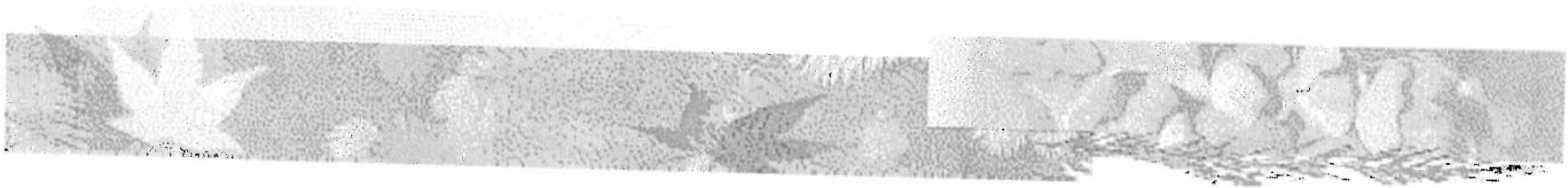
# Water Resources Conservation Advisory Council - June/2009 update



James Clift, Michigan Environmental Council

June 11, 2009

Scale 1 : 6 000 000
0
100
200
300
kilometres
0
50
100
150
200
miles
Lake Superior
Lake Michigan
Lake Huron
Lake Ontario
Lake Erie

# Water Use Regulation

- Part 327 – Great Lakes Preservation
- Part 328 – Aquifer Protection
- Part 342 - Great Lakes - St. Lawrence River Basin Water Resources Compact

# Water Resources Conservation Advisory Council

- Background
- Have issued three reports
  - Capacity and Actual Withdrawals – 1/09
  - Interim report – 2/09
  - Screening Tool Assessment – 4/09
- One additional report this fall

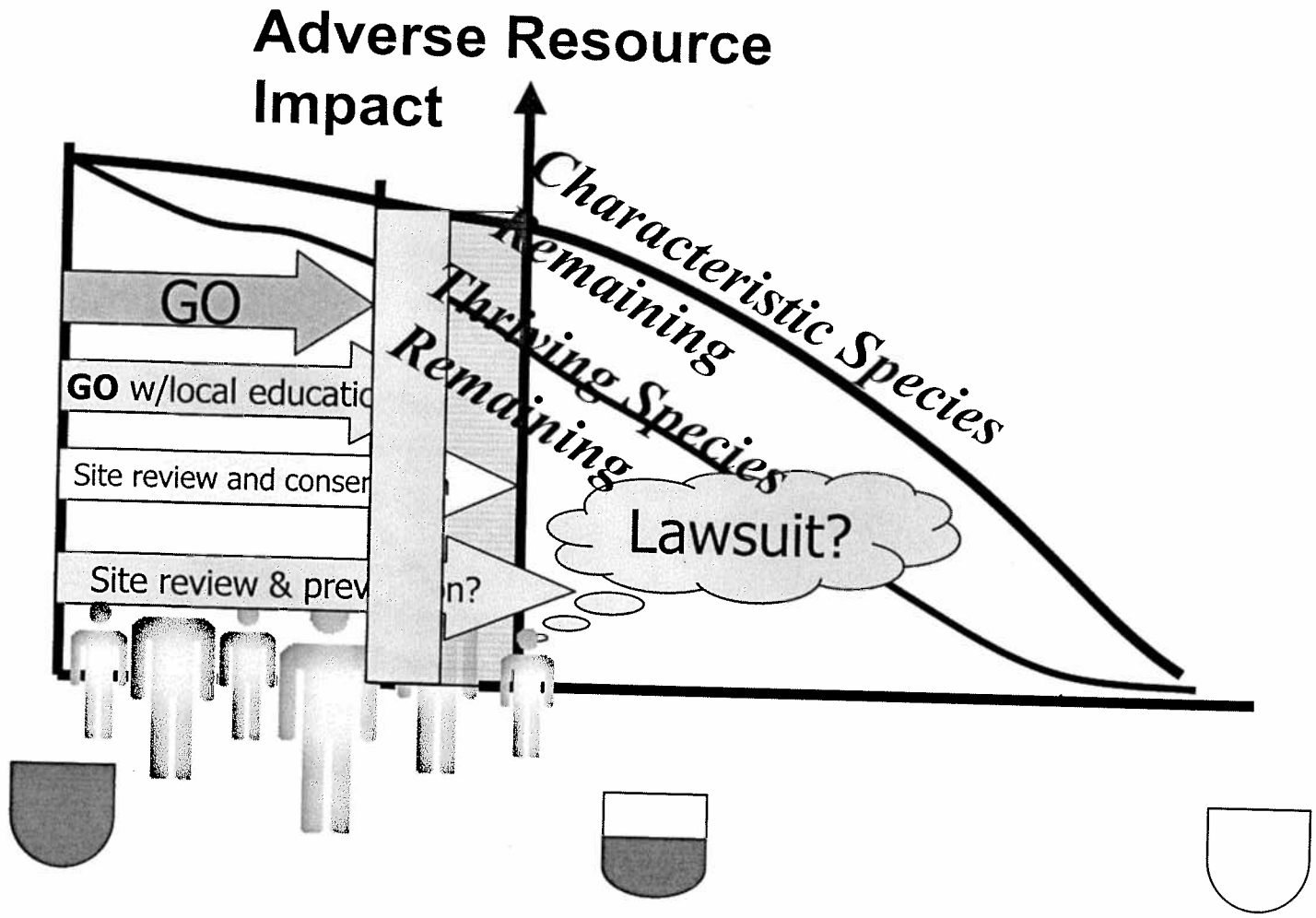
# Water Withdrawal Assessment Tool

- GIS – Internet based system
- Provides a screening function to determine which impacts warrant more detailed review and online registration
- Provides easy access to information regarding water use, cumulative impacts, and planning information
- Now available at: www.miwwat.org

# Impact Assessment Tool - basics

- Identifies which streams or rivers are potentially impacted – and estimates the flows during the sensitive low-flow summer months
- Estimates how much a well will reduce the flow of the river or stream
- Predicts how reduction in flow will diminish fish habitat (as indicator of aquatic health)

# Determining Impact For New & Expanding Uses



## All river types

Tw_lp_vsec_strata_052307.shp

- Cold small river
- Cold stream
- Cool large river
- Cool small river
- Cool stream
- Transitional large river
- Transitional small river
- Transitional stream
- Warm large river
- Warm small river
- Warm stream

Search Favorites

//www.miwwat.org/address.asp

## Related Articles

- Education Material
- Tool Introduction

## Collaborators

Department of Environmental Quality

Department of Natural Resouces

United States Geologic Survey

Institute of Water Research

## WWAT Information

- Coming Soon!

## Finding the Location of Your Water Withdrawal

Please select one of the following options for locating the position of your water withdrawal.

### Locate by Address

Enter the address and zip code at or near the withdrawal location. Please spell street names correctly in order to ensure system accuracy.

Address:

Zip Code:

Find Address

### Locate by Navigation

To select the county where the water withdrawal will occur, click the map or choose from the drop down menu.

Grand Traverse

Find County

### Locate by Latitute and Longitude

Enter the latitude and longitude coordinates at or near the withdrawal location. Please input data correctly in order to ensure system accuracy.

Decimal Degrees

Degree Minute Second

Longitude(X):

Latitude(Y):

Water Withdrawal Assessment Tool - Microsoft Internet Explorer

Back Search Favorites

Address http://35.8.121.114/website/wwat/viewer.htm?Query=NAME='ROSCOMMON'&QueryZoom=yes

# WATER WITHDRAWAL ASSESSMENT TOOL

**GIS Tools**

| | |
|---|---|
| Zoom In | Zoom Out |
| Address | Move Map |
| Back | Erase |
| Identify | Toggle Legend |
| Measure | Set Scale |
| Overview Map | Print |
| Query Builder | Help |
| New Withdrawal | |

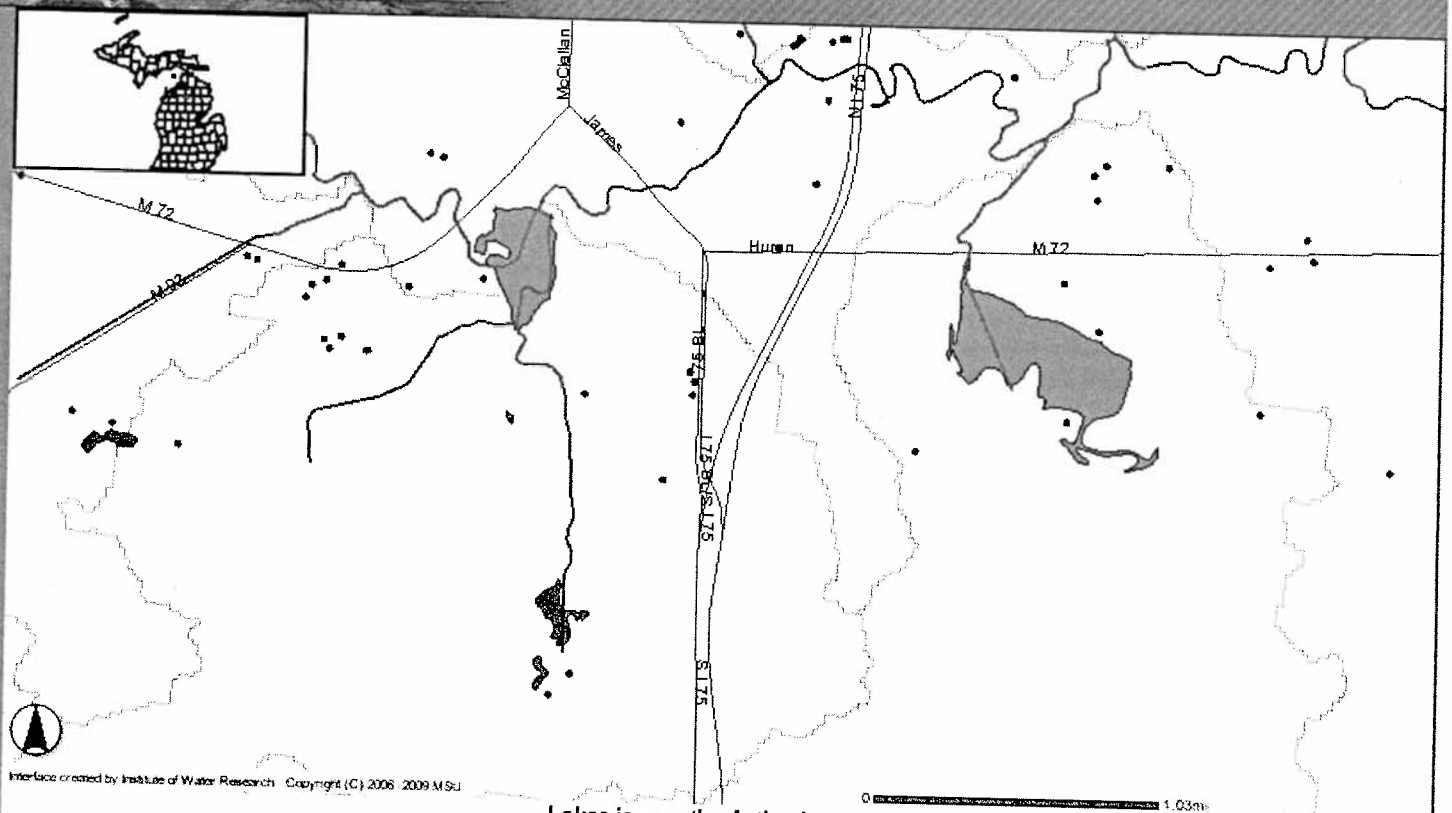
**Data Layers**

- All Layers
  - Roads
  - State Roads
  - Existing Wells
  - Streams
  - Lakes
  - Watersheds
  - Sections
  - County
  - Aerial Photo (NAIP - 2005)

Refresh Map

Auto Refresh

Data Layer Help?




Lakes is now the Active Layer

Map: 600422.8 , 454414.97 -- Image: 226 , 399 -- ScaleFactor: 9.555542661137993

Internet

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http://www.miwwat.org - Withdrawl Input File - Microsoft Internet Explorer

ENTER WITHDRAWAL INFORMATION

**Pumping Source and Frequency**

Withdrawal Source:

- Surface Water (from stream)
- Ground Water
- Shallow Pond

Pumping Frequency: Continuous / Intermittent

**Pumping Parameters**

Pumping Capacity (GPM): 140

Coordinates (X,Y): -84.69976 , 44.635137

Well Depth (FT): 25-50 ft

Aquifer Type: Bedrock / Glacial

**Current Stats at Location**

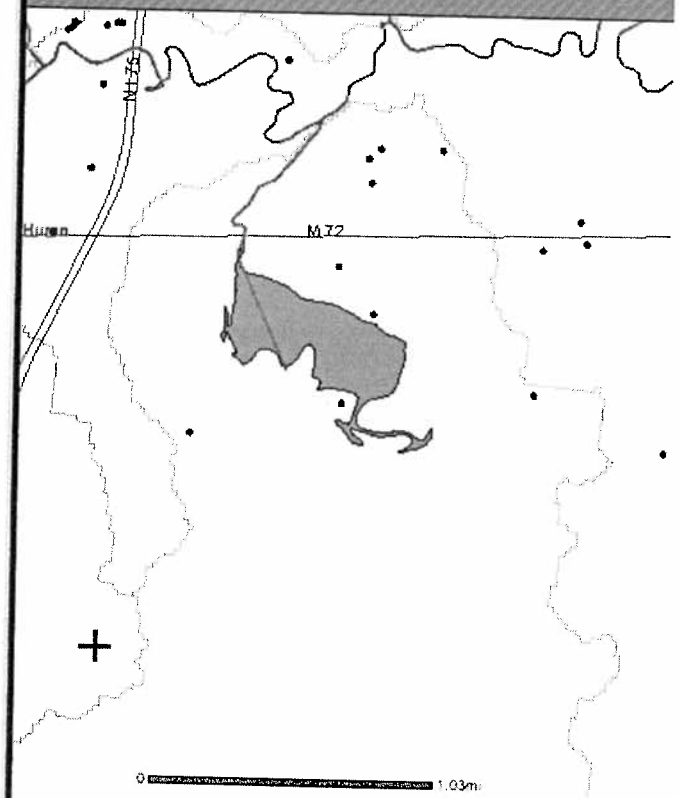
- Depth to Bedrock (FT): 517
- Average Well Depth (FT): 45
- Percent Wells in Glacial: 100
- Percent Wells in Bedrock: 0

Send to Model

Done

Internet

Data Layer Help?




hzoned=45&estdphbdk=517&pctdrift=100&pctrock=0&kww=128.126&type=Cold
3.74760707083

Map: 602687.46 , 454586.97 -- Image: 463 , 381 -- ScaleFactor: 9.555542661137993

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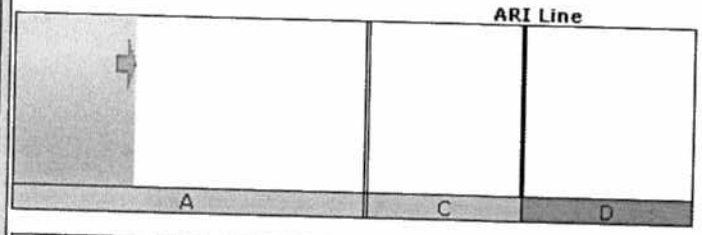
http://www.miwwat.org - Screening Results - Microsoft Internet Explorer

# Water Withdrawal Screening Results

**WARNING:** For evaluation purpose only.

## Adverse Resource Impact (ARI) Graph



The ARI graph above illustrates the estimated removal of water from a nearby stream and its potential for causing an adverse resource impact (ARI).

The proposed withdrawal has passed in Zone A.

## Screening Results - PASSED

**STREAM CLASSIFICATION:** Cold stream

**TEST VERSION RESULTS:**
The proposed withdrawal would pass the screening process. The projected impact of the withdrawal lies within 'Zone A' and is not likely to cause an adverse resource impact.

**REGISTRATION:**
A Large quantity withdrawal (LQW) with a capacity of 70 gpm or greater must be registered with the Michigan Department of Environmental Quality or with the Michigan Department of Agriculture if the LQW is for an agricultural purpose, before the withdrawal can begin. A registration is valid for 18 months. The withdrawal capacity must be installed within this time period or the registration becomes void. Registration may be done at this time through the button at the right.

You may register at this time, or come back to this site at a later time, or you may obtain a form to register the withdrawal by contacting Andrew LeBaron at 517-241-1435, or on-line at:
www.michigan.gov/deqwateruse

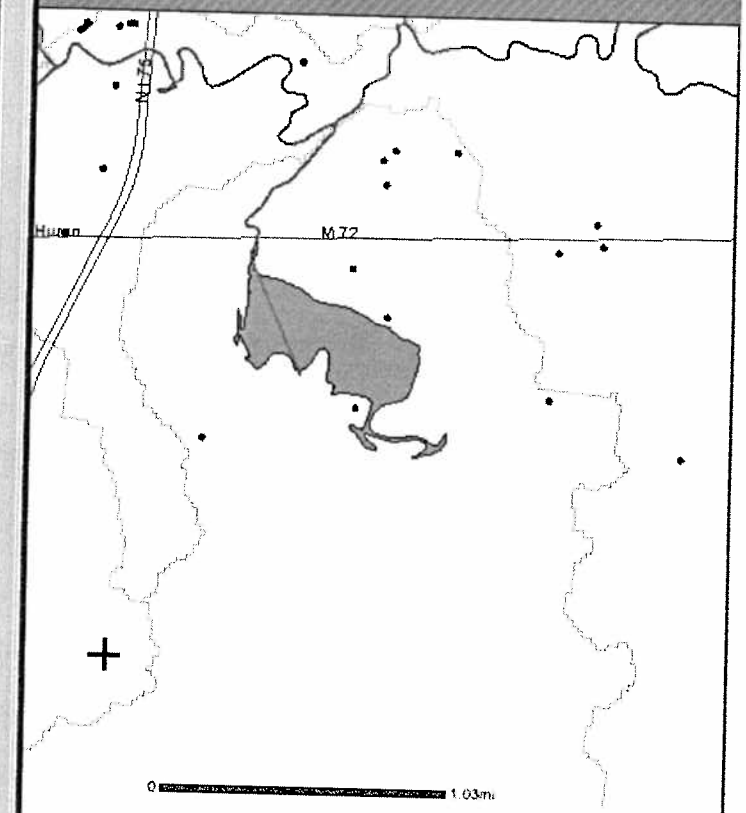
**Actions:**

- Help
- Rerun
- Register Now
- Feedback
- Print Report
- Administrator
- Exit

**DISCLAIMER:**
The Water Withdrawal Assessment Tool is designed to estimate the likely impact of a proposed water withdrawal on nearby streams. It is not an indication of how much groundwater may be available for your use. The quantity and quality of groundwater varies greatly with depth and location. You should consult with a water resources professional or a local well driller about groundwater availability at your location.

Done

Internet




hzoned=46&estdphbdrk=517&pctdrift=100&pctrock=0&kw=128.126&type=Cold
9.1920644097

Map: 602630.13 , 454864.08 -- Image: 457 , 352 -- ScaleFactor: 9.555542661137993

Internet

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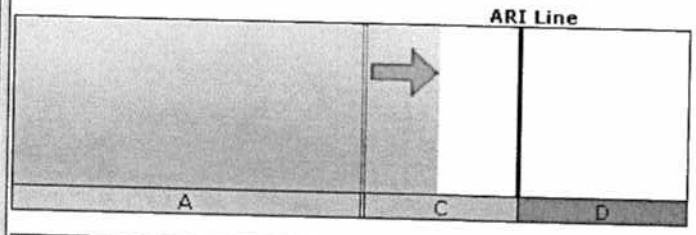
http://www.miwwat.org - Screening Results - Microsoft Internet Explorer

# Water Withdrawal Screening Results

**WARNING:** For evaluation purpose only.

## Adverse Resource Impact (ARI) Graph



The ARI graph above illustrates the estimated removal of water from a nearby stream and its potential for causing an adverse resource impact (ARI).

The proposed withdrawal is in Zone C and is approaching the ARI line.

## Screening Results - SITE SPECFIC REVIEW IS REQUIRED AFTER JULY 9, 2009.

**STREAM CLASSIFICATION:** Cold stream

**TEST VERSION RESULTS:**
The projected impact of the withdrawal lies within 'Zone C', meaning there is an increased likelihood of an adverse resource impact. After the Assessment Tool becomes effective on July 9, 2009, a withdrawal of this type would require a site-specific review by the Department of Environmental Quality.

**MODIFYING A PROPOSED WITHDRAWAL:**
Changing certain characteristics of the proposed withdrawal may decrease the flow taken from nearby river systems, thereby lessening the likelihood of an adverse resource impact. The following withdrawal characteristics may be altered in the screening process to reduce the potential impact to nearby river systems:

- Reduce the pumping frequency
- Reduce the pumping capacity
- Increase the well depth
- Relocate the withdrawal farther from nearby river systems

You can use the button at the right to rerun the Water Withdrawal Assessment Tool and change the proposed withdrawal characteristics.

**REGISTRATION:**
A Large quantity withdrawal (LQW) with a capacity of 70 gpm or greater must be registered with the Michigan Department of Environmental

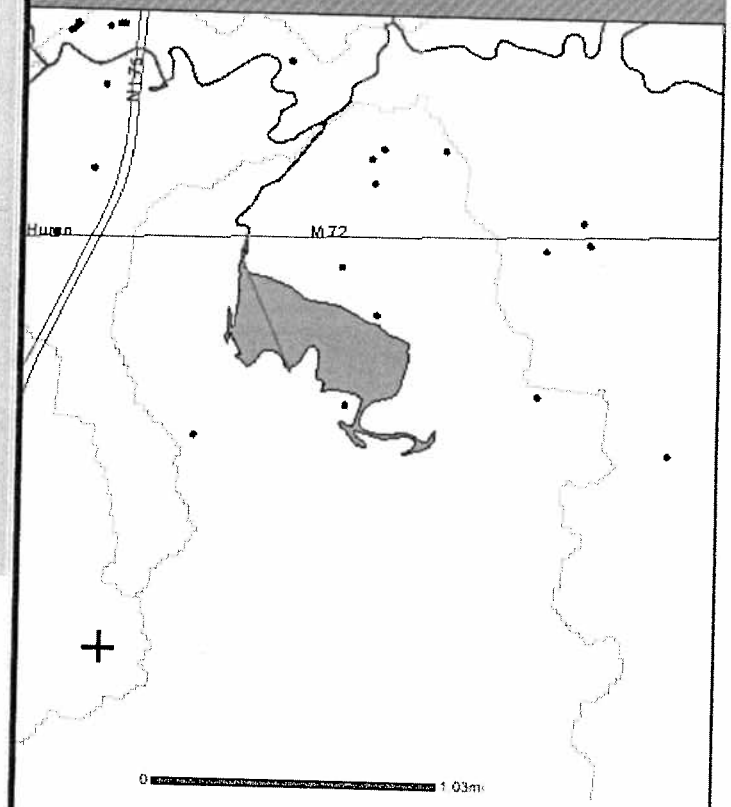
**Actions:**

- Help
- Rerun
- Register Now
- Feedback
- Print Report
- Administrator
- Exit

Done

Internet

Map: 602840.35 , 457950.52 -- Image: 479 , 29 -- ScaleFactor: 9.555542661137993




hzoned=45&estdphbdrk=517&pctdrift=100&pctrock=0&kw=128.126&type=Cold
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Internet

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# Capacity and Actual Withdrawals

- Data systems being finalized – combining and integrating existing reported information
- Recommendation – More accurate reporting of location of surfaces sources withdrawals
- Monitor at site-specific level

# Interim report – 2/09

- Assessment tool – more detail in April report
- Surface water sources – will be addressed in fall report
- Conservation
- Educational materials

# Screening Tool Assessment – 4/09

- Evaluation of Accuracy
- Evaluation of Operation
- Phase-in Provisions

# For more information:

- James Clift, Michigan Environmental Council, 517-487-9539
  - James@environmentalcouncil.org
- Scott Piggott, Farm Bureau, 517-323-7000, spiggot@michfb.com
- Water Resources Conservation Advisory Council
  - http://www.michigan.gov/dnr/0,1607,7-153-39002_51494---,00.html