

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 07-47

A STUDY OF THE BENTHIC MACROINVERTEBRATE COMMUNITY

IN SELECTED CHICAGO METROPOLITAN AREA WATERWAYS

DURING 2003 AND 2004

Prepared By

EA Engineering, Science, and Technology, Inc.

JULY 2007

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Research and Development Department
Louis Kollias, Director

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444 Lake Cook Road, Suite 18
Deerfield, IL 60015

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EA Project 61755.01

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1. INTRODUCTION

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

In an effort to support and strengthen their AWQM program, the District has implemented an ancillary monitoring program to evaluate the biological resources, sediment quality, and habitat condition on waterways within their service area. As part of this initiative, a benthic macroinvertebrate sampling program began in 2001 to collect samples at established stations in five watersheds: North Branch Chicago River, South Branch Chicago River and Chicago Sanitary and Ship Canal, Calumet River, Fox River, and Des Plaines River. Each of these watersheds will be sampled on a four-year rotation. In addition to the target watersheds, a core group of stations throughout the District's service area will be evaluated annually. The first two primary watersheds sampled were the North Branch Chicago River (2001) and the South Branch Chicago River and Chicago Sanitary and Ship Canal (2002) (EA 2004). This report presents the study design and benthic macroinvertebrate data for the 2003 and 2004 program years.

2. METHODS

For the 2003 and 2004 studies, benthic macroinvertebrates were monitored at 24 and 32 stations respectively in the Chicago Metropolitan Area waterways. Of these stations, 15 were sampled during both years. In 2003, benthic macroinvertebrate samples were collected at 24 stations in the Calumet River, Grand Calumet River, Little Calumet River, Calumet-Sag Channel, North Branch of the Chicago River, Chicago Sanitary and Ship Canal, Des Plaines River, West Branch of the DuPage River, Higgins Creek, North Shore Channel, Salt Creek, Thorn Creek, and Wolf Lake Drainage Channel waterways (Table 2-1). During 2004, benthic macroinvertebrates were monitored at 32 stations in the aforementioned 2003 waterways (excluding the Wolf Lake Drainage Channel) as well as in the Buffalo Creek and Poplar Creek waterways (Table 2-2). Figure 2-1 presents the benthic macroinvertebrate sampling locations for the District's ambient water quality program.

Field sampling was conducted by District personnel using a combination of Hester-Dendy (HD) artificial substrates and Ponar grabs. 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 m². At each location, a group of three HD samplers (sampler array) were deployed near shore in the littoral zone and an additional group of three samplers was deployed 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. One cable was used to anchor both arrays to a structure on shore.

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 (250 μ) mesh (Figure 2-3). The cable tie connecting each H-D 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 5% formalin before the lid was attached. Deployment and retrieval dates for the HD samples in each watershed were as follows:

	2003	
<u>Watershed</u>	<u>Deployed</u>	<u>Retrieved</u>
Calumet River	16 May – 6 June	1 July - 8 September
North Branch Chicago River	20-27 May	23 July – 6 August
CSSC	21-22 May	18-29 July
Des Plaines River	29 April – 19 May	9-27 June

Table 2-1. Description of benthic macroinvertebrate monitoring stations sampled during 2003. Stations arranged by major watershed, upstream to downstream within each waterway. Highlighted stations were sampled every year during the 2001-2004 study period

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
	49- Ewing Ave.	Calumet River	41° 43.683' N 87° 32.536' N	50' upstream of Ewing Ave. (30' from east bank and center channel)
	55- 130th St.	Calumet River	41° 39' 33.9"N 87° 34' 20.1"W	50' upstream of 130th St. (40' from east bank and center channel)
	50- 126th St.	Wolf Lake Drainage Channel	41° 39.878' N 87° 32.330' W	100' upstream of 126th St. (10' from east bank and center channel)
	86- Burnham Ave.	Grand Calumet River	41° 37.870' N 87° 32.352' W	200' west of Norfolk & Western Railroad bridge (10' from south bank and center channel)
	54- Joe Orr Rd.	Thorn Creek	41° 32.250' N 87° 37.522' W	200' upstream of Joe Orr Rd. (5' from east bank and center channel)
	97- 170th St.	Thorn Creek	41° 31.250' N 87° 37.522' W	150' upstream of 170th St. (10' from east bank and center channel)
	52- Wentworth Ave.	Little Calumet River	41° 35.131' N 87° 31.792' W	150' upstream of Wentworth Ave. (5' from north bank and center channel)
	57- Ashland Ave.	Little Calumet River	41° 39.099' N 87° 39.633' W	400' upstream of Ashland Ave. (15' from south bank and center channel)
	76- Halsted St.	Little Calumet River	41° 39' 25.9"N 87° 38' 27.3"W	20' upstream of Halsted St. (20' from south bank and center channel)
	56- Indiana Ave.	Little Calumet River	41° 39.136' N 87° 35.828' W	30' upstream of Indiana Ave. (20' from north bank and center channel)
	58- Ashland Ave.	Calumet-Sag Channel	41° 39.312' N 87° 39.640' W	200' upstream of Ashland Ave. (15' from south bank and center channel)
	59- Cicero Ave.	Calumet-Sag Channel	41° 359' 19.4"N 87° 44' 15.6"W	150' upstream of Cicero Ave. (30' from north bank and center channel)
	43- Route 83	Calumet-Sag Channel	41° 41.790' N 87° 56.480' W	1000' upstream of Route 83 (20' from south bank and center channel)

(1) CSSC= Chicago Sanitary and Ship Canal

Table 2-1 - Continued

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
North Branch Chicago River	36- Touhy Ave.	N. Shore Channel	42° 00' 43.7"N 87° 42' 37.2"W	10' upstream of Touhy Ave. (15' from east bank and center channel)
	96- Albany Ave.	N. Branch Chicago R.	41° 58' 21.7"N 87° 42' 44.3"W	250' downstream of Kimball Ave. (5' from south bank and center channel)
	46- Grand Ave.	N. Branch Chicago R.	41° 53' 29.16" N 87° 38' 9.29" W	50' upstream of Grand Ave. (40' from east bank and center channel)
	75- Cicero Ave.	Chicago Sanitary and Ship Canal	41° 49' 11.4"N 87° 44' 35.7"W	20' upstream of Cicero Ave. (70' from north bank and center channel)
SBCR CSSC (1)	41- Harlem Ave.	Chicago Sanitary and Ship Canal	41° 48' 4.01"N 87° 48' 5.64"W	50' upstream of Harlem Ave. (50' from south bank and center channel)
	92- Lockport (16th St.)	Chicago Sanitary and Ship Canal	41° 34' 58"N 88° 04' 09.4"W	75' upstream of former Division St. bridge location (20' from west bank and center channel)
Des Plaines River	64- Lake St.	W Branch Du Page R.	41° 58' 43.1"N 88° 07' 59.4"W	75' upstream of Lake St. (5' from west bank and center channel)
	18- Devon Ave.	Salt Cr.	41° 59' 34.6"N 87° 59' 42.9"W	150' upstream of Devon Ave. (10' from west bank and center channel)
	78- Wille Road	Higgins Cr.	42° 01' 7.24"N 87° 56' 12.03"W	200' downstream of Wille Rd., inside entrance to culvert (5' from west bank and center channel)
	13- Lake-Cook Rd.	Des Plaines R.	42° 09' 9.8"N 87° 54' 36.2"W	20' downstream of Lake-Cook Rd. (20' from west bank and center channel)
	22- Ogden Ave.	Des Plaines R.	41° 49' 14.4"N 87° 48' 38.2"W	50' upstream of Ogden Ave. (20' from east bank and center channel)
	91- Material Service Rd.	Des Plaines R.	41° 35' 29.3"N 88° 4' 8.30"W	20' upstream of Material Service Rd. (20' from east bank and center channel)

(1) CSSC= Chicago Sanitary and Ship Canal

Table 2-2. Description of benthic macroinvertebrate monitoring stations sampled during 2004. Stations arranged by major watershed, upstream to downstream within each waterway. Highlighted stations were sampled every year during the 2001-2004 study period.

Watershed	Sampling Station	Waterway	Lat./Lon.	Location Description
Calumet River	55- 130th St.	Calumet River	41° 39' 33.9"N 87° 34' 20.1"W	50' upstream of 130th St. (40' from east bank and center channel)
	76- Halsted St.	Little Calumet River	41° 39' 25.9"N 87° 38' 27.3"W	20' upstream of Halsted St. (20' from south bank and center channel)
	59- Cicero Ave.	Calumet-Sag Channel	41° 359' 19.4"N 87° 44' 15.6"W	150' upstream of Cicero Ave. (30' from north bank and center channel)
	36- Touhy Ave.	N. Shore Channel	42° 00' 43.7"N 87° 42' 37.2"W	10' upstream of Touhy Ave. (15' from east bank and center channel)
North Branch Chicago River	96- Albany Ave.	N. Branch Chicago R.	41° 58' 21.7"N 87° 42' 44.3"W	250' downstream of Kimball Ave. (5' from south bank and center channel)
	CFAR Fullerton Ave.	N. Branch Chicago R.		
SBCR and CSSC (1)	46- Grand Ave.	N. Branch Chicago R.	41° 53' 29.16" N 87° 38' 9.29" W	50' upstream of Grand Ave. (40' from east bank and center channel)
	75- Cicero Ave.	Chicago Sanitary and Ship Canal	41° 49' 11.4"N 87° 44' 35.7"W	20' upstream of Cicero Ave. (70' from north bank and center channel)
	41- Harlem Ave.	Chicago Sanitary and Ship Canal	41° 48' 4.01"N 87° 48' 5.64"W	50' upstream of Harlem Ave. (50' from south bank and center channel)
	92- Lockport (16th St.)	Chicago Sanitary and Ship Canal	41° 34' 58"N 88° 04' 09.4"W	75' upstream of former Division St. bridge location (20' from west bank and center channel)
Fox River	90- Route 19	Poplar Cr.	42° 01.841 N 88° 14.516' W	5' upstream of Route 19 (3' from east bank and center channel)

(1) CSSC= Chicago Sanitary and Ship Canal

Table 2-2 - Continued

Sampling Station	Waterway	Lat./Lon.	Location Description
110	W. Branch Du Page R.	42° 00.496' N 88° 07.145' W	At upstream side of Springinguth Rd. (2' from south bank and center channel)
89-	W. Branch Du Page R.	41° 59.745' N 88° 08.179' W	100' upstream of Walnut Ln. (5' from east bank and center channel)
64-	W Branch Du Page R.	41° 58'43.1"N 88° 07' 59.4"W	75' upstream of Lake St. (5' from west bank and center channel)
12-	Lake-Cook Rd. Buffalo Cr.	42° 09.110' N 87° 58.150' W	50' upstream of Lake -Cook Rd. (15' from east bank and center channel)
79-	Higgins Rd. Salt Cr.	42° 01.880' N 88° 00.679' W	200' upstream of Higgins Rd. (15' from east bank and center channel)
80-	Arlington Heights Salt Cr.	42° 00.736' N 88° 00.075' W	1200' upstream of Arlington Heights Rd. (10' from west bank and center channel)
CFAR	J.F. Kennedy Blvd. Salt Cr.		
18-	Devon Ave. Salt Cr.	41° 59'34.6"N 87° 59' 42.9"W	150' upstream of Devon Ave. (10' from west bank and center channel)
24-	Wolf Rd. Salt Cr.	41° 49.548' N 87° 54.025' W	150' upstream of Wolf Rd. (10' from north bank and center channel)
109-	Brookfield Ave. Salt Cr.	41° 49.370' N 87° 50.494' W	200' downstream of Brookfield Ave. (5' from east bank and center channel)
77-	Elmhurst Rd. Higgins Cr.	42° 01.287' N 87° 56.436' W	30' upstream of Elmhurst Rd. (10' from south bank and center channel)

Des Plaines River

(1) CSSC= Chicago Sanitary and Ship Canal

Table 2-2 - Continued

Sampling Station	Waterway	Lat./Lon.	Location Description
78- Wille Road	Higgins Cr.	42° 01' 7.24"N 87° 56' 12.03"W	200' downstream of Wille Rd., inside entrance to culvert (5' from west bank and center channel)
13- Lake-Cook Rd.	Des Plaines R.	42° 09' 9.8"N 87° 54' 36.2"W	20' downstream of Lake-Cook Rd. (20' from west bank and center channel)
17- Oakton St.	Des Plaines R.	42° 01.512'N 87° 52.494'W	100' downstream of Oakton St. (15' from west bank and center channel)
CFAR Irving Park Road	Des Plaines R.		
19- Belmont Ave.	Des Plaines R.	41° 56.236'N 87° 50.975'W	200' downstream of Belmont Ave. (15' from west bank and center channel)
20- Roosevelt Rd.	Des Plaines R.	41° 51.878'N 87° 49.639'W	200' upstream of Roosevelt Rd. (10' from east bank and center channel)
22- Ogden Ave.	Des Plaines R.	41° 49'14.4"N 87° 48' 38.2"W	50' upstream of Ogden Ave. (20' from east bank and center channel)
23- Willow Springs Rd.	Des Plaines R.	41° 44.135'N 87° 52.901'W	300' upstream of Willow Springs Rd. (20' from west bank and center channel)
29- Stephen St.	Des Plaines R.	41° 40.899'N 88° 00.147' W	70' upstream of Stephen St. (15' from east bank and center channel)
91- Material Service Rd.	Des Plaines R.	41° 35' 29.3"N 88° 4' 8.30"W	20' upstream of Material Service Rd. (20' from east bank and center channel)

Des Plaines River

(1) CSSC= Chicago Sanitary and Ship Canal

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

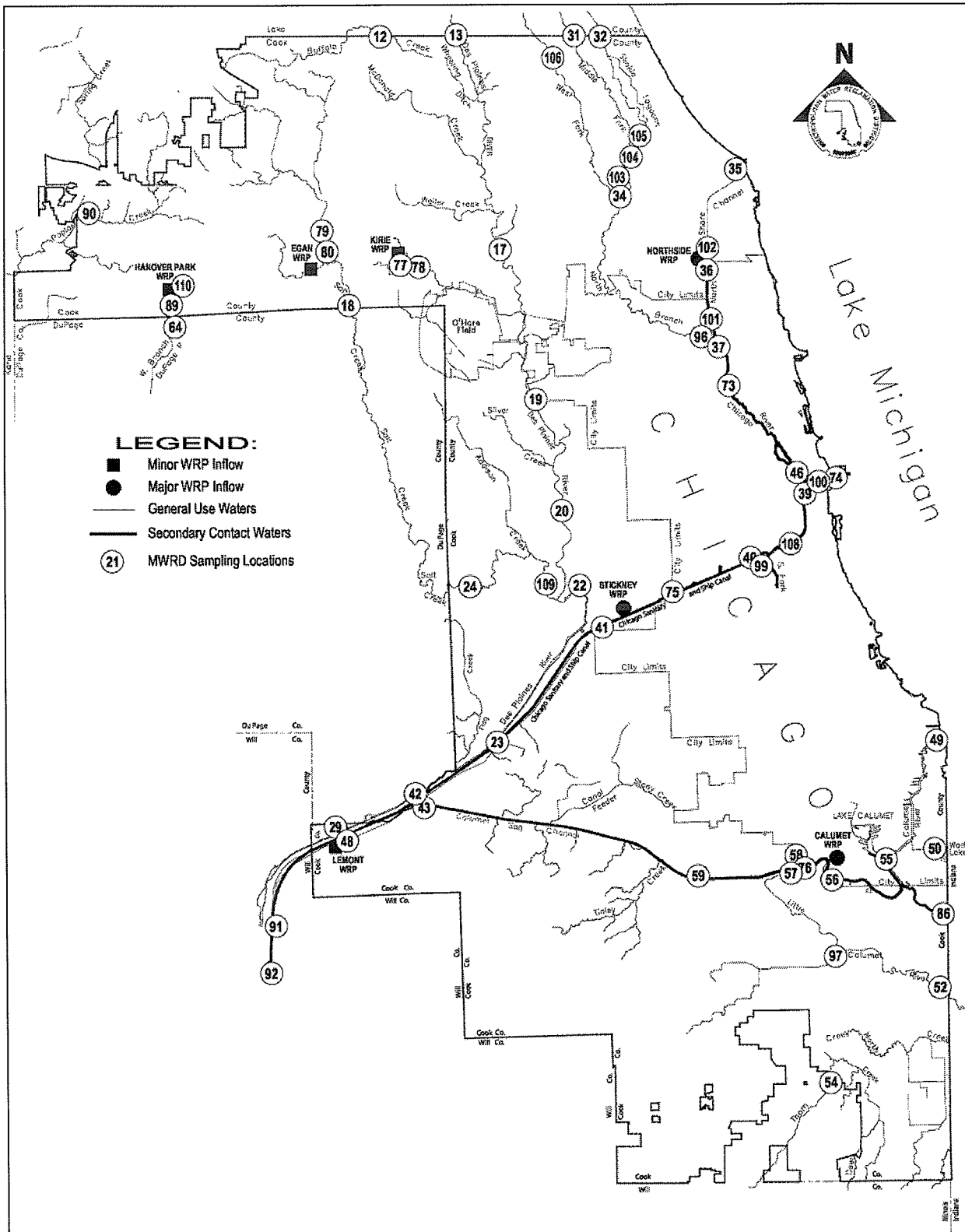


Figure 2-2. Hester-Dendy sampling array.

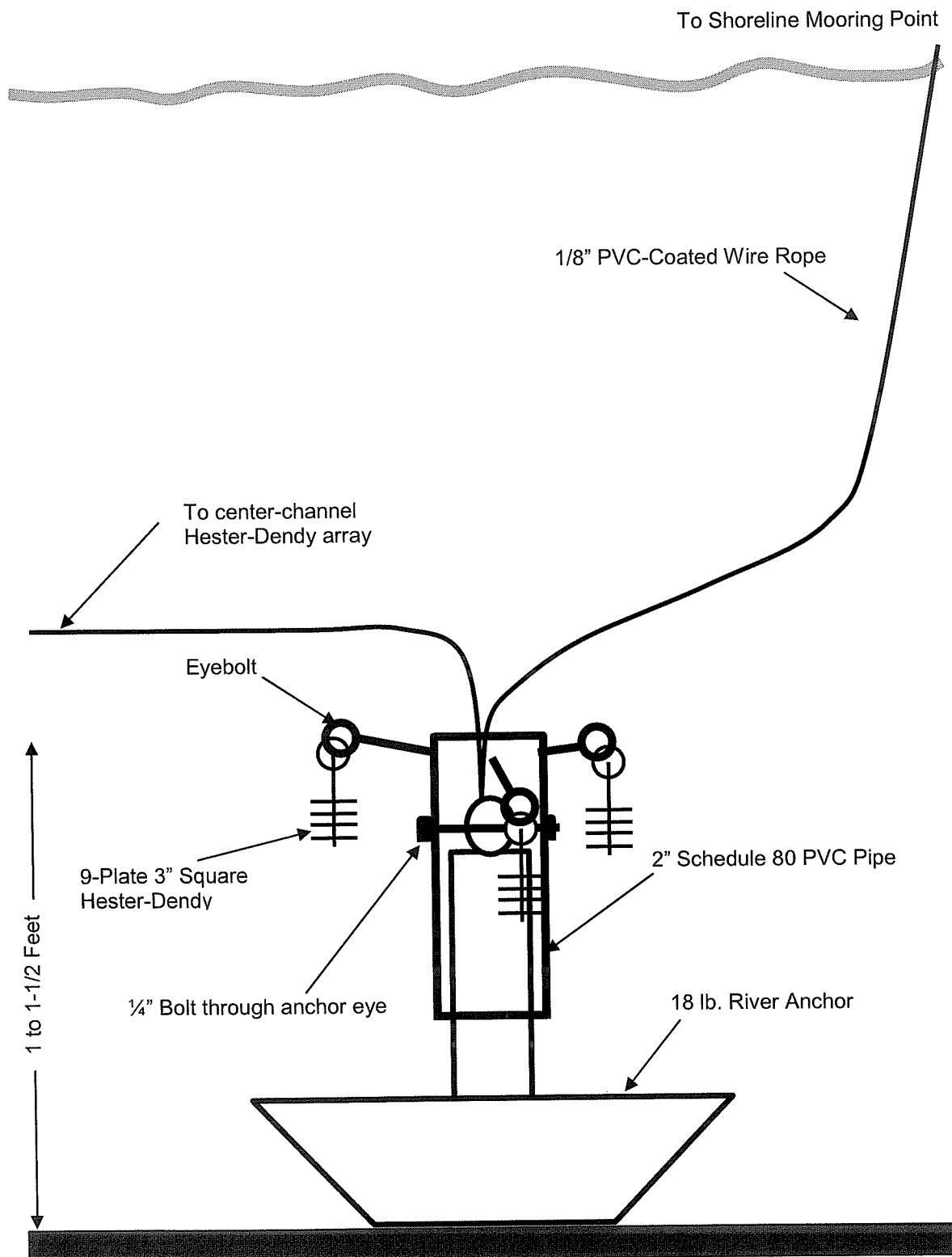
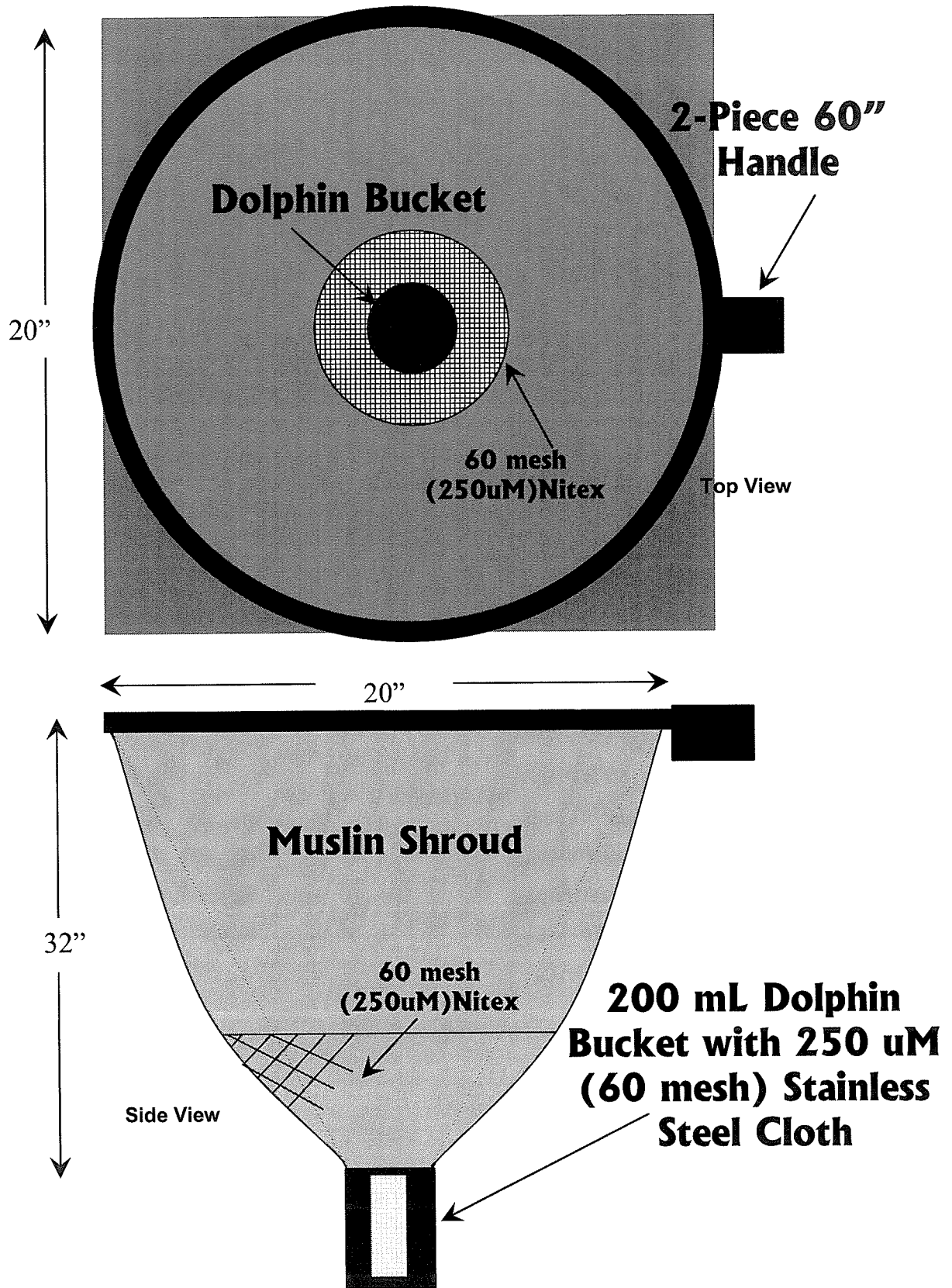


Figure 2-3. Dipnet for Hester-Dendy sampler retrieval.



2004

<u>Watershed</u>	<u>Deployed</u>	<u>Retrieved</u>
Calumet River	15-17 June	31 August - 30 September
North Branch Chicago River	1-21 June	10 August – 29 September
CSSC	3-16 June	23-30 August
Fox River	6 May	8 July
Des Plaines River	4 May - 29 June	1 July – 22 September

HD samples were collected at 22 of the 24 sites in 2003 and 28 out of 32 sites in 2004.

Ponar grab samples were collected at each station in conjunction with the HD retrieval. The grab samples were collected using a 6" X 6" Petite-Ponar sampler. As with the HD sampling, Ponar samples were collected from two areas at each station; one from a near shore area and one from mid-channel. Each Ponar sample consisted of three grabs. All Ponar samples were collected within 30 to 50 feet of the HD samplers. All three grabs for each sample were combined in the field and washed in a No. 60 (250 μ) mesh sieving bucket to remove most of the fine sediment. The sample was then transferred to a one-gallon bottle and preserved with 5% formalin. Mid-channel Ponar samples could not be collected from the North Branch of the Chicago River at Albany Avenue (Station 96) from 2001-2003 (EA 2004), however, a sample was collected in 2004. In 2004, there were three sites from which a Ponar was collected but not an HD.

In the laboratory, each sample was processed by first pouring the contents of the 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. Following counting, the samples were preserved with 70% isopropanol solution. The subject samples 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. 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 Dermott (1991), Dickman et al. (1992), Groenendijk et al. (1998), Hudson and Ciborowski (1996a), Warwick (1985 and 1991), and Warwick and Tisdale (1988), among others. 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. Temporal comparisons also were made for those stations that were sampled during both years. Metrics compared included density, relative abundance (percent), 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 it was unclear what factors may have affected the results, 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 Appendices A and B.

3. RESULTS AND DISCUSSION

3.1 2003 Benthic Macroinvertebrate Results

During 2003, 45 HD samples and 50 Ponar samples were collected from 25 stations in 13 different waterways (Table 2-1). Combined, these samples yielded 108 total taxa and 20 relatively pollution sensitive EPT taxa (Table 3-1). Chironomidae was the most taxa rich group with 47 taxa. Among the EPT, Trichoptera was the most speciose group with 11 taxa, followed by Ephemeroptera with 8 taxa, and Plecoptera with only a single taxon. 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

Thirteen stations (including the three core stations sampled in 2001-2002) were sampled in the Calumet watershed during 2003: two stations in the Calumet River, one station in the Wolf Lake Drainage Channel, one station in the Grand Calumet River, two stations in Thorn Creek, four stations in the Little Calumet River, and three stations in the Calumet-Sag Channel (Cal-Sag) (Table 2-1).

Out of 12 HD samples from the Calumet watershed, more than half were dominated by Oligochaeta whereas the remaining samples varied in taxonomic dominance. The Ponar samples were dominated by Oligochaeta at all stations. The benthic community in the Calumet watershed largely consisted of tolerant taxa.

Of the waterways sampled in the Calumet watershed, chironomid deformities were observed only in Thorn Creek and the Little Calumet River.

3.1.1.1 Calumet River

The samples from Station 49 and 55 combined yielded 28 taxa and two EPT taxa from the Calumet River (Table 3-2 and 3-3). Seventeen total taxa and two EPT Taxa were observed in the single HD sample from Station 49, while the Ponar samples from stations 49 and 55 resulted in 12 and 8 total taxa, respectively. *Hydra* was the most dominant HD taxon, representing over 92 percent of the total density. Except for Oligochaeta (3 percent), the remaining taxa observed in the HD samples were individually represented by less than one percent of the total density.

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

Taxa	Hester-Dendy 2001	Ponar 2001	Hester-Dendy 2002	Ponar 2002	Hester-Dendy 2003	Ponar 2003	Hester-Dendy 2004	Ponar 2004
COELENTERATA (Hydroids)								
<i>Hydra</i>	X	X	X	X	X	X	X	X
NEMATODA								
PLATYHELMINTHES (Flat worms)								
Turbellaria	X	X	X	X	X	X	X	X
ENTOPROCTA (Moss Animalcules)								
<i>Urnatella gracilis</i>		X					X	X
ECTOPROCTA (Bryozoans)								
<i>Plumatella</i>	X	X	X	X	X	X	X	X
ANNELLIDA								
<u>Oligochaeta (Aquatic Worms)</u>	X	X	X	X	X	X	X	X
Hirudinea (Leeches)			X	X				
Glossiphoniidae ¹			X	X				
<i>Helobdella</i> ¹	X				X	X	X	X
<i>Helobdella papillata</i>				X		X		X
<i>Helobdella stagnalis</i>	X	X	X	X	X	X	X	X
<u><i>Helobdella triseriatis</i></u>	X	X	X	X	X	X		
<i>Placobdella</i>			X					
<i>Placobdella pediculata</i>							X	X
<u><i>Erpobdella punctata punctata</i></u>	X	X		X	X	X	X	X
<u><i>Mooreobdella buccera</i></u>								X
<u><i>Mooreobdella microstoma</i></u>	X	X	X	X	X	X	X	X
CRUSTACEA								
Ostracoda (Seed Shrimp)		X					X	X
Isopoda (Sow Bugs)								
<i>Caecidotea</i>	X	X	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-	
	Dendy 2001	Ponar 2001	Dendy 2002	Ponar 2002	Dendy 2003	Ponar 2003	Dendy 2004	Ponar 2004
Crustacea (cont.)								
Amphipoda (Side Swimmers)								
<u><i>Crangonyx</i></u>					X		X	
<i>Gammarus</i> ¹				X	X	X		
<i>Gammarus fasciatus</i>		X	X	X	X	X	X	X
<i>Hyaella azteca</i>					X		X	X
Decapoda (Crayfish)								
<i>Cambarus bartonii</i>						X	X	
<i>Orconectes</i>					X ¹	X		
<i>Orconectes immunis</i>		X						
<i>Orconectes virilis</i>	X			X	X			
ARACHNOIDEA								
Hydracarina (Water Mites)	X	X					X	
INSECTA								
Ephemeroptera (Mayflies)								
<i>Isonychia</i>	X			X				
<i>Baetis</i> ¹							X	
<i>Baetis flavistriga</i>							X	X
<i>Baetis intercalaris</i>	X	X		X	X	X	X	X
<i>Callibaetis</i>							X	
<i>Pseudocloeon ephippiatum</i>	X							
Heptageniidae ¹	X	X						
<i>Heptagenia</i>	X			X			X	
<i>Leucrocuta</i>	X			X			X	
<i>Stenacron</i>	X			X			X	X
<i>Stenonema</i>	X ¹	X						

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-	
	Dendy 2001	Ponar 2001	Dendy 2002	Ponar 2002	Dendy 2003	Ponar 2003	Dendy 2004	Ponar 2004
Ephemeroptera (cont.)								
<i>Stenonema exiguum</i>	X		X		X		X	
<i>Stenonema integrum</i>	X		X		X		X	
<i>Stenonema terminatum</i>		X		X	X		X	X
<i>Caenis</i>	X	X	X	X	X	X	X	X
<i>Tricorythodes</i>								
<i>Anthopotamus myops</i> grp.						X ¹		
<i>Hexagenia</i>								
<i>Hexagenia bilineata</i>				X				
<i>Hexagenia limbata</i>						X		
Plecoptera								
<i>Perlesta</i>					X			
Odonata (Damselflies and Dragonflies)								
<i>Calopteryx</i>	X						X	
Coenagrionidae	X				X		X	
<i>Argia</i>	X	X	X		X		X	
<i>Enallagma</i>	X		X		X		X	
<i>Lestes</i>								X
Libellulidae								X
<i>Somatochlora</i>			X				X	
<i>Stylurus</i>		X						X
Hemiptera (True Bugs)								
<i>Trepobates</i>			X				X	
Corixidae			X	X			X	
<i>Palmarcorixa</i>		X						
Megaloptera (Dobson flies)								
<i>Corydalus cornutus</i>						X		
<i>Sialis</i>							X	

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-	
	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar
	2001	2001	2002	2002	2003	2003	2004	2004
Trichoptera (Caddisflies)								
<i>Cynellus fraternus</i>	X	X	X		X		X	
Hydropsychidae ¹				X				X
<i>Ceratopsyche morosa</i>	X		X		X		X	X
<i>Cheumatopsyche</i>	X	X	X	X	X	X	X	X
<i>Hydropsyche</i>	X		X		X		X	
<i>Hydropsyche betteni</i>	X	X	X		X		X	
<i>Hydropsyche bidens</i>	X		X		X		X	
<i>Hydropsyche orris</i>	X		X		X		X	
<i>Hydropsyche simulans</i>	X		X		X		X	
<i>Potamyia flava</i>	X	X	X	X	X	X	X	X
<i>Hydroptila</i>	X	X	X	X	X	X	X	X
<i>Ocecetis</i>								
Lepidoptera (Aquatic Moths)								
<i>Petrophila</i>	X		X				X	
Coleoptera (Beetles)								
<i>Agabus</i>							X	
<i>Copelatus</i>				X				
<i>Laccophilus maculosus</i>				X				
<i>Ancyronyx variegata</i>					X			
<i>Dubiraphia</i>	X	X	X	X			X	X
<i>Macronychus glabratus</i>	X	X			X	X	X	X
<i>Stenelmis</i>	X ¹	X ¹	X ¹	X ¹	X ¹	X ¹	X ¹	X ¹
<i>Stenelmis crenata</i> grp.	X	X	X	X	X	X	X	X
<i>Pelodytes</i>								
<i>Berosus</i>	X	X			X			
<i>Paracymus</i>					X			
<i>Tropisternus</i>								
<i>Ectopria</i>				X			X	X

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-	
	Dendy 2001	Ponar 2001	Dendy 2002	Ponar 2002	Dendy 2003	Ponar 2003	Dendy 2004	Ponar 2004
Diptera (True Flies)								
<u>Chaoborus</u>	X	X						
Ceratopogonidae			X	X				
<i>Atrichopogon</i>			X			X		X
<i>Bezzia</i>		X					X	X
<i>Ceratopogon</i>							X	X
<i>Culicoides</i>							X	X
<i>Serromyia</i>							X	
<u>Culicidae</u>					X			X
<i>Hemerodromia</i>						X	X	
<i>Rhamphomyia</i>								X
<i>Pericoma</i>								X
Simuliidae								
<i>Simulium</i>		X			X	X	X	X
Tipulidae								
<i>Tipula</i>			X		X			
Chironomidae (Midges) ¹		X	X	X	X	X		
<i>Ablabesmyia</i>							X	
<i>Ablabesmyia janta</i>			X	X	X	X	X	
<i>Ablabesmyia mallochi</i>		X	X	X	X	X	X	X
<i>Clinotanypus</i>								
<i>Coelotanypus</i>				X		X		X
<u>Netarsia</u> <u>sp. A</u>		X						X
<i>Nilotanypus fimbriatus</i>	X		X	X			X	
<u>Procladius</u> (<u>Holotanypus</u>)	X	X	X	X	X	X	X	X
<u>Tanypus</u>								
<i>Psectrotanypus dyari</i>								X
<i>Thienemannimyia</i> grp.	X	X	X	X	X	X	X	X
<i>Corynoneura</i>	X	X	X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-	
	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar
	2001	2001	2002	2002	2003	2003	2004	2004
Chironomidae (cont.)								
<i>Corynoneura lobata</i>							X	
<u><i>Cricotopus</i></u>							X	
<u><i>Cricotopus bicinctus</i> grp.</u>	X	X	X	X	X	X	X	X
<u><i>Cricotopus sylvestris</i> grp.</u>	X	X	X	X	X	X	X	X
<u><i>Cricotopus tremulus</i> grp.</u>	X		X	X	X	X	X	X
<i>Cricotopus trifascia</i> grp.			X	X	X	X	X	X
<i>Cricotopus/Orthocladius</i>							X	
<i>Euryhapsis</i>					X			
<i>Heterotrissocladius</i>			X					
<i>Nanocladius</i> ¹		X					X	
<i>Nanocladius crassicornus/rectinervis</i>	X	X	X		X		X	X
<u><i>Nanocladius distinctus</i></u>	X	X	X	X	X		X	X
<i>Orthocladius</i>							X	
<i>Parakiefferiella</i>							X	
<i>Rheocricotopus robacki</i>	X		X		X		X	X
<i>Thienemanniella</i> n. sp. 3	X							X
<i>Thienemanniella similis</i>	X	X			X		X	X
<i>Thienemanniella xena</i>	X		X		X		X	X
<i>Tvetenia discoloripes</i> grp							X	
Chironomini							X ¹	
<u><i>Chironomus</i></u>	X	X	X	X	X	X	X	X
<i>Cladopelma</i>		X	X		X	X	X	X
<u><i>Cryptochironomus</i></u>	X	X	X	X	X	X	X	X
<i>Cryptotendipes</i>								
<i>Cryptotendipes</i> sp. 15								
<i>Dicrotendipes</i> ¹					X		X	X
<i>Dicrotendipes fumidus</i>					X		X	X

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-	
	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar
	2001	2001	2002	2002	2003	2003	2004	2004
Chironomidae (cont.)								
<i>Dicrotendipes neomodestus</i>	X	X	X	X	X	X	X	X
<u><i>Dicrotendipes simpsoni</i></u>	X	X	X	X	X	X	X	X
<i>Endochironomus nigricans</i>	X	X	X	X	X	X	X	X
<u><i>Glyptotendipes</i></u>	X	X	X	X	X	X	X	X
<i>Harnischia</i>		X	X					
<i>Microchironomus</i>		X	X					
<i>Micropsectra</i>		X	X					
<i>Microtendipes</i>		X	X					
<u><i>Parachironomus</i></u>	X	X	X	X	X	X	X	X
<i>Paracladopelma</i>	X	X	X	X	X	X	X	X
<i>Paratendipes</i>								
<i>Phaenopsectra</i>	X							
<i>Phaenopsectra punctipes</i>					X			
<u><i>Polypedium fallax</i> grp.</u>	X	X	X	X	X	X	X	X
<i>Polypedium flavum</i>	X	X	X	X	X	X	X	X
<i>Polypedium halterale</i> grp.	X	X	X	X	X	X	X	X
<u><i>Polypedium illinoense</i></u>	X	X	X	X	X	X	X	X
<i>Polypedium scalaenum</i> grp.	X	X	X	X	X	X	X	X
<i>Pseudochironomus</i>								
<i>Saetheria</i>								
<i>Stenochironomus</i>	X	X	X	X	X	X	X	X
<i>Stictochironomus</i>								
<i>Tribelos fusciorne</i>								
<i>Xenochironomus xenolabis</i>			X		X		X	
<i>Cladotanytarsus</i> ¹								
<i>Cladotanytarsus mancus</i> grp.		X	X	X	X	X	X	X
<i>Cladotanytarsus vanderwulpi</i> grp.		X						
<i>Paratanytarsus</i>	X		X	X	X	X	X	X

Table 3-1 (cont.)

Taxa	Hester-		Hester-		Hester-		Hester-		
	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar	Dendy	Ponar	
	2001	2001	2002	2002	2003	2003	2004	2004	
Chironomidae (cont.)									
<i>Rheotanytarsus</i>	X	X	X		X	X	X	X	X
<i>Tanytarsus</i>			X	X	X	X	X	X	X
<i>Tanytarsus glabrescens</i> grp.				X					
<i>Tanytarsus guerlus</i> grp.	X	X	X			X			
GASTROPODA (Snails)									
<i>Amnicola</i>		X		X		X		X	X
<i>Campeloma decisum</i>				X		X		X	X
<i>Ferrissia</i>	X		X	X	X	X	X	X	X
<i>Physa</i>	X	X	X		X	X	X	X	X
<i>Gyraulus</i>									X
<i>Helisoma</i>					X	X	X	X	X
<i>Menetus dilatatus</i>	X	X	X				X	X	X
<i>Planorbella</i>							X		
<i>Pleurocera</i>	X	X			X	X	X	X	X
<i>Valvata</i>						X	X	X	X
<i>Viviparus</i>							X	X	X
PELECYPODA (Mussels and Clams)¹									
<i>Corbicula fluminea</i>	X	X	X	X	X	X	X	X	X
<i>Dreissena polymorpha</i>	X	X	X	X	X	X	X	X	X
Sphaeriidae ¹									X
<i>Musculium</i>		X ¹	X		X	X	X ¹	X ¹	X ¹
<i>Musculium transversum</i>	X	X		X			X	X	X
<i>Pisidium</i>	X	X ¹			X				X
<i>Pisidium compressum</i>		X							
<i>Pisidium nitidum</i>				X					
<i>Sphaerium</i>							X	X ¹	X ¹
<i>Sphaerium simile</i>		X							X

Table 3-1 (cont.)

	Hester- Dendy 2001	Ponar 2001	Hester- Dendy 2002	Ponar 2002	Hester- Dendy 2003	Ponar 2003	Hester- Dendy 2004	Ponar 2004
PELECYPODA (cont.)		X						X
<i>Lasmsgona complanata</i>								
TOTAL RICHNESS BY SAMPLE TYPE	83	74	81	50	88	81	119	104
EPT RICHNESS BY SAMPLE TYPE	19	8	18	5	19	7	19	10
TOTAL RICHNESS BY YEAR	101		90		108		137	
EPT RICHNESS BY YEAR	20		19		20		19	

¹Not counted as a discreet taxa.

TABLE 3-2. HESTER-DENDY DENSITIES AT SAMPLING STATION 49 WITHIN THE CALUMET RIVER, AUGUST 2003.

TAXA	49 EWING AVE.	
	#/m2	%
Hydra	11,781.5	92.30
Oligochaeta	441.3	3.46
Caecidotea	59.2	0.46
Gammarus fasciatus	80.7	0.63
Hydropsyche	1.8	0.01
Hydropsyche orris	17.9	0.14
Chironomidae	5.4	0.04
Procladius (Holotanypus)	1.8	0.01
Ablabesmyia mallochii	1.8	0.01
Cricotopus bicinctus grp.	48.4	0.38
Cricotopus sylvestris grp.	7.2	0.06
Nanocladius distinctus	5.4	0.04
Dicrotendipes simpsoni	53.8	0.42
Glyptotendipes	23.3	0.18
Parachironomus	21.5	0.17
Polypedilum flavum	89.7	0.70
Rheotanytarsus	17.9	0.14
Dreissena polymorpha	105.8	0.83
TOTAL BENTHOS	12,764.6	100.00
TOTAL TAXA RICHNESS	17	
EPT TAXA RICHNESS	2	

TABLE 3-3. PETITE PONAR DENSITIES AT SAMPLING STATIONS 55 AND 49 WITHING THE CALUMET RIVER, AUGUST 2003.

TAXA	49 EWING AVE.		55 130TH ST.	
	#/m2	%	#/m2	%
Oligochaeta	1,471.2	91.52	1,284.6	91.79
Gammarus fasciatus	--	--	7.2	0.51
Chironomidae	--	--	7.2	0.51
Procladius (Holotanypus)	7.2	0.45	14.4	1.03
Coelotanypus	--	--	28.7	2.05
Thienemannimyia grp.	14.4	0.89	--	--
Thienemanniella xena	21.5	1.34	--	--
Nanocladius distinctus	7.2	0.45	--	--
Rheocricotopus robacki	7.2	0.45	--	--
Chironomus	--	--	7.2	0.51
Cryptochironomus	--	--	7.2	0.51
Dicrotendipes neomodestus	7.2	0.45	--	--
Microchironomus	--	--	7.2	0.51
Polypedilum flavum	14.4	0.89	--	--
Polypedilum illinoense	7.2	0.45	--	--
Polypedilum scalaenum grp.	7.2	0.45	35.9	2.56
Xenochironomus xenolabis	7.2	0.45	--	--
Dreissena polymorpha	35.9	2.23	--	--
TOTAL BENTHOS	1,607.6	100.00	1,399.4	100.00
TOTAL TAXA RICHNESS	12		8	
EPT TAXA RICHNESS	0		0	

In contrast to the HD samples, Oligochaeta was the most dominant taxon (92 percent at both stations) in the Ponar samples (Table 3-3). With the exception of zebra mussels *D. polymorpha*, and the midges *Coelotanypus*, *Polypedium scalaenum* grp., *Procladius (Holotanypus)*, and *Thienemanniella xena*, none of the other taxa collected in the Ponar samples was represented by more than one percent of the total density.

No Chironomidae head capsule deformities were observed in either the HD or Ponar samples. However, the benthic community represented in both the HD and Ponar samples largely consisted of taxa that are considered moderately to extremely tolerant of pollution. The highly tolerant taxon, Oligochaeta, dominated the Ponar collections at both locations. In addition, of the 28 taxa, eleven are typically classified as tolerant suggesting some degree and type of environmental stress is affecting the benthic community at Stations 49 and 55 (Tables 3-2 and 3-3).

3.1.1.2 Wolf Lake Drainage Channel

The benthic macroinvertebrate community in the Wolf Lake Drainage Channel at Station 50 was represented by 30 total taxa, including four EPT taxa from the Ponar samples (Table 3-4). Only Ponar samples were collected from this site since HD's were not retrievable. Oligochaeta was the dominant taxon at nearly half the total density. Aside from the midges *Chironomus*, *Cladopelma*, and the sideswimmer *Gammarus fasciatus*, none of other taxa collected in the Ponars were represented by more than one percent of the total density.

Overall, the community was dominated by tolerant organisms but head capsule deformities were not observed. Nonetheless, given the number and density of tolerant taxa, it appears the benthic community at Station 50 is moderately stressed.

3.1.1.3 Grand Calumet River

Combined, the HD and Ponar samples from the single station (Station 86) in the Grand Calumet River yielded only 12 total taxa (Tables 3-5 and 3-6) and no EPT taxa. Total taxa richness ranged from 10 taxa in the HD samples to six taxa in the Ponar samples. Oligochaeta was clearly the most dominant taxon, accounting for over 90 percent of the total density in both the HD and Ponar samples. A majority of the HD taxa were individually represented by less than one percent of the total density (Table 3-5). With the exception of the midges *Cricotopus bicinctus* grp., *C. sylvestris* grp., and *Tanypus*, none of the other taxa collected in either samples achieved more than one percent of the total density.

As with the Calumet River samples, no Chironomidae head capsule deformities were observed in either the HD or Ponar samples. However, two thirds of the taxa represented in the HD and Ponar samples combined are considered highly tolerant of pollution indicating a stressed environment (Table 3-1).

TABLE 3-4. PETITE PONAR DENSITIES AT SAMPLING STATION 50 WITHIN THE WOLF LAKE DRAINAGE CHANNEL, JULY 2003.

TAXA	50 BURNHAM AVE.	
	#/m ²	%
Turbellaria	7.2	0.18
Oligochaeta	1,830.0	46.62
Helobdella stagnalis	7.2	0.18
Gammarus fasciatus	244.0	6.22
Caenis	107.6	2.74
Hexagenia limbata	35.9	0.91
Lestes	7.2	0.18
Corixidae	14.4	0.37
Corydalus cornutus	7.2	0.18
Cheumatopsyche	93.3	2.38
Oecetis	14.4	0.37
Ceratopogonidae	7.2	0.18
Chironomidae	64.6	1.65
Tanypus	7.2	0.18
Procladius (Holotanypus)	71.8	1.83
Ablabesmyia janta	28.7	0.73
Cricotopus bicinctus grp.	14.4	0.37
Cricotopus sylvestris grp.	28.7	0.73
Chironomus	509.5	12.98
Cladopelma	258.4	6.58
Cryptochironomus	122.0	3.11
Cryptotendipes sp. 15	14.4	0.37
Dicrotendipes neomodestus	14.4	0.37
Dicrotendipes simpsoni	14.4	0.37
Polypedilum halterale grp.	193.8	4.94
Polypedilum scalaenum grp.	93.3	2.38
Cladotanytarsus mancus grp.	7.2	0.18
Paratanytarsus	7.2	0.18
Rheotanytarsus	14.4	0.37
Tanytarsus guerlus grp.	78.9	2.01
Hemerodromia	7.2	0.18
TOTAL BENTHOS	3,925.6	100.00
TOTAL TAXA RICHNESS	30	
EPT TAXA RICHNESS	4	

TABLE 3-5. HESTER DENDY DENSITIES AT SAMPLING STATION 86 WITHIN THE GRAND CALUMET RIVER, SEPTEMBER 2003.

TAXA	86 BURNHAM AVE.	
	#/m2	%
Oligochaeta	495.2	90.49
Helobdella stagnalis	1.8	0.33
Erpobdella punctata punctata	3.6	0.66
Mooreobdella microstoma	1.8	0.33
Chironomidae	1.8	0.33
Tanypus	1.8	0.33
Ablabesmyia janta	1.8	0.33
Cricotopus bicinctus grp.	1.8	0.33
Cricotopus sylvestris grp.	17.9	3.28
Parachironomus	16.1	2.95
Helisoma	3.6	0.66
TOTAL BENTHOS	547.2	100.00
TOTAL TAXA RICHNESS	10	
EPT TAXA RICHNESS	0	

TABLE 3-6. PETITE PONAR DENSITIES AT SAMPLING STATION 86 WITHIN THE GRAND CALUMET RIVER, SEPTEMBER 2003.

TAXA	86 BURNHAM AVE.	
	#/m2	%
Oligochaeta	5,590.6	94.20
Enallagma	7.2	0.12
Chironomidae	7.2	0.12
Tanypus	222.5	3.75
Cricotopus sylvestris grp.	50.2	0.85
Dicrotendipes neomodestus	7.2	0.12
Parachironomus	50.2	0.85
TOTAL BENTHOS	5,935.1	100.00
TOTAL TAXA RICHNESS	6	
EPT TAXA RICHNESS	0	

3.1.1.4 Thorn Creek

Together, the HD and Ponar samples from the two Thorn Creek stations (Stations 54 and 97) yielded 43 total taxa and four EPT taxa (Tables 3-7 and 3-8.). HD total taxa richness between the two Stations 54 and 97 was slightly varied at 24 and 35 taxa, respectively. Two to four EPT taxa were observed in the HD samples, while only one EPT taxon was observed in the two Ponar samples. HD total densities observed between the two stations were fairly similar. At Station 97, Oligochaeta was the dominant taxon (52 percent) in the HD sample. *Cheumatopsyche* was also observed in substantial numbers (22 percent) (Table 3-7). Although Oligochaeta was the dominant taxon at Station 54, it comprised only slightly more than 32 percent, while the midge *Polypedilum illinoense* comprised just over 25 percent of the total HD sample.

The Ponar samples were similar in total taxa richness at Stations 54 and 97, with 11 and 14 taxa, respectively (Tables 3-8). Station 97 had nearly four times the total density of Station 54 due to much higher Oligochaeta density at Station 97. Oligochaeta was the dominant taxon at both Stations 54 and 97 at just under 64 and 80 percent, respectively. Both the HD and Ponar samples at Thorn Creek were dominated by highly tolerant taxa (Table 3-1).

The incidence of chironomid head capsule deformities in the Thorn Creek was restricted to *Chironomus* from Ponar samples at Stations 54 and 97. Of the 59 *Chironomus* examined, 31 (59 percent) were deformed (Table 3-9). This represents 23% of all the midges examined at the two Thorn Creek stations. Several studies involving chironomid deformity analysis have included *Chironomus* (Bisthoven et al. 1998, Bisthoven and Ollevier 1998, Dermot 1991, Groenenduk et al. 1998, Hudson and Ciborowski 1996a, Hudson and Ciborowski 1996b, Lenat 1993, and Warwick 1985, among others). Over half of the 52 *Chironomus* examined from Station 97 were deformed while over a quarter of the *Chironomus* examined from Station 54 exhibited mentum deformities. 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. Lenat (1993) indicates that typically less than five percent of *Chironomus* from non-toxic sites exhibited deformities while toxic sites were generally double that incidence level. Regardless of how many specimens were examined in these studies, the 59 percent incidence of deformity for *Chironomus* collected in the Ponar samples from Thorn Creek is substantially higher than background levels in literature for this taxon (Bisthoven et al. 1998, Bisthoven and Ollevier 1998, Dermot 1991, Groenenduk et al. 1998, Hudson and Ciborowski 1996a, Hudson and Ciborowski 1996b, Lenat 1993, and Warwick 1985).

Based on the number and density of tolerant taxa in both the HD and Ponar samples combined with the relatively high incidence of mentum deformities in the Ponar samples, it appears the benthic community at both Stations 54 and 97 is moderately stressed.

3.1.1.5 Little Calumet River

HD and Ponar samples from the four L.C.R. stations (Stations 52, 56, 57, and 76) yielded a combined 52 total taxa (Tables 3-10 and 3-11). Six EPT taxa were present in the HD samples

TABLE 3-7. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 54 AND 97 WITHIN THORN CREEK, JULY-AUGUST 2003.

TAXA	54 JOE ORR RD.		97 170TH ST.	
	#/m2	%	#/m2	%
Hydra	--	--	139.9	4.29
Turbellaria	34.1	0.59	1.8	0.05
Oligochaeta	1,844.3	32.02	1,684.6	51.59
Helobdella stagnalis	--	--	1.8	0.05
Caecidotea	105.8	1.84	222.5	6.81
Stenacron	--	--	1.8	0.05
Argia	--	--	5.4	0.16
Perlesta	--	--	1.8	0.05
Cheumatopsyche	68.2	1.18	717.6	21.98
Hydropsyche betteni	66.4	1.15	14.4	0.44
Ancyronyx variegata	--	--	1.8	0.05
Paracymus	--	--	1.8	0.05
Atrichopogon	--	--	1.8	0.05
Chironomidae	208.1	3.61	34.1	1.04
Ablabesmyia mallochi	17.9	0.31	7.2	0.22
Thienemannimyia grp.	96.9	1.68	12.6	0.38
Corynoneura	102.3	1.78	9.0	0.27
Thienemanniella xena	491.6	8.54	32.3	0.99
Cricotopus bicinctus grp.	48.4	0.84	--	--
Cricotopus sylvestris grp.	35.9	0.62	--	--
Euryhopsis	--	--	7.2	0.22
Nanocladius distinctus	17.9	0.31	5.4	0.16
Nanocladius crassicornus/rectinervis	--	--	1.8	0.05
Rheocricotopus robacki	84.3	1.46	118.4	3.63
Chironomus	269.1	4.67	35.9	1.10
Cryptochironomus	17.9	0.31	5.4	0.16
Dicrotendipes neomodestus	48.4	0.84	5.4	0.16
Dicrotendipes simpsoni	17.9	0.31	--	--
Polypedilum fallax grp.	--	--	17.9	0.55
Polypedilum flavum	17.9	0.31	--	--
Polypedilum illinoense	1,483.7	25.76	23.3	0.71
Polypedilum scalaenum grp.	17.9	0.31	28.7	0.88
Paratanytarsus	192.0	3.33	10.8	0.33
Tanytarsus	--	--	1.8	0.05
Culicidae	--	--	1.8	0.05
Simulium	59.2	1.03	1.8	0.05
Tipula	--	--	1.8	0.05
Physa	30.5	0.53	21.5	0.66
Ferrissia	382.1	6.64	78.9	2.42
Corbicula fluminea	--	--	5.4	0.16
TOTAL BENTHOS	5,758.9	100.00	3,265.2	100.00
TOTAL TAXA RICHNESS	24		35	
EPT TAXA RICHNESS	2		4	

TABLE 3-8. PETITE PONAR DENSITIES AT SAMPLING STATIONS 54 AND 97 WITHIN THORN CREEK, JULY-AUGUST 2003.

TAXA	54 JOE ORR RD.		97 170TH ST.	
	#/m2	%	#/m2	%
Oligochaeta	875.5	63.87	4,176.8	79.95
Mooreobdella microstoma	--	--	14.4	0.27
Caecidotea	--	--	35.9	0.69
Cheumatopsyche	--	--	7.2	0.14
Stenelmis	--	--	7.2	0.14
Chironomidae	14.4	1.05	43.1	0.82
Thienemannimyia grp.	--	--	7.2	0.14
Thienemanniella xena	28.7	2.09	--	--
Cricotopus tremulus grp.	7.2	0.52	--	--
Cricotopus bicinctus grp.	14.4	1.05	--	--
Rheocricotopus robacki	7.2	0.52	--	--
Chironomus	50.2	3.66	373.2	7.14
Cryptochironomus	--	--	100.5	1.92
Dicotendipes neomodestus	--	--	7.2	0.14
Polypedilum fallax grp.	--	--	7.2	0.14
Polypedilum halterale grp.	--	--	7.2	0.14
Polypedilum illinoense	294.2	21.47	14.4	0.27
Polypedilum scalaenum grp.	28.7	2.09	64.6	1.24
Paratanytarsus	7.2	0.52	--	--
Simulium	14.4	1.05	--	--
Corbicula fluminea	28.7	2.09	358.8	6.87
TOTAL BENTHOS	1,370.7	100.00	5,224.6	100.00
TOTAL TAXA RICHNESS	11		14	
EPT TAXA RICHNESS	0		1	

Table 3-9. Chironomidae head capsule deformities observed in Ponar samples from Thorn Creek of the Calumet watershed, June-August 2003.

Taxa	Ponar Samples	
	Thorn Creek @ 170th St. Sta. 97	Thorn Creek @ Joe Orr Sta. 54
<i>Chironomus sp</i>		
Number Examined	52	7
Percent Deformed	55.8	28.6
TOTAL SAMPLE		
Total Midges Examined	77	61
Percent Deformed	37.7	3.3

TABLE 3-10. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 52, 56, 57, AND 76 WITHIN THE LITTLE CALUMET RIVER, JULY-SEPTEMBER 2003.

TAXA	52 WENTWORTH AVE.		56 INDIANA AVE.		57 AHSLAND AVE.		76 HALSTED ST.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	17.9	0.29	2,160.0	36.09	1,126.7	20.62	3,948.7	40.73
Turbellaria	4,605.3	73.43	57.4	0.96	17.9	0.33	9.0	0.09
Plumatella	--	--	--	--	--	--	1.8	0.02
Oligochaeta	932.9	14.87	2,283.8	38.16	1,252.2	22.92	4,029.4	41.56
Helobdella triserialis	10.8	0.17	--	--	64.6	1.18	--	--
Mooreobdella microstoma	5.4	0.09	3.6	0.06	--	--	17.9	0.19
Caecidotea	113.0	1.80	--	--	211.7	3.88	9.0	0.09
Gammarus	53.8	0.86	37.7	0.63	10.8	0.20	--	--
Gammarus fasciatus	--	--	--	--	--	--	193.8	2.00
Stenacron	--	--	--	--	7.2	0.13	--	--
Caenis	--	--	3.6	0.06	--	--	--	--
Argia	5.4	0.09	--	--	--	--	--	--
Enallagma	--	--	--	--	1.8	0.03	--	--
Cynellus fraternus	--	--	141.7	2.37	--	--	--	--
Cheumatopsyche	--	--	--	--	14.4	0.26	1.8	0.02
Hydropsyche betteni	--	--	--	--	5.4	0.10	--	--
Potamyia flava	--	--	3.6	0.06	--	--	--	--
Chironomidae	--	--	68.2	1.14	1.8	0.03	48.4	0.50
Procladius (Holotanypus)	--	--	32.3	0.54	--	--	--	--
Ablabesmyia janta	23.3	0.37	--	--	7.2	0.13	--	--
Thienemannimyia grp.	17.9	0.29	--	--	57.4	1.05	--	--
Corynoneura	--	--	--	--	5.4	0.10	--	--
Cricotopus bicinctus grp.	--	--	--	--	--	--	68.2	0.70
Cricotopus sylvestris grp.	--	--	--	--	1.8	0.03	179.4	1.85
Nanocladius distinctus	12.6	0.20	70.0	1.17	14.4	0.26	161.5	1.67
Nanocladius crassicornus/rectinervis	--	--	--	--	10.8	0.20	--	--
Rheocricotopus robacki	5.4	0.09	--	--	3.6	0.07	--	--
Chironomus	--	--	80.7	1.35	1.8	0.03	26.9	0.28
Cryptochironomus	--	--	--	--	10.8	0.20	--	--
Dicrotendipes neomodestus	--	--	26.9	0.45	9.0	0.16	--	--
Dicrotendipes simpsoni	41.3	0.66	274.5	4.59	118.4	2.17	733.8	7.57
Glyptotendipes	--	--	638.7	10.67	3.6	0.07	43.1	0.44
Parachironomus	--	--	17.9	0.30	5.4	0.10	25.1	0.26
Polypedilum fallax grp.	--	--	--	--	12.6	0.23	--	--
Polypedilum flavum	5.4	0.09	--	--	--	--	--	--
Polypedilum illinoense	--	--	--	--	82.5	1.51	9.0	0.09
Polypedilum scalaenum grp.	333.7	5.32	5.4	0.09	34.1	0.62	9.0	0.09
Paratanytarsus	5.4	0.09	--	--	19.7	0.36	25.1	0.26
Tanytarsus	5.4	0.09	--	--	--	--	--	--
Amnicola	--	--	--	--	--	--	9.0	0.09
Physa	12.6	0.20	--	--	43.1	0.79	145.3	1.50
Helisoma	41.3	0.66	--	--	39.5	0.72	--	--
Ferrissia	17.9	0.29	--	--	2,267.7	41.51	--	--
Pisidium	5.4	0.09	--	--	--	--	--	--
Dreissena polymorpha	--	--	78.9	1.32	--	--	--	--
TOTAL BENTHOS	6,272.0	100.00	5,984.9	100.00	5,462.9	100.00	9,695.0	100.00
TOTAL TAXA RICHNESS	21		17		30		20	
EPT TAXA RICHNESS	0		3		3		1	

TABLE 3-11. PETITE PONAR DENSITIES AT SAMPLING STATIONS 52,56,57, AND 76 WITHIN THE LITTLE CALUMET RIVER, JULY-SEPTEMBER 2003.

TAXA	52		56		57		76	
	WENTWORTH AVE.		INDIANA AVE.		AHSLAND AVE.		HALSTED ST.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Turbellaria	495.2	3.04	--	--	--	--	--	--
Oligochaeta	10,076.0	61.90	2,124.3	90.52	27,443.5	98.66	26,158.8	95.95
Helobdella stagnalis	--	--	--	--	7.2	0.03	--	--
Helobdella triserialis	--	--	--	--	7.2	0.03	--	--
Erpobdella punctata punctata	559.8	3.44	--	--	--	--	--	--
Caecidotea	14.4	0.09	--	--	--	--	7.2	0.03
Gammarus	7.2	0.04	--	--	--	--	122.0	0.45
Chironomidae	--	--	--	--	--	--	28.7	0.11
Procladius (Holotanypus)	7.2	0.04	93.3	3.98	--	--	71.8	0.26
Coelotanypus	--	--	7.2	0.31	--	--	--	--
Ablabesmyia mallochi	--	--	--	--	--	--	7.2	0.03
Cricotopus bicinctus grp.	--	--	--	--	--	--	100.5	0.37
Cricotopus sylvestris grp.	--	--	--	--	--	--	315.8	1.16
Nanocladius distinctus	--	--	--	--	7.2	0.03	--	--
Chironomus	--	--	35.9	1.53	21.5	0.08	57.4	0.21
Cryptochironomus	14.4	0.09	35.9	1.53	50.2	0.18	71.8	0.26
Dicrotendipes simpsoni	--	--	--	--	14.4	0.05	7.2	0.03
Microchironomus	--	--	14.4	0.61	--	--	--	--
Parachironomus	--	--	--	--	--	--	50.2	0.18
Polypedilum halterale grp.	--	--	28.7	1.22	--	--	--	--
Polypedilum illinoense	--	--	--	--	114.8	0.41	--	--
Polypedilum scalaenum grp.	28.7	0.18	--	--	28.7	0.10	--	--
Paratanytarsus	--	--	--	--	--	--	28.7	0.11
Valvata	186.6	1.15	--	--	--	--	--	--
Amnicola	--	--	--	--	--	--	71.8	0.26
Physa	14.4	0.09	--	--	--	--	--	--
Helisoma	35.9	0.22	--	--	--	--	--	--
Ferrissia	--	--	--	--	122.0	0.44	--	--
Corbicula fluminea	--	--	--	--	--	--	93.3	0.34
Musculium	4,054.8	24.91	--	--	--	--	--	--
Pisidium	782.3	4.81	--	--	--	--	--	--
Dreissena polymorpha	--	--	7.2	0.31	--	--	71.8	0.26
TOTAL BENTHOS	16,276.6	100.00	2,346.8	100.00	27,816.6	100.00	27,264.0	100.00
TOTAL TAXA RICHNESS	13		8		10		15	
EPT TAXA RICHNESS	0		0		0		0	

(Table 3-10), but none were present in the Ponar samples (Table 3-11). HD total taxa richness was similar among Stations 52, 56, and 76 (17-21 taxa) but higher (30 taxa) at Station 57. Total HD density was relatively similar between Stations 52, 56, and 57 while substantially higher at Station 76. Total HD density varied largely depending on the abundance of the organisms *Ferrissia*, *Hydra*, *Oligochaeta*, and *Turbellaria*. The freshwater limpet *Ferrissia* was the dominant HD taxon at Station 57 with substantial numbers of *Hydra* and *Oligochaeta* also present. *Turbellaria* dominated the sample at Station 52, representing almost three-quarters of the sample. *Hydra* and *Oligochaeta* were nearly equally dominant in the HD samples at Stations 56, 57, and 76

Ponar total taxa richness was fairly similar between Stations 56 and 57, ranging from eight to 10 taxa while Stations 52 and 76 were represented by 13 and 15 total taxa, respectively (Table 3-11). No EPT taxa were present in the Ponar samples. Ponar densities were similar at Stations 52, 57, and 76 with Station 56 being the lowest of the four stations. These differences were primarily due to variations in the abundance of *Oligochaeta* among the four stations. *Oligochaeta* was the dominant taxon in the Ponar samples accounting for greater than 90 percent of the total density at all four stations except for Station 52 at just over 60 percent. In addition to *Oligochaeta*, the fingernail clam *Musculium* was relatively common at Station 52 as well.

Chironomidae head capsule deformities were observed in both the HD and Ponar samples (Table 3-12). *Chironomus* was the taxon most frequently with deformities. Overall, the percent deformities was low (1-2%) at Stations 52, 57, and 76, but higher in the Ponar samples at Station 56. Highly tolerant taxa accounted for >50% of the individuals at all stations (Tables 3-1, 3-10, and 3-11).

3.1.1.6 Calumet-Sag Channel

The HD and Ponar samples from the three Cal-Sag Stations (43, 58, and 59) yielded 35 total taxa and two EPT taxa. (Table 3-13 and 3-14). HD total taxa richness was similar among all three sampling stations yielding between 18-21 taxa (Table 3-13). Total HD and Ponar densities varied greatly between the three stations. HD total density variation was primarily due to differences in the abundance of *Oligochaeta*, *D. polymorpha*, and the midge *Cricotopus sylvestris* grp. However, in the Ponars, total density variation was almost exclusively due to the abundance of *Oligochaeta* (Table 3-14). *Oligochaeta* was the dominant taxon in the Ponar samples accounting for 86-99 percent of the total density at the three stations. Excluding the midge *Procladius (Holotanypus)*, none of the other taxa in the Ponar samples accounted for greater than one percent of the total density.

Chironomidae head capsule deformities were observed in both the HD and Ponar samples from the Cal-Sag stations (Table 3-15). Except for the Ponar samples at Station 59, the incidence of head capsule deformities at the Cal-Sag stations was fairly low (i.e., approximately one percent or less). In the Station 59 Ponar samples, five of the 51 midge specimens exhibited head capsule deformities and all deformities were observed in the taxon *Procladius (Holotanypus)*. Despite the low occurrence of deformities in most samples, the benthic community at all three locations was represented by a low number of taxa and was dominated by highly tolerant taxa (Tables 3-13 and 3-14). Therefore, it is reasonable to conclude that the benthic community at these locations in the Cal-Sag is highly stressed.

Table 3-12. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from the Little Calumet River (L.C.R.) of the Calumet watershed, July 2003.

Taxa	Hester-Dendy Samples		Ponar Samples	
	L.C.R @ Indiana Sta. 56	L.C.R @ Ashland Sta. 57	L.C.R @ Indiana Sta. 56	L.C.R @ Halsted Sta. 76
<i>Chironomus sp.</i>				
Number Examined	13	--	5	8
Percent Deformed	15.4	--	60.0	13.0
<i>Polypedilum fallax grp.</i>				
Number Examined	--	7	--	--
Percent Deformed	--	14.3	--	--
<i>Procladius (Holotanypus)</i>				
Number Examined	5	--	--	--
Percent Deformed	20.0	--	--	--
TOTAL SAMPLE				
Total Midges Examined	181	222	30	104
Percent Deformed	1.7	0.5	10.0	0.9

TABLE 3-13. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 43,58, AND 59 WITHIN THE CAL-SAG CHANNEL, JULY-SEPTEMBER 2003.

TAXA	43		58		59	
	ROUTE 83		ASHLAND AVE.		CICERO AVE.	
	#/m2	%	#/m2	%	#/m2	%
Hydra	294.2	6.66	113.0	1.42	520.3	3.33
Turbellaria	7.2	0.16	593.8	7.45	1.8	0.01
Plumatella	9.0	0.20	--	--	--	--
Oligochaeta	934.7	21.15	2,287.4	28.69	11,286.3	72.31
Helobdella triserialis	--	--	35.9	0.45	--	--
Erpobdella punctata punctata	--	--	23.3	0.29	--	--
Mooreobdella microstoma	7.2	0.16	--	--	--	--
Caecidotea	5.4	0.12	19.7	0.25	96.9	0.62
Gammarus	--	--	--	--	200.9	1.29
Gammarus fasciatus	249.4	5.64	364.2	4.57	--	--
Caenis	9.0	0.20	--	--	--	--
Argia	--	--	3.6	0.05	--	--
Cynellus fraternus	1.8	0.04	--	--	--	--
Chironomidae	80.7	1.83	44.9	0.56	93.3	0.60
Procladius (Holotanypus)	3.6	0.08	17.9	0.23	17.9	0.11
Cricotopus bicinctus grp.	26.9	0.61	71.8	0.90	154.3	0.99
Cricotopus sylvestris grp.	2,131.3	48.23	9.0	0.11	470.0	3.01
Nanocladius distinctus	26.9	0.61	380.3	4.77	346.3	2.22
Rheocricotopus robacki	--	--	--	--	17.9	0.11
Chironomus	--	--	--	--	10.8	0.07
Dicrotendipes	--	--	17.9	0.23	--	--
Dicrotendipes neomodestus	--	--	--	--	10.8	0.07
Dicrotendipes simpsoni	113.0	2.56	2,269.5	28.47	2,025.5	12.98
Glyptotendipes	296.0	6.70	9.0	0.11	10.8	0.07
Parachironomus	53.8	1.22	--	--	--	--
Polypedilum illinoense	109.4	2.48	26.9	0.34	272.7	1.75
Stenochironomus	--	--	17.9	0.23	--	--
Paratanytarsus	55.6	1.26	--	--	17.9	0.11
Xenochironomus xenolabis	--	--	35.9	0.45	--	--
Amnicola	1.8	0.04	--	--	--	--
Physa	1.8	0.04	--	--	17.9	0.11
Helisoma	--	--	296.0	3.71	--	--
Ferrissia	--	--	166.8	2.09	--	--
Corbicula fluminea	--	--	--	--	35.9	0.23
Dreissena polymorpha	--	--	1,167.9	14.65	--	--
TOTAL BENTHOS	4,418.7	100.00	7,972.7	100.00	15,608.2	100.00
TOTAL TAXA RICHNESS	20		21		18	
TOTAL EPT RICHNESS	2		0		0	

TABLE 3-14. PETITE PONAR DENSITIES AT SAMPLING STATIONS 43, 58, AND 59 WITHIN THE CAL-SAG CHANNEL, JULY-SEPTEMBER 2003.

TAXA	43		58		59	
	ROUTE 83		ASHLAND AVE.		CICERO AVE.	
	#/m2	%	#/m2	%	#/m2	%
Oligochaeta	11,159.7	86.25	43,956.9	99.42	4,219.9	91.59
Mooreobdella microstoma	7.2	0.06	--	--	--	--
Procladius (Holotanypus)	1,736.7	13.42	236.8	0.54	344.5	7.48
Nanocladius distinctus	14.4	0.11	--	--	--	--
Cryptochironomus	7.2	0.06	--	--	--	--
Dicrotendipes simpsoni	--	--	--	--	7.2	0.16
Polypedilum illinoense	--	--	--	--	14.4	0.31
Tanytarsus	14.4	0.11	--	--	--	--
Corbicula fluminea	--	--	--	--	21.5	0.47
Pisidium	--	--	21.5	0.05	--	--
TOTAL BENTHOS	12,939.5	100.00	44,215.2	100.00	4,607.4	100.00
TOTAL TAXA RICHNESS	6		3		5	
EPT TAXA RICHNESS	0		0		0	

Table 3-15. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from stations within the Calumet watershed, July-September 2003.

Taxa	Hester-Dendy Samples		
	Cal-Sag Channel @ Ashland Sta. 58	Cal-Sag Channel @ Cicero Sta. 59	Cal-Sag Channel @ Route 83 Sta. 43
<i>Dicrotendipes simpsoni</i>			
Number Examined	158	108	21
Percent Deformed	0.6	2.8	4.8
TOTAL SAMPLE			
Total Midges Examined	202	196	132
Percent Deformed	0.4	1.5	0.8

Taxa	Ponar Samples	
	Cal-Sag Channel @ Cicero Sta. 59	Cal-Sag Channel @ Route 83 Sta. 43
<i>Procladius (Holotanypus)</i>		
Number Examined	48	179
Percent Deformed	10.4	1.1
TOTAL SAMPLE		
Total Midges Examined	51	183
Percent Deformed	9.8	1.1

3.1.2 North Branch Chicago River Watershed

Sampling was conducted at three stations in the North Branch of the Chicago River watershed during 2003: one station in the North Shore Channel (NSC) and two stations in the North Branch of the Chicago River (NBCR) (Table 2-1).

In the HD samples collected from the North Branch Chicago River watershed, the dominant taxa were Oligochaeta, Turbellaria, or the sow bug Caecidotea. Oligochaeta was the dominant taxon in the Ponar samples at all but one of the stations.

The incidence of Chironomidae deformities was generally low in the watershed. Based on the dominance of a single taxon, dominance by tolerant taxa, taxa richness, and EPT richness, several stations in the watershed exhibited varying degrees of stress.

3.1.2.1 North Shore Channel

Combined, the HD and Ponar samples from the single station in the North Shore Channel (Station 36) produced 14 total taxa and no EPT taxa (Tables 3-16 and 3-17). In the HD sample, Oligochaeta and Turbellaria were similar in abundance (Table 3-16). Both the midge *Dicrotendipes simpsoni* and the sideswimmer *Gammarus* were observed in substantial numbers in the HD sample as well. Oligochaeta was clearly the dominant taxon for the Ponar samples comprising almost 90 percent of the sample (Table 3-17). With the exception of the flatworm Turbellaria, no other taxon accounted for more than one percent of the total density in the Ponar sample.

Only one chironomid head capsule deformity was observed from the NSC samples (Table 3-18). Nonetheless, the benthic community of the NSC could be characterized as moderately to highly stressed. This assertion is supported by the fact that of the 14 total taxa observed nine are considered highly tolerant and tolerant taxa comprised >50 percent of the benthic community at each station regardless of sample type (Table 3-1).

3.1.2.2 North Branch of the Chicago River (NBCR)

Combined, the HD and Ponar samples from the two stations in the NBCR (Stations 96 and 46) yielded 39 total taxa, including five EPT taxa (Tables 3-19 and 3-20). HD total taxa richness was greatly different between the two stations with Station 96 upstream having 31 total taxa and five EPT taxa, whereas Station 46 downstream had only 13 total taxa and no EPT taxa. Conversely, total HD density at Station 46 was more than five times that of Station 96 due to the abundance of Oligochaeta at Station 46. The dominant taxon for the HD sample at Station 96 was the sow bug *Caecidotea*, representing 76 percent of the sample.

Total Ponar taxa richness varied from only five taxa at Station 46 to 18 taxa at Station 96 (Table 3-20). Again the upstream station, Station 96, contained the only EPT taxon in the Ponar samples. Total Ponar densities were very similar at the two stations. The dominant organism for Station 46 was Oligochaeta comprising over 99 percent of the sample, whereas *Caecidotea*, and the fingernail clam *Musculium* were the dominant organisms collected at Station 96, comprising just over 40 and 30 percent of the sample, respectively.

TABLE 3-16. HESTER-DENDY DENSITIES AT SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL, JULY 2003.

TAXA	36 TOUHY AVE.	
	#/m ²	%
Turbellaria	6,745.6	37.79
Oligochaeta	8,575.5	48.04
Caecidotea	80.7	0.45
Gammarus	959.8	5.38
Chironomidae	44.9	0.25
Cricotopus sylvestris grp.	71.8	0.40
Nanocladius distinctus	26.9	0.15
Chironomus	9.0	0.05
Dicrotendipes simpsoni	915.0	5.13
Glyptotendipes	358.8	2.01
Parachironomus	62.8	0.35
TOTAL BENTHOS	17,850.7	100.00
TOTAL TAXA RICHNESS	10	
EPT TAXA RICHNESS	0	

TABLE 3-17. PETITE PONAR DENSITIES AT SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL, JULY 2003.

TAXA	36 TOUHY AVE.	
	#/m ²	%
Turbellaria	2,892.2	8.09
Oligochaeta	31,799.7	88.98
Helobdella triserialis	21.5	0.06
Caecidotea	14.4	0.04
Gammarus	7.2	0.02
Cricotopus bicinctus grp.	7.2	0.02
Cricotopus sylvestris grp.	172.2	0.48
Nanocladius distinctus	28.7	0.08
Chironomus	215.3	0.60
Dicrotendipes simpsoni	258.4	0.72
Glyptotendipes	93.3	0.26
Parachironomus	143.5	0.40
Polypedilum scalaenum grp.	71.8	0.20
Helisoma	14.4	0.04
TOTAL BENTHOS	35,739.6	100.00
TOTAL TAXA RICHNESS	14	
EPT TAXA RICHNESS	0	

Table 3-18. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from the North Branch of the Chicago River watershed, July 2003.

Taxa	Hester-Dendy Sample	Ponar Sample
	N.B.C.R @ Grand Sta. 46	N.S.C @ Touhy Sta. 36
<i>Chironomus sp.</i>		
Number Examined	--	18
Percent Deformed	--	5.6
<i>Dicrotendipes simpsoni</i>		
Number Examined	8.4	--
Percent Deformed	1.2	--
TOTAL SAMPLE		
Total Midges Examined	107	101
Percent Deformed	0.9	1.0

TABLE 3-19. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH BRANCH CHICAGO RIVER, JULY-AUGUST 2003.

TAXA	96 ALBANY AVE.		46 GRAND AVE.	
	#/m2	%	#/m2	%
Hydra	14.4	0.35	--	--
Turbellaria	236.8	5.74	2,179.8	9.49
Oligochaeta	172.2	4.17	18,864.4	82.15
Helobdella triserialis	70.0	1.69	26.9	0.12
Erpobdella punctata punctata	3.6	0.09	--	--
Mooreobdella microstoma	--	--	9.0	0.04
Caecidotea	3,150.3	76.31	116.6	0.51
Gammarus fasciatus	--	--	17.9	0.08
Baetis intercalaris	5.4	0.13	--	--
Stenacron	10.8	0.26	--	--
Argia	1.8	0.04	--	--
Cheumatopsyche	12.6	0.30	--	--
Hydropsyche betteni	9.0	0.22	--	--
Ceraclea	1.8	0.04	--	--
Chironomidae	1.8	0.04	--	--
Thienemannimyia grp.	14.4	0.35	35.9	0.16
Corynoneura	14.4	0.35	--	--
Cricotopus bicinctus grp.	10.8	0.26	--	--
Cricotopus sylvestris grp.	--	--	9.0	0.04
Nanocladius distinctus	10.8	0.26	278.1	1.21
Nanocladius crassicornus/rectinervis	7.2	0.17	--	--
Chironomus	3.6	0.09	--	--
Dicrotendipes	12.6	0.30	--	--
Dicrotendipes simpsoni	1.8	0.04	1,381.4	6.02
Glyptotendipes	1.8	0.04	17.9	0.08
Parachironomus	--	--	17.9	0.08
Phaenopsectra punctipes	1.8	0.04	--	--
Polypedilum illinoense	37.7	0.91	9.0	0.04
Polypedilum scalaenum grp.	17.9	0.43	--	--
Paratanytarsus	7.2	0.17	--	--
Tanytarsus	5.4	0.13	--	--
Xenochironomus xenolabis	55.6	1.35	--	--
Physa	12.6	0.30	--	--
Helisoma	7.2	0.17	--	--
Ferrissia	213.5	5.17	--	--
Musculium	1.8	0.04	--	--
TOTAL BENTHOS	4,128.1	100.00	22,963.8	100.00
TOTAL TAXA RICHNESS	31		13	
EPT TAXA RICHNESS	5		0	

TABLE 3-20. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE NORTH BRANCH CHICAGO RIVER, JULY-AUGUST 2003.

TAXA	96 ALBANY AVE.		46 GRAND AVE.	
	#/m2	%	#/m2	%
Turbellaria	1,076.5	4.97	--	--
Oligochaeta	947.3	4.38	23,223.6	99.81
Helobdella stagnalis	100.5	0.46	--	--
Erpobdella punctata punctata	416.2	1.92	--	--
Mooreobdella microstoma	--	--	7.2	0.03
Caecidotea	8,942.1	41.31	--	--
Gammarus	43.1	0.20	--	--
Coenagrionidae	14.4	0.07	--	--
Cheumatopsyche	14.4	0.07	--	--
Stenelmis	28.7	0.13	--	--
Procladius (Holotanypus)	--	--	7.2	0.03
Thienemannimyia grp.	43.1	0.20	7.2	0.03
Dicrotendipes	14.4	0.07	--	--
Dicrotendipes simpsoni	--	--	21.5	0.09
Polypedilum scalaenum grp.	86.1	0.40	--	--
Tanytarsus	14.4	0.07	--	--
Xenochironomus xenolabis	28.7	0.13	--	--
Amnicola	14.4	0.07	--	--
Physa	114.8	0.53	--	--
Musculium	6,703.0	30.97	--	--
Pisidium	3,042.9	14.06	--	--
TOTAL BENTHOS	21,644.7	100.00	23,266.6	100.00
TOTAL TAXA RICHNESS	18		5	
EPT TAXA RICHNESS	1		0	

The incidence of Chironomidae deformities was low in samples from the North Branch Chicago River (Table 3-18). Only one specimen (7.1 percent) of *Dicrotendipes simpsoni* from the Station 46 HD samples exhibited a deformity. However, the benthic community at Station 46 was almost completely dominated by highly tolerant taxa which suggests the benthic community is at least moderately stressed (Tables 3-19 and 3-20). In contrast, the higher taxa richness at Station 96 indicates the benthic community is more balanced and less stressed compared to the community at Station 46.

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

Benthic macroinvertebrate sampling was conducted at three stations all within the Chicago Sanitary and Ship Canal (CSSC) (Table 2-1). Oligochaeta was the dominant taxa at all three stations for both sample types.

3.1.3.1 Chicago Sanitary and Ship Canal

Combined, the HD and Ponar samples from the three CSSC stations (Stations 75, 41, and 92) yielded 26 total taxa and no EPT taxa (Tables 3-21 and 3-22). HD total taxa richness was similar between Stations 75 and 41 at 9 and 12 taxa, respectively. Station 92 had the highest HD taxa richness with 20 total taxa. Total density was similar between Stations 75 and 41 but slightly more than four times higher than at Station 41. Density among the three stations was primarily driven by the abundance of Turbellaria, Oligochaeta, *Dicrotendipes simpsoni*, and *Gammarus fasciatus*. Oligochaeta was the dominant taxon at the two Stations 75 and 41, representing more than 80 percent of the sample at each station. Oligochaeta was the dominant Station 92, however only represented 37 percent of the total density, with *Gammarus fasciatus* nearly as abundant at 23 percent.

Ponar total taxa richness was identical between Stations 41 and 92 with 4 taxa, and only slightly higher (7 taxa) at Station 75 (Table 3-22). Taxa richness in the Station 75 Ponars (seven taxa) was nearly equal to total HD taxa richness (nine taxa) for that station. Total density varied greatly among the three stations due to differences in Oligochaeta density among the three locations.

Chironomid head capsule deformities were observed in the HD samples at two stations and in the Ponar samples at one station in the CSSC (Table 3-23). *Dicrotendipes simpsoni* and *Chironomus* sp. were the taxa exhibiting deformities. Deformities were relatively low at all locations, ranging from one to three individuals with deformities.

The tolerant taxon Oligochaeta was dominant at all three stations for both sample types (Table 3-1). However, based on higher taxa richness and lower abundance of Oligochaeta, it appears that conditions are somewhat better at Station 92.

3.1.4 Des Plaines River Watershed

Sampling was conducted at six stations in the Des Plaines River watershed during 2003: one in Higgins Creek, one in Salt Creek, one in the West Branch of the DuPage River (W.B. DuPage River), and three in the Des Plaines River (Table 2-1).

TABLE 3-21. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO SANITARY AND SHIP CANAL, JULY 2003.

TAXA	75		41		92	
	CICERO AVE.		HARLEM AVE.		LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%
Hydra	17.9	0.06	17.9	0.06	367.8	5.84
Turbellaria	2,368.1	8.12	627.9	2.26	1,123.1	17.82
Oligochaeta	25,314.0	86.83	24,865.4	89.65	2,335.8	37.07
Helobdella stagnalis	--	--	17.9	0.06	41.3	0.65
Helobdella triserialis	--	--	--	--	5.4	0.09
Mooreobdella microstoma	--	--	--	--	1.8	0.03
Caecidotea	--	--	35.9	0.13	10.8	0.17
Gammarus	--	--	197.3	0.71	--	--
Gammarus fasciatus	125.6	0.43	--	--	1,458.6	23.15
Berosus	--	--	--	--	1.8	0.03
Chironomidae	17.9	0.06	161.5	0.58	9.0	0.14
Procladius (Holotanypus)	17.9	0.06	--	--	--	--
Ablabesmyia mallochii	17.9	0.06	--	--	--	--
Cricotopus bicinctus grp.	--	--	--	--	3.6	0.06
Cricotopus sylvestris grp.	--	--	53.8	0.19	64.6	1.03
Nanocladius distinctus	89.7	0.31	538.2	1.94	192.0	3.05
Chironomus	--	--	71.8	0.26	--	--
Dicrotendipes simpsoni	1,148.2	3.94	1,076.4	3.88	584.9	9.28
Glyptotendipes	--	--	53.8	0.19	21.5	0.34
Parachironomus	35.9	0.12	--	--	--	--
Polypedilum illinoense	--	--	--	--	9.0	0.14
Polypedilum scalaenum grp.	--	--	--	--	5.4	0.09
Stenochironomus	--	--	--	--	5.4	0.09
Xenochironomus xenolabis	--	--	--	--	35.9	0.57
Physa	--	--	17.9	0.06	--	--
Ferrissia	--	--	--	--	9.0	0.14
Corbicula fluminea	--	--	--	--	14.4	0.23
TOTAL BENTHOS	29,153.2	100.00	27,735.9	100.00	6,300.7	100.00
TOTAL TAXA RICHNESS	9		12		20	
EPT TAXA RICHNESS	0		0		0	

TABLE 3-22. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE CHICAGO SANITARY AND SHIP CANAL, JULY 2003.

TAXA	75		41		92	
	CICERO AVE.		HARLEM AVE.		LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%
Turbellaria	21.5	3.26	--	--	--	--
Oligochaeta	588.5	89.13	24,594.3	98.14	112,027.3	98.49
Helobdella triserialis	7.2	1.09	--	--	--	--
Gammarus fasciatus	--	--	--	--	287.1	0.25
Chironomidae	--	--	--	--	71.8	0.06
Procladius (Holotanypus)	7.2	1.09	71.8	0.29	1,291.8	1.14
Cricotopus sylvestris grp.	7.2	1.09	7.2	0.03	--	--
Chironomus	--	--	387.5	1.55	--	--
Tipulidae	7.2	1.09	--	--	--	--
Corbicula fluminea	21.5	3.26	--	--	71.8	0.06
TOTAL BENTHOS	660.3	100.00	25,060.8	100.00	113,749.7	100.00
TOTAL TAXA RICHNESS	7		4		4	
EPT TAXA RICHNESS	0		0		0	

Table 3-23. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from the Chicago Sanitary and Ship Canal, July 2003.

Taxa	Hester-Dendy Samples		Ponar Sample
	C.S.S.C @ Cicero Sta. 75	C.S.S.C @ Harlem Sta. 41	C.S.S.C @ Lockport Sta. 92
<i>Chironomus sp.</i>			
Number Examined	--	9	--
Percent Deformed	--	33.3	--
<i>Dicrotendipes simpsoni</i>			
Number Examined	64	--	126
Percent Deformed	4.7	--	0.8
TOTAL SAMPLE			
Total Midges Examined	73	11	203
Percent Deformed	4.1	27.3	0.5

The benthic community in the Des Plaines River watershed exhibited a substantial amount of variability. The dominant taxon for more than half of the HD and Ponar samples was Oligochaeta. However, in the Des Plaines River, midges dominated. The incidence of chironomid deformities was generally low among stations in the Des Plaines watershed. The highest number of deformed specimens in 2003 was observed at Station 22 on the Des Plaines River. In addition, the highest total richness and highest EPT richness for any stations sampled in 2003 were observed in the Des Plaines River watershed.

3.1.4.1 West Branch of the DuPage River

The benthic macroinvertebrate community in the West Branch of the DuPage River (WBDPR) at Station 64 was represented by 25 total taxa and one EPT taxon in the HD and Ponar samples (Tables 3-24 and 3-25). The HD and Ponar samples yielded 23 and 16 total taxa, respectively. Only one EPT taxon was found in the HD samples and none were present in the Ponars. In the HD samples, the highly tolerant taxon Oligochaeta was clearly dominant (Table 3-24). Oligochaeta was also the dominant taxa in the Ponar samples but the relatively tolerant midge *Chironomus* was nearly as abundant.

Chironomid head capsule deformities were observed on several tolerant taxa in the WB DuPage River (Table 3-26). However, no taxon had more than two specimens with deformities. Tolerant taxa comprised >90 percent of the total density in both the HDs and Ponars (Tables 3-24 and 3-25). Based on the presence of only one EPT and the high relative abundance of tolerant taxa in the samples, it is reasonable to characterize the WB DuPage River benthic community as moderately to highly stressed, during 2003.

3.1.4.2 Salt Creek

HD and Ponar samples from the single station in Salt Creek (Station 18) yielded 34 total taxa and a single EPT taxon (Tables 3-27 and 3-28). Total taxa richness ranged from 31 taxa in the HD samples to 19 taxa in the Ponar samples. The EPT taxon *Caenis* was observed in both sample types. Oligochaeta was the dominant taxon in the HD samples whereas the relatively intolerant midge *Cladotanytarsus mancus* grp. was the dominant in the Ponars. A substantial number of *Hydra* was similarly observed in the HD samples. Aside from *Hydra* and Oligochaeta, no single taxon in the HD samples accounted for more than two percent of the total sample. The Ponars were dominated by the midge *Cladotanytarsus mancus* grp. and Oligochaeta, with substantial numbers of the midges *Polypedilum scalaenum* group, *Dicrotendipes fumidus*, and *Chironomus* also observed in the Ponar samples.

Chironomid head capsule deformities were not observed in any HD specimens and on only one midge specimen in the Ponar samples exhibited a deformity (Table 3-26).

Results from the 2003 sampling of Salt Creek were mixed. Tolerant taxa comprised approximately 60 and 35 percent of the HD and Ponar total density (Tables 3-27 and 3-28). This suggests that the Salt Creek benthic community is moderately stressed. In contrast, the presence of Tanytarsini midge taxa as well as the relatively high taxa richness observed in both the HDs and Ponars indicates a healthier benthic assemblage compared to several of the stations surveyed in 2003.

TABLE 3-24. HESTER-DENDY DENSITIES AT SAMPLING STATION 64 WITHIN THE WEST BRANCH OF THE DUPAGE RIVER, JULY 2003.

TAXA	64 LAKE ST.	
	#/m ²	%
Hydra	35.9	0.12
Oligochaeta	22,461.4	72.16
Caecidotea	107.6	0.35
Argia	35.9	0.12
Cheumatopsyche	197.3	0.63
Chironomidae	233.2	0.75
Thienemannimyia grp.	143.5	0.46
Thienemanniella xena	143.5	0.46
Cricotopus tremulus grp.	143.5	0.46
Cricotopus bicinctus grp.	861.1	2.77
Cricotopus sylvestris grp.	1,148.2	3.69
Chironomus	735.6	2.36
Dicrotendipes neomodestus	107.6	0.35
Dicrotendipes simpsoni	143.5	0.46
Endochironomus nigricans	35.9	0.12
Glyptotendipes	2,475.8	7.95
Polypedilum flavum	322.9	1.04
Polypedilum illinoense	251.2	0.81
Polypedilum scalaenum grp.	143.5	0.46
Paratanytarsus	358.8	1.15
Tanytarsus	107.6	0.35
Simulium	861.1	2.77
Physa	17.9	0.06
Helisoma	53.8	0.17
TOTAL BENTHOS	31,126.7	100.00
TOTAL TAXA RICHNESS	23	
EPT TAXA RICHNESS	1	

TABLE 3-25. PETITE PONAR DENSITIES AT SAMPLING STATION 64 WITHIN THE WEST BRANCH OF THE DUPAGE RIVER, JULY 2003.

TAXA	64 LAKE ST.	
	#/m ²	%
Oligochaeta	1,607.6	41.56
Caecidotea	14.4	0.37
Chironomidae	21.5	0.56
Cricotopus bicinctus grp.	71.8	1.86
Cricotopus sylvestris grp.	157.9	4.08
Chironomus	1,449.7	37.48
Cryptochironomus	35.9	0.93
Dicrotendipes neomodestus	21.5	0.56
Dicrotendipes simpsoni	14.4	0.37
Endochironomus nigricans	21.5	0.56
Glyptotendipes	143.5	3.71
Polypedilum flavum	7.2	0.19
Polypedilum scalaenum grp.	150.7	3.90
Cladotanytarsus	14.4	0.37
Paratanytarsus	78.9	2.04
Simulium	50.2	1.30
Helisoma	7.2	0.19
TOTAL BENTHOS	3,868.2	100.00
TOTAL TAXA RICHNESS	16	
EPT TAXA RICHNESS	0	

Table 3-26. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from the Des Plaines River watershed, June-September 2003.

Taxa	Hester-Dendy Samples			Ponar Samples		
	W.B.D.P.R. @ Lake Sta. 64	Des Plaines R. @ Ogden Sta. 22	Salt Cr. @ Devon Sta. 18	Higgins Cr. @ Wille Sta. 78	Des Plaines R. @ Lake Cook Sta. 56	Des Plaines R. @ Material Svc. Sta. 91
<i>Chironomus sp.</i>						
Number Examined	20	2	25	13	--	97
Percent Deformed	10.0	50.0	4.0	23.1	--	4.1
<i>Dicrotendipes simpsoni</i>						
Number Examined	4	--	--	--	--	--
Percent Deformed	25.0	--	--	--	--	--
<i>Glyptotendipes sp.</i>						
Number Examined	69	--	--	--	--	--
Percent Deformed	1.4	--	--	--	--	--
<i>Polypedilum flavum</i>						
Number Examined	--	--	--	--	--	61
Percent Deformed	--	--	--	--	--	3.3
<i>Polypedilum scalaenum grp</i>						
Number Examined	4	--	--	--	39	--
Percent Deformed	50.0	--	--	--	2.6	--
<i>Procladius (Holotanypus)</i>						
Number Examined	--	20	--	--	--	--
Percent Deformed	--	25.0	--	--	--	--
TOTAL SAMPLE						
Total Midges Examined	198	153	199	124	117	195
Percent Deformed	3.0	10.5	0.5	2.4	0.9	3.1

TABLE 3-27. HESTER-DENDY DENSITIES AT SAMPLING STATION 18 WITHIN SALT CREEK, JUNE 2003.

TAXA	18 DEVON AVE.	
	#/m ²	%
Hydra	9,831.4	34.66
Turbellaria	35.9	0.13
Oligochaeta	16,200.2	57.12
Caecidotea	251.2	0.89
Orconectes virilis	35.9	0.13
Caenis	179.4	0.63
Argia	17.9	0.06
Stenelmis	17.9	0.06
Ceratopogonidae	71.8	0.25
Chironomidae	125.6	0.44
Procladius (Holotanypus)	17.9	0.06
Cricotopus tremulus grp.	53.8	0.19
Cricotopus bicinctus grp.	35.9	0.13
Cricotopus sylvestris grp.	17.9	0.06
Nanocladius distinctus	53.8	0.19
Nanocladius crassicornus/rectinervis	35.9	0.13
Chironomus	35.9	0.13
Cryptochironomus	35.9	0.13
Dicrotendipes fumidus	107.6	0.38
Endochironomus nigricans	17.9	0.06
Glyptotendipes	35.9	0.13
Parachironomus	394.7	1.39
Polypedilum illinoense	35.9	0.13
Polypedilum scalaenum grp.	448.5	1.58
Tribelos fuscicorne	17.9	0.06
Cladotanytarsus mancus grp.	17.9	0.06
Paratanytarsus	53.8	0.19
Tanytarsus glabrescens grp.	35.9	0.13
Phylla	35.9	0.13
Helisoma	71.8	0.25
Ferrissia	17.9	0.06
Corbicula fluminea	17.9	0.06
TOTAL BENTHOS	28,363.8	100.00
TOTAL TAXA RICHNESS	31	
EPT TAXA RICHNESS	1	

TABLE 3-28. PETITE PONAR DENSITIES AT SAMPLING STATION 18 WITHIN SALT CREEK, JUNE 2003.

TAXA	18 DEVON AVE.	
	#/m ²	%
Hydra	14.4	0.24
Oligochaeta	1,421.0	24.15
Caecidotea	14.4	0.24
Caenis	7.2	0.12
Macronychus glabratus	7.2	0.12
Stenelmis	14.4	0.24
Chironomidae	64.6	1.10
Cricotopus tremulus grp.	28.7	0.49
Cricotopus bicinctus grp.	57.4	0.98
Cricotopus sylvestris grp.	28.7	0.49
Chironomus	523.9	8.90
Cladopelma	14.4	0.24
Cryptochironomus	93.3	1.59
Dicrotendipes fumidus	674.6	11.46
Parachironomus	14.4	0.24
Polypedilum scalaenum grp.	696.1	11.83
Stictochironomus	28.7	0.49
Tribelos fuscicorne	14.4	0.24
Cladotanytarsus mancus grp.	2,045.3	34.76
Corbicula fluminea	122.0	2.07
TOTAL BENTHOS	5,884.8	100.00
TOTAL TAXA RICHNESS	19	
EPT TAXA RICHNESS	1	

3.1.4.3 Higgins Creek

Combined, the HD and Ponar samples from the single station (Station 78) in Higgins Creek yielded 17 total taxa and one EPT taxon (Tables 3-29 and 3-30). Eleven total taxa were observed in the HD samples while 15 taxa were present in the Ponar samples. Oligochaeta was the dominant taxon in both the HD and Ponar samples. *Caecidotea* also was observed in substantial numbers in both sample types.

Head capsule deformities were relatively low in Higgins Creek with anomalies being observed on only three specimens (Table 3-26). Highly tolerant taxa comprised >80 percent of the total density for each sample type (Tables 3-29 and 3-30). This suggests that pollution type stress is relatively high in Higgins Creek.

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 74 total taxa and 17 EPT taxa (Tables 3-31 and 3-32). Total richness was the highest value observed among all the waterways sampled in 2003 while EPT richness was the highest observed in both 2003 and 2004. HD total taxa richness decreased longitudinally from upstream to downstream from 45 taxa at Station 13, the upstream-most station, to 21 taxa at Station 91, the downstream-most station (Table 3-31). EPT taxa richness was much higher (15 taxa) at the upstream Station 13 compared to four EPT taxa at both Stations 22 and 91. The HD richness values observed at Station 91 were highest observed among all the stations sampled during 2003. The dominant taxon at Station 13 was the relatively pollution sensitive midge *Rheotanytarsus*. The EPT taxon *Cheumatopsyche* was the dominant taxon at Station 91 and was also observed in substantial numbers in the HD samples at Station 13. Oligochaeta was the dominant organism in the HDs at Station 22. Total HD density was similar at Stations 13 and 91 but over eleven times lower at Station 22. The cause for decline in density at Station 22 was attributable to lower abundance of Oligochaeta, *Cheumatopsyche*, *Polypedilum flavum*, and/or *Rheotanytarsus*.

Ponar total taxa richness was similar at Stations 13 and 22 with 23 and 20 taxa, respectively and somewhat higher at Station 91 with 30 taxa (Table 3-32). EPT taxa richness increased upstream to downstream with one EPT at Station 13 and four EPT taxa at Station 91. The richness trends in the Ponar data were the opposite of those described above for the HD data. The dominant taxon at Station 13 was *Polypedilum scalaenum* grp while Oligochaeta, *Paracladopelma*, and *Corbicula fluminea* were also well represented. Oligochaeta was the dominant taxon at Stations 22 and 91 representing over 60 percent of the specimens taken at those two stations. In addition, *Turbellaria*, *Cheumatopsyche*, and *Polypedilum scalaenum* grp. also were common at Station 22. Elevated numbers of *Cheumatopsyche*, *Polypedilum flavum*, *Gammarus fasciatus*, and *Chironomus* contributed the most to the higher density observed at Station 91.

Chironomid head capsule deformities were observed in the HD sample from Station 22 and the Ponar samples from Stations 13 and 91 (Table 3-26). Overall, the percent incidence of deformity was low (<1%) at Station 13 and somewhat higher (3%) at Stations 22 and 91.

Based on relative abundance, tolerant taxa were a relatively minor component in the samples at Station 13 (Tables 3-31 and 3-32). In contrast, tolerant taxa were a relatively more important

TABLE 3-29. HESTER-DENDY DENSITIES AT SAMPLING STATION 78 WITHIN HIGGINS CREEK, JUNE 2003.

TAXA	78 WILLE RD.	
	#/m2	%
Hydra	5.4	0.04
Turbellaria	35.9	0.29
Oligochaeta	9,137.1	73.14
Caecidotea	1,614.6	12.93
Gammarus	17.9	0.14
Hydroptila	5.4	0.04
Chironomidae	82.5	0.66
Cricotopus tremulus grp.	830.6	6.65
Cricotopus bicinctus grp.	453.9	3.63
Cricotopus sylvestris grp.	285.3	2.28
Nanocladius crassicornus/rectinervis	5.4	0.04
Physa	17.9	0.14
TOTAL BENTHOS	12,491.9	100.00
TOTAL TAXA RICHNESS	11	
EPT TAXA RICHNESS	1	

TABLE 3-30. PETITE PONAR DENSITIES AT SAMPLING STATION 78 WITHIN HIGGINS CREEK, JUNE 2003.

TAXA	78 WILLE RD.	
	#/m2	%
Hydra	35.9	0.12
Turbellaria	7.2	0.02
Oligochaeta	22,340.9	74.40
Caecidotea	4,026.1	13.41
Orconectes	7.2	0.02
Hydroptila	21.5	0.07
Chironomidae	473.7	1.58
Cricotopus tremulus grp.	1,069.3	3.56
Cricotopus bicinctus grp.	868.4	2.89
Cricotopus sylvestris grp.	488.0	1.63
Chironomus	437.8	1.46
Dicrotendipes neomodestus	100.5	0.33
Glyptotendipes	21.5	0.07
Parachironomus	28.7	0.10
Physa	93.3	0.31
Pisidium	7.2	0.02
TOTAL BENTHOS	30,027.0	100.00
TOTAL TAXA RICHNESS	15	
EPT TAXA RICHNESS	1	

TABLE 3-31. HESTER-DENDY DENSITIES AT EACH SAMPLING STATION WITHIN THE DES PLAINES RIVER, JUNE 2003.

TAXA	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	#/m2	%	#/m2	%	#/m2	%
Hydra	818.1	5.94	12.6	1.04	35.9	0.22
Turbellaria	91.5	0.66	26.9	2.23	358.8	2.16
Plumatella	--	--	1.8	0.15	--	--
Oligochaeta	1,099.7	7.99	349.8	28.97	143.5	0.87
Helobdella triserialis	1.8	0.01	--	--	--	--
Mooreobdella microstoma	1.8	0.01	--	--	--	--
Caecidotea	35.9	0.26	23.3	1.93	--	--
Gammarus	--	--	1.8	0.15	--	--
Gammarus fasciatus	550.8	4.00	--	--	--	--
Orconectes	--	--	--	--	17.9	0.11
Baetis intercalaris	--	--	3.6	0.30	592.0	3.57
Stenacron	25.1	0.18	152.5	12.63	--	--
Stenonema integrum	505.9	3.67	--	--	--	--
Stenonema exiguum	3.6	0.03	--	--	--	--
Tricorythodes	53.8	0.39	3.6	0.30	--	--
Caenis	1.8	0.01	--	--	--	--
Anthopotamus myops grp.	61.0	0.44	--	--	--	--
Hexagenia	21.5	0.16	--	--	--	--
Argia	16.1	0.12	91.5	7.58	--	--
Perlesta	39.5	0.29	--	--	--	--
Cynellus fraternus	3.6	0.03	--	--	--	--
Cheumatopsyche	1,424.5	10.35	12.6	1.04	7,194.1	43.36
Hydropsyche	35.9	0.26	--	--	71.8	0.43
Hydropsyche simulans	1.8	0.01	--	--	--	--
Hydropsyche bidens	17.9	0.13	--	--	--	--
Ceratopsyche morosa	--	--	--	--	233.2	1.41
Potamyia flava	5.4	0.04	--	--	--	--
Hydroptila	17.9	0.13	--	--	--	--
Macronychus glabratus	1.8	0.01	--	--	17.9	0.11
Stenelmis	--	--	9.0	0.74	--	--
Stenelmis crenata grp.	157.9	1.15	--	--	--	--
Ceratopogonidae	17.9	0.13	--	--	--	--
Chironomidae	138.1	1.00	10.8	0.89	35.9	0.22
Procladius (Holotanypus)	--	--	73.6	6.09	--	--
Ablabesmyia janta	71.8	0.52	16.1	1.34	--	--
Ablabesmyia mallochi	--	--	1.8	0.15	--	--
Thienemanniya grp.	143.5	1.04	5.4	0.45	71.8	0.43
Thienemanniella xena	--	--	10.8	0.89	129.2	0.78
Thienemanniella similis	71.8	0.52	--	--	--	--
Cricotopus tremulus grp.	394.7	2.87	--	--	--	--
Cricotopus bicinctus grp.	143.5	1.04	--	--	129.2	0.78
Cricotopus sylvestris grp.	340.9	2.48	--	--	--	--
Nanocladius distinctus	17.9	0.13	21.5	1.78	71.8	0.43
Nanocladius crassicornus/rectinervis	--	--	10.8	0.89	129.2	0.78
Rheocricotopus robacki	--	--	1.8	0.15	--	--
Chironomus	--	--	5.4	0.45	--	--
Dicrotendipes neomodestus	242.2	1.76	--	--	--	--
Dicrotendipes simpsoni	--	--	66.4	5.50	--	--
Endochironomus nigricans	17.9	0.13	--	--	--	--
Glyptotendipes	1,706.1	12.39	3.6	0.30	71.8	0.43
Paracladopelma	71.8	0.52	3.6	0.30	--	--
Polypedilum flavum	2,242.6	16.29	9.0	0.74	6,709.7	40.44
Polypedilum illinoense	37.7	0.27	61.0	5.05	129.2	0.78
Polypedilum scalaenum grp.	181.2	1.32	131.0	10.85	--	--
Stenochironomus	--	--	39.5	3.27	--	--
Paratanytarsus	17.9	0.13	--	--	--	--
Rheotanytarsus	2,906.4	21.11	--	--	394.7	2.38
Simulium	--	--	--	--	35.9	0.22
Pleurocera	--	--	16.1	1.34	--	--
Physa	3.6	0.03	1.8	0.15	--	--
Ferrissia	5.4	0.04	28.7	2.38	17.9	0.11
TOTAL BENTHOS	13,767.5	100.00	1,207.4	100.00	16,591.3	100.00
TOTAL TAXA RICHNESS	45		31		21	
EPT TAXA RICHNESS	15		4		4	

TABLE 3-32. PETITE PONAR DENSITIES AT EACH SAMPLING STATION WITHIN THE DES PLAINES RIVER, JUNE 2003.

TAXA	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	#/m2	%	#/m2	%	#/m2	%
Turbellaria	--	--	244.0	7.94	215.3	0.44
Oligochaeta	373.2	10.24	2,002.3	65.19	29,266.3	60.37
Helobdella stagnalis	--	--	7.2	0.23	93.3	0.19
Mooreobdella microstoma	--	--	--	--	21.5	0.04
Caecidotea	--	--	50.2	1.64	71.8	0.15
Gammarus	--	--	7.2	0.23	--	--
Gammarus fasciatus	57.4	1.57	--	--	3,624.2	7.48
Baetis intercalaris	--	--	--	--	21.5	0.04
Tricorythodes	--	--	64.6	2.10	71.8	0.15
Caenis	--	--	--	--	21.5	0.04
Hexagenia	50.2	1.38	--	--	--	--
Cheumatopsyche	--	--	107.6	3.50	2,282.2	4.71
Dubiraphia	7.2	0.20	--	--	--	--
Stenelmis	--	--	28.7	0.93	71.8	0.15
Stenelmis crenata grp.	143.5	3.94	--	--	--	--
Ceratopogonidae	35.9	0.98	--	--	--	--
Chironomidae	--	--	--	--	488.0	1.01
Procladius (Holotanypus)	--	--	64.6	2.10	107.6	0.22
Ablabesmyia mallochii	--	--	7.2	0.23	71.8	0.15
Thienemanimyia grp.	--	--	14.4	0.47	--	--
Thienemanniella xena	--	--	--	--	71.8	0.15
Thienemanniella similis	--	--	--	--	179.4	0.37
Cricotopus bicinctus grp.	78.9	2.17	--	--	1,040.6	2.15
Cricotopus trifascia grp.	--	--	--	--	143.5	0.30
Nanocladius distinctus	--	--	--	--	143.5	0.30
Chironomus	--	--	14.4	0.47	4,148.1	8.56
Cladopelma	28.7	0.79	--	--	--	--
Cryptochironomus	179.4	4.92	28.7	0.93	71.8	0.15
Dicrotendipes neomodestus	136.4	3.74	--	--	35.9	0.07
Glyptotendipes	21.5	0.59	--	--	71.8	0.15
Microtendipes	114.8	3.15	--	--	--	--
Paracladopelma	531.1	14.57	--	--	--	--
Polypedilum flavum	28.7	0.79	14.4	0.47	5,238.9	10.81
Polypedilum illinoense	--	--	--	--	107.6	0.22
Polypedilum scalaenum grp.	889.9	24.41	172.2	5.61	--	--
Saetheria	43.1	1.18	--	--	--	--
Stictochironomus	21.5	0.59	--	--	--	--
Tribelos fuscicorne	7.2	0.20	--	--	--	--
Cladotanytarsus mancus grp.	21.5	0.59	--	--	--	--
Cladotanytarsus vanderwulpi grp.	136.4	3.74	--	--	--	--
Paratanytarsus	43.1	1.18	--	--	--	--
Rheotanytarsus	21.5	0.59	--	--	502.4	1.04
Tanytarsus guerlus grp.	--	--	--	--	35.9	0.07
Amnicola	--	--	7.2	0.23	--	--
Pleurocera	--	--	78.9	2.57	--	--
Physa	--	--	--	--	21.5	0.04
Ferrissia	--	--	7.2	0.23	143.5	0.30
Corbicula fluminea	674.6	18.50	50.2	1.64	21.5	0.04
Musculium	--	--	--	--	71.8	0.15
Pisidium	--	--	100.5	3.27	--	--
TOTAL BENTHOS	3,645.7	100.00	3,071.6	100.00	48,478.2	100.00
TOTAL TAXA RICHNESS	23		20		30	
EPT TAXA RICHNESS	1		2		4	

component in the samples from Stations 22 and 91. Tolerant taxa relative abundance in the Ponars increased sequentially in a longitudinal manner from <20 percent at Station 13 to about 70 percent at Station 91. This combined with the upstream to downstream decline of HD total taxa richness and EPT richness for both sample types suggests that benthic community quality decreases and environmental stress increases in a downstream manner between Station 13 and Station 91. Station 13 had the best benthic community among the stations sampled in 2003.

3.2 2004 Benthic Macroinvertebrate Results

During 2004, 55 HD samples and 61 Ponar samples were collected from 30 stations in 12 different waterways (Table 2-2). Combined, the 2004 samples yielded 137 taxa, the highest number of taxa observed during the four years of monitoring (Table 3-1). The number of EPT taxa collected in 2004 was similar to the EPT richness observed in 2003 with 19 EPT in 2004 vs. 20 in 2003. As in 2003, Chironomidae was the most taxa rich group with 55 taxa followed by Gastropoda, Trichoptera, Ephemeroptera, and Coleoptera with 11, 10, 9, and 9 taxa, respectively.

3.2.1 Calumet Watershed

The same three stations in the Calumet watershed surveyed during 2003 were sampled again during 2004: one station in the Calumet River, one station in the Little Calumet River, and one station in the Cal-Sag (Table 2-2). Results among the three waterbodies were generally similar. As in 2003, Oligochaeta dominated the Ponar samples while Zebra mussel (*Dreissena polymorpha*) dominated the HD samples in the Calumet watershed in 2004.

3.2.1.1 Calumet River

Combined, the HD and Ponar samples from the single station in the Calumet River (Station 55) yielded 18 total taxa and one EPT taxon (Tables 3-33 and 3-34). Twelve total taxa and one EPT taxon were observed in the HD samples while ten total taxa were present in the Ponar samples with no EPT taxa. Total density in the HD samples was more than 50 times higher than in the Ponar samples due to the extreme abundance of zebra mussels (*Dreissena polymorpha*). Zebra mussel was the most dominant HD taxon, representing over 95 percent of the total density (Table 3-33). With the exception of *Gammarus fasciatus*, all the remaining taxa observed in the HD samples were individually represented by less than one percent of the total density.

In contrast to the HD samples, Oligochaeta was clearly the most dominant taxon representing nearly 90 percent of the total abundance in the Ponars (Table 3-34). The only other taxa that attained greater than one percent in the Ponar samples were Chironomidae.

No Chironomidae head capsule deformities were observed in either the HD or Ponar samples at Station 55. However, based on the relatively low taxa richness in both sample types and the fact that tolerant taxa comprised 88 percent of the total density in the Ponars (Table 3-34), it is reasonable to characterize the benthic community at Station 55 in the Calumet River as moderately to highly stressed.

TABLE 3-33. HESTER-DENDY DENSITIES AT SAMPLING STATION 55 WITHIN THE CALUMET RIVER, SEPTEMBER 2004.

TAXA	55 130TH ST.	
	#/m2	%
Hydra	143.5	0.16
Plumatella	1.8	0.00
Oligochaeta	53.8	0.06
Gammarus fasciatus	2,601.4	2.96
Cyrnellus fraternus	269.1	0.31
Cricotopus bicinctus grp.	17.9	0.02
Nanocladius distinctus	53.8	0.06
Dicrotendipes simpsoni	197.3	0.22
Polypedilum flavum	35.9	0.04
Simulium	89.7	0.10
Ferrissia	322.9	0.37
Dreissena polymorpha	84,104.8	95.69
TOTAL BENTHOS	87,892.0	100.00
TOTAL TAXA RICHNESS	12	
EPT TAXA RICHNESS	1	

TABLE 3-34. PETITE PONAR DENSITIES AT SAMPLING STATION 55 WITHIN THE CALUMET RIVER, SEPTEMBER 2004.

TAXA	55 130TH ST.	
	#/m2	%
Oligochaeta	1,449.7	87.83
Gammarus fasciatus	7.2	0.43
Procladius (Holotanypus)	35.9	2.17
Coelotanypus	7.2	0.43
Parakiefferiella	7.2	0.43
Chironomus	35.9	2.17
Cryptochironomus	64.6	3.91
Dicrotendipes simpsoni	7.2	0.43
Polypedilum halterale grp.	21.5	1.30
Dreissena polymorpha	14.4	0.87
TOTAL BENTHOS	1,650.6	100.00
TOTAL TAXA RICHNESS	10	
EPT TAXA RICHNESS	0	

3.2.1.2 Little Calumet River

The HD and Ponar samples from the single station in the Little Calumet River (Station 76) yielded 20 total taxa and two EPT taxa (Tables 3-35 and 3-36). Total taxa richness in the HD samples was slightly higher compared to the Ponars with 15 and 12 taxa being collected, respectively. Both EPT taxa, *Cyrtellus fraternus* and *Hydroptila*, were observed in the HD samples. As was the case for the Calumet River, zebra mussel was the dominant taxon in the HD samples while Oligochaeta was the dominant in the Ponars. The amphipod *Gammarus fasciatus* and the tolerant midge *Dicrotendipes simpsoni* also were common in the HD sample. In contrast, all taxa except Oligochaeta were represented by less than one percent of the total density in the Ponar samples.

As with the Calumet River samples, no Chironomidae head capsule deformities were observed in either the HD or Ponar samples at Station 76. However, many of the taxa represented in the HD and Ponar samples are considered highly tolerant of pollution indicating a moderately to highly stressed benthic assemblage (Table 3-1). Furthermore, highly tolerant Oligochaeta accounted for >98% of the specimens in the Ponar sample (Table 3-36). As such, it appears the benthic community at Station 76 is moderately to highly stressed.

3.2.1.3 Calumet-Sag Channel

Together, the HD and Ponar samples from the single station in the Cal-Sag (Station 59) combined to yield 21 total taxa and two EPT taxa (Tables 3-37 and 3-38). Nineteen total taxa and two EPT taxa were observed in the HD samples compared to 10 total taxa and no EPT taxa in the Ponar samples. Zebra mussel and Oligochaeta again were the two dominant taxa in the HD and Ponar samples, respectively.

Although the density difference between the two sample types was largely driven by high *Dreissena polymorpha* abundance in the HDs, Oligochaeta and *Dicrotendipes simpsoni* also were relatively common in the HD samples (Table 3-37). The midge *Procladius* was the only other common taxon in the Ponar samples (Table 3-38).

Like the other two stations in the watershed, no Chironomidae head capsule deformities were observed in either the HD or Ponar samples. Nonetheless, the abundance of tolerant taxa in both sample types together with the low density of pollution sensitive taxa (i.e., EPT) suggests that the benthic community at Station 59 in the Cal-Sag is moderately to highly stressed (Table 3-1).

3.2.2 North Branch Chicago River Watershed

Sampling was conducted at four stations in the North Branch Chicago River watershed during 2004: one station in the NSC and three stations in the NBCR (Table 2-2). All these stations except the CFAR Station had been sampled in 2003. Hester-Dendy and Ponar samples were taken at all stations except at the CFAR Station where only Ponar samples were collected.

Oligochaeta dominated both sample types at Station 36 in the NSC and at Stations 46 and CFAR in NBCR. Fingernail clam dominated the Ponar samples at Station 96 in 2004. No chironomid head deformities were observed at any station in the North Branch Chicago River Watershed.

TABLE 3-35. HESTER-DENDY DENSITIES AT SAMPLING STATION 76 WITHIN LITTLE CALUMET RIVER, SEPTEMBER 2004.

TAXA	76 HALSTED ST.	
	#/m2	%
Dugesia	17.9	0.09
Oligochaeta	610.0	3.12
Hyalella azteca	287.0	1.47
Gammarus fasciatus	2,081.1	10.64
Cyrtellus fraternus	89.7	0.46
Hydroptila	17.9	0.09
Ablabesmyia	17.9	0.09
Cricotopus bicinctus grp.	161.5	0.83
Nanocladius distinctus	17.9	0.09
Dicrotendipes simpsoni	2,045.2	10.46
Stenochironomus	89.7	0.46
Xenochironomus xenolabis	35.9	0.18
Menetus dilatatus	17.9	0.09
Ferrissia	179.4	0.92
Dreissena polymorpha	13,885.9	71.01
TOTAL BENTHOS	19,555.1	100.00
TOTAL TAXA RICHNESS	15	
EPT TAXA RICHNESS	2	

TABLE 3-36. PETITE PONAR DENSITIES AT SAMPLING STATION 76 WITHIN LITTLE CALUMET RIVER, SEPTEMBER 2004.

TAXA	76 HALSTED ST.	
	#/m2	%
Oligochaeta	24,989.0	98.03
Mooreobdella microstoma	7.2	0.03
Hyalella azteca	7.2	0.03
Gammarus fasciatus	64.6	0.25
Procladius (Holotanypus)	165.1	0.65
Cricotopus bicinctus grp.	7.2	0.03
Chironomus	14.4	0.06
Cryptochironomus	150.7	0.59
Dicrotendipes simpsoni	7.2	0.03
Ferrissia	7.2	0.03
Corbicula fluminea	64.6	0.25
Dreissena polymorpha	7.2	0.03
TOTAL BENTHOS	25,491.4	100.00
TOTAL TAXA RICHNESS	12	
EPT TAXA RICHNESS	0	

TABLE 3-37. HESTER-DENDY DENSITIES AT SAMPLING STATION 59 WITHIN CAL-SAG CHANNEL, AUGUST 2004.

TAXA	59 CICERO AVE.	
	#/m2	%
Hydra	479.0	5.88
Turbellaria	1.8	0.02
Oligochaeta	588.4	7.23
Caecidotea	19.7	0.24
Hyalella azteca	17.9	0.22
Gammarus fasciatus	152.5	1.87
Cyrenellus fraternus	28.7	0.35
Hydroptila	9.0	0.11
Procladius (Holotanypus)	17.9	0.22
Cricotopus tremulus grp.	44.9	0.55
Cricotopus sylvestris grp.	337.3	4.14
Nanocladius distinctus	213.5	2.62
Dicrotendipes simpsoni	2,145.7	26.35
Polypedilum illinoense	118.4	1.45
Paratanytarsus	5.4	0.07
Gyraulid	1.8	0.02
Ferrissia	68.2	0.84
Corbicula fluminea	26.9	0.33
Dreissena polymorpha	3,866.2	47.48
TOTAL BENTHOS	8,143.2	100.00
TOTAL TAXA RICHNESS	19	
EPT TAXA RICHNESS	2	

TABLE 3-38. PETITE PONAR DENSITIES AT SAMPLING STATION 59 WITHIN CAL-SAG CHANNEL, AUGUST 2004.

TAXA	59 CICERO AVE.	
	#/m2	%
Oligochaeta	1,672.2	73.50
Hyalella azteca	35.9	1.58
Gammarus fasciatus	64.6	2.84
Procladius (Holotanypus)	416.2	18.30
Cricotopus bicinctus grp.	14.4	0.63
Cricotopus sylvestris grp.	7.2	0.32
Cryptochironomus	7.2	0.32
Polypedilum illinoense	7.2	0.32
Corbicula fluminea	35.9	1.58
Dreissena polymorpha	14.4	0.63
TOTAL BENTHOS	2,275.0	100.00
TOTAL TAXA RICHNESS	10	
EPT TAXA RICHNESS	0	

3.2.2.1 North Shore Channel

The HD and Ponar samples from the single station in the NSC (Station 36) yielded 23 total taxa and three EPT taxa combined (Tables 3-39 and 3-40). Twenty total taxa, including three EPT taxa were observed in the HD samples compared to 16 total taxa and no EPT taxa in the Ponars. Oligochaeta was the dominant taxon in both sample types. Total density was very high in the HD samples due to the high abundance of Oligochaeta and the highly tolerant midge *Dicrotendipes simpsoni*. Oligochaeta and *Dicrotendipes simpsoni* comprised over 46 percent and 20 percent of the total density, respectively in the HD samples as compared to 78 percent and six percent, in the Ponars (Table 3-40).

No Chironomidae head capsule deformities were observed in either the HD or Ponar samples. However, nearly half of the total taxa collected were highly tolerant taxa. In addition, based on density, tolerant taxa were >80% of the benthos in both the HDs and the Ponars (Tables 3-39 and 3-40). As such, it appears the benthic community at Station 36 in the NSC is moderately to highly stressed.

3.2.2.2 North Branch of the Chicago River

The combined number of taxa collected in the HD and Ponar samples from the two NBCR stations (Stations 96 and 46) and the CFAR station at Fullerton Ave. (Ponar only) was 40 total taxa and five EPT taxa (Tables 3-41 and 3-42). HD total taxa richness was decidedly higher at the upstream Station 96 (26 taxa) compared to the 10 taxa observed at Station 46 (Table 3-41). In addition, five of the six EPT taxa observed in the NBCR were collected in the HDs at Station 96. *Caecidotea* and *Cheumatopsyche* were the dominant taxa at Station 96 representing nearly 22 and 23 percent of the total density. In contrast, the tolerant taxon Oligochaeta clearly was the dominant taxon at Station 46 representing nearly 57 percent of the total density.

As with the HD samples, Ponar total taxa richness was greatest at Station 96 with 29 taxa. Station 46 had 4 taxa and the CFAR station had only a single taxon (Table 3-41). The only EPT taxon collected in the Ponar samples was collected at Station 96. The fingernail clam *Musculium transversum* was the dominant taxon at Station 96 with substantial numbers of *Pisidium* and Oligochaeta also present. Oligochaeta comprised 100 percent of the total benthos at the CFAR station and nearly so at Station 46 with over 98 percent. Total Ponar density, excluding the CFAR station, was more than ten times higher upstream at Station 96 compared to downstream at Station 46 (Table 3-41). This was largely due to large numbers of *Musculium transversum*, *Pisidium* and Oligochaeta at Station 96. The density of the single taxon (Oligochaeta) at the CFAR station was about 10 times the total density at Station 96 and about 100 times the total density of Station 46.

Chironomid head capsule deformities were not observed on any of the midges at Stations 46, 96, and CFAR (Tables 3-41 and 3-42).

Overall, based on the higher taxa richness and presence of EPT taxa at Station 96, combined with the higher density of tolerant taxa at Station 46, it appears the benthic community at Station 46 is considerably more stressed than at Station 96. The benthic community at the CFAR Station was the poorest benthic community observed in 2004.

TABLE 3-39. HESTER-DENDY DENSITIES AT SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL, SEPTEMBER 2004.

TAXA	36 TOUHY AVE.	
	#/m2	%
Hydra	2,762.8	5.62
Turbellaria	2,852.5	5.81
Oligochaeta	22,999.6	46.82
Helobdella papillata	53.8	0.11
Ostracoda	484.4	0.99
Caecidotea	17.9	0.04
Gammarus fasciatus	5,453.9	11.10
Baetis	17.9	0.04
Enallagma	17.9	0.04
Cheumatopsyche	53.8	0.11
Hydroptila	17.9	0.04
Cricotopus bicinctus grp.	125.6	0.26
Nanocladius distinctus	897.0	1.83
Chironomus	71.8	0.15
Dicrotendipes simpsoni	10,244.0	20.85
Glyptotendipes	2,709.0	5.51
Parachironomus	143.5	0.29
Gyraulus	17.9	0.04
Ferrissia	107.6	0.22
Dreissena polymorpha	71.8	0.15
TOTAL BENTHOS	49,120.9	100.00
TOTAL TAXA RICHNESS	20	
EPT TAXA RICHNESS	3	

TABLE 3-40. PETITE PONAR DENSITIES AT SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL, SEPTEMBER 2004.

TAXA	36 TOUHY AVE.	
	#/m2	%
Hydra	7.2	0.10
Turbellaria	624.4	8.27
Oligochaeta	5,884.8	77.95
Ostracoda	7.2	0.10
Caecidotea	14.4	0.19
Gammarus fasciatus	21.5	0.29
Procladius (Holotanypus)	7.2	0.10
Cricotopus bicinctus grp.	7.2	0.10
Nanocladius distinctus	21.5	0.29
Chironomus	28.7	0.38
Cryptochironomus	7.2	0.10
Dicrotendipes neomodestus	14.4	0.19
Dicrotendipes simpsoni	480.8	6.37
Glyptotendipes	322.9	4.28
Parachironomus	86.1	1.14
Ferrissia	14.4	0.19
TOTAL BENTHOS	7,549.8	100.00
TOTAL TAXA RICHNESS	16	
EPT TAXA RICHNESS	0	

TABLE 3-41. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 96, AND 46 WITHIN THE NORTH BRANCH CHICAGO RIVER, JUNE-AUGUST 2004.

TAXA	96		46	
	ALBANY AVE.		GRAND AVE.	
	#/m ²	%	#/m ²	%
Hydra	39.5	1.23	3.6	0.09
Turbellaria	279.9	8.69	1,002.9	23.95
Plumatella	--	--	1.8	0.04
Oligochaeta	220.7	6.85	2,386.1	56.98
Ostracoda	16.1	0.50	--	--
Caecidotea	696.1	21.62	--	--
Hyalella azteca	--	--	9.0	0.21
Gammarus fasciatus	26.9	0.84	--	--
Hydracarina	5.4	0.17	--	--
Baetis intercalaris	104.1	3.23	--	--
Stenacron	195.6	6.07	--	--
Tricorythodes	3.6	0.11	--	--
Coenagrionidae	1.8	0.06	--	--
Cheumatopsyche	751.7	23.34	--	--
Hydropsyche betteni	170.4	5.29	--	--
Stenelmis crenata grp.	3.6	0.11	--	--
Thienemanimyia grp.	5.4	0.17	--	--
Corynoneura	26.9	0.84	--	--
Thienemanniella xena	23.3	0.72	--	--
Nanocladius distinctus	17.9	0.56	7.2	0.17
Rheocricotopus robacki	292.4	9.08	--	--
Dicrotendipes simpsoni	--	--	751.7	17.95
Glyptotendipes	--	--	7.2	0.17
Polypedilum flavum	209.9	6.52	--	--
Polypedilum illinoense	5.4	0.17	--	--
Polypedilum scalaenum grp.	28.7	0.89	14.4	0.34
Amnicola	1.8	0.06	--	--
Ferrissia	78.9	2.45	3.6	0.09
Musculium	7.2	0.22	--	--
Dreissena polymorpha	7.2	0.22	--	--
TOTAL BENTHOS	3,220.3	100.00	4,187.3	100.00
TOTAL TAXA RICHNESS	26		10	
EPT TAXA RICHNESS	5		0	

TABLE 3-42. PETITE PONAR DENSITIES AT SAMPLING STATIONS 96, CFAR, AND 46 WITHIN THE NORTH BRANCH CHICAGO RIVER, JUNE-AUGUST 2004.

TAXA	96 ALBANY AVE.		CFAR FULLERTON AVE.		46 GRAND AVE.	
	#/m2	%	#/m2	%	#/m2	%
Hydra	21.5	0.06	--	--	--	--
Turbellaria	1,937.7	5.77	--	--	7.2	0.22
Plumatella	7.2	0.02	--	--	--	--
Oligochaeta	6,387.2	19.03	321,513.2	100.00	3,150.5	98.43
Helobdella stagnalis	114.8	0.34	--	--	--	--
Erpobdella punctata punctata	430.6	1.28	--	--	--	--
Mooreobdella microstoma	430.6	1.28	--	--	--	--
Caecidotea	1,040.6	3.10	--	--	7.2	0.22
Gammarus fasciatus	57.4	0.17	--	--	--	--
Hydropsychidae	7.2	0.02	--	--	--	--
Procladius (Holotanypus)	--	--	--	--	28.7	0.90
Thienemanniya grp.	71.8	0.21	--	--	--	--
Corynoneura lobata	1,255.9	3.74	--	--	--	--
Thienemanniella xena	179.4	0.53	--	--	--	--
Nanocladius distinctus	366.0	1.09	--	--	--	--
Nanocladius crassicornus/rectinervis	107.6	0.32	--	--	--	--
Dicrotendipes simpsoni	1,543.0	4.60	--	--	--	--
Glyptotendipes	50.2	0.15	--	--	--	--
Polypedilum flavum	35.9	0.11	--	--	--	--
Polypedilum illinoense	968.8	2.89	--	--	--	--
Polypedilum scalaenum grp.	574.1	1.71	--	--	--	--
Paratanytarsus	35.9	0.11	--	--	--	--
Valvata	35.9	0.11	--	--	--	--
Amnicola	35.9	0.11	--	--	--	--
Menetus dilatatus	50.2	0.15	--	--	--	--
Ferrissia	7.2	0.02	--	--	--	--
Corbicula fluminea	7.2	0.02	--	--	--	--
Musculium transversum	9,616.7	28.66	--	--	--	--
Pisidium	8,145.5	24.27	--	--	7.2	0.22
Dreissena polymorpha	35.9	0.11	--	--	--	--
TOTAL BENTHOS	33,557.9	100.00	321,513.2	100.00	3,200.8	100.00
TOTAL TAXA RICHNESS	29		1		4	
EPT TAXA RICHNESS	1		0		0	

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

Benthic macroinvertebrate sampling was conducted at three stations exclusively within the CSSC waterway during 2004 (Table 2-2). Tolerant taxa were dominant in all locations in 2004. In all but one of these instances, the tolerant taxon was Oligochaeta. No chironomid head capsule deformities were observed at any of the stations in the SBCR and CSSC watershed in 2004.

3.2.3.1 Chicago Sanitary and Ship Canal

The HD and Ponar samples from the three CSSC stations combined yielded 37 total taxa and six EPT taxa (Tables 3-43 and 3-44). HD total taxa richness ranged from 21 taxa at Station 92 to 16 taxa at Station 41 (Table 3-43). Total richness was similar at Stations 41 and 75 but somewhat higher at Station 92. Oligochaeta was the dominant taxon in the HD samples at Stations 75 and 41 whereas at Station 92 substantial numbers of the following taxa were observed: *Turbellaria*, Oligochaeta, *Gammarus fasciatus*, *Dicrotendipes simpsoni*, and *Ferrissia*. *Ferrissia* was the most common taxon at Station 92 in the HD samples, but accounted for only 23 percent of the total sample. Total density was greatest at Station 41 and lowest at Station 92. Total density at Station 75 was slightly more than one and a half times that of Station 92, but more than four times less than Stations 41. The higher density observed at Station 41 was primarily due to the abundance of Oligochaeta, which comprised over 80 percent of the total density.

Ponar total taxa richness was similarly low at Stations 75 and 41 with 4 and 5 taxa, respectively (Table 3-44). Station 92 had 11 total taxa. Only one EPT taxon was found in the Ponar samples at Station 75. Oligochaeta was the dominant taxon at all three stations representing between 75 and 95 percent of the total density. Total density varied greatly among the three stations. Ponar total density was low at Stations 75 and 41. However, the total density observed at Station 92 was nearly 37 times greater compared to Station 41 and well over 100 times that of Station 75. Total density at the three stations was dictated by the abundance of Oligochaeta in the samples.

No Chironomid head capsule deformities only were observed in the samples at the three stations in the CSSC. Although no deformities were noted, the benthic community at Stations 75 and 41 appears to be highly stressed as judged by high percentages of tolerant organisms and fairly low taxa richness. Based on higher taxa richness, less dominance by tolerant organisms, and overall more balanced assemblage, Station 92 appears to be moderately stressed.

3.2.4 Fox River Watershed

The only waterbody sampled in the Fox River watershed was Poplar Creek. 2004 marks the first time Poplar Creek has been sampled during the current monitoring program (Table 2-2).

3.2.4.1 Poplar Creek

Combined, the HD and Ponar samples from Station 90 of Poplar Creek yielded 45 taxa, including three EPT taxa (Tables 3-45 and 3-46). Total taxa richness varied from 32 taxa in the

TABLE 3-43. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 75, 41, AND 92 WITHIN THE CHICAGO SANITARY SHIP CHANNEL, AUGUST 2004.

TAXA	75 CICERO AVE.		41 HARLEM AVE.		92 LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%
Hydra	14.4	0.20	430.6	1.47	224.3	5.26
Turbellaria	2,902.8	41.21	1,596.7	5.46	622.5	14.59
Urnatella gracilis	28.7	0.41	35.9	0.12	--	--
Plumatella	--	--	125.6	0.43	5.4	0.13
Oligochaeta	3,541.4	50.28	23,493.0	80.31	554.4	12.99
Helobdella papillata	17.9	0.25	--	--	48.4	1.14
Placobdella pediculata	3.6	0.05	--	--	--	--
Caecidotea	--	--	233.2	0.80	--	--
Gammarus fasciatus	10.8	0.15	188.4	0.64	583.1	13.67
Baetis intercalaris	28.7	0.41	--	--	--	--
Stenacron	3.6	0.05	--	--	3.6	0.08
Stenonema integrum	--	--	--	--	3.6	0.08
Argia	--	--	17.9	0.06	--	--
Cynellus fraternus	3.6	0.05	--	--	1.8	0.04
Cheumatopsyche	17.9	0.25	--	--	1.8	0.04
Ablabesmyia janta	--	--	--	--	7.2	0.17
Cricotopus	3.6	0.05	--	--	3.6	0.08
Cricotopus sylvestris grp.	--	--	17.9	0.06	--	--
Nanocladius distinctus	43.1	0.61	269.1	0.92	254.8	5.97
Chironomus	3.6	0.05	--	--	--	--
Dicrotendipes simpsoni	380.3	5.40	1,300.7	4.45	870.1	20.40
Glyptotendipes	--	--	9.0	0.03	--	--
Parachironomus	--	--	9.0	0.03	--	--
Polypedilum flavum	--	--	9.0	0.03	--	--
Xenochironomus xenolabis	--	--	--	--	26.9	0.63
Physa	--	--	--	--	7.2	0.17
Menetus dilatatus	--	--	--	--	5.4	0.13
Ferrissia	21.5	0.31	26.9	0.09	965.2	22.62
Corbicula fluminea	17.9	0.25	--	--	5.4	0.13
Musculium	--	--	--	--	5.4	0.13
Dreissena polymorpha	--	--	1,489.1	5.09	66.4	1.56
TOTAL BENTHOS	7,043.4	100.00	29,251.9	100.00	4,266.2	100.00
TOTAL TAXA RICHNESS	17		16		21	
EPT TAXA RICHNESS	4		0		4	

TABLE 3-44. PETITE PONAR DENSITIES AT SAMPLING STATIONS 75, 41, AND 92 WITHIN THE CHICAGO SANITARY SHIP CHANNEL, AUGUST 2004.

TAXA	75 CICERO AVE.		41 HARLEM AVE.		92 LOCKPORT	
	#/m2	%	#/m2	%	#/m2	%
Turbellaria	--	--	222.5	17.03	71.8	0.15
Plumatella	--	--	43.1	3.30	--	--
Oligochaeta	236.8	89.19	976.0	74.73	45,212.8	95.21
Erpobdella punctata punctata	--	--	--	--	143.5	0.30
Gammarus fasciatus	--	--	21.5	1.65	933.0	1.96
Tricorythodes	7.2	2.70	--	--	--	--
Tanypus	--	--	--	--	71.8	0.15
Procladius (Holotanypus)	--	--	--	--	538.2	1.13
Cryptochironomus	--	--	--	--	179.4	0.38
Dicrotendipes simpsoni	14.4	5.41	43.1	3.30	71.8	0.15
Pericoma	--	--	--	--	14.4	0.03
Ferrissia	--	--	--	--	215.3	0.45
Corbicula fluminea	7.2	2.70	--	--	35.9	0.08
TOTAL BENTHOS	265.5	100.00	1,306.1	100.00	47,487.8	100.00
TOTAL TAXA RICHNESS	4		5		11	
EPT TAXA RICHNESS	1		0		0	

TABLE 3-45. HESTER-DENDY DENSITIES AT SAMPLING STATION 90 WITHIN POPLAR CREEK, JULY 2004.

TAXA	90 ROUTE 19	
	#/m ²	%
Turbellaria	114.8	17.02
Oligochaeta	89.7	13.30
Gammarus fasciatus	3.6	0.53
Cambarus bartonii	1.8	0.27
Stenacron	19.7	2.92
Caenis	1.8	0.27
Sialis	1.8	0.27
Cheumatopsyche	25.1	3.72
Dubiraphia	7.2	1.07
Macronychus glabratus	14.4	2.13
Stenelmis	3.6	0.53
Thienemannimyia grp.	34.1	5.05
Thienemanniella xena	10.8	1.60
Nanocladius crassicornus/rectinervis	21.5	3.19
Dicrotendipes	7.2	1.07
Dicrotendipes neomodestus	1.8	0.27
Glyptotendipes	3.6	0.53
Microtendipes	43.1	6.39
Paratendipes	1.8	0.27
Polypedilum fallax grp.	3.6	0.53
Polypedilum flavum	5.4	0.80
Polypedilum scalaenum grp.	19.7	2.92
Tribelos fuscicorne	3.6	0.53
Micropsectra	3.6	0.53
Paratanytarsus	43.1	6.39
Rheotanytarsus	120.2	17.82
Tanytarsus	3.6	0.53
Valvata	3.6	0.53
Viviparus	1.8	0.27
Pleurocera	7.2	1.07
Physa	3.6	0.53
Ferrissia	48.4	7.17
TOTAL BENTHOS	674.6	100.00
TOTAL TAXA RICHNESS	32	
EPT TAXA RICHNESS	3	

TABLE 3-46. PETITE PONAR DENSITIES AT SAMPLING STATION 90 WITHIN POPLAR CREEK, JULY 2004.

TAXA	90 ROUTE 19	
	#/m2	%
Turbellaria	64.6	2.87
Oligochaeta	1,356.4	60.19
Helobdella stagnalis	14.4	0.64
Mooreobdella microstoma	50.2	2.23
Stenacron	7.2	0.32
Caenis	7.2	0.32
Cheumatopsyche	7.2	0.32
Dubiraphia	100.5	4.46
Ectopria	35.9	1.59
Procladius (Holotanypus)	28.7	1.27
Thienemannimyia grp.	14.4	0.64
Thienemanniella n. sp. 3	21.5	0.96
Chironomus	7.2	0.32
Cryptochironomus	21.5	0.96
Cryptotendipes	86.1	3.82
Dicrotendipes neomodestus	7.2	0.32
Polypedilum halterale grp.	7.2	0.32
Polypedilum scalaenum grp.	7.2	0.32
Cladotanytarsus mancus grp.	7.2	0.32
Viviparus	122.0	5.41
Amnicola	186.6	8.28
Corbicula fluminea	7.2	0.32
Sphaerium simile	86.1	3.82
TOTAL BENTHOS	2,253.5	100.00
TOTAL TAXA RICHNESS	23	
EPT TAXA RICHNESS	3	

HDs to 23 taxa in the Ponars. The midge *Rheotanytarsus* and the flatworm *Turbellaria* were very nearly co-dominant in the HD sample, whereas Oligochaeta dominated the Ponar sample accounting for over 60 percent of the total benthos.

No midges with head capsule deformities were noted in Poplar Creek. However, based on the relatively balanced benthic community, particularly evident in the HD samples, Poplar Creek appears to be slightly to moderately stressed.

3.2.5 Des Plaines River Watershed

The same six stations in the Des Plaines River watershed that were surveyed during 2003 were sampled again during 2004. The 2004 sampling also included 16 new stations: two stations in the West Branch of the DuPage River, one station in Buffalo Creek, five stations in Salt Creek, one station in Higgins Creek, and six stations (including one CFAR station) in the Des Plaines River (Table 2-2).

As in 2003, Oligochaeta was the dominant taxon in 2004 at the majority of the Ponar sampling stations. In addition, as previously seen in 2003, tolerant taxa remained dominant at more than half of the stations in 2004. Chironomidae capsule deformities remained relatively rare in the watershed while taxa richness and EPT richness remained relatively high compared to the other watersheds sampled in 2004.

3.2.5.1 West Branch of the DuPage River

The benthic macroinvertebrate community in the WB DuPage River at Stations 110, 89, and 64 was represented by 49 total taxa and six EPT taxa in the HD and Ponar samples combined (Tables 3-47 and 3-48). HD total taxa richness was higher at the downstream sites (Stations 89 and 64) with 28 total taxa at each site while the upstream site (Station 110) yielded only 11 total taxa (Table 3-47). EPT taxa richness in the HD samples was highest downstream at Station 64 with 3 taxa and lowest upstream at Station 110 with no EPT taxa. Station 89 had only a single EPT taxon. Oligochaeta was the dominant taxon for the HD samples at the two downstream stations (Stations 89 and 64), while *Caecidotea* was the dominant taxon for upstream station (Station 110), accounting for more than 65 percent of the total sample. Total density was highest at Station 89, lower at Station 64, and substantially lower furthest upstream at Station 110. The noticeably higher density of Station 89 was the result of high numbers of Oligochaeta and the midges *Chironomus* and *Polypedilum illinoense*.

Ponar total taxa richness was lowest in the upstream site (Station 110) and progressively increased downstream at Stations 89 and 64 (Table 3-48). EPT taxa richness was similarly low (1-2 taxa) at each station. In contrast to the HD samples, total density for the Ponar stations was highest at the upstream station (Station 110) and progressively decreased through the downstream stations (Stations 89 and 64). Substantial numbers of the midge *Chironomus* were observed at Station 89. However, density in the Ponars was driven primarily by the abundance of Oligochaeta.

TABLE 3-47. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 110, 89, AND 64 WITHIN THE WEST BRANCH DUPAGE RIVER, JULY 2004.

TAXA	110 SPRINGINGSGUTH RD.		89 WALNUT AVE.		64 LAKE ST.	
	#/m2	%	#/m2	%	#/m2	%
Hydra	--	--	--	--	5.4	0.06
Turbellaria	--	--	780.4	5.30	224.3	2.37
Oligochaeta	172.2	26.52	5,823.5	39.56	2,705.4	28.55
Helobdella	--	--	39.5	0.27	--	--
Helobdella stagnalis	5.4	0.83	--	--	--	--
Erpobdella punctata punctata	--	--	17.9	0.12	5.4	0.06
Ostracoda	--	--	35.9	0.24	5.4	0.06
Caecidotea	427.0	65.75	251.2	1.71	968.8	10.22
Stenacron	--	--	--	--	17.9	0.19
Coenagrionidae	--	--	--	--	5.4	0.06
Argia	--	--	9.0	0.06	--	--
Enallagma	--	--	14.4	0.10	--	--
Cheumatopsyche	--	--	107.6	0.73	1,304.3	13.76
Hydropsyche	--	--	--	--	35.9	0.38
Serromyia	--	--	17.9	0.12	--	--
Tanytus	--	--	5.4	0.04	--	--
Procladius (Holotanytus)	--	--	5.4	0.04	30.5	0.32
Thienemannimyia grp.	1.8	0.28	--	--	71.8	0.76
Thienemanniella xena	--	--	53.8	0.37	93.3	0.98
Cricotopus tremulus grp.	3.6	0.55	23.3	0.16	120.2	1.27
Cricotopus bicinctus grp.	--	--	227.8	1.55	147.1	1.55
Cricotopus sylvestris grp.	--	--	--	--	17.9	0.19
Nanocladius	1.8	0.28	--	--	26.9	0.28
Nanocladius crassicornus/rectinervis	--	--	179.4	1.22	--	--
Chironomini	--	--	--	--	17.9	0.19
Chironomus	26.9	4.14	3,252.6	22.10	--	--
Dicrotendipes neomodestus	--	--	165.1	1.12	44.9	0.47
Dicrotendipes simpsoni	--	--	53.8	0.37	166.8	1.76
Glyptotendipes	--	--	44.9	0.30	1,817.4	19.18
Parachironomus	5.4	0.83	174.0	1.18	--	--
Polypedilum flavum	1.8	0.28	--	--	179.4	1.89
Polypedilum illinoense	1.8	0.28	2,454.3	16.67	819.9	8.65
Polypedilum scalaenum grp.	--	--	--	--	62.8	0.66
Stictochironomus	--	--	59.2	0.40	--	--
Micropsectra	--	--	292.4	1.99	--	--
Paratanytarsus	1.8	0.28	425.2	2.89	17.9	0.19
Simulium	--	--	--	--	143.5	1.51
Hemerodromia	--	--	17.9	0.12	--	--
Physa	--	--	35.9	0.24	--	--
Gyraulus	--	--	--	--	389.3	4.11
Ferrissia	--	--	152.5	1.04	30.5	0.32
TOTAL BENTHOS	649.4	100.00	14,720.1	100.00	9,476.1	100.00
TOTAL TAXA RICHNESS	11		28		28	
EPT TAXA RICHNESS	0		1		3	

TABLE 3-48. PETITE PONAR DENSITIES AT SAMPLING STATIONS 110, 89, AND 64 WITHIN THE WEST BRANCH DUPAGE RIVER, JULY 2004.

TAXA	110 SPRINGINGGUTH RD.		89 WALNUT AVE.		64 LAKE ST.	
	#/m2	%	#/m2	%	#/m2	%
Hydra	--	--	--	--	380.4	11.55
Plumatella	--	--	--	--	14.4	0.44
Oligochaeta	5,884.8	80.55	2,691.2	48.08	1,255.9	38.13
Helobdella	--	--	14.4	0.26	--	--
Erpobdella punctata punctata	--	--	--	--	7.2	0.22
Mooreobdella bucera	14.4	0.20	--	--	--	--
Ostracoda	--	--	--	--	122.0	3.70
Caecidotea	322.9	4.42	--	--	--	--
Baetis intercalaris	--	--	14.4	0.26	--	--
Caenis	7.2	0.10	--	--	--	--
Cheumatopsyche	--	--	7.2	0.13	--	--
Oecetis	--	--	--	--	7.2	0.22
Peltodytes	--	--	7.2	0.13	--	--
Psectrotanypus dyari	35.9	0.49	--	--	--	--
Procladius (Holotanypus)	--	--	7.2	0.13	7.2	0.22
Thienemannimyia grp.	--	--	43.1	0.77	7.2	0.22
Thienemanniella xena	--	--	--	--	14.4	0.44
Cricotopus	--	--	--	--	28.7	0.87
Cricotopus tremulus grp.	21.5	0.29	71.8	1.28	--	--
Cricotopus bicinctus grp.	7.2	0.10	43.1	0.77	7.2	0.22
Cricotopus sylvestris grp.	--	--	21.5	0.38	7.2	0.22
Chironomus	789.4	10.81	1,980.8	35.38	14.4	0.44
Cryptochironomus	14.4	0.20	64.6	1.15	703.3	21.35
Dicrotendipes neomodestus	--	--	86.1	1.54	7.2	0.22
Paratendipes	7.2	0.10	--	--	--	--
Polypedilum halterale grp.	7.2	0.10	--	--	--	--
Polypedilum illinoense	14.4	0.20	244.0	4.36	57.4	1.74
Polypedilum scalaenum grp.	--	--	86.1	1.54	516.7	15.69
Stictochironomus	--	--	43.1	0.77	--	--
Micropsectra	--	--	21.5	0.38	--	--
Paratanytarsus	--	--	129.2	2.31	--	--
Simulium	--	--	--	--	7.2	0.22
Hemerodromia	7.2	0.10	--	--	--	--
Physa	14.4	0.20	21.5	0.38	7.2	0.22
Gyraulus	--	--	--	--	7.2	0.22
Ferrissia	--	--	--	--	114.8	3.49
Sphaeriidae	157.9	2.16	--	--	--	--
TOTAL BENTHOS	7,305.8	100.00	5,597.8	100.00	3,294.1	100.00
TOTAL TAXA RICHNESS	15		19		21	
EPT TAXA RICHNESS	1		2		1	

Chironomid head capsule deformities were relatively low or absent in the samples from WB DuPage River (Table 3-49). Deformities were observed in the HD samples at Stations 89 and 64. Three *Chironomus* and a single specimen of *Glyptotendipes* exhibited deformities in the HD samples at Stations 89 and 64, respectively. In addition, two specimens of *Chironomus* in the Station 89 Ponar samples also exhibited deformities. Based on taxa richness and percent tolerant organisms, Stations 64 and 89 would be considered moderately stressed, while Station 110 would be considered highly stressed (Tables 3-47 and 3-48).

3.2.5.2 Buffalo Creek

HD and Ponar samples from the single station in Buffalo Creek (Station 12) yielded 45 total taxa and six EPT taxa (Tables 3-50 and 3-51). The HD samples produced 33 total taxa and six EPT taxa, whereas the Ponar samples had 30 total taxa and only one EPT taxon. The midge *Polypedilum flavum* was the dominant taxon in the HD samples, however, the flatworm *Turbellaria* and several midge species also were well represented in the HD samples (Table 3-50). Oligochaeta was clearly the dominant taxon in the Ponar samples representing more than 66 percent of the total sample.

No head capsule deformities were noted at this station. Given the number of taxa, presence of relatively pollution sensitive Tanytarsini midges, and distribution of abundance among taxa, particularly in the HD samples, it appears the benthic community at Station 12 is slightly stressed.

3.2.5.3 Salt Creek

Both HD and Ponar samples were taken at Stations 79, 18, 24 and 109. In addition to these four stations, Ponar samples were also taken at the CFAR station at J.F.K Blvd. and Station 80. Combined, these stations yielded 83 total taxa and 10 EPT taxa (Tables 3-52 and 3-53). The HD samples produced 83 total taxa and 10 EPT taxa (Table 3-52). Total taxa richness for the HD samples was fairly similar among the four sites ranging between 30 and 40 taxa. EPT taxa increased from three upstream (Station 79) to as high as six taxa downstream (Station 109). The dominant taxon for the upstream station (Station 79) was the tolerant midge *Glyptotendipes*, also present in substantial numbers were Oligochaeta and the midge *Dicrotendipes simpsoni*. Aside from these nearly co-dominant taxa, no other taxa at this station accounted for more than three percent of the total sample. Oligochaeta dominated both Stations 18 and 109, representing over half the sample at Station 18 but only 14 percent at Station 109. The flatworm *Turbellaria* dominated the sample of Station 24. HD total density varied substantially between the four stations, steadily decreasing from upstream (Station 79) to downstream (Station 109) largely driven by the abundance of Oligochaeta and *Glyptotendipes*.

Ponar samples produced 52 total taxa and three EPT taxa (Table 3-53). Except for Station 80 which only yielded 13 taxa, total richness was relatively consistent among the stations ranging from 16 to 22 taxa. Oligochaeta dominated all of the stations except Station 80 where the midge taxa *Cladotanytarsus mancus* grp. accounted for nearly 72 percent of the sample. Total density in the Ponars varied widely among the six stations. The Ponar density at the CFAR station was just over 26 times the density at Station 109. Except for Station 80, the abundance of Oligochaeta determined the total density pattern at all the stations.

Table 3-49. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from the West Branch of the Du Page River (W.B.D.P.R.) and Salt Creek of the Des Plaines River watershed, July 2004

Taxa	Hester-Dendy Samples				Ponar Sample	
	W.B.D.P.R. @ Walnut Sta. 89	W.B.D.P.R. @ Lake Sta. 64	Salt Creek @ Higgins Sta. 79	Salt Creek @ Wolf Sta. 24	W.B.D.P.R. @ Walnut Sta. 89	W.B.D.P.R. @ Walnut Sta. 89
<i>Chironomus sp.</i>						
Number Examined	77	--	16	--	--	120
Percent Deformed	3.9	--	6.3	--	--	1.7
<i>Glyptotendipes sp.</i>						
Number Examined	--	114	131	--	--	--
Percent Deformed	--	0.9	2.3	--	--	--
<i>Polypedium scalaenum grp.</i>						
Number Examined	--	--	--	31	--	--
Percent Deformed	--	--	--	3.2	--	--
<i>Procladius sp.</i>						
Number Examined	--	--	--	14	--	--
Percent Deformed	--	--	--	7.1	--	--
TOTAL SAMPLE						
Total Midges Examined	239	233	232	172	167	167
Percent Deformed	1.3	0.4	1.7	1.2	1.2	1.2

TABLE 3-50. HESTER-DENDY DENSITIES AT SAMPLING STATION 12 WITHIN BUFFALO CREEK, JULY 2004.

TAXA	12 LAKE COOK RD.	
	#/m ²	%
Hydra	107.6	0.44
Turbellaria	4,018.7	16.57
Oligochaeta	2,870.5	11.83
Ostracoda	197.3	0.81
Caecidotea	35.9	0.15
Baetis intercalaris	17.9	0.07
Stenacron	35.9	0.15
Caenis	17.9	0.07
Sialis	17.9	0.07
Cheumatopsyche	322.9	1.33
Hydropsyche betteni	17.9	0.07
Ceraclea	17.9	0.07
Dubiraphia	53.8	0.22
Ablabesmyia mallochii	71.8	0.30
Thienemannimyia grp.	358.8	1.48
Thienemanniella xena	1,686.4	6.95
Cricotopus/Orthocladus	681.7	2.81
Cricotopus bicinctus grp.	1,632.6	6.73
Cricotopus sylvestris grp.	340.9	1.41
Nanocladius distinctus	161.5	0.67
Nanocladius crassicornus/rectinervis	394.7	1.63
Rheocricotopus robacki	89.7	0.37
Cryptochironomus	89.7	0.37
Dicrotendipes neomodestus	1,596.7	6.58
Dicrotendipes simpsoni	2,134.9	8.80
Endochironomus nigricans	71.8	0.30
Glyptotendipes	1,722.3	7.10
Polypedilum flavum	4,449.2	18.34
Polypedilum scalaenum grp.	322.9	1.33
Micropsectra	305.0	1.26
Paratanytarsus	305.0	1.26
Tanytarsus	89.7	0.37
Hemerodromia	17.9	0.07
TOTAL BENTHOS	24,255.5	100.00
TOTAL TAXA RICHNESS	33	
EPT TAXA RICHNESS	6	

TABLE 3-51. PETITE PONAR DENSITIES AT SAMPLING STATION 12 WITHIN BUFFALO CREEK, JULY 2004.

TAXA	12 LAKE COOK RD.	
	#/m2	%
Turbellaria	14.4	0.17
Oligochaeta	5,705.4	66.69
Ostracoda	7.2	0.08
Caecidotea	7.2	0.08
Cheumatopsyche	35.9	0.42
Dubiraphia	14.4	0.17
Stenelmis	64.6	0.76
Thienemanniella xena	7.2	0.08
Cricotopus/Orthocladius	7.2	0.08
Cricotopus bicinctus grp.	28.7	0.34
Nanocladius distinctus	7.2	0.08
Nanocladius crassicornus/rectinervis	21.5	0.25
Chironomus	43.1	0.50
Cryptochironomus	208.1	2.43
Cryptotendipes	35.9	0.42
Dicrotendipes neomodestus	696.1	8.14
Glyptotendipes	50.2	0.59
Microtendipes	21.5	0.25
Polypedilum flavum	452.1	5.29
Polypedilum scalaenum grp.	208.1	2.43
Pseudochironomus	43.1	0.50
Stictochironomus	394.7	4.61
Cladotanytarsus mancus grp.	21.5	0.25
Paratanytarsus	14.4	0.17
Rheotanytarsus	7.2	0.08
Tanytarsus	57.4	0.67
Sphaerium simile	71.8	0.84
Musculium	93.3	1.09
Pisidium	208.1	2.43
Lasmigona complanata	7.2	0.08
TOTAL BENTHOS	8,554.5	100.00
TOTAL TAXA RICHNESS	30	
EPT TAXA RICHNESS	1	

TABLE 3-52. HESTER-DENDY DENSITIES AT SAMPLING STATIONS 79, 18, 24, AND 109 WITHIN SALT CREEK, JULY-SEPTEMBER 2004.

TAXA	79 HIGGINS RD.		18 DEVON AVE.		24 WOLF RD.		109 BROOKFIELD AVE.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	141.7	1.42	10.8	0.23	--	--	12.6	2.29
Turbellaria	127.4	1.27	231.4	4.85	798.3	46.99	19.7	3.59
Nematoda	--	--	3.6	0.08	--	--	--	--
Urnatella gracilis	--	--	1.8	0.04	--	--	--	--
Oligochaeta	2,371.7	23.69	2,746.7	57.56	206.3	12.14	78.9	14.38
Helobdella	--	--	--	--	--	--	3.6	0.65
Helobdella stagnalis	3.6	0.04	--	--	--	--	--	--
Ostracoda	80.7	0.81	118.4	2.48	--	--	1.8	0.33
Caecidotea	1.8	0.02	244.0	5.11	1.8	0.11	26.9	4.90
Gammarus fasciatus	--	--	1.8	0.04	--	--	--	--
Crangonyx	17.9	0.18	--	--	--	--	--	--
Hydracarina	1.8	0.02	--	--	--	--	--	--
Baetis intercalaris	--	--	--	--	12.6	0.74	--	--
Baetis flavistriga	--	--	--	--	--	--	1.8	0.33
Callibaetis	--	--	--	--	--	--	1.8	0.33
Stenacron	--	--	7.2	0.15	95.1	5.60	37.7	6.86
Tricorythodes	--	--	--	--	14.4	0.84	--	--
Caenis	17.9	0.18	--	--	--	--	1.8	0.33
Coenagrionidae	--	--	1.8	0.04	--	--	--	--
Argia	--	--	--	--	5.4	0.32	28.7	5.23
Enallagma	17.9	0.18	--	--	--	--	--	--
Corixidae	32.3	0.32	5.4	0.11	--	--	--	--
Sialis	--	--	--	--	10.8	0.63	--	--
Cyrnellus fraternus	272.7	2.72	224.3	4.70	1.8	0.11	--	--
Cheumatopsyche	--	--	48.4	1.02	105.8	6.23	10.8	1.96
Hydropsyche betteni	--	--	--	--	--	--	7.2	1.31
Oecetis	1.8	0.02	--	--	--	--	--	--
Dubiraphia	62.8	0.63	5.4	0.11	--	--	--	--
Stenelmis	--	--	1.8	0.04	9.0	0.53	12.6	2.29
Ceratopogon	1.8	0.02	--	--	--	--	--	--
Culicoides	17.9	0.18	--	--	--	--	--	--
Bezzia	--	--	1.8	0.04	--	--	--	--
Tanypus	10.8	0.11	--	--	--	--	--	--
Natarsia sp. A	--	--	--	--	--	--	1.8	0.33
Procladius (Holotanypus)	75.3	0.75	100.5	2.11	25.1	1.48	1.8	0.33
Ablabesmyia janta	107.6	1.08	--	--	--	--	--	--
Ablabesmyia mallochii	--	--	--	--	1.8	0.11	7.2	1.31
Nilotanypus fimbriatus	--	--	--	--	--	--	1.8	0.33
Thienemannimyia grp.	--	--	7.2	0.15	32.3	1.90	25.1	4.58
Corynoneura lobata	--	--	--	--	3.6	0.21	--	--
Thienemanniella xena	--	--	--	--	68.2	4.01	1.8	0.33
Cricotopus/Orthocladus	--	--	--	--	7.2	0.42	5.4	0.98
Cricotopus	--	--	--	--	--	--	10.8	1.96
Cricotopus bicinctus grp.	--	--	--	--	39.5	2.32	10.8	1.96
Nanocladus distinctus	--	--	--	--	3.6	0.21	--	--
Nanocladus crassicornus/rectinervis	53.8	0.54	57.4	1.20	1.8	0.11	--	--
Rheocricotopus robacki	--	--	--	--	1.8	0.11	21.5	3.92
Chironomus	84.3	0.84	50.2	1.05	--	--	1.8	0.33
Cladopelma	159.7	1.59	7.2	0.15	--	--	--	--
Cryptochironomus	--	--	35.9	0.75	10.8	0.63	9.0	1.63
Dicrotendipes neomodestus	--	--	21.5	0.45	14.4	0.84	1.8	0.33
Dicrotendipes simpsoni	2,160.0	21.57	93.3	1.95	1.8	0.11	--	--
Endochironomus nigricans	--	--	43.1	0.90	--	--	--	--
Glyptotendipes	3,862.6	38.58	71.8	1.50	--	--	--	--
Harnischia	--	--	7.2	0.15	--	--	3.6	0.65
Parachironomus	64.6	0.65	--	--	--	--	--	--
Polypedilum fallax grp.	--	--	--	--	9.0	0.53	5.4	0.98
Polypedilum flavum	--	--	28.7	0.60	77.1	4.54	21.5	3.92
Polypedilum halterale grp.	--	--	--	--	12.6	0.74	1.8	0.33
Polypedilum illinoense	59.2	0.59	21.5	0.45	17.9	1.06	68.2	12.42
Polypedilum scalaenum grp.	--	--	138.1	2.89	77.1	4.54	41.3	7.52
Pseudochironomus	--	--	35.9	0.75	--	--	--	--
Stenochironomus	--	--	14.4	0.30	7.2	0.42	1.8	0.33
Stictochironomus	59.2	0.59	--	--	--	--	--	--
Cladotanytarsus mancus grp.	--	--	9.0	0.19	--	--	--	--
Rheotanytarsus	--	--	14.4	0.30	--	--	1.8	0.33
Tanytarsus	--	--	21.5	0.45	--	--	5.4	0.98
Rhamphomyia	--	--	1.8	0.04	--	--	--	--
Amnicola	--	--	--	--	--	--	1.8	0.33
Pleurocera	--	--	--	--	7.2	0.42	--	--
Physa	53.8	0.54	--	--	--	--	1.8	0.30

TABLE 3-52 (cont.)

TAXA	79 HIGGINS RD.		18 DEVON AVE.		24 WOLF RD.		109 BROOKFIELD AVE.	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Helisoma	19.7	0.20	--	--	--	--	--	--
Menetus dilatatus	--	--	274.5	5.75	16.1	0.95	--	--
Ferrissia	70.0	0.70	39.5	0.83	--	--	46.6	8.50
Corbicula fluminea	--	--	21.5	0.45	1.8	0.11	--	--
Dreissena polymorpha	--	--	1.8	0.04	--	--	1.8	0.33
TOTAL BENTHOS	10,012.6	100.00	4,772.2	100.00	1,699.0	100.00	549.0	100.00
TOTAL TAXA RICHNESS	30		40		33		40	
EPT TAXA RICHNESS	3		3		5		6	

TABLE 3-53. PETITE PONAR DENSITIES AT SAMPLING STATIONS 79, 80, CFAR, 18, 24, AND 109 WITHIN SALT CREEK, MAY-SEPTEMBER 2004.

TAXA	79		80		CFAR		18		24		109	
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
Turbellaria	--	--	--	--	--	--	7.2	0.12	7.2	0.74	--	--
Nematoda	14.4	0.30	--	--	--	--	--	--	--	--	--	--
Urnatella gracilis	3,710.3	76.93	545.4	3.95	14.4	0.08	2,346.8	38.79	480.8	49.26	208.1	29.29
Plumatella	28.7	0.60	7.2	0.05	6,961.3	36.55	172.2	2.85	--	--	--	--
Oligochaeta	--	--	--	--	10,851.1	56.97	222.5	3.68	--	--	--	--
Caecidotea	43.1	0.89	--	--	--	--	--	--	14.4	1.47	7.2	1.01
Baetis intercalaris	114.8	2.38	--	--	14.4	0.08	35.9	0.59	--	--	--	--
Caenis	14.4	0.30	--	--	14.4	0.08	14.4	0.24	--	--	--	--
Cheumatopsyche	43.1	0.89	--	--	--	--	7.2	0.12	50.2	5.15	14.4	2.02
Dubiraphia	172.2	3.57	--	--	14.4	0.08	--	--	--	--	--	--
Stenelmis	57.4	1.19	--	--	--	--	--	--	--	--	--	--
Ceratopogon	14.4	0.30	--	--	14.4	0.08	--	--	--	--	--	--
Bezzia	14.4	0.30	--	--	--	--	--	--	--	--	--	--
Tanyptus	172.2	3.57	--	--	--	--	--	--	--	--	7.2	1.01
Natansia sp. A	--	--	--	--	--	--	14.4	0.24	7.2	0.74	--	--
Procladius (Holotanyptus)	--	--	--	--	--	--	7.2	0.12	--	--	--	--
Ablabesmyia mallochii	--	--	--	--	--	--	7.2	0.12	7.2	0.74	14.4	2.02
Thienemanniella xena	--	--	--	--	--	--	--	--	--	--	--	--
Cricotopus/Orthocladius	--	--	--	--	28.7	0.15	--	--	--	--	43.1	6.06
Cricotopus	--	--	--	--	--	--	--	--	--	--	--	--
Cricotopus bicornutus grp.	--	--	--	--	71.8	0.38	--	--	--	--	--	--
Cricotopus sylvestris grp.	--	--	--	--	215.3	1.13	--	--	--	--	--	--
Parakiefferiella	--	--	--	--	45.1	0.23	--	--	--	--	--	--
Chironomus	14.4	0.30	14.4	0.10	445.0	2.34	7.2	0.12	14.4	1.47	--	--
Cladopelma	14.4	0.30	531.1	3.85	--	--	552.6	9.13	28.7	2.94	21.5	3.03
Cryptochironomus	64.6	1.34	136.4	0.99	--	--	--	--	14.4	1.47	14.4	2.02
Cryptotendipes	57.4	1.19	--	--	200.9	1.06	--	--	--	--	--	--
Cryptotendipes neomodestus	--	--	--	--	14.4	0.08	--	--	--	--	--	--
Dicrotendipes simpsoni	7.2	0.15	--	--	--	--	14.4	0.24	--	--	--	--
Glyptotendipes	--	--	--	--	--	--	7.2	0.12	--	--	--	--
Harnischia	229.7	4.66	--	--	--	--	--	--	7.2	0.74	64.6	9.09
Polydipilum flavum	21.5	0.45	--	--	14.4	0.08	86.1	1.42	50.2	5.15	21.5	3.03
Polydipilum halterale grp.	--	--	7.2	0.05	14.4	0.08	7.2	0.12	7.2	0.74	--	--
Polydipilum illinoense	--	--	1,665.0	12.06	--	--	595.7	9.85	57.4	5.88	129.2	18.18
Polydipilum scalaenum grp.	--	--	358.8	2.60	--	--	--	--	--	--	--	--
Pseudochironomus	--	--	--	--	--	--	--	--	7.2	0.74	--	--
Stenochironomus	14.4	0.30	358.8	2.60	--	--	28.7	0.47	--	--	--	--
Stictochironomus	--	--	9,910.9	71.78	57.4	0.30	1,507.1	24.91	--	--	14.4	2.02
Cladotanytarsus mancus grp.	--	--	21.5	0.16	28.7	0.15	--	--	--	--	--	--
Micropsectra	--	--	21.5	0.16	43.1	0.23	--	--	--	--	--	--
Paratanytarsus	358.8	7.44	--	--	--	--	7.2	0.12	--	--	--	--
Rheotanytarsus	--	--	--	--	--	--	--	--	14.4	1.47	7.2	1.01
Tanytarsus	64.6	1.34	--	--	--	--	--	--	21.5	2.21	--	--
Amnicola	7.2	0.15	--	--	--	--	--	--	57.4	5.88	--	--
Pleurocera	--	--	--	--	--	--	--	--	--	--	--	--
Physa	50.2	1.04	--	--	--	--	7.2	0.12	--	--	100.5	14.74
Gyraulus	7.2	0.15	--	--	--	--	394.7	6.52	129.2	13.24	7.2	1.01
Helisoma	7.2	0.15	--	--	--	--	--	--	--	--	35.9	5.05
Corbicula fluminea	--	--	--	--	--	--	--	--	--	--	--	--
Musculium	--	--	--	--	--	--	--	--	--	--	--	--
Pisidium	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL BENTHOS	4,822.7	100.00	13,807.8	100.00	19,046.8	100.00	6,049.9	100.00	976.0	100.00	710.5	100.00
TOTAL TAXA RICHNESS	20	1	13	0	18	1	22	1	18	1	16	1
EPT TAXA RICHNESS	1	1	0	0	1	1	1	1	1	1	1	1

Chironomid head capsule deformities were observed in the HD samples from Stations 24 and 79 (Table 3-49). At Station 79, one specimen of *Chironomus* and three specimens of *Glyptotendipes* exhibited deformities, whereas two of 120 specimens of *Chironomus* displayed deformities at Station 24. Taxa richness was fairly high at all the Salt Creek Stations. However, EPT taxa richness was low and highly tolerant taxa were common to abundant. Therefore, Salt Creek appears to be slightly to moderately stressed. No longitudinal pattern was apparent (Tables 3-52 and 3-53).

3.2.5.4 Higgins Creek

Combined, the HD and Ponar samples from Stations 77 and 78 in Higgins Creek yielded 38 total taxa and two EPT taxa (Tables 3-54 and 3-55). Total taxa richness was identical (28 taxa) for both the HD and Ponar samples for stations combined. *Caecidotea* was the dominant taxon at both stations in the HD samples, representing 36 and 90 percent of the total density at Stations 77 and 78, respectively. Oligochaeta also was fairly common (33 percent) in the HD samples from Station 77 while representing only three percent in the Station 78 HD samples. HD total density was similar between the two stations

In the Ponar samples, Oligochaeta was the dominant taxon at Station 77 while *Caecidotea* was the most common taxon at Station 78 (Table 3-55). In addition, *Chironomus* and Turbellaria were fairly abundant at Station 77 and 78, respectively. Total density varied considerably in the Ponar samples. As a result of very high densities of *Caecidotea*, total density in the Station 78 Ponar samples was nearly 33 times that at Station 77.

The only taxon to exhibit deformities in Higgins Creek was *Chironomus*, however, all specimens were observed in the samples from Station 77 (Table 3-56). Two midges with head capsule deformities were observed in the HD samples while four specimens exhibited deformities in the Station 77 Ponar samples. Although the incidence of head capsule deformities does not provide clear evidence, together with the greater abundance of tolerant taxa at Station 77 suggests that the benthic community is slightly more stressed at Station 77 compared to Station 78.

3.2.5.5 Des Plaines River

The HD and Ponar samples from the eight Des Plaines River stations (Stations 13, 17, 19, 20, 22, 23, 29, and 91), plus the additional CFAR Ponar station, yielded 92 total taxa and 16 EPT taxa (Tables 3-57 and 3-58). This was the highest total richness value observed among all the waterways sampled in 2003 and 2004 and the second highest EPT richness value between the two years. EPT richness from the Des Plaines River in 2004 was nearly identical to 2003. HD total taxa richness ranged from 13 to 41 taxa and decreased longitudinally upstream to downstream among Stations 13 through 20. However, the decreasing trend was not evident at the remaining stations (Table 3-57). Taxa richness at Stations 13, 22, and 29 was similarly high ranging from 38 to 41 taxa. In contrast, the lowest taxa richness was observed at Stations 20 and 23 with 16 and 13 taxa, respectively.

EPT taxa richness varied throughout the eight HD stations, ranging from the 13 taxa at Station 29 to only one EPT taxon at Station 20 (Table 3-57). The tolerant taxon Oligochaeta was the

TABLE 3-54 HESTER-DENDY DENSITIES AT SAMPLING STATIONS 77 AND 78 WITHIN HIGGINS CREEK, JULY 2004.

TAXA	77 ELMHURST RD.		78 WILLE RD.	
	#/m2	%	#/m2	%
Turbellaria	5.4	0.07	95.1	0.99
Plumatella	23.3	0.30	17.9	0.19
Oligochaeta	2,527.8	32.83	292.4	3.05
Erpobdella punctata punctata	14.4	0.19	17.9	0.19
Ostracoda	--	--	30.5	0.32
Caecidotea	2,777.2	36.07	8,624.0	89.97
Argia	35.9	0.47	--	--
Agabus	1.8	0.02	--	--
Laccophilus maculosus	1.8	0.02	--	--
Tropisternus	5.4	0.07	--	--
Tanytus	122.0	1.58	--	--
Procladius (Holotanytus)	14.4	0.19	--	--
Thienemannimyia grp.	113.0	1.47	5.4	0.06
Cricotopus/Orthocladius	30.5	0.40	--	--
Cricotopus tremulus grp.	--	--	66.4	0.69
Cricotopus bicinctus grp.	217.1	2.82	269.1	2.81
Cricotopus sylvestris grp.	89.7	1.16	41.3	0.43
Orthocladius	--	--	17.9	0.19
Nanocladius distinctus	91.5	1.19	--	--
Nanocladius crassicornus/rectinervis	733.8	9.53	17.9	0.19
Chironomus	403.7	5.24	12.6	0.13
Cryptochironomus	1.8	0.02	--	--
Dicrotendipes neomodestus	30.5	0.40	--	--
Polypedilum illinoense	--	--	35.9	0.37
Simulium	--	--	5.4	0.06
Physa	279.9	3.63	--	--
Planorbella	30.5	0.40	--	--
Ferrissia	148.9	1.93	35.9	0.37
TOTAL BENTHOS	7,700.0	100.00	9,585.6	100.00
TOTAL TAXA RICHNESS	23		16	
EPT TAXA RICHNESS	0		0	

TABLE 3-55. PETITE PONAR DENSITIES AT SAMPLING STATIONS 77 AND 78 WITHIN HIGGINS CREEK, JULY 2004.

TAXA	77 ELMHURST RD.		78 WILLE RD.	
	#/m2	%	#/m2	%
Hydra	--	--	531.1	0.63
Turbellaria	--	--	15,365.2	18.36
Oligochaeta	1,758.3	69.21	2,203.2	2.63
Erpobdella punctata punctata	71.8	2.82	251.2	0.30
Ostracoda	--	--	3,243.8	3.88
Caecidotea	--	--	60,204.8	71.94
Libellulidae	7.2	0.28	--	--
Hydropsychidae	--	--	43.1	0.05
Hydroptila	--	--	43.1	0.05
Tanytus	78.9	3.11	--	--
Procladius (Holotanytus)	21.5	0.85	--	--
Thienemannimyia grp.	--	--	35.9	0.04
Cricotopus tremulus grp.	--	--	14.4	0.02
Cricotopus bicinctus grp.	7.2	0.28	846.8	1.01
Cricotopus trifascia grp.	--	--	122.0	0.15
Cricotopus sylvestris grp.	--	--	43.1	0.05
Nanocladius crassicornus/rectinervis	--	--	416.2	0.50
Chironomus	552.6	21.75	--	--
Cryptochironomus	14.4	0.56	14.4	0.02
Endochironomus nigricans	--	--	7.2	0.01
Polypedilum flavum	--	--	14.4	0.02
Polypedilum illinoense	7.2	0.28	28.7	0.03
Rheotanytarsus	--	--	7.2	0.01
Pericoma	--	--	7.2	0.01
Physa	--	--	78.9	0.09
Ferrissia	--	--	71.8	0.09
Sphaerium simile	--	--	93.3	0.11
Pisidium	21.5	0.85	--	--
TOTAL BENTHOS	2,540.5	100.00	83,686.7	100.00
TOTAL TAXA RICHNESS	10		23	
EPT TAXA RICHNESS	0		2	

Table 3-56. Chironomidae head capsule deformities observed in Hester-Dendy and Ponar samples from Higgins Creek and the Des Plaines River of the Des Plaines River watershed, July 2004

Taxa	Hester-Dendy Sample		Ponar Samples	
	Higgins Creek @ Elmhurst Sta. 77	Des Plaines R. @ Lake-Cook Sta. 13	Higgins Creek @ Elmhurst Sta. 77	
<i>Chironomus sp.</i>				
Number Examined	31	--	77	
Percent Deformed	6.5	--	5.2	
<i>Cladotanytarsus mancus grp.</i>				
Number Examined		3		
Percent Deformed		33.3		
TOTAL SAMPLE				
Total Midges Examined	146	109	95	
Percent Deformed	1.4	0.9	4.2	

TABLE 3-57 HESTER-DENDY DENSITIES AT SAMPLING STATIONS 13, 17, 19, 20, 22, 23, 29, AND 91 WITHIN THE DES PLAINES RIVER, JULY AND SEPTEMBER 2004.

TAXA	13		17		19		20		22		23		29		91	
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
Hydra	77.1	2.57	16.1	1.03	9.0	0.77	---	---	17.9	0.42	50.2	4.36	---	---	---	---
Turbellaria	---	---	3.6	0.23	---	---	---	---	351.6	8.15	---	---	592.0	5.86	1,828.1	28.48
Urnatella gracilis	---	---	3.6	0.23	---	---	---	---	---	---	---	---	---	---	---	---
Plumatella	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Oligochaeta	579.5	19.30	1,114.1	71.38	319.3	27.30	190.2	42.57	425.2	9.85	1,026.2	89.10	209.9	2.08	518.5	8.08
Helobdella stagnalis	1.8	0.06	1.8	0.11	---	---	---	---	---	---	7.2	0.62	---	---	---	---
Placobdella pediculata	1.8	0.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mooreobdella microstoma	---	---	---	---	---	---	---	---	9.0	0.21	---	---	---	---	---	---
Ostracoda	---	---	3.6	0.23	---	---	---	---	---	---	---	---	12.6	0.12	---	---
Caecidotea	17.9	0.60	21.5	1.38	1.8	0.15	25.1	5.62	5.4	0.12	3.6	0.31	---	---	9.0	0.14
Gammarus fasciatus	57.4	1.91	154.3	9.89	89.7	7.67	30.5	6.83	14.4	0.33	---	---	32.3	0.32	9.0	0.14
Hydracarina	---	---	---	---	1.8	0.15	---	---	1.8	0.04	---	---	---	---	---	---
Baetis intercalaris	7.2	0.24	---	---	46.6	3.99	---	---	265.5	6.15	---	---	432.4	4.28	251.2	3.91
Stenacron	26.9	0.90	73.6	4.71	104.1	8.90	39.5	8.84	55.6	1.29	10.8	0.93	170.4	1.69	17.9	0.28
Stenonema integrum	147.1	4.90	---	---	---	---	---	---	3.6	0.08	---	---	1.8	0.02	---	---
Stenonema terminatum	17.9	0.60	---	---	---	---	---	---	---	---	---	---	125.6	1.24	---	---
Tricorythodes	184.8	6.15	3.6	0.23	---	---	---	---	57.4	1.33	---	---	143.5	1.42	17.9	0.28
Caenis	---	---	---	---	---	---	---	---	1.8	0.04	---	---	10.8	0.11	---	---
Anthopotamus myops grp.	30.5	1.02	---	---	---	---	---	---	---	---	---	---	1.8	0.02	---	---
Argia	21.5	0.72	12.6	0.80	17.9	1.53	50.2	11.24	16.1	0.37	17.9	1.56	12.6	0.12	5.4	0.08
Somatochlora	---	---	---	---	---	---	1.8	0.40	---	---	---	---	---	---	---	---
Trepobates	---	---	---	---	---	---	---	---	1.8	0.04	---	---	---	---	---	---
Sialis	1.8	0.06	1.8	0.11	---	---	---	---	---	---	---	---	---	---	---	---
Cynellus fraternus	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cheumatopsyche	663.8	22.10	23.3	1.49	206.3	17.64	---	---	1,460.4	33.85	10.8	0.93	28.7	0.28	2,185.1	34.04
Hydropsyche betten	---	---	---	---	3.6	0.31	---	---	16.1	0.37	---	---	---	---	---	---
Hydropsyche orris	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hydropsyche simulans	132.8	4.42	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hydropsyche bidens	25.1	0.84	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ceratopsyche morosa	10.8	0.36	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hydroptila	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Petrophila	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ancyronyx variegata	3.6	0.12	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dubiraphia	1.8	0.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Macronychus glabratus	16.1	0.54	---	---	19.7	1.69	---	---	10.8	0.25	---	---	9.0	0.09	16.1	0.25
Stenelmis	43.1	1.43	1.8	0.11	---	---	---	---	---	---	---	---	---	---	---	---
Stenelmis crenata grp.	---	---	---	---	19.7	1.69	---	---	7.2	0.17	---	---	113.0	1.12	---	---
Tanytus	---	---	---	---	3.6	0.31	---	---	---	---	---	---	---	---	---	---
Procladius (Holotanypus)	---	---	---	---	9.0	0.77	1.8	0.40	---	---	---	---	---	---	---	---
Ablabesmyia janta	---	---	1.8	0.11	---	---	1.8	0.40	---	---	---	---	19.7	0.20	---	---

TABLE 3-57(cont.).

TAXA	13 LAKE COOK RD.		17 OAKTON ST.		19 BELMONT AVE.		20 ROOSEVELT RD.		22 OGDEN AVE.		23 WILLOW SPRINGS RD.		29 STEPHEN ST.		91 MATERIAL SERVICE RD.	
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
<i>Nilotanytus fimbriatus</i>	25.1	0.84	1.8	0.11	--	--	--	--	61.0	1.41	--	--	--	--	--	--
<i>Thienemanimyia</i> grp.	25.1	0.84	7.2	0.46	--	--	--	--	120.2	2.79	--	--	382.1	3.78	--	--
<i>Corynoneura lobata</i>	--	--	--	--	35.9	3.07	3.6	0.80	37.7	0.87	--	--	7.2	0.07	--	--
<i>Thienemanniella xena</i>	7.2	0.24	1.8	0.11	78.9	6.75	--	--	19.7	0.46	--	--	37.7	0.37	39.5	0.61
<i>Cricotopus/Orthocladus</i>	--	--	--	--	--	--	--	--	--	--	--	--	7.2	0.07	--	--
<i>Orthocladus</i>	--	--	--	--	--	--	--	--	154.3	3.58	--	--	--	--	--	--
<i>Nanocladus</i>	--	--	--	--	--	--	--	--	--	--	--	--	357.0	3.53	--	--
<i>Nanocladus distinctus</i>	--	--	--	--	--	--	--	--	109.4	2.54	--	--	586.7	5.81	53.8	0.84
<i>Nanocladus crassicornus/rectinervis</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	229.6	3.58
<i>Parakiefferiella</i>	--	--	--	--	5.4	0.46	3.6	0.80	--	--	--	--	--	--	--	--
<i>Rheocricotopus robacki</i>	25.1	0.84	1.8	0.11	23.3	1.99	--	--	122.0	2.83	--	--	--	--	--	--
<i>Tvetenia discoloripes</i> grp.	--	--	--	--	--	--	--	--	--	--	--	--	96.9	0.96	17.9	0.28
<i>Cryptochironomus</i>	--	--	3.6	0.23	--	--	--	--	--	--	3.6	0.31	--	--	17.9	0.28
<i>Dicrotendipes</i>	7.2	0.24	--	--	3.6	0.31	1.8	0.40	14.4	0.33	--	--	--	--	--	--
<i>Dicrotendipes neomodestus</i>	--	--	3.6	0.23	--	--	--	--	--	--	--	--	37.7	0.37	--	--
<i>Dicrotendipes simpsoni</i>	2.6	0.42	3.6	0.23	--	--	--	--	--	--	--	--	--	--	--	--
<i>Endochironomus nigricans</i>	3.6	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Glyptotendipes</i>	34.1	1.14	21.5	1.38	--	--	1.8	0.40	1.8	0.04	--	--	7.2	0.07	5.4	0.08
<i>Harnischia</i>	--	--	10.8	0.69	--	--	--	--	--	--	--	--	7.2	0.07	--	--
<i>Microtendipes</i>	41.3	1.37	1.8	0.11	--	--	--	--	--	--	--	--	--	--	--	--
<i>Parachironomus</i>	--	--	12.6	0.80	--	--	--	--	--	--	--	--	7.2	0.07	--	--
<i>Polypedium flavum</i>	45.9	21.51	5.4	0.34	10.8	0.92	23.3	5.22	681.7	15.80	--	--	251.2	2.49	566.9	8.83
<i>Polypedium illinoense</i>	--	--	23.3	1.49	34.1	2.91	5.4	1.20	75.3	1.75	--	--	25.1	0.25	10.8	0.17
<i>Polypedium scalaenum</i> grp.	32.3	1.08	23.3	1.49	73.6	6.29	--	--	1.8	0.04	3.6	0.31	--	--	--	--
<i>Stenochironomus</i>	7.2	0.24	10.8	0.69	12.6	1.07	--	--	50.2	1.16	3.6	0.31	57.4	0.57	5.4	0.08
<i>Tribelos fuscicorne</i>	1.8	0.06	--	--	--	--	1.8	0.40	--	--	--	--	--	--	--	--
<i>Paratanytarsus</i>	46.6	1.55	3.6	0.23	9.0	0.77	--	--	39.5	0.91	--	--	30.5	0.30	344.5	5.37
<i>Rheotanytarsus</i>	--	--	--	--	--	--	--	--	14.4	0.33	--	--	7.2	0.07	--	--
<i>Tanytarsus</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.6	0.06
<i>Simulium</i>	--	--	--	--	--	--	--	--	1.8	0.04	--	--	37.7	0.37	1.8	0.03
<i>Hemerodromia</i>	--	--	--	--	--	--	--	--	--	--	--	--	17.9	0.18	--	--
<i>Menetus dilatatus</i>	3.6	0.12	--	--	--	--	--	--	28.7	0.67	7.2	0.62	175.8	1.74	172.2	2.68
<i>Ferrissia</i>	1.8	0.06	1.8	0.11	30.5	2.61	64.6	14.46	10.8	0.25	3.6	0.31	--	--	--	--
<i>Corbicula fluminea</i>	5.4	0.18	1.8	0.11	--	--	--	--	--	--	--	--	--	--	--	--
<i>Sphaerium</i>	5.4	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Musculium</i>	1.8	0.06	--	--	--	--	--	--	--	--	--	--	--	--	3.6	0.06
<i>Musculium transversum</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14.4	0.22
<i>Dreissena polymorpha</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL BENTHOS	3,003.2	100.00	1,560.8	100.00	1,169.7	100.00	446.7	100.00	4,314.7	100.00	1,151.8	100.00	10,100.5	100.00	6,419.1	10.00
TOTAL TAXA RICHNESS	41		33		25		16		38		13		41		32	
EPT TAXA RICHNESS	10		3		4		1		9		2		13		7	

TABLE 3-58. PETITE PONAR DENSITIES AT SAMPLING STATIONS 13, 17, CFAR, 19, 20, 22, 23, 29, AND 91 WITHIN THE DES PLAINES RIVER, JULY-SEPTEMBER 2004.

TAXA	13	17	CFAR	19	20	22	23	29	91
	LAKE COOK RD. #/m2	OAKTON ST. #/m2	IRVING PARK RD. #/m2	BELMONT AVE. #/m2	ROOSEVELT RD. #/m2	OGDEN AVE. #/m2	WILLOW SPRINGS RD. #/m2	STEPHEN ST. #/m2	MATERIAL SERVICE RD. #/m2
Turbellaria	--	--	--	--	--	28.7	0.9	--	78.9
Nematoda	--	--	--	--	--	--	--	--	1.7
Plumatella	--	7.2	0.1	--	--	--	--	--	7.2
Oligochaeta	--	4,499.7	90.1	8,999.5	91.0	5,102.6	86.8	3,602.7	95.8
Helobdella stagnalis	14.4	0.7	--	--	--	--	--	--	2,949.6
Placobdella pediculata	--	--	14.4	0.1	--	--	--	--	--
Mooreobdella microstoma	--	--	14.4	0.1	--	--	--	--	--
Ostracoda	28.7	1.4	7.2	0.1	--	--	--	--	322.9
Caecidotea	--	--	14.4	0.1	7.2	0.2	--	--	7.1
Gammarus fasciatus	--	--	14.4	0.1	7.2	0.2	--	--	--
Baetis intercalaris	150.7	7.3	28.7	0.6	21.5	0.4	35.9	1.0	14.4
Baetis flavistriga	--	--	172.2	1.7	--	--	--	--	0.4
Stenacron	--	--	--	--	--	--	--	--	0.2
Stenomema terminatum	28.7	1.4	--	--	--	--	--	--	--
Tricorythodes	21.5	1.0	--	--	--	--	--	--	71.8
Caenis	--	--	--	--	--	--	--	--	2.2
Anthopotamus myops grp.	35.9	1.7	--	--	--	--	--	--	--
Stylurus	--	7.2	0.1	--	--	--	--	--	--
Corixidae	--	--	--	--	--	--	--	--	--
Hydropsychidae	--	7.2	0.1	--	--	--	--	--	7.2
Cheumatopsyche	229.7	11.2	14.4	0.1	7.2	0.1	--	--	0.6
Ceratopsyche morosa	--	--	--	--	--	--	--	--	0.2
Hydroptila	--	--	--	--	--	--	--	--	0.2
Dubiraphia	7.2	0.3	--	--	--	--	--	--	--
Macronychus glabratus	--	--	--	--	7.2	0.1	--	--	--
Stenelmis	57.4	2.8	28.7	0.3	--	--	--	--	50.2
Ceratopogon	--	--	14.4	0.1	--	--	--	--	1.5
Culicoides	--	--	14.4	0.1	--	--	--	--	--
Procladius (Holotanypus)	14.4	0.7	14.4	0.1	35.9	1.0	35.9	1.1	7.2
Ablabesmyia mallochii	--	--	--	--	--	--	57.4	1.3	0.2
Thienemanniomyia grp.	93.3	4.5	7.2	0.1	--	--	--	--	0.2
Thienemanniella xena	14.4	0.7	--	--	--	--	--	--	0.2
Cricotopus binctus grp.	--	--	--	--	--	--	--	--	--
Orthocladius	--	--	--	--	--	--	--	--	--
Rheocricotopus robacki	14.4	0.7	--	--	--	--	--	--	--
Chironomus	--	--	--	--	--	--	229.7	5.3	0.8
Cryptochironomus	50.2	2.4	50.2	1.0	--	--	7.2	0.2	7.2
Dicrotendipes	14.4	0.7	--	--	--	--	--	--	0.2
Dicrotendipes neomodestus	--	--	--	--	--	--	--	--	0.8
Harnischia	--	--	35.9	0.7	--	--	--	--	14.4
Microtendipes	14.4	0.7	--	--	--	--	--	--	0.3
Paracladopelma	--	129.2	2.6	--	--	--	--	--	--
Polypedium flavum	351.7	17.1	14.4	0.3	--	--	--	--	236.8

TABLE 3-58 (cont.)

TAXA (cont.)	13 LAKE COOK RD.		17 OAKTON ST.		CFAR IRVING PARK RD.		19 BELMONT AVE.		20 ROOSEVELT RD.		22 OGDEN AVE.		23 WILLOW SPRINGS RD.		29 STEPHEN ST.		91 MATERIAL SERVICE RD.	
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
Polypedium halterale grp.	57.4	2.8	14.4	0.3	--	--	--	--	--	--	--	--	--	7.2	0.2	--	7.2	0.2
Polypedium illinoense	--	--	7.2	0.1	--	--	--	--	--	--	--	--	7.2	0.2	--	--	7.2	0.2
Polypedium scalaenum grp.	215.3	10.5	78.9	1.6	--	--	7.2	0.1	--	--	7.2	0.2	--	--	--	71.8	1.6	--
Saetheria	179.4	8.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tribelos fuscicorne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.2	0.2
Cladotanytarsus mancus grp.	35.9	1.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cladotanytarsus vandervulpi grp.	200.9	9.8	--	--	--	--	--	--	--	--	--	--	--	--	--	7.2	0.2	--
Rheotanytarsus	14.4	0.7	--	--	--	--	--	--	--	--	--	--	--	--	11.1	7.2	28.7	0.6
Tanytarsus	35.9	1.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	114.8	2.5
Cameloma decisum	--	--	--	--	57.4	0.6	28.7	0.5	--	--	--	--	--	--	--	--	--	--
Ammicola	--	--	14.4	0.3	--	--	7.2	0.1	--	--	--	--	--	--	--	--	--	--
Pleurocera	--	--	7.2	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Menetus dilatatus	--	--	--	--	28.7	0.3	--	--	--	--	28.7	0.9	7.2	0.2	--	14.4	0.3	--
Ferriisia	--	--	--	--	--	--	--	--	--	--	667.4	20.1	--	--	22.2	50.2	1.1	--
Corbicula fluminea	64.6	3.1	78.9	1.6	315.8	3.2	689.0	11.7	71.8	1.9	43.1	1.3	--	--	--	107.6	2.4	--
Sphaerium simile	86.1	4.2	--	--	--	--	7.2	0.1	--	--	--	--	--	--	--	--	--	--
Musculium	--	--	--	--	--	--	--	--	--	--	7.2	0.2	--	--	--	--	--	--
Musculium transversum	--	--	--	--	200.9	2.0	--	--	--	--	--	--	--	--	--	--	--	--
Pisidium	21.5	1.0	--	--	--	--	--	--	--	--	28.7	0.9	--	--	--	--	--	--
TOTAL BENTHOS	2,052.5	100.0	4,994.9	100.0	9,889.4	100.0	5,877.7	100.0	3,760.6	100.0	3,322.8	100.0	4,313.2	100.0	64.6	100.0	4,578.7	100.0
TOTAL TAXA RICHNESS	27	4	17	1	13	1	9	1	6	0	21	7	7	0	4	0	32	4
EPT TAXA RICHNESS	4	1	1	1	1	1	1	1	0	0	7	0	0	0	0	0	4	4

dominant taxa at half of the HD stations (Stations 17, 19, 20, and 23). The other stations (Stations 13, 22, 29 and 91) were dominated by the EPT taxon *Cheumatopsyche*. Oligochaeta and the midge *Polypedilum flavum* were nearly co-dominant with *Cheumatopsyche* in the HD sample at Station 13, while *Cheumatopsyche* was also well represented at Station 19. At Station 91 there were substantial numbers of Turbellaria and *Cheumatopsyche*. Total density varied greatly among the eight stations being lowest (447/m²) at Station 20, intermediate at Stations 17, 19, 23 and highest at downstream Stations 29 and 91 (6,419 to 10,100/m²). The noticeably higher densities at Stations 29 and 91 were primarily due to the elevated abundance of the filter-feeding caddisfly *Cheumatopsyche* at both stations.

Except for Station 29, Ponar taxa richness followed a similar trend as HD total richness (Table 3-58). Ponar total richness was highest at Stations 13 and 91, intermediate at Stations 17 and 22, and lowest at Stations 19, 20, 23, 29, and the CFAR station (Table 3-58). Zero or one EPT taxa were observed in the Ponar samples at six of the nine stations. EPT taxa richness was similar in the Ponar samples at Stations 13 and 91 (4 taxa each) while seven EPT taxa were found at Station 29. The dominant taxon at Station 13 was *Polypedilum flavum* with substantial numbers of the EPT taxon *Cheumatopsyche* also present. Oligochaeta dominated the Ponar samples at the remaining stations. In addition, the Asiatic clam *Corbicula fluminea* was relatively common at Stations 19 and 22. Ponar total density was highest at the CFAR Station and Station 19, intermediate at Stations 17, 20, 22, 23, and 91, and lowest at Station 29. With the exception of Station 13, the relative abundance of the tolerant taxa Oligochaeta appeared to drive the total densities of those stations.

A single specimen in the Ponar sample from Station 13 exhibited a head capsule deformity (Table 3-56). Given that deformities were absent in all the other samples examined, the percent incidence of deformity observed in these samples is likely insignificant.

Results of the Des Plaines River benthic macroinvertebrate sampling were mixed. Station 13 had some of the highest total richness in both the HD and Ponar samples and the highest EPT richness in the HD samples. In addition, the Station 13 Ponars had the lowest percentage of tolerant taxa among the stations. It appears that the benthic community at all the stations is affected by environmental perturbation in varying degrees of severity and/or types of disturbance. Overall, Station 13 was the best of the Des Plaines River stations and one of the best stations overall in 2004. On the other hand, Stations 20, 23, and CFAR are highly stressed. The others appear to be slightly to moderately stressed. Station 29 was interesting. It had a very poor benthic community as judged by the Ponar results (Table 3-58) but a good one as judged by the HD results (Table 3-57). This suggests that water quality is good at this location but the substrate is very poor.

3.3 Inter-Year Comparisons: 2003 vs. 2004

Of the 30 stations sampled in 2003 and 2004, 15 stations in 10 different waterways were sampled in both 2003 and 2004, as well as in 2001-2002. In an effort to analyze for trends and gauge variability within these systems, comparisons between the two years, 2003 and 2004, by sample type and station are summarized in the following sections. Differences between years could be the result of changes in flow conditions, changes in the amount and type of stressors, or natural variability. However, for the purposes of these studies, no attempt was made to ascertain a specific cause.

3.3.1 Calumet Watershed

The same three stations in the Calumet watershed were surveyed during 2003 and 2004: Station 55 in the Calumet River, Station 76 in the Little Calumet River, and Station 59 in the Cal-Sag (Tables 2-1 and 2-2).

3.3.1.1 Calumet River

The HD results from Station 55 can not be compared between years because a HD sample was not collected at Station 55 in 2004. However, the Ponar results at Station 55 were largely similar between the two years (Table 3-59). Total taxa richness and density were similar each year and no EPT taxa were found in the Ponar samples for either year.

Overall, 8 total taxa were collected in the 2003 Ponar samples from Station 55 compared to 10 total taxa in 2004 (Table 3-59). There were five taxa not common between the two years. However, these taxa accounted for less than three percent of their respective total samples in both years.

Chironomid head capsule deformities were not observed in either year. In terms of density, relative abundance and richness, tolerant taxa were relatively similar between 2003 and 2004 (Table 3-1).

3.3.1.2 Little Calumet River

Results from the HD sampling at Station 76 were not very comparable between the two years. (Table 3-60). Total taxa richness was higher in 2003 than in 2004. Two EPT taxa were collected in 2004 compared to one in 2003. The dominant taxa switched from very high numbers of *Hydra* and *Oligochaeta* in 2003 to high numbers of *Dreissena polymorpha*, *G. fasciatus*, and *Dicrotendipes simpsoni* in the 2004 HD samples. The extremely high abundance of zebra mussel in the 2004 HD sample resulted in the total density in 2004 being just over twice the total density of 2003 HD sample.

On the other hand, Ponar results from 2003 and 2004 were quite comparable (Table 3-61). Total taxa richness differed by only three taxa and EPT richness was zero both years. *Oligochaeta* was the dominant taxon in both years, and total density was similar between the two years as well. Chironomidae head capsule deformities were low in 2003 (Table 3-12) and absent in 2004.

3.3.1.3 Calumet-Sag Channel

In terms of taxa richness, the benthic community in the HD samples exhibited few changes between 2003 and 2004 (Table 3-62). Total taxa and EPT richness both increased by only one and two taxa, respectively from 2003 to 2004. Total density decreased by nearly 50 percent from 2003 to 2004 because of the decline in *Oligochaeta* density from 11,286/m² in 2003 to 588/m² in 2004. *Oligochaeta* dominated the 2003 HD sample, but zebra mussel was the dominant taxon in the 2004 HD sample.

TABLE 3-59. COMPARISON OF PETITE PONAR DENSITIES BETWEEN AUGUST 2003 AND SEPTEMBER 2004 FOR SAMPLING STATION 55 WITHIN THE CALUMET RIVER.

TAXA	55 130TH ST.			
	2003		2004	
	#/m2	%	#/m2	%
Oligochaeta	1,284.6	91.79	1,449.7	87.83
Gammarus fasciatus	7.2	0.51	7.2	0.43
Chironomidae	7.2	0.51	--	--
Procladius (Holotanypus)	14.4	1.03	35.9	2.17
Coelotanypus	28.7	2.05	7.2	0.43
Parakiefferiella	--	--	7.2	0.43
Chironomus	7.2	0.51	35.9	2.17
Cryptochironomus	7.2	0.51	64.6	3.91
Dicrotendipes simpsoni	--	--	7.2	0.43
Microchironomus	7.2	0.51	--	--
Polypedilum halterale grp.	--	--	21.5	1.30
Polypedilum scalaenum grp.	35.9	2.56	--	--
Dreissena polymorpha	--	--	14.4	0.87
TOTAL BENTHOS	1,399.4	100.00	1,650.6	100.00
TOTAL TAXA RICHNESS	8		10	
EPT TAXA RICHNESS	0		0	

TABLE 3-60. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JULY-SEPTEMBER 2003 AND SEPTEMBER 2004 FOR SAMPLING STATION 76 WITHIN THE LITTLE CALUMET RIVER.

TAXA	76 HALSTED ST.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	3,948.7	40.73	--	--
Turbellaria	9.0	0.09	17.9	0.09
Plumatella	1.8	0.02	--	--
Oligochaeta	4,029.4	41.56	610.0	3.12
Mooreobdella microstoma	17.9	0.19	--	--
Caecidotea	9.0	0.09	--	--
Hyalella azteca	--	--	287.0	1.47
Gammarus fasciatus	193.8	2.00	2,081.1	10.64
Cyrenellus fraternus	--	--	89.7	0.46
Cheumatopsyche	1.8	0.02	--	--
Hydroptila	--	--	17.9	0.09
Chironomidae	48.4	0.50	--	--
Ablabesmyia	--	--	17.9	0.09
Cricotopus bicinctus grp.	68.2	0.70	161.5	0.83
Cricotopus sylvestris grp.	179.4	1.85	--	--
Nanocladius distinctus	161.5	1.67	17.9	0.09
Chironomus	26.9	0.28	--	--
Dicrotendipes simpsoni	733.8	7.57	2,045.2	10.46
Glyptotendipes	43.1	0.44	--	--
Parachironomus	25.1	0.26	--	--
Polypedilum illinoense	9.0	0.09	--	--
Polypedilum scalaenum grp.	9.0	0.09	--	--
Stenochironomus	--	--	89.7	0.46
Paratanytarsus	25.1	0.26	--	--
Xenochironomus xenolabis	--	--	35.9	0.18
Amnicola	9.0	0.09	--	--
Physa	145.3	1.50	--	--
Menetus dilatatus	--	--	17.9	0.09
Ferrissia	--	--	179.4	0.92
Dreissena polymorpha	--	--	13,885.9	71.01
TOTAL BENTHOS	9,695.0	100.00	19,555.1	100.00
TOTAL TAXA RICHNESS	20		15	
EPT TAXA RICHNESS	1		2	

TABLE 3-61. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JULY-SEPTEMBER 2003 AND SEPTEMBER 2004 FOR SAMPLING STATION 76 WITHIN THE LITTLE CALUMET RIVER.

TAXA	76 HALSTED ST.			
	2003		2004	
	#/m2	%	#/m2	%
Oligochaeta	26,158.8	95.95	24,989.0	98.03
Mooreobdella microstoma	--	--	7.2	0.03
Caecidotea	7.2	0.03	--	--
Hyalella azteca	--	--	7.2	0.03
Gammarus	122.0	0.45	--	--
Gammarus fasciatus	--	--	64.6	0.25
Chironomidae	28.7	0.11	--	--
Procladius (Holotanypus)	71.8	0.26	165.1	0.65
Ablabesmyia mallochii	7.2	0.03	--	--
Cricotopus bicinctus grp.	100.5	0.37	7.2	0.03
Cricotopus sylvestris grp.	315.8	1.16	--	--
Chironomus	57.4	0.21	14.4	0.06
Cryptochironomus	71.8	0.26	150.7	0.59
Dicrotendipes simpsoni	7.2	0.03	7.2	0.03
Parachironomus	50.2	0.18	--	--
Paratanytarsus	28.7	0.11	--	--
Amnicola	71.8	0.26	--	--
Ferrissia	--	--	7.2	0.03
Corbicula fluminea	93.3	0.34	64.6	0.25
Dreissena polymorpha	71.8	0.26	7.2	0.03
TOTAL BENTHOS	27,264.0	100.00	25,491.4	100.00
TOTAL TAXA RICHNESS	15		12	
EPT TAXA RICHNESS	0		0	

TABLE 3-62. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JULY-SEPTEMBER 2003 AND AUGUST 2004 FOR SAMPLING STATION 59 WITHIN THE CAL-SAG CHANNEL.

TAXA	59 CICERO AVE.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	520.3	3.33	479.0	5.88
Turbellaria	1.8	0.01	1.8	0.02
Oligochaeta	11,286.3	72.31	588.4	7.23
Caecidotea	96.9	0.62	19.7	0.24
Hyalella azteca	--	--	17.9	0.22
Gammarus	200.9	1.29	--	--
Gammarus fasciatus	--	--	152.5	1.87
Cyrenellus fraternus	--	--	28.7	0.35
Hydroptila	--	--	9.0	0.11
Chironomidae	93.3	0.60	--	--
Procladius (Holotanypus)	17.9	0.11	17.9	0.22
Cricotopus tremulus grp.	--	--	44.9	0.55
Cricotopus bicinctus grp.	154.3	0.99	--	--
Cricotopus sylvestris grp.	470.0	3.01	337.3	4.14
Nanocladius distinctus	346.3	2.22	213.5	2.62
Rheocricotopus robacki	17.9	0.11	--	--
Chironomus	10.8	0.07	--	--
Dicrotendipes neomodestus	10.8	0.07	--	--
Dicrotendipes simpsoni	2,025.5	12.98	2,145.7	26.35
Glyptotendipes	10.8	0.07	--	--
Polypedilum illinoense	272.7	1.75	118.4	1.45
Paratanytarsus	17.9	0.11	5.4	0.07
Physa	17.9	0.11	--	--
Gyraulus	--	--	1.8	0.02
Ferrissia	--	--	68.2	0.84
Corbicula fluminea	35.9	0.23	26.9	0.33
Dreissena polymorpha	--	--	3,866.2	47.48
TOTAL BENTHOS	15,608.2	100.00	8,143.2	100.00
TOTAL TAXA RICHNESS	18		19	
EPT TAXA RICHNESS	0		2	

TABLE 3-63. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JULY-SEPTEMBER 2003 AND AUGUST 2004 FOR SAMPLING STATION 59 WITHIN THE CAL-SAG CHANNEL.

TAXA	59 CICERO AVE.			
	2003		2004	
	#/m2	%	#/m2	%
Oligochaeta	4,219.9	91.59	1,672.2	73.50
Hyalella azteca	--	--	35.9	1.58
Gammarus fasciatus	--	--	64.6	2.84
Procladius (Holotanypus)	344.5	7.48	416.2	18.30
Cricotopus bicinctus grp.	--	--	14.4	0.63
Cricotopus sylvestris grp.	--	--	7.2	0.32
Cryptochironomus	--	--	7.2	0.32
Dicrotendipes simpsoni	7.2	0.16	--	--
Polypedilum illinoense	14.4	0.31	7.2	0.32
Corbicula fluminea	21.5	0.47	35.9	1.58
Dreissena polymorpha	--	--	14.4	0.63
TOTAL BENTHOS	4,607.4	100.00	2,275.0	100.00
TOTAL TAXA RICHNESS	5		10	
EPT TAXA RICHNESS	0		0	

Ponar results were somewhat different between the years. Total taxa doubled but EPT richness was zero both years (Table 3-63). Oligochaeta was the dominant taxon both years. However, substantially lower numbers of Oligochaeta in 2004 resulted in a decrease of nearly one-half in total density between years. Chironomidae deformities were observed in both the HD and Ponar samples collected during 2003 but were not observed in either sample type during 2004 (Table 3-15). Nonetheless, these differences do not appear to have changed the overall quality of the benthic community at Station 59.

3.3.2 North Branch Chicago River Watershed

Of the 4 stations sampled in the NBCR Watershed during 2003 and 2004, three were sampled both years: Station 36 in the NSC and Stations 96 and 46 in the NBCR (Tables 2-1 and 2-2).

3.3.2.1 North Shore Channel

HD results from Station 36 were considerably different in 2003 and 2004 (Table 3-64). Total taxa richness was much higher in 2004 with 20 taxa compared to 10 taxa in 2003. The most notable additions to the 2004 taxa list were the three EPT taxa *Baetis*, *Cheumatopsyche*, and *Hydroptila*, whereas no EPT taxa were found during the 2003 sampling period. In addition, dominance and total density differed noticeably between the two years. In 2003, the benthic community in the HD samples was dominated by the tolerant taxon Oligochaeta and Turbellaria. Between 2003 and 2004, the density of Oligochaeta more than doubled and densities of the tolerant midges *D. simpsoni* and *Glyptotendipes* increased by several orders of magnitude over the same period.

The results from the Ponar sampling were generally more similar between years than the HD samples in terms of total taxa richness and dominant taxa (Table 3-65). Total and EPT richness varied little between 2003 and 2004. Although Oligochaeta experienced an over five-fold decrease in density between 2003 and 2004, it remained the dominant taxon in 2004.

Overall, the benthic macroinvertebrate community was represented by 11 total taxa and no EPT taxa in 2003 compared to 24 total taxa and three EPT taxa in 2004 (Tables 3-65 and 3-66). Chironomid head capsule deformities were observed in 2003 at Station 36 (Table 3-18) but not in 2004. Oligochaeta density increased substantially in the HD samples between 2003 and 2004, but decreased considerably between years in the Ponar samples. Despite these differences in total richness between the years, tolerant organisms represented over half the total richness observed in each year.

3.3.2.2 North Branch of the Chicago River

The HD results from Station 46 were quite similar between the two study years (Table 3-66). At Station 96, density, total richness, and EPT richness were similar between the years. *Caecidotea*, which was clearly the dominant taxon at Station 96 in 2003, was co-dominant with *Cheumatopsyche* in 2004 (Table 3-66).

TABLE 3-64. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JULY 2003 AND SEPTEMBER 2004 FOR SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL.

TAXA	36 TOUHY AVE.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	--	--	2,762.8	5.62
Turbellaria	6,745.6	37.79	2,852.5	5.81
Oligochaeta	8,575.5	48.04	22,999.6	46.82
Helobdella papillata	--	--	53.8	0.11
Ostracoda	--	--	484.4	0.99
Caecidotea	80.7	0.45	17.9	0.04
Gammarus	959.8	5.38	--	--
Gammarus fasciatus	--	--	5,453.9	11.10
Baetis	--	--	17.9	0.04
Enallagma	--	--	17.9	0.04
Cheumatopsyche	--	--	53.8	0.11
Hydroptila	--	--	17.9	0.04
Chironomidae	44.9	0.25	--	--
Cricotopus bicinctus grp.	--	--	125.6	0.26
Cricotopus sylvestris grp.	71.8	0.40	--	--
Nanocladius distinctus	26.9	0.15	897.0	1.83
Chironomus	9.0	0.05	71.8	0.15
Dicrotendipes simpsoni	915.0	5.13	10,244.0	20.85
Glyptotendipes	358.8	2.01	2,709.0	5.51
Parachironomus	62.8	0.35	143.5	0.29
Gyraulus	--	--	17.9	0.04
Ferrissia	--	--	107.6	0.22
Dreissena polymorpha	--	--	71.8	0.15
TOTAL BENTHOS	17,850.7	100.00	49,120.9	100.00
TOTAL TAXA RICHNESS	10		20	
EPT TAXA RICHNESS	0		3	

TABLE 3-65. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JULY 2003 AND SEPTEMBER 2004 FOR SAMPLING STATION 36 WITHIN THE NORTH SHORE CHANNEL.

TAXA	36 TOUHY AVE.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	--	--	7.2	0.10
Turbellaria	2,892.2	8.09	624.4	8.27
Oligochaeta	31,799.7	88.98	5,884.8	77.95
Helobdella triserialis	21.5	0.06	--	--
Ostracoda	--	--	7.2	0.10
Caecidotea	14.4	0.04	14.4	0.19
Gammarus	7.2	0.02	--	--
Gammarus fasciatus	--	--	21.5	0.29
Procladius (Holotanypus)	--	--	7.2	0.10
Cricotopus bicinctus grp.	7.2	0.02	7.2	0.10
Cricotopus sylvestris grp.	172.2	0.48	--	--
Nanocladius distinctus	28.7	0.08	21.5	0.29
Chironomus	215.3	0.60	28.7	0.38
Cryptochironomus	--	--	7.2	0.10
Dicrotendipes neomodestus	--	--	14.4	0.19
Dicrotendipes simpsoni	258.4	0.72	480.8	6.37
Glyptotendipes	93.3	0.26	322.9	4.28
Parachironomus	143.5	0.40	86.1	1.14
Polypedilum scalaenum grp.	71.8	0.20	--	--
Helisoma	14.4	0.04	--	--
Ferrissia	--	--	14.4	0.19
TOTAL BENTHOS	35,739.6	100.00	7,549.8	100.00
TOTAL TAXA RICHNESS	14		16	
EPT TAXA RICHNESS	0		0	

TABLE 3-66. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JULY-AUGUST 2003 AND JUNE-AUGUST 2004 FOR SAMPLING STATIONS WITHIN THE NORTH BRANCH CHICAGO RIVER.

TAXA	96 ALBANY AVE.				46 GRAND AVE.			
	2003		2004		2003		2004	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	14.4	0.35	39.5	1.23	--	--	3.6	0.09
Turbellaria	236.8	5.74	279.9	8.69	2,179.8	9.49	1,002.9	23.95
Plumatella	--	--	--	--	--	--	1.8	0.04
Oligochaeta	172.2	4.17	220.7	6.85	18,864.4	82.15	2,386.1	56.98
Helobdella triserialis	70.0	1.69	--	--	26.9	0.12	--	--
Erpobdella punctata punctata	3.6	0.09	--	--	--	--	--	--
Mooreobdella microstoma	--	--	--	--	9.0	0.04	--	--
Ostracoda	--	--	16.1	0.50	--	--	--	--
Caecidotea	3,150.3	76.31	696.1	21.62	116.6	0.51	--	--
Hyalella azteca	--	--	--	--	--	--	9.0	0.21
Gammarus fasciatus	--	--	26.9	0.84	17.9	0.08	--	--
Hydracarina	--	--	5.4	0.17	--	--	--	--
Baetis intercalaris	5.4	0.13	104.1	3.23	--	--	--	--
Stenacron	10.8	0.26	195.6	6.07	--	--	--	--
Tricorythodes	--	--	3.6	0.11	--	--	--	--
Coenagrionidae	--	--	1.8	0.06	--	--	--	--
Argia	1.8	0.04	--	--	--	--	--	--
Cheumatopsyche	12.6	0.30	751.7	23.34	--	--	--	--
Hydropsyche betteni	9.0	0.22	170.4	5.29	--	--	--	--
Ceraclea	1.8	0.04	--	--	--	--	--	--
Stenelmis crenata grp.	--	--	3.6	0.11	--	--	--	--
Chironomidae	1.8	0.04	--	--	--	--	--	--
Thienemannimyia grp.	14.4	0.35	5.4	0.17	35.9	0.16	--	--
Corynoneura	14.4	0.35	26.9	0.84	--	--	--	--
Thienemanniella xena	--	--	23.3	0.72	--	--	--	--
Cricotopus bicinctus grp.	10.8	0.26	--	--	--	--	--	--
Cricotopus sylvestris grp.	--	--	--	--	9.0	0.04	--	--
Nanocladius distinctus	10.8	0.26	17.9	0.56	278.1	1.21	7.2	0.17
Nanocladius crassicornus/rectinervis	7.2	0.17	--	--	--	--	--	--
Rheocricotopus robacki	--	--	292.4	9.08	--	--	--	--
Chironomus	3.6	0.09	--	--	--	--	--	--
Dicrotendipes	12.6	0.30	--	--	--	--	--	--
Dicrotendipes simpsoni	1.8	0.04	--	--	1,381.4	6.02	751.7	17.95
Glyptotendipes	1.8	0.04	--	--	17.9	0.08	7.2	0.17
Parachironomus	--	--	--	--	17.9	0.08	--	--
Phaenopsectra punctipes	1.8	0.04	--	--	--	--	--	--
Polypedilum flavum	--	--	209.9	6.52	--	--	--	--
Polypedilum illinoense	37.7	0.91	5.4	0.17	9.0	0.04	--	--
Polypedilum scalaenum grp.	17.9	0.43	28.7	0.89	--	--	14.4	0.34
Paratanytarsus	7.2	0.17	--	--	--	--	--	--
Tanytarsus	5.4	0.13	--	--	--	--	--	--
Xenochironomus xenolabis	55.6	1.35	--	--	--	--	--	--
Ammicola	--	--	1.8	0.06	--	--	--	--
Physa	12.6	0.30	--	--	--	--	--	--
Helisoma	7.2	0.17	--	--	--	--	--	--
Ferrissia	213.5	5.17	78.9	2.45	--	--	3.6	0.09
Musculium	1.8	0.04	7.2	0.22	--	--	--	--
Dreissena polymorpha	--	--	7.2	0.22	--	--	--	--
TOTAL BENTHOS	4,128.1	100.00	3,220.3	100.00	22,963.8	100.00	4,187.3	100.00
TOTAL TAXA RICHNESS	31		26		13		10	
EPT TAXA RICHNESS	5		5		0		0	

The 2003 and 2004 Ponar richness results at Station 46 were very similar and although its density changed, Oligochaetes dominated at this Station both years (Table 3-67). At Station 96, both density and total taxa richness increased by roughly 50 percent from 2003 to 2004. Taxonomically, the main changes from 2003 to 2004 at this station were an 8-fold density decline in *Caecidotea* and a large increase in *D. simpsoni*.

Chironomid head capsule deformities only were observed at the Station 46 HD samples in 2003 (Table 3-18).

Based on the combined results of the HD and Ponar samples, richness was relatively similar at Station 96 with 35 total taxa in 2003 and 37 total taxa in 2004 with five EPT taxa at both stations for both years. (Tables 3-66 and 3-67). Similarly, total taxa richness at Station 46 was also relatively similar with 14 taxa in 2003 to 13 taxa in 2004 and no EPT taxa in either year.

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

Three stations were sampled in the SBCR and CSSC watershed in 2003 and 2004: Stations 75, 41, and 92 in the CSSC (Tables 2-1 and 2-2).

The HD sampling at the three CSSC stations exhibited some differences between 2003 and 2004. However, few consistent trends were evident among all three stations. Total taxa richness showed a modest increase at Station 75 (Table 3-68). However, at Stations 41 and 92, total taxa richness was relatively similar between the two years. In addition, EPT taxa richness increased from 0 to 4 at both Stations 75 and 92. Density was similar both years at Stations 41 and 92. At Station 75, there was a 3-fold decline due to a large decrease in Oligochaeta.

Similar to the other watersheds, the Ponar data collected from the three CSSC stations in 2003 and 2004 exhibited a lesser degree of variability compared to the HD data (Table 3-69). Total richness was relatively similar between years at Stations 75 and 41 but more than doubled at Station 92. The only EPT taxon collected in the Ponars among the three stations was observed at Station 75 in 2004. Densities at each station changed considerably between the years, but these were due exclusively to changes in Oligochaeta densities. Low incidence of Chironomidae head capsule deformities were observed in the samples at all three stations in 2003 but were not observed in 2004 (Tables 3-23).

3.3.4 Des Plaines River Watershed

Six stations in the Des Plaines River watershed were sampled during both 2003 and 2004: Station 78 in Higgins Creek, Station 18 in Salt Creek, Station 64 in the West Branch of the DuPage River, and Stations 13, 22, and 91 in the Des Plaines River (Tables 2-1 and 2-2).

3.3.4.1 West Branch of the DuPage River

The HD results from Station 64 were generally similar between years (Table 3-70). Total richness and EPT richness were slightly higher in 2004. EPT density increased in 2004 due to the higher abundance of all EPT taxa, particularly *Cheumatopsyche*. Also, the density of several tolerant taxa decreased in 2004. This was most evident in Oligochaeta whose density declined by nearly 10-fold from 2003 to 2004.

TABLE 3-67. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JULY-AUGUST 2003 AND JUNE-AUGUST 2004 FOR SAMPLING STATIONS WITHIN THE NORTH BRANCH CHICAGO RIVER.

TAXA	96 ALBANY AVE.				46 GRAND AVE.			
	2003		2004		2003		2004	
	#/m2	%	#/m2	%	#/m2	%	#/m2	%
Hydra	--	--	21.5	0.06	--	--	--	--
Turbellaria	1,076.5	4.97	1,937.7	5.77	--	--	7.2	0.22
Plumatella	--	--	7.2	0.02	--	--	--	--
Oligochaeta	947.3	4.38	6,387.2	19.03	23,223.6	99.81	3,150.5	98.43
Helobdella stagnalis	100.5	0.46	114.8	0.34	--	--	--	--
Erpobdella punctata punctata	416.2	1.92	430.6	1.28	--	--	--	--
Mooreobdella microstoma	--	--	430.6	1.28	7.2	0.03	--	--
Caecidotea	8,942.1	41.31	1,040.6	3.10	--	--	7.2	0.22
Gammarus	43.1	0.20	--	--	--	--	--	--
Gammarus fasciatus	--	--	57.4	0.17	--	--	--	--
Coenagrionidae	14.4	0.07	--	--	--	--	--	--
Hydropsychidae	--	--	7.2	0.02	--	--	--	--
Cheumatopsyche	14.4	0.07	--	--	--	--	--	--
Stenelmis	28.7	0.13	--	--	--	--	--	--
Procladius (Holotanypus)	--	--	--	--	7.2	0.03	28.7	0.90
Thienemannimyia grp.	43.1	0.20	71.8	0.21	7.2	0.03	--	--
Corynoneura lobata	--	--	1,255.9	3.74	--	--	--	--
Thienemanniella xena	--	--	179.4	0.53	--	--	--	--
Nanocladius distinctus	--	--	366.0	1.09	--	--	--	--
Nanocladius crassicornus/rectinervis	--	--	107.6	0.32	--	--	--	--
Dicrotendipes	14.4	0.07	--	--	--	--	--	--
Dicrotendipes simpsoni	--	--	1,543.0	4.60	21.5	0.09	--	--
Glyptotendipes	--	--	50.2	0.15	--	--	--	--
Polypedilum flavum	--	--	35.9	0.11	--	--	--	--
Polypedilum illinoense	--	--	968.8	2.89	--	--	--	--
Polypedilum scalaenum grp.	86.1	0.40	574.1	1.71	--	--	--	--
Paratanytarsus	--	--	35.9	0.11	--	--	--	--
Tanytarsus	14.4	0.07	--	--	--	--	--	--
Xenochironomus xenolabis	28.7	0.13	--	--	--	--	--	--
Valvata	--	--	35.9	0.11	--	--	--	--
Amnicola	14.4	0.07	35.9	0.11	--	--	--	--
Physa	114.8	0.53	--	--	--	--	--	--
Menetus dilatatus	--	--	50.2	0.15	--	--	--	--
Ferrissia	--	--	7.2	0.02	--	--	--	--
Corbicula fluminea	--	--	7.2	0.02	--	--	--	--
Musculium	6,703.0	30.97	--	--	--	--	--	--
Musculium transversum	--	--	9,616.7	28.66	--	--	--	--
Pisidium	3,042.9	14.06	8,145.5	24.27	--	--	7.2	0.22
Dreissena polymorpha	--	--	35.9	0.11	--	--	--	--
TOTAL BENTHOS	21,644.7	100.00	33,557.9	100.00	23,266.6	100.00	3,200.8	100.00
TOTAL TAXA RICHNESS	18		29		5		4	
EPT TAXA RICHNESS	1		1		0		0	

TABLE 3-68. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JULY 2003 AND AUGUST 2004 FOR SAMPLING STATIONS WITHIN THE CHICAGO SANITARY AND SHIP CANAL.

TAXA	75 CICERO AVE.			41 HARLEM AVE.			92 LOCKPORT		
	2003	2004	2004	2003	2004	2004	2003	2004	2004
	#/m ²	%	#/m ²	#/m ²	%	#/m ²	%	#/m ²	%
Hydra	17.9	0.06	14.4	17.9	0.06	430.6	1.47	367.8	5.84
Turbellaria	2,368.1	8.12	2,902.8	627.9	2.26	1,596.7	5.46	1,123.1	17.82
Urnatella gracilis			28.7			35.9	0.12		
Plumatella						125.6	0.43		
Oligochaeta	25,314.0	86.83	3,541.4	24,865.4	89.65	23,493.0	80.31	2,335.8	37.07
Helobdella papillata			17.9	17.9	0.06			41.3	0.65
Helobdella stagnalis								5.4	0.09
Helobdella triserialis			3.6					1.8	0.03
Placobdella pediculata								10.8	0.17
Mooreobdella microstoma				35.9	0.13	233.2	0.80		
Caecidotea				197.3	0.71				
Gammarus	125.6	0.43	10.8			188.4	0.64	1,458.6	23.15
Gammarus fasciatus			28.7						
Baetis intercalaris			3.6						
Stenacron									
Stenonema integrum						17.9	0.06		
Argia									
Cyrnellus fraternus			3.6						
Cheumatopsyche			17.9						
Berosus								1.8	0.03
Chironomidae	17.9	0.06		161.5	0.58			9.0	0.14
Procladius (Holotanypus)	17.9	0.06							
Ablabesmyia janta									
Ablabesmyia mallochi									
Cricotopus			3.6						
Cricotopus binctus grp.								3.6	0.06
Cricotopus sylvestris grp.				53.8	0.19	17.9	0.06	64.6	1.03
Nanocladius distinctus	89.7	0.31	43.1	538.2	1.94	269.1	0.92	192.0	3.05
Chironomus			3.6	71.8	0.26				
Dicrotendipes simpsoni	1,148.2	3.94	380.3	1,076.4	3.88	1,300.7	4.45	584.9	9.28
Glyptotendipes				53.8	0.19	9.0	0.03	21.5	0.34
Parachironomus	35.9	0.12				9.0	0.03		
Polypedilum flavum						9.0	0.03		
Polypedilum illinoense								9.0	0.14
Polypedilum scalaenum grp.								5.4	0.09
Stenochironomus								5.4	0.09
Xenochironomus xenolabis								35.9	0.57
Physsa				17.9	0.06				
Menetus dilatatus									
Ferrissia			21.5			26.9	0.09	9.0	0.14
Corbicula fluminea			17.9					14.4	0.23
Musculium									
Dreissena polymorpha						1,489.1	5.09		
TOTAL BENTHOS	29,153.2	100.00	7,043.4	27,735.9	100.00	29,251.9	100.00	6,300.7	100.00
TOTAL TAXA RICHNESS	9		17	12		16		20	
EPT TAXA RICHNESS	0		4	0		0		0	
								21	
								4	

TABLE 3-69. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JULY 2003 AND AUGUST 2004 FOR SAMPLING STATIONS WITHIN THE CHICAGO SANITARY AND SHIP CANAL.

TAXA	75 CICERO AVE.			41 HARLEM AVE.			92 LOCKPORT					
	2003		2004		2003		2004		2003		2004	
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
Turbellaria	21.5	3.26	--	--	--	--	222.5	17.03	--	--	71.8	0.15
Plumatella	--	--	--	--	--	--	43.1	3.30	--	--	--	--
Oligochaeta	588.5	89.13	236.8	89.19	24,594.3	98.14	976.0	74.73	112,027.3	98.49	45,212.8	95.21
Helobdella triserialis	7.2	1.09	--	--	--	--	--	--	--	--	143.5	0.30
Eprobodella punctata punctata	--	--	--	--	--	--	21.5	1.65	287.1	0.25	933.0	1.96
Gammarus fasciatus	--	--	7.2	2.70	--	--	--	--	--	71.8	0.06	--
Tricorythodes	--	--	--	--	--	--	--	--	--	--	--	--
Chironomidae	--	--	--	--	--	--	--	--	--	--	--	--
Tanytopus	7.2	1.09	--	--	71.8	0.29	--	--	1,291.8	1.14	71.8	0.15
Procladius (Holotanytopus)	7.2	1.09	--	--	7.2	0.03	--	--	--	--	538.2	1.13
Cricotopus sylvestris grp.	--	--	--	--	387.5	1.55	--	--	--	--	--	--
Chironomus	--	--	--	--	--	--	--	--	--	--	--	--
Cryptochironomus	--	--	14.4	5.41	--	--	43.1	3.30	--	--	179.4	0.38
Dicrotendipes simpsoni	--	--	--	--	--	--	--	--	--	--	71.8	0.15
Pericoma	--	--	--	--	--	--	--	--	--	--	14.4	0.03
Tipulidae	7.2	1.09	--	--	--	--	--	--	--	--	--	--
Ferrissia	--	--	--	--	--	--	--	--	--	--	215.3	0.45
Corbicula fluminea	21.5	3.26	7.2	2.70	--	--	--	--	71.8	0.06	35.9	0.08
TOTAL BENTHOS	660.3	100.00	265.5	100.00	25,060.8	100.00	1,306.1	100.00	113,749.7	100.00	47,487.8	100.00
TOTAL TAXA RICHNESS	7		4		4		5		4		11	
EPT TAXA RICHNESS	0		1		0		0		0		0	

TABLE 3-70. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JULY 2003 AND JULY 2004 FOR SAMPLING STATION 64 WITHIN THE WEST BRANCH DUPAGE RIVER.

TAXA	64 LAKE ST.			
	2003		2004	
	#/m ²	%	#/m ²	%
Hydra	35.9	0.12	5.4	0.06
Turbellaria	--	--	224.3	2.37
Oligochaeta	22,461.4	72.16	2,705.4	28.55
Erpobdella punctata punctata	--	--	5.4	0.06
Ostracoda	--	--	5.4	0.06
Caecidotea	107.6	0.35	968.8	10.22
Stenacron	--	--	17.9	0.19
Coenagrionidae	--	--	5.4	0.06
Argia	35.9	0.12	--	--
Cheumatopsyche	197.3	0.63	1,304.3	13.76
Hydropsyche	--	--	35.9	0.38
Chironomidae	233.2	0.75	--	--
Procladius (Holotanypus)	--	--	30.5	0.32
Thienemanimyia grp.	143.5	0.46	71.8	0.76
Thienemanniella xena	143.5	0.46	93.3	0.98
Cricotopus tremulus grp.	143.5	0.46	120.2	1.27
Cricotopus bicinctus grp.	861.1	2.77	147.1	1.55
Cricotopus sylvestris grp.	1,148.2	3.69	17.9	0.19
Nanocladius	--	--	26.9	0.28
Chironomini	--	--	17.9	0.19
Chironomus	735.6	2.36	--	--
Dicrotendipes neomodestus	107.6	0.35	44.9	0.47
Dicrotendipes simpsoni	143.5	0.46	166.8	1.76
Endochironomus nigricans	35.9	0.12	--	--
Glyptotendipes	2,475.8	7.95	1,817.4	19.18
Polypedilum flavum	322.9	1.04	179.4	1.89
Polypedilum illinoense	251.2	0.81	819.9	8.65
Polypedilum scalaenum grp.	143.5	0.46	62.8	0.66
Paratanytarsus	358.8	1.15	17.9	0.19
Tanytarsus	107.6	0.35	--	--
Simulium	861.1	2.77	143.5	1.51
Physa	17.9	0.06	--	--
Gyraulus	--	--	389.3	4.11
Helisoma	53.8	0.17	--	--
Ferrissia	--	--	30.5	0.32
TOTAL BENTHOS	31,126.7	100.00	9,476.1	100.00
TOTAL TAXA RICHNESS	23		28	
EPT TAXA RICHNESS	1		3	

The Ponar results were similar between years (Table 3-71). Total richness, EPT richness, and density were similar between years and Oligochaeta was the dominant taxon both years.

Chironomid head capsule deformities were observed in samples during both 2003 and 2004 (Tables 3-26 and 3-49). In 2003, six specimens of *Chironomus* in the HD samples exhibited deformities, whereas only one specimen of *Glyptotendipes* exhibited a deformity in 2004. The decrease of deformities in 2004 together with the increase in EPT richness and abundance in HD samples suggests that conditions improved between years and were more conducive to the benthic macroinvertebrate community at Station 64.

3.3.4.2 Salt Creek

As with the WB DuPage River, the HD results from Station 18 suggest that conditions improved between 2003 and 2004 (Table 3-72). Total taxa richness and EPT richness were both higher in 2004. The highly tolerant taxon, Oligochaeta declined by 6-fold from 2003 to 2004, while the caddisfly, *Cyrnellus fraternus* became fairly abundant in 2004.

Ponar sampling results were very similar between the two years (Table 3-73). Total richness, EPT richness, and total density, were very similar both years. Oligochaeta and the midge *Cladotanytarsus mancus* were the dominant taxa both years.

The incidence of head capsule deformities was very low at Station 18 in both 2003 and 2004. Only one chironomid specimen in the 2003 Ponar samples from Station 18 exhibited a head capsule deformity while no deformities were observed in either the HD or Ponar samples from Station 18 in 2004 (Table 3-26).

3.3.4.3 Higgins Creek

Total taxa richness in the HD samples was somewhat higher in 2004 compared to 2003 while EPT taxa were rare both years. *Caecidotea* was the dominant taxon in 2004 with Oligochaeta being the second most common. In 2003, the order of these two taxa was reversed but *Cricotopus* spp. remained fairly common both years (Table 3-74).

Ponar results also were somewhat different between years and exhibited a pattern that was similar to the HD results (Tables 3-74 and 3-75). As was true for the HDs, total Ponar taxa richness was slightly higher in 2004 and EPT richness was similar between the years. The more tolerant Oligochaeta was dominant in 2003. However, as with the HD samples, Oligochaeta density decreased substantially and the density of *Caecidotea* increased dramatically from 2003 to 2004 so that *Caecidotea* became the dominant taxon.

Three *Chironomus* specimens exhibited deformities at Station 78 in 2003 (Table 3-26). However, no deformities were observed among the midges collected at Station 78 in 2004.

3.3.4.4 Des Plaines River

Both total taxa richness and EPT taxa richness in the HD samples from Station 13 declined slightly from 2004 to 2003 (Table 3-76). Also, there was about a 4-fold decline in HD density from 2004 to 2003. This decline was the result of several taxa decreasing rather than a large

TABLE 3-71. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JULY 2003 AND JULY 2004 FOR SAMPLING STATION 64 WITHIN THE WEST BRANCH DUPAGE RIVER.

TAXA	64 LAKE ST.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	--	--	380.4	11.55
Plumatella	--	--	14.4	0.44
Oligochaeta	1,607.6	41.56	1,255.9	38.13
Erpobdella punctata punctata	--	--	7.2	0.22
Ostracoda	--	--	122.0	3.70
Caecidotea	14.4	0.37	--	--
Oecetis	--	--	7.2	0.22
Chironomidae	21.5	0.56	--	--
Procladius (Holotanypus)	--	--	7.2	0.22
Thienemannimyia grp.	--	--	7.2	0.22
Thienemanniella xena	--	--	14.4	0.44
Cricotopus	--	--	28.7	0.87
Cricotopus bicinctus grp.	71.8	1.86	7.2	0.22
Cricotopus sylvestris grp.	157.9	4.08	7.2	0.22
Chironomus	1,449.7	37.48	14.4	0.44
Cryptochironomus	35.9	0.93	703.3	21.35
Dicrotendipes neomodestus	21.5	0.56	7.2	0.22
Dicrotendipes simpsoni	14.4	0.37	--	--
Endochironomus nigricans	21.5	0.56	--	--
Glyptotendipes	143.5	3.71	--	--
Polypedilum flavum	7.2	0.19	--	--
Polypedilum illinoense	--	--	57.4	1.74
Polypedilum scalaenum grp.	150.7	3.90	516.7	15.69
Cladotanytarsus	14.4	0.37	--	--
Paratanytarsus	78.9	2.04	--	--
Simulium	50.2	1.30	7.2	0.22
Physa	--	--	7.2	0.22
Gyraulus	--	--	7.2	0.22
Helisoma	7.2	0.19	--	--
Ferrissia	--	--	114.8	3.49
TOTAL BENTHOS	3,868.2	100.00	3,294.1	100.00
TOTAL TAXA RICHNESS	16		21	
EPT TAXA RICHNESS	0		1	

TABLE 3-72. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JUNE 2003 AND JULY 2004 FOR SAMPLING STATION 18 WITHIN SALT CREEK.

TAXA	18 DEVON AVE.			
	2003		2004	
	#/m ²	%	#/m ²	%
Hydra	9,831.4	34.66	10.8	0.23
Turbellaria	35.9	0.13	231.4	4.85
Nematoda	--	--	3.6	0.08
Urnatella gracilis	--	--	1.8	0.04
Oligochaeta	16,200.2	57.12	2,746.7	57.56
Ostracoda	--	--	118.4	2.48
Caecidotea	251.2	0.89	244.0	5.11
Gammarus fasciatus	--	--	1.8	0.04
Orconectes virilis	35.9	0.13	--	--
Stenacron	--	--	7.2	0.15
Caenis	179.4	0.63	--	--
Coenagrionidae	--	--	1.8	0.04
Argia	17.9	0.06	--	--
Corixidae	--	--	5.4	0.11
Cyrnellus fraternus	--	--	224.3	4.70
Cheumatopsyche	--	--	48.4	1.02
Dubiraphia	--	--	5.4	0.11
Stenelmis	17.9	0.06	1.8	0.04
Ceratopogonidae	71.8	0.25	--	--
Bezzia	--	--	1.8	0.04
Chironomidae	125.6	0.44	--	--
Procladius (Holotanypus)	17.9	0.06	100.5	2.11
Thienemannimyia grp.	--	--	7.2	0.15
Cricotopus tremulus grp.	53.8	0.19	--	--
Cricotopus bicinctus grp.	35.9	0.13	--	--
Cricotopus sylvestris grp.	17.9	0.06	--	--
Nanocladius distinctus	53.8	0.19	--	--
Nanocladius crassicornus/rectinervis	35.9	0.13	57.4	1.20
Chironomus	35.9	0.13	50.2	1.05
Cladopelma	--	--	7.2	0.15
Cryptochironomus	35.9	0.13	35.9	0.75
Dicrotendipes neomodestus	--	--	21.5	0.45
Dicrotendipes fumidus	107.6	0.38	--	--
Dicrotendipes simpsoni	--	--	93.3	1.95
Endochironomus nigricans	17.9	0.06	43.1	0.90
Glyptotendipes	35.9	0.13	71.8	1.50
Harnischia	--	--	7.2	0.15
Parachironomus	394.7	1.39	--	--
Polypedilum flavum	--	--	28.7	0.60
Polypedilum illinoense	35.9	0.13	21.5	0.45
Polypedilum scalaenum grp.	448.5	1.58	138.1	2.89
Pseudochironomus	--	--	35.9	0.75
Stenochironomus	--	--	14.4	0.30
Tribelos fuscicorne	17.9	0.06	--	--
Cladotanytarsus mancus grp.	17.9	0.06	9.0	0.19
Paratanytarsus	53.8	0.19	--	--
Rheotanytarsus	--	--	14.4	0.30
Tanytarsus	--	--	21.5	0.45
Tanytarsus glabrescens grp.	35.9	0.13	--	--
Rhamphomyia	--	--	1.8	0.04
Physa	35.9	0.13	--	--
Helisoma	71.8	0.25	--	--
Menetus dilatatus	--	--	274.5	5.75
Ferrissia	17.9	0.06	39.5	0.83
Corbicula fluminea	17.9	0.06	21.5	0.45
Dreissena polymorpha	--	--	1.8	0.04
TOTAL BENTHOS	28,363.8	100.00	4,772.2	100.00
TOTAL TAXA RICHNESS	31		40	
EPT TAXA RICHNESS	1		3	

TABLE 3-73. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JUNE 2003 AND MAY-SEPTEMBER 2004 FOR SAMPLING STATION 18 WITHIN SALT CREEK.

TAXA	18 DEVON AVE.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	14.4	0.24	--	--
Nematoda	--	--	7.2	0.12
Oligochaeta	1,421.0	24.15	2,346.8	38.79
Ostracoda	--	--	172.2	2.85
Caecidotea	14.4	0.24	222.5	3.68
Caenis	7.2	0.12	--	--
Cheumatopsyche	--	--	35.9	0.59
Dubiraphia	--	--	14.4	0.24
Macronychus glabratus	7.2	0.12	--	--
Stenelmis	14.4	0.24	7.2	0.12
Chironomidae	64.6	1.10	--	--
Procladius (Holotanypus)	--	--	14.4	0.24
Ablabesmyia mallochii	--	--	7.2	0.12
Thienemanniella xena	--	--	7.2	0.12
Cricotopus tremulus grp.	28.7	0.49	--	--
Cricotopus bicinctus grp.	57.4	0.98	--	--
Cricotopus sylvestris grp.	28.7	0.49	--	--
Chironomus	523.9	8.90	7.2	0.12
Cladopelma	14.4	0.24	--	--
Cryptochironomus	93.3	1.59	552.6	9.13
Dicotendipes fumidus	674.6	11.46	--	--
Glyptotendipes	--	--	14.4	0.24
Harnischia	--	--	7.2	0.12
Parachironomus	14.4	0.24	--	--
Polypedilum halterale grp.	--	--	86.1	1.42
Polypedilum illinoense	--	--	7.2	0.12
Polypedilum scalaenum grp.	696.1	11.83	595.7	9.85
Stictochironomus	28.7	0.49	28.7	0.47
Tribelos fuscicorne	14.4	0.24	--	--
Cladotanytarsus mancus grp.	2,045.3	34.76	1,507.1	24.91
Rheotanytarsus	--	--	7.2	0.12
Helisoma	--	--	7.2	0.12
Corbicula fluminea	122.0	2.07	394.7	6.52
TOTAL BENTHOS	5,884.8	100.00	6,049.9	100.00
TOTAL TAXA RICHNESS	19		22	
EPT TAXA RICHNESS	1		1	

TABLE 3-74. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JUNE 2003 AND JULY 2004 FOR SAMPLING STATION 78 WITHIN HIGGINS CREEK.

TAXA	78 WILLE RD.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	5.4	0.04	--	--
Turbellaria	35.9	0.29	95.1	0.99
Plumatella	--	--	17.9	0.19
Oligochaeta	9,137.1	73.14	292.4	3.05
Erpobdella punctata punctata	--	--	17.9	0.19
Ostracoda	--	--	30.5	0.32
Caecidotea	1,614.6	12.93	8,624.0	89.97
Gammarus	17.9	0.14	--	--
Hydroptila	5.4	0.04	--	--
Chironomidae	82.5	0.66	--	--
Thienemannimyia grp.	--	--	5.4	0.06
Cricotopus tremulus grp.	830.6	6.65	66.4	0.69
Cricotopus bicinctus grp.	453.9	3.63	269.1	2.81
Cricotopus sylvestris grp.	285.3	2.28	41.3	0.43
Orthocladius	--	--	17.9	0.19
Nanocladius crassicornus/rectinervis	5.4	0.04	17.9	0.19
Chironomus	--	--	12.6	0.13
Polypedilum illinoense	--	--	35.9	0.37
Simulium	--	--	5.4	0.06
Physa	17.9	0.14	--	--
Ferrissia	--	--	35.9	0.37
TOTAL BENTHOS	12,491.9	100.00	9,585.6	100.00
TOTAL TAXA RICHNESS	11		16	
EPT TAXA RICHNESS	1		0	

TABLE 3-75. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JUNE 2003 AND JULY 2004 FOR SAMPLING STATION 78 WITHIN HIGGINS CREEK.

TAXA	78 WILLE RD.			
	2003		2004	
	#/m2	%	#/m2	%
Hydra	35.9	0.12	531.1	0.63
Turbellaria	7.2	0.02	15,365.2	18.36
Oligochaeta	22,340.9	74.40	2,203.2	2.63
Erpobdella punctata punctata	--	--	251.2	0.30
Ostracoda	--	--	3,243.8	3.88
Caecidotea	4,026.1	13.41	60,204.8	71.94
Orconectes	7.2	0.02	--	--
Hydropsychidae	--	--	43.1	0.05
Hydroptila	21.5	0.07	43.1	0.05
Chironomidae	473.7	1.58	--	--
Thienemannimyia grp.	--	--	35.9	0.04
Cricotopus tremulus grp.	1,069.3	3.56	14.4	0.02
Cricotopus bicinctus grp.	868.4	2.89	846.8	1.01
Cricotopus trifascia grp.	--	--	122.0	0.15
Cricotopus sylvestris grp.	488.0	1.63	43.1	0.05
Nanocladius crassicornus/rectinervis	--	--	416.2	0.50
Chironomus	437.8	1.46	--	--
Cryptochironomus	--	--	14.4	0.02
Dicrotendipes neomodestus	100.5	0.33	--	--
Endochironomus nigricans	--	--	7.2	0.01
Glyptotendipes	21.5	0.07	--	--
Parachironomus	28.7	0.10	--	--
Polypedilum flavum	--	--	14.4	0.02
Polypedilum illinoense	--	--	28.7	0.03
Rheotanytarsus	--	--	7.2	0.01
Pericoma	--	--	7.2	0.01
Physa	93.3	0.31	78.9	0.09
Ferrissia	--	--	71.8	0.09
Sphaerium simile	--	--	93.3	0.11
Pisidium	7.2	0.02	--	--
TOTAL BENTHOS	30,027.0	100.00	83,686.7	100.00
TOTAL TAXA RICHNESS	15		23	
EPT TAXA RICHNESS	1		2	

TABLE 3-76. COMPARISON OF HESTER-DENDY DENSITIES BETWEEN JUNE 2003 AND JULY-SEPTEMBER 2004 FOR SAMPLING STATIONS WITHIN THE DES PLAINES RIVER.

TAXA	13 LAKE COOK RD.			22 OGDEN AVE.			91 MATERIAL SERVICE RD.					
	2003			2004			2003			2004		
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
Hydra	818.1	5.94										
Turbellaria	91.5	0.66	77.1	2.57	26.9	2.23	351.6	8.15	358.8	2.16	1,828.1	28.48
Plumatella						1.8	0.15				5.4	0.08
Oligochaeta	1,099.7	7.99	579.5	19.30	349.8	28.97	425.2	9.85	143.5	0.87	518.5	8.08
Helobdella stagnalis			1.8	0.06								
Helobdella triseriatis			1.8	0.06								
Placobdella pediculata	1.8	0.01					9.0	0.21				
Mooreobdella microstoma	35.9	0.26	17.9	0.60	23.3	1.93	5.4	0.12			9.0	0.14
Caecidotea					1.8	0.15						
Gammarus	550.8	4.00	57.4	1.91			14.4	0.33			9.0	0.14
Gammarus fasciatus									17.9	0.11		
Orconectes												
Hydracarina							1.8	0.04				
Baetis intercalaris			7.2	0.24	3.6	0.30	265.5	6.15	592.0	3.57	251.2	3.91
Stenacron	25.1	0.18	26.9	0.90	152.5	12.63	55.6	1.29			17.9	0.28
Stenonema integrum	505.9	3.67	147.1	4.90			3.6	0.08				
Stenonema terminatum			17.9	0.60								
Stenonema exiguum	3.6	0.03										
Tricorythodes	53.8	0.39	184.8	6.15	3.6	0.30	57.4	1.33			17.9	0.28
Caenis	1.8	0.01					1.8	0.04				
Anthopotamus myops grp.	61.0	0.44	30.5	1.02								
Hexagenia	21.5	0.16										
Argia	16.1	0.12	21.5	0.72	91.5	7.58	16.1	0.37			5.4	0.08
Pertesta	39.5	0.29										
Trepobates							1.8	0.04				
Sialis			1.8	0.06								
Cyrnellus fraternus	3.6	0.03										
Cheumatopsyche	1,424.5	10.35	663.8	22.10	12.6	1.04	1,460.4	33.85	7,194.1	43.36	2,185.1	34.04
Hydropsyche	35.9	0.26							71.8	0.43		
Hydropsyche betteni							16.1	0.37				
Hydropsyche orris											14.4	0.22
Hydropsyche simulans	1.8	0.01	132.8	4.42							17.9	0.28
Hydropsyche bidens	17.9	0.13	25.1	0.84								
Ceratopsyche morosa			10.8	0.36			35.9	0.83	233.2	1.41	9.0	0.14
Potamyia flava	5.4	0.04										
Potamyia flava	17.9	0.13										
Hydroptila							12.6	0.29				
Petrophila												
Ancyronyx variegata			3.6	0.12							3.6	0.06
Dubiraphia			1.8	0.06								
Macronychus glabratus	1.8	0.01	16.1	0.54			10.8	0.25	17.9	0.11	16.1	0.25
Stenelmis			43.1	1.43	9.0	0.74	7.2	0.17			17.9	0.28
Stenelmis crenata grp.	157.9	1.15										
Ceratopogonidae	17.9	0.13										
Chironomidae	138.1	1.00			10.8	0.89			35.9	0.22		
Procladius (Holotanypus)					73.6	6.09						
Ablabesmyia janta					16.1	1.34						
Ablabesmyia mallochii	71.8	0.52			1.8	0.15						
Nilotanypus fimbriatus			25.1	0.84			61.0	1.41				

TABLE 3-76 (cont.)

TAXA (cont.)	13 LAKE COOK RD.			22 OGDEN AVE.			91 MATERIAL SERVICE RD.			
	2003	2004	2004	2003	2004	2004	2003	2003	2004	
	#/m ²	%	#/m ²	#/m ²	%	#/m ²	#/m ²	%	#/m ²	%
<i>Thienemanniya</i> grp.	143.5	1.04	25.1	5.4	0.45	120.2	2.79	71.8	0.43	--
<i>Corynoneura lobata</i>	--	--	--	--	--	37.7	0.87	--	--	--
<i>Thienemanniella xena</i>	--	--	7.2	10.8	0.89	19.7	0.46	129.2	0.78	39.5
<i>Thienemanniella similis</i>	71.8	0.52	--	--	--	--	--	--	--	--
<i>Cricotopus tremulus</i> grp.	394.7	2.87	--	--	--	--	--	--	--	--
<i>Cricotopus binctus</i> grp.	143.5	1.04	--	--	--	--	--	--	--	--
<i>Cricotopus sylvestris</i> grp.	340.9	2.48	--	--	--	--	--	129.2	0.78	--
<i>Orthocladus</i>	--	--	--	--	--	--	--	--	--	--
<i>Orthocladus distinctus</i>	17.9	0.13	--	--	--	154.3	3.58	--	--	--
<i>Nanocladius crassicornus/rectinervis</i>	--	--	--	21.5	1.78	109.4	2.54	71.8	0.43	53.8
<i>Rheocricotopus robacki</i>	--	--	--	10.8	0.89	--	--	129.2	0.78	229.6
<i>Tvetenia discoloripes</i> grp.	--	--	25.1	1.8	0.15	122.0	2.83	--	--	--
<i>Chironomus</i>	--	--	--	5.4	0.45	--	--	--	--	17.9
<i>Dicrotendipes</i>	--	--	7.2	--	--	--	--	--	--	17.9
<i>Dicrotendipes neomodestus</i>	242.2	1.76	--	--	--	14.4	0.33	--	--	--
<i>Dicrotendipes simpsoni</i>	--	--	12.6	66.4	5.50	--	--	--	--	--
<i>Endochironomus nigricans</i>	17.9	0.13	3.6	--	--	--	--	--	--	--
<i>Glyptotendipes</i>	1,706.1	12.39	34.1	3.6	0.30	1.8	0.04	71.8	0.43	5.4
<i>Microtendipes</i>	--	--	41.3	1.37	--	--	--	--	--	0.08
<i>Paracladopelma</i>	71.8	0.52	--	3.6	0.30	--	--	--	--	--
<i>Polypedilum flavum</i>	2,242.6	16.29	645.9	9.0	0.74	681.7	15.80	6,709.7	40.44	566.9
<i>Polypedilum illinoense</i>	37.7	0.27	--	61.0	5.05	75.3	1.75	129.2	0.78	10.8
<i>Polypedilum scalaenum</i> grp.	181.2	1.32	32.3	131.0	10.85	1.8	0.04	--	--	--
<i>Stenochironomus</i>	--	--	7.2	39.5	3.27	50.2	1.16	--	--	5.4
<i>Tribelos fuscicorne</i>	--	--	1.8	--	--	--	--	--	--	0.08
<i>Paratanytarsus</i>	17.9	0.13	--	--	--	--	--	--	--	--
<i>Rheotanytarsus</i>	2,906.4	21.11	46.6	1.55	--	39.5	0.91	394.7	2.38	344.5
<i>Tanytarsus</i>	--	--	--	--	--	14.4	0.33	--	--	--
<i>Stimulium</i>	--	--	--	--	--	--	--	35.9	0.22	3.6
<i>Hemerodromia</i>	--	--	--	--	--	1.8	0.04	--	--	1.8
<i>Pleurocera</i>	--	--	--	16.1	1.34	--	--	--	--	--
<i>Physa</i>	3.6	0.03	--	1.8	0.15	--	--	--	--	--
<i>Menetus dilatatus</i>	--	--	3.6	0.12	--	--	--	--	--	--
<i>Ferrissia</i>	5.4	0.04	1.8	28.7	2.38	28.7	0.67	17.9	0.11	172.2
<i>Corbicula fluminea</i>	--	--	5.4	0.18	--	10.8	0.25	--	--	--
<i>Sphaerium</i>	--	--	5.4	0.18	--	--	--	--	--	--
<i>Musculium</i>	--	--	1.8	0.06	--	--	--	--	--	--
<i>Musculium transversum</i>	--	--	--	--	--	--	--	--	--	3.6
<i>Dreissena polymorpha</i>	--	--	--	--	--	--	--	--	--	14.4
TOTAL BENTHOS	13,767.5	100.00	3,003.2	1,207.4	100.00	4,314.7	100.00	16,591.3	100.00	6,419.1
TOTAL TAXA RICHNESS	45		41	31		38		21		32
EPT TAXA RICHNESS	15		10	4		9		4		7

decline of one or two dominant taxa. The relatively pollution sensitive chironomid *Rheotanytarsus* was the dominant taxa during 2003. Despite a decrease in density by over half between years, the EPT taxon *Cheumatopsyche* was dominant in 2004.

In contrast, both total taxa richness and EPT taxa richness increased in the Station 13 Ponar samples and density declined only modestly (Table 3-77). As with the HDs, dominance shifted between taxa from 2003 to 2004. In 2003, Asiatic clam was dominant. However, in 2004, the midge *Polypedilum flavum* became the dominant taxon in the Station 13 Ponar samples.

The incidence of head capsule deformities was very low both years at Station 13. In 2003, no deformities were observed and in 2004 only one midge specimen exhibited deformities (Table 3-56).

At Station 22, total taxa and especially EPT taxa richness increased in the HD samples (Table 3-76). Density also increased nearly four fold between 2003 and 2004. Much of the density increase was due to a large increase in *Cheumatopsyche* numbers. Oligochaeta was the dominant taxon in 2003 while *Cheumatopsyche* was dominant in 2004. In addition, chironomid head capsule deformities decreased from six specimens in 2003 to zero in 2004 (Table 3-26).

Total taxa richness and density in the Ponar samples from Station 22 were essentially unchanged from 2003 to 2004 (Table 3-77). In addition, Oligochaeta was the dominant taxon both years. However, EPT richness increased from only two taxa in 2003 to seven taxa in 2004.

Collectively, the HD and Ponar results suggest improving conditions at Station 22, especially in terms of EPT richness.

At Station 91, both total and EPT richness in the HD samples increased from 2003 to 2004 (Table 3-76). Density declined due mainly to declines in *Cheumatopsyche* and *Polypedilum flavum*. Nonetheless, *Cheumatopsyche* remained the dominant taxon in both years. No head capsule deformities were observed in the HD samples from Station 91 in either year.

Total richness was similar and EPT richness remained unchanged from 2003 to 2004 in the Ponar samples (Table 3-77). Ponar density declined 10-fold from 2003 to 2004 due to greatly reduced numbers of Oligochaeta, *Gammarus fasciatus*, *Cheumatopsyche*, *Cricotopus bicinctus* grp., *Chironomus*, and *Polypedilum flavum*. In addition, the incidence of head capsule deformities decreased from 2003 to 2004. Six specimens exhibited deformities in the 2003 Ponar samples as opposed to zero in 2004 (Table 3-26). Despite a substantial decline in density, Oligochaeta was the dominant taxon in both years.

Collectively, the HD and Ponar data suggest that conditions were fairly similar between the years at Station 91.

TABLE 3-77. COMPARISON OF PETITE PONAR DENSITIES BETWEEN JUNE 2003 AND JULY-SEPTEMBER 2004 FOR SAMPLING STATIONS WITHIN THE DES PLAINES RIVER.

TAXA	13 LAKE COOK RD.			22 OGDEN AVE.			91 MATERIAL SERVICE RD.					
	2003		2004		2003		2004		2003		2004	
	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%	#/m ²	%
Turbellaria	--	--	--	--	244.0	7.94	28.7	0.86	215.3	0.44	78.9	1.72
Nematoda	373.2	10.24	--	--	2,002.3	65.19	2,260.6	68.03	29,266.3	60.37	2,949.6	64.42
Oligochaeta	--	--	14.4	0.70	7.2	0.23	--	--	93.3	0.19	--	--
Helobdella stagnalis	--	--	--	--	--	--	--	--	21.5	0.04	--	--
Mooreobdella microstoma	--	--	--	--	--	--	--	--	--	--	322.9	7.05
Ostracoda	--	--	28.7	1.40	50.2	1.64	--	--	71.8	0.15	--	--
Caecidotea	--	--	--	--	7.2	0.23	--	--	--	--	--	--
Gammarus	--	--	150.7	7.34	--	--	14.4	0.43	3,624.2	7.48	78.9	1.72
Gammarus fasciatus	57.4	1.57	--	--	--	--	7.2	0.22	21.5	0.04	21.5	0.47
Baetis intercalaris	--	--	--	--	--	--	7.2	0.22	--	--	--	--
Baetis flavistriga	--	--	--	--	--	--	7.2	0.22	--	--	--	--
Stenacron	--	--	--	--	--	--	--	--	--	--	--	--
Stenonema terminatum	--	--	28.7	1.40	--	--	--	--	--	--	--	--
Tricorythodes	--	--	21.5	1.05	64.6	2.10	71.8	2.16	71.8	0.15	21.5	0.47
Caenis	--	--	--	--	--	--	--	--	21.5	0.04	7.2	0.16
Anthopotamus myops grp.	--	--	35.9	1.75	--	--	--	--	--	--	--	--
Hexagenia	--	--	--	--	--	--	--	--	--	--	--	--
Corixidae	50.2	1.38	--	--	--	--	--	--	--	--	--	--
Cheumatopsyche	--	--	229.7	11.19	107.6	3.50	21.5	0.65	2,282.2	4.71	14.4	0.31
Ceratopsyche morosa	--	--	--	--	--	--	7.2	0.22	--	--	93.3	2.04
Hydroptila	--	--	--	--	--	--	7.2	0.22	--	--	--	--
Dubiraphia	7.2	0.20	7.2	0.35	--	--	--	--	--	--	--	--
Stenelmis	143.5	3.94	57.4	2.80	28.7	0.93	50.2	1.51	71.8	0.15	57.4	1.25
Stenelmis crenata grp.	35.9	0.98	--	--	--	--	--	--	--	--	--	--
Ceratopogonidae	--	--	--	--	--	--	--	--	--	--	--	--
Chironomidae	--	--	--	--	--	--	--	--	488.0	1.01	--	--
Procladius (Holotanypus)	--	--	14.4	0.70	64.6	2.10	35.9	1.08	107.6	0.22	14.4	0.31
Ablabesmyia mallochii	--	--	--	--	7.2	0.23	--	--	71.8	0.15	7.2	0.16
Thienemanniya grp.	--	--	93.3	4.55	14.4	0.47	7.2	0.22	--	--	--	--
Thienemanniella xena	--	--	14.4	0.70	--	--	7.2	0.22	71.8	0.15	78.9	1.72
Thienemanniella similis	--	--	--	--	--	--	--	--	179.4	0.37	--	--
Cricotopus bicinctus grp.	78.9	2.17	--	--	--	--	--	--	1,040.6	2.15	28.7	0.63
Cricotopus trifascia grp.	--	--	--	--	--	--	--	--	143.5	0.30	--	--
Orthocladus	--	--	--	--	--	--	--	--	--	--	43.1	0.94
Nanocladius distinctus	--	--	--	--	--	--	--	--	143.5	0.30	--	--
Rheocricotopus robacki	--	--	14.4	0.70	--	--	--	--	--	--	--	--
Chironomus	--	--	--	--	14.4	0.47	--	--	4,148.1	8.56	35.9	0.78
Cladopelma	28.7	0.79	--	--	--	--	--	--	--	--	--	--
Cryptochironomus	179.4	4.92	50.2	2.45	28.7	0.93	7.2	0.22	71.8	0.15	7.2	0.16
Dicrotendipes	--	--	14.4	0.70	--	--	--	--	--	--	35.9	0.78
Dicrotendipes neomodestus	136.4	3.74	--	--	--	--	--	--	--	--	14.4	0.31
Glyptotendipes	21.5	0.59	--	--	--	--	--	--	35.9	0.07	--	--
Microtendipes	114.8	3.15	14.4	0.70	--	--	--	--	71.8	0.15	--	--
Paracladopelma	531.1	14.57	--	--	--	--	--	--	--	--	--	--
Polypedium flavum	28.7	0.79	351.7	17.13	14.4	0.47	--	--	5,238.9	10.81	236.8	5.17
Polypedium halterale grp.	--	--	57.4	2.80	--	--	--	--	--	--	7.2	0.16
Polypedium illinoense	--	--	--	--	--	--	--	--	107.6	0.22	7.2	0.16
Polypedium scalaenum grp.	889.9	24.41	215.3	10.49	172.2	5.61	7.2	0.22	--	--	71.8	1.57

TABLE 3-77 (cont.)

TAXA (cont.)	13 LAKE COOK RD.		22 OGDEN AVE.		91 MATERIAL SERVICE RD.	
	2003	2004	2003	2004	2003	2004
	#/m ²	%	#/m ²	%	#/m ²	%
Saetheria	43.1	1.18	179.4	8.74	--	--
Stictochironomus	21.5	0.59	--	--	--	--
Tribelos fuscicorne	7.2	0.20	--	--	--	7.2 0.16
Cladotanytarsus mancus grp.	21.5	0.59	35.9	1.75	--	--
Cladotanytarsus vanderwulpi grp.	136.4	3.74	200.9	9.79	--	7.2 0.16
Paratanytarsus	43.1	1.18	--	--	--	--
Rheotanytarsus	21.5	0.59	14.4	0.70	--	28.7 0.63
Tanytarsus	--	--	35.9	1.75	--	114.8 2.51
Tanytarsus guerlus grp.	--	--	--	--	502.4	1.04
Ammicola	--	--	7.2	0.23	--	--
Pleurocera	--	--	78.9	2.57	--	--
Physa	--	--	--	--	21.5	0.04
Menetus dilatatus	--	--	--	--	--	14.4 0.31
Ferrissia	--	--	7.2	0.23	28.7	0.86
Corbicula fluminea	674.6	18.50	50.2	1.64	667.4	20.09
Sphaerium	--	--	--	--	43.1	1.30
Musculium	--	--	--	--	7.2	0.22
Pisidium	--	--	21.5	1.05	100.5	3.27
TOTAL BENTHOS	3,645.7	100.00	2,052.5	100.00	3,322.8	100.00
TOTAL TAXA RICHNESS	23	27	20	21	30	32
EPT TAXA RICHNESS	1	4	2	7	4	4

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APPENDIX A

2003 CENTER AND NEAR SHORE HD AND PONAR DATA

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= C.S.C.,
 LOCATION= ASHLAND AVE.,
 STATION= 58,
 and DATE= 05SEP03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	63	226.0	2.29	0	0.0	0.00
Turbellaria	48	172.2	1.74	283	1,015.4	16.73
Oligochaeta	898	3,222.1	32.63	377	1,352.7	22.28
Helobdella triserialis	20	71.8	0.73	0	0.0	0.00
Erpobdella punctata punctata	13	46.6	0.47	0	0.0	0.00
Caecidotea	8	28.7	0.29	3	10.8	0.18
Gammarus fasciatus	28	100.5	1.02	175	627.9	10.34
Argia	0	0.0	0.00	2	7.2	0.12
Chironomidae	18	64.6	0.65	7	25.1	0.41
Procladius (Holotanypus)	10	35.9	0.36	0	0.0	0.00
Cricotopus bicinctus grp.	20	71.8	0.73	20	71.8	1.18
Cricotopus sylvestris grp.	0	0.0	0.00	5	17.9	0.30
Nanocladius distinctus	160	574.1	5.81	52	186.6	3.07
Dicrotendipes	0	0.0	0.00	10	35.9	0.59
Dicrotendipes simpsoni	888	3,186.2	32.27	377	1,352.7	22.28
Glyptotendipes	0	0.0	0.00	5	17.9	0.30
Polypedilum illinoense	0	0.0	0.00	15	53.8	0.89
Stenochironomus	0	0.0	0.00	10	35.9	0.59
Xenochironomus xenolabis	0	0.0	0.00	20	71.8	1.18
Helisoma	5	17.9	0.18	160	574.1	9.46
Ferrissia	35	125.6	1.27	58	208.1	3.43
Dreissena polymorpha	538	1,930.4	19.55	113	405.5	6.68
TOTAL BENTHOS	2,752	9,874.4	100.00	1,692	6,071.0	100.00

WATERWAY= C.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 59,
 and DATE= 31JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	290	1,040.5	3.90	0	0.0	0.00
Turbellaria	0	0.0	0.00	1	3.6	0.08
Oligochaeta	5,760	20,667.4	77.52	531	1,905.3	41.81
Caecidotea	40	143.5	0.54	14	50.2	1.10
Gammarus	50	179.4	0.67	62	222.5	4.88
Chironomidae	30	107.6	0.40	22	78.9	1.73
Procladius (Holotanypus)	10	35.9	0.13	0	0.0	0.00
Cricotopus bicinctus grp.	80	287.0	1.08	6	21.5	0.47
Cricotopus sylvestris grp.	0	0.0	0.00	262	940.1	20.63
Nanocladius distinctus	160	574.1	2.15	33	118.4	2.60
Rheocricotopus robacki	10	35.9	0.13	0	0.0	0.00
Chironomus	0	0.0	0.00	6	21.5	0.47
Dicrotendipes neomodestus	0	0.0	0.00	6	21.5	0.47
Dicrotendipes simpsoni	880	3,157.5	11.84	249	893.4	19.61
Glyptotendipes	0	0.0	0.00	6	21.5	0.47
Polypedilum illinoense	80	287.0	1.08	72	258.3	5.67
Paratanytarsus	10	35.9	0.13	0	0.0	0.00
Physa	10	35.9	0.13	0	0.0	0.00
Corbicula fluminea	20	71.8	0.27	0	0.0	0.00
TOTAL BENTHOS	7,430	26,659.5	100.00	1,270	4,556.9	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= C.S.C.,
 LOCATION= ROUTE 83,
 STATION= 43,
 and DATE= 30JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	159	570.5	50.80	5	17.9	0.23
Turbellaria	4	14.4	1.28	0	0.0	0.00
Plumatella	0	0.0	0.00	5	17.9	0.23
Oligochaeta	91	326.5	29.07	430	1,542.9	20.00
Mooreobdella microstoma	4	14.4	1.28	0	0.0	0.00
Caecidotea	3	10.8	0.96	0	0.0	0.00
Gammarus fasciatus	19	68.2	6.07	120	430.6	5.58
Caenis	0	0.0	0.00	5	17.9	0.23
Cynnellus fraternus	1	3.6	0.32	0	0.0	0.00
Chironomidae	0	0.0	0.00	45	161.5	2.09
Procladius (Holotanypus)	2	7.2	0.64	0	0.0	0.00
Cricotopus bicinctus grp.	0	0.0	0.00	15	53.8	0.70
Cricotopus sylvestris grp.	8	28.7	2.56	1,180	4,233.9	54.88
Nanocladius distinctus	0	0.0	0.00	15	53.8	0.70
Dicrotendipes simpsoni	18	64.6	5.75	45	161.5	2.09
Glyptotendipes	0	0.0	0.00	165	592.0	7.67
Parachironomus	0	0.0	0.00	30	107.6	1.40
Polypedilum illinoense	1	3.6	0.32	60	215.3	2.79
Paratanytarsus	1	3.6	0.32	30	107.6	1.40
Amnicola	1	3.6	0.32	0	0.0	0.00
Physa	1	3.6	0.32	0	0.0	0.00
TOTAL BENTHOS	313	1,123.1	100.00	2,150	7,714.4	100.00

WATERWAY= C.S.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 75,
 and DATE= 18JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	10	35.9	0.09
Turbellaria	190	681.7	4.23	1,130	4,054.5	9.61
Oligochaeta	4,140	14,854.7	92.20	9,970	35,773.2	84.78
Gammarus fasciatus	0	0.0	0.00	70	251.2	0.60
Chironomidae	10	35.9	0.22	0	0.0	0.00
Procladius (Holotanypus)	10	35.9	0.22	0	0.0	0.00
Ablabesmyia mallochii	10	35.9	0.22	0	0.0	0.00
Nanocladius distinctus	10	35.9	0.22	40	143.5	0.34
Dicrotendipes simpsoni	120	430.6	2.67	520	1,865.8	4.42
Parachironomus	0	0.0	0.00	20	71.8	0.17
TOTAL BENTHOS	4,490	16,110.5	100.00	11,760	42,195.9	100.00

WATERWAY= C.S.S.C.,
 LOCATION= HARLEM AVE.,
 STATION= 41,
 and DATE= 21JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	10	35.9	0.13
Turbellaria	150	538.2	1.94	200	717.6	2.58
Oligochaeta	7,230	25,941.9	93.65	6,630	23,789.0	85.66
Helobdella stagnalis	0	0.0	0.00	10	35.9	0.13
Caecidotea	10	35.9	0.13	10	35.9	0.13
Gammarus	0	0.0	0.00	110	394.7	1.42
Chironomidae	10	35.9	0.13	80	287.0	1.03
Cricotopus sylvestris grp.	10	35.9	0.13	20	71.8	0.26
Nanocladius distinctus	40	143.5	0.52	260	932.9	3.36
Chironomus	20	71.8	0.26	20	71.8	0.26
Dicrotendipes simpsoni	240	861.1	3.11	360	1,291.7	4.65
Glyptotendipes	10	35.9	0.13	20	71.8	0.26
Physa	0	0.0	0.00	10	35.9	0.13
TOTAL BENTHOS	7,720	27,700.0	100.00	7,740	27,771.8	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= C.S.S.C.,
 LOCATION= LOCKPORT,
 STATION= 92,
 and DATE= 29JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	204	732.0	9.55	1	3.6	0.07
Turbellaria	624	2,239.0	29.21	2	7.2	0.15
Oligochaeta	577	2,070.3	27.01	725	2,601.4	52.69
Helobdella stagnalis	23	82.5	1.08	0	0.0	0.00
Helobdella triserialis	3	10.8	0.14	0	0.0	0.00
Mooreobdella microstoma	1	3.6	0.05	0	0.0	0.00
Caecidotea	6	21.5	0.28	0	0.0	0.00
Gammarus fasciatus	406	1,456.8	19.01	407	1,460.4	29.58
Berosus	1	3.6	0.05	0	0.0	0.00
Chironomidae	4	14.4	0.19	1	3.6	0.07
Cricotopus bicinctus grp.	0	0.0	0.00	2	7.2	0.15
Cricotopus sylvestris grp.	0	0.0	0.00	36	129.2	2.62
Nanocladius distinctus	36	129.2	1.69	71	254.8	5.16
Dicrotendipes simpsoni	229	821.7	10.72	97	348.0	7.05
Glyptotendipes	0	0.0	0.00	12	43.1	0.87
Polypedilum illinoense	0	0.0	0.00	5	17.9	0.36
Polypedilum scalaenum grp.	3	10.8	0.14	0	0.0	0.00
Stenochironomus	3	10.8	0.14	0	0.0	0.00
Xenochironomus xenolabis	6	21.5	0.28	14	50.2	1.02
Ferrissia	2	7.2	0.09	3	10.8	0.22
Corbicula fluminea	8	28.7	0.37	0	0.0	0.00
TOTAL BENTHOS	2,136	7,664.2	100.00	1,376	4,937.2	100.00

WATERWAY= CALUMET R.,
 LOCATION= EWING AVE.,
 STATION= 49,
 and DATE= 01AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	6,420	23,035.5	95.11	147	527.4	40.27
Oligochaeta	160	574.1	2.37	86	308.6	23.56
Caecidotea	30	107.6	0.44	3	10.8	0.82
Gammarus fasciatus	10	35.9	0.15	35	125.6	9.59
Hydropsyche	0	0.0	0.00	1	3.6	0.27
Hydropsyche orris	10	35.9	0.15	0	0.0	0.00
Chironomidae	0	0.0	0.00	3	10.8	0.82
Procladius (Holotanypus)	0	0.0	0.00	1	3.6	0.27
Ablabesmyia mallochii	0	0.0	0.00	1	3.6	0.27
Cricotopus bicinctus grp.	20	71.8	0.30	7	25.1	1.92
Cricotopus sylvestris grp.	0	0.0	0.00	4	14.4	1.10
Nanocladius distinctus	0	0.0	0.00	3	10.8	0.82
Dicrotendipes simpsoni	20	71.8	0.30	10	35.9	2.74
Glyptotendipes	10	35.9	0.15	3	10.8	0.82
Parachironomus	10	35.9	0.15	2	7.2	0.55
Polypedilum flavum	50	179.4	0.74	0	0.0	0.00
Rheotanytarsus	10	35.9	0.15	0	0.0	0.00
Dreissena polymorpha	0	0.0	0.00	59	211.7	16.16
TOTAL BENTHOS	6,750	24,219.6	100.00	365	1,309.7	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R.,
 LOCATION= LAKE COOK RD.,
 STATION= 13,
 and DATE= 18JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	340	1,219.9	5.75	116	416.2	6.58
Turbellaria	50	179.4	0.85	1	3.6	0.06
Oligochaeta	470	1,686.4	7.95	143	513.1	8.11
Helobdella triserialis	0	0.0	0.00	1	3.6	0.06
Mooreobdella microstoma	0	0.0	0.00	1	3.6	0.06
Caecidotea	20	71.8	0.34	0	0.0	0.00
Gammarus fasciatus	40	143.5	0.68	267	958.0	15.14
Stenacron	0	0.0	0.00	14	50.2	0.79
Stenonema integrum	240	861.1	4.06	42	150.7	2.38
Stenonema exiguum	0	0.0	0.00	2	7.2	0.11
Tricorythodes	30	107.6	0.51	0	0.0	0.00
Caenis	0	0.0	0.00	1	3.6	0.06
Anthopotamus myops grp.	30	107.6	0.51	4	14.4	0.23
Hexagenia	10	35.9	0.17	2	7.2	0.11
Argia	0	0.0	0.00	9	32.3	0.51
Perlesta	10	35.9	0.17	12	43.1	0.68
Cynnellus fraternus	0	0.0	0.00	2	7.2	0.11
Cheumatopsyche	790	2,834.6	13.37	4	14.4	0.23
Hydropsyche	20	71.8	0.34	0	0.0	0.00
Hydropsyche simulans	0	0.0	0.00	1	3.6	0.06
Hydropsyche bidens	10	35.9	0.17	0	0.0	0.00
Potamyia flava	0	0.0	0.00	3	10.8	0.17
Hydroptila	10	35.9	0.17	0	0.0	0.00
Macronychus glabratus	0	0.0	0.00	1	3.6	0.06
Stenelmis crenata grp.	70	251.2	1.18	18	64.6	1.02
Ceratopogonidae	0	0.0	0.00	10	35.9	0.57
Chironomidae	70	251.2	1.18	7	25.1	0.40
Ablabesmyia janta	40	143.5	0.68	0	0.0	0.00
Thienemanniya grp.	70	251.2	1.18	10	35.9	0.57
Thienemanniella similis	40	143.5	0.68	0	0.0	0.00
Cricotopus tremulus grp.	220	789.4	3.72	0	0.0	0.00
Cricotopus bicinctus grp.	70	251.2	1.18	10	35.9	0.57
Cricotopus sylvestris grp.	190	681.7	3.21	0	0.0	0.00
Nanocladius distinctus	0	0.0	0.00	10	35.9	0.57
Dicrotendipes neomodestus	0	0.0	0.00	135	484.4	7.65
Endochironomus nigricans	0	0.0	0.00	10	35.9	0.57
Glyptotendipes	110	394.7	1.86	841	3,017.6	47.68
Paracladopelma	40	143.5	0.68	0	0.0	0.00
Polypedilum flavum	1,240	4,449.2	20.98	10	35.9	0.57
Polypedilum illinoense	0	0.0	0.00	21	75.3	1.19
Polypedilum scalaenum grp.	70	251.2	1.18	31	111.2	1.76
Paratanytarsus	0	0.0	0.00	10	35.9	0.57
Rheotanytarsus	1,610	5,776.8	27.24	10	35.9	0.57
Physa	0	0.0	0.00	2	7.2	0.11
Ferrissia	0	0.0	0.00	3	10.8	0.17
TOTAL BENTHOS	5,910	21,205.6	100.00	1,764	6,329.4	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R.,
 LOCATION= MATERIAL SERVICE RD.,
 STATION= 91,
 and DATE= 27JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	10	35.9	0.22	--	--	--
Turbellaria	100	358.8	2.16	--	--	--
Oligochaeta	40	143.5	0.87	--	--	--
Orconectes	5	17.9	0.11	--	--	--
Baetis intercalaris	165	592.0	3.57	--	--	--
Cheumatopsyche	2,005	7,194.1	43.36	--	--	--
Hydropsyche	20	71.8	0.43	--	--	--
Ceratopsyche morosa	65	233.2	1.41	--	--	--
Macronychus glabratus	5	17.9	0.11	--	--	--
Chironomidae	10	35.9	0.22	--	--	--
Thienemannimyia grp.	20	71.8	0.43	--	--	--
Thienemanniella xena	36	129.2	0.78	--	--	--
Cricotopus bicinctus grp.	36	129.2	0.78	--	--	--
Nanocladius distinctus	20	71.8	0.43	--	--	--
Nanocladius crassicornus/rectinervis	36	129.2	0.78	--	--	--
Glyptotendipes	20	71.8	0.43	--	--	--
Polypedilum flavum	1,870	6,709.7	40.44	--	--	--
Polypedilum illinoense	36	129.2	0.78	--	--	--
Rheotanytarsus	110	394.7	2.38	--	--	--
Simulium	10	35.9	0.22	--	--	--
Ferrissia	5	17.9	0.11	--	--	--
TOTAL BENTHOS	4,624	16,591.3	100.00	--	--	--

WATERWAY= DES PLAINES R.,
 LOCATION= OGDEN AVE.,
 STATION= 22,
 and DATE= 07AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	7	25.1	1.22	0	0.0	0.00
Turbellaria	15	53.8	2.60	0	0.0	0.00
Plumatella	1	3.6	0.17	0	0.0	0.00
Oligochaeta	172	617.2	29.86	23	82.5	23.71
Caecidotea	8	28.7	1.39	5	17.9	5.15
Gammarus	1	3.6	0.17	0	0.0	0.00
Baetis intercalaris	0	0.0	0.00	2	7.2	2.06
Stenacron	84	301.4	14.58	1	3.6	1.03
Tricorythodes	2	7.2	0.35	0	0.0	0.00
Argia	51	183.0	8.85	0	0.0	0.00
Cheumatopsyche	0	0.0	0.00	7	25.1	7.22
Stenelmis	0	0.0	0.00	5	17.9	5.15
Chironomidae	6	21.5	1.04	0	0.0	0.00
Procladius (Holotanypus)	41	147.1	7.12	0	0.0	0.00
Ablabesmyia janta	8	28.7	1.39	1	3.6	1.03
Ablabesmyia mallochii	0	0.0	0.00	1	3.6	1.03
Thienemannimyia grp.	2	7.2	0.35	1	3.6	1.03
Thienemanniella xena	0	0.0	0.00	6	21.5	6.19
Nanocladius distinctus	8	28.7	1.39	4	14.4	4.12
Nanocladius crassicornus/rectinervis	4	14.4	0.69	2	7.2	2.06
Rheocricotopus robacki	0	0.0	0.00	1	3.6	1.03
Chironomus	2	7.2	0.35	1	3.6	1.03
Dicrotendipes simpsoni	37	132.8	6.42	0	0.0	0.00
Glyptotendipes	2	7.2	0.35	0	0.0	0.00
Paracladopelma	2	7.2	0.35	0	0.0	0.00
Polypedilum flavum	2	7.2	0.35	3	10.8	3.09
Polypedilum illinoense	8	28.7	1.39	26	93.3	26.80
Polypedilum scalaenum grp.	66	236.8	11.46	7	25.1	7.22
Stenochironomus	22	78.9	3.82	0	0.0	0.00
Pleurocera	9	32.3	1.56	0	0.0	0.00
Physa	0	0.0	0.00	1	3.6	1.03
Ferrissia	16	57.4	2.78	0	0.0	0.00
TOTAL BENTHOS	576	2,066.7	100.00	97	348.0	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= G.C.R.,
 LOCATION= BURNHAM AVE.,
 STATION= 86,
 and DATE= 03SEP03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	124	444.9	94.66	152	545.4	87.36
Helobdella stagnalis	1	3.6	0.76	0	0.0	0.00
Erpobdella punctata punctata	2	7.2	1.53	0	0.0	0.00
Mooreobdella microstoma	0	0.0	0.00	1	3.6	0.57
Chironomidae	0	0.0	0.00	1	3.6	0.57
Tanypus	1	3.6	0.76	0	0.0	0.00
Ablabesmyia janta	0	0.0	0.00	1	3.6	0.57
Cricotopus bicinctus grp.	1	3.6	0.76	0	0.0	0.00
Cricotopus sylvestris grp.	2	7.2	1.53	8	28.7	4.60
Parachironomus	0	0.0	0.00	9	32.3	5.17
Helisoma	0	0.0	0.00	2	7.2	1.15
TOTAL BENTHOS	131	470.0	100.00	174	624.3	100.00

WATERWAY= HIGGINS CR.,
 LOCATION= WILLE RD.,
 STATION= 78,
 and DATE= 09JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	3	10.8	0.17
Turbellaria	10	35.9	0.19	10	35.9	0.56
Oligochaeta	3,710	13,311.8	71.62	1,383	4,962.3	77.57
Caecidotea	690	2,475.8	13.32	210	753.5	11.78
Gammarus	10	35.9	0.19	0	0.0	0.00
Hydroptila	0	0.0	0.00	3	10.8	0.17
Chironomidae	40	143.5	0.77	6	21.5	0.34
Cricotopus tremulus grp.	450	1,614.6	8.69	13	46.6	0.73
Cricotopus bicinctus grp.	170	610.0	3.28	83	297.8	4.66
Cricotopus sylvestris grp.	100	358.8	1.93	59	211.7	3.31
Nanocladius crassicornus/rectinervis	0	0.0	0.00	3	10.8	0.17
Physa	0	0.0	0.00	10	35.9	0.56
TOTAL BENTHOS	5,180	18,586.3	100.00	1,783	6,397.6	100.00

WATERWAY= L.C.R.,
 LOCATION= AHSLAND AVE.,
 STATION= 57,
 and DATE= 13AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	257	922.1	13.76	371	1,331.2	31.52
Turbellaria	3	10.8	0.16	7	25.1	0.59
Oligochaeta	353	1,266.6	18.90	345	1,237.9	29.31
Helobdella triserialis	19	68.2	1.02	17	61.0	1.44
Caecidotea	81	290.6	4.34	37	132.8	3.14
Gammarus	1	3.6	0.05	5	17.9	0.42
Stenacron	1	3.6	0.05	3	10.8	0.25
Enallagma	1	3.6	0.05	0	0.0	0.00
Cheumatopsyche	7	25.1	0.37	1	3.6	0.08
Hydropsyche betteni	3	10.8	0.16	0	0.0	0.00
Chironomidae	0	0.0	0.00	1	3.6	0.08
Ablabesmyia janta	3	10.8	0.16	1	3.6	0.08
Thienemannimyia grp.	29	104.1	1.55	3	10.8	0.25
Corynoneura	3	10.8	0.16	0	0.0	0.00
Cricotopus sylvestris grp.	0	0.0	0.00	1	3.6	0.08
Nanocladius distinctus	2	7.2	0.11	6	21.5	0.51
Nanocladius crassicornus/rectinervis	5	17.9	0.27	1	3.6	0.08
Rheocricotopus robacki	2	7.2	0.11	0	0.0	0.00
Chironomus	0	0.0	0.00	1	3.6	0.08
Cryptochironomus	2	7.2	0.11	4	14.4	0.34
Dicrotendipes neomodestus	3	10.8	0.16	2	7.2	0.17
Dicrotendipes simpsoni	43	154.3	2.30	23	82.5	1.95
Glyptotendipes	0	0.0	0.00	2	7.2	0.17
Parachironomus	2	7.2	0.11	1	3.6	0.08

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= L.C.R.,
 LOCATION= AHSLAND AVE.,
 STATION= 57,
 and DATE= 13AUG03

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Polypedilum fallax grp.	5	17.9	0.27	2	7.2	0.17
Polypedilum illinoense	32	114.8	1.71	14	50.2	1.19
Polypedilum scalaenum grp.	11	39.5	0.59	8	28.7	0.68
Paratanytarsus	9	32.3	0.48	2	7.2	0.17
Physa	5	17.9	0.27	19	68.2	1.61
Helisoma	0	0.0	0.00	22	78.9	1.87
Ferrissia	986	3,537.9	52.78	278	997.5	23.62
TOTAL BENTHOS	1,868	6,702.5	100.00	1,177	4,223.2	100.00

WATERWAY= L.C.R.,
 LOCATION= HALSTED ST.,
 STATION= 76,
 and DATE= 11JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	1,940	6,960.9	43.99	261	936.5	26.26
Turbellaria	5	17.9	0.11	0	0.0	0.00
Plumatella	0	0.0	0.00	1	3.6	0.10
Oligochaeta	2,070	7,427.3	46.94	176	631.5	17.71
Mooreobdella microstoma	10	35.9	0.23	0	0.0	0.00
Caecidotea	0	0.0	0.00	5	17.9	0.50
Gammarus fasciatus	55	197.3	1.25	53	190.2	5.33
Cheumatopsyche	0	0.0	0.00	1	3.6	0.10
Chironomidae	10	35.9	0.23	17	61.0	1.71
Cricotopus bicinctus grp.	10	35.9	0.23	28	100.5	2.82
Cricotopus sylvestris grp.	20	71.8	0.45	80	287.0	8.05
Nanocladius distinctus	15	53.8	0.34	75	269.1	7.55
Chironomus	15	53.8	0.34	0	0.0	0.00
Diclotendipes simpsoni	140	502.3	3.17	269	965.2	27.06
Glyptotendipes	15	53.8	0.34	9	32.3	0.91
Parachironomus	5	17.9	0.11	9	32.3	0.91
Polypedilum illinoense	5	17.9	0.11	0	0.0	0.00
Polypedilum scalaenum grp.	5	17.9	0.11	0	0.0	0.00
Paratanytarsus	5	17.9	0.11	9	32.3	0.91
Amnicola	5	17.9	0.11	0	0.0	0.00
Physa	80	287.0	1.81	1	3.6	0.10
TOTAL BENTHOS	4,410	15,823.5	100.00	994	3,566.6	100.00

WATERWAY= L.C.R., LOCATION= INDIANA AVE.,
 STATION= 56,
 and DATE= 14JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	1,190	4,269.8	55.56	14	50.2	1.17
Turbellaria	0	0.0	0.00	32	114.8	2.68
Oligochaeta	653	2,343.0	30.49	620	2,224.6	51.93
Mooreobdella microstoma	0	0.0	0.00	2	7.2	0.17
Gammarus	13	46.6	0.61	8	28.7	0.67
Caenis	0	0.0	0.00	2	7.2	0.17
Cyrnellus fraternus	7	25.1	0.33	72	258.3	6.03
Potamyia flava	0	0.0	0.00	2	7.2	0.17
Chironomidae	20	71.8	0.93	18	64.6	1.51
Procladius (Holotanypus)	10	35.9	0.47	8	28.7	0.67
Nanocladius distinctus	17	61.0	0.79	22	78.9	1.84
Chironomus	23	82.5	1.07	22	78.9	1.84
Diclotendipes neomodestus	3	10.8	0.14	12	43.1	1.01
Diclotendipes simpsoni	43	154.3	2.01	110	394.7	9.21
Glyptotendipes	150	538.2	7.00	206	739.1	17.25
Parachironomus	10	35.9	0.47	0	0.0	0.00
Polypedilum scalaenum grp.	3	10.8	0.14	0	0.0	0.00
Dreissena polymorpha	0	0.0	0.00	44	157.9	3.69
TOTAL BENTHOS	2,142	7,685.7	100.00	1,194	4,284.2	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= L.C.R.,
 LOCATION= WENTWORTH AVE.,
 STATION= 52,
 and DATE= 08SEPO3

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	3	10.8	0.15	7	25.1	0.48
Turbellaria	1,430	5,131.0	70.51	1,137	4,079.7	77.45
Oligochaeta	337	1,209.2	16.62	183	656.6	12.47
Helobdella triserialis	3	10.8	0.15	3	10.8	0.20
Mooreobdella microstoma	0	0.0	0.00	3	10.8	0.20
Caecidotea	20	71.8	0.99	43	154.3	2.93
Gammarus	7	25.1	0.35	23	82.5	1.57
Argia	3	10.8	0.15	0	0.0	0.00
Ablabesmyia janta	13	46.6	0.64	0	0.0	0.00
Thienemannimyia grp.	7	25.1	0.35	3	10.8	0.20
Nanocladius distinctus	7	25.1	0.35	0	0.0	0.00
Rheocricotopus robacki	3	10.8	0.15	0	0.0	0.00
Dicrotendipes simpsoni	0	0.0	0.00	23	82.5	1.57
Polypedilum flavum	3	10.8	0.15	0	0.0	0.00
Polypedilum scalaenum grp.	183	656.6	9.02	3	10.8	0.20
Paratanytarsus	3	10.8	0.15	0	0.0	0.00
Tanytarsus	3	10.8	0.15	0	0.0	0.00
Physa	0	0.0	0.00	7	25.1	0.48
Helisoma	3	10.8	0.15	20	71.8	1.36
Ferrissia	0	0.0	0.00	10	35.9	0.68
Pisidium	0	0.0	0.00	3	10.8	0.20
TOTAL BENTHOS	2,028	7,276.6	100.00	1,468	5,267.3	100.00

WATERWAY= N.B.C.R.,
 LOCATION= ALBANY AVE.,
 STATION= 96,
 and DATE= 06AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	4	14.4	0.29	4	14.4	0.43
Turbellaria	114	409.0	8.36	18	64.6	1.92
Oligochaeta	55	197.3	4.03	41	147.1	4.38
Helobdella triserialis	2	7.2	0.15	37	132.8	3.95
Erpobdella punctata punctata	1	3.6	0.07	1	3.6	0.11
Caecidotea	1,075	3,857.2	78.81	681	2,443.5	72.68
Baetis intercalaris	3	10.8	0.22	0	0.0	0.00
Stenacron	2	7.2	0.15	4	14.4	0.43
Argia	1	3.6	0.07	0	0.0	0.00
Cheumatopsyche	6	21.5	0.44	1	3.6	0.11
Hydropsyche betteni	4	14.4	0.29	1	3.6	0.11
Ceraclea	0	0.0	0.00	1	3.6	0.11
Chironomidae	1	3.6	0.07	0	0.0	0.00
Thienemannimyia grp.	4	14.4	0.29	4	14.4	0.43
Corynoneura	4	14.4	0.29	4	14.4	0.43
Cricotopus bicinctus grp.	2	7.2	0.15	4	14.4	0.43
Nanocladius distinctus	4	14.4	0.29	2	7.2	0.21
Nanocladius crassicornus/rectinervis	2	7.2	0.15	2	7.2	0.21
Chironomus	1	3.6	0.07	1	3.6	0.11
Dicrotendipes	3	10.8	0.22	4	14.4	0.43
Dicrotendipes simpsoni	1	3.6	0.07	0	0.0	0.00
Glyptotendipes	1	3.6	0.07	0	0.0	0.00
Phaenopsectra punctipes	0	0.0	0.00	1	3.6	0.11
Polypedilum illinoense	10	35.9	0.73	11	39.5	1.17
Polypedilum scalaenum grp.	6	21.5	0.44	4	14.4	0.43
Paratanytarsus	2	7.2	0.15	2	7.2	0.21
Tanytarsus	1	3.6	0.07	2	7.2	0.21
Xenochironomus xenolabis	15	53.8	1.10	16	57.4	1.71
Physa	1	3.6	0.07	6	21.5	0.64
Helisoma	4	14.4	0.29	0	0.0	0.00
Ferrissia	34	122.0	2.49	85	305.0	9.07
Musculium	1	3.6	0.07	0	0.0	0.00
TOTAL BENTHOS	1,364	4,894.2	100.00	937	3,362.0	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= N.B.C.R.,
 LOCATION= GRAND AVE.,
 STATION= 46,
 and DATE= 23JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	1,155	4,144.2	32.81	60	215.3	0.65
Oligochaeta	2,195	7,875.9	62.36	8,320	29,852.9	89.66
Helobdella triserialis	5	17.9	0.14	10	35.9	0.11
Mooreobdella microstoma	5	17.9	0.14	0	0.0	0.00
Caecidotea	65	233.2	1.85	0	0.0	0.00
Gammarus fasciatus	0	0.0	0.00	10	35.9	0.11
Thienemannimyia grp.	0	0.0	0.00	20	71.8	0.22
Cricotopus sylvestris grp.	5	17.9	0.14	0	0.0	0.00
Nanocladius distinctus	15	53.8	0.43	140	502.3	1.51
Dicrotendipes simpsoni	70	251.2	1.99	700	2,511.7	7.54
Glyptotendipes	0	0.0	0.00	10	35.9	0.11
Parachironomus	0	0.0	0.00	10	35.9	0.11
Polypedilum illinoense	5	17.9	0.14	0	0.0	0.00
TOTAL BENTHOS	3,520	12,630.1	100.00	9,280	33,297.5	100.00

WATERWAY= N.S.C.,
 LOCATION= TOUHY AVE.,
 STATION= 36,
 and DATE= 24JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	2,505	8,988.2	58.60	1,255	4,503.0	22.11
Oligochaeta	1,455	5,220.7	34.04	3,325	11,930.4	58.59
Caecidotea	0	0.0	0.00	45	161.5	0.79
Gammarus	5	17.9	0.12	530	1,901.7	9.34
Chironomidae	0	0.0	0.00	25	89.7	0.44
Cricotopus sylvestris grp.	0	0.0	0.00	40	143.5	0.70
Nanocladius distinctus	15	53.8	0.35	0	0.0	0.00
Chironomus	5	17.9	0.12	0	0.0	0.00
Dicrotendipes simpsoni	290	1,040.5	6.78	220	789.4	3.88
Glyptotendipes	0	0.0	0.00	200	717.6	3.52
Parachironomus	0	0.0	0.00	35	125.6	0.62
TOTAL BENTHOS	4,275	15,339.1	100.00	5,675	20,362.4	100.00

WATERWAY= SALT CR.,
 LOCATION= DEVON AVE.,
 STATION= 18,
 and DATE= 10JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	3,120	11,194.8	40.26	2,360	8,467.9	29.28
Turbellaria	20	71.8	0.26	0	0.0	0.00
Oligochaeta	4,120	14,782.9	53.16	4,910	17,617.5	60.92
Caecidotea	100	358.8	1.29	40	143.5	0.50
Orconectes virilis	20	71.8	0.26	0	0.0	0.00
Caenis	0	0.0	0.00	100	358.8	1.24
Argia	0	0.0	0.00	10	35.9	0.12
Stenelmis	10	35.9	0.13	0	0.0	0.00
Ceratopogonidae	10	35.9	0.13	30	107.6	0.37
Chironomidae	40	143.5	0.52	30	107.6	0.37
Procladius (Holotanypus)	10	35.9	0.13	0	0.0	0.00
Cricotopus tremulus grp.	10	35.9	0.13	20	71.8	0.25
Cricotopus bicinctus grp.	0	0.0	0.00	20	71.8	0.25
Cricotopus sylvestris grp.	0	0.0	0.00	10	35.9	0.12
Nanocladius distinctus	0	0.0	0.00	30	107.6	0.37
Nanocladius crassicornus/rectinervis	0	0.0	0.00	20	71.8	0.25
Chironomus	10	35.9	0.13	10	35.9	0.12
Cryptochironomus	0	0.0	0.00	20	71.8	0.25
Dicrotendipes fumidus	40	143.5	0.52	20	71.8	0.25
Endochironomus nigricans	0	0.0	0.00	10	35.9	0.12
Glyptotendipes	0	0.0	0.00	20	71.8	0.25
Parachironomus	80	287.0	1.03	140	502.3	1.74
Polypedilum illinoense	10	35.9	0.13	10	35.9	0.12

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= SALT CR.,
 LOCATION= DEVON AVE.,
 STATION= 18,
 and DATE= 10JUN03

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Polypedilum scalaenum grp.	80	287.0	1.03	170	610.0	2.11
Tribelos fuscicorne	10	35.9	0.13	0	0.0	0.00
Cladotanytarsus mancus grp.	10	35.9	0.13	0	0.0	0.00
Paratanytarsus	0	0.0	0.00	30	107.6	0.37
Tanytarsus glabrescens grp.	0	0.0	0.00	20	71.8	0.25
Physa	10	35.9	0.13	10	35.9	0.12
Helisoma	40	143.5	0.52	0	0.0	0.00
Ferrissia	0	0.0	0.00	10	35.9	0.12
Corbicula fluminea	0	0.0	0.00	10	35.9	0.12
TOTAL BENTHOS	7,750	27,807.7	100.00	8,060	28,920.0	100.00

WATERWAY= THORN CR.,
 LOCATION= 170TH ST.,
 STATION= 97,
 and DATE= 09JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	76	272.7	7.20	2	7.2	0.26
Turbellaria	1	3.6	0.09	0	0.0	0.00
Oligochaeta	458	1,643.3	43.41	481	1,725.9	62.88
Helobdella stagnalis	0	0.0	0.00	1	3.6	0.13
Caecidotea	39	139.9	3.70	85	305.0	11.11
Stenacron	0	0.0	0.00	1	3.6	0.13
Argia	2	7.2	0.19	1	3.6	0.13
Perlesta	1	3.6	0.09	0	0.0	0.00
Cheumatopsyche	335	1,202.0	31.75	65	233.2	8.50
Hydropsyche betteni	8	28.7	0.76	0	0.0	0.00
Ancyronyx variegata	1	3.6	0.09	0	0.0	0.00
Paracymus	0	0.0	0.00	1	3.6	0.13
Atrichopogon	1	3.6	0.09	0	0.0	0.00
Chironomidae	2	7.2	0.19	17	61.0	2.22
Ablabesmyia mallochii	3	10.8	0.28	1	3.6	0.13
Thienemannimyia grp.	2	7.2	0.19	5	17.9	0.65
Corynoneura	2	7.2	0.19	3	10.8	0.39
Thienemanniella xena	3	10.8	0.28	15	53.8	1.96
Euryhapsis	1	3.6	0.09	3	10.8	0.39
Nanocladius distinctus	3	10.8	0.28	0	0.0	0.00
Nanocladius crassicornus/rectinervis	1	3.6	0.09	0	0.0	0.00
Rheocricotopus robacki	29	104.1	2.75	37	132.8	4.84
Chironomus	10	35.9	0.95	10	35.9	1.31
Cryptochironomus	3	10.8	0.28	0	0.0	0.00
Dicrotendipes neomodestus	1	3.6	0.09	2	7.2	0.26
Polypedilum fallax grp.	2	7.2	0.19	8	28.7	1.05
Polypedilum illinoense	4	14.4	0.38	9	32.3	1.18
Polypedilum scalaenum grp.	5	17.9	0.47	11	39.5	1.44
Paratanytarsus	2	7.2	0.19	4	14.4	0.52
Tanytarsus	1	3.6	0.09	0	0.0	0.00
Culicidae	0	0.0	0.00	1	3.6	0.13
Simulium	0	0.0	0.00	1	3.6	0.13
Tipula	0	0.0	0.00	1	3.6	0.13
Physa	12	43.1	1.14	0	0.0	0.00
Ferrissia	44	157.9	4.17	0	0.0	0.00
Corbicula fluminea	3	10.8	0.28	0	0.0	0.00
TOTAL BENTHOS	1,055	3,785.4	100.00	765	2,744.9	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= THORN CR.,
 LOCATION= JOE ORR RD.,
 STATION= 54,
 and DATE= 12AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	17	61.0	0.71	2	7.2	0.24
Oligochaeta	1,020	3,659.8	42.71	8	28.7	0.97
Caecidotea	40	143.5	1.68	19	68.2	2.31
Cheumatopsyche	33	118.4	1.38	5	17.9	0.61
Hydropsyche betteni	33	118.4	1.38	4	14.4	0.49
Chironomidae	87	312.2	3.64	29	104.1	3.53
Ablabesmyia mallochi	10	35.9	0.42	0	0.0	0.00
Thienemanimyia grp.	47	168.6	1.97	7	25.1	0.85
Corynoneura	57	204.5	2.39	0	0.0	0.00
Thienemanniella xena	227	814.5	9.51	47	168.6	5.72
Cricotopus bicinctus grp.	27	96.9	1.13	0	0.0	0.00
Cricotopus sylvestris grp.	20	71.8	0.84	0	0.0	0.00
Nanocladius distinctus	10	35.9	0.42	0	0.0	0.00
Rheocricotopus robacki	47	168.6	1.97	0	0.0	0.00
Chironomus	143	513.1	5.99	7	25.1	0.85
Cryptochironomus	10	35.9	0.42	0	0.0	0.00
Dicrotendipes neomodestus	20	71.8	0.84	7	25.1	0.85
Dicrotendipes simpsoni	10	35.9	0.42	0	0.0	0.00
Polypedilum flavum	10	35.9	0.42	0	0.0	0.00
Polypedilum illinoense	313	1,123.1	13.11	514	1,844.3	62.53
Polypedilum scalaenum grp.	10	35.9	0.42	0	0.0	0.00
Paratanytarsus	27	96.9	1.13	80	287.0	9.73
Simulium	33	118.4	1.38	0	0.0	0.00
Physa	17	61.0	0.71	0	0.0	0.00
Ferrissia	120	430.6	5.03	93	333.7	11.31
TOTAL BENTHOS	2,388	8,568.4	100.00	822	2,949.4	100.00

WATERWAY= W.B. DUPAGE R.,
 LOCATION= LAKE ST.,
 STATION= 64,
 and DATE= 11JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	20	71.8	0.25	0	0.0	0.00
Oligochaeta	5,290	18,981.0	67.30	7,230	25,941.9	76.19
Caecidotea	40	143.5	0.51	20	71.8	0.21
Argia	0	0.0	0.00	20	71.8	0.21
Cheumatopsyche	100	358.8	1.27	10	35.9	0.11
Chironomidae	60	215.3	0.76	70	251.2	0.74
Thienemanimyia grp.	40	143.5	0.51	40	143.5	0.42
Thienemanniella xena	60	215.3	0.76	20	71.8	0.21
Cricotopus tremulus grp.	60	215.3	0.76	20	71.8	0.21
Cricotopus bicinctus grp.	230	825.3	2.93	250	897.0	2.63
Cricotopus sylvestris grp.	330	1,184.1	4.20	310	1,112.3	3.27
Chironomus	180	645.9	2.29	230	825.3	2.42
Dicrotendipes neomodestus	20	71.8	0.25	40	143.5	0.42
Dicrotendipes simpsoni	0	0.0	0.00	80	287.0	0.84
Endochironomus nigricans	20	71.8	0.25	0	0.0	0.00
Glyptotendipes	580	2,081.1	7.38	800	2,870.5	8.43
Polypedilum flavum	140	502.3	1.78	40	143.5	0.42
Polypedilum illinoense	80	287.0	1.02	60	215.3	0.63
Polypedilum scalaenum grp.	60	215.3	0.76	20	71.8	0.21
Paratanytarsus	80	287.0	1.02	120	430.6	1.26
Tanytarsus	60	215.3	0.76	0	0.0	0.00
Simulium	380	1,363.5	4.83	100	358.8	1.05
Physa	10	35.9	0.13	0	0.0	0.00
Helisoma	20	71.8	0.25	10	35.9	0.11
TOTAL BENTHOS	7,860	28,202.4	100.00	9,490	34,051.0	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= C.S.C.,
 LOCATION= ASHLAND AVE.,
 STATION= 58,
 and DATE= 05SEP03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	1,155	16,578.0	99.48	4,970	71,335.7	99.40
Procladius (Holotanypus)	3	43.1	0.26	30	430.6	0.60
Pisidium	3	43.1	0.26	0	0.0	0.00
TOTAL BENTHOS	1,161	16,664.1	100.00	5,000	71,766.3	100.00

WATERWAY= C.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 59,
 and DATE= 31JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	289	4,148.1	87.05	299	4,291.6	96.45
Procladius (Holotanypus)	42	602.8	12.65	6	86.1	1.94
Dicrotendipes simpsoni	1	14.4	0.30	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	2	28.7	0.65
Corbicula fluminea	0	0.0	0.00	3	43.1	0.97
TOTAL BENTHOS	332	4,765.3	100.00	310	4,449.5	100.00

WATERWAY= C.S.C.,
 LOCATION= ROUTE 83,
 STATION= 43,
 and DATE= 30JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	796	11,425.2	82.83	759	10,894.1	90.14
Mooreobdella microstoma	1	14.4	0.10	0	0.0	0.00
Procladius (Holotanypus)	162	2,325.2	16.86	80	1,148.3	9.50
Nanocladius distinctus	0	0.0	0.00	2	28.7	0.24
Cryptochironomus	0	0.0	0.00	1	14.4	0.12
Tanytarsus	2	28.7	0.21	0	0.0	0.00
TOTAL BENTHOS	961	13,793.5	100.00	842	12,085.5	100.00

WATERWAY= C.S.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 75,
 and DATE= 18JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	3	43.1	10.34
Oligochaeta	61	875.5	96.83	21	301.4	72.41
Helobdella triserialis	0	0.0	0.00	1	14.4	3.45
Procladius (Holotanypus)	1	14.4	1.59	0	0.0	0.00
Cricotopus sylvestris grp.	0	0.0	0.00	1	14.4	3.45
Tipulidae	1	14.4	1.59	0	0.0	0.00
Corbicula fluminea	0	0.0	0.00	3	43.1	10.34
TOTAL BENTHOS	63	904.3	100.00	29	416.2	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= C.S.S.C.,
 LOCATION= HARLEM AVE.,
 STATION= 41,
 and DATE= 21JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	267	3,832.3	98.16	3,160	45,356.3	98.14
Procladius (Holotanypus)	0	0.0	0.00	10	143.5	0.31
Cricotopus sylvestris grp.	1	14.4	0.37	0	0.0	0.00
Chironomus	4	57.4	1.47	50	717.7	1.55
TOTAL BENTHOS	272	3,904.1	100.00	3,220	46,217.5	100.00

WATERWAY= C.S.S.C.,
 LOCATION= LOCKPORT,
 STATION= 92,
 and DATE= 29JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	9,430	135,351.3	98.95	6,180	88,703.2	97.78
Gammarus fasciatus	20	287.1	0.21	20	287.1	0.32
Chironomidae	0	0.0	0.00	10	143.5	0.16
Procladius (Holotanypus)	80	1,148.3	0.84	100	1,435.3	1.58
Corbicula fluminea	0	0.0	0.00	10	143.5	0.16
TOTAL BENTHOS	9,530	136,786.7	100.00	6,320	90,712.7	100.00

WATERWAY= CALUMET R.,
 LOCATION= 130TH ST.,
 STATION= 55,
 and DATE= 08AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	130	1,865.9	94.89	49	703.3	84.48
Gammarus fasciatus	0	0.0	0.00	1	14.4	1.72
Chironomidae	0	0.0	0.00	1	14.4	1.72
Procladius (Holotanypus)	1	14.4	0.73	1	14.4	1.72
Coelotanypus	4	57.4	2.92	0	0.0	0.00
Chironomus	1	14.4	0.73	0	0.0	0.00
Cryptochironomus	0	0.0	0.00	1	14.4	1.72
Microchironomus	1	14.4	0.73	0	0.0	0.00
Polypedilum scalaenum grp.	0	0.0	0.00	5	71.8	8.62
TOTAL BENTHOS	137	1,966.4	100.00	58	832.5	100.00

WATERWAY= CALUMET R.,
 LOCATION= EWING AVE.,
 STATION= 49,
 and DATE= 01AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	0	0.0	0.00	205	2,942.4	93.61
Procladius (Holotanypus)	0	0.0	0.00	1	14.4	0.46
Thienemanimyia grp.	0	0.0	0.00	2	28.7	0.91
Thienemanniella xena	0	0.0	0.00	3	43.1	1.37
Nanocladius distinctus	0	0.0	0.00	1	14.4	0.46
Rheocricotopus robacki	0	0.0	0.00	1	14.4	0.46
Dicrotendipes neomodestus	0	0.0	0.00	1	14.4	0.46
Polypedilum flavum	0	0.0	0.00	2	28.7	0.91
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.46
Polypedilum scalaenum grp.	0	0.0	0.00	1	14.4	0.46
Xenochironomus xenolabis	0	0.0	0.00	1	14.4	0.46
Dreissena polymorpha	5	71.8	100.00	0	0.0	0.00
TOTAL BENTHOS	5	71.8	100.00	219	3,143.4	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= DES PLAINES R.,
 LOCATION= LAKE COOK RD.,
 STATION= 13,
 and DATE= 18JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	46	660.3	10.02	6	86.1	12.24
Gammarus fasciatus	8	114.8	1.74	0	0.0	0.00
Hexagenia	7	100.5	1.53	0	0.0	0.00
Dubiraphia	1	14.4	0.22	0	0.0	0.00
Stenelmis crenata grp.	17	244.0	3.70	3	43.1	6.12
Ceratopogonidae	0	0.0	0.00	5	71.8	10.20
Cricotopus bicinctus grp.	10	143.5	2.18	1	14.4	2.04
Cladopelma	3	43.1	0.65	1	14.4	2.04
Cryptochironomus	19	272.7	4.14	6	86.1	12.24
Dicrotendipes neomodestus	16	229.7	3.49	3	43.1	6.12
Glyptotendipes	3	43.1	0.65	0	0.0	0.00
Microtendipes	16	229.7	3.49	0	0.0	0.00
Paracladopelma	73	1,047.8	15.90	1	14.4	2.04
Polypedilum flavum	3	43.1	0.65	1	14.4	2.04
Polypedilum scalaenum grp.	124	1,779.8	27.02	0	0.0	0.00
Saetheria	6	86.1	1.31	0	0.0	0.00
Stictochironomus	3	43.1	0.65	0	0.0	0.00
Tribelos fuscicorne	0	0.0	0.00	1	14.4	2.04
Cladotanytarsus mancus grp.	0	0.0	0.00	3	43.1	6.12
Cladotanytarsus vanderwulpi grp.	19	272.7	4.14	0	0.0	0.00
Paratanytarsus	6	86.1	1.31	0	0.0	0.00
Rheotanytarsus	3	43.1	0.65	0	0.0	0.00
Corbicula fluminea	76	1,090.8	16.56	18	258.4	36.73
TOTAL BENTHOS	459	6,588.2	100.00	49	703.3	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= MATERIAL SERVICE RD.,
 STATION= 91,
 and DATE= 27JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	30	430.6	0.60	0	0.0	0.00
Oligochaeta	3,140	45,069.3	62.30	938	13,463.4	54.69
Helobdella stagnalis	0	0.0	0.00	13	186.6	0.76
Mooreobdella microstoma	0	0.0	0.00	3	43.1	0.17
Caecidotea	0	0.0	0.00	10	143.5	0.58
Gammarus fasciatus	250	3,588.3	4.96	255	3,660.1	14.87
Baetis intercalaris	0	0.0	0.00	3	43.1	0.17
Tricorythodes	10	143.5	0.20	0	0.0	0.00
Caenis	0	0.0	0.00	3	43.1	0.17
Cheumatopsyche	310	4,449.5	6.15	8	114.8	0.47
Stenelmis	10	143.5	0.20	0	0.0	0.00
Chironomidae	60	861.2	1.19	8	114.8	0.47
Procladius (Holotanypus)	0	0.0	0.00	15	215.3	0.87
Ablabesmyia mallochi	0	0.0	0.00	10	143.5	0.58
Thienemanniella xena	10	143.5	0.20	0	0.0	0.00
Thienemanniella similis	10	143.5	0.20	15	215.3	0.87
Cricotopus bicinctus grp.	140	2,009.5	2.78	5	71.8	0.29
Cricotopus trifascia grp.	20	287.1	0.40	0	0.0	0.00
Nanocladius distinctus	20	287.1	0.40	0	0.0	0.00
Chironomus	190	2,727.1	3.77	388	5,569.1	22.62
Cryptochironomus	0	0.0	0.00	10	143.5	0.58
Dicrotendipes neomodestus	0	0.0	0.00	5	71.8	0.29
Glyptotendipes	0	0.0	0.00	10	143.5	0.58
Polypedilum flavum	730	10,477.9	14.48	0	0.0	0.00
Polypedilum illinoense	10	143.5	0.20	5	71.8	0.29
Rheotanytarsus	70	1,004.7	1.39	0	0.0	0.00
Tanytarsus guerlus grp.	0	0.0	0.00	5	71.8	0.29
Physa	0	0.0	0.00	3	43.1	0.17
Ferrissia	20	287.1	0.40	0	0.0	0.00
Corbicula fluminea	0	0.0	0.00	3	43.1	0.17
Musculium	10	143.5	0.20	0	0.0	0.00
TOTAL BENTHOS	5,040	72,340.5	100.00	1,715	24,615.9	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= DES PLAINES R.,
 LOCATION= OGDEN AVE.,
 STATION= 22,
 and DATE= 07AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	34	488.0	24.11	0	0.0	0.00
Oligochaeta	9	129.2	6.38	270	3,875.4	94.08
Helobdella stagnalis	1	14.4	0.71	0	0.0	0.00
Caecidotea	5	71.8	3.55	2	28.7	0.70
Gammarus	0	0.0	0.00	1	14.4	0.35
Tricorythodes	9	129.2	6.38	0	0.0	0.00
Cheumatopsyche	15	215.3	10.64	0	0.0	0.00
Stenelmis	4	57.4	2.84	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	9	129.2	3.14
Ablabesmyia mallochii	0	0.0	0.00	1	14.4	0.35
Thienemannimyia grp.	2	28.7	1.42	0	0.0	0.00
Chironomus	0	0.0	0.00	2	28.7	0.70
Cryptochironomus	3	43.1	2.13	1	14.4	0.35
Polypedilum flavum	2	28.7	1.42	0	0.0	0.00
Polypedilum scalaenum grp.	24	344.5	17.02	0	0.0	0.00
Amnicola	1	14.4	0.71	0	0.0	0.00
Pleurocera	11	157.9	7.80	0	0.0	0.00
Ferrissia	1	14.4	0.71	0	0.0	0.00
Corbicula fluminea	6	86.1	4.26	1	14.4	0.35
Pisidium	14	200.9	9.93	0	0.0	0.00
TOTAL BENTHOS	141	2,023.8	100.00	287	4,119.4	100.00

WATERWAY= G.C.R.,
 LOCATION= BURNHAM AVE.,
 STATION= 86,
 and DATE= 03SEP03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	526	7,549.8	93.59	253	3,631.4	95.47
Enallagma	0	0.0	0.00	1	14.4	0.38
Chironomidae	1	14.4	0.18	0	0.0	0.00
Tanytus	27	387.5	4.80	4	57.4	1.51
Cricotopus sylvestris grp.	4	57.4	0.71	3	43.1	1.13
Dicrotendipes neomodestus	1	14.4	0.18	0	0.0	0.00
Parachironomus	3	43.1	0.53	4	57.4	1.51
TOTAL BENTHOS	562	8,066.5	100.00	265	3,803.6	100.00

WATERWAY= HIGGINS CR.,
 LOCATION= WILLE RD.,
 STATION= 78,
 and DATE= 09JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	5	71.8	0.27
Turbellaria	1	14.4	0.04	0	0.0	0.00
Oligochaeta	1,483	21,285.9	63.98	1,630	23,395.8	87.35
Caecidotea	451	6,473.3	19.46	110	1,578.9	5.89
Orconectes	1	14.4	0.04	0	0.0	0.00
Hydroptila	3	43.1	0.13	0	0.0	0.00
Chironomidae	51	732.0	2.20	15	215.3	0.80
Cricotopus tremulus grp.	139	1,995.1	6.00	10	143.5	0.54
Cricotopus bicinctus grp.	96	1,377.9	4.14	25	358.8	1.34
Cricotopus sylvestris grp.	68	976.0	2.93	0	0.0	0.00
Chironomus	6	86.1	0.26	55	789.4	2.95
Dicrotendipes neomodestus	9	129.2	0.39	5	71.8	0.27
Glyptotendipes	3	43.1	0.13	0	0.0	0.00
Parachironomus	3	43.1	0.13	1	14.4	0.05
Physa	3	43.1	0.13	10	143.5	0.54
Pisidium	1	14.4	0.04	0	0.0	0.00
TOTAL BENTHOS	2,318	33,270.9	100.00	1,866	26,783.2	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= L.C.R.,
 LOCATION= AHSLAND AVE.,
 STATION= 57,
 and DATE= 13AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	623	8,942.1	94.82	3,201	45,944.8	99.44
Helobdella stagnalis	1	14.4	0.15	0	0.0	0.00
Helobdella triserialis	1	14.4	0.15	0	0.0	0.00
Nanocladius distinctus	1	14.4	0.15	0	0.0	0.00
Chironomus	0	0.0	0.00	3	43.1	0.09
Cryptochironomus	4	57.4	0.61	3	43.1	0.09
Dicrotendipes simpsoni	0	0.0	0.00	2	28.7	0.06
Polypedilum illinoense	16	229.7	2.44	0	0.0	0.00
Polypedilum scalaenum grp.	4	57.4	0.61	0	0.0	0.00
Ferrissia	7	100.5	1.07	10	143.5	0.31
TOTAL BENTHOS	657	9,430.1	100.00	3,219	46,203.2	100.00

WATERWAY= L.C.R.,
 LOCATION= HALSTED ST.,
 STATION= 76,
 and DATE= 11JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	3,170	45,499.9	98.75	475	6,817.8	80.65
Caecidotea	0	0.0	0.00	1	14.4	0.17
Gammarus	10	143.5	0.31	7	100.5	1.19
Chironomidae	0	0.0	0.00	4	57.4	0.68
Procladius (Holotanypus)	0	0.0	0.00	10	143.5	1.70
Ablabesmyia mallochi	0	0.0	0.00	1	14.4	0.17
Cricotopus bicinctus grp.	0	0.0	0.00	14	200.9	2.38
Cricotopus sylvestris grp.	0	0.0	0.00	44	631.5	7.47
Chironomus	0	0.0	0.00	8	114.8	1.36
Cryptochironomus	0	0.0	0.00	10	143.5	1.70
Dicrotendipes simpsoni	0	0.0	0.00	1	14.4	0.17
Parachironomus	0	0.0	0.00	7	100.5	1.19
Paratanytarsus	0	0.0	0.00	4	57.4	0.68
Amnicola	10	143.5	0.31	0	0.0	0.00
Corbicula fluminea	10	143.5	0.31	3	43.1	0.51
Dreissena polymorpha	10	143.5	0.31	0	0.0	0.00
TOTAL BENTHOS	3,210	46,074.0	100.00	589	8,454.1	100.00

WATERWAY= L.C.R.,
 LOCATION= INDIANA AVE.,
 STATION= 56,
 and DATE= 14JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	137	1,966.4	91.33	159	2,282.2	89.83
Procladius (Holotanypus)	6	86.1	4.00	7	100.5	3.95
Coelotanypus	0	0.0	0.00	1	14.4	0.56
Chironomus	4	57.4	2.67	1	14.4	0.56
Cryptochironomus	1	14.4	0.67	4	57.4	2.26
Microchironomus	1	14.4	0.67	1	14.4	0.56
Polypedilum halterale grp.	0	0.0	0.00	4	57.4	2.26
Dreissena polymorpha	1	14.4	0.67	0	0.0	0.00
TOTAL BENTHOS	150	2,153.0	100.00	177	2,540.5	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= L.C.R.,
 LOCATION= WENTWORTH AVE.,
 STATION= 52,
 and DATE= 08SEP03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	41	588.5	3.66	28	401.9	2.44
Oligochaeta	820	11,769.7	73.28	584	8,382.3	50.83
Erpobdella punctata punctata	4	57.4	0.36	74	1,062.1	6.44
Caecidotea	0	0.0	0.00	2	28.7	0.17
Gammarus	0	0.0	0.00	1	14.4	0.09
Procladius (Holotanypus)	0	0.0	0.00	1	14.4	0.09
Cryptochironomus	2	28.7	0.18	0	0.0	0.00
Polypedilum scalaenum grp.	2	28.7	0.18	2	28.7	0.17
Valvata	1	14.4	0.09	25	358.8	2.18
Physa	2	28.7	0.18	0	0.0	0.00
Helisoma	2	28.7	0.18	3	43.1	0.26
Musculium	203	2,913.7	18.14	362	5,195.9	31.51
Pisidium	42	602.8	3.75	67	961.7	5.83
TOTAL BENTHOS	1,119	16,061.3	100.00	1,149	16,491.9	100.00

WATERWAY= N.B.C.R.,
 LOCATION= ALBANY AVE.,
 STATION= 96,
 and DATE= 06AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	--	--	--	75	1,076.5	4.97
Oligochaeta	--	--	--	66	947.3	4.38
Helobdella stagnalis	--	--	--	7	100.5	0.46
Erpobdella punctata punctata	--	--	--	29	416.2	1.92
Caecidotea	--	--	--	623	8,942.1	41.31
Gammarus	--	--	--	3	43.1	0.20
Coenagrionidae	--	--	--	1	14.4	0.07
Cheumatopsyche	--	--	--	1	14.4	0.07
Stenelmis	--	--	--	2	28.7	0.13
Thienemannimyia grp.	--	--	--	3	43.1	0.20
Dicrotendipes	--	--	--	1	14.4	0.07
Polypedilum scalaenum grp.	--	--	--	6	86.1	0.40
Tanytarsus	--	--	--	1	14.4	0.07
Xenochironomus xenolabis	--	--	--	2	28.7	0.13
Amnicola	--	--	--	1	14.4	0.07
Physa	--	--	--	8	114.8	0.53
Musculium	--	--	--	467	6,703.0	30.97
Pisidium	--	--	--	212	3,042.9	14.06
TOTAL BENTHOS	--	--	--	1,508	21,644.7	100.00

WATERWAY= N.B.C.R.,
 LOCATION= GRAND AVE.,
 STATION= 46,
 and DATE= 23JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	3,130	44,925.7	100.00	106	1,521.4	94.64
Mooreobdella microstoma	0	0.0	0.00	1	14.4	0.89
Procladius (Holotanypus)	0	0.0	0.00	1	14.4	0.89
Thienemannimyia grp.	0	0.0	0.00	1	14.4	0.89
Dicrotendipes simpsoni	0	0.0	0.00	3	43.1	2.68
TOTAL BENTHOS	3,130	44,925.7	100.00	112	1,607.6	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= N.S.C.,
 LOCATION= TOUHY AVE.,
 STATION= 36,
 and DATE= 24JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	403	5,784.4	30.53
Oligochaeta	3,640	52,245.9	99.45	791	11,353.4	59.92
Helobdella triserialis	0	0.0	0.00	3	43.1	0.23
Caecidotea	0	0.0	0.00	2	28.7	0.15
Gammarus	0	0.0	0.00	1	14.4	0.08
Cricotopus bicinctus grp.	0	0.0	0.00	1	14.4	0.08
Cricotopus sylvestris grp.	0	0.0	0.00	24	344.5	1.82
Nanocladius distinctus	0	0.0	0.00	4	57.4	0.30
Chironomus	10	143.5	0.27	20	287.1	1.52
Dicrotendipes simpsoni	0	0.0	0.00	36	516.7	2.73
Glyptotendipes	0	0.0	0.00	13	186.6	0.98
Parachironomus	0	0.0	0.00	20	287.1	1.52
Polypedilum scalaenum grp.	10	143.5	0.27	0	0.0	0.00
Helisoma	0	0.0	0.00	2	28.7	0.15
TOTAL BENTHOS	3,660	52,533.0	100.00	1,320	18,946.3	100.00

WATERWAY= SALT CR., LOCATION= DEVON AVE., STATION= 18,
 and DATE= 10JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	2	28.7	0.56
Oligochaeta	27	387.5	5.84	171	2,454.4	47.77
Caecidotea	0	0.0	0.00	2	28.7	0.56
Caenis	0	0.0	0.00	1	14.4	0.28
Macronychus glabratus	1	14.4	0.22	0	0.0	0.00
Stenelmis	2	28.7	0.43	0	0.0	0.00
Chironomidae	5	71.8	1.08	4	57.4	1.12
Cricotopus tremulus grp.	4	57.4	0.87	0	0.0	0.00
Cricotopus bicinctus grp.	8	114.8	1.73	0	0.0	0.00
Cricotopus sylvestris grp.	4	57.4	0.87	0	0.0	0.00
Chironomus	50	717.7	10.82	23	330.1	6.42
Cladopelma	0	0.0	0.00	2	28.7	0.56
Cryptochironomus	8	114.8	1.73	5	71.8	1.40
Dicrotendipes fumidus	66	947.3	14.29	28	401.9	7.82
Parachironomus	0	0.0	0.00	2	28.7	0.56
Polypedilum scalaenum grp.	62	889.9	13.42	35	502.4	9.78
Stictochironomus	0	0.0	0.00	4	57.4	1.12
Tribelos fuscicorne	0	0.0	0.00	2	28.7	0.56
Cladotanytarsus mancus grp.	211	3,028.5	45.67	74	1,062.1	20.67
Corbicula fluminea	14	200.9	3.03	3	43.1	0.84
TOTAL BENTHOS	462	6,631.2	100.00	358	5,138.5	100.00

WATERWAY= THORN CR., LOCATION= 170TH ST., STATION= 97, and DATE= 09JUL03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	85	1,220.0	62.96	497	7,133.6	83.81
Mooreobdella microstoma	0	0.0	0.00	2	28.7	0.34
Caecidotea	0	0.0	0.00	5	71.8	0.84
Cheumatopsyche	1	14.4	0.74	0	0.0	0.00
Stenelmis	1	14.4	0.74	0	0.0	0.00
Chironomidae	1	14.4	0.74	5	71.8	0.84
Thienemannimyia grp.	0	0.0	0.00	1	14.4	0.17
Chironomus	0	0.0	0.00	52	746.4	8.77
Cryptochironomus	10	143.5	7.41	4	57.4	0.67
Dicrotendipes neomodestus	0	0.0	0.00	1	14.4	0.17
Polypedilum fallax grp.	0	0.0	0.00	1	14.4	0.17
Polypedilum halterale grp.	1	14.4	0.74	0	0.0	0.00
Polypedilum illinoense	1	14.4	0.74	1	14.4	0.17
Polypedilum scalaenum grp.	2	28.7	1.48	7	100.5	1.18
Corbicula fluminea	33	473.7	24.44	17	244.0	2.87
TOTAL BENTHOS	135	1,937.7	100.00	593	8,511.5	100.00

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= THORN CR.,
 LOCATION= JOE ORR RD.,
 STATION= 54,
 and DATE= 12AUG03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	9	129.2	12.16	113	1,621.9	96.58
Chironomidae	2	28.7	2.70	0	0.0	0.00
Thienemanniella xena	4	57.4	5.41	0	0.0	0.00
Cricotopus tremulus grp.	1	14.4	1.35	0	0.0	0.00
Cricotopus bicinctus grp.	2	28.7	2.70	0	0.0	0.00
Rheocricotopus robacki	1	14.4	1.35	0	0.0	0.00
Chironomus	7	100.5	9.46	0	0.0	0.00
Polypedilum illinoense	41	588.5	55.41	0	0.0	0.00
Polypedilum scalaenum grp.	1	14.4	1.35	3	43.1	2.56
Paratanytarsus	1	14.4	1.35	0	0.0	0.00
Simulium	2	28.7	2.70	0	0.0	0.00
Corbicula fluminea	3	43.1	4.05	1	14.4	0.85
TOTAL BENTHOS	74	1,062.1	100.00	117	1,679.3	100.00

WATERWAY= W.B. DUPAGE R.,
 LOCATION= LAKE ST.,
 STATION= 64,
 and DATE= 11JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	65	933.0	37.79	159	2,282.2	43.32
Caecidotea	1	14.4	0.58	1	14.4	0.27
Chironomidae	2	28.7	1.16	1	14.4	0.27
Cricotopus bicinctus grp.	6	86.1	3.49	4	57.4	1.09
Cricotopus sylvestris grp.	22	315.8	12.79	0	0.0	0.00
Chironomus	36	516.7	20.93	166	2,382.6	45.23
Cryptochironomus	1	14.4	0.58	4	57.4	1.09
Dicrotendipes neomodestus	3	43.1	1.74	0	0.0	0.00
Dicrotendipes simpsoni	0	0.0	0.00	2	28.7	0.54
Endochironomus nigricans	1	14.4	0.58	2	28.7	0.54
Glyptotendipes	14	200.9	8.14	6	86.1	1.63
Polypedilum flavum	1	14.4	0.58	0	0.0	0.00
Polypedilum scalaenum grp.	7	100.5	4.07	14	200.9	3.81
Cladotanytarsus	0	0.0	0.00	2	28.7	0.54
Paratanytarsus	7	100.5	4.07	4	57.4	1.09
Simulium	6	86.1	3.49	1	14.4	0.27
Helisoma	0	0.0	0.00	1	14.4	0.27
TOTAL BENTHOS	172	2,468.8	100.00	367	5,267.6	100.00

WATERWAY= WOLF LAKE D.C.,
 LOCATION= BURNHAM AVE.,
 STATION= 50,
 and DATE= 27JUN03

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	1	14.4	0.45	0	0.0	0.00
Oligochaeta	95	1,363.6	43.18	160	2,296.5	48.93
Helobdella stagnalis	0	0.0	0.00	1	14.4	0.31
Gammarus fasciatus	23	330.1	10.45	11	157.9	3.36
Caenis	11	157.9	5.00	4	57.4	1.22
Hexagenia limbata	0	0.0	0.00	5	71.8	1.53
Lestes	0	0.0	0.00	1	14.4	0.31
Corixidae	0	0.0	0.00	2	28.7	0.61
Corydalus cornutus	0	0.0	0.00	1	14.4	0.31
Cheumatopsyche	12	172.2	5.45	1	14.4	0.31
Oecetis	1	14.4	0.45	1	14.4	0.31
Ceratopogonidae	0	0.0	0.00	1	14.4	0.31
Chironomidae	2	28.7	0.91	7	100.5	2.14
Tanytus	0	0.0	0.00	1	14.4	0.31
Procladius (Holotanytus)	2	28.7	0.91	8	114.8	2.45
Ablabesmyia janta	0	0.0	0.00	4	57.4	1.22
Cricotopus bicinctus grp.	1	14.4	0.45	1	14.4	0.31
Cricotopus sylvestris grp.	0	0.0	0.00	4	57.4	1.22

APPENDIX A - 2003 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= WOLF LAKE D.C.,
 LOCATION= BURNHAM AVE.,
 STATION= 50,
 and DATE= 27JUN03

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Chironomus	3	43.1	1.36	68	976.0	20.80
Cladopelma	8	114.8	3.64	28	401.9	8.56
Cryptochironomus	13	186.6	5.91	4	57.4	1.22
Cryptotendipes sp. 15	2	28.7	0.91	0	0.0	0.00
Dicrotendipes neomodestus	1	14.4	0.45	1	14.4	0.31
Dicrotendipes simpsoni	1	14.4	0.45	1	14.4	0.31
Polypedilum halterale grp.	19	272.7	8.64	8	114.8	2.45
Polypedilum scalaenum grp.	12	172.2	5.45	1	14.4	0.31
Cladotanytarsus mancus grp.	1	14.4	0.45	0	0.0	0.00
Paratanytarsus	0	0.0	0.00	1	14.4	0.31
Rheotanytarsus	1	14.4	0.45	1	14.4	0.31
Tanytarsus guerlus grp.	10	143.5	4.55	1	14.4	0.31
Hemerodromia	1	14.4	0.45	0	0.0	0.00
TOTAL BENTHOS	220	3,157.7	100.00	327	4,693.5	100.00

APPENDIX B

2004 CENTER AND NEAR SHORE HD AND PONAR DATA

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= BUFFALO CR.,
 LOCATION= LAKE COOK RD.,
 STATION= 12,
 and DATE= 01JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	20	71.8	0.28	40	143.5	0.62
Turbellaria	1,010	3,624.0	14.39	1,230	4,413.3	18.92
Oligochaeta	460	1,650.5	6.55	1,140	4,090.4	17.54
Ostracoda	0	0.0	0.00	110	394.7	1.69
Caecidotea	20	71.8	0.28	0	0.0	0.00
Baetis intercalaris	10	35.9	0.14	0	0.0	0.00
Stenacron	10	35.9	0.14	10	35.9	0.15
Caenis	10	35.9	0.14	0	0.0	0.00
Sialis	0	0.0	0.00	10	35.9	0.15
Cheumatopsyche	120	430.6	1.71	60	215.3	0.92
Hydropsyche betteni	10	35.9	0.14	0	0.0	0.00
Ceraclea	0	0.0	0.00	10	35.9	0.15
Dubiraphia	0	0.0	0.00	30	107.6	0.46
Ablabesmyia mallochi	0	0.0	0.00	40	143.5	0.62
Thienemanimyia grp.	200	717.6	2.85	0	0.0	0.00
Thienemanniella xena	900	3,229.3	12.82	40	143.5	0.62
Cricotopus/Orthocladius	200	717.6	2.85	180	645.9	2.77
Cricotopus bicinctus grp.	400	1,435.2	5.70	510	1,829.9	7.85
Cricotopus sylvestris grp.	50	179.4	0.71	140	502.3	2.15
Nanocladius distinctus	50	179.4	0.71	40	143.5	0.62
Nanocladius crassicornus/rectinervis	0	0.0	0.00	220	789.4	3.38
Rheocricotopus robacki	50	179.4	0.71	0	0.0	0.00
Cryptochironomus	50	179.4	0.71	0	0.0	0.00
Dicrotendipes neomodestus	450	1,614.6	6.41	440	1,578.8	6.77
Dicrotendipes simpsoni	500	1,794.0	7.12	690	2,475.8	10.62
Endochironomus nigricans	0	0.0	0.00	40	143.5	0.62
Glyptotendipes	600	2,152.9	8.55	360	1,291.7	5.54
Polypedilum flavum	1,640	5,884.5	23.36	840	3,014.0	12.92
Polypedilum scalaenum grp.	0	0.0	0.00	180	645.9	2.77
Micropsectra	100	358.8	1.42	70	251.2	1.08
Paratanytarsus	100	358.8	1.42	70	251.2	1.08
Tanytarsus	50	179.4	0.71	0	0.0	0.00
Hemerodromia	10	35.9	0.14	0	0.0	0.00
TOTAL BENTHOS	7,020	25,188.4	100.00	6,500	23,322.6	100.00

WATERWAY= C.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 59,
 and DATE= 31AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	17	61.0	2.32	250	897.0	6.57
Turbellaria	1	3.6	0.14	0	0.0	0.00
Oligochaeta	13	46.6	1.77	315	1,130.2	8.28
Caecidotea	1	3.6	0.14	10	35.9	0.26
Hyalella azteca	0	0.0	0.00	10	35.9	0.26
Gammarus fasciatus	20	71.8	2.72	65	233.2	1.71
Cyrenellus fraternus	1	3.6	0.14	15	53.8	0.39
Hydroptila	0	0.0	0.00	5	17.9	0.13
Procladius (Holotanypus)	0	0.0	0.00	10	35.9	0.26
Cricotopus tremulus grp.	0	0.0	0.00	25	89.7	0.66
Cricotopus sylvestris grp.	3	10.8	0.41	185	663.8	4.86
Nanocladius distinctus	34	122.0	4.63	85	305.0	2.23
Dicrotendipes simpsoni	266	954.4	36.24	930	3,336.9	24.44
Polypedilum illinoense	6	21.5	0.82	60	215.3	1.58
Paratanytarsus	3	10.8	0.41	0	0.0	0.00
Gyraulus	1	3.6	0.14	0	0.0	0.00
Ferrissia	38	136.3	5.18	0	0.0	0.00
Corbicula fluminea	0	0.0	0.00	15	53.8	0.39
Dreissena polymorpha	330	1,184.1	44.96	1,825	6,548.3	47.96
TOTAL BENTHOS	734	2,633.7	100.00	3,805	13,652.7	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= C.S.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 75,
 and DATE= 23AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	--	--	--	4	14.4	0.20
Turbellaria	--	--	--	809	2,902.8	41.21
Urnatella gracilis	--	--	--	8	28.7	0.41
Oligochaeta	--	--	--	987	3,541.4	50.28
Helobdella papillata	--	--	--	5	17.9	0.25
Placobdella pediculata	--	--	--	1	3.6	0.05
Gammarus fasciatus	--	--	--	3	10.8	0.15
Baetis intercalaris	--	--	--	8	28.7	0.41
Stenacron	--	--	--	1	3.6	0.05
Cyrnellus fraternus	--	--	--	1	3.6	0.05
Cheumatopsyche	--	--	--	5	17.9	0.25
Cricotopus	--	--	--	1	3.6	0.05
Nanocladius distinctus	--	--	--	12	43.1	0.61
Chironomus	--	--	--	1	3.6	0.05
Dicrotendipes simpsoni	--	--	--	106	380.3	5.40
Ferrissia	--	--	--	6	21.5	0.31
Corbicula fluminea	--	--	--	5	17.9	0.25
TOTAL BENTHOS	--	--	--	1,963	7,043.4	100.00

WATERWAY= C.S.S.C.,
 LOCATION= HARLEM AVE.,
 STATION= 41,
 and DATE= 23AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	170	610.0	1.37	70	251.2	1.82
Turbellaria	680	2,439.9	5.46	210	753.5	5.45
Urnatella gracilis	20	71.8	0.16	0	0.0	0.00
Plumatella	0	0.0	0.00	70	251.2	1.82
Oligochaeta	11,110	39,863.7	89.24	1,985	7,122.4	51.49
Caecidotea	130	466.5	1.04	0	0.0	0.00
Gammarus fasciatus	20	71.8	0.16	85	305.0	2.20
Argia	10	35.9	0.08	0	0.0	0.00
Cricotopus sylvestris grp.	10	35.9	0.08	0	0.0	0.00
Nanocladius distinctus	50	179.4	0.40	100	358.8	2.59
Dicrotendipes simpsoni	250	897.0	2.01	475	1,704.3	12.32
Glyptotendipes	0	0.0	0.00	5	17.9	0.13
Parachironomus	0	0.0	0.00	5	17.9	0.13
Polypedilum flavum	0	0.0	0.00	5	17.9	0.13
Ferrissia	0	0.0	0.00	15	53.8	0.39
Dreissena polymorpha	0	0.0	0.00	830	2,978.1	21.53
TOTAL BENTHOS	12,450	44,671.7	100.00	3,855	13,832.1	100.00

WATERWAY= C.S.S.C.,
 LOCATION= LOCKPORT,
 STATION= 92,
 and DATE= 30AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	83	297.8	6.71	42	150.7	3.68
Turbellaria	229	821.7	18.51	118	423.4	10.34
Plumatella	3	10.8	0.24	0	0.0	0.00
Oligochaeta	132	473.6	10.67	177	635.1	15.51
Helobdella papillata	1	3.6	0.08	26	93.3	2.28
Gammarus fasciatus	91	326.5	7.36	234	839.6	20.51
Stenacron	1	3.6	0.08	1	3.6	0.09
Stenonema integrum	0	0.0	0.00	2	7.2	0.18
Cyrnellus fraternus	1	3.6	0.08	0	0.0	0.00
Cheumatopsyche	1	3.6	0.08	0	0.0	0.00
Ablabesmyia janta	4	14.4	0.32	0	0.0	0.00
Cricotopus	0	0.0	0.00	2	7.2	0.18
Nanocladius distinctus	51	183.0	4.12	91	326.5	7.98
Dicrotendipes simpsoni	332	1,191.2	26.84	153	549.0	13.41

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= C.S.S.C.,
 LOCATION= LOCKPORT,
 STATION= 92,
 and DATE= 30AUG04

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Xenochironomus xenolabis	0	0.0	0.00	15	53.8	1.31
Physa	4	14.4	0.32	0	0.0	0.00
Menetus dilatatus	3	10.8	0.24	0	0.0	0.00
Ferrissia	291	1,044.1	23.52	247	886.3	21.65
Corbicula fluminea	0	0.0	0.00	3	10.8	0.26
Musculium	3	10.8	0.24	0	0.0	0.00
Dreissena polymorpha	7	25.1	0.57	30	107.6	2.63
TOTAL BENTHOS	1,237	4,438.5	100.00	1,141	4,094.0	100.00

WATERWAY= CALUMET R.,
 LOCATION= 130TH ST.,
 STATION= 55,
 and DATE= 01SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	80	287.0	0.29	0	0.0	0.00
Plumatella	1	3.6	0.00	0	0.0	0.00
Oligochaeta	30	107.6	0.11	0	0.0	0.00
Gammarus fasciatus	1,200	4,305.7	4.30	250	897.0	1.18
Cyrenellus fraternus	0	0.0	0.00	150	538.2	0.71
Cricotopus bicinctus grp.	10	35.9	0.04	0	0.0	0.00
Nanocladius distinctus	30	107.6	0.11	0	0.0	0.00
Dicrotendipes simpsoni	10	35.9	0.04	100	358.8	0.47
Polypedilum flavum	20	71.8	0.07	0	0.0	0.00
Simulium	0	0.0	0.00	50	179.4	0.24
Ferrissia	180	645.9	0.65	0	0.0	0.00
Dreissena polymorpha	26,330	94,474.3	94.40	20,550	73,735.2	97.39
TOTAL BENTHOS	27,891	100,075.3	100.00	21,100	75,708.6	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= BELMONT AVE.,
 STATION= 19,
 and DATE= 20SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	5	17.9	1.25	0	0.0	0.00
Oligochaeta	4	14.4	1.00	174	624.3	69.32
Caecidotea	1	3.6	0.25	0	0.0	0.00
Gammarus fasciatus	44	157.9	10.97	6	21.5	2.39
Hydracarina	1	3.6	0.25	0	0.0	0.00
Baetis intercalaris	26	93.3	6.48	0	0.0	0.00
Stenacron	21	75.3	5.24	37	132.8	14.74
Argia	5	17.9	1.25	5	17.9	1.99
Cheumatopsyche	115	412.6	28.68	0	0.0	0.00
Hydropsyche betteni	2	7.2	0.50	0	0.0	0.00
Macronychus glabratus	11	39.5	2.74	0	0.0	0.00
Stenelmis crenata grp.	11	39.5	2.74	0	0.0	0.00
Tanytus	0	0.0	0.00	2	7.2	0.80
Procladius (Holotanytus)	1	3.6	0.25	4	14.4	1.59
Corynoneura lobata	20	71.8	4.99	0	0.0	0.00
Thienemanniella xena	44	157.9	10.97	0	0.0	0.00
Parakiefferiella	3	10.8	0.75	0	0.0	0.00
Rheocricotopus robacki	13	46.6	3.24	0	0.0	0.00
Dicrotendipes	0	0.0	0.00	2	7.2	0.80
Polypedilum flavum	6	21.5	1.50	0	0.0	0.00
Polypedilum illinoense	13	46.6	3.24	6	21.5	2.39
Polypedilum scalaenum grp.	26	93.3	6.48	15	53.8	5.98
Stenochironomus	7	25.1	1.75	0	0.0	0.00
Rheotanytarsus	5	17.9	1.25	0	0.0	0.00
Ferrissia	17	61.0	4.24	0	0.0	0.00
TOTAL BENTHOS	401	1,438.8	100.00	251	900.6	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R.,
 LOCATION= LAKE COOK RD.,
 STATION= 13,
 and DATE= 06JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	38	136.3	2.64	5	17.9	2.12
Oligochaeta	154	552.6	10.71	169	606.4	71.61
Helobdella stagnalis	0	0.0	0.00	1	3.6	0.42
Placobdella pediculata	0	0.0	0.00	1	3.6	0.42
Caecidotea	10	35.9	0.70	0	0.0	0.00
Gammarus fasciatus	22	78.9	1.53	10	35.9	4.24
Baetis intercalaris	4	14.4	0.28	0	0.0	0.00
Stenacron	14	50.2	0.97	1	3.6	0.42
Stenonema integrum	82	294.2	5.70	0	0.0	0.00
Stenonema terminatum	10	35.9	0.70	0	0.0	0.00
Tricorythodes	102	366.0	7.09	1	3.6	0.42
Anthopotamus myops grp.	16	57.4	1.11	1	3.6	0.42
Argia	4	14.4	0.28	8	28.7	3.39
Sialis	0	0.0	0.00	1	3.6	0.42
Cheumatopsyche	370	1,327.6	25.73	0	0.0	0.00
Hydropsyche simulans	74	265.5	5.15	0	0.0	0.00
Hydropsyche bidens	14	50.2	0.97	0	0.0	0.00
Ceratopsyche morosa	6	21.5	0.42	0	0.0	0.00
Ancyronyx variegata	2	7.2	0.14	0	0.0	0.00
Dubiraphia	0	0.0	0.00	1	3.6	0.42
Macronychus glabratus	8	28.7	0.56	1	3.6	0.42
Stenelmis	24	86.1	1.67	0	0.0	0.00
Nilotanypus fimbriatus	14	50.2	0.97	0	0.0	0.00
Thienemanimyia grp.	14	50.2	0.97	0	0.0	0.00
Thienemanniella xena	4	14.4	0.28	0	0.0	0.00
Rheocricotopus robacki	14	50.2	0.97	0	0.0	0.00
Dicrotendipes	0	0.0	0.00	4	14.4	1.69
Dicrotendipes simpsoni	4	14.4	0.28	3	10.8	1.27
Endochironomus nigricans	0	0.0	0.00	2	7.2	0.85
Glyptotendipes	0	0.0	0.00	19	68.2	8.05
Microtendipes	22	78.9	1.53	1	3.6	0.42
Polypedilum flavum	360	1,291.7	25.03	0	0.0	0.00
Polypedilum scalaenum grp.	18	64.6	1.25	0	0.0	0.00
Stenochironomus	4	14.4	0.28	0	0.0	0.00
Tribelos fuscicorne	0	0.0	0.00	1	3.6	0.42
Rheotanytarsus	26	93.3	1.81	0	0.0	0.00
Menetus dilatatus	2	7.2	0.14	0	0.0	0.00
Ferrissia	0	0.0	0.00	1	3.6	0.42
Corbicula fluminea	2	7.2	0.14	1	3.6	0.42
Sphaerium	0	0.0	0.00	3	10.8	1.27
Musculium	0	0.0	0.00	1	3.6	0.42
TOTAL BENTHOS	1,438	5,159.7	100.00	236	846.8	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= MATERIAL SERVICE RD.,
 STATION= 91,
 and DATE= 10SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	595	2,134.9	30.19	424	1,521.3	26.38
Plumatella	2	7.2	0.10	1	3.6	0.06
Oligochaeta	57	204.5	2.89	232	832.4	14.44
Caecidotea	5	17.9	0.25	0	0.0	0.00
Gammarus fasciatus	5	17.9	0.25	0	0.0	0.00
Baetis intercalaris	135	484.4	6.85	5	17.9	0.31
Stenacron	5	17.9	0.25	5	17.9	0.31
Tricorythodes	5	17.9	0.25	5	17.9	0.31
Argia	0	0.0	0.00	3	10.8	0.19
Trepobates	0	0.0	0.00	3	10.8	0.19
Cheumatopsyche	722	2,590.6	36.63	496	1,779.7	30.86
Hydropsyche orris	2	7.2	0.10	6	21.5	0.37
Hydropsyche simulans	8	28.7	0.41	2	7.2	0.12
Ceratopsyche morosa	5	17.9	0.25	0	0.0	0.00
Petrophila	2	7.2	0.10	0	0.0	0.00
Macronychus glabratus	0	0.0	0.00	9	32.3	0.56
Stenelmis	8	28.7	0.41	2	7.2	0.12

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R.,
 LOCATION= MATERIAL SERVICE RD.,
 STATION= 91,
 and DATE= 10SEP04

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Thienemanniella xena	22	78.9	1.12	0	0.0	0.00
Nanocladius distinctus	30	107.6	1.52	0	0.0	0.00
Nanocladius crassicornus/rectinervis	115	412.6	5.83	13	46.6	0.81
Tvetenia discoloripes grp.	10	35.9	0.51	0	0.0	0.00
Dicrotendipes	10	35.9	0.51	0	0.0	0.00
Glyptotendipes	0	0.0	0.00	3	10.8	0.19
Polypedilum flavum	168	602.8	8.52	148	531.0	9.21
Polypedilum illinoense	0	0.0	0.00	6	21.5	0.37
Stenochironomus	0	0.0	0.00	3	10.8	0.19
Rheotanytarsus	22	78.9	1.12	170	610.0	10.58
Simulium	0	0.0	0.00	2	7.2	0.12
Hemerodromia	0	0.0	0.00	1	3.6	0.06
Ferrissia	28	100.5	1.42	68	244.0	4.23
Musculium transversum	2	7.2	0.10	0	0.0	0.00
Dreissena polymorpha	8	28.7	0.41	0	0.0	0.00
TOTAL BENTHOS	1,971	7,072.1	100.00	1,607	5,766.1	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= OAKTON ST.,
 STATION= 17,
 and DATE= 07JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	9	32.3	2.39
Urnatella gracilis	2	7.2	0.40	0	0.0	0.00
Plumatella	1	3.6	0.20	1	3.6	0.27
Oligochaeta	477	1,711.5	96.56	144	516.7	38.30
Helobdella stagnalis	1	3.6	0.20	0	0.0	0.00
Ostracoda	2	7.2	0.40	0	0.0	0.00
Caecidotea	0	0.0	0.00	12	43.1	3.19
Gammarus fasciatus	1	3.6	0.20	85	305.0	22.61
Stenacron	0	0.0	0.00	41	147.1	10.90
Tricorythodes	1	3.6	0.20	1	3.6	0.27
Argia	0	0.0	0.00	7	25.1	1.86
Sialis	0	0.0	0.00	1	3.6	0.27
Cheumatopsyche	2	7.2	0.40	11	39.5	2.93
Stenelmis	0	0.0	0.00	1	3.6	0.27
Ablabesmyia janta	0	0.0	0.00	1	3.6	0.27
Nilotanypus fimbriatus	0	0.0	0.00	1	3.6	0.27
Thienemannimyia grp.	0	0.0	0.00	4	14.4	1.06
Thienemanniella xena	0	0.0	0.00	1	3.6	0.27
Nanocladius crassicornus/rectinervis	0	0.0	0.00	4	14.4	1.06
Rheocricotopus robacki	0	0.0	0.00	1	3.6	0.27
Cryptochironomus	0	0.0	0.00	2	7.2	0.53
Dicrotendipes neomodestus	0	0.0	0.00	2	7.2	0.53
Dicrotendipes simpsoni	0	0.0	0.00	2	7.2	0.53
Glyptotendipes	1	3.6	0.20	11	39.5	2.93
Harnischia	0	0.0	0.00	6	21.5	1.60
Microtendipes	0	0.0	0.00	1	3.6	0.27
Polypedilum flavum	3	10.8	0.61	4	14.4	1.06
Polypedilum illinoense	0	0.0	0.00	3	10.8	0.80
Polypedilum scalaenum grp.	2	7.2	0.40	11	39.5	2.93
Stenochironomus	0	0.0	0.00	6	21.5	1.60
Rheotanytarsus	1	3.6	0.20	1	3.6	0.27
Ferrissia	0	0.0	0.00	1	3.6	0.27
Corbicula fluminea	0	0.0	0.00	1	3.6	0.27
TOTAL BENTHOS	494	1,772.5	100.00	376	1,349.1	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R.,
 LOCATION= OGDEN AVE.,
 STATION= 22,
 and DATE= 08SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	10	35.9	1.79
Turbellaria	195	699.7	10.56	1	3.6	0.18
Oligochaeta	152	545.4	8.23	85	305.0	15.21
Mooreobdella microstoma	5	17.9	0.27	0	0.0	0.00
Caecidotea	2	7.2	0.11	1	3.6	0.18
Gammarus fasciatus	5	17.9	0.27	3	10.8	0.54
Hydracarina	0	0.0	0.00	1	3.6	0.18
Baetis intercalaris	120	430.6	6.50	28	100.5	5.01
Stenacron	0	0.0	0.00	31	111.2	5.55
Stenonema integrum	0	0.0	0.00	2	7.2	0.36
Tricorythodes	32	114.8	1.73	0	0.0	0.00
Caenis	0	0.0	0.00	1	3.6	0.18
Argia	5	17.9	0.27	4	14.4	0.72
Trepobates	0	0.0	0.00	1	3.6	0.18
Cheumatopsyche	585	2,099.0	31.69	229	821.7	40.97
Hydropsyche betteni	2	7.2	0.11	7	25.1	1.25
Ceratopsyche morosa	20	71.8	1.08	0	0.0	0.00
Hydroptila	5	17.9	0.27	2	7.2	0.36
Macronychus glabratus	5	17.9	0.27	1	3.6	0.18
Stenelmis crenata grp.	0	0.0	0.00	4	14.4	0.72
Nilotanypus fimbriatus	20	71.8	1.08	14	50.2	2.50
Thienemannimyia grp.	55	197.3	2.98	12	43.1	2.15
Corynoneura lobata	0	0.0	0.00	21	75.3	3.76
Thienemanniella xena	0	0.0	0.00	11	39.5	1.97
Orthocladius	80	287.0	4.33	6	21.5	1.07
Nanocladius distinctus	60	215.3	3.25	1	3.6	0.18
Rheocricotopus robacki	60	215.3	3.25	8	28.7	1.43
Dicrotendipes neomodestus	8	28.7	0.43	0	0.0	0.00
Glyptotendipes	0	0.0	0.00	1	3.6	0.18
Polypedilum flavum	350	1,255.8	18.96	30	107.6	5.37
Polypedilum illinoense	40	143.5	2.17	2	7.2	0.36
Polypedilum scalaenum grp.	0	0.0	0.00	1	3.6	0.18
Stenochironomus	12	43.1	0.65	16	57.4	2.86
Rheotanytarsus	20	71.8	1.08	2	7.2	0.36
Tanytarsus	8	28.7	0.43	0	0.0	0.00
Hemerodromia	0	0.0	0.00	1	3.6	0.18
Ferrissia	0	0.0	0.00	16	57.4	2.86
Corbicula fluminea	0	0.0	0.00	6	21.5	1.07
TOTAL BENTHOS	1,846	6,623.6	100.00	559	2,005.7	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= ROOSEVELT RD.,
 STATION= 20,
 and DATE= 04SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	6	21.5	7.59	100	358.8	58.82
Caecidotea	6	21.5	7.59	8	28.7	4.71
Gammarus fasciatus	2	7.2	2.53	15	53.8	8.82
Stenacron	21	75.3	26.58	1	3.6	0.59
Argia	25	89.7	31.65	3	10.8	1.76
Somatochlora	0	0.0	0.00	1	3.6	0.59
Procladius (Holotanypus)	1	3.6	1.27	0	0.0	0.00
Ablabesmyia janta	1	3.6	1.27	0	0.0	0.00
Corynoneura lobata	1	3.6	1.27	1	3.6	0.59
Parakiefferiella	0	0.0	0.00	2	7.2	1.18
Dicrotendipes neomodestus	0	0.0	0.00	1	3.6	0.59
Harnischia	1	3.6	1.27	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	13	46.6	7.65
Polypedilum scalaenum grp.	3	10.8	3.80	0	0.0	0.00
Paratanytarsus	0	0.0	0.00	1	3.6	0.59
Ferrissia	12	43.1	15.19	24	86.1	14.12
TOTAL BENTHOS	79	283.5	100.00	170	610.0	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= DES PLAINES R.,
 LOCATION= STEPHEN ST.,
 STATION= 29,
 and DATE= 22SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	330	1,184.1	7.08	0	0.0	0.00
Plumatella	0	0.0	0.00	21	75.3	2.16
Oligochaeta	60	215.3	1.29	57	204.5	5.88
Ostracoda	0	0.0	0.00	7	25.1	0.72
Gammarus fasciatus	0	0.0	0.00	18	64.6	1.86
Baetis intercalaris	240	861.1	5.15	1	3.6	0.10
Stenacron	20	71.8	0.43	75	269.1	7.73
Stenonema integrum	0	0.0	0.00	1	3.6	0.10
Stenonema terminatum	50	179.4	1.07	20	71.8	2.06
Tricorythodes	80	287.0	1.72	0	0.0	0.00
Caenis	0	0.0	0.00	6	21.5	0.62
Anthopotamus myops grp.	0	0.0	0.00	1	3.6	0.10
Argia	0	0.0	0.00	7	25.1	0.72
Cyrnellus fraternus	10	35.9	0.21	6	21.5	0.62
Cheumatopsyche	2,200	7,893.8	47.21	215	771.4	22.16
Hydropsyche orris	810	2,906.4	17.38	3	10.8	0.31
Hydropsyche simulans	30	107.6	0.64	0	0.0	0.00
Ceratopsyche morosa	80	287.0	1.72	0	0.0	0.00
Hydroptila	10	35.9	0.21	0	0.0	0.00
Macronychus glabratus	0	0.0	0.00	5	17.9	0.52
Stenelmis crenata grp.	30	107.6	0.64	33	118.4	3.40
Ablabesmyia janta	0	0.0	0.00	11	39.5	1.13
Thienemanniya grp.	180	645.9	3.86	33	118.4	3.40
Corynoneura lobata	0	0.0	0.00	4	14.4	0.41
Thienemanniella xena	10	35.9	0.21	11	39.5	1.13
Cricotopus/Orthocladius	0	0.0	0.00	4	14.4	0.41
Nanocladius	140	502.3	3.00	59	211.7	6.08
Nanocladius distinctus	160	574.1	3.43	167	599.2	17.22
Tvetenia discoloripes grp.	10	35.9	0.21	44	157.9	4.54
Dicrotendipes simpsoni	10	35.9	0.21	11	39.5	1.13
Glyptotendipes	0	0.0	0.00	4	14.4	0.41
Harnischia	0	0.0	0.00	4	14.4	0.41
Parachironomus	0	0.0	0.00	4	14.4	0.41
Polypedilum flavum	140	502.3	3.00	0	0.0	0.00
Polypedilum illinoense	10	35.9	0.21	4	14.4	0.41
Stenochironomus	10	35.9	0.21	22	78.9	2.27
Rheotanytarsus	10	35.9	0.21	7	25.1	0.72
Tanytarsus	0	0.0	0.00	4	14.4	0.41
Hemerodromia	20	71.8	0.43	1	3.6	0.10
Menetus dilatatus	10	35.9	0.21	0	0.0	0.00
Ferrissia	0	0.0	0.00	98	351.6	10.10
Corbicula fluminea	0	0.0	0.00	2	7.2	0.21
TOTAL BENTHOS	4,660	16,720.5	100.00	970	3,480.4	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= WILLOW SPRINGS RD.,
 STATION= 23,
 and DATE= 21SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	14	50.2	4.36	--	--	--
Oligochaeta	286	1,026.2	89.10	--	--	--
Helobdella stagnalis	2	7.2	0.62	--	--	--
Caecidotea	1	3.6	0.31	--	--	--
Stenacron	3	10.8	0.93	--	--	--
Argia	5	17.9	1.56	--	--	--
Cyrnellus fraternus	3	10.8	0.93	--	--	--
Procladius (Holotanypus)	1	3.6	0.31	--	--	--
Cryptochironomus	1	3.6	0.31	--	--	--
Polypedilum scalaenum grp.	1	3.6	0.31	--	--	--
Stenochironomus	1	3.6	0.31	--	--	--
Ferrissia	2	7.2	0.62	--	--	--
Corbicula fluminea	1	3.6	0.31	--	--	--
TOTAL BENTHOS	321	1,151.8	100.00	--	--	--

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= HIGGINS CR.,
 LOCATION= ELMHURST RD.,
 STATION= 77,
 and DATE= 20JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	3	10.8	0.07	0	0.0	0.00
Plumatella	13	46.6	0.31	0	0.0	0.00
Oligochaeta	1,373	4,926.4	33.19	36	129.2	23.23
Erpobdella punctata punctata	7	25.1	0.17	1	3.6	0.65
Caecidotea	1,467	5,263.7	35.46	81	290.6	52.26
Argia	20	71.8	0.48	0	0.0	0.00
Agabus	0	0.0	0.00	1	3.6	0.65
Laccophilus maculosus	0	0.0	0.00	1	3.6	0.65
Tropisternus	3	10.8	0.07	0	0.0	0.00
Tanytus	67	240.4	1.62	1	3.6	0.65
Procladius (Holotanytus)	7	25.1	0.17	1	3.6	0.65
Thienemannimyia grp.	60	215.3	1.45	3	10.8	1.94
Cricotopus/Orthocladius	17	61.0	0.41	0	0.0	0.00
Cricotopus bicinctus grp.	120	430.6	2.90	1	3.6	0.65
Cricotopus sylvestris grp.	50	179.4	1.21	0	0.0	0.00
Nanocladius distinctus	50	179.4	1.21	1	3.6	0.65
Nanocladius crassicornus/rectinervis	393	1,410.1	9.50	16	57.4	10.32
Chironomus	220	789.4	5.32	5	17.9	3.23
Cryptochironomus	0	0.0	0.00	1	3.6	0.65
Dicrotendipes neomodestus	17	61.0	0.41	0	0.0	0.00
Physa	153	549.0	3.70	3	10.8	1.94
Planorbella	17	61.0	0.41	0	0.0	0.00
Ferrissia	80	287.0	1.93	3	10.8	1.94
TOTAL BENTHOS	4,137	14,843.9	100.00	155	556.2	100.00

WATERWAY= HIGGINS CR.,
 LOCATION= WILLE RD.,
 STATION= 78,
 and DATE= 21JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	40	143.5	0.83	13	46.6	2.44
Plumatella	10	35.9	0.21	0	0.0	0.00
Oligochaeta	100	358.8	2.08	63	226.0	11.82
Erpobdella punctata punctata	10	35.9	0.21	0	0.0	0.00
Ostracoda	10	35.9	0.21	7	25.1	1.31
Caecidotea	4,560	16,361.7	94.80	247	886.3	46.34
Thienemannimyia grp.	0	0.0	0.00	3	10.8	0.56
Cricotopus tremulus grp.	20	71.8	0.42	17	61.0	3.19
Cricotopus bicinctus grp.	30	107.6	0.62	120	430.6	22.51
Cricotopus sylvestris grp.	0	0.0	0.00	23	82.5	4.32
Orthocladius	0	0.0	0.00	10	35.9	1.88
Nanocladius crassicornus/rectinervis	10	35.9	0.21	0	0.0	0.00
Chironomus	0	0.0	0.00	7	25.1	1.31
Polypedilum illinoense	0	0.0	0.00	20	71.8	3.75
Simulium	0	0.0	0.00	3	10.8	0.56
Ferrissia	20	71.8	0.42	0	0.0	0.00
TOTAL BENTHOS	4,810	17,258.7	100.00	533	1,912.5	100.00

WATERWAY= L.C.R.,
 LOCATION= HALSTED ST.,
 STATION= 76,
 and DATE= 30SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	10	35.9	0.19	0	0.0	0.00
Oligochaeta	160	574.1	3.12	180	645.9	3.12
Hyalella azteca	20	71.8	0.39	140	502.3	2.43
Gammarus fasciatus	380	1,363.5	7.41	780	2,798.7	13.52
Cyrenellus fraternus	20	71.8	0.39	30	107.6	0.52
Hydroptila	0	0.0	0.00	10	35.9	0.17
Ablabesmyia	10	35.9	0.19	0	0.0	0.00
Cricotopus bicinctus grp.	50	179.4	0.97	40	143.5	0.69

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= L.C.R.,
 LOCATION= HALSTED ST.,
 STATION= 76,
 and DATE= 30SEP04

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Nanocladius distinctus	10	35.9	0.19	0	0.0	0.00
Dicrotendipes simpsoni	530	1,901.7	10.33	610	2,188.7	10.57
Stenochironomus	10	35.9	0.19	40	143.5	0.69
Xenochironomus xenolabis	10	35.9	0.19	10	35.9	0.17
Menetus dilatatus	0	0.0	0.00	10	35.9	0.17
Ferrissia	30	107.6	0.58	70	251.2	1.21
Dreissena polymorpha	3,890	13,957.7	75.83	3,850	13,814.1	66.72
TOTAL BENTHOS	5,130	18,406.9	100.00	5,770	20,703.3	100.00

WATERWAY= N.B.C.R.,
 LOCATION= ALBANY AVE.,
 STATION= 96,
 and DATE= 10AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	22	78.9	3.63
Turbellaria	90	322.9	7.57	66	236.8	10.89
Oligochaeta	43	154.3	3.62	80	287.0	13.20
Ostracoda	0	0.0	0.00	9	32.3	1.49
Caecidotea	112	401.9	9.42	276	990.3	45.54
Gammarus fasciatus	15	53.8	1.26	0	0.0	0.00
Hydracarina	2	7.2	0.17	1	3.6	0.17
Baetis intercalaris	58	208.1	4.88	0	0.0	0.00
Stenacron	8	28.7	0.67	101	362.4	16.67
Tricorythodes	0	0.0	0.00	2	7.2	0.33
Coenagrionidae	0	0.0	0.00	1	3.6	0.17
Cheumatopsyche	413	1,481.9	34.74	6	21.5	0.99
Hypopsyche betteni	95	340.9	7.99	0	0.0	0.00
Stenelmis crenata grp.	2	7.2	0.17	0	0.0	0.00
Thienemannimyia grp.	3	10.8	0.25	0	0.0	0.00
Corynoneura	15	53.8	1.26	0	0.0	0.00
Thienemanniella xena	13	46.6	1.09	0	0.0	0.00
Nanocladius distinctus	10	35.9	0.84	0	0.0	0.00
Rheocricotopus robacki	163	584.9	13.71	0	0.0	0.00
Polypedilum flavum	117	419.8	9.84	0	0.0	0.00
Polypedilum illinoense	3	10.8	0.25	0	0.0	0.00
Polypedilum scalaenum grp.	15	53.8	1.26	1	3.6	0.17
Ammicola	0	0.0	0.00	1	3.6	0.17
Ferrissia	12	43.1	1.01	32	114.8	5.28
Musculium	0	0.0	0.00	4	14.4	0.66
Dreissena polymorpha	0	0.0	0.00	4	14.4	0.66
TOTAL BENTHOS	1,189	4,266.2	100.00	606	2,174.4	100.00

WATERWAY= N.B.C.R.,
 LOCATION= GRAND AVE.,
 STATION= 46,
 and DATE= 27AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	2	7.2	0.13
Turbellaria	122	437.7	16.35	437	1,568.0	27.52
Plumatella	0	0.0	0.00	1	3.6	0.06
Oligochaeta	189	678.1	25.34	1,141	4,094.0	71.85
Hyalella azteca	0	0.0	0.00	5	17.9	0.31
Nanocladius distinctus	4	14.4	0.54	0	0.0	0.00
Dicrotendipes simpsoni	419	1,503.4	56.17	0	0.0	0.00
Glyptotendipes	4	14.4	0.54	0	0.0	0.00
Polypedilum scalaenum grp.	8	28.7	1.07	0	0.0	0.00
Ferrissia	0	0.0	0.00	2	7.2	0.13
TOTAL BENTHOS	746	2,676.7	100.00	1,588	5,697.9	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= N.S.C.,
 LOCATION= TOUHY AVE.,
 STATION= 36,
 and DATE= 29SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	1,540	5,525.7	10.29
Turbellaria	620	2,224.6	4.99	970	3,480.4	6.48
Oligochaeta	8,060	28,920.0	64.90	4,760	17,079.3	31.82
Helobdella papillata	0	0.0	0.00	30	107.6	0.20
Ostracoda	10	35.9	0.08	260	932.9	1.74
Caecidotea	0	0.0	0.00	10	35.9	0.07
Gammarus fasciatus	0	0.0	0.00	3,040	10,907.8	20.32
Baetis	0	0.0	0.00	10	35.9	0.07
Enallagma	0	0.0	0.00	10	35.9	0.07
Cheumatopsyche	0	0.0	0.00	30	107.6	0.20
Hydroptila	0	0.0	0.00	10	35.9	0.07
Cricotopus bicinctus grp.	70	251.2	0.56	0	0.0	0.00
Nanocladius distinctus	420	1,507.0	3.38	80	287.0	0.53
Chironomus	40	143.5	0.32	0	0.0	0.00
Dicrotendipes simpsoni	2,590	9,293.1	20.85	3,120	11,194.8	20.86
Glyptotendipes	570	2,045.2	4.59	940	3,372.8	6.28
Parachironomus	40	143.5	0.32	40	143.5	0.27
Gyraulid	0	0.0	0.00	10	35.9	0.07
Ferrissia	0	0.0	0.00	60	215.3	0.40
Dreissena polymorpha	0	0.0	0.00	40	143.5	0.27
TOTAL BENTHOS	12,420	44,564.0	100.00	14,960	53,677.8	100.00

WATERWAY= POPLAR CR.,
 LOCATION= ROUTE 19,
 STATION= 90,
 and DATE= 08JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Dugesia	27	96.9	12.74	37	132.8	22.42
Oligochaeta	30	107.6	14.15	20	71.8	12.12
Copepoda	1	3.6	0.47	0	0.0	0.00
Gammarus fasciatus	0	0.0	0.00	2	7.2	1.21
Cambarus bartonii	0	0.0	0.00	1	3.6	0.61
Stenacron	1	3.6	0.47	10	35.9	6.06
Caenis	0	0.0	0.00	1	3.6	0.61
Sialis	0	0.0	0.00	1	3.6	0.61
Cheumatopsyche	14	50.2	6.60	0	0.0	0.00
Dubiraphia	1	3.6	0.47	3	10.8	1.82
Macronychus glabratus	5	17.9	2.36	3	10.8	1.82
Stenelmis	0	0.0	0.00	2	7.2	1.21
Thienemanniya grp.	8	28.7	3.77	11	39.5	6.67
Thienemanniella xena	6	21.5	2.83	0	0.0	0.00
Nanocladius crassicornus/rectinervis	12	43.1	5.66	0	0.0	0.00
Dicrotendipes	2	7.2	0.94	2	7.2	1.21
Dicrotendipes neomodestus	1	3.6	0.47	0	0.0	0.00
Glyptotendipes	0	0.0	0.00	2	7.2	1.21
Microtendipes	11	39.5	5.19	13	46.6	7.88
Paratendipes albimanus	0	0.0	0.00	1	3.6	0.61
Polypedilum fallax grp.	0	0.0	0.00	2	7.2	1.21
Polypedilum flavum	1	3.6	0.47	2	7.2	1.21
Polypedilum scalaenum grp.	3	10.8	1.42	8	28.7	4.85
Tribelos fuscicorne	0	0.0	0.00	2	7.2	1.21
Micropsectra	2	7.2	0.94	0	0.0	0.00
Paratanytarsus	17	61.0	8.02	7	25.1	4.24
Rheotanytarsus	42	150.7	19.81	25	89.7	15.15
Tanytarsus	0	0.0	0.00	2	7.2	1.21
Valvata	2	7.2	0.94	0	0.0	0.00
Viviparus	1	3.6	0.47	0	0.0	0.00
Pleurocera	4	14.4	1.89	0	0.0	0.00
Physa	2	7.2	0.94	0	0.0	0.00
Ferrissia	19	68.2	8.96	8	28.7	4.85
TOTAL BENTHOS	212	760.7	100.00	165	592.0	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= SALT CR.,
 LOCATION= BROOKFIELD AVE.,
 STATION= 109,
 and DATE= 07SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	7	25.1	4.29
Turbellaria	6	21.5	4.20	5	17.9	3.07
Oligochaeta	13	46.6	9.09	31	111.2	19.02
Helobdella	0	0.0	0.00	2	7.2	1.23
Ostracoda	0	0.0	0.00	1	3.6	0.61
Caecidotea	7	25.1	4.90	8	28.7	4.91
Baetis flavistriga	1	3.6	0.70	0	0.0	0.00
Callibaetis	0	0.0	0.00	1	3.6	0.61
Stenacron	10	35.9	6.99	11	39.5	6.75
Caenis	0	0.0	0.00	1	3.6	0.61
Argia	6	21.5	4.20	10	35.9	6.13
Cheumatopsyche	6	21.5	4.20	0	0.0	0.00
Hydropsyche betteni	3	10.8	2.10	1	3.6	0.61
Stenelmis	1	3.6	0.70	6	21.5	3.68
Natarsia sp. A	1	3.6	0.70	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	1	3.6	0.61
Ablabesmyia mallochi	0	0.0	0.00	4	14.4	2.45
Nilotanypus fimbriatus	1	3.6	0.70	0	0.0	0.00
Thienemannimyia grp.	12	43.1	8.39	2	7.2	1.23
Thienemanniella xena	1	3.6	0.70	0	0.0	0.00
Cricotopus/Orthocladius	0	0.0	0.00	3	10.8	1.84
Cricotopus	0	0.0	0.00	6	21.5	3.68
Cricotopus bicinctus grp.	6	21.5	4.20	0	0.0	0.00
Rheocricotopus robacki	12	43.1	8.39	0	0.0	0.00
Chironomus	0	0.0	0.00	1	3.6	0.61
Cryptochironomus	3	10.8	2.10	2	7.2	1.23
Dicrotendipes neomodestus	0	0.0	0.00	1	3.6	0.61
Harnischia	0	0.0	0.00	2	7.2	1.23
Polypedilum fallax grp.	2	7.2	1.40	1	3.6	0.61
Polypedilum flavum	12	43.1	8.39	0	0.0	0.00
Polypedilum halterale grp.	0	0.0	0.00	1	3.6	0.61
Polypedilum illinoense	8	28.7	5.59	30	107.6	18.40
Polypedilum scalaenum grp.	8	28.7	5.59	15	53.8	9.20
Stenochironomus	1	3.6	0.70	0	0.0	0.00
Rheotanytarsus	1	3.6	0.70	0	0.0	0.00
Tanytarsus	2	7.2	1.40	1	3.6	0.61
Amnicola	0	0.0	0.00	1	3.6	0.61
Physa	0	0.0	0.00	1	3.6	0.61
Ferrissia	19	68.2	13.29	7	25.1	4.29
Dreissena polymorpha	1	3.6	0.70	0	0.0	0.00
TOTAL BENTHOS	143	513.1	100.00	163	584.9	100.00

WATERWAY= SALT CR.,
 LOCATION= DEVON AVE.,
 STATION= 18,
 and DATE= 19JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	6	21.5	0.23
Turbellaria	1	3.6	1.41	128	459.3	4.94
Nematoda	0	0.0	0.00	2	7.2	0.08
Urnatella gracilis	0	0.0	0.00	1	3.6	0.04
Oligochaeta	68	244.0	95.77	1,463	5,249.4	56.51
Ostracoda	0	0.0	0.00	66	236.8	2.55
Caecidotea	0	0.0	0.00	136	488.0	5.25
Gammarus fasciatus	0	0.0	0.00	1	3.6	0.04
Stenacron	0	0.0	0.00	4	14.4	0.15
Coenagrionidae	0	0.0	0.00	1	3.6	0.04
Corixidae	0	0.0	0.00	3	10.8	0.12
Cyrnellus fraternus	0	0.0	0.00	125	448.5	4.83
Cheumatopsyche	0	0.0	0.00	27	96.9	1.04
Dubiraphia	0	0.0	0.00	3	10.8	0.12
Stenelmis	0	0.0	0.00	1	3.6	0.04
Bezzia	0	0.0	0.00	1	3.6	0.04
Procladius (Holotanypus)	0	0.0	0.00	56	200.9	2.16
Thienemannimyia grp.	0	0.0	0.00	4	14.4	0.15

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= SALT CR.,
 LOCATION= DEVON AVE.,
 STATION= 18,
 and DATE= 19JUL04

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Nanocladius crassicornus/rectinervis	0	0.0	0.00	32	114.8	1.24
Chironomus	0	0.0	0.00	28	100.5	1.08
Cladopelma	0	0.0	0.00	4	14.4	0.15
Cryptochironomus	0	0.0	0.00	20	71.8	0.77
Dicrotendipes neomodestus	0	0.0	0.00	12	43.1	0.46
Dicrotendipes simpsoni	0	0.0	0.00	52	186.6	2.01
Endochironomus nigricans	0	0.0	0.00	24	86.1	0.93
Glyptotendipes	0	0.0	0.00	40	143.5	1.54
Harnischia	0	0.0	0.00	4	14.4	0.15
Polypedilum flavum	0	0.0	0.00	16	57.4	0.62
Polypedilum illinoense	0	0.0	0.00	12	43.1	0.46
Polypedilum scalaenum grp.	1	3.6	1.41	76	272.7	2.94
Pseudochironomus	0	0.0	0.00	20	71.8	0.77
Stenochironomus	0	0.0	0.00	8	28.7	0.31
Cladotanytarsus mancus grp.	1	3.6	1.41	4	14.4	0.15
Rheotanytarsus	0	0.0	0.00	8	28.7	0.31
Tanytarsus	0	0.0	0.00	12	43.1	0.46
Rhamphomyia	0	0.0	0.00	1	3.6	0.04
Menetus dilatatus	0	0.0	0.00	153	549.0	5.91
Ferrissia	0	0.0	0.00	22	78.9	0.85
Corbicula fluminea	0	0.0	0.00	12	43.1	0.46
Dreissena polymorpha	0	0.0	0.00	1	3.6	0.04
TOTAL BENTHOS	71	254.8	100.00	2,589	9,289.6	100.00

WATERWAY= SALT CR.,
 LOCATION= HIGGINS RD.,
 STATION= 79,
 and DATE= 15JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	39	139.9	6.83	40	143.5	0.80
Turbellaria	1	3.6	0.18	70	251.2	1.40
Oligochaeta	132	473.6	23.12	1,190	4,269.8	23.75
Helobdella stagnalis	2	7.2	0.35	0	0.0	0.00
Ostracoda	15	53.8	2.63	30	107.6	0.60
Caecidotea	1	3.6	0.18	0	0.0	0.00
Crangonyx	0	0.0	0.00	10	35.9	0.20
Hydracarina	1	3.6	0.18	0	0.0	0.00
Caenis	0	0.0	0.00	10	35.9	0.20
Enallagma	0	0.0	0.00	10	35.9	0.20
Corixidae	8	28.7	1.40	10	35.9	0.20
Cyrenellus fraternus	2	7.2	0.35	150	538.2	2.99
Oecetis	1	3.6	0.18	0	0.0	0.00
Dubiraphia	5	17.9	0.88	30	107.6	0.60
Ceratopogon	1	3.6	0.18	0	0.0	0.00
Culicoides	0	0.0	0.00	10	35.9	0.20
Tanytus	6	21.5	1.05	0	0.0	0.00
Procladius (Holotanytus)	12	43.1	2.10	30	107.6	0.60
Ablabesmyia janta	0	0.0	0.00	60	215.3	1.20
Nanocladius crassicornus/rectinervis	0	0.0	0.00	30	107.6	0.60
Chironomus	47	168.6	8.23	0	0.0	0.00
Cladopelma	9	32.3	1.58	80	287.0	1.60
Dicrotendipes simpsoni	74	265.5	12.96	1,130	4,054.5	22.55
Glyptotendipes	183	656.6	32.05	1,970	7,068.5	39.32
Parachironomus	6	21.5	1.05	30	107.6	0.60
Polypedilum illinoense	3	10.8	0.53	30	107.6	0.60
Stictochironomus	3	10.8	0.53	30	107.6	0.60
Physa	0	0.0	0.00	30	107.6	0.60
Helisoma	11	39.5	1.93	0	0.0	0.00
Ferrissia	9	32.3	1.58	30	107.6	0.60
TOTAL BENTHOS	571	2,048.8	100.00	5,010	17,976.3	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= SALT CR., LOCATION= WOLF RD., STATION= 24, and DATE= 22JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	444	1,593.1	54.48	1	3.6	0.76
Oligochaeta	52	186.6	6.38	63	226.0	47.73
Caecidotea	0	0.0	0.00	1	3.6	0.76
Baetis intercalaris	7	25.1	0.86	0	0.0	0.00
Stenacron	45	161.5	5.52	8	28.7	6.06
Tricorythodes	8	28.7	0.98	0	0.0	0.00
Argia	1	3.6	0.12	2	7.2	1.52
Sialis	3	10.8	0.37	3	10.8	2.27
Cynnellus fraternus	1	3.6	0.12	0	0.0	0.00
Cheumatopsyche	58	208.1	7.12	1	3.6	0.76
Stenelmis	2	7.2	0.25	3	10.8	2.27
Procladius (Holotanypus)	0	0.0	0.00	14	50.2	10.61
Ablabesmyia mallochii	1	3.6	0.12	0	0.0	0.00
Thienemanimyia grp.	16	57.4	1.96	2	7.2	1.52
Corynoneura lobata	1	3.6	0.12	1	3.6	0.76
Thienemanniella xena	38	136.3	4.66	0	0.0	0.00
Cricotopus/Orthocladus	4	14.4	0.49	0	0.0	0.00
Cricotopus bicinctus grp.	22	78.9	2.70	0	0.0	0.00
Nanocladius distinctus	1	3.6	0.12	1	3.6	0.76
Nanocladius crassicornus/rectinervis	1	3.6	0.12	0	0.0	0.00
Rheocricotopus robacki	1	3.6	0.12	0	0.0	0.00
Cryptochironomus	6	21.5	0.74	0	0.0	0.00
Dicrotendipes neomodestus	7	25.1	0.86	1	3.6	0.76
Dicrotendipes simpsoni	1	3.6	0.12	0	0.0	0.00
Polypedilum fallax grp.	3	10.8	0.37	2	7.2	1.52
Polypedilum flavum	43	154.3	5.28	0	0.0	0.00
Polypedilum halterale grp.	0	0.0	0.00	7	25.1	5.30
Polypedilum illinoense	4	14.4	0.49	6	21.5	4.55
Polypedilum scalaenum grp.	37	132.8	4.54	6	21.5	4.55
Stenochironomus	3	10.8	0.37	1	3.6	0.76
Pleurocera	4	14.4	0.49	0	0.0	0.00
Menetus dilatatus	0	0.0	0.00	9	32.3	6.82
Corbicula fluminea	1	3.6	0.12	0	0.0	0.00
TOTAL BENTHOS	815	2,924.3	100.00	132	473.6	100.00

WATERWAY= W.B. DUPAGE R., LOCATION= LAKE ST., STATION= 64, and DATE= 13JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	3	10.8	0.13
Turbellaria	75	269.1	2.52	50	179.4	2.17
Oligochaeta	755	2,709.0	25.38	753	2,701.8	32.64
Erpobdella punctata punctata	0	0.0	0.00	3	10.8	0.13
Ostracoda	0	0.0	0.00	3	10.8	0.13
Caecidotea	360	1,291.7	12.10	180	645.9	7.80
Stenacron	0	0.0	0.00	10	35.9	0.43
Coenagrionidae	0	0.0	0.00	3	10.8	0.13
Cheumatopsyche	710	2,547.5	23.87	17	61.0	0.74
Hydropsyche	20	71.8	0.67	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	17	61.0	0.74
Thienemanimyia grp.	40	143.5	1.34	0	0.0	0.00
Thienemanniella xena	35	125.6	1.18	17	61.0	0.74
Cricotopus tremulus grp.	50	179.4	1.68	17	61.0	0.74
Cricotopus bicinctus grp.	65	233.2	2.18	17	61.0	0.74
Cricotopus sylvestris grp.	10	35.9	0.34	0	0.0	0.00
Nanocladius	15	53.8	0.50	0	0.0	0.00
Chironomini	10	35.9	0.34	0	0.0	0.00
Dicrotendipes neomodestus	15	53.8	0.50	10	35.9	0.43
Dicrotendipes simpsoni	40	143.5	1.34	53	190.2	2.30
Glyptotendipes	250	897.0	8.40	763	2,737.7	33.07
Polypedilum flavum	90	322.9	3.03	10	35.9	0.43
Polypedilum illinoense	320	1,148.2	10.76	137	491.6	5.94
Polypedilum scalaenum grp.	25	89.7	0.84	10	35.9	0.43
Paratanytarsus	10	35.9	0.34	0	0.0	0.00
Simulium	80	287.0	2.69	0	0.0	0.00
Gyraulus	0	0.0	0.00	217	778.6	9.41
Ferrissia	0	0.0	0.00	17	61.0	0.74
TOTAL BENTHOS	2,975	10,674.6	100.00	2,307	8,277.7	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - HESTER-DENDY DATA

WATERWAY= W.B. DUPAGE R.,
 LOCATION= SPRINGINGGUTH RD.,
 STATION= 110,
 and DATE= 09JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	57	204.5	79.17	39	139.9	13.45
Helobdella stagnalis	0	0.0	0.00	3	10.8	1.03
Caecidotea	11	39.5	15.28	227	814.5	78.28
Thienemannimyia grp.	0	0.0	0.00	1	3.6	0.34
Cricotopus tremulus grp.	0	0.0	0.00	2	7.2	0.69
Nanocladius	0	0.0	0.00	1	3.6	0.34
Chironomus	1	3.6	1.39	14	50.2	4.83
Parachironomus	1	3.6	1.39	2	7.2	0.69
Polypedilum flavum	1	3.6	1.39	0	0.0	0.00
Polypedilum illinoense	1	3.6	1.39	0	0.0	0.00
Paratanytarsus	0	0.0	0.00	1	3.6	0.34
TOTAL BENTHOS	72	258.3	100.00	290	1,040.5	100.00

WATERWAY= W.B. DUPAGE R.,
 LOCATION= WALNUT AVE.,
 STATION= 89,
 and DATE= 12JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	300	1,076.4	4.04	135	484.4	17.20
Oligochaeta	3,070	11,015.4	41.37	176	631.5	22.42
Helobdella	20	71.8	0.27	2	7.2	0.25
Erpobdella punctata punctata	10	35.9	0.13	0	0.0	0.00
Ostracoda	20	71.8	0.27	0	0.0	0.00
Caecidotea	110	394.7	1.48	30	107.6	3.82
Argia	0	0.0	0.00	5	17.9	0.64
Enallagma	0	0.0	0.00	8	28.7	1.02
Cheumatopsyche	60	215.3	0.81	0	0.0	0.00
Serromyia	10	35.9	0.13	0	0.0	0.00
Tanytus	0	0.0	0.00	3	10.8	0.38
Procladius (Holotanytus)	0	0.0	0.00	3	10.8	0.38
Thienemanniella xena	30	107.6	0.40	0	0.0	0.00
Cricotopus tremulus grp.	0	0.0	0.00	13	46.6	1.66
Cricotopus bicinctus grp.	120	430.6	1.62	7	25.1	0.89
Nanocladius crassicornus/rectinervis	90	322.9	1.21	10	35.9	1.27
Chironomus	1,740	6,243.3	23.45	73	261.9	9.30
Dicrotendipes neomodestus	60	215.3	0.81	32	114.8	4.08
Dicrotendipes simpsoni	30	107.6	0.40	0	0.0	0.00
Glyptotendipes	0	0.0	0.00	25	89.7	3.18
Parachironomus	90	322.9	1.21	7	25.1	0.89
Polypedilum illinoense	1,210	4,341.6	16.31	158	566.9	20.13
Stictochironomus	30	107.6	0.40	3	10.8	0.38
Micropsectra	160	574.1	2.16	3	10.8	0.38
Paratanytarsus	160	574.1	2.16	77	276.3	9.81
Hemerodromia	10	35.9	0.13	0	0.0	0.00
Physa	20	71.8	0.27	0	0.0	0.00
Ferrissia	70	251.2	0.94	15	53.8	1.91
TOTAL BENTHOS	7,420	26,623.6	100.00	785	2,816.6	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= BUFFALO CR.,
 LOCATION= LAKE COOK RD.,
 STATION= 12,
 and DATE= 01JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	1	14.4	0.36	1	14.4	0.11
Oligochaeta	112	1,607.6	40.58	683	9,803.3	74.56
Ostracoda	1	14.4	0.36	0	0.0	0.00
Caecidotea	1	14.4	0.36	0	0.0	0.00
Cheumatopsyche	5	71.8	1.81	0	0.0	0.00
Dubiraphia	1	14.4	0.36	1	14.4	0.11
Stenelmis	3	43.1	1.09	6	86.1	0.66
Thienemanniella xena	1	14.4	0.36	0	0.0	0.00
Cricotopus/Orthocladus	1	14.4	0.36	0	0.0	0.00
Cricotopus bicinctus grp.	1	14.4	0.36	3	43.1	0.33
Nanocladius distinctus	1	14.4	0.36	0	0.0	0.00
Nanocladius crassicornus/rectinervis	3	43.1	1.09	0	0.0	0.00
Chironomus	1	14.4	0.36	5	71.8	0.55
Cryptochironomus	15	215.3	5.43	14	200.9	1.53
Cryptotendipes	0	0.0	0.00	5	71.8	0.55
Dicrotendipes neomodestus	39	559.8	14.13	58	832.5	6.33
Glyptotendipes	7	100.5	2.54	0	0.0	0.00
Microtendipes	1	14.4	0.36	2	28.7	0.22
Polypedilum flavum	51	732.0	18.48	12	172.2	1.31
Polypedilum scalaenum grp.	7	100.5	2.54	22	315.8	2.40
Pseudochironomus	4	57.4	1.45	2	28.7	0.22
Stictochironomus	4	57.4	1.45	51	732.0	5.57
Cladotanytarsus mancus grp.	3	43.1	1.09	0	0.0	0.00
Paratanytarsus	0	0.0	0.00	2	28.7	0.22
Rheotanytarsus	1	14.4	0.36	0	0.0	0.00
Tanytarsus	1	14.4	0.36	7	100.5	0.76
Sphaerium simile	10	143.5	3.62	0	0.0	0.00
Musculium	0	0.0	0.00	13	186.6	1.42
Pisidium	0	0.0	0.00	29	416.2	3.17
Lasmigona complanata	1	14.4	0.36	0	0.0	0.00
TOTAL BENTHOS	276	3,961.5	100.00	916	13,147.6	100.00

WATERWAY= C.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 59,
 and DATE= 31AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	108	1,550.2	89.26	125	1,794.2	63.78
Hyalella azteca	0	0.0	0.00	5	71.8	2.55
Gammarus fasciatus	0	0.0	0.00	9	129.2	4.59
Procladius (Holotanypus)	12	172.2	9.92	46	660.3	23.47
Cricotopus bicinctus grp.	0	0.0	0.00	2	28.7	1.02
Cricotopus sylvestris grp.	0	0.0	0.00	1	14.4	0.51
Cryptochironomus	1	14.4	0.83	0	0.0	0.00
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.51
Corbicula fluminea	0	0.0	0.00	5	71.8	2.55
Dreissena polymorpha	0	0.0	0.00	2	28.7	1.02
TOTAL BENTHOS	121	1,736.7	100.00	196	2,813.2	100.00

WATERWAY= C.S.S.C.,
 LOCATION= CICERO AVE.,
 STATION= 75,
 and DATE= 23AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	7	100.5	77.78	26	373.2	92.86
Tricorythodes	1	14.4	11.11	0	0.0	0.00
Dicrotendipes simpsoni	0	0.0	0.00	2	28.7	7.14
Corbicula fluminea	1	14.4	11.11	0	0.0	0.00
TOTAL BENTHOS	9	129.2	100.00	28	401.9	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= C.S.S.C.,
 LOCATION= HARLEM AVE.,
 STATION= 41,
 and DATE= 23AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	31	445.0	25.83
Plumatella	0	0.0	0.00	6	86.1	5.00
Oligochaeta	62	889.9	100.00	74	1,062.1	61.67
Gammarus fasciatus	0	0.0	0.00	3	43.1	2.50
Dicotendipes simpsoni	0	0.0	0.00	6	86.1	5.00
TOTAL BENTHOS	62	889.9	100.00	120	1,722.4	100.00

WATERWAY= C.S.S.C.,
 LOCATION= LOCKPORT,
 STATION= 92,
 and DATE= 30AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	0	0.0	0.00	10	143.5	0.21
Oligochaeta	1,820	26,122.9	98.01	4,480	64,302.6	94.12
Erpobdella punctata punctata	0	0.0	0.00	20	287.1	0.42
Gammarus fasciatus	0	0.0	0.00	130	1,865.9	2.73
Tanytus	0	0.0	0.00	10	143.5	0.21
Procladius (Holotanytus)	5	71.8	0.27	70	1,004.7	1.47
Cryptochironomus	25	358.8	1.35	0	0.0	0.00
Dicotendipes simpsoni	0	0.0	0.00	10	143.5	0.21
Pericoma	2	28.7	0.11	0	0.0	0.00
Ferrissia	0	0.0	0.00	30	430.6	0.63
Corbicula fluminea	5	71.8	0.27	0	0.0	0.00
TOTAL BENTHOS	1,857	26,654.0	100.00	4,760	68,321.6	100.00

WATERWAY= CALUMET R.,
 LOCATION= 130TH ST.,
 STATION= 55,
 and DATE= 01SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	152	2,181.7	91.57	50	717.7	78.13
Gammarus fasciatus	1	14.4	0.60	0	0.0	0.00
Procladius (Holotanytus)	3	43.1	1.81	2	28.7	3.13
Coelotanytus	1	14.4	0.60	0	0.0	0.00
Parakiefferiella	0	0.0	0.00	1	14.4	1.56
Chironomus	5	71.8	3.01	0	0.0	0.00
Cryptochironomus	4	57.4	2.41	5	71.8	7.81
Dicotendipes simpsoni	0	0.0	0.00	1	14.4	1.56
Polypedilum halterale grp.	0	0.0	0.00	3	43.1	4.69
Dreissena polymorpha	0	0.0	0.00	2	28.7	3.13
TOTAL BENTHOS	166	2,382.6	100.00	64	918.6	100.00

WATERWAY= DES PLAINES R., LOCATION= BELMONT AVE.,
 STATION= 19,
 and DATE= 20SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	167	2,397.0	63.02	544	7,808.2	98.19
Gammarus fasciatus	2	28.7	0.75	1	14.4	0.18
Cheumatopsyche	1	14.4	0.38	0	0.0	0.00
Macronychus glabratus	1	14.4	0.38	0	0.0	0.00
Polypedilum scalaenum grp.	1	14.4	0.38	0	0.0	0.00
Campelema decisum	0	0.0	0.00	4	57.4	0.72
Amnicola	0	0.0	0.00	1	14.4	0.18
Corbicula fluminea	92	1,320.5	34.72	4	57.4	0.72
Sphaerium simile	1	14.4	0.38	0	0.0	0.00
TOTAL BENTHOS	265	3,803.6	100.00	554	7,951.7	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= DES PLAINES R.,
 LOCATION= IRVING PARK RD.,
 STATION= CFAR,
 and DATE= 16JUL04

TAXA	CFAR		
	#	#/m2	%
Oligochaeta	627	8,999.5	91.00
Placobdella pediculata	1	14.4	0.15
Mooreobdella microstoma	1	14.4	0.15
Caecidotea	1	14.4	0.15
Gammarus fasciatus	12	172.2	1.74
Cheumatopsyche	1	14.4	0.15
Stenelmis	2	28.7	0.29
Ceratopogon	1	14.4	0.15
Procladius (Holotanypus)	1	14.4	0.15
Campeloma decisum	4	57.4	0.58
Ferrissia	2	28.7	0.29
Corbicula fluminea	22	315.8	3.19
Musculium transversum	14	200.9	2.03
TOTAL BENTHOS	689	9,889.4	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= LAKE COOK RD.,
 STATION= 13,
 and DATE= 06JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Helobdella stagnalis	0	0.0	0.00	2	28.7	10.00
Ostracoda	4	57.4	1.50	0	0.0	0.00
Gammarus fasciatus	21	301.4	7.89	0	0.0	0.00
Stenonema terminatum	4	57.4	1.50	0	0.0	0.00
Tricorythodes	3	43.1	1.13	0	0.0	0.00
Anthopotamus myops grp.	5	71.8	1.88	0	0.0	0.00
Cheumatopsyche	32	459.3	12.03	0	0.0	0.00
Dubiraphia	1	14.4	0.38	0	0.0	0.00
Stenelmis	8	114.8	3.01	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	2	28.7	10.00
Thienemanimyia grp.	12	172.2	4.51	1	14.4	5.00
Thienemanniella xena	2	28.7	0.75	0	0.0	0.00
Rheocricotopus robacki	2	28.7	0.75	0	0.0	0.00
Cryptochironomus	7	100.5	2.63	0	0.0	0.00
Dicrotendipes	2	28.7	0.75	0	0.0	0.00
Microtendipes	2	28.7	0.75	0	0.0	0.00
Polypedilum flavum	49	703.3	18.42	0	0.0	0.00
Polypedilum halterale grp.	8	114.8	3.01	0	0.0	0.00
Polypedilum scalaenum grp.	30	430.6	11.28	0	0.0	0.00
Saetheria	25	358.8	9.40	0	0.0	0.00
Cladotanytarsus mancus grp.	5	71.8	1.88	0	0.0	0.00
Cladotanytarsus vanderwulpi grp.	28	401.9	10.53	0	0.0	0.00
Rheotanytarsus	2	28.7	0.75	0	0.0	0.00
Tanytarsus	5	71.8	1.88	0	0.0	0.00
Corbicula fluminea	9	129.2	3.38	0	0.0	0.00
Sphaerium	0	0.0	0.00	12	172.2	60.00
Pisidium	0	0.0	0.00	3	43.1	15.00
TOTAL BENTHOS	266	3,818.0	100.00	20	287.1	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= DES PLAINES R.,
 LOCATION= MATERIAL SERVICE RD.,
 STATION= 91,
 and DATE= 10SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	7	100.5	5.04	4	57.4	0.80
Nematoda	0	0.0	0.00	1	14.4	0.20
Oligochaeta	51	732.0	36.69	360	5,167.2	72.14
Ostracoda	0	0.0	0.00	45	645.9	9.02
Gammarus fasciatus	1	14.4	0.72	10	143.5	2.00
Baetis intercalaris	2	28.7	1.44	1	14.4	0.20
Tricorythodes	2	28.7	1.44	1	14.4	0.20
Caenis	0	0.0	0.00	1	14.4	0.20
Corixidae	0	0.0	0.00	2	28.7	0.40
Cheumatopsyche	5	71.8	3.60	8	114.8	1.60
Stenelmis	7	100.5	5.04	1	14.4	0.20
Procladius (Holotanypus)	0	0.0	0.00	2	28.7	0.40
Ablabesmyia mallochii	0	0.0	0.00	1	14.4	0.20
Thienemanniella xena	11	157.9	7.91	0	0.0	0.00
Cricotopus bicinctus grp.	1	14.4	0.72	3	43.1	0.60
Orthocladius	1	14.4	0.72	5	71.8	1.00
Chironomus	0	0.0	0.00	5	71.8	1.00
Cryptochironomus	0	0.0	0.00	1	14.4	0.20
Dicrotendipes	1	14.4	0.72	4	57.4	0.80
Dicrotendipes neomodestus	0	0.0	0.00	2	28.7	0.40
Polypedilum flavum	30	430.6	21.58	3	43.1	0.60
Polypedilum halterale grp.	0	0.0	0.00	1	14.4	0.20
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.20
Polypedilum scalaenum grp.	3	43.1	2.16	7	100.5	1.40
Tribelos fuscicornis	0	0.0	0.00	1	14.4	0.20
Cladotanytarsus vanderwulpi grp.	1	14.4	0.72	0	0.0	0.00
Rheotanytarsus	4	57.4	2.88	0	0.0	0.00
Tanytarsus	0	0.0	0.00	16	229.7	3.21
Menetus dilatatus	0	0.0	0.00	2	28.7	0.40
Ferrissia	1	14.4	0.72	6	86.1	1.20
Corbicula fluminea	11	157.9	7.91	4	57.4	0.80
Musculium	0	0.0	0.00	1	14.4	0.20
TOTAL BENTHOS	139	1,995.1	100.00	499	7,162.3	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= OAKTON ST.,
 STATION= 17,
 and DATE= 07JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Plumatella	1	14.4	0.96	0	0.0	0.00
Oligochaeta	47	674.6	45.19	580	8,324.9	97.97
Ostracoda	0	0.0	0.00	1	14.4	0.17
Gammarus fasciatus	4	57.4	3.85	0	0.0	0.00
Stylurus	0	0.0	0.00	1	14.4	0.17
Hydropsychidae	1	14.4	0.96	0	0.0	0.00
Thienemanniella grp.	1	14.4	0.96	0	0.0	0.00
Cryptochironomus	7	100.5	6.73	0	0.0	0.00
Harnischia	1	14.4	0.96	4	57.4	0.68
Paracladopelma	18	258.4	17.31	0	0.0	0.00
Polypedilum flavum	2	28.7	1.92	0	0.0	0.00
Polypedilum halterale grp.	2	28.7	1.92	0	0.0	0.00
Polypedilum illinoense	1	14.4	0.96	0	0.0	0.00
Polypedilum scalaenum grp.	11	157.9	10.58	0	0.0	0.00
Amnicola	0	0.0	0.00	2	28.7	0.34
Pleurocera	0	0.0	0.00	1	14.4	0.17
Corbicula fluminea	8	114.8	7.69	3	43.1	0.51
TOTAL BENTHOS	104	1,492.7	100.00	592	8,497.1	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= DES PLAINES R.,
 LOCATION= OGDEN AVE.,
 STATION= 22,
 and DATE= 08SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	4	57.4	2.25	0	0.0	0.00
Oligochaeta	47	674.6	26.40	268	3,846.7	94.04
Gammarus fasciatus	2	28.7	1.12	0	0.0	0.00
Baetis intercalaris	1	14.4	0.56	0	0.0	0.00
Baetis flavistriga	1	14.4	0.56	0	0.0	0.00
Stenacron	1	14.4	0.56	0	0.0	0.00
Tricorythodes	10	143.5	5.62	0	0.0	0.00
Cheumatopsyche	1	14.4	0.56	2	28.7	0.70
Ceratopsyche morosa	0	0.0	0.00	1	14.4	0.35
Hydroptila	1	14.4	0.56	0	0.0	0.00
Stenelmis	7	100.5	3.93	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	5	71.8	1.75
Thienemannimyia grp.	1	14.4	0.56	0	0.0	0.00
Thienemanniella xena	1	14.4	0.56	0	0.0	0.00
Cryptochironomus	1	14.4	0.56	0	0.0	0.00
Polypedilum scalaenum grp.	1	14.4	0.56	0	0.0	0.00
Ferrissia	4	57.4	2.25	0	0.0	0.00
Corbicula fluminea	89	1,277.4	50.00	4	57.4	1.40
Sphaerium	6	86.1	3.37	0	0.0	0.00
Musculium	0	0.0	0.00	1	14.4	0.35
Pisidium	0	0.0	0.00	4	57.4	1.40
TOTAL BENTHOS	178	2,554.9	100.00	285	4,090.7	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= ROOSEVELT RD.,
 STATION= 20,
 and DATE= 04SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	189	2,712.8	91.30	313	4,492.6	98.74
Placobdella pediculata	0	0.0	0.00	1	14.4	0.32
Caecidotea	1	14.4	0.48	0	0.0	0.00
Gammarus fasciatus	4	57.4	1.93	1	14.4	0.32
Procladius (Holotanypus)	3	43.1	1.45	2	28.7	0.63
Corbicula fluminea	10	143.5	4.83	0	0.0	0.00
TOTAL BENTHOS	207	2,971.1	100.00	317	4,550.0	100.00

WATERWAY= DES PLAINES R.,
 LOCATION= STEPHEN ST.,
 STATION= 29,
 and DATE= 22SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	3	43.1	75.00	2	28.7	40.00
Gammarus fasciatus	0	0.0	0.00	1	14.4	20.00
Rheotanytarsus	1	14.4	25.00	0	0.0	0.00
Ferrissia	0	0.0	0.00	2	28.7	40.00
TOTAL BENTHOS	4	57.4	100.00	5	71.8	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= DES PLAINES R.,
 LOCATION= WILLOW SPRINGS RD.,
 STATION= 23,
 and DATE= 21SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	375	5,382.5	98.43	182	2,612.3	82.73
Corixidae	0	0.0	0.00	1	14.4	0.45
Culicoides	1	14.4	0.26	0	0.0	0.00
Procladius (Holotanypus)	3	43.1	0.79	5	71.8	2.27
Chironomus	2	28.7	0.52	30	430.6	13.64
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.45
Ferrissia	0	0.0	0.00	1	14.4	0.45
TOTAL BENTHOS	381	5,468.6	100.00	220	3,157.7	100.00

WATERWAY= HIGGINS CR.,
 LOCATION= ELMHURST RD.,
 STATION= 77,
 and DATE= 20JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	193	2,770.2	85.02	52	746.4	40.94
Erpobdella punctata punctata	4	57.4	1.76	6	86.1	4.72
Libellulidae	1	14.4	0.44	0	0.0	0.00
Tanypus	1	14.4	0.44	10	143.5	7.87
Procladius (Holotanypus)	1	14.4	0.44	2	28.7	1.57
Cricotopus bicinctus grp.	1	14.4	0.44	0	0.0	0.00
Chironomus	25	358.8	11.01	52	746.4	40.94
Cryptochironomus	0	0.0	0.00	2	28.7	1.57
Polypedilum illinoense	1	14.4	0.44	0	0.0	0.00
Pisidium	0	0.0	0.00	3	43.1	2.36
TOTAL BENTHOS	227	3,258.2	100.00	127	1,822.9	100.00

WATERWAY= HIGGINS CR.,
 LOCATION= WILLE RD.,
 STATION= 78,
 and DATE= 21JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	74	1,062.1	0.98	0	0.0	0.00
Turbellaria	1,469	21,085.0	19.46	672	9,645.4	16.33
Oligochaeta	178	2,554.9	2.36	129	1,851.6	3.14
Erpobdella punctata punctata	11	157.9	0.15	24	344.5	0.58
Ostracoda	452	6,487.7	5.99	0	0.0	0.00
Caecidotea	5,222	74,952.8	69.19	3,167	45,456.8	76.98
Hydropsychidae	0	0.0	0.00	6	86.1	0.15
Hydroptila	0	0.0	0.00	6	86.1	0.15
Thienemannimyia grp.	1	14.4	0.01	4	57.4	0.10
Cricotopus tremulus grp.	2	28.7	0.03	0	0.0	0.00
Cricotopus bicinctus grp.	34	488.0	0.45	84	1,205.7	2.04
Cricotopus trifascia grp.	6	86.1	0.08	11	157.9	0.27
Cricotopus sylvestris grp.	4	57.4	0.05	2	28.7	0.05
Nanocladius crassicornus/rectinervis	58	832.5	0.77	0	0.0	0.00
Cryptochironomus	1	14.4	0.01	1	14.4	0.02
Endochironomus nigricans	0	0.0	0.00	1	14.4	0.02
Polypedilum flavum	2	28.7	0.03	0	0.0	0.00
Polypedilum illinoense	4	57.4	0.05	0	0.0	0.00
Rheotanytarsus	0	0.0	0.00	1	14.4	0.02
Pericoma	0	0.0	0.00	1	14.4	0.02
Physa	6	86.1	0.08	5	71.8	0.12
Ferrissia	10	143.5	0.13	0	0.0	0.00
Sphaerium simile	13	186.6	0.17	0	0.0	0.00
TOTAL BENTHOS	7,547	108,324.1	100.00	4,114	59,049.3	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= L.C.R.,
 LOCATION= HALSTED ST.,
 STATION= 76,
 and DATE= 30SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	3,279	47,064.4	98.65	203	2,913.7	89.04
Mooreobdella microstoma	0	0.0	0.00	1	14.4	0.44
Hyaella azteca	0	0.0	0.00	1	14.4	0.44
Gammarus fasciatus	8	114.8	0.24	1	14.4	0.44
Procladius (Holotanypus)	21	301.4	0.63	2	28.7	0.88
Cricotopus bicinctus grp.	1	14.4	0.03	0	0.0	0.00
Chironomus	2	28.7	0.06	0	0.0	0.00
Cryptochironomus	10	143.5	0.30	11	157.9	4.82
Dicrotendipes simpsoni	1	14.4	0.03	0	0.0	0.00
Ferrissia	0	0.0	0.00	1	14.4	0.44
Corbicula fluminea	2	28.7	0.06	7	100.5	3.07
Dreissena polymorpha	0	0.0	0.00	1	14.4	0.44
TOTAL BENTHOS	3,324	47,710.3	100.00	228	3,272.5	100.00

WATERWAY= N.B.C.R.,
 LOCATION= ALBANY AVE.,
 STATION= 96,
 and DATE= 10AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	3	43.1	0.39	0	0.0	0.00
Turbellaria	265	3,803.6	34.82	5	71.8	0.13
Plumatella	1	14.4	0.13	0	0.0	0.00
Oligochaeta	270	3,875.4	35.48	620	8,899.0	15.84
Helobdella stagnalis	1	14.4	0.13	15	215.3	0.38
Erpobdella punctata punctata	0	0.0	0.00	60	861.2	1.53
Mooreobdella microstoma	0	0.0	0.00	60	861.2	1.53
Caecidotea	0	0.0	0.00	145	2,081.2	3.70
Gammarus fasciatus	3	43.1	0.39	5	71.8	0.13
Hydropsychidae	1	14.4	0.13	0	0.0	0.00
Thienemannimyia grp.	0	0.0	0.00	10	143.5	0.26
Corynoneura lobata	0	0.0	0.00	175	2,511.8	4.47
Thienemanniella xena	0	0.0	0.00	25	358.8	0.64
Nanocladius distinctus	6	86.1	0.79	45	645.9	1.15
Nanocladius crassicornus/rectinervis	0	0.0	0.00	15	215.3	0.38
Dicrotendipes simpsoni	195	2,798.9	25.62	20	287.1	0.51
Glyptotendipes	2	28.7	0.26	5	71.8	0.13
Polypedilum flavum	0	0.0	0.00	5	71.8	0.13
Polypedilum illinoense	0	0.0	0.00	135	1,937.7	3.45
Polypedilum scalaenum grp.	0	0.0	0.00	80	1,148.3	2.04
Paratanytarsus	0	0.0	0.00	5	71.8	0.13
Valvata	0	0.0	0.00	5	71.8	0.13
Amnicola	0	0.0	0.00	5	71.8	0.13
Menetus dilatatus	7	100.5	0.92	0	0.0	0.00
Ferrissia	1	14.4	0.13	0	0.0	0.00
Corbicula fluminea	1	14.4	0.13	0	0.0	0.00
Musculium transversum	0	0.0	0.00	1,340	19,233.4	34.23
Pisidium	0	0.0	0.00	1,135	16,291.0	28.99
Dreissena polymorpha	5	71.8	0.66	0	0.0	0.00
TOTAL BENTHOS	761	10,922.8	100.00	3,915	56,193.0	100.00

WATERWAY= N.B.C.R.,
 LOCATION= FULLERTON AVE.,
 STATION= CFAR,
 and DATE= 01JUN04

TAXA	CFAR		
	#	#/m2	%
Oligochaeta	22,400	321,513.2	100.00
TOTAL BENTHOS	22,400	321,513.2	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= N.B.C.R.,
 LOCATION= GRAND AVE.,
 STATION= 46,
 and DATE= 27AUG04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	1	14.4	0.45	0	0.0	0.00
Oligochaeta	216	3,100.3	96.86	223	3,200.8	100.00
Caecidotea	1	14.4	0.45	0	0.0	0.00
Procladius (Holotanypus)	4	57.4	1.79	0	0.0	0.00
Pisidium	1	14.4	0.45	0	0.0	0.00
TOTAL BENTHOS	223	3,200.8	100.00	223	3,200.8	100.00

WATERWAY= N.S.C.,
 LOCATION= TOUHY AVE.,
 STATION= 36,
 and DATE= 29SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	1	14.4	0.15
Turbellaria	1	14.4	0.25	86	1,234.4	13.13
Oligochaeta	389	5,583.4	97.98	431	6,186.3	65.80
Ostracoda	0	0.0	0.00	1	14.4	0.15
Caecidotea	0	0.0	0.00	2	28.7	0.31
Gammarus fasciatus	0	0.0	0.00	3	43.1	0.46
Procladius (Holotanypus)	0	0.0	0.00	1	14.4	0.15
Cricotopus bicinctus grp.	0	0.0	0.00	1	14.4	0.15
Nanocladius distinctus	1	14.4	0.25	2	28.7	0.31
Chironomus	3	43.1	0.76	1	14.4	0.15
Cryptochironomus	1	14.4	0.25	0	0.0	0.00
Dicrotendipes neomodestus	0	0.0	0.00	2	28.7	0.31
Dicrotendipes simpsoni	1	14.4	0.25	66	947.3	10.08
Glyptotendipes	0	0.0	0.00	45	645.9	6.87
Parachironomus	0	0.0	0.00	12	172.2	1.83
Ferrissia	1	14.4	0.25	1	14.4	0.15
TOTAL BENTHOS	397	5,698.2	100.00	655	9,401.4	100.00

WATERWAY= POPLAR CR.,
 LOCATION= ROUTE 19,
 STATION= 90,
 and DATE= 08JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	9	129.2	31.03	0	0.0	0.00
Oligochaeta	4	57.4	13.79	185	2,655.4	64.91
Helobdella stagnalis	0	0.0	0.00	2	28.7	0.70
Mooreobdella microstoma	3	43.1	10.34	4	57.4	1.40
Stenacron	1	14.4	3.45	0	0.0	0.00
Caenis	0	0.0	0.00	1	14.4	0.35
Cheumatopsyche	1	14.4	3.45	0	0.0	0.00
Dubiraphia	0	0.0	0.00	14	200.9	4.91
Ectopria	5	71.8	17.24	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	4	57.4	1.40
Thienemanniomyia grp.	2	28.7	6.90	0	0.0	0.00
Thienemanniella n. sp. 3	3	43.1	10.34	0	0.0	0.00
Chironomus	0	0.0	0.00	1	14.4	0.35
Cryptochironomus	0	0.0	0.00	3	43.1	1.05
Cryptotendipes	0	0.0	0.00	12	172.2	4.21
Dicrotendipes neomodestus	0	0.0	0.00	1	14.4	0.35
Polypedilum halterale grp.	0	0.0	0.00	1	14.4	0.35
Polypedilum scalaenum grp.	1	14.4	3.45	0	0.0	0.00
Cladotanytarsus mancus grp.	0	0.0	0.00	1	14.4	0.35
Viviparus	0	0.0	0.00	17	244.0	5.96
Amnicola	0	0.0	0.00	26	373.2	9.12
Corbicula fluminea	0	0.0	0.00	1	14.4	0.35
Sphaerium simile	0	0.0	0.00	12	172.2	4.21
TOTAL BENTHOS	29	416.2	100.00	285	4,090.7	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= SALT CR., LOCATION= ARLINGTON HTS. RD., STATION= 80,
and DATE= 14JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	29	416.2	39.19	47	674.6	2.54
Ostracoda	0	0.0	0.00	1	14.4	0.05
Chironomus	2	28.7	2.70	0	0.0	0.00
Cryptochironomus	9	129.2	12.16	65	933.0	3.51
Dicrotendipes neomodestus	3	43.1	4.05	16	229.7	0.86
Polypedilum flavum	0	0.0	0.00	32	459.3	1.73
Polypedilum illinoense	1	14.4	1.35	0	0.0	0.00
Polypedilum scalaenum grp.	21	301.4	28.38	211	3,028.5	11.41
Pseudochironomus	1	14.4	1.35	49	703.3	2.65
Stictochironomus	1	14.4	1.35	49	703.3	2.65
Cladotanytarsus mancus grp.	1	14.4	1.35	1,380	19,807.5	74.59
Micropsectra	3	43.1	4.05	0	0.0	0.00
Paratanytarsus	3	43.1	4.05	0	0.0	0.00
TOTAL BENTHOS	74	1,062.1	100.00	1,850	26,553.5	100.00

WATERWAY= SALT CR., LOCATION= BROOKFIELD AVE., STATION= 109,
and DATE= 07SEP04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	23	330.1	28.40	6	86.1	33.33
Baetis intercalaris	1	14.4	1.23	0	0.0	0.00
Stenelmis	2	28.7	2.47	0	0.0	0.00
Natarsia	1	14.4	1.23	0	0.0	0.00
Thienemanniella xena	2	28.7	2.47	0	0.0	0.00
Cricotopus	6	86.1	7.41	0	0.0	0.00
Cryptochironomus	3	43.1	3.70	0	0.0	0.00
Dicrotendipes neomodestus	2	28.7	2.47	0	0.0	0.00
Polypedilum flavum	9	129.2	11.11	0	0.0	0.00
Polypedilum halterale grp.	3	43.1	3.70	0	0.0	0.00
Polypedilum scalaenum grp.	18	258.4	22.22	0	0.0	0.00
Cladotanytarsus mancus grp.	2	28.7	2.47	0	0.0	0.00
Tanytarsus	1	14.4	1.23	0	0.0	0.00
Corbicula fluminea	7	100.5	8.64	7	100.5	38.89
Musculium	0	0.0	0.00	1	14.4	5.56
Pisidium	1	14.4	1.23	4	57.4	22.22
TOTAL BENTHOS	81	1,162.6	100.00	18	258.4	100.00

WATERWAY= SALT CR., LOCATION= DEVON AVE., STATION= 18,
and DATE= 19JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Nematoda	0	0.0	0.00	1	14.4	0.29
Oligochaeta	96	1,377.9	19.24	231	3,315.6	67.15
Ostracoda	0	0.0	0.00	24	344.5	6.98
Caecidotea	1	14.4	0.20	30	430.6	8.72
Cheumatopsyche	5	71.8	1.00	0	0.0	0.00
Dubiraphia	0	0.0	0.00	2	28.7	0.58
Stenelmis	1	14.4	0.20	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	2	28.7	0.58
Ablabesmyia mallochii	0	0.0	0.00	1	14.4	0.29
Thienemanniella xena	0	0.0	0.00	1	14.4	0.29
Chironomus	0	0.0	0.00	1	14.4	0.29
Cryptochironomus	68	976.0	13.63	9	129.2	2.62
Glyptotendipes	0	0.0	0.00	2	28.7	0.58
Harnischia	0	0.0	0.00	1	14.4	0.29
Polypedilum halterale grp.	6	86.1	1.20	6	86.1	1.74
Polypedilum illinoense	0	0.0	0.00	1	14.4	0.29
Polypedilum scalaenum grp.	77	1,105.2	15.43	6	86.1	1.74
Stictochironomus	3	43.1	0.60	1	14.4	0.29
Cladotanytarsus mancus grp.	201	2,885.0	40.28	9	129.2	2.62
Rheotanytarsus	0	0.0	0.00	1	14.4	0.29
Helisoma	1	14.4	0.20	0	0.0	0.00
Corbicula fluminea	40	574.1	8.02	15	215.3	4.36
TOTAL BENTHOS	499	7,162.3	100.00	344	4,937.5	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= SALT CR.,
 LOCATION= HIGGINS RD.,
 STATION= 79,
 and DATE= 15JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Urnatella gracilis	2	28.7	0.77	0	0.0	0.00
Oligochaeta	135	1,937.7	51.72	382	5,482.9	92.94
Ostracoda	1	14.4	0.38	3	43.1	0.73
Caenis	6	86.1	2.30	0	0.0	0.00
Dubiraphia	14	200.9	5.36	2	28.7	0.49
Ceratopogon	2	28.7	0.77	0	0.0	0.00
Tanytus	4	57.4	1.53	2	28.7	0.49
Procladius (Holotanytus)	23	330.1	8.81	1	14.4	0.24
Chironomus	1	14.4	0.38	1	14.4	0.24
Cladopelma	2	28.7	0.77	0	0.0	0.00
Cryptochironomus	6	86.1	2.30	3	43.1	0.73
Cryptotendipes	7	100.5	2.68	1	14.4	0.24
Glyptotendipes	1	14.4	0.38	0	0.0	0.00
Polypedilum halterale grp.	3	43.1	1.15	0	0.0	0.00
Stictochironomus	2	28.7	0.77	0	0.0	0.00
Tanytarsus	50	717.7	19.16	0	0.0	0.00
Physa	0	0.0	0.00	9	129.2	2.19
Gyraulus	0	0.0	0.00	1	14.4	0.24
Corbicula fluminea	1	14.4	0.38	6	86.1	1.46
Musculium	1	14.4	0.38	0	0.0	0.00
TOTAL BENTHOS	261	3,746.2	100.00	411	5,899.2	100.00

WATERWAY= SALT CR.,
 LOCATION= J.F.K. BLVD.,
 STATION= CFAR,
 and DATE= 19MAY04

TAXA	CFAR		
	#	#/m2	%
Plumatella	1	14.4	0.08
Oligochaeta	485	6,961.3	36.55
Ostracoda	756	10,851.1	56.97
Caenis	1	14.4	0.08
Dubiraphia	1	14.4	0.08
Bezzia	1	14.4	0.08
Cricotopus/Orthocladius	2	28.7	0.15
Cricotopus bicinctus grp.	5	71.8	0.38
Cricotopus sylvestris grp.	15	215.3	1.13
Parakiefferiella	3	43.1	0.23
Chironomus	31	445.0	2.34
Dicrotendipes neomodestus	14	200.9	1.06
Dicrotendipes simpsoni	1	14.4	0.08
Polypedilum halterale grp.	1	14.4	0.08
Polypedilum illinoense	1	14.4	0.08
Cladotanytarsus mancus grp.	4	57.4	0.30
Micropsectra	2	28.7	0.15
Paratanytarsus	3	43.1	0.23
TOTAL BENTHOS	1,327	19,046.8	100.00

WATERWAY= SALT CR.,
 LOCATION= WOLF RD.,
 STATION= 24,
 and DATE= 22JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Turbellaria	1	14.4	1.28	0	0.0	0.00
Oligochaeta	30	430.6	38.46	37	531.1	63.79
Caenis	2	28.7	2.56	0	0.0	0.00
Stenelmis	6	86.1	7.69	1	14.4	1.72
Procladius (Holotanytus)	0	0.0	0.00	1	14.4	1.72
Thienemanniella xena	1	14.4	1.28	0	0.0	0.00
Chironomus	0	0.0	0.00	2	28.7	3.45
Cryptochironomus	2	28.7	2.56	2	28.7	3.45
Dicrotendipes neomodestus	2	28.7	2.56	0	0.0	0.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= SALT CR.,
 LOCATION= WOLF RD.,
 STATION= 24,
 and DATE= 22JUL04

TAXA (cont.)	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Polypedilum flavum	1	14.4	1.28	0	0.0	0.00
Polypedilum halterale grp.	0	0.0	0.00	7	100.5	12.07
Polypedilum illinoense	0	0.0	0.00	1	14.4	1.72
Polypedilum scalaenum grp.	3	43.1	3.85	5	71.8	8.62
Stenochironomus	0	0.0	0.00	1	14.4	1.72
Tanytarsus	2	28.7	2.56	0	0.0	0.00
Amnicola	3	43.1	3.85	0	0.0	0.00
Pleurocera	7	100.5	8.97	1	14.4	1.72
Corbicula fluminea	18	258.4	23.08	0	0.0	0.00
TOTAL BENTHOS	78	1,119.6	100.00	58	832.5	100.00

WATERWAY= W.B. DUPAGE R.,
 LOCATION= LAKE ST.,
 STATION= 64,
 and DATE= 13JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Hydra	0	0.0	0.00	53	760.7	37.06
Plumatella	1	14.4	0.32	1	14.4	0.70
Oligochaeta	161	2,310.9	50.95	14	200.9	9.79
Erpobdella punctata punctata	0	0.0	0.00	1	14.4	0.70
Ostracoda	12	172.2	3.80	5	71.8	3.50
Oecetis	1	14.4	0.32	0	0.0	0.00
Procladius (Holotanypus)	0	0.0	0.00	1	14.4	0.70
Thienemanniya grp.	1	14.4	0.32	0	0.0	0.00
Thienemanniella xena	0	0.0	0.00	2	28.7	1.40
Cricotopus	0	0.0	0.00	4	57.4	2.80
Cricotopus bicinctus grp.	1	14.4	0.32	0	0.0	0.00
Cricotopus sylvestris grp.	0	0.0	0.00	1	14.4	0.70
Chironomus	2	28.7	0.63	0	0.0	0.00
Cryptochironomus	73	1,047.8	23.10	25	358.8	17.48
Dicrotendipes neomodestus	1	14.4	0.32	0	0.0	0.00
Polypedilum illinoense	2	28.7	0.63	6	86.1	4.20
Polypedilum scalaenum grp.	61	875.5	19.30	11	157.9	7.69
Simulium	0	0.0	0.00	1	14.4	0.70
Physa	0	0.0	0.00	1	14.4	0.70
Gyraulus	0	0.0	0.00	1	14.4	0.70
Ferrissia	0	0.0	0.00	16	229.7	11.19
TOTAL BENTHOS	316	4,535.6	100.00	143	2,052.5	100.00

WATERWAY= W.B. DUPAGE R.,
 LOCATION= SPRINGSGUTH RD.,
 STATION= 110,
 and DATE= 09JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	722	10,363.1	79.87	98	1,406.6	85.96
Mooreobdella bucera	2	28.7	0.22	0	0.0	0.00
Caecidotea	44	631.5	4.87	1	14.4	0.88
Caenis	1	14.4	0.11	0	0.0	0.00
Psectrotanypus dyari	0	0.0	0.00	5	71.8	4.39
Cricotopus tremulus grp.	3	43.1	0.33	0	0.0	0.00
Cricotopus bicinctus grp.	1	14.4	0.11	0	0.0	0.00
Chironomus	100	1,435.3	11.06	10	143.5	8.77
Cryptochironomus	2	28.7	0.22	0	0.0	0.00
Paratendipes	1	14.4	0.11	0	0.0	0.00
Polypedilum halterale grp.	1	14.4	0.11	0	0.0	0.00
Polypedilum illinoense	2	28.7	0.22	0	0.0	0.00
Hemerodromia	1	14.4	0.11	0	0.0	0.00
Physa	2	28.7	0.22	0	0.0	0.00
Sphaeriidae	22	315.8	2.43	0	0.0	0.00
TOTAL BENTHOS	904	12,975.4	100.00	114	1,636.3	100.00

APPENDIX B - 2004 MACROINVERTEBRATE SAMPLES - RAW DATA SUMMARY - PETITE PONAR DATA

WATERWAY= W.B. DUPAGE R.,
 LOCATION= WALNUT AVE.,
 STATION= 89,
 and DATE= 12JUL04

TAXA	CENTER			SIDE		
	#	#/m2	%	#	#/m2	%
Oligochaeta	346	4,966.2	49.22	29	416.2	37.66
Helobdella	2	28.7	0.28	0	0.0	0.00
Baetis intercalaris	2	28.7	0.28	0	0.0	0.00
Cheumatopsyche	1	14.4	0.14	0	0.0	0.00
Peltodytes	0	0.0	0.00	1	14.4	1.30
Procladius (Holotanypus)	0	0.0	0.00	1	14.4	1.30
Thienemannimyia grp.	6	86.1	0.85	0	0.0	0.00
Cricotopus tremulus grp.	9	129.2	1.28	1	14.4	1.30
Cricotopus bicinctus grp.	6	86.1	0.85	0	0.0	0.00
Cricotopus sylvestris grp.	3	43.1	0.43	0	0.0	0.00
Chironomus	237	3,401.7	33.71	39	559.8	50.65
Cryptochironomus	6	86.1	0.85	3	43.1	3.90
Dicrotendipes neomodestus	12	172.2	1.71	0	0.0	0.00
Polypedilum illinoense	32	459.3	4.55	2	28.7	2.60
Polypedilum scalaenum grp.	12	172.2	1.71	0	0.0	0.00
Stictochironomus	6	86.1	0.85	0	0.0	0.00
Micropsectra	3	43.1	0.43	0	0.0	0.00
Paratanytarsus	17	244.0	2.42	1	14.4	1.30
Physa	3	43.1	0.43	0	0.0	0.00
TOTAL BENTHOS	703	10,090.3	100.00	77	1,105.2	100.00