

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-24-01

SID: 1

STOREID:

HUC: 04060102070010

Collection Information	
Date	9/7/2008
Time	6:45 PM 7:12 PM
Collectors	
Roger	Vajda
Louis	Vajda
Megan	Vajda
Datasheet completed by:	
Roger	Vajda
Identifications made by:	
Roger	Vajda

Stream Conditions	
Average Depth	1 ft
Air Temperature	67 F
Current Conditions	
Cloudy	
last storm:	
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input checked="" type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Minnows	

Stream Information		County: Mecosta	Latitude: N43 43.897
Stream: Dalziel Creek		Township: Green	Longitude: W85 29.214
Location: Spruce Rd.		TownshipNum: 16	Datum: GPS
		TownshipDir: N	
		Range: 10	
		RangeDir: W	
Watershed: Muskegon River		Section: 35	300 Feet <input checked="" type="checkbox"/>
		Quarter: SW	Feet-other
Subwatershed: Buckhorn		QuarterQuarter	If not 300, why?

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare:	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>		
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>		
<input type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> midge larvae	<input type="checkbox"/>	Group 2	
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input checked="" type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>	Rare	9
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Common	6.4
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Group 3	
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>			Rare	1.1
		<input checked="" type="checkbox"/> damselfly nymphs	<input type="checkbox"/>			Common	0
		<input checked="" type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>			Total:	16.5
		<input type="checkbox"/> net-spinning caddis	<input checked="" type="checkbox"/>			Quality Score	
		<input type="checkbox"/> scuds	<input type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments	
Number of jars	1
Confidence Level	1

Poor

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-25-01

SID: 1

STOREID:

HUC: 04060102070020

Collection Information	
Date	9/18/2008
Time	4:20 PM 5:15 PM
Collectors	
Bill & Nancy	Burmeister
Rachel	Mueller
Tiffany	Hunter
Datasheet completed by:	
Nancy	Burmeister
Identifications made by:	
Bill & Nancy	Burmeister

Stream Conditions	
Average Depth	1.5 ft
Air Temperature	70 F
Current Conditions	
Calm, Sunny	
last storm:	9/14/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Fish, crayfish, clams, snake, spiders, wood duck	

Stream Information		County: Mecosta	Latitude: N43 42.258
Stream: Ryan Creek		Township: Colfax	Longitude: W85 26.488
Location: Off 180th Ave. by a picnic area		TownshipNum: 15	Datum: GPS
		TownshipDir: N	
		Range: 10	
		RangeDir: W	
Watershed: Muskegon River		Section: 7	300 Feet <input checked="" type="checkbox"/>
		Quarter: SW	Feet-other
Subwatershed: Ryan/Mitchell Creek		QuarterQuarter	If not 300, why?

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input type="checkbox"/> caddisfly larvae	<input checked="" type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> aquatic worm	<input type="checkbox"/>		
<input checked="" type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>		
<input checked="" type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>		
<input type="checkbox"/> gilled snails	<input checked="" type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input checked="" type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>		
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input checked="" type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>		
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>		
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input type="checkbox"/> crayfish	<input checked="" type="checkbox"/>				
		<input checked="" type="checkbox"/> damselfly nymphs	<input type="checkbox"/>				
		<input type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>				
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>				
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments	Number of jars	Confidence Level	2
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-25-03

SID: 1

STOREID:

HUC: 04060102070020

Collection Information	
Date	9/14/2008
Time	8:45 AM 10:10 AM
Collectors	
Cindy	Fitzwilliams-Heck
 Datasheet completed by:	
Cindy	Fitzwilliams-Heck
Identifications made by:	
Cindy	Fitzwilliams-Heck

<p>Stream Information</p> <p>Stream: Mitchell Creek</p> <p>Location: Mitchell Creek Park - beginning 12 ft south of north footbridge to 10'</p> <p>Watershed: Muskegon River</p> <p>Subwatershed: Ryan/Mitchell Creek</p>	<p>County: Mecosta</p> <p>Township: Big Rapids</p> <p>TownshipNum: 15</p> <p>TownshipDir: N</p> <p>Range: 10</p> <p>RangeDir: W</p> <p>Section: 11</p> <p>Quarter: SW</p> <p>QuarterQuarter</p>	<p>Latitude: N43 42.006</p> <p>Longitude: W85 28.984</p> <p>Datum: GPS</p> <p>300 Feet <input checked="" type="checkbox"/></p> <p>Feet-other</p> <p>If not 300, why?</p>
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Stream Conditions	
Average Depth	1.5 ft
Air Temperature	55 F
Current Conditions	
Cloudy, sprinkling	
last storm:	9/14/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
brook lamprey, red squirrels, bluejays	

<p>Group 1 - Sensitive</p> <p>Rare Common</p> <p><input checked="" type="checkbox"/> caddisfly larvae <input type="checkbox"/></p> <p><input type="checkbox"/> hellgrammites <input type="checkbox"/></p> <p><input type="checkbox"/> mayfly nymphs <input type="checkbox"/></p> <p><input type="checkbox"/> gilled snails <input type="checkbox"/></p> <p><input type="checkbox"/> stonefly nymphs <input type="checkbox"/></p> <p><input type="checkbox"/> water penny <input type="checkbox"/></p> <p><input type="checkbox"/> water snipe fly <input type="checkbox"/></p>	<p>2-Somewhat Sensitive</p> <p>Rare Common</p> <p><input type="checkbox"/> alderfly larvae <input type="checkbox"/></p> <p><input type="checkbox"/> beetle adults <input type="checkbox"/></p> <p><input type="checkbox"/> beetle larvae <input type="checkbox"/></p> <p><input type="checkbox"/> black fly larvae <input checked="" type="checkbox"/></p> <p><input type="checkbox"/> clams <input type="checkbox"/></p> <p><input type="checkbox"/> crane fly larvae <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> crayfish <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> damselfly nymphs <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> dragonfly nymphs <input type="checkbox"/></p> <p><input type="checkbox"/> net-spinning caddis <input checked="" type="checkbox"/></p> <p><input type="checkbox"/> scuds <input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/> sowbugs <input type="checkbox"/></p>	<p>Group 3-Tolerant</p> <p>Rare Common</p> <p><input type="checkbox"/> aquatic worm <input type="checkbox"/></p> <p><input type="checkbox"/> leeches <input type="checkbox"/></p> <p><input type="checkbox"/> midge larvae <input type="checkbox"/></p> <p><input type="checkbox"/> pouch snails <input checked="" type="checkbox"/></p> <p><input type="checkbox"/> True Bugs <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> Other True Flies <input type="checkbox"/></p>	<p>Stream Quality Score</p> <p>Group 1</p> <p>Rare: 5</p> <p>Common: 0</p> <p>Group 2</p> <p>Rare: 12</p> <p>Common: 9.6</p> <p>Group 3</p> <p>Rare: 1.1</p> <p>Common: 1</p> <p>Total: 28.7</p> <p>Quality Score</p> <p style="text-align: center;">Fair</p>
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Comments

Number of jars 1 **Confidence Level** 1

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-25-05

SID: 1

STOREID:

HUC: 04060102070020

Collection Information	
Date	9/7/2008
Time	1:40 PM 2:05 PM
Collectors	
Karen Bailey	
Ruth & Gabr Mary & MacKenzie	
Lauren Magi Adam L. & Case H.	
Datasheet completed by:	
Karen Bailey	
Identifications made by:	
Karen Bailey	

Stream Conditions	
Average Depth	0.5 ft
Air Temperature	69 F
Current Conditions	
Cloudy then rainy	
last storm:	9/7/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input checked="" type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
3 trout, minnows	

Stream Information		County: Mecosta	Latitude: N43 41.941
Stream: Mitchell Creek		Township: Big Rapids	Longitude: W85 29.405
Location: 100 feet below footbridge at Big Rapids Community Pool		TownshipNum: 15	Datum: GPS
Watershed: Muskegon River		TownshipDir: N	
Subwatershed: Ryan/Mitchell Creeks		Range: 10	
		RangeDir: W	
		Section: 10	300 Feet <input type="checkbox"/>
		Quarter: SE	Feet-other 290
		QuarterQuarter	If not 300, why? Overhanging branches - deep very slippery

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input checked="" type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>	Group 1	
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input type="checkbox"/> beetle adults	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> leeches	<input type="checkbox"/>	Rare: 15	
<input checked="" type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input checked="" type="checkbox"/>	Common: 0	
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input checked="" type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input checked="" type="checkbox"/>	Group 2	
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Rare: 15	
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input checked="" type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Common: 9.6	
<input checked="" type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>			Group 3	
		<input type="checkbox"/> damselfly nymphs	<input checked="" type="checkbox"/>			Rare: 1.1	
		<input checked="" type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>			Common: 2	
		<input type="checkbox"/> net-spinning caddis	<input checked="" type="checkbox"/>			Total: 42.7	
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>			Quality Score	
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>			Good	

Comments	Number of jars	3	Confidence Level	1
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-25-06

SID: 1

STOREID:

HUC: 040601020700200

Collection Information

Date 9/14/2008
Time 4:30 PM 6:30 PM

Collectors

Linnea Weis
 Jerry Weis

Datasheet completed by:

Linnea Weis

Identifications made by:

Linnea Weis

Stream Conditions

Average Depth 1.75 ft

Air Temperature 67 F

Current Conditions

Drizzle, overcast

last storm: 9/13/2008

Excessive Silt

Substrate Embeddedness

0-25 >50

25-50 unsure

Fish/wildlife Observed

Small fish, crayfish, blue heron

Stream Information

Stream: Upper Mitchell Creek

Location: 17 Mile Road, West of
220th, Big Rapids MI

Watershed: Muskegon River

Subwatershed: Ryan/Mitchell Creek

County: Mecosta

Township: Big Rapids

TownshipNum: 15

TownshipDir: N

Range: 10

RangeDir: W

Section: 4

Quarter: SW

QuarterQuarter

Latitude: N42 42.908

Longitude: W85 31.375

Datum: GPS

300 Feet

Feet-other

If not 300, why?

	2-Somewhat Sensitive	Group 3-Tolerant	
	Rare Common	Rare Common	Stream Quality Score
Group 1 - Sensitive			Group 1
Rare Common			Rare: 10 Common: 5.3
<input checked="" type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 2
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	Rare: 12 Common: 0
<input type="checkbox"/> mayfly nymphs <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> beetle larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> midge larvae <input type="checkbox"/>	Group 3
<input type="checkbox"/> gilled snails <input type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	Rare: 1.1 Common: 0
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input checked="" type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Total: 28.4
<input checked="" type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Quality Score
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish <input type="checkbox"/>		Fair
	<input type="checkbox"/> damselfly nymphs <input type="checkbox"/>		
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		
	<input checked="" type="checkbox"/> scuds <input type="checkbox"/>		
	<input type="checkbox"/> sowbugs <input type="checkbox"/>		

Comments

Number of jars

8

Confidence Level

3

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-25-07

SID: 1

STOREID:

HUC: 04060102070020

Collection Information	
Date	9/1/2008
Time	5:30 PM 8:30 PM
Collectors	
Beth	Scsavnicki
Daniel	Scsavnicki
Datasheet completed by:	
Beth	Scsavnicki
Identifications made by:	
Beth	Scsavnicki

Stream Conditions	
Average Depth	1 ft
Air Temperature	80 F
Current Conditions	
Sunny	
last storm:	
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25	<input type="checkbox"/>
>50	<input checked="" type="checkbox"/>
25-50	<input type="checkbox"/>
unsure	<input type="checkbox"/>
Fish/wildlife Observed	
Wild turkeys	

Stream Information		County: Mecosta	Latitude: N43 50.834
Stream: Unnamed Tributary		Township: Mecosta	Longitude: W85 56.221
Location: East of Rogers Dam Pond		TownshipNum: 14	Datum: GPS online
		TownshipDir: N	
		Range: 10	
		RangeDir: W	
Watershed: Muskegon River		Section: 11	300 Feet <input checked="" type="checkbox"/>
		Quarter: NE	Feet-other
Subwatershed: Ryan/Mitchell Creek		QuarterQuarter	If not 300, why?

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> aquatic worm	<input type="checkbox"/>		
<input checked="" type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input type="checkbox"/> beetle adults	<input checked="" type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>		
<input checked="" type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>		
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input checked="" type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>		
<input checked="" type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>		
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>		
<input checked="" type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input type="checkbox"/> crayfish	<input type="checkbox"/>				
		<input type="checkbox"/> damselfly nymphs	<input type="checkbox"/>				
		<input checked="" type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>				
		<input type="checkbox"/> net-spinning caddis	<input checked="" type="checkbox"/>				
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments	
Number of jars	1
Confidence Level	2

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-25-08

SID: 1

STOREID:

HUC: 04060102070020

Collection Information	
Date	8/31/2008
Time	10:30 AM 12:30 PM
Collectors	
Jean	LaLonde
Datasheet completed by:	
Jean	LaLonde
Identifications made by:	
Jean	LaLonde

Stream Conditions	
Average Depth	1 ft
Air Temperature	57 F
Current Conditions	
Clear	
last storm:	8/28/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25	<input checked="" type="checkbox"/>
>50	<input type="checkbox"/>
25-50	<input type="checkbox"/>
unsure	<input type="checkbox"/>
Fish/wildlife Observed	
Minnows, frogs	

Stream Information		County: Mecosta	Latitude: N43 41.061
Stream:	Higginson Creek	Township: Colfax	Longitude: W85 27.459
Location:	New Millpond and McKinley Rd	TownshipNum: 15	Datum: GPS
Watershed:	Muskegon River	TownshipDir: N	Range: 10
Subwatershed:	Ryan/Mitchell Creek	RangeDir: W	Section: 300 Feet <input checked="" type="checkbox"/>
		Quarter: QuarterQuarter	Feet-other: If not 300, why?

Group 1 - Sensitive	2-Somewhat Sensitive	Group 3-Tolerant	Stream Quality Score
Rare Common	Rare Common	Rare Common	
<input type="checkbox"/> caddisfly larvae <input checked="" type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 1
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	Rare: 10
<input checked="" type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input checked="" type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input checked="" type="checkbox"/>	Common: 5.3
<input checked="" type="checkbox"/> gilled snails <input type="checkbox"/>	<input checked="" type="checkbox"/> black fly larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> pouch snails <input type="checkbox"/>	Group 2
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Rare: 12
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Common: 3.2
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>		Group 3
	<input type="checkbox"/> damselfly nymphs <input type="checkbox"/>		Rare: 1.1
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		Common: 1
	<input checked="" type="checkbox"/> net-spinning caddis <input type="checkbox"/>		Total: 32.6
	<input type="checkbox"/> scuds <input checked="" type="checkbox"/>		Quality Score
	<input checked="" type="checkbox"/> sowbugs <input type="checkbox"/>		Fair

Comments	Number of jars	1	Confidence Level	3
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-26-01

SID: 1

STOREID:

HUC: 04060102070030

Collection Information	
Date	9/8/2008
Time	12:25 PM 12:50 PM
Collectors	
Stephen	Ross
Datasheet completed by:	
Stephen	Ross
Identifications made by:	
Stephen	Ross

Stream Information	County: Mecosta	Latitude: N43 35.689
Stream: Betts Creek	Township: Mecosta	Longitude: W85 31.607
Location: West of 220th Ave	TownshipNum: 14	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	Range: 10
Subwatershed: Hardy Dam Pond	RangeDir: W	Section: 20
	Quarter: NE	300 Feet <input checked="" type="checkbox"/>
	QuarterQuarter: SE	Feet-other
		If not 300, why?

Stream Conditions	
Average Depth	0.25 ft
Air Temperature	60 F
Current Conditions	
Partly cloudy	
last storm:	9/5/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Small fish, water striders, green frog	

	2-Somewhat Sensitive		
	Rare Common	Group 3-Tolerant	
Group 1 - Sensitive		Rare Common	
Rare Common	<input type="checkbox"/> alderfly larvae <input type="checkbox"/> <input type="checkbox"/> beetle adults <input type="checkbox"/> <input type="checkbox"/> beetle larvae <input type="checkbox"/> <input type="checkbox"/> black fly larvae <input type="checkbox"/> <input type="checkbox"/> clams <input type="checkbox"/> <input checked="" type="checkbox"/> crane fly larvae <input type="checkbox"/> <input type="checkbox"/> crayfish <input type="checkbox"/> <input type="checkbox"/> damselfly nymphs <input type="checkbox"/> <input checked="" type="checkbox"/> dragonfly nymphs <input type="checkbox"/> <input type="checkbox"/> net-spinning caddis <input checked="" type="checkbox"/> <input type="checkbox"/> scuds <input checked="" type="checkbox"/> <input type="checkbox"/> sowbugs <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/> <input type="checkbox"/> leeches <input type="checkbox"/> <input type="checkbox"/> midge larvae <input type="checkbox"/> <input type="checkbox"/> pouch snails <input type="checkbox"/> <input type="checkbox"/> True Bugs <input type="checkbox"/> <input type="checkbox"/> Other True Flies <input type="checkbox"/>	Stream Quality Score
			Group 1
			Rare: 10 Common: 0
			Group 2
			Rare: 6 Common: 6.4
			Group 3
			Rare: 0 Common: 0
			Total: 22.4
			Quality Score
			Fair

Comments	
Number of jars	1
Confidence Level	1

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-26-02

SID: 1

STOREID:

HUC: 04060102070030

Collection Information	
Date	9/8/2008
Time	1:20 PM 1:50 PM
Collectors	
Stephen	Ross
Datasheet completed by:	
Stephen	Ross
Identifications made by:	
Stephen	Ross

Stream Conditions	
Average Depth	0.25 ft
Air Temperature	60 F
Current Conditions	
Partly cloudy	
last storm:	9/5/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Green frog, water striders	

Stream Information		County: Mecosta	Latitude: N43 30.280
Stream: Rosy Run		Township: Aetna	Longitude: W85 32.771
Location: East of Newcosta Road between Two and Three Mile Roads		TownshipNum: 13	Datum: GPS
Watershed: Muskegon River		TownshipDir: N	
Subwatershed: Hardy Dam Pond		Range: 10	
		RangeDir: W	
		Section: 19	300 Feet <input checked="" type="checkbox"/>
		Quarter: NW	Feet-other
		QuarterQuarter	If not 300, why?

Group 1 - Sensitive	2-Somewhat Sensitive	Group 3-Tolerant	Stream Quality Score
Rare Common	Rare Common	Rare Common	
<input type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 1
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	Rare: 0
<input type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	Common 5.3
<input type="checkbox"/> gilled snails <input type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	Group 2
<input type="checkbox"/> stonefly nymphs <input checked="" type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Rare 3
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Common 3.2
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish <input type="checkbox"/>		Group 3
	<input type="checkbox"/> damselfly nymphs <input type="checkbox"/>		Rare 0
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		Common 0
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		Total: 11.5
	<input type="checkbox"/> scuds <input checked="" type="checkbox"/>		Quality Score
	<input type="checkbox"/> sowbugs <input type="checkbox"/>		

Comments	Poor
Number of jars	1
Confidence Level	1

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 02-26-03
SID: 1
STOREID:
HUC: 0460102070030

Collection Information
Date 9/1/2008
Time
Collectors

Datasheet completed by:

Identifications made by:

Stream Conditions
Average Depth 0 ft
Air Temperature F
Current Conditions

last storm:
Excessive Silt

Substrate Embeddedness
 0-25 >50
 25-50 unsure

Fish/wildlife Observed

Stream Information	County: Mecosta	Latitude: N43 34.506
Stream: Bennett Creek	Township: Mecosta	Longitude: W85 33.035
Location: end of Pierce Road	TownshipNum: 14	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Hardy Dam Pond	Range: 10	
	RangeDir: W	
	Section: 30	300 Feet <input checked="" type="checkbox"/>
	Quarter:	Feet-other
	QuarterQuarter	If not 300, why?

	2-Somewhat Sensitive		Stream Quality Score
	Rare Common		
Group 1 - Sensitive		Group 3-Tolerant	Group 1
Rare Common		Rare Common	Rare: 0 Common 0
<input type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 2
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	Rare 0 Common 0
<input type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	Group 3
<input type="checkbox"/> gilled snails <input type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	Rare 0 Common 0
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Total: 0
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Quality Score
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>		
	<input type="checkbox"/> damselfly nymphs <input type="checkbox"/>		
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		
	<input type="checkbox"/> scuds <input type="checkbox"/>		
	<input type="checkbox"/> sowbugs <input type="checkbox"/>		

Comments Not monitored due to health reasons. Poor

Number of jars **Confidence Level**

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 03-05-01
SID: 1
STOREID:
HUC: 4060102020020

Collection Information
Date 9/1/2008
Time
Collectors

Datasheet completed by:

Identifications made by:

Stream Conditions
Average Depth 0 ft
Air Temperature F
Current Conditions

last storm:
Excessive Silt

Substrate Embeddedness
 0-25 >50
 25-50 unsure

Fish/wildlife Observed

Stream Information	County: Missaukee	Latitude: N44 20.133
Stream: West Branch Muskegon R	Township: Richland	Longitude: W84 55.291
Location: South Side of M-55 - first time the River crosses M-55.	TownshipNum: 22	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Haymarsh Lake	Range: 5	
	RangeDir: W	
	Section: 6	300 Feet <input checked="" type="checkbox"/>
	Quarter:	Feet-other
	QuarterQuarter	If not 300, why?

	2-Somewhat Sensitive		
Group 1 - Sensitive	Rare Common	Group 3-Tolerant	Rare Common
<input type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	
<input type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	
<input type="checkbox"/> gilled snails <input type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>		
	<input type="checkbox"/> damselfly nymphs <input type="checkbox"/>		
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		
	<input type="checkbox"/> scuds <input type="checkbox"/>		
	<input type="checkbox"/> sowbugs <input type="checkbox"/>		

Stream Quality Score	
Group 1	
Rare:	0
Common:	0
Group 2	
Rare:	0
Common:	0
Group 3	
Rare:	0
Common:	0
Total:	0
Quality Score	
Poor	

Comments Not monitored due to being in another country.

Number of jars **Confidence Level**

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 04-29-01

SID: 1

STOREID:

HUC: 4060102080030

Collection Information	
Date	9/11/2008
Time	5:35 PM 6:35 PM
Collectors	
Margaret Feravich	Lorissa Feravich
Datasheet completed by: Margaret Feravich	
Identifications made by: Margaret & Lo Feravich	

Stream Information	County: Montcalm	Latitude: N43 26.763
Stream: Little Muskegon River	Township: Reynolds	Longitude: W85 30.737
Location: Downstream from Long Rd.	TownshipNum: 12	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Little Muskegon River/Handy Creek Watershed	Range: 10	
	RangeDir: W	
	Section: 9	300 Feet <input checked="" type="checkbox"/>
	Quarter: SW	Feet-other
	QuarterQuarter	If not 300, why?

Stream Conditions	
Average Depth	3 ft
Air Temperature	73 F
Current Conditions	
Partly sunny	
last storm:	9/5/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Frogs, fish	

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant	
Rare	Common	Rare	Common	Rare	Common
<input checked="" type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>
<input type="checkbox"/> mayfly nymphs	<input checked="" type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input checked="" type="checkbox"/>
<input type="checkbox"/> gilled snails	<input checked="" type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input checked="" type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>
<input type="checkbox"/> water penny	<input checked="" type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>
<input checked="" type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>		
		<input type="checkbox"/> damselfly nymphs	<input type="checkbox"/>		
		<input type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>		
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>		
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>		
		<input checked="" type="checkbox"/> sowbugs	<input type="checkbox"/>		

Stream Quality Score	
Group 1	
Rare:	10
Common:	15.9
Group 2	
Rare:	12
Common:	3.2
Group 3	
Rare:	0
Common:	1
Total:	42.1
Quality Score	
Good	

Comments The sediment ridge in May is no longer there.

Number of jars 1 **Confidence Level** 2

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 04-31-01

SID: 1

STOREID:

HUC: 04060102080050

Collection Information	
Date	9/6/2008
Time	1:30 PM 2:30 PM
Collectors	
Lee	Olsen
Karlee	Olsen
Datasheet completed by:	
Lee	Olsen
Identifications made by:	
Lee	Olsen

<p>Stream Information</p> <p>Stream: Tamarack Creek</p> <p>Location: Artman Park - near US 131 - Howard City Exit</p> <p>Watershed: Muskegon River</p> <p>Subwatershed: Lower Tamarack Creek</p>	<p>County: Montcalm</p> <p>Township: Reynolds</p> <p>TownshipNum: 12</p> <p>TownshipDir: N</p> <p>Range: 10</p> <p>RangeDir: W</p> <p>Section: 28</p> <p>Quarter: SE</p> <p>QuarterQuarter</p>	<p>Latitude: N43 22.980</p> <p>Longitude: W85 30.662</p> <p>Datum: GPS</p> <p>300 Feet <input checked="" type="checkbox"/></p> <p>Feet-other</p> <p>If not 300, why?</p>
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Stream Conditions	
Average Depth	3.6 ft
Air Temperature	71 F
Current Conditions	
Mostly cloudy	
last storm:	9/5/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25	<input type="checkbox"/>
>50	<input type="checkbox"/>
25-50	<input checked="" type="checkbox"/>
unsure	<input type="checkbox"/>
Fish/wildlife Observed	
Sculpin and frogs	

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> aquatic worm	<input type="checkbox"/>		
<input checked="" type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>		
<input type="checkbox"/> mayfly nymphs	<input checked="" type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>		
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>		
<input checked="" type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input checked="" type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>		
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input checked="" type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>		
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>				
		<input type="checkbox"/> damselfly nymphs	<input type="checkbox"/>				
		<input type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>				
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>				
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				
Group 1						Rare: 10	
Group 2						Common: 5.3	
Group 3						Rare: 15	
Total:						Common: 0	
Quality Score						Rare: 1.1	
Fair						Common: 0	

Comments	Number of jars	1	Confidence Level	1
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 04-31-02

SID: 1

STOREID:

HUC: 04060102080050

Collection Information	
Date	9/6/2008
Time	11:00 AM 2:30 PM
Collectors	
Lee	Olsen
Karlee	Olsen
Datasheet completed by:	
Lee	Olsen
Identifications made by:	
Lee	Olsen

Stream Conditions	
Average Depth	2 ft
Air Temperature	65 F
Current Conditions	
Mostly cloudy	
last storm:	9/6/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input checked="" type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	

Stream Information		County: Montcalm	Latitude: N43 23.752
Stream: Rice Creek	Location: North of W. Lake-Montcalm Rd - Olsen property	Township: Reynolds	Longitude: W85 30.270
Watershed: Muskegon River	Subwatershed: Tamarack Creek	TownshipNum: 12	Datum: GPS
		TownshipDir: N	
		Range: 10	
		RangeDir: W	
		Section: 33	300 Feet <input checked="" type="checkbox"/>
		Quarter:	Feet-other
		QuarterQuarter	If not 300, why?

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare:	Common
<input type="checkbox"/> caddisfly larvae	<input checked="" type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> aquatic worm	<input type="checkbox"/>	10	5.3
<input checked="" type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>	Group 2	
<input checked="" type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>	Rare	15
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input checked="" type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>	Common	3.2
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Group 3	
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input checked="" type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Rare	1.1
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input type="checkbox"/> crayfish	<input type="checkbox"/>	Total: 34.6			
		<input checked="" type="checkbox"/> damselfly nymphs	<input type="checkbox"/>	Quality Score			
		<input checked="" type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>	Good			
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>				
		<input type="checkbox"/> scuds	<input checked="" type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments	Number of jars 1	Confidence Level 1
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 04-31-03

SID: 1

STOREID:

HUC: 40600102080050

Collection Information	
Date	9/11/2008
Time	4:50 PM 5:20 PM
Collectors	
Margaret Feravich	Lorissa Feravich
Datasheet completed by:	
Margaret Feravich	
Identifications made by:	
Margaret & Lo Feravich	

Stream Conditions	
Average Depth	0.75 ft
Air Temperature	73 F
Current Conditions	
Partly sunny	
last storm:	9/5/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input checked="" type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Frogs, deer tracks and turkey feather	

Stream Information	County: Montcalm	Latitude: N43 25.139
Stream: Indian Creek	Township: Reynolds	Longitude: W85 27.151
Location: Downstream from Jones Road	TownshipNum: 12	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Lower Tamarack Creek	Range: 10	
	RangeDir: W	
	Section: 24	300 Feet <input checked="" type="checkbox"/>
	Quarter: NW	Feet-other
	QuarterQuarter	If not 300, why?

	2-Somewhat Sensitive	
	Rare Common	
Group 1 - Sensitive		Group 3-Tolerant
Rare Common		Rare Common
<input type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input checked="" type="checkbox"/>
<input type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input type="checkbox"/> beetle larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> midge larvae <input type="checkbox"/>
<input type="checkbox"/> gilled snails <input type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>	
	<input type="checkbox"/> damselfly nymphs <input type="checkbox"/>	
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>	
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>	
	<input type="checkbox"/> scuds <input checked="" type="checkbox"/>	
	<input type="checkbox"/> sowbugs <input checked="" type="checkbox"/>	

Comments	
Number of jars	1
Confidence Level	2

Stream Quality Score	
Group 1	
Rare:	0
Common:	0
Group 2	
Rare:	0
Common:	6.4
Group 3	
Rare:	1.1
Common:	1
Total:	8.5
Quality Score	
Poor	

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 06-34-01

SID: 1

STOREID:

HUC: 04060102090020

Collection Information	
Date	9/10/2008
Time	3:15 PM 4:00 PM
Collectors	
Mark	Pitzer
Datasheet completed by:	
Mark	Pitzer
Identifications made by:	
Mark	Pitzer

Stream Conditions	
Average Depth	1 ft
Air Temperature	72 F
Current Conditions	
Partly cloudy	
last storm:	9/8/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Sculpin, fish, kingfisher, minnows	

Stream Information		County: Newaygo	Latitude: N43 27.212
Stream: Bigelow Creek		Township: Brooks Township	Longitude: W85 44.516
Location: Coolbough Nature Preserve		TownshipNum: 12	Datum: GPS
Watershed: Muskegon River		TownshipDir: N	
Subwatershed: Bigelow Creek		Range: 12	
		RangeDir: W	
		Section: 4	300 Feet <input type="checkbox"/>
		Quarter:	Feet-other 100
		QuarterQuarter	If not 300, why? Multiple locations are monitored at Coolbough

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>	5	0
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>	Group 2	
<input type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>	Rare	9
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input checked="" type="checkbox"/>	Common	0
<input checked="" type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Group 3	
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Rare	0
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>			Common	1
		<input checked="" type="checkbox"/> damselfly nymphs	<input type="checkbox"/>			Total: 15	
		<input type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>			Quality Score	
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>			Poor	
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments		Number of jars	1	Confidence Level	1
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 06-34-11

SID: 1

STOREID:

HUC: 04060102090020

Collection Information	
Date	9/6/2008
Time	8:00 AM 9:30 AM
Collectors	
Russ	Bachman
Datasheet completed by:	
Russ	Bachman
Identifications made by:	
Russ	Bachman

Stream Information	County: Newaygo	Latitude: N43 27 30.69
Stream: Penoyer Creek	Township: Brooks	Longitude: W85 47 40.03
Location: Creek's outflow from Emerald Lake on Centerline Road	TownshipNum: 12	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Bigelow Creek Watershed	Range: 12	
	RangeDir: W	
	Section: 6	300 Feet <input checked="" type="checkbox"/>
	Quarter:	Feet-other
	QuarterQuarter	If not 300, why?

Stream Conditions	
Average Depth	3 ft
Air Temperature	55 F
Current Conditions	
Clear	
last storm:	9/4/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25	<input checked="" type="checkbox"/> >50 <input type="checkbox"/>
25-50	<input type="checkbox"/> unsure <input type="checkbox"/>
Fish/wildlife Observed	
Green heron, wood ducks, panfish	

Group 1 - Sensitive	2-Somewhat Sensitive	Group 3-Tolerant	Stream Quality Score
Rare Common	Rare Common	Rare Common	
<input checked="" type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 1
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	Rare: 5
<input type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	Common: 5.3
<input type="checkbox"/> gilled snails <input checked="" type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> pouch snails <input type="checkbox"/>	Group 2
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input checked="" type="checkbox"/> clams <input type="checkbox"/>	<input checked="" type="checkbox"/> True Bugs <input type="checkbox"/>	Rare: 9
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Common: 6.4
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>		Group 3
	<input type="checkbox"/> damselfly nymphs <input checked="" type="checkbox"/>		Rare: 3.3
	<input checked="" type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		Common: 0
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		Total: 29
	<input type="checkbox"/> scuds <input checked="" type="checkbox"/>		Quality Score
	<input type="checkbox"/> sowbugs <input type="checkbox"/>		Fair

Comments		
	Number of jars	1
	Confidence Level	1

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 06-34-12

SID: 1

STOREID:

HUC: 04060102090020

Collection Information	
Date	9/2/2008
Time	5:00 PM 6:00 PM
Collectors	
Russ	Bachman
Datasheet completed by:	
Russ	Bachman
Identifications made by:	
Russ	Bachman

Stream Information	County: Newaygo	Latitude: N43 27 23.36
Stream: Penoyer	Township: Brooks	Longitude: W85 47 54.87
Location: Pickerel Lake outflow on Centerline Road	TownshipNum: 12	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Bigelow Creek Watershed	Range: 12	
	RangeDir: W	
	Section: 6	300 Feet <input checked="" type="checkbox"/>
	Quarter:	Feet-other
	QuarterQuarter	If not 300, why?

Stream Conditions	
Average Depth	2 ft
Air Temperature	70 F
Current Conditions	
Cloudy	
last storm:	8/27/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25 <input checked="" type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Frogs, tadpoles, panfish, songbirds, great blue heron	

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input checked="" type="checkbox"/>		
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input type="checkbox"/> beetle adults	<input checked="" type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>		
<input checked="" type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>		
<input type="checkbox"/> gilled snails	<input checked="" type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> pouch snails	<input type="checkbox"/>		
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input checked="" type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>		
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>		
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input type="checkbox"/> crayfish	<input type="checkbox"/>				
		<input type="checkbox"/> damselfly nymphs	<input checked="" type="checkbox"/>				
		<input type="checkbox"/> dragonfly nymphs	<input checked="" type="checkbox"/>				
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>				
		<input type="checkbox"/> scuds	<input checked="" type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments	
Number of jars	1
Confidence Level	1

Stream Quality Score	
Group 1	
Rare:	5
Common:	5.3
Group 2	
Rare:	3
Common:	12.8
Group 3	
Rare:	1.1
Common:	1
Total:	28.2
Quality Score	
Fair	

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 06-34-C1

SID: 1

STOREID:

HUC: 04060102090020

Collection Information	
Date	9/10/2008
Time	4:15 PM 5:00 PM
Collectors	
Mark	Pitzer
Datasheet completed by:	
Mark	Pitzer
Identifications made by:	
Mark	Pitzer

Stream Conditions	
Average Depth	1.5 ft
Air Temperature	72 F
Current Conditions	
Partly cloudy	
last storm:	9/8/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input checked="" type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Sculpin, fish, minnow	

Stream Information		County: Newaygo	Latitude: N43 27.203
Stream: Bigelow Creek		Township: Brooks	Longitude: W85 44.944
Location: Coolbough Nature Preserve		TownshipNum: 12	Datum: GPS
Watershed: Muskegon River		TownshipDir: N	
Subwatershed: Bigelow Creek		Range: 12	
		RangeDir: W	
		Section: 4	300 Feet <input type="checkbox"/>
		Quarter: QuarterQuarter	Feet-other 100
			If not 300, why? Multiple locations are monitored at Coolbough

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input checked="" type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>	Group 1	
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>	Rare: 5	
<input type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input type="checkbox"/>	Common: 0	
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>	Group 2	
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Rare: 9	
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Common: 0	
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>			Group 3	
		<input checked="" type="checkbox"/> damselfly nymphs	<input type="checkbox"/>			Rare: 0	
		<input type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>			Common: 0	
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>			Total: 14	
		<input type="checkbox"/> scuds	<input type="checkbox"/>			Quality Score	
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>			Poor	

Comments	Number of jars	1	Confidence Level	1
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 06-36-01

SID: 1

STOREID:

HUC: 04060102090040

Collection Information	
Date	9/6/2008
Time	9:00 AM 10:15 AM
Collectors	
Darrell	Crawford
Tom	Moore
Datasheet completed by:	
Darrell	Crawford
Identifications made by:	
Tom Moore & Darrell Crawford	

Stream Conditions	
Average Depth	2.5 ft
Air Temperature	70 F
Current Conditions	
Clear	
last storm:	9/4/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25	<input type="checkbox"/>
>50	<input type="checkbox"/>
25-50	<input checked="" type="checkbox"/>
unsure	<input type="checkbox"/>
Fish/wildlife Observed	

Stream Information		County: Newaygo	Latitude: N43 27.501
Stream: Daisy Creek	Location:	Township: Dayton	Longitude: W85 57.685
Watershed: Muskegon River	Subwatershed: Brooks Creek	TownshipNum:	Datum: GPS
		TownshipDir:	
		Range:	
		RangeDir:	
		Section:	300 Feet <input checked="" type="checkbox"/>
		Quarter:	Feet-other
		QuarterQuarter:	If not 300, why?

Group 1 - Sensitive	2-Somewhat Sensitive	Group 3-Tolerant	Stream Quality Score
Rare Common	Rare Common	Rare Common	
<input type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 1
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input type="checkbox"/> leeches <input type="checkbox"/>	Rare: 0
<input type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input checked="" type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	Common: 0
<input type="checkbox"/> gilled snails <input type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	Group 2
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Rare: 12
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Common: 0
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>		Group 3
	<input checked="" type="checkbox"/> damselfly nymphs <input type="checkbox"/>		Rare: 0
	<input type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		Common: 0
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		Total: 12
	<input checked="" type="checkbox"/> scuds <input type="checkbox"/>		Quality Score
	<input checked="" type="checkbox"/> sowbugs <input type="checkbox"/>		

Comments 1 mosquito larvae, 4 aquatic mites?	Number of jars	1	Confidence Level
			Poor

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 06-36-02

SID: 1

STOREID:

HUC: 04060102090040

Collection Information	
Date	9/4/2008
Time	9:00 AM 10:10 AM
Collectors	
Darrell	Crawford
Tom	Moore
Datasheet completed by:	
Darrell	Crawford
Identifications made by:	
Tom Moore & Darrell Crawford	

Stream Conditions	
Average Depth	1.5 ft
Air Temperature	70 F
Current Conditions	
Light rain	
last storm:	
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25	<input checked="" type="checkbox"/> >50 <input type="checkbox"/>
25-50	<input type="checkbox"/> unsure <input type="checkbox"/>
Fish/wildlife Observed	
Large carp, minnows	

Stream Information		County: Newaygo	Latitude: N43 28.655
Stream: Daisy Creek		Township: Dayton	Longitude: W85 56.569
Location:		TownshipNum:	Datum: GPS
		TownshipDir:	
		Range:	
		RangeDir:	
Watershed: Muskegon River		Section: 300 Feet	<input checked="" type="checkbox"/>
		Quarter: Feet-other	
Subwatershed: Brooks Creek		QuarterQuarter: If not 300, why?	

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input checked="" type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>	Group 1	
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input checked="" type="checkbox"/> leeches	<input type="checkbox"/>	Rare: 10	
<input type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> midge larvae	<input type="checkbox"/>	Common: 0	
<input checked="" type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>	Group 2	
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Rare: 12	
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Common: 0	
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input type="checkbox"/> crayfish	<input type="checkbox"/>			Group 3	
		<input checked="" type="checkbox"/> damselfly nymphs	<input type="checkbox"/>			Rare: 2.2	
		<input checked="" type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>			Common: 0	
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>			Total: 24.2	
		<input checked="" type="checkbox"/> scuds	<input type="checkbox"/>			Quality Score	
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>			Fair	

Comments		
	Number of jars	8
	Confidence Level	3

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 07-22-01

SID: 1

STOREID:

HUC: 04060102060010

Collection Information	
Date	9/13/2008
Time	9:45 AM 12:00 PM
Collectors	
Doug	Trembath
Jean	LaLonde
Datasheet completed by:	
Doug	Trembath
Identifications made by:	
Doug Trembat Jean LaLonde	

Stream Conditions	
Average Depth	0.84 ft
Air Temperature	63 F
Current Conditions	
Cloudy, then rain	
last storm:	9/13/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	

Stream Information	County: Osceola	Latitude: N43 53.820
Stream: Twin Creek	Township: City of Evert	Longitude: W85 15.487
Location: Mouth of Creek at Riverside Park	TownshipNum: 17	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	Range: 8
Subwatershed: Strawberry Lake	RangeDir: W	Section: 3
	Quarter: NW	300 Feet <input checked="" type="checkbox"/>
	QuarterQuarter	Feet-other
		If not 300, why?

<p style="text-align: center;">Group 1 - Sensitive</p> <p>Rare Common</p> <p><input checked="" type="checkbox"/> caddisfly larvae <input type="checkbox"/></p> <p><input type="checkbox"/> hellgrammites <input type="checkbox"/></p> <p><input type="checkbox"/> mayfly nymphs <input checked="" type="checkbox"/></p> <p><input type="checkbox"/> gilled snails <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> stonefly nymphs <input type="checkbox"/></p> <p><input type="checkbox"/> water penny <input type="checkbox"/></p> <p><input type="checkbox"/> water snipe fly <input type="checkbox"/></p>	<p style="text-align: center;">2-Somewhat Sensitive</p> <p>Rare Common</p> <p><input type="checkbox"/> alderfly larvae <input type="checkbox"/></p> <p><input type="checkbox"/> beetle adults <input type="checkbox"/></p> <p><input type="checkbox"/> beetle larvae <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> black fly larvae <input type="checkbox"/></p> <p><input type="checkbox"/> clams <input type="checkbox"/></p> <p><input type="checkbox"/> crane fly larvae <input type="checkbox"/></p> <p><input type="checkbox"/> crayfish <input type="checkbox"/></p> <p><input type="checkbox"/> damselfly nymphs <input type="checkbox"/></p> <p><input type="checkbox"/> dragonfly nymphs <input type="checkbox"/></p> <p><input type="checkbox"/> net-spinning caddis <input type="checkbox"/></p> <p><input type="checkbox"/> scuds <input checked="" type="checkbox"/></p> <p><input type="checkbox"/> sowbugs <input type="checkbox"/></p>	<p style="text-align: center;">Group 3-Tolerant</p> <p>Rare Common</p> <p><input type="checkbox"/> aquatic worm <input type="checkbox"/></p> <p><input type="checkbox"/> leeches <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> midge larvae <input type="checkbox"/></p> <p><input type="checkbox"/> pouch snails <input type="checkbox"/></p> <p><input type="checkbox"/> True Bugs <input type="checkbox"/></p> <p><input type="checkbox"/> Other True Flies <input type="checkbox"/></p>	<p style="text-align: center;">Stream Quality Score</p> <p style="text-align: center;">Group 1</p> <p>Rare: 10</p> <p>Common: 5.3</p> <p style="text-align: center;">Group 2</p> <p>Rare: 3</p> <p>Common: 3.2</p> <p style="text-align: center;">Group 3</p> <p>Rare: 1.1</p> <p>Common: 0</p> <p style="text-align: center;">Total: 22.6</p> <p style="text-align: center;">Quality Score</p> <p style="text-align: center;">Fair</p>
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Comments	
Number of jars	1
Confidence Level	2

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 07-23-01

SID: 1

STOREID:

HUC: 04060102060020

Collection Information	
Date	9/6/2008
Time	3:00 PM 6:24 PM
Collectors	
April	Heilman
Nathan	Heilman
Nicholas	Heilman
Datasheet completed by:	
April	Heilman
Identifications made by:	
April	Heilman

Stream Conditions	
Average Depth	1.75 ft
Air Temperature	73 F
Current Conditions	
Partly cloudy	
last storm:	9/4/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input checked="" type="checkbox"/>
Fish/wildlife Observed	
Frog, minnows, crayfish	

Stream Information		County: Osceola	Latitude: N43 51.157
Stream: Hersey River		Township: Hersey	Longitude: W85 26.742
Location: Hersey Park (former dam site)		TownshipNum: 27	Datum: GPS
Watershed: Muskegon River		TownshipDir: N	
Subwatershed: Hersey		Range: 10	
		RangeDir: W	
		Section: 24	300 Feet <input checked="" type="checkbox"/>
		Quarter: NE	Feet-other
		QuarterQuarter	If not 300, why?

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>	0	5.3
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input type="checkbox"/> leeches	<input type="checkbox"/>	Group 2	
<input type="checkbox"/> mayfly nymphs	<input checked="" type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input type="checkbox"/> midge larvae	<input checked="" type="checkbox"/>	Rare	3
<input type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>	Common	3.2
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>	Group 3	
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>	Rare	0
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input type="checkbox"/> crayfish	<input type="checkbox"/>			Common	1
		<input type="checkbox"/> damselfly nymphs	<input type="checkbox"/>			Total: 12.5	
		<input type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>			Quality Score	
		<input type="checkbox"/> net-spinning caddis	<input checked="" type="checkbox"/>			Poor	
		<input type="checkbox"/> scuds	<input type="checkbox"/>				
		<input type="checkbox"/> sowbugs	<input type="checkbox"/>				

Comments	Number of jars	1	Confidence Level	1
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 08-02-01

SID: 1

STOREID:

HUC: 04060102010020

Collection Information	
Date	9/16/2008
Time	9:15 AM 9:45 AM
Collectors	
Claude	Schmitt
Joe	Crnkovich
Datasheet completed by:	
Claude	Schmitt
Identifications made by:	
Claude Schmi	Joe Crnkovich

Stream Conditions	
Average Depth	2.5 ft
Air Temperature	42 F
Current Conditions	
Sunny	
last storm:	9/14/2008
Excessive Silt	<input checked="" type="checkbox"/>
Substrate Embeddedness	
0-25	<input checked="" type="checkbox"/> >50 <input type="checkbox"/>
25-50	<input type="checkbox"/> unsure <input type="checkbox"/>
Fish/wildlife Observed	
Bass minnows	

Stream Information	County: Roscommon	Latitude: N44 25.73
Stream: The Cut	Township: Higgins	Longitude: W84 39.27
Location: Downstream from Marl Lake	TownshipNum: 24	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	
Subwatershed: Backus Creek	Range: 3	
	RangeDir: W	
	Section: 34	300 Feet <input checked="" type="checkbox"/>
	Quarter: NE	Feet-other
	QuarterQuarter: SE	If not 300, why?

	2-Somewhat Sensitive	Group 3-Tolerant	
	Rare Common	Rare Common	
Group 1 - Sensitive			Stream Quality Score
Rare Common			Group 1
<input checked="" type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> aquatic worm <input type="checkbox"/>	Rare: 5
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input checked="" type="checkbox"/> leeches <input type="checkbox"/>	Common: 10.6
<input type="checkbox"/> mayfly nymphs <input checked="" type="checkbox"/>	<input type="checkbox"/> beetle larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	Group 2
<input type="checkbox"/> gilled snails <input checked="" type="checkbox"/>	<input type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	Rare: 6
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> clams <input checked="" type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Common: 9.6
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input checked="" type="checkbox"/> Other True Flies <input type="checkbox"/>	Group 3
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish <input type="checkbox"/>		Rare: 3.3
	<input checked="" type="checkbox"/> damselfly nymphs <input type="checkbox"/>		Common: 0
	<input type="checkbox"/> dragonfly nymphs <input checked="" type="checkbox"/>		Total: 34.5
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		Quality Score
	<input type="checkbox"/> scuds <input checked="" type="checkbox"/>		 Good
	<input type="checkbox"/> sowbugs <input type="checkbox"/>		

Comments	Number of jars	2	Confidence Level
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MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 08-03-01

SID: 1

STOREID:

HUC: 4060102010030

Collection Information	
Date	9/12/2008
Time	6:00 PM 7:00 PM
Collectors	
Craig	Cotterman
Emily	Cotterman
Datasheet completed by:	
Craig	Cotterman
Identifications made by:	
Craig	Cotterman

Stream Conditions	
Average Depth	3 ft
Air Temperature	75 F
Current Conditions	
Moderate	
last storm:	9/6/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25	<input type="checkbox"/>
>50	<input checked="" type="checkbox"/>
25-50	<input type="checkbox"/>
unsure	<input type="checkbox"/>
Fish/wildlife Observed	
Small minnows	

Stream Information		County: Roscommon	Latitude: N44 18.048
Stream: Denton Creek		Township: Roscommon	Longitude: W84 38.271
Location: 318 Arrowhead Drive, Houghton Lake		TownshipNum: 22	Datum: GPS
		TownshipDir: N	
		Range: 4	
		RangeDir: W	
Watershed: Muskegon River		Section: 11	300 Feet <input checked="" type="checkbox"/>
		Quarter:	Feet-other
Subwatershed: Houghton Lake Watershed		QuarterQuarter	If not 300, why?

Group 1 - Sensitive		2-Somewhat Sensitive		Group 3-Tolerant		Stream Quality Score	
Rare	Common	Rare	Common	Rare	Common	Rare:	Common
<input type="checkbox"/> caddisfly larvae	<input type="checkbox"/>	<input type="checkbox"/> alderfly larvae	<input type="checkbox"/>	<input type="checkbox"/> aquatic worm	<input type="checkbox"/>		
<input type="checkbox"/> hellgrammites	<input type="checkbox"/>	<input checked="" type="checkbox"/> beetle adults	<input type="checkbox"/>	<input checked="" type="checkbox"/> leeches	<input type="checkbox"/>		
<input checked="" type="checkbox"/> mayfly nymphs	<input type="checkbox"/>	<input type="checkbox"/> beetle larvae	<input type="checkbox"/>	<input checked="" type="checkbox"/> midge larvae	<input type="checkbox"/>		
<input checked="" type="checkbox"/> gilled snails	<input type="checkbox"/>	<input type="checkbox"/> black fly larvae	<input type="checkbox"/>	<input type="checkbox"/> pouch snails	<input type="checkbox"/>		
<input type="checkbox"/> stonefly nymphs	<input type="checkbox"/>	<input checked="" type="checkbox"/> clams	<input type="checkbox"/>	<input type="checkbox"/> True Bugs	<input type="checkbox"/>		
<input type="checkbox"/> water penny	<input type="checkbox"/>	<input type="checkbox"/> crane fly larvae	<input type="checkbox"/>	<input type="checkbox"/> Other True Flies	<input type="checkbox"/>		
<input type="checkbox"/> water snipe fly	<input type="checkbox"/>	<input checked="" type="checkbox"/> crayfish	<input type="checkbox"/>				
		<input type="checkbox"/> damselfly nymphs	<input checked="" type="checkbox"/>				
		<input checked="" type="checkbox"/> dragonfly nymphs	<input type="checkbox"/>				
		<input type="checkbox"/> net-spinning caddis	<input type="checkbox"/>				
		<input type="checkbox"/> scuds	<input checked="" type="checkbox"/>				
		<input checked="" type="checkbox"/> sowbugs	<input type="checkbox"/>				
						Group 1	
						Rare: 10	
						Common: 0	
						Group 2	
						Rare: 15	
						Common: 6.4	
						Group 3	
						Rare: 2.2	
						Common: 0	
						Total: 33.6	
						Quality Score	
						Good	

Comments	
Number of jars	1
Confidence Level	2

MUSKEGON RIVER WATER MONITORING PROGRAM

SITE INFORMATION/MACROINVERTEBRATE REPORT

FALL 2008

CID: 08-04-01

SID: 1

STOREID:

HUC: 04060102020010

Collection Information	
Date	9/9/2008
Time	10:00 AM 11:00 AM
Collectors	
Craig	Cotterman
Sally	Cotterman
Datasheet completed by:	
Craig	Cotterman
Identifications made by:	
Craig	Cotterman

Stream Conditions	
Average Depth	5 ft
Air Temperature	65 F
Current Conditions	
Moderate	
last storm:	9/6/2008
Excessive Silt	<input type="checkbox"/>
Substrate Embeddedness	
0-25 <input type="checkbox"/>	>50 <input checked="" type="checkbox"/>
25-50 <input type="checkbox"/>	unsure <input type="checkbox"/>
Fish/wildlife Observed	
Small minnows	

Stream Information	County: Roscommon	Latitude: N44 24.517
Stream: Muskegon River	Township: Lake	Longitude: W84 48.307
Location: Meads Landing	TownshipNum: 23	Datum: GPS
Watershed: Muskegon River	TownshipDir: N	Range: 4
Subwatershed: Dead Stream	RangeDir: W	Section: 3
	Quarter: 3	300 Feet <input checked="" type="checkbox"/>
	QuarterQuarter	Feet-other
		If not 300, why?

Group 1 - Sensitive	2-Somewhat Sensitive	Group 3-Tolerant	Stream Quality Score
Rare Common	Rare Common	Rare Common	
<input type="checkbox"/> caddisfly larvae <input type="checkbox"/>	<input type="checkbox"/> alderfly larvae <input type="checkbox"/>	<input type="checkbox"/> aquatic worm <input type="checkbox"/>	Group 1
<input type="checkbox"/> hellgrammites <input type="checkbox"/>	<input type="checkbox"/> beetle adults <input type="checkbox"/>	<input checked="" type="checkbox"/> leeches <input type="checkbox"/>	Rare: 5
<input checked="" type="checkbox"/> mayfly nymphs <input type="checkbox"/>	<input checked="" type="checkbox"/> black fly larvae <input type="checkbox"/>	<input type="checkbox"/> midge larvae <input type="checkbox"/>	Common: 5.3
<input type="checkbox"/> gilled snails <input checked="" type="checkbox"/>	<input type="checkbox"/> clams <input type="checkbox"/>	<input type="checkbox"/> pouch snails <input type="checkbox"/>	Group 2
<input type="checkbox"/> stonefly nymphs <input type="checkbox"/>	<input type="checkbox"/> crane fly larvae <input type="checkbox"/>	<input type="checkbox"/> True Bugs <input type="checkbox"/>	Rare: 12
<input type="checkbox"/> water penny <input type="checkbox"/>	<input type="checkbox"/> crayfish <input type="checkbox"/>	<input type="checkbox"/> Other True Flies <input type="checkbox"/>	Common: 3.2
<input type="checkbox"/> water snipe fly <input type="checkbox"/>	<input checked="" type="checkbox"/> damselfly nymphs <input type="checkbox"/>		Group 3
	<input checked="" type="checkbox"/> dragonfly nymphs <input type="checkbox"/>		Rare: 1.1
	<input type="checkbox"/> net-spinning caddis <input type="checkbox"/>		Common: 0
	<input checked="" type="checkbox"/> scuds <input type="checkbox"/>		Total: 26.6
	<input type="checkbox"/> sowbugs <input checked="" type="checkbox"/>		Quality Score

Comments	Number of jars 1
	Confidence Level 2

Fair