

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> LaPaz
<b>Collection No.</b> 201-0101-0ED-001	<b>County:</b> Marshall	<b>Township:</b> T34N
<b>Date:</b> 4/12/04	<b>Civil Township:</b> North	<b>Range:</b> R2E
<b>Time:</b> 1637	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 9
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 3452 acres	<b>Quarters:</b> SWSESE
		<b>Latitude:</b> 41.24.26
		<b>Longitude:</b> 86.18.01

**Waterbody:** Elmer-Seltenricht Ditch  
**Location:** Maple Road bridge east toward US31

**Notes:**  
**Adjacent land use:** exclusive agricultural land use

## Physical Description

**Reach Length**  
**Right Bank Height** 2.4 m  
**Left Bank Height** 2.4 m  
**Flow** normal  
**In-stream cover** overhanging herbaceous vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 1.8 - 3.0 m  
**Run depth** 0.5 - 0.8 m  
**Run substrate** fines: 100%

## Riparian Vegetation

<b>Herb</b>	<i>Arctium minus</i>	lesser burdock
	<i>Lamium amplexicaule</i>	henbit deadnettle
	<i>Polygonum sp.</i>	smartweed
<b>Graminoid</b>	<i>Elymus sp.</i>	wild rye
	<i>Phalaris arundinacea</i>	reed canary grass
	<i>Setaria faberi</i>	Japanese bristlegrass

## Water Quality

<b>Air temp.</b> 5 deg. C	<b>DO</b> 0.56 mg/ml	<b>Total hardness</b> 372 ppm
<b>Water temp.</b> 12.5 deg. C	<b>DO % sat.</b> 5.2 %	<b>Ca hardness</b> ppm
<b>pH</b> 8.6	<b>Turbidity</b>	<b>Chloride</b> 92 ppm
<b>Conductivity</b> 526 uS	<b>Salinity</b> 0.3 ppt	<b>Iron</b> 3.5 ppm
<b>Specific cond.</b> 696 uS	<b>Alkalinity</b> ppm	<b>Phosphate</b> 3 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen repeated on 12/3/04 (see 201-0101-0ED-001R).		<b>Nitrate</b> 1.5 ppm



# Stream Assessment Data Sheet

## Fish

Collection Method: 10' seine (0.25" mesh)

Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Centrarchidae	<i>Lepomis cyanellus</i>	green sunfish	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	1
Cyprinidae	<i>Pimephales notatus</i>	bluntnose minnow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	omnivore	1
	<i>Rhinichthys atratulus</i>	blacknose dace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		5
	<i>Semotilus atromaculatus</i>	creek chub	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		5
Cyprinodontidae	<i>Fundulus notatus</i>	blackstripe topminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	14
Percidae	<i>Etheostoma nigrum</i>	Johnny darter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	3
<b>Number of individuals = 29</b>		<b>Shannon-Weaver (H' base 10) = 0.619</b>			<b>Pielou's Evenness (J') = 0.8</b>				
<b>Number of taxa = 6</b>		<b>Shannon-Weaver (H' base 2) = 2.055</b>			<b>IBI score = 38</b>				

## Arthropods

Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Insecta	Coleoptera	Dytiscidae		<i>Hydaticus sp.</i>	diving beetle	3	adult
		Gyrinidae		<i>Gyrinus sp.</i>	whirligig beetle	1	larva
Diptera	Ephemeroptera	Tabanidae		<i>Chrysops sp.</i>	deerfly	1	larva
		Baetidae				1	
Odonata	Ephemeroptera	Ephemerida		<i>Hexagenia sp.</i>	mayfly	1	larva
		Aeshnidae		<i>Aeshna sp.</i>	mosaic damer	1	larva
		Calopterygid		<i>Calopteryx sp.</i>	jewelwing	3	larva
		Libellulidae		<i>Plathemis sp.</i>	white-tailed skimmer	3	larva
Odonota	Coenagrioni		<i>Enallagma sp.</i>	bluet	1	larva	



## Stream Assessment Data Sheet

<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-002	<b>County:</b>	Marshall	<b>Township:</b>	T34N
<b>Date:</b>	4/13/04	<b>Civil Township:</b>	North	<b>Range:</b>	R2E
<b>Time:</b>	820	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	33
<b>Collectors:</b>	RKY, JSK, JAD, KMG	<b>Drainage Area:</b>	980 acres	<b>Quarters:</b>	NWSESE

**Waterbody:** Elmer-Seltenricht Ditch

**Location:** approx. 300 m downstream of West 2C Road bridge - east of Maple Road

**Notes:**

### Physical Description

**Reach Length** 100 m  
**Right Bank Height** 3.6 m  
**Left Bank Height** 3.6 m  
**Flow** normal  
**In-stream cover** overhanging herbaceous vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 4.0 - 5.2 m  
**Run depth** 0.5 m  
**Run substrate** fines: 100%

### Riparian Vegetation

<b>Tree</b>	<i>Maclura pomifera</i>	osage orange
<b>Shrub</b>	<i>Rhus sp.</i>	sumac
<b>Herb</b>	<i>Oenothera biennis</i>	common evening primrose
	<i>Rosa multiflora</i>	multiflora rose
	<i>Solidago sp.</i>	goldenrod
	<i>Verbascum thapsus</i>	common mullein
	<i>Viola sp.</i>	violet
<b>Graminoid</b>	<i>Phalaris arundinacea</i>	reed canary grass

### Water Quality

<b>Air temp.</b>	7 deg. C	<b>DO</b>	1.79 mg/ml	<b>Total hardness</b>	360 ppm
<b>Water temp.</b>	5.7 deg. C	<b>DO % sat.</b>	14.4 %	<b>Ca hardness</b>	ppm
<b>pH</b>	7.4	<b>Turbidity</b>		<b>Chloride</b>	116 ppm
<b>Conductivity</b>	543 uS	<b>Salinity</b>	0.4 ppt	<b>Iron</b>	0.5 ppm
<b>Specific cond.</b>	859 uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	1.5 ppm

**Notes** Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen repeated on 12/3/04 (see 201-0101-0ED-002R).



# Stream Assessment Data Sheet

Fish				Collection Method: 10' seine (0.25" mesh)					
Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Centrarchidae	<i>Lepomis cyanellus</i>	green sunfish	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	2
Cyprinidae	<i>Semotilus atromactulatus</i>	creek chub	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4
Percidae	<i>Etheostoma nigrum</i>	Johnny darter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	1
Umbridae	<i>Umbra limi</i>	central mudminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	omnivore	5
<b>Number of individuals = 12</b>		<b>Shannon-Weaver (H' base 10) = 0.537</b>		<b>Pielou's Evenness (J') = 0.9</b>					
<b>Number of taxa = 4</b>		<b>Shannon-Weaver (H' base 2) = 1.784</b>		<b>IBI score = 16</b>					

Arthropods							
Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Insecta	Odonata				dragonfly/damselfly	1	larva
		Calopterygid		<i>Calopteryx sp.</i>	jewelwing	1	larva
		Coenagrioni		<i>Enallagma sp.</i>	bluet	1	larva

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> LaPaz
<b>Collection No.</b> 201-0101-0ED-003	<b>County:</b> Marshall	<b>Township:</b> T35N
<b>Date:</b> 4/13/04	<b>Civil Township:</b> North	<b>Range:</b> R2E
<b>Time:</b> 920	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 27
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 591 acres	<b>Quarters:</b> SWNWNW
		<b>Latitude:</b> 41.27.38
		<b>Longitude:</b> 86.17.24

**Waterbody:** Lehman Ditch  
**Location:** approx. 470 m upstream of 1st Road  
**Notes:**

**Physical Description**

**Reach Length** 100 m  
**Right Bank Height** 3.0 - 3.3 m  
**Left Bank Height** 2.4 - 2.7 m  
**Flow** normal  
**In-stream cover** few downfall branches  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 2.4 m  
**Run depth** 0.2 - 0.3 m  
**Run substrate** fines: 100%

**Riparian Vegetation**

<b>Shrub</b> <i>Rhus glabra</i>	smooth sumac
<b>Herb</b> <i>Solidago sp.</i>	goldenrod
<b>Graminoid</b> <i>Phalaris arundinacea</i>	reed canary grass
<i>Setaria faberi</i>	Japanese bristleglass

**Water Quality**

<b>Air temp.</b> 7 deg. C	<b>DO</b> 2.14 mg/ml	<b>Total hardness</b> 400 ppm
<b>Water temp.</b> 6.4 deg. C	<b>DO % sat.</b> 17.5 %	<b>Ca hardness</b> ppm
<b>pH</b> 7.7	<b>Turbidity</b>	<b>Chloride</b> 96 ppm
<b>Conductivity</b> 546 uS	<b>Salinity</b> 0.4 ppt	<b>Iron</b> 1.0 ppm
<b>Specific cond.</b> 847 uS	<b>Alkalinity</b> ppm	<b>Phosphate</b> <1 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated.		<b>Nitrate</b> 2.0 ppm

# Stream Assessment Data Sheet

**Fish** **Collection Method:** 10' seine (0.25" mesh)

Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Centrarchidae	<i>Micropterus punctulatus</i>	spotted bass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	carnivore	1
Cyprinidae	<i>Cyprinella spiloptera</i>	spotfin shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	1
	<i>Luxilus chrysocephalus</i>	striped shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	insectivore	9
	<i>Pimephales promelas</i>	fathead minnow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	omnivore	1
	<i>Semotilus atromactulatus</i>	creek chub	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1
Cyprinodontidae	<i>Fundulus notatus</i>	blackstripe topminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	2

**Number of individuals** = 15      **Shannon-Weaver (H' base 10)** = 0.563      **Pielou's Evenness (J')** = 0.7  
**Number of taxa** = 6      **Shannon-Weaver (H' base 2)** = 1.872      **IBI score** = 24

## Arthropods

Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Crustacea	Decapoda				crayfish	4	
	Isopoda				sow bug	1	larva
Insecta	Odonata	Aeshnidae		<i>Aeshna sp.</i>	darner	4	larva

## Stream Assessment Data Sheet

<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-004	<b>County:</b>	St. Joseph	<b>Township:</b>	T35N
<b>Date:</b>	4/13/04	<b>Civil Township:</b>	Union	<b>Range:</b>	R2E
<b>Time:</b>	1010	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	14
<b>Collectors:</b>	RKY, JSK, JAD, KMG	<b>Drainage Area:</b>	813 acres	<b>Quarters:</b>	NWSWSW

**Waterbody:** Lehman Ditch tributary

**Location:** Linden Road bridge approx. 500 m north of Tyler Road

**Notes:**

**Adjacent land use:** exclusive agricultural land use

### Physical Description

**Reach Length** 100 m  
**Right Bank Height** 2.7 - 3.0 m  
**Left Bank Height** 2.7 - 3.0 m  
**Flow** normal  
**In-stream cover** overhanging herbaceous vegetation  
**Pool %** 5  
**Pool width** 1.2 - 1.8 m  
**Pool depth** 0.2 - 0.6 m  
**Pool substrate** fines: 100%  
**Riffle %** 5  
**Riffle width** 1.2 - 1.8 m  
**Riffle depth** 0.08 m  
**Riffle substrate** fines: 80%, gravel: 20%  
**Run %** 90  
**Run width** 1.2 - 1.8 m  
**Run depth** 0.13 - 0.20 m  
**Run substrate** fines: 95%, gravel: 5%

### Riparian Vegetation

**Graminoid** *Phalaris arundinaceae* reed canary grass

### Water Quality

<b>Air temp.</b>	7 deg. C	<b>DO</b>	2.25 mg/ml	<b>Total hardness</b>	332 ppm
<b>Water temp.</b>	8.6 deg. C	<b>DO % sat.</b>	19.2 %	<b>Ca hardness</b>	ppm
<b>pH</b>	8.2	<b>Turbidity</b>		<b>Chloride</b>	48 ppm
<b>Conductivity</b>	378 uS	<b>Salinity</b>	0.3 ppt	<b>Iron</b>	<0.5 ppm
<b>Specific cond.</b>	551 uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	<1 ppm

**Notes** Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen repeated on 12/3/04 (see 201-0101-0ED-004R).



# Stream Assessment Data Sheet

Fish			Collection Method: 10' seine (0.25" mesh)						
Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Catostomidae	<i>Catostomus commersoni</i>	white sucker	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	omnivore	4
Centrarchidae	<i>Lepomis cyanellus</i>	green sunfish	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	4
Cyprinidae	<i>Luxilus chrysocephalus</i>	striped shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	insectivore	147
	<i>Rhinichthys atratulus</i>	blacknose dace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		1
	<i>Semotilus atromaculatus</i>	creek chub	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4
Number of individuals = 160		Shannon-Weaver (H' base 10) = 0.168			Pielou's Evenness (J') = 0.2				
Number of taxa = 5		Shannon-Weaver (H' base 2) = 0.557			IBI score = 46				

## Arthropods



## Stream Assessment Data Sheet

<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-005	<b>County:</b>	St. Joseph	<b>Township:</b>	T35N
<b>Date:</b>	4/10/03	<b>Civil Township:</b>	Union	<b>Range:</b>	R2E
<b>Time:</b>	1200	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	11
<b>Collectors:</b>	RKY, JSK	<b>Drainage Area:</b>	7935 acres	<b>Quarters:</b>	NESESE

**Waterbody:** Heston Ditch

**Location:** Kenilworth Road bridge approx. 190 m south of Rockstroh Road

**Notes:**

**Adjacent land use:** exclusive agricultural land use

### Physical Description

**Reach Length** 100 m  
**Right Bank Height**  
**Left Bank Height**  
**Flow** normal  
**In-stream cover** overhanging herbaceous  
vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width**  
**Run depth**  
**Run substrate** fines: 100%

### Riparian Vegetation

### Water Quality

<b>Air temp.</b>	deg. C	<b>DO</b>	2.57 mg/ml	<b>Total hardness</b>	184 ppm
<b>Water temp.</b>	10.6 deg. C	<b>DO % sat.</b>	23.1 %	<b>Ca hardness</b>	ppm
<b>pH</b>	7.4	<b>Turbidity</b>		<b>Chloride</b>	48 ppm
<b>Conductivity</b>	275 uS	<b>Salinity</b>	0.2 ppt	<b>Iron</b>	<0.5 ppm
<b>Specific cond.</b>	379 uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	<1 ppm

**Notes** Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen repeated on 12/3/04 (see 201-0101-0ED-005R).



# Stream Assessment Data Sheet

Fish

Collection Method: 10' seine (0.25" mesh)

Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Catostomidae	<i>Catostomus commersoni</i>	white sucker	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	omnivore	2
	<i>Minytrema melanops</i>	spotted sucker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	insectivore	1
Centrarchidae	<i>Lepomis gulosus</i>	warmouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	carnivore	1
	<i>Lepomis macrochirus</i>	bluegill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	2
Cyprinidae	<i>Luxilus chrysocephalus</i>	striped shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	insectivore	56
	<i>Nocomis micropogon</i>	river chub	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	1
	<i>Notemigonus crysoleucas</i>	golden shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	1
	<i>Notropis buccatus</i>	silverjaw minnow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	11
	<i>Pimephales notatus</i>	bluntnose minnow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	omnivore	1
	<i>Rhinichthys atratulus</i>	blacknose dace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		4
Percidae	<i>Semotilus atromaculatus</i>	creek chub	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		6
	<i>Etheostoma nigrum</i>	Johnny darter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	2
<b>Number of individuals = 85</b>		<b>Shannon-Weaver (H' base 10) = 0.545</b>		<b>Pielou's Evenness (J') = 0.5</b>					
<b>Number of taxa = 10</b>		<b>Shannon-Weaver (H' base 2) = 1.812</b>		<b>IBI score = 44</b>					

Arthropods

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> Lakeville
<b>Collection No.</b> 201-0101-0ED-006	<b>County:</b> St. Joseph	<b>Township:</b> T35N
<b>Date:</b> 4/13/04	<b>Civil Township:</b> Union	<b>Range:</b> R2E
<b>Time:</b> 1625	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 25
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 190 acres	<b>Quarters:</b> NWSENW
		<b>Latitude:</b> 41.32.49
		<b>Longitude:</b> 86.15.01

**Waterbody:** Bunch Ditch tributary

**Location:** east of Kenilworth Road and south of Osborne Road

**Notes:** Collection was primarily upstream of footbridge across ditch, drainage upstream of woodland edge to the northwest is tiled

**Adjacent land use:** woodland and herbaceous field

## Physical Description

**Reach Length** 100 m  
**Right Bank Height** 2.1 m  
**Left Bank Height** 2.1 m  
**Flow** low  
**In-stream cover** overhanging herbaceous vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 3.6 - 4.6 m  
**Run depth** 0.30 - 0.50 m  
**Run substrate** fines: 100%

## Riparian Vegetation

<b>Shrub</b> <i>Rhus sp.</i>	sumac
<b>Herb</b> <i>Ambrosia trifida</i>	great ragweed
<i>Arctium minus</i>	lesser burdock
<i>Geum sp.</i>	avens
<i>Lamium amplexicalue</i>	henbit deadnettle
<i>Rosa multiflora</i>	multiflora rose
<i>Urtica dioica</i>	stinging nettle
<b>Graminoid</b> <i>Phalaris arundinacea</i>	reed canary grass

## Water Quality

<b>Air temp.</b> deg. C	<b>DO</b> 4.86 mg/ml	<b>Total hardness</b> 300 ppm
<b>Water temp.</b> 10.3 deg. C	<b>DO % sat.</b> 43.3 %	<b>Ca hardness</b> ppm
<b>pH</b> 8.6	<b>Turbidity</b>	<b>Chloride</b> 120 ppm
<b>Conductivity</b> 557 uS	<b>Salinity</b> 0.4 ppt	<b>Iron</b> <0.5 ppm
<b>Specific cond.</b> 775 uS	<b>Alkalinity</b> 228 ppm	<b>Phosphate</b> 1 ppm
<b>Notes</b> Sedimentation is heavy, algal mats on surface of water. Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		<b>Nitrate</b> 1.0 ppm



# Stream Assessment Data Sheet

Fish			Collection Method: 10' seine (0.25" mesh)						
Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Centrarchidae	<i>Lepomis cyanellus</i>	green sunfish	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	2
Cyprinidae	<i>Luxilus chrysocephalus</i>	striped shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	insectivore	5
	<i>Notemigonus crysoleucas</i>	golden shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	3
Cyprinodontidae	<i>Fundulus notatus</i>	blackstripe topminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	11
Esocidae	<i>Esox americanus</i>	grass pickerel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	carnivore	1
Umbridae	<i>Umbra limi</i>	central mudminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	omnivore	1
<b>Number of individuals = 23</b>		<b>Shannon-Weaver (H' base 10) = 0.623</b>			<b>Pielou's Evenness (J') = 0.8</b>				
<b>Number of taxa = 6</b>		<b>Shannon-Weaver (H' base 2) = 2.071</b>			<b>IBI score = 19</b>				

## Arthropods

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> LaPaz
<b>Collection No.</b> 201-0101-0ED-007	<b>County:</b> St. Joseph	<b>Township:</b> T35N
<b>Date:</b> 4/13/04	<b>Civil Township:</b> Union	<b>Range:</b> R2E
<b>Time:</b> 1135	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 10
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 443 acres	<b>Quarters:</b> SWNESE
		<b>Latitude:</b> 41.29.57
		<b>Longitude:</b> 86.16.41

**Waterbody:** unnamed intermittent

**Location:** approx. 100 m west of corner at Rankert Road and Lilac Road

**Notes:**

**Adjacent land use:** agriculture and woodland

## Physical Description

**Reach Length** 100 m  
**Right Bank Height** 2.1 m  
**Left Bank Height** 2.1 m  
**Flow** normal  
**In-stream cover** overhanging herbaceous vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 0.5 - 0.9 m  
**Run depth** 0.20 - 0.25 m  
**Run substrate** hardpan: 80%, fines: 20%)

## Riparian Vegetation

<b>Herb</b>	<i>Ambrosia trifida</i>	great ragweed
	<i>Arctium minus</i>	lesser burdock
	<i>Aster sp.</i>	aster
	<i>Datura stramonium</i>	jimsonweed
	<i>Rosa multiflora</i>	multiflora rose
	<i>Urtica dioica</i>	stinging nettle
<b>Graminoid</b>	<i>Phalaris arundinacea</i>	reed canary grass
	<i>Setaria faberi</i>	Japanese bristlegrass

## Water Quality

<b>Air temp.</b> 7 deg. C	<b>DO</b> 2.93 mg/ml	<b>Total hardness</b> 276 ppm
<b>Water temp.</b> 10.5 deg. C	<b>DO % sat.</b> 26.1 %	<b>Ca hardness</b> ppm
<b>pH</b> 8.7	<b>Turbidity</b>	<b>Chloride</b> 84 ppm
<b>Conductivity</b> 430 uS	<b>Salinity</b> 0.3 ppt	<b>Iron</b> <0.5 ppm
<b>Specific cond.</b> 596 uS	<b>Alkalinity</b> 216 ppm	<b>Phosphate</b> <1 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		<b>Nitrate</b> 1.0 ppm



# Stream Assessment Data Sheet

Fish		Collection Method: 10' seine (0.25" mesh)							
Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Cyprinidae	<i>Semotilus atromaculatus</i>	creek chub	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		35
Number of individuals = 35		Shannon-Weaver (H' base 10) = 0		Pielou's Evenness (J') = 0					
Number of taxa = 1		Shannon-Weaver (H' base 2) = 0		IBI score = 18					

## Arthropods

Class	Order	Family	Subfamily	Species	Common	Capture	Notes	
Crustacea	Decapoda				crayfish	1	female	
Insecta	Hemiptera	Gerridae	Gerrinae	<i>Aquarius sp.</i>	water strider	1	larva	
				<i>Odonata</i>	Aeshnidae			
					<i>Coryphaeschna sp.</i>	mosaic damer	7	larva
					<i>Plathemis sp.</i>	damer	1	larva
		Libellulidae			white-tailed skimmer	1	larva	



# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> Lakeville
<b>Collection No.</b> 201-0101-0ED-008	<b>County:</b> St. Joseph	<b>Township:</b> T36N
<b>Date:</b> 4/13/04	<b>Civil Township:</b> Union	<b>Range:</b> R2E
<b>Time:</b> 1403	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 34
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 4069 acres	<b>Quarters:</b> NESESW
		<b>Latitude:</b> 41.31.32
		<b>Longitude:</b> 86.17.02

**Waterbody:** Heston Ditch

**Location:** approx. 890 m upstream of old US31 bridge at Lakeville

**Notes:**

**Adjacent land use:** woodland and pasture

**Physical Description**

**Reach Length** 100 m  
**Right Bank Height** 1.2 m  
**Left Bank Height** 1.2 m  
**Flow** normal  
**In-stream cover** discarded tire, limited overhanging herbaceous vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 1.5 - 1.8 m  
**Run depth** 0.25 - 0.36 m  
**Run substrate** fines: 100%

**Riparian Vegetation**

<b>Herb</b>	<i>Asclepias sp.</i>	milkweed
	<i>Aster sp.</i>	aster
	<i>Datura stramonium</i>	jimsonweed
	<i>Polygonum arifolium</i>	halberdleaf tearthumb
	<i>Solidago sp.</i>	goldenrod
<b>Graminoid</b>	<i>Phalaris arundinacea</i>	reed canary grass

**Water Quality**

<b>Air temp.</b> 9 deg. C	<b>DO</b> 4.16 mg/ml	<b>Total hardness</b> 172 ppm
<b>Water temp.</b> 11 deg. C	<b>DO % sat.</b> 37.3 %	<b>Ca hardness</b> ppm
<b>pH</b> 7.6	<b>Turbidity</b>	<b>Chloride</b> 52 ppm
<b>Conductivity</b> 264 uS	<b>Salinity</b> 0.2 ppt	<b>Iron</b> 0.5 ppm
<b>Specific cond.</b> 361 uS	<b>Alkalinity</b> 144 ppm	<b>Phosphate</b> 1 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		<b>Nitrate</b> 1.0 ppm

# Stream Assessment Data Sheet

Fish			Collection Method: 10' seine (0.25" mesh)						
Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Centrarchidae	<i>Lepomis cyanellus</i>	green sunfish	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	insectivore	2
	<i>Lepomis gulosus</i>	warmouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	carnivore	1
	<i>Lepomis macrochirus</i>	bluegill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	10
Cyprinodontidae	<i>Fundulus notatus</i>	blackstripe topminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	13
Ictaluridae	<i>Ameiurus natalis</i>	yellow bullhead	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	5
	<i>Ameiurus nebulosus</i>	brown bullhead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	1
<b>Number of individuals = 32</b>		<b>Shannon-Weaver (H' base 10) = 0.612</b>			<b>Pielou's Evenness (J') = 0.8</b>				
<b>Number of taxa = 6</b>		<b>Shannon-Weaver (H' base 2) = 2.033</b>			<b>IBI score = 34</b>				

Arthropods							
Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Insecta	Hemiptera	Belostomatid	Belostomatinae	<i>Belostoma sp.</i>	giant water bug	2	adult
	Odonata	Libellulidae		<i>Platthemis sp.</i>	white-tailed skimmer	3	larva



# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> Lakeville
<b>Collection No.</b> 201-0101-0ED-009	<b>County:</b> St. Joseph	<b>Township:</b> T36N
<b>Date:</b> 4/13/04	<b>Civil Township:</b> Union	<b>Range:</b> R2E
<b>Time:</b> 1530	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 27
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 220 acres	<b>Quarters:</b> NWNWSE
		<b>Latitude:</b> 41.32.33
		<b>Longitude:</b> 86.16.59

**Waterbody:** Heston Ditch tributary

**Location:** north of SR4 and approx. 760 m east of Maple Road

**Notes:** Collection from an open ditch that terminates at an enclosed drain approx. 450 m east of Maple Road

**Adjacent land use:** woodland and pasture

## Physical Description

**Reach Length** 100 m  
**Right Bank Height** 1.5 - 2.1 m  
**Left Bank Height** 1.5 - 2.1 m  
**Flow** no flow  
**In-stream cover** overhanging herbaceous vegetation  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 0  
**Riffle width**  
**Riffle depth**  
**Riffle substrate**  
**Run %** 100  
**Run width** 2.1 - 2.7 m  
**Run depth** 0.30 m  
**Run substrate** fines: 100%

## Riparian Vegetation

<b>Herb</b>	<i>Polygonum sp.</i>	smartweed
	<i>Rumex sp.</i>	dock
	<i>Urtica dioica</i>	stinging nettle
<b>Graminoid</b>	<i>Phalaris arundinacea</i>	reed canary grass

## Water Quality

<b>Air temp.</b> deg. C	<b>DO</b> 3.52 mg/ml	<b>Total hardness</b> 200 ppm
<b>Water temp.</b> 10.3 deg. C	<b>DO % sat.</b> 31.1 %	<b>Ca hardness</b> ppm
<b>pH</b> 7.4	<b>Turbidity</b>	<b>Chloride</b> 76 ppm
<b>Conductivity</b> 546 uS	<b>Salinity</b> 0.4 ppt	<b>Iron</b> 0.5 ppm
<b>Specific cond.</b> 771 uS	<b>Alkalinity</b> 180 ppm	<b>Phosphate</b> 1 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		<b>Nitrate</b> 1.0 ppm



# Stream Assessment Data Sheet

<b>Fish</b>		<b>Collection Method:</b> 10' seine (0.25" mesh)	
<b>Number of individuals =</b> 0	<b>Shannon-Weaver (H' base 10) =</b> 0	<b>Pielou's Evenness (J') =</b> 0	
<b>Number of taxa =</b> 0	<b>Shannon-Weaver (H' base 2) =</b> 0	<b>IBI score =</b>	

## Arthropods

Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Crustacea	Decapoda				crayfish	4	
		Cambaridae		<i>Cambarus diogenes</i>	devil crayfish	1	form II male
Insecta	Odonata	Aeshnidae		<i>Aeshna sp.</i>	mosaic damer	1	larva
				<i>Anax sp.</i>	green damer	4	larva

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> Lakeville
<b>Collection No.</b> 201-0101-0ED-010	<b>County:</b> St. Joseph	<b>Township:</b> T36N
<b>Date:</b> 4/14/04	<b>Civil Township:</b> Greene	<b>Range:</b> R2E
<b>Time:</b> 900	<b>Drainage Basin:</b> St. Joseph River	<b>Section:</b> 3
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 1522 acres	<b>Quarters:</b> NWNESE
		<b>Latitude:</b> 41.36.04
		<b>Longitude:</b> 86.16.43

**Waterbody:** Auten Ditch

**Location:** approx. 340 m upstream of Locust Road culvert

**Notes:**

**Adjacent land use:** woodland and herbaceous field, salvage material noted atop of bank along creek, agricultural drainage pipe outlets

**Physical Description**

**Reach Length** 100 m  
**Right Bank Height** 2.1 m  
**Left Bank Height** 2.1 m  
**Flow** low  
**In-stream cover** undercut banks, submerged tree roots  
**Pool %** 5  
**Pool width** 2.1 - 2.4 m  
**Pool depth** 0.30 m  
**Pool substrate** fines: 99%, boulders: 1%  
**Riffle %** 20  
**Riffle width** 1.8 m  
**Riffle depth** 0.05 - 0.07 m  
**Riffle substrate** fines: 84%, gravel: 5%, pebbles  
**Run %** 75  
**Run width** 2.1 - 2.4 m  
**Run depth** 0.15 - 0.2 m  
**Run substrate** fines: 93%, gravel: 5%, cobbles

**Riparian Vegetation**

<b>Tree</b>	<i>Acer saccharinum</i>	silver maple
	<i>Betula nigra</i>	river birch
	<i>Celtis occidentalis</i>	common hackberry
	<i>Populus deltoides</i>	eastern cottonwood
	<i>Prunus serotina</i>	black cherry
	<i>Ulmus americana</i>	American elm
<b>Herb</b>	<i>Achillea millefolium</i>	common yarrow
	<i>Packera glabella</i>	butterweed
	<i>Rosa multiflora</i>	multiflora rose
	<i>Rumex sp.</i>	dock
	<i>Urtica dioica</i>	stinging nettle
<b>Graminoid</b>	<i>Elymus virginicus</i>	Virginia wildrye
	<i>Phalaris arundinacea</i>	reed canary grass

**Water Quality**

<b>Air temp.</b> deg. C	<b>DO</b> 6.98 mg/ml	<b>Total hardness</b> 320 ppm
<b>Water temp.</b> 4.3 deg. C	<b>DO % sat.</b> 54.8 %	<b>Ca hardness</b> ppm
<b>pH</b> 8.0	<b>Turbidity</b>	<b>Chloride</b> 72 ppm
<b>Conductivity</b> 398 uS	<b>Salinity</b> 0.3 ppt	<b>Iron</b> <0.5 ppm
<b>Specific cond.</b> 659 uS	<b>Alkalinity</b> 296 ppm	<b>Phosphate</b> <1 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		<b>Nitrate</b> <0.25 ppm

# Stream Assessment Data Sheet

<b>Fish</b>		<b>Collection Method:</b> 10' seine (0.25" mesh)	
Number of individuals = 0	Shannon-Weaver (H' base 10) = 0	Pielou's Evenness (J') = 0	
Number of taxa = 0	Shannon-Weaver (H' base 2) = 0	IBI score =	

**Arthropods**

Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Insecta	Hemiptera	Gerridae	Gerrinae	<i>Aquarius sp.</i>	water strider		observed

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> Lakeville
<b>Collection No.</b> 201-0101-0ED-011	<b>County:</b> St. Joseph	<b>Township:</b> T36N
<b>Date:</b> 4/14/04	<b>Civil Township:</b> Centre	<b>Range:</b> R2E
<b>Time:</b> 755	<b>Drainage Basin:</b> St. Joseph River	<b>Section:</b> 11
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 164 acres	<b>Quarters:</b> NESWNW
		<b>Latitude:</b> 41.35.26
		<b>Longitude:</b> 86.16.19

**Waterbody:** Auten Ditch tributary

**Location:** approx. 145 m north of last house on Wittmer Road

**Notes:** Remainder of old small concrete dam no longer in use

**Adjacent land use:** woodland along both sides of creek, agricultural land beyond woods upstream to the east

## Physical Description

**Reach Length** 100 m  
**Right Bank Height** 2.1 m  
**Left Bank Height** 2.1 m  
**Flow** low  
**In-stream cover** few downfall branches  
**Pool %** 0  
**Pool width**  
**Pool depth**  
**Pool substrate**  
**Riffle %** 10  
**Riffle width** 1.2 m  
**Riffle depth** 0.02  
**Riffle substrate** fines: 100%  
**Run %** 90  
**Run width** 2.1 m  
**Run depth** 0.10 - 1.5 m  
**Run substrate** fines: 100%

## Riparian Vegetation

<b>Tree</b>	<i>Acer saccharinum</i>	silver maple
	<i>Celtis occidentalis</i>	common hackberry
	<i>Fagus grandifolia</i>	American beech
	<i>Liriodendron tulipifera</i>	tuliptree
	<i>Platanus occidenatlis</i>	sycamore
	<i>Populus deltoides</i>	eastern cottonwood
	<i>Quercus alba</i>	white oak
	<i>Quercus rubra</i>	red oak
<b>Herb</b>	<i>Allium sp.</i>	onion
	<i>Hydrophyllum sp.</i>	waterleaf
	<i>Rosa multiflora</i>	multiflora rose

## Water Quality

<b>Air temp.</b> 11 deg. C	<b>DO</b> 5.86 mg/ml	<b>Total hardness</b> 372 ppm
<b>Water temp.</b> 6.4 deg. C	<b>DO % sat.</b> 48.0 %	<b>Ca hardness</b> ppm
<b>pH</b> 7.7	<b>Turbidity</b>	<b>Chloride</b> 70 ppm
<b>Conductivity</b> 430 uS	<b>Salinity</b> 0.3 ppt	<b>Iron</b> 0.5 ppm
<b>Specific cond.</b> 668 uS	<b>Alkalinity</b> 288 ppm	<b>Phosphate</b> <1 ppm
<b>Notes</b> Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		<b>Nitrate</b> 2.0 ppm



# Stream Assessment Data Sheet

<b>Fish</b>		<b>Collection Method:</b> 10' seine (0.25" mesh)	
<b>Number of individuals =</b> 0	<b>Shannon-Weaver (H' base 10) =</b> 0	<b>Pielou's Evenness (J') =</b> 0	
<b>Number of taxa =</b> 0	<b>Shannon-Weaver (H' base 2) =</b> 0	<b>IBI score =</b>	

## Arthropods

Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Crustacea	Amphipoda				amphipod	1	
	Decapoda	Cambaridae			crayfish	1	
Insecta	Coleoptera	Dytisaidae		<i>Hydaticus sp.</i>	diving beetle	1	adult

# Stream Assessment Data Sheet

<b>BLA Project No.</b> 201-0101-0ED	<b>State:</b> IN	<b>Quadrangle:</b> Lakeville
<b>Collection No.</b> 201-0101-0ED-012	<b>County:</b> St. Joseph	<b>Township:</b> T36N
<b>Date:</b> 4/13/04	<b>Civil Township:</b> Union	<b>Range:</b> R2E
<b>Time:</b> 1310	<b>Drainage Basin:</b> Kankakee River	<b>Section:</b> 34
<b>Collectors:</b> RKY, JSK, JAD, KMG	<b>Drainage Area:</b> 4079 acres	<b>Quarters:</b> SESESW
		<b>Latitude:</b> 41.31.20
		<b>Longitude:</b> 86.16.59

**Waterbody:** Heston Ditch tributary  
**Location:** approx. 350 m upstream of Heston Ditch confluence

**Notes:**  
**Adjacent land use:** woodland north of ditch, agriculture south of ditch

<u>Physical Description</u>		<u>Riparian Vegetation</u>	
<b>Reach Length</b>	100 m	<b>Herb</b>	<i>Asclepias sp.</i> milkweed
<b>Right Bank Height</b>	1.5 - 3.6 m		<i>Datura stramonium</i> jimsonweed
<b>Left Bank Height</b>	1.5 - 3.0 m		<i>Lamium amplexicaule</i> henbit deadnettle
<b>Flow</b>	low		<i>Rosa multiflora</i> multiflora rose
<b>In-stream cover</b>	downfall branches, overhanging herbaceous vegetation		<i>Solidago sp.</i> goldenrod
<b>Pool %</b>	0	<b>Graminoid</b>	<i>Phalaris arundinacea</i> reed canary grass
<b>Pool width</b>			<i>Setaria faberi</i> Japanese bristlegrass
<b>Pool depth</b>			
<b>Pool substrate</b>			
<b>Riffle %</b>	0		
<b>Riffle width</b>			
<b>Riffle depth</b>			
<b>Riffle substrate</b>			
<b>Run %</b>	100		
<b>Run width</b>	1.8 - 2.4 m		
<b>Run depth</b>	0.10 - 0.30 m		
<b>Run substrate</b>	finer: 100%		

<u>Water Quality</u>			
<b>Air temp.</b>	deg. C	<b>DO</b>	2.70 mg/ml
<b>Water temp.</b>	11.2 deg. C	<b>DO % sat.</b>	24.4 %
<b>pH</b>	8.0	<b>Turbidity</b>	
<b>Conductivity</b>	255 uS	<b>Salinity</b>	0.2 ppt
<b>Specific cond.</b>	348 uS	<b>Alkalinity</b>	160 ppm
<b>Notes</b>	Dissolved oxygen probe malfunctioned resulting in erroneous DO and percent saturation data, dissolved oxygen not repeated on 12/3/04.		
		<b>Total hardness</b>	180 ppm
		<b>Ca hardness</b>	ppm
		<b>Chloride</b>	32 ppm
		<b>Iron</b>	0.5 ppm
		<b>Phosphate</b>	1 ppm
		<b>Nitrate</b>	0.25 ppm

# Stream Assessment Data Sheet

**Fish** **Collection Method:** 10' seine (0.25" mesh)

Family	Species	Common	Headwater	Sensitive	Tolerant	Pioneer	Lithophilic	Trophic level	Total capture
Cyprinodontidae	<i>Fundulus notatus</i>	blackstripe topminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	insectivore	10
Umbridae	<i>Umbra limi</i>	central mudminnow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	omnivore	3
<b>Number of individuals = 10</b>		<b>Shannon-Weaver (H' base 10) = 0.235</b>			<b>Pielou's Evenness (J') = 0.8</b>				
<b>Number of taxa = 3</b>		<b>Shannon-Weaver (H' base 2) = 0.779</b>			<b>IBI score = 16</b>				

## Arthropods

Class	Order	Family	Subfamily	Species	Common	Capture	Notes
Crustacea	Decapoda	Cambaridae			crayfish	4	
	Isopoda				sow bug	2	
Insecta	Hemiptera	Corixidae		<i>Hesperocorica sp.</i>	water boatman	1	
	Odonata	Aeshnidae		<i>Aeshna sp.</i>	mosaic damer	1	





## Stream Assessment Data Sheet

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<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-001R	<b>County:</b>	Marshall	<b>Township:</b>	T34N
<b>Date:</b>	12/3/04	<b>Civil Township:</b>	North	<b>Range:</b>	R2E
<b>Time:</b>	748	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	9
<b>Collectors:</b>	RKY	<b>Drainage Area:</b>	3452 acres	<b>Quarters:</b>	SWSESE
				<b>Latitude:</b>	41.24.26
				<b>Longitude:</b>	86.18.01

**Waterbody:** Elmer-Seltenricht Ditch

**Location:** Maple Road bridge east toward US31

**Notes:** Temperature and DO resampled

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### Physical Description

### Riparian Vegetation

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### Water Quality

<b>Air temp.</b>	deg. C	<b>DO</b>	8.22 mg/ml	<b>Total hardness</b>	ppm
<b>Water temp.</b>	4.7 deg. C	<b>DO % sat.</b>	64.4 %	<b>Ca hardness</b>	ppm
<b>pH</b>		<b>Turbidity</b>		<b>Chloride</b>	ppm
<b>Conductivity</b>	uS	<b>Salinity</b>	ppt	<b>Iron</b>	ppm
<b>Specific cond.</b>	uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	ppm
<b>Notes</b>	Dissolved oxygen measurement repeated due to instrument malfunction on 4/14/04.			<b>Nitrate</b>	ppm

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# Stream Assessment Data Sheet

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Fish

Collection Method:

Arthropods

# Stream Assessment Data Sheet

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<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-002R	<b>County:</b>	Marshall	<b>Township:</b>	T34N
<b>Date:</b>	12/3/04	<b>Civil Township:</b>	North	<b>Range:</b>	R2E
<b>Time:</b>	758	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	33
<b>Collectors:</b>	RKY	<b>Drainage Area:</b>	980 acres	<b>Quarters:</b>	NWSESE
				<b>Latitude:</b>	41.26.14
				<b>Longitude:</b>	86.17.36

**Waterbody:** Elmer-Seltenricht Ditch

**Location:** approx. 300 m downstream of West 2C Road bridge - east of Maple Road

**Notes:** Temperature and DO resampled

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## Physical Description

## Riparian Vegetation

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## Water Quality

<b>Air temp.</b>	deg. C	<b>DO</b>	6.79 mg/ml	<b>Total hardness</b>	ppm
<b>Water temp.</b>	4.2 deg. C	<b>DO % sat.</b>	52.0 %	<b>Ca hardness</b>	ppm
<b>pH</b>		<b>Turbidity</b>		<b>Chloride</b>	ppm
<b>Conductivity</b>	uS	<b>Salinity</b>	ppt	<b>Iron</b>	ppm
<b>Specific cond.</b>	uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	ppm
<b>Notes</b>	Dissolved oxygen measurement repeated due to instrument malfunction on 4/14/04.			<b>Nitrate</b>	ppm

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# Stream Assessment Data Sheet

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Fish

Collection Method:

Arthropods

# Stream Assessment Data Sheet

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<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-004R	<b>County:</b>	St. Joseph	<b>Township:</b>	T35N
<b>Date:</b>	12/3/04	<b>Civil Township:</b>	Union	<b>Range:</b>	R2E
<b>Time:</b>	815	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	14
<b>Collectors:</b>	RKY	<b>Drainage Area:</b>	813 acres	<b>Quarters:</b>	NWSWSW
				<b>Latitude:</b>	41.28.59
				<b>Longitude:</b>	86.16.24

**Waterbody:** Lehman Ditch tributary

**Location:** Linden Road bridge approx. 500 m north of Tyler Road

**Notes:** Temperature and DO resampled

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## Physical Description

## Riparian Vegetation

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## Water Quality

<b>Air temp.</b>	deg. C	<b>DO</b>	9.54 mg/ml	<b>Total hardness</b>	ppm
<b>Water temp.</b>	4.6 deg. C	<b>DO % sat.</b>	74.5 %	<b>Ca hardness</b>	ppm
<b>pH</b>		<b>Turbidity</b>		<b>Chloride</b>	ppm
<b>Conductivity</b>	uS	<b>Salinity</b>	ppt	<b>Iron</b>	ppm
<b>Specific cond.</b>	uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	ppm
<b>Notes</b>	Dissolved oxygen measurement repeated due to instrument malfunction on 4/14/04.			<b>Nitrate</b>	ppm

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# Stream Assessment Data Sheet

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Fish

Collection Method:

Arthropods

# Stream Assessment Data Sheet

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<b>BLA Project No.</b>	201-0101-0ED	<b>State:</b>	IN	<b>Quadrangle:</b>	LaPaz
<b>Collection No.</b>	201-0101-0ED-005R	<b>County:</b>	St. Joseph	<b>Township:</b>	T35N
<b>Date:</b>	12/3/04	<b>Civil Township:</b>	Union	<b>Range:</b>	R2E
<b>Time:</b>	824	<b>Drainage Basin:</b>	Kankakee River	<b>Section:</b>	11
<b>Collectors:</b>	RKY	<b>Drainage Area:</b>	7935 acres	<b>Quarters:</b>	NESESE
				<b>Latitude:</b>	41.29.45
				<b>Longitude:</b>	86.15.12

**Waterbody:** Heston Ditch

**Location:** Kenilworth Road bridge approx. 190 m south of Rockstroh Road

**Notes:** Temperature and DO resampled

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## Physical Description

## Riparian Vegetation

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## Water Quality

<b>Air temp.</b>	deg. C	<b>DO</b>	9.55 mg/ml	<b>Total hardness</b>	ppm
<b>Water temp.</b>	3.5 deg. C	<b>DO % sat.</b>	71.5 %	<b>Ca hardness</b>	ppm
<b>pH</b>		<b>Turbidity</b>		<b>Chloride</b>	ppm
<b>Conductivity</b>	uS	<b>Salinity</b>	ppt	<b>Iron</b>	ppm
<b>Specific cond.</b>	uS	<b>Alkalinity</b>	ppm	<b>Phosphate</b>	ppm
<b>Notes</b>	Dissolved oxygen measurement repeated due to instrument malfunction on 4/14/04.			<b>Nitrate</b>	ppm

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# Stream Assessment Data Sheet

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Fish

Collection Method:

Arthropods