer	13	46.6	0.57	245	879.1	3.85
Dicrotendipes simpsoni	16	57.4	0.70	160	574.1	2.51
Dreissena bugensis	0	0.0	0.00	5	17.9	0.08
TOTAL BENTHOS	2,272	8,152.1	100.00	6,365	22,838.2	100.00

WATERWAY= C.S.S.C.,
LOCATION= LOCKPORT,
STATION= 92,
and DATE= 23JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	547	1,962.7	30.36	3	10.8	0.27
Turbellaria	72	258.3	4.00	13	46.6	1.17
Oligochaeta	14	50.2	0.78	165	592.0	14.88
Hyalella azteca	137	491.6	7.60	65	233.2	5.86
Gammarus	331	1,187.7	18.37	47	168.6	4.24
Echinogammarus ischusa	43	154.3	2.39	13	46.6	1.17
Cyrnellus fraternus	8	28.7	0.44	5	17.9	0.45
Cheumatopsyche	0	0.0	0.00	12	43.1	1.08
Hydropsyche simulans	0	0.0	0.00	2	7.2	0.18
Ceratopsyche morosa	1	3.6	0.06	0	0.0	0.00
Ablabesmyia janta	0	0.0	0.00	7	25.1	0.63
Nanocladius distinctus	22	78.9	1.22	178	638.7	16.05
Dicrotendipes lucifer	407	1,460.4	22.59	283	1,015.4	25.52
Dicrotendipes simpsoni	105	376.7	5.83	92	330.1	8.30
Glyptotendipes	0	0.0	0.00	7	25.1	0.63
Ferrissia	108	387.5	5.99	217	778.6	19.57
Corbicula fluminea	7	25.1	0.39	0	0.0	0.00
TOTAL BENTHOS	1,802	6,465.7	100.00	1,109	3,979.2	100.00

WATERWAY= C.S.S.C.,
LOCATION= ROUTE 83,
STATION= 42,
and DATE= 07SEP10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	158	566.9	15.27	72	258.3	7.33
Turbellaria	353	1,266.6	34.11	439	1,575.2	44.70
Oligochaeta	75	269.1	7.25	128	459.3	13.03
Helobdella	2	7.2	0.19	1	3.6	0.10
Helobdella stagnalis	10	35.9	0.97	8	28.7	0.81
Erpobdella punctata punctata	1	3.6	0.10	0	0.0	0.00
Caecidotea	6	21.5	0.58	1	3.6	0.10
Hyalella azteca	259	929.3	25.02	151	541.8	15.38
Gammarus	72	258.3	6.96	0	0.0	0.00
Cyrnellus fraternus	0	0.0	0.00	6	21.5	0.61
Ablabesmyia janta	10	35.9	0.97	0	0.0	0.00
Nanocladius distinctus	0	0.0	0.00	1	3.6	0.10
Dicrotendipes lucifer	17	61.0	1.64	45	161.5	4.58
Dicrotendipes simpsoni	19	68.2	1.84	33	118.4	3.36
Parachironomus	0	0.0	0.00	1	3.6	0.10
Polypedilum halterale grp.	0	0.0	0.00	1	3.6	0.10
Physa	0	0.0	0.00	1	3.6	0.10
Ferrissia	1	3.6	0.10	8	28.7	0.81
Eupera cubensis	52	186.6	5.02	86	308.6	8.76
TOTAL BENTHOS	1,035	3,713.7	100.00	982	3,523.5	100.00

WATERWAY= C.S.S.C.,
LOCATION= STEPHEN ST.,
STATION= 48,
and DATE= 07SEP10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	58	208.1	3.01	28	100.5	3.01
Turbellaria	28	100.5	1.45	0	0.0	0.00
Oligochaeta	542	1,944.7	28.08	51	183.0	5.48
Helobdella	0	0.0	0.00	1	3.6	0.11
Caecidotea	14	50.2	0.73	0	0.0	0.00
Hyalella azteca	14	50.2	0.73	0	0.0	0.00
Echinogammarus ischusa	44	157.9	2.28	14	50.2	1.51
Cyrnellus fraternus	640	2,296.4	33.16	727	2,608.5	78.17
Ablabesmyia janta	92	330.1	4.77	19	68.2	2.04
Thienemannimyia grp.	24	86.1	1.24	0	0.0	0.00
Nanocladius distinctus	20	71.8	1.04	7	25.1	0.75
Dicrotendipes lucifer	96	344.5	4.97	43	154.3	4.62
Dicrotendipes simpsoni	16	57.4	0.83	16	57.4	1.72
Glyptotendipes	4	14.4	0.21	3	10.8	0.32
Polypedilum illinoense	4	14.4	0.21	0	0.0	0.00
Stenochironomus	38	136.3	1.97	9	32.3	0.97
Ferrissia	124	444.9	6.42	0	0.0	0.00
Corbicula fluminea	86	308.6	4.46	3	10.8	0.32
Eupera cubensis	0	0.0	0.00	1	3.6	0.11
Dreissena bugensis	86	308.6	4.46	8	28.7	0.86
TOTAL BENTHOS	1,930	6,925.0	100.00	930	3,336.9	100.00

WATERWAY= CALUMET R.,
LOCATION= 130TH ST.,
STATION= 55,
and DATE= 11AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	200	717.6	0.29	300	1,076.4	0.41
Gammarus	400	1,435.2	0.57	500	1,794.0	0.69
Ablabesmyia mallochi	0	0.0	0.00	100	358.8	0.14
Nanocladius distinctus	200	717.6	0.29	0	0.0	0.00
Dicrotendipes neomodestus	100	358.8	0.14	0	0.0	0.00
Dicrotendipes lucifer	0	0.0	0.00	100	358.8	0.14
Dicrotendipes simpsoni	100	358.8	0.14	100	358.8	0.14
Dreissena polymorpha	2,900	10,405.5	4.14	7,400	26,551.8	10.21
Dreissena bugensis	66,100	237,172.6	94.43	64,000	229,637.6	88.28
TOTAL BENTHOS	70,000	251,166.1	100.00	72,500	260,136.3	100.00

WATERWAY= CHICAGO R.,
LOCATION= LAKE SHORE DR.,
STATION= 74,
and DATE= 09AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	145	520.3	2.39	10	35.9	0.08
Oligochaeta	1,535	5,507.7	25.27	1,020	3,659.8	8.62
Helobdella stagnalis	10	35.9	0.16	0	0.0	0.00
Caecidotea	290	1,040.5	4.77	0	0.0	0.00
Hyalella azteca	685	2,457.8	11.28	10	35.9	0.08
Gammarus	325	1,166.1	5.35	40	143.5	0.34
Procladius	15	53.8	0.25	10	35.9	0.08
Cricotopus bicinctus grp.	5	17.9	0.08	10	35.9	0.08
Nanocladius distinctus	5	17.9	0.08	20	71.8	0.17
Chironomus	10	35.9	0.16	0	0.0	0.00
Cladopelma	10	35.9	0.16	10	35.9	0.08
Dicrotendipes neomodestus	10	35.9	0.16	0	0.0	0.00
Dicrotendipes fumidus	20	71.8	0.33	0	0.0	0.00
Dicrotendipes lucifer	45	161.5	0.74	20	71.8	0.17
Dicrotendipes simpsoni	20	71.8	0.33	20	71.8	0.17
Polypedilum halterale grp.	5	17.9	0.08	0	0.0	0.00
Tanytarsus glabrescens grp.	5	17.9	0.08	0	0.0	0.00
Physa	10	35.9	0.16	0	0.0	0.00
Menetus	10	35.9	0.16	0	0.0	0.00
Dreissena bugensis	2,915	10,459.3	47.98	10,660	38,249.0	90.11
TOTAL BENTHOS	6,075	21,797.6	100.00	11,830	42,447.1	100.00

WATERWAY= CHICAGO R.,
LOCATION= WELLS ST.,
STATION= 100,
and DATE= 28JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	4	14.4	3.25	9	32.3	0.99
Oligochaeta	84	301.4	68.29	503	1,804.8	55.52
Helobdella stagnalis	0	0.0	0.00	1	3.6	0.11
Erpobdella microstoma	1	3.6	0.81	0	0.0	0.00
Caecidotea	26	93.3	21.14	28	100.5	3.09
Hyalella azteca	2	7.2	1.63	35	125.6	3.86
Gammarus	2	7.2	1.63	99	355.2	10.93
Procladius	0	0.0	0.00	5	17.9	0.55
Ablabesmyia mallochi	0	0.0	0.00	2	7.2	0.22
Cricotopus sylvestris grp.	0	0.0	0.00	5	17.9	0.55
Nanocladius distinctus	0	0.0	0.00	2	7.2	0.22
Dicrotendipes lucifer	4	14.4	3.25	104	373.2	11.48
Dicrotendipes simpsoni	0	0.0	0.00	86	308.6	9.49
Glyptotendipes	0	0.0	0.00	7	25.1	0.77
Parachironomus	0	0.0	0.00	5	17.9	0.55
Ferrissia	0	0.0	0.00	2	7.2	0.22
Dreissena bugensis	0	0.0	0.00	13	46.6	1.43
TOTAL BENTHOS	123	441.3	100.00	906	3,250.8	100.00

WATERWAY= DES PLAINES R.,
LOCATION= LAKE COOK RD.,
STATION= 13,
and DATE= 22JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	2,485	8,916.4	35.88	703	2,522.4	34.96
Oligochaeta	0	0.0	0.00	23	82.5	1.14
Baetis intercalaris	470	1,686.4	6.79	0	0.0	0.00
Stenacron	0	0.0	0.00	125	448.5	6.22
Maccaffertium integrum	505	1,812.0	7.29	73	261.9	3.63
Maccaffertium terminatum	70	251.2	1.01	20	71.8	0.99
Tricorythodes	215	771.4	3.10	18	64.6	0.90
Cheumatopsyche	1,370	4,915.7	19.78	648	2,325.1	32.22
Hydropsyche simulans	110	394.7	1.59	90	322.9	4.48
Hydropsyche bidens	70	251.2	1.01	0	0.0	0.00
Nectopsyche	35	125.6	0.51	0	0.0	0.00
Macronychus glabratus	10	35.9	0.14	3	10.8	0.15
Stenelmis	0	0.0	0.00	3	10.8	0.15
Procladius	0	0.0	0.00	3	10.8	0.15
Ablabesmyia janta	35	125.6	0.51	35	125.6	1.74
Labrundinia	0	0.0	0.00	3	10.8	0.15
Thienemannimyia grp.	395	1,417.3	5.70	73	261.9	3.63
Corynoneura lobata	0	0.0	0.00	3	10.8	0.15
Thienemanniella similis	0	0.0	0.00	3	10.8	0.15
Cricotopus bicinctus grp.	135	484.4	1.95	18	64.6	0.90
Cricotopus sylvestris grp.	35	125.6	0.51	0	0.0	0.00
Nanocladius distinctus	15	53.8	0.22	3	10.8	0.15
Rheocricotopus robacki	50	179.4	0.72	0	0.0	0.00
Dicrotendipes neomodestus	0	0.0	0.00	18	64.6	0.90
Dicrotendipes lucifer	15	53.8	0.22	0	0.0	0.00
Dicrotendipes simpsoni	50	179.4	0.72	0	0.0	0.00
Paracladopelma	0	0.0	0.00	3	10.8	0.15
Polypedilum fallax grp.	0	0.0	0.00	3	10.8	0.15
Polypedilum flavum	275	986.7	3.97	28	100.5	1.39
Polypedilum halterale grp.	0	0.0	0.00	3	10.8	0.15
Polypedilum scalaenum grp.	0	0.0	0.00	10	35.9	0.50
Rheotanytarsus	550	1,973.4	7.94	93	333.7	4.62
Tanytarsus	15	53.8	0.22	3	10.8	0.15
Tanytarsus glabrescens grp.	15	53.8	0.22	3	10.8	0.15
TOTAL BENTHOS	6,925	24,847.5	100.00	2,011	7,215.6	100.00

WATERWAY= DES PLAINES R.,
LOCATION= MATERIAL SERVICE RD.,
STATION= 91,
and DATE= 21JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	2,520	9,042.0	21.99	948	3,401.5	18.58
Oligochaeta	210	753.5	1.83	27	96.9	0.53
Hyalella azteca	0	0.0	0.00	12	43.1	0.24
Baetis intercalaris	290	1,040.5	2.53	84	301.4	1.65
Tricorythodes	360	1,291.7	3.14	24	86.1	0.47
Argia	0	0.0	0.00	12	43.1	0.24
Cheumatopsyche	2,880	10,333.7	25.13	2,784	9,989.2	54.56
Ceratopsyche morosa	70	251.2	0.61	120	430.6	2.35
Macronychus glabratus	0	0.0	0.00	12	43.1	0.24
Thienemannimyia grp.	50	179.4	0.44	0	0.0	0.00
Cricotopus bicinctus grp.	420	1,507.0	3.66	67	240.4	1.31
Nanocladius distinctus	210	753.5	1.83	0	0.0	0.00
Glyptotendipes	50	179.4	0.44	11	39.5	0.22
Parachironomus	50	179.4	0.44	0	0.0	0.00
Polypedilum flavum	4,140	14,854.7	36.13	934	3,351.3	18.30
Rheotanytarsus	210	753.5	1.83	56	200.9	1.10
Simulium	0	0.0	0.00	12	43.1	0.24
TOTAL BENTHOS	11,460	41,119.5	100.00	5,103	18,310.0	100.00

WATERWAY= DES PLAINES R.,
LOCATION= OGDEN AVE.,
STATION= 22,
and DATE= 20JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	46	165.1	2.10	0	0.0	0.00
Oligochaeta	87	312.2	3.97	18	64.6	3.10
Caecidotea	23	82.5	1.05	0	0.0	0.00
Gammarus	3	10.8	0.14	14	50.2	2.41
Orconectes	0	0.0	0.00	1	3.6	0.17
Baetis intercalaris	46	165.1	2.10	2	7.2	0.34
Stenacron	0	0.0	0.00	36	129.2	6.20
Maccaffertium terminatum	23	82.5	1.05	2	7.2	0.34
Tricorythodes	93	333.7	4.24	2	7.2	0.34
Cheumatopsyche	383	1,374.2	17.46	180	645.9	30.98
Ceratopsyche morosa	23	82.5	1.05	7	25.1	1.20
Stenelmis	0	0.0	0.00	1	3.6	0.17
Thienemannimyia grp.	57	204.5	2.60	23	82.5	3.96
Cricotopus tremulus grp.	30	107.6	1.37	0	0.0	0.00
Cricotopus bicinctus grp.	487	1,747.4	22.20	54	193.8	9.29
Cricotopus sylvestris grp.	0	0.0	0.00	3	10.8	0.52
Nanocladius distinctus	30	107.6	1.37	3	10.8	0.52
Rheocricotopus robacki	57	204.5	2.60	59	211.7	10.15
Cryptochironomus	13	46.6	0.59	0	0.0	0.00
Dicrotendipes neomodestus	0	0.0	0.00	14	50.2	2.41
Dicrotendipes lucifer	0	0.0	0.00	11	39.5	1.89
Polypedilum flavum	557	1,998.6	25.39	34	122.0	5.85
Polypedilum illinoense	0	0.0	0.00	14	50.2	2.41
Polypedilum scalaenum grp.	43	154.3	1.96	28	100.5	4.82
Stenochironomus	43	154.3	1.96	25	89.7	4.30
Paratanytarsus	0	0.0	0.00	3	10.8	0.52
Rheotanytarsus	57	204.5	2.60	8	28.7	1.38
Tanytarsus glabrescens grp.	0	0.0	0.00	3	10.8	0.52
Ferrissia	93	333.7	4.24	36	129.2	6.20
TOTAL BENTHOS	2,194	7,872.3	100.00	581	2,084.7	100.00

WATERWAY= HIGGINS CR.,
LOCATION= WILLE RD.,
STATION= 78,
and DATE= 06JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	5,690	20,416.2	35.06	4,030	14,460.0	22.92
Oligochaeta	10	35.9	0.06	0	0.0	0.00
Haemopis	10	35.9	0.06	3	10.8	0.02
Erpobdella microstoma	10	35.9	0.06	10	35.9	0.06
Caecidotea	10,510	37,710.8	64.76	13,540	48,582.7	77.01
TOTAL BENTHOS	16,230	58,234.7	100.00	17,583	63,089.3	100.00

WATERWAY= L.C.R., LOCATION= HALSTED ST.,
STATION= 76, and DATE= 19AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	187	671.0	4.44	70	251.2	1.58
Turbellaria	1,382	4,958.7	32.83	325	1,166.1	7.34
Oligochaeta	392	1,406.5	9.31	630	2,260.5	14.24
Helobdella	0	0.0	0.00	10	35.9	0.23
Helobdella stagnalis	28	100.5	0.67	0	0.0	0.00
Caecidotea	7	25.1	0.17	0	0.0	0.00
Gammarus	1,353	4,854.7	32.15	1,490	5,346.3	33.67
Cricotopus bicinctus grp.	5	17.9	0.12	0	0.0	0.00
Nanocladius distinctus	43	154.3	1.02	95	340.9	2.15
Dicrotendipes lucifer	283	1,015.4	6.72	815	2,924.3	18.42
Dicrotendipes simpsoni	123	441.3	2.92	250	897.0	5.65
Glyptotendipes	5	17.9	0.12	10	35.9	0.23
Parachironomus	14	50.2	0.33	0	0.0	0.00
Polypedilum flavum	5	17.9	0.12	0	0.0	0.00
Amnicola	22	78.9	0.52	0	0.0	0.00
Physa	36	129.2	0.86	5	17.9	0.11
Menetus	65	233.2	1.54	0	0.0	0.00
Ferrissia	28	100.5	0.67	5	17.9	0.11
Dreissena bugensis	231	828.8	5.49	720	2,583.4	16.27
TOTAL BENTHOS	4,209	15,102.3	100.00	4,425	15,877.3	100.00

WATERWAY= N.B.C.R., LOCATION= ALBANY AVE.,
STATION= 96, and DATE= 10AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	66	236.8	6.98	6	21.5	0.65
Oligochaeta	119	427.0	12.58	41	147.1	4.47
Caecidotea	62	222.5	6.55	29	104.1	3.16
Gammarus	353	1,266.6	37.32	104	373.2	11.33
Enallagma	1	3.6	0.11	0	0.0	0.00
Thienemannimyia grp.	1	3.6	0.11	0	0.0	0.00
Thienemanniella xena	4	14.4	0.42	179	642.3	19.50
Cricotopus bicinctus grp.	0	0.0	0.00	6	21.5	0.65
Cricotopus sylvestris grp.	0	0.0	0.00	3	10.8	0.33
Nanocladius distinctus	1	3.6	0.11	6	21.5	0.65
Rheocricotopus robacki	1	3.6	0.11	12	43.1	1.31
Cryptochironomus	1	3.6	0.11	0	0.0	0.00
Dicrotendipes neomodestus	2	7.2	0.21	6	21.5	0.65
Dicrotendipes lucifer	5	17.9	0.53	3	10.8	0.33
Dicrotendipes simpsoni	1	3.6	0.11	3	10.8	0.33
Polypedilum flavum	7	25.1	0.74	20	71.8	2.18
Polypedilum illinoense	11	39.5	1.16	35	125.6	3.81
Polypedilum scalaenum grp.	57	204.5	6.03	0	0.0	0.00
Cladotanytarsus vanderwulpi grp.	1	3.6	0.11	0	0.0	0.00
Paratanytarsus	1	3.6	0.11	0	0.0	0.00
Rheotanytarsus	1	3.6	0.11	12	43.1	1.31
Tanytarsus	19	68.2	2.01	9	32.3	0.98
Simulium	1	3.6	0.11	0	0.0	0.00
Ferrissia	230	825.3	24.31	444	1,593.1	48.37
Corbicula fluminea	1	3.6	0.11	0	0.0	0.00
TOTAL BENTHOS	946	3,394.3	100.00	918	3,293.9	100.00

WATERWAY= N.B.C.R., LOCATION= GRAND AVE.,
STATION= 46, and DATE= 28JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	0	0.0	0.00	105	376.7	2.64
Turbellaria	688	2,468.6	56.12	60	215.3	1.51
Oligochaeta	269	965.2	21.94	1,050	3,767.5	26.38
Helobdella	1	3.6	0.08	0	0.0	0.00
Caecidotea	168	602.8	13.70	35	125.6	0.88
Hyalella azteca	76	272.7	6.20	490	1,758.2	12.31
Gammarus	1	3.6	0.08	0	0.0	0.00
Echinogammarus ischusa	1	3.6	0.08	0	0.0	0.00
Cricotopus sylvestris grp.	1	3.6	0.08	20	71.8	0.50
Nanocladius distinctus	2	7.2	0.16	40	143.5	1.01
Dicrotendipes lucifer	6	21.5	0.49	660	2,368.1	16.58
Dicrotendipes simpsoni	4	14.4	0.33	1,075	3,857.2	27.01
Glyptotendipes	0	0.0	0.00	40	143.5	1.01
Parachironomus	3	10.8	0.24	60	215.3	1.51
Polypedilum halterale grp.	1	3.6	0.08	0	0.0	0.00
Polypedilum illinoense	3	10.8	0.24	0	0.0	0.00
Polypedilum scalaenum grp.	1	3.6	0.08	0	0.0	0.00
Menetus	1	3.6	0.08	345	1,237.9	8.67
TOTAL BENTHOS	1,226	4,399.0	100.00	3,980	14,280.6	100.00

WATERWAY= N.S.C.,
LOCATION= TOUHY AVE.,
STATION= 36, and DATE= 29JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	0	0.0	0.00	580	2,081.1	3.93
Turbellaria	230	825.3	5.62	650	2,332.3	4.40
Oligochaeta	237	850.4	5.79	5,700	20,452.1	38.62
Helobdella	1	3.6	0.02	0	0.0	0.00
Erpobdella punctata punctata	27	96.9	0.66	0	0.0	0.00
Caecidotea	2,232	8,008.6	54.52	2,160	7,750.3	14.63
Hyalella azteca	87	312.2	2.13	1,080	3,875.1	7.32
Gammarus	0	0.0	0.00	220	789.4	1.49
Cyrnellus fraternus	29	104.1	0.71	0	0.0	0.00
Cricotopus bicinctus grp.	142	509.5	3.47	0	0.0	0.00
Nanocladius distinctus	26	93.3	0.64	0	0.0	0.00
Dicrotendipes fumidus	13	46.6	0.32	0	0.0	0.00
Dicrotendipes lucifer	116	416.2	2.83	190	681.7	1.29
Dicrotendipes simpsoni	283	1,015.4	6.91	520	1,865.8	3.52
Glyptotendipes	631	2,264.1	15.41	3,350	12,020.1	22.70
Parachironomus	26	93.3	0.64	240	861.1	1.63
Menetus	0	0.0	0.00	50	179.4	0.34
Ferrissia	14	50.2	0.34	20	71.8	0.14
TOTAL BENTHOS	4,094	14,689.6	100.00	14,760	52,960.2	100.00

WATERWAY= S.B.C.R., LOCATION= LOOMIS ST.,
STATION= 108, and DATE= 26JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	0	0.0	0.00	22	78.9	1.76
Turbellaria	0	0.0	0.00	3	10.8	0.24
Oligochaeta	1,788	6,415.5	89.67	510	1,829.9	40.87
Helobdella stagnalis	4	14.4	0.20	0	0.0	0.00
Caecidotea	3	10.8	0.15	0	0.0	0.00
Hyalella azteca	5	17.9	0.25	10	35.9	0.80
Gammarus	0	0.0	0.00	1	3.6	0.08
Cyrnellus fraternus	0	0.0	0.00	6	21.5	0.48
Procladius	2	7.2	0.10	0	0.0	0.00
Ablabesmyia mallochi	2	7.2	0.10	0	0.0	0.00
Mesosmittia	2	7.2	0.10	0	0.0	0.00
Nanocladius distinctus	0	0.0	0.00	6	21.5	0.48
Chironomus	9	32.3	0.45	18	64.6	1.44
Dicrotendipes lucifer	82	294.2	4.11	431	1,546.5	34.54
Dicrotendipes simpsoni	51	183.0	2.56	176	631.5	14.10
Glyptotendipes	5	17.9	0.25	18	64.6	1.44
Parachironomus	0	0.0	0.00	6	21.5	0.48
Pericoma	7	25.1	0.35	0	0.0	0.00
Physa	16	57.4	0.80	1	3.6	0.08
Menetus	9	32.3	0.45	37	132.8	2.96
Ferrissia	5	17.9	0.25	3	10.8	0.24
Corbicula fluminea	4	14.4	0.20	0	0.0	0.00
TOTAL BENTHOS	1,994	7,154.6	100.00	1,248	4,477.9	100.00

WATERWAY= S.B.C.R., LOCATION= MADISON ST.,
STATION= 39, and DATE= 09AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	295	1,058.5	9.61	50	179.4	1.83
Turbellaria	173	620.7	5.64	155	556.2	5.67
Oligochaeta	1,586	5,690.7	51.66	1,845	6,620.0	67.46
Helobdella	1	3.6	0.03	0	0.0	0.00
Helobdella stagnalis	4	14.4	0.13	0	0.0	0.00
Caecidotea	540	1,937.6	17.59	70	251.2	2.56
Hyalella azteca	180	645.9	5.86	105	376.7	3.84
Gammarus	50	179.4	1.63	0	0.0	0.00
Enallagma	1	3.6	0.03	0	0.0	0.00
Cricotopus bicinctus grp.	6	21.5	0.20	0	0.0	0.00
Nanocladius distinctus	13	46.6	0.42	5	17.9	0.18
Dicrotendipes neomodestus	2	7.2	0.07	5	17.9	0.18
Dicrotendipes lucifer	61	218.9	1.99	130	466.5	4.75
Dicrotendipes simpsoni	82	294.2	2.67	105	376.7	3.84
Glyptotendipes	7	25.1	0.23	10	35.9	0.37
Parachironomus	6	21.5	0.20	10	35.9	0.37
Polypedilum illinoense	4	14.4	0.13	0	0.0	0.00
Polypedilum scalaenum grp.	0	0.0	0.00	5	17.9	0.18
Physa	1	3.6	0.03	95	340.9	3.47
Menetus	0	0.0	0.00	100	358.8	3.66
Ferrissia	0	0.0	0.00	25	89.7	0.91
Corbicula fluminea	58	208.1	1.89	5	17.9	0.18
Dreissena bugensis	0	0.0	0.00	15	53.8	0.55
TOTAL BENTHOS	3,070	11,015.4	100.00	2,735	9,813.4	100.00

WATERWAY= S.F.S.B.C.R., LOCATION= ARCHER AVE.,
STATION= 99, and DATE= 26JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	121	434.2	94.53	124	444.9	99.20
Baetis intercalaris	1	3.6	0.78	0	0.0	0.00
Cheumatopsyche	1	3.6	0.78	0	0.0	0.00
Ceratopogonidae	3	10.8	2.34	0	0.0	0.00
Chironomus	1	3.6	0.78	0	0.0	0.00
Dicrotendipes lucifer	0	0.0	0.00	1	3.6	0.80
Parachironomus	1	3.6	0.78	0	0.0	0.00
TOTAL BENTHOS	128	459.3	100.00	125	448.5	100.00

WATERWAY= SALT CR., LOCATION= DEVON AVE.,
STATION= 18, and DATE= 07JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	47	168.6	1.15	35	125.6	0.90
Turbellaria	1,343	4,818.8	32.80	325	1,166.1	8.39
Oligochaeta	1,133	4,065.3	27.67	295	1,058.5	7.61
Caecidotea	360	1,291.7	8.79	0	0.0	0.00
Tricorythodes	337	1,209.2	8.23	110	394.7	2.84
Cheumatopsyche	263	943.7	6.42	1,510	5,418.0	38.97
Nectopsyche	0	0.0	0.00	5	17.9	0.13
Ablabesmyia janta	63	226.0	1.54	65	233.2	1.68
Thienemannimyia grp.	173	620.7	4.22	260	932.9	6.71
Thienemanniella xena	0	0.0	0.00	35	125.6	0.90
Cricotopus tremulus grp.	0	0.0	0.00	15	53.8	0.39
Cricotopus bicinctus grp.	0	0.0	0.00	65	233.2	1.68
Nanocladius distinctus	13	46.6	0.32	35	125.6	0.90
Nanocladius crassicornus/rectinervis	7	25.1	0.17	50	179.4	1.29
Dicrotendipes neomodestus	0	0.0	0.00	100	358.8	2.58
Paratendipes	20	71.8	0.49	0	0.0	0.00
Phaenopsectra obediens grp.	13	46.6	0.32	0	0.0	0.00
Polypedilum flavum	150	538.2	3.66	685	2,457.8	17.68
Polypedilum illinoense	13	46.6	0.32	115	412.6	2.97
Polypedilum scalaenum grp.	110	394.7	2.69	0	0.0	0.00
Rheotanytarsus	0	0.0	0.00	50	179.4	1.29
Tanytarsus	50	179.4	1.22	50	179.4	1.29
Tanytarsus glabrescens grp.	0	0.0	0.00	35	125.6	0.90
Ferrissia	0	0.0	0.00	35	125.6	0.90
TOTAL BENTHOS	4,095	14,693.2	100.00	3,875	13,903.8	100.00

WATERWAY= W.B. DUPAGE R., LOCATION= LAKE ST.,
STATION= 64, and DATE= 24JUN10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	1,280	4,592.8	11.78	1,087	3,900.3	30.19
Oligochaeta	7,850	28,166.5	72.26	1,510	5,418.0	41.93
Helobdella	20	71.8	0.18	7	25.1	0.19
Placobdella nuchalis	10	35.9	0.09	0	0.0	0.00
Erpobdella microstoma	10	35.9	0.09	22	78.9	0.61
Caecidotea	290	1,040.5	2.67	108	387.5	3.00
Orconectes	2	7.2	0.02	0	0.0	0.00
Procambarus	0	0.0	0.00	1	3.6	0.03
Hydracarina	50	179.4	0.46	0	0.0	0.00
Baetis intercalaris	1	3.6	0.01	0	0.0	0.00
Argia	10	35.9	0.09	14	50.2	0.39
Enallagma	0	0.0	0.00	1	3.6	0.03
Aeshna	0	0.0	0.00	1	3.6	0.03
Peltodytes	30	107.6	0.28	6	21.5	0.17
Procladius	0	0.0	0.00	17	61.0	0.47
Thienemannimyia grp.	50	179.4	0.46	9	32.3	0.25
Thienemanniella xena	10	35.9	0.09	0	0.0	0.00
Cricotopus bicinctus grp.	410	1,471.1	3.77	34	122.0	0.94
Cricotopus sylvestris grp.	30	107.6	0.28	0	0.0	0.00
Nanocladius distinctus	250	897.0	2.30	78	279.9	2.17
Chironomus	40	143.5	0.37	52	186.6	1.44
Dicrotendipes neomodestus	80	287.0	0.74	34	122.0	0.94
Dicrotendipes lucifer	0	0.0	0.00	34	122.0	0.94
Dicrotendipes simpsoni	10	35.9	0.09	86	308.6	2.39
Endochironomus nigricans	0	0.0	0.00	9	32.3	0.25
Glyptotendipes	10	35.9	0.09	103	369.6	2.86
Polypedilum flavum	0	0.0	0.00	17	61.0	0.47
Polypedilum illinoense	360	1,291.7	3.31	241	864.7	6.69
Polypedilum scalaenum grp.	10	35.9	0.09	9	32.3	0.25
Cladotanytarsus mancus grp.	0	0.0	0.00	9	32.3	0.25
Paratanytarsus	10	35.9	0.09	0	0.0	0.00
Rheotanytarsus	30	107.6	0.28	9	32.3	0.25
Tanytarsus	10	35.9	0.09	9	32.3	0.25
Menetus	0	0.0	0.00	94	337.3	2.61
TOTAL BENTHOS	10,863	38,977.4	100.00	3,601	12,920.7	100.00

WATERWAY= C.S.C., LOCATION= CICERO AVE.,
STATION= 59, and DATE= 13AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	6,990	100,329.4	94.72	9,290	133,341.9	94.70
Procladius	220	3,157.7	2.98	300	4,306.0	3.06
Chironomus	70	1,004.7	0.95	110	1,578.9	1.12
Cryptochironomus	10	143.5	0.14	0	0.0	0.00
Polypedilum scalaenum grp.	0	0.0	0.00	10	143.5	0.10
Corbicula fluminea	90	1,291.8	1.22	90	1,291.8	0.92
Musculium	0	0.0	0.00	10	143.5	0.10
TOTAL BENTHOS	7,380	105,927.1	100.00	9,810	140,805.6	100.00

WATERWAY= C.S.S.C., LOCATION= CICERO AVE.,
STATION= 75, and DATE= 20AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Hydra	0	0.0	0.00	5	71.8	0.75
Oligochaeta	3,710	53,250.6	98.15	647	9,286.6	97.29
Procladius	10	143.5	0.26	12	172.2	1.80
Dicrotendipes lucifer	10	143.5	0.26	0	0.0	0.00
Paralauterborniella nigrohalteralis	0	0.0	0.00	1	14.4	0.15
Corbicula fluminea	50	717.7	1.32	0	0.0	0.00
TOTAL BENTHOS	3,780	54,255.4	100.00	665	9,544.9	100.00

WATERWAY= C.S.S.C., LOCATION= DAMEN AVE.,
STATION= 40, and DATE= 26JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	15,800	226,781.6	99.06	7,242	103,946.4	99.57
Caecidotea	0	0.0	0.00	1	14.4	0.01
Hyalella azteca	0	0.0	0.00	9	129.2	0.12
Ceratopogonidae	50	717.7	0.31	0	0.0	0.00
Procladius	100	1,435.3	0.63	6	86.1	0.08
Chironomus	0	0.0	0.00	7	100.5	0.10
Dicrotendipes simpsoni	0	0.0	0.00	3	43.1	0.04
Corbicula fluminea	0	0.0	0.00	5	71.8	0.07
TOTAL BENTHOS	15,950	228,934.6	100.00	7,273	104,391.3	100.00

WATERWAY= C.S.S.C., LOCATION= HARLEM AVE.,
STATION= 41, and DATE= 16AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	15	215.3	0.61	0	0.0	0.00
Oligochaeta	2,425	34,806.7	98.94	2,730	39,184.4	99.45
Helobdella stagnalis	1	14.4	0.04	5	71.8	0.18
Procladius	9	129.2	0.37	0	0.0	0.00
Chironomus	1	14.4	0.04	5	71.8	0.18
Cryptotendipes	0	0.0	0.00	5	71.8	0.18
TOTAL BENTHOS	2,451	35,179.9	100.00	2,745	39,399.7	100.00

WATERWAY= C.S.S.C., LOCATION= LOCKPORT,
STATION= 92, and DATE= 23JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	4	57.4	0.27	0	0.0	0.00
Oligochaeta	1,446	20,754.8	97.77	3,822	54,858.2	97.33
Helobdella	1	14.4	0.07	0	0.0	0.00
Erpobdella microstoma	5	71.8	0.34	1	14.4	0.03
Hyalella azteca	0	0.0	0.00	2	28.7	0.05
Echinogammarus ischusa	2	28.7	0.14	0	0.0	0.00
Procladius	3	43.1	0.20	92	1,320.5	2.34
Thienemannimyia grp.	0	0.0	0.00	2	28.7	0.05
Nanocladius distinctus	3	43.1	0.20	0	0.0	0.00
Dicrotendipes lucifer	2	28.7	0.14	0	0.0	0.00
Dicrotendipes simpsoni	0	0.0	0.00	2	28.7	0.05
Polypedilum halterale grp.	1	14.4	0.07	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.03
Corbicula fluminea	12	172.2	0.81	5	71.8	0.13
TOTAL BENTHOS	1,479	21,228.5	100.00	3,927	56,365.3	100.00

WATERWAY= C.S.S.C.,
LOCATION= ROUTE 83,
STATION= 42,
and DATE= 07SEP10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	5	71.8	0.52	--	--	--
Oligochaeta	913	13,104.5	95.80	--	--	--
Helobdella stagnalis	30	430.6	3.15	--	--	--
Hyalella azteca	1	14.4	0.10	--	--	--
Dicrotendipes lucifer	2	28.7	0.21	--	--	--
Dicrotendipes simpsoni	1	14.4	0.10	--	--	--
Corbicula fluminea	1	14.4	0.10	--	--	--
TOTAL BENTHOS	953	13,678.7	100.00	--	--	--

WATERWAY= CALUMET R.,
LOCATION= 130TH ST.,
STATION= 55,
and DATE= 11AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	1	14.4	0.16	0	0.0	0.00
Oligochaeta	257	3,688.8	40.73	54	775.1	55.67
Caecidotea	1	14.4	0.16	0	0.0	0.00
Gammarus	23	330.1	3.65	1	14.4	1.03
Echinogammarus ischusa	5	71.8	0.79	0	0.0	0.00
Tanypus	0	0.0	0.00	1	14.4	1.03
Procladius	0	0.0	0.00	9	129.2	9.28
Ablabesmyia mallochi	0	0.0	0.00	1	14.4	1.03
Cricotopus bicinctus grp.	0	0.0	0.00	1	14.4	1.03
Parakiefferiella	0	0.0	0.00	9	129.2	9.28
Cryptochironomus	0	0.0	0.00	3	43.1	3.09
Dicrotendipes neomodestus	0	0.0	0.00	1	14.4	1.03
Dicrotendipes fumidus	0	0.0	0.00	4	57.4	4.12
Polypedilum halterale grp.	0	0.0	0.00	6	86.1	6.19
Tanytarsus	0	0.0	0.00	3	43.1	3.09
Dreissena polymorpha	15	215.3	2.38	0	0.0	0.00
Dreissena bugensis	329	4,722.2	52.14	4	57.4	4.12
TOTAL BENTHOS	631	9,056.9	100.00	97	1,392.3	100.00

WATERWAY= CHICAGO R.,
LOCATION= LAKE SHORE DR.,
STATION= 74,
and DATE= 09AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	820	11,769.7	99.88	2,630	37,749.1	93.93
Procladius	1	14.4	0.12	5	71.8	0.18
Cladopelma	0	0.0	0.00	15	215.3	0.54
Dicrotendipes neomodestus	0	0.0	0.00	5	71.8	0.18
Dicrotendipes simpsoni	0	0.0	0.00	5	71.8	0.18
Polypedilum halterale grp.	0	0.0	0.00	5	71.8	0.18
Dreissena bugensis	0	0.0	0.00	135	1,937.7	4.82
TOTAL BENTHOS	821	11,784.0	100.00	2,800	40,189.2	100.00

WATERWAY= CHICAGO R.,
LOCATION= WELLS ST.,
STATION= 100,
and DATE= 28JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	871	12,501.7	99.89	493	7,076.2	100.00
Chironomus	1	14.4	0.11	0	0.0	0.00
TOTAL BENTHOS	872	12,516.1	100.00	493	7,076.2	100.00

WATERWAY= DES PLAINES R.,
LOCATION= LAKE COOK RD.,
STATION= 13,
and DATE= 22JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	9	129.2	0.95	1,030	14,783.9	78.63
Gammarus	1	14.4	0.11	10	143.5	0.76
Baetis intercalaris	2	28.7	0.21	0	0.0	0.00
Maccaffertium terminatum	2	28.7	0.21	0	0.0	0.00
Tricorythodes	164	2,353.9	17.25	10	143.5	0.76
Anthopotamus myops grp.	2	28.7	0.21	0	0.0	0.00
Ephoron album	1	14.4	0.11	0	0.0	0.00
Cheumatopsyche	10	143.5	1.05	0	0.0	0.00
Potamyia flava	2	28.7	0.21	0	0.0	0.00
Nectopsyche	2	28.7	0.21	0	0.0	0.00
Oecetis	0	0.0	0.00	10	143.5	0.76
Dubiraphia	1	14.4	0.11	0	0.0	0.00
Stenelmis	1	14.4	0.11	0	0.0	0.00
Procladius	0	0.0	0.00	40	574.1	3.05
Thienemannimyia grp.	76	1,090.8	7.99	10	143.5	0.76
Cricotopus bicinctus grp.	8	114.8	0.84	10	143.5	0.76
Dicrotendipes neomodestus	114	1,636.3	11.99	0	0.0	0.00
Dicrotendipes lucifer	8	114.8	0.84	0	0.0	0.00
Microtendipes	273	3,918.4	28.71	0	0.0	0.00
Paracladopelma	0	0.0	0.00	10	143.5	0.76
Paralauterborniella nigrohalteralis	8	114.8	0.84	0	0.0	0.00
Polypedilum halterale grp.	8	114.8	0.84	140	2,009.5	10.69
Polypedilum scalaenum grp.	129	1,851.6	13.56	0	0.0	0.00
Cladotanytarsus vanderwulpi grp.	114	1,636.3	11.99	0	0.0	0.00
Tanytarsus	8	114.8	0.84	0	0.0	0.00
Corbicula fluminea	1	14.4	0.11	10	143.5	0.76
Musculium	0	0.0	0.00	20	287.1	1.53
Pisidium	6	86.1	0.63	0	0.0	0.00
Leptodea fragilis	1	14.4	0.11	10	143.5	0.76
TOTAL BENTHOS	951	13,650.0	100.00	1,310	18,802.8	100.00

WATERWAY= DES PLAINES R.,
LOCATION= MATERIAL SERVICE RD.,
STATION= 91,
and DATE= 21JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	291	4,176.8	29.57	412	5,913.5	35.36
Helobdella stagnalis	0	0.0	0.00	1	14.4	0.09
Erpobdella punctata punctata	0	0.0	0.00	5	71.8	0.43
Gammarus	0	0.0	0.00	10	143.5	0.86
Enallagma	0	0.0	0.00	1	14.4	0.09
Macronychus glabratus	1	14.4	0.10	0	0.0	0.00
Procladius	0	0.0	0.00	131	1,880.3	11.24
Clinotanypus	0	0.0	0.00	7	100.5	0.60
Ablabesmyia mallochi	5	71.8	0.51	0	0.0	0.00
Thienemanniella similis	5	71.8	0.51	0	0.0	0.00
Cricotopus bicinctus grp.	34	488.0	3.46	0	0.0	0.00
Chironomus	39	559.8	3.96	480	6,889.6	41.20
Cryptochironomus	0	0.0	0.00	7	100.5	0.60
Dicrotendipes neomodestus	364	5,224.6	36.99	73	1,047.8	6.27
Dicrotendipes lucifer	0	0.0	0.00	7	100.5	0.60
Dicrotendipes simpsoni	0	0.0	0.00	7	100.5	0.60
Microtendipes	0	0.0	0.00	7	100.5	0.60
Polypedilum flavum	10	143.5	1.02	0	0.0	0.00
Polypedilum scalaenum grp.	5	71.8	0.51	7	100.5	0.60
Amnicola	22	315.8	2.24	0	0.0	0.00
Pleurocera	151	2,167.3	15.35	0	0.0	0.00
Physa	0	0.0	0.00	3	43.1	0.26
Corbicula fluminea	50	717.7	5.08	6	86.1	0.52
Pisidium	7	100.5	0.71	1	14.4	0.09
TOTAL BENTHOS	984	14,123.6	100.00	1,165	16,721.6	100.00

WATERWAY= DES PLAINES R.,
LOCATION= OGDEN AVE.,
STATION= 22,
and DATE= 20JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	27	387.5	3.30	636	9,128.7	93.39
Caecidotea	13	186.6	1.59	2	28.7	0.29
Gammarus	0	0.0	0.00	4	57.4	0.59
Maccaffertium terminatum	1	14.4	0.12	0	0.0	0.00
Tricorythodes	28	401.9	3.42	0	0.0	0.00
Cheumatopsyche	2	28.7	0.24	0	0.0	0.00
Stenelmis	11	157.9	1.34	0	0.0	0.00
Thienemannimyia grp.	128	1,837.2	15.65	2	28.7	0.29
Cricotopus bicinctus grp.	0	0.0	0.00	1	14.4	0.15
Chironomus	0	0.0	0.00	4	57.4	0.59
Cryptochironomus	23	330.1	2.81	5	71.8	0.73
Dicrotendipes neomodestus	23	330.1	2.81	0	0.0	0.00
Paracladopelma	0	0.0	0.00	1	14.4	0.15
Polypedilum flavum	30	430.6	3.67	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.15
Polypedilum scalaenum grp.	452	6,487.7	55.26	18	258.4	2.64
Cladotanytarsus vanderwulpi grp.	30	430.6	3.67	4	57.4	0.59
Tanytarsus	15	215.3	1.83	0	0.0	0.00
Ferrissia	2	28.7	0.24	1	14.4	0.15
Corbicula fluminea	29	416.2	3.55	2	28.7	0.29
Pisidium	4	57.4	0.49	0	0.0	0.00
TOTAL BENTHOS	818	11,741.0	100.00	681	9,774.6	100.00

WATERWAY= HIGGINS CR.,
LOCATION= WILLE RD.,
STATION= 78,
and DATE= 06JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	1,742	25,003.4	41.30	3,773	54,154.9	39.18
Oligochaeta	35	502.4	0.83	9	129.2	0.09
Haemopis	7	100.5	0.17	4	57.4	0.04
Caecidotea	2,246	32,237.4	53.25	5,760	82,674.8	59.81
Hyalella azteca	1	14.4	0.02	0	0.0	0.00
Physa	0	0.0	0.00	5	71.8	0.05
Pisidium	187	2,684.1	4.43	79	1,133.9	0.82
TOTAL BENTHOS	4,218	60,542.1	100.00	9,630	138,222.0	100.00

WATERWAY= L.C.R.,
LOCATION= HALSTED ST.,
STATION= 76,
and DATE= 19AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	10	143.5	0.14	0	0.0	0.00
Oligochaeta	7,010	100,616.4	97.91	3,220	46,217.5	96.70
Helobdella stagnalis	60	861.2	0.84	0	0.0	0.00
Erpobdella microstoma	40	574.1	0.56	10	143.5	0.30
Hyalella azteca	0	0.0	0.00	30	430.6	0.90
Chironomus	0	0.0	0.00	10	143.5	0.30
Cryptochironomus	0	0.0	0.00	10	143.5	0.30
Dicrotendipes fumidus	0	0.0	0.00	10	143.5	0.30
Dicrotendipes simpsoni	10	143.5	0.14	0	0.0	0.00
Corbicula fluminea	0	0.0	0.00	40	574.1	1.20
Sphaerium	20	287.1	0.28	0	0.0	0.00
Dreissena bugensis	10	143.5	0.14	0	0.0	0.00
TOTAL BENTHOS	7,160	102,769.4	100.00	3,330	47,796.4	100.00

WATERWAY= N.B.C.R.,
LOCATION= ALBANY AVE.,
STATION= 96, and DATE= 10AUG10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	6	86.1	3.61	2	28.7	0.60
Oligochaeta	26	373.2	15.66	313	4,492.6	93.15
Caecidotea	0	0.0	0.00	1	14.4	0.30
Gammarus	87	1,248.7	52.41	0	0.0	0.00
Cricotopus bicinctus grp.	0	0.0	0.00	1	14.4	0.30
Cryptochironomus	0	0.0	0.00	8	114.8	2.38
Polypedilum scalaenum grp.	21	301.4	12.65	10	143.5	2.98
Paratanytarsus	0	0.0	0.00	1	14.4	0.30
Corbicula fluminea	3	43.1	1.81	0	0.0	0.00
Musculium	19	272.7	11.45	0	0.0	0.00
Pisidium	4	57.4	2.41	0	0.0	0.00
TOTAL BENTHOS	166	2,382.6	100.00	336	4,822.7	100.00

WATERWAY= N.B.C.R.,
LOCATION= GRAND AVE.,
STATION= 46, and DATE= 28JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Turbellaria	0	0.0	0.00	1	14.4	0.04
Oligochaeta	811	11,640.5	99.02	2,226	31,950.4	98.71
Erpobdella microstoma	0	0.0	0.00	1	14.4	0.04
Caecidotea	0	0.0	0.00	3	43.1	0.13
Hyalella azteca	0	0.0	0.00	1	14.4	0.04
Gammarus	0	0.0	0.00	3	43.1	0.13
Echinogammarus ischusa	2	28.7	0.24	0	0.0	0.00
Procladius	1	14.4	0.12	17	244.0	0.75
Chironomus	1	14.4	0.12	0	0.0	0.00
Dicrotendipes lucifer	0	0.0	0.00	1	14.4	0.04
Polypedilum illinoense	1	14.4	0.12	0	0.0	0.00
Physa	0	0.0	0.00	1	14.4	0.04
Corbicula fluminea	3	43.1	0.37	1	14.4	0.04
TOTAL BENTHOS	819	11,755.3	100.00	2,255	32,366.6	100.00

WATERWAY= N.S.C.,
LOCATION= TOUHY AVE.,
STATION= 36, and DATE= 29JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	3,382	48,542.8	94.84	17,720	254,339.9	99.33
Caecidotea	40	574.1	1.12	0	0.0	0.00
Procladius	1	14.4	0.03	0	0.0	0.00
Cricotopus bicinctus grp.	22	315.8	0.62	10	143.5	0.06
Nanocladius distinctus	1	14.4	0.03	0	0.0	0.00
Chironomus	84	1,205.7	2.36	50	717.7	0.28
Cryptochironomus	6	86.1	0.17	10	143.5	0.06
Dicrotendipes fumidus	7	100.5	0.20	10	143.5	0.06
Dicrotendipes lucifer	1	14.4	0.03	0	0.0	0.00
Dicrotendipes simpsoni	3	43.1	0.08	0	0.0	0.00
Glyptotendipes	6	86.1	0.17	30	430.6	0.17
Parachironomus	12	172.2	0.34	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	10	143.5	0.06
Ferrissia	1	14.4	0.03	0	0.0	0.00
TOTAL BENTHOS	3,566	51,183.8	100.00	17,840	256,062.3	100.00

WATERWAY= S.B.C.R.,
LOCATION= LOOMIS ST.,
STATION= 108, and DATE= 26JUL10

TAXA	CENTER			SIDE		
	#_	#/m2	%	#_	#/m2	%
Oligochaeta	907	13,018.4	92.27	1,625	23,324.1	95.31
Erpobdella punctata punctata	0	0.0	0.00	5	71.8	0.29
Procladius	56	803.8	5.70	0	0.0	0.00
Chironomus	11	157.9	1.12	20	287.1	1.17
Dicrotendipes lucifer	0	0.0	0.00	5	71.8	0.29
Pericoma	1	14.4	0.10	0	0.0	0.00
Corbicula fluminea	8	114.8	0.81	45	645.9	2.64
Dreissena bugensis	0	0.0	0.00	5	71.8	0.29
TOTAL BENTHOS	983	14,109.3	100.00	1,705	24,472.3	100.00

APPENDIX A - 2010 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= S.B.C.R., LOCATION= MADISON ST., STATION= 39, and DATE= 09AUG10

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Oligochaeta	4,433	63,628.0	99.82	1,052	15,099.6	99.06
Hyalella azteca	1	14.4	0.02	0	0.0	0.00
Procladius	2	28.7	0.05	4	57.4	0.38
Nanocladius distinctus	0	0.0	0.00	1	14.4	0.09
Chironomus	0	0.0	0.00	2	28.7	0.19
Parachironomus	0	0.0	0.00	1	14.4	0.09
Polypedilum scalaenum grp.	0	0.0	0.00	1	14.4	0.09
Corbicula fluminea	5	71.8	0.11	0	0.0	0.00
Dreissena bugensis	0	0.0	0.00	1	14.4	0.09
TOTAL BENTHOS	4,441	63,742.9	100.00	1,062	15,243.2	100.00

WATERWAY= S.F.S.B.C.R., LOCATION= ARCHER AVE., STATION= 99, and DATE= 26JUL10

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Oligochaeta	7,140	102,482.3	99.86	1,809	25,965.1	99.18
Hyalella azteca	0	0.0	0.00	1	14.4	0.05
Procladius	0	0.0	0.00	2	28.7	0.11
Cricotopus sylvestris grp.	0	0.0	0.00	2	28.7	0.11
Mesosmittia	0	0.0	0.00	1	14.4	0.05
Chironomus	10	143.5	0.14	5	71.8	0.27
Tipula	0	0.0	0.00	1	14.4	0.05
Physa	0	0.0	0.00	3	43.1	0.16
TOTAL BENTHOS	7,150	102,625.9	100.00	1,824	26,180.4	100.00

WATERWAY= SALT CR., LOCATION= DEVON AVE., STATION= 18, and DATE= 07JUL10

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Turbellaria	1	14.4	0.13	0	0.0	0.00
Oligochaeta	70	1,004.7	9.00	431	6,186.3	55.76
Tricorythodes	17	244.0	2.19	4	57.4	0.52
Cheumatopsyche	7	100.5	0.90	5	71.8	0.65
Oecetis	0	0.0	0.00	2	28.7	0.26
Stenelmis	9	129.2	1.16	1	14.4	0.13
Thienemannimyia grp.	46	660.3	5.91	17	244.0	2.20
Cryptochironomus	53	760.7	6.81	31	445.0	4.01
Dicrotendipes neomodestus	20	287.1	2.57	45	645.9	5.82
Microtendipes	13	186.6	1.67	0	0.0	0.00
Paratendipes	0	0.0	0.00	3	43.1	0.39
Polypedilum flavum	0	0.0	0.00	3	43.1	0.39
Polypedilum halterale grp.	80	1,148.3	10.28	25	358.8	3.23
Polypedilum scalaenum grp.	113	1,621.9	14.52	37	531.1	4.79
Cladotanytarsus mancus grp.	13	186.6	1.67	39	559.8	5.05
Tanytarsus	292	4,191.2	37.53	81	1,162.6	10.48
Ferrissia	0	0.0	0.00	8	114.8	1.03
Corbicula fluminea	44	631.5	5.66	40	574.1	5.17
Pisidium	0	0.0	0.00	1	14.4	0.13
TOTAL BENTHOS	778	11,166.8	100.00	773	11,095.1	100.00

WATERWAY= W.B. DUPAGE R., LOCATION= LAKE ST., STATION= 64, and DATE= 24JUN10

TAXA	CENTER			SIDE		
	#_	#/m2__	%__	#_	#/m2__	%__
Turbellaria	1	14.4	0.22	0	0.0	0.00
Oligochaeta	283	4,062.0	62.89	426	6,114.5	76.76
Helobdella	0	0.0	0.00	1	14.4	0.18
Caecidotea	1	14.4	0.22	0	0.0	0.00
Procladius	0	0.0	0.00	4	57.4	0.72
Thienemannimyia grp.	7	100.5	1.56	1	14.4	0.18
Thienemanniella xena	9	129.2	2.00	0	0.0	0.00
Cricotopus bicinctus grp.	92	1,320.5	20.44	1	14.4	0.18
Nanocladius distinctus	5	71.8	1.11	0	0.0	0.00
Chironomus	5	71.8	1.11	71	1,019.1	12.79
Cryptochironomus	5	71.8	1.11	22	315.8	3.96
Cryptotendipes	0	0.0	0.00	4	57.4	0.72
Dicrotendipes neomodestus	5	71.8	1.11	4	57.4	0.72
Phaenopsectra obediens grp.	0	0.0	0.00	1	14.4	0.18
Polypedilum flavum	0	0.0	0.00	4	57.4	0.72
Polypedilum illinoense	15	215.3	3.33	1	14.4	0.18
Polypedilum scalaenum grp.	5	71.8	1.11	7	100.5	1.26
Stictochironomus	0	0.0	0.00	1	14.4	0.18
Cladotanytarsus mancus grp.	2	28.7	0.44	4	57.4	0.72
Paratanytarsus	2	28.7	0.44	0	0.0	0.00
Rheotanytarsus	2	28.7	0.44	0	0.0	0.00
Tanytarsus	9	129.2	2.00	3	43.1	0.54
Corbicula fluminea	2	28.7	0.44	0	0.0	0.00
TOTAL BENTHOS	450	6,459.0	100.00	555	7,966.1	100.00