CASS COUNTY
MICHIGAN

Water Resources Commissioner

2009 Annual Report

Spring Flooding – Huckleberry Lane – Dewey Lake - 2009
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“Both residents and visitors of Cass County enjoy the beauty of over 250 lakes and ponds, along with numerous streams, creeks, and wetlands that offer some of the best boating, fishing, swimming, wildlife habitat, and other recreational opportunities in Southwest Michigan. Maintaining county drains for agricultural, commercial, industrial, and residential use is critical to our economy and our quality of life. Managing established lake levels and protecting the waters of our county through a strong Soil Erosion Control Program will ensure the protection of these waters as one of our county’s most valuable resources for our current and future generations.”

– Bruce Campbell, Cass County Water Resources Commissioner

Forward

The year 2009 provided a lot of activity for the Drain Office. The historic rain from the remnants of Tropical Depression Lowell and Hurricane Ike in September 2008 coupled with rains in the Fall and snow that covered the ground for the majority of the Winter brought the water table up to levels we had not seen in the past 30 to 50 years. The Spring and Summer of 2009 produced a number of rain events that further contributed to the high water table. The resulting rains left water over portions of the following roads: Harvey Street, M-60 just west of Cassopolis, Huckleberry Lane, Black Street, White Temple Road, Yankee Street, Corwin Street, and many others. High water threatened homes in the Regal Place and Wilkinson Trail Subdivisions along with Big and Little Smith Lakes. Two lifelong residents in rural Volinia Township witnessed water in the woods between their homes for the first time in 80 years. Long time residents experienced water in their basements for the first time. Shavehead Lake had rain gauges that registered over 7” in a rain event in August. Lake levels were high in the county and strong currents in drains and creeks threatened and washed out culverts and bridges throughout the county. Most notable were Magician Lake Road, Donnell Lake Street, White Street, M-51 southwest of Dowagiac, and Redfield Street. Crops were planted late due to standing water in many fields. The Drain Office started the year with approximately 6 projects and finished with well over 20.
ANNUAL REPORT
OF THE
CASS COUNTY WATER RESOURCES COMMISSIONER

October 1, 2009
By Bruce Campbell

I. COUNTY DRAINS

Inspection of County Drains

Since October 1st, 2008 35 inspections have occurred on 20 different drains.

New Drainage Districts

Petitions received and district formed: Three

Subdivision plats, with new drainage districts are: None

And being contemplated for: SW Corner Shavehead Lake

Cleaning, Maintenance and Repair

Petitions were received for cleaning, maintenance or repair of drains for: None

Drains cleaned or maintained from drain fund accounts or revolving drain funds:

Nottingham Jones Drain - Marcellus Township
Whitaker Drain NE Extension – Volinia Township
Patrick Hamilton Drain – Silver Creek Township
Dodd & Doanne Drain – Howard Township
Bame Huntley Drain – Howard Township

Drains needing cleaning or maintenance include: Most.

Status Report

Patrick Hamilton Drain Silver Creek Township

Maintenance and repair was completed in July and August 2009.

MEANDERS Pokagon Township

A new description and easement needs to be written and recorded. An application has been submitted for a permit from the Michigan Department of Environmental Quality (MDEQ) for a proposed project south of the original Meanders.

Breezy Beach Drain Howard Township
A drainage district was established and the transfer of the drain from Howard Township to the Drain Office is scheduled for Fiscal Year 2010.

Williamsville Drain Porter Township

The Cass County Road Commission petitioned the Drain Office for a watershed issue in the Williamsville area from Birch to Shavehead Lakes. Preliminary surveying and engineering has started which will lead to a Board of Determination Hearing.

Happy Homes Drain Lagrange Township

Lagrange Township petitioned the Drain Office and preliminary surveying and engineering has been completed for a Board of Determination Hearing scheduled for the Fall of 2009.

Glenwood Drain Wayne Township

Wayne Township petitioned the Drain Office and preliminary surveying and engineering has been completed. The Board of Determination Hearing issued an Order of Necessity and the drain will be constructed in the Fall of 2009.

Nottingham Jones Drain Marcellus Township

The drain inspection showed a sinkhole as the result of a failure along a joint on the buried tile. Over 500’ of new plastic pipe was installed in the Summer of 2009.

Pleasant Lake Drain Ontwa Township

Inspection made in the Summer of 2009 indicated future maintenance.

II. INTERCOUNTY DRAINS

The Department of Agriculture Intercounty Drain program was funded for the Fiscal Year of 2009 with two agents and one administrative staff.

New Drainage Districts

None

Cleaning, Maintenance and Repair

Smith Lake

Drains need cleaning

Four County – Marcellus Township
Status Report

Smith Lake           Pokagon Township

The drain was reestablished through construction in the Summer of 2009. The Road Commission replaced the culvert under Indian Lake Road with a steel pipe.

III. LAKE LEVEL CONTROLS

The required three year Inspections were completed on all eighteen structures in October of 2008. Report indicated maintenance was required for the Shavehead Lake control structure (dam).

Lilly Lake            Penn Township

A 12 inch steel pipe was replaced between Hutchins and Lilly Lake in the Spring of 2009.

Barron Lake           Howard Township

Two 6” lake level control boards in a weir were discovered in the middle manhole on Lake Shore Drive in the Spring of 2009.

Garver Lake           Ontwa Township

The petitioned dredging project is scheduled for maintenance in the Fall of 2009.

IV. SOIL EROSION AND SEDIMENTATION CONTROL PROGRAM

The Board of Commissioners transferred the authority of the Soil Erosion and Sedimentation Control Program to the Water Resources Commissioner as the enforcing agency on July 3, 2008 by Resolution R-93-08.

Statistics

- Permits Issued: 105
- Total Site Inspections: 207
- Final Site Inspections: 198
- Complaints: 5

Major Sites Permitted

- Lakes Area Sewer Authority: Marcellus Township
- T&R Investments: Ontwa Township
- SMC Apartments: Lagrange Township
- North Shore Cottages: Penn Township
Edwardsburg Sports Complex - Ontwa Township
Aggregate Industries - Ontwa Township
Garver Lake Dredging - Ontwa Township
Smith Lake Intercounty Drain - Pokagon Township
Shavehead Lake Dam - Porter Township

Future Major Permits

None pending

V. FINANCIAL

Assessments

The following special assessments have been approved for 2009:

<table>
<thead>
<tr>
<th>Assessments</th>
<th>Amounts</th>
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<tbody>
<tr>
<td>Bame Huntly</td>
<td>Howard/Milton 4,784.00</td>
</tr>
<tr>
<td>Barron Lake Level</td>
<td>Howard 34,079.00</td>
</tr>
<tr>
<td>Beaver Dam &amp; State Line</td>
<td>Ontwa 4,400.00</td>
</tr>
<tr>
<td>Brandywine</td>
<td>Howard/Milton 14,704.80</td>
</tr>
<tr>
<td>Dodd &amp; Doanne</td>
<td>Howard 4,378.00</td>
</tr>
<tr>
<td>Dowagiac River IC</td>
<td>Wayne/Volinia 13,992.16</td>
</tr>
<tr>
<td>G.D. Mann</td>
<td>Silver Creek 6,252.40</td>
</tr>
<tr>
<td>Garver Lake Level</td>
<td>Ontwa 53,603.00</td>
</tr>
<tr>
<td>Glenwood</td>
<td>Wayne 10,863.80 (3 year)</td>
</tr>
<tr>
<td>Lilly Lake Level</td>
<td>Newberg 15,065.00</td>
</tr>
<tr>
<td>Long Lake</td>
<td>Newberg 5,636.12</td>
</tr>
<tr>
<td>Magician Lake Level</td>
<td>Silver Creek 7,370.00</td>
</tr>
<tr>
<td>Nottingham Jones</td>
<td>Marcellus 20,350.00</td>
</tr>
<tr>
<td>Patrick Hamilton</td>
<td>Silver Creek 67,699.50</td>
</tr>
<tr>
<td>Pleasant Lake</td>
<td>Ontwa 5,592.40</td>
</tr>
<tr>
<td>Shavehead Lake Level</td>
<td>Porter 34,305.70</td>
</tr>
<tr>
<td>Smith Lake Intercounty</td>
<td>Pokagon 15,989.62</td>
</tr>
<tr>
<td>Stock Farm</td>
<td>Pokagon 2,365.00</td>
</tr>
<tr>
<td>Twin Lakes Level</td>
<td>Wayne 7,920.00</td>
</tr>
<tr>
<td>Whitaker NE Extension</td>
<td>Volinia 10,560.00</td>
</tr>
</tbody>
</table>

Drain Funds

On September 21, 2009, the cash balances in the various accounts were:

<table>
<thead>
<tr>
<th>Accounts</th>
<th>Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>801 Drain</td>
<td>$34,744.19</td>
</tr>
<tr>
<td>841 Lake Level</td>
<td>101,614.38</td>
</tr>
<tr>
<td>802 Revolving Drain</td>
<td>29,091.68</td>
</tr>
</tbody>
</table>

Notes Payable
Barron Lake Note: $395,000 - installment four of five was paid on July 1, 2009.

Dowagiac River Note: $94,000.00 – installment three of three was paid on July 1, 2009.

Delinquent Tax Fund Loans

$214,000 was borrowed from the Delinquent Tax Fund.

VI. OTHER ISSUES

Lake Augmentation Projects

Barron Lake is functioning at an optimal level.

Twin Lakes is functioning at a satisfactory level.

The Michigan Department of Environmental Quality (MDEQ) permit was obtained for Crooked Lake. Construction of the system was nearly completed at the time of this report.

Phase II of NPDES

Fishbeck, Thompson, Carr and Huber along with Southwest Michigan Commission have administered and submitted a public awareness campaign. Our annual report was accepted and the County is in compliance. Fishbeck, Thompson, Carr and Huber applied for Cass County’s new permit. The final draft for the storm water regulations for the county is being reviewed.

Cass County Road Commission

The Water Resource Commissioner and the Cass County Road Commission continue to work together in several areas. The petition by the Road Commission for the Williamsville Project is the first such petition in many years, if ever.

VII. WATER RESOURCES COMMISSIONER’S OFFICE

1. Developing drain and lake level districts into county GIS System continues.
2. Drawing route and courses of drains into GIS System continues.
3. Developing electronic spreadsheet for assessment rolls continues.
4. Storm water regulations are in the final draft review.
5. Web page development for the Drain Office is complete.
6. An imaging program for historic drain documents was implemented in 2009.

VIII. PROFESSIONAL

The drain commissioner attended the following professional meetings:
IX.   OTHER

Besides regular office hours and field inspections, the Water Resources Commissioner attended:

- Board of Public Works – Member
- Parks Board – Member
- Road Commission monthly meetings
- Numerous County, Township, Village and City meetings

X.   ACKNOWLEDGEMENTS

The Water Resources Commissioner is appreciative of the assistance of many individuals over the past year, but especially wants to thank:

- Jackie Taylor and Tara Myer for their secretarial and administrative assistance.

- CPA Becky Moore and Treasurer Linda Irwin for their assistance on the accounting of the drain and lake level funds and ledgers.

- Clerk Barb Runyon and her staff for assistance with deeds, plats, and easement information.

- Information Systems Director Kerry Collins and his staff for mapping and other GIS support.

- County Administrator Terry Proctor for administrative support.
APPENDIX A

DRAINS INSPECTED BY WATER RESOURCES COMMISSIONER

<table>
<thead>
<tr>
<th>Drains Inspected</th>
<th>Drains Inspected</th>
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<tbody>
<tr>
<td>Brandwywine *</td>
<td>Smith Lake Intercounty *</td>
</tr>
<tr>
<td>Dowagiac</td>
<td>Pleasant Lake</td>
</tr>
<tr>
<td>Garver Lake Drain *</td>
<td>Pitcher Lake *</td>
</tr>
<tr>
<td>Hilltop Road</td>
<td>Whitaker</td>
</tr>
<tr>
<td>Twin Lakes</td>
<td>Whitaker NE Extension *</td>
</tr>
<tr>
<td>Patrick Hamilton *</td>
<td>Nottingham Jones *</td>
</tr>
<tr>
<td>Mud &amp; Pine Lake</td>
<td>Big Huckleberry Marsh *</td>
</tr>
<tr>
<td>Bame &amp; Huntley *</td>
<td>Stock Farm *</td>
</tr>
<tr>
<td>Dodd &amp; Doanne *</td>
<td>Jones Drain</td>
</tr>
<tr>
<td>G.D. Mann *</td>
<td>Peavine Creek *</td>
</tr>
</tbody>
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Note – Water Resources Commissioner performed familiarity visits to 37 drains in 2009.

LAKE LEVEL CONTROL STRUCTURES INSPECTED BY WATER RESOURCES COMMISSIONER
(note – all lake level structures were inspected on the mandatory 3 year cycle by Merritt Engineering in October of 2008)

<table>
<thead>
<tr>
<th>Lake Level Control Structures</th>
<th>Lake Level Control Structures</th>
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<tbody>
<tr>
<td>Barron Lake*</td>
<td>Garver Lake</td>
</tr>
<tr>
<td>Magician Lake</td>
<td>Twin Lakes</td>
</tr>
<tr>
<td>Lilly Lake *</td>
<td>Diamond Lake</td>
</tr>
<tr>
<td>Shavehead Lake *</td>
<td></td>
</tr>
</tbody>
</table>
Pleasant Lake
Priest Lake
Corey Lake
Eagle Lake *
* - work was performed

OTHER INSPECTIONS (complaints)

Numerous throughout the year with the majority coming during the Spring of 2009.

DRAIN CROSSING PERMITS

None

*Patrick Hamilton Drain – 2009*
Nottingham Jones Drain – 2009

Smith Lake Intercounty Drain – 2009
Whitaker NE Extension Drain – 2009

Spring Flooding – Black Street- 2009
Spring Flooding – Wilkinson Trail Subdivision – 2009

Spring Flooding – Huckleberry Lane – 2009
Spring Flooding - M-60 - Just west of Cassopolis going towards Niles – 2009
Long time residents could not remember water ever being over the road in this location. High water resulted in the planned raising of the road by MDOT.