

Memo



To: Oshtemo Charter Township Board
From: James W. Porter
Date: October 8, 2015
Subject: Proposed Wastewater Service Ordinance Amendment

OBJECTIVE

To amend the Township's Wastewater Service Ordinance.

BACKGROUND

Pursuant to MCL 333.12752, Section 12752 of the Public Health Code:

"Public sanitary sewer systems are essential to the health, safety, and welfare of the people of the state. Septic tank disposal systems are subject to failure due to soil conditions or other reasons. Failure or potential failure of septic tank disposal systems poses a threat to the public health, safety, and welfare; presents a potential for ill health, transmission of disease, mortality, and economic blight; and constitutes a threat to the quality of surface and subsurface waters of this state. The connection to available public sanitary sewer systems at the earliest, reasonable date is a matter for the protection of the public health, safety and welfare and necessary in the public interest which is declared as a matter of legislative determination."

Available public sanitary sewer is defined by MCL 333.12751, Section 12751 of the Michigan Public Health Code, as follows:

"(c) "Available Public sanitary sewer system" means a public sanitary sewer system located in a right of way, easement, highway, street, or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a structure in which sanitary sewage originates."

As the Board discussed, a proposed amendment to the Ordinance would require a mandatory connection for all sanitary sewer systems which reach or exceed the normal useful life of a septic system in Michigan, i.e., 15 years.

A question has arisen as to how the Township would require this connection, and the answer is relatively simple. MCL 333.12753, Section 12753 of the Michigan Public Health Code, Subsection (3) reads as follows:

“(3) Except as provided in subsection (4), the connection provided for in subsections (1) and (2) shall be completed promptly but not later than 18 months after the date of occurrence of the last of the following events or before the city, village, or township in which the sewage originates requires the connection:”

- (a) publication of a notice by the governmental entity . . . , or
- (b) modification of a structure so as to become a structure in which sanitary sewage originates.

Therefore, pursuant to Michigan law, anyone with available public sanitary sewer would have to connect not later than 18 months after published notice or generating sanitary sewage.

However, there was an exception provided to Subsection (3) and that is a township may enact an ordinance to adopt regulations to establish a different standard. The state statute says that the township “may” shorten the period for reasons of public health, but if there is no immediate public health reason, I believe that the Township then also has the latitude, per ordinance, to adopt a different standard regarding connection.

Given that, I thought it would be easier to use a 24-month notice period versus an 18-month notice period simply for ease of keeping the public record. However, the Board could reduce it to the 18-months as provided for in state law, or you could reduce it to an even shorter period after notice. Also, I believe the Township has the authority in lieu of published notice to provide direct notice to those with available public sewer at or nearing the end of its useful life.

It has come to our attention that the Kalamazoo County Health and Community Services Department, operating under a new Director, is generally supportive of requiring connection to available public sewer, but has given some indication that it is not as adamant about it as past administrations. Given that, it behooves the Township, for purposes of maintaining public health, safety, and welfare, to enact its own provisions to protect the Township residents.

INFORMATION PROVIDED

A copy of the proposed Wastewater Service Ordinance Amendment adding Subsection 8 to the Ordinance.

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

Consider the proposed Ordinance Amendment and set it for first reading.

OSHTEMO CHARTER TOWNSHIP ORDINANCE NO. ____

Adopted: _____, 2015

Effective: _____, 2015

OSHTEMO CHARTER TOWNSHIP ORDINANCE

This Ordinance amends Ordinance No. 208, being the Oshtemo Charter Township Wastewater Service Ordinance, adopted on February 19, 1985, as amended, and repeals all Ordinances or parts of Ordinances in conflict.

THE CHARTER TOWNSHIP OF OSHTEMO

KALAMAZOO COUNTY, MICHIGAN

ORDAINS:

SECTION I. ADDITION OF COMPILED SECTION 232.008 AND RENUMBERING SECTIONS 232.008 THROUGH 232.027. Sections 232.008 through 232.027 are renumbered to be Sections 232.009 through 232.028 and new Compiled Section 232.008 Timing of Connections is hereby added to read as follows:

232.008 Timing of Connections.

Sec. 8.

Any premises abutting a public sewer main, requiring sewage disposal service, and which is currently served by, or, at the end of the two-year notice period, will be served by, a septic system which is more than fifteen (15) years old, shall be connected to the abutting sewer system within two (2) years following the installation of said system, or, within two (2) years of notification of availability of sewer service by the Township, or at such earlier time as the private sewage disposal system serving the premises requires replacement, a new tile field, new dry well, or new septic tank. Wastewater and sewage disposal facilities in all buildings hereafter constructed shall be connected to the public sewer system if sewer mains are located in the abutting street at the boundaries of the site at the time of construction. New plats and subdivisions shall be developed with public water and/or sewer mains at the time of street construction if public water and/or sewer service is available at or near the boundaries of the plat or subdivision. The Township Board shall have the right to determine whether the service is sufficiently near to require such public service main installation.

SECTION II. This Ordinance shall take effect upon publication. All Ordinances or parts of Ordinances in conflict with any of the provisions of this Ordinance are hereby repealed.

DEBORAH L. EVERETT, CLERK
OSHTEMO CHARTER TOWNSHIP

Memo



To: Oshtemo Charter Township Board

From: James Porter, Corporate Counsel
Marc Elliott, P.E., Director of Public Works
Julie Johnston, AICP, Director of Planning

Date: November 25, 2015

Mtg Date: December 8, 2015

Item #: 6

Subject: Sanitary Sewer Ordinance Amendments – First Reading

OBJECTIVE

First reading of the Sanitary Sewer Ordinance amendment, which would require mandatory hook-ups at the time public sanitary sewer is available and when a septic system is at least 15 years old.

BACKGROUND

November 10th Work Session

At the Board Work Session on November 10, 2015, the Board was provided information on the importance of this Ordinance amendment. The following materials were provided:

- A report from Township staff on groundwater protection, property values, cost competitiveness of sewer connections, and the overall community needs related to connections.
- A report from W.E. Upjohn titled Oshtemo Township Sewer System Impact Analysis. This report completed a statistical analysis to try and quantify the impact of the Township sewer system on residential property values. According to the analysis, homeowners will not see an increase in home value upon connecting to a public system but will realize improved values when lines are installed adjacent to their homes. The report also indicated that connecting to a public system is more cost effective when looking long term.

- Information from the Michigan State University study, which conducted research on 64 river systems in Michigan, the largest watershed study to date. The study provides a basis for evaluating water quality and health implications. It found that the primary driver of fecal bacterial levels was from leaky septic tanks. The more septic systems found in an area the higher the levels of fecal bacteria were detected.

In addition to the reports, experts were invited to the Work Session to help answer any questions the Board may have. These experts included:

- Rich Pierson, Executive Director of the Gull Lake Water and Sewer Authority
- Deb Cardiff, former Director of Kalamazoo County Health and Community Services
- Alan Smaka, P.E., Wightman and Associates

The Board discussed the information provided and a vote was taken regarding moving the ordinance amendment forward to first reading. The vote of five in favor and one against resulted in the ordinance moving forward to first reading, within one Trustee absent.

Proposed Policy/Calendar of Events

In order to move the proposed ordinance forward, many steps are going to be required before the first hook-up takes place. The following information is a general overview of how the Township may handle policy and/or issues that will be required:

December 2015 – First reading of the Ordinance: If first reading can take place in December, this will give staff time to meet with the Township's financial consultant. Determinations on cash flow for the future development of sewer and the timing we will need to employ to ensure financial solvency of the projects can be resolved.

January 2016 – Second reading of Ordinance: While second reading would enact the ordinance, for it to be enforced the Township would need to send notification to the first property owners who would be required to connect. Until the Township Board directs staff to send this notification, no action would be taken.

If the Township Board decides not to move forward with second reading of the proposed ordinance amendments at this time, it will be important to stop the engineering of the 10th Street sanitary sewer extension and pump station project. Continuation of this project only makes sense if mandatory connections are required.

If second reading is approved, the design of the first sewer projects within neighborhoods will begin.

February 2016 – Funding Structure: While the ordinance is in the process of being approved, staff will have continued to work with the financial consultant to develop the best possible funding options for the future development of sewers. As was discussed in previous meetings, road reconstruction will have to take place as part of the development of sewer. Approving an alternative funding source for the road reconstruction will lower the individual homeowner's one-time costs to connect to the sanitary sewer system. Staff will provide options to the Township Board in February on how this might be achieved.

Spring/Early Summer – Road Funding: Based on discussions from the winter, the Township Board will work towards setting up whatever funding mechanism is determined best for paying for road reconstruction.

Early Summer – Property Owner Notice: If all goes according to schedule, staff would send the first notices to property owners in June or July of 2016. These property owners would have until that same time in 2018 to hook up to the sewer system. According to the proposed ordinance amendments, all property owners receive two years from either the time they receive notice from the Township or from when the sewer is available. Notice could be achieved in the following ways:

- As the calendar of projects is determined, notice is provided two years in advance of the construction of the sewer. Property owners would then have to hook-up as the sewer is installed.
- As the calendar of projects is determined, notice is provided one year in advance of construction, allowing property owners approximately one year to hook-up after the sewer is installed.
- Notice is provided after the sewer project is complete, providing a two year time period to hook-up once the sewer has been installed.

Determining which neighborhoods would be the first to receive sanitary sewer involves a number of criteria. The Township Board would consider issues like age of the neighborhood and therefore the likelihood of aging septic systems, the condition of the road, the Township's Master Plan, any citizen requests to be hooked-up to sewer, etc.

June/July 2018 – First Hook-Ups: Based on the time line proposed, the first hook-ups would take place (at the latest) in June or July of 2018. At this time, the Township will need to be ready to handle any financing requests of property owners. Based on past Board discussions, staff recommends financing be either prime plus a quarter percent or the bond rate (if used by the Township) plus a quarter percent. The additional quarter above prime or the bond rate is to help offset the staff costs of managing the financing.

INFORMATION PROVIDED

Staff report from November 10, 2015 Work Session

W.E Upjohn Institute Report – Oshtemo Township Sewer System Impact Analysis

MSU Today Article – Septic Tanks aren't Keeping Poo out of Rivers and Lakes

Bridge Magazine Article – Thousands of Failed Septic Tanks across the State Threaten Michigan's Waters

Maps: Sanitary Sewer System Capital Improvements Plan

2016/2017 Ready – Neighborhood Sewer Extensions

Color Rendering of the Orderly Extension of Public Sanitary Sewer

Occupied Parcels Ready for Sanitary Connection

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

First reading of the Sanitary Sewer Ordinance amendments.

Memo



To: Oshtemo Charter Township Board
From: James Porter, Corporate Counsel
Marc Elliott, P.E., Director of Public Works
Julie Johnston, AICP, Director of Planning
Date: November 10, 2015
Subject: Mandatory Sewer Connections Report

OBJECTIVE

The following report will provide an overview of some of the issues and concerns that have been discussed by the Township Board related to the proposed mandatory sewer connection. The intent is to provide information that might help resolve these concerns to advance an Ordinance amendment to first reading.

BACKGROUND

Groundwater Protection

Septic systems and public sewer systems both have benefits and constraints that support their use in removal of wastewater. There are benefits to septic systems that centralized systems cannot address, like the ability to service more rural areas, allow development where public systems are not financially feasible, and new technologies that are making septic systems more environmentally sustainable. However, there are some disturbing statistics related to septic systems that warrant concern.

According to the Department of Environmental Quality (MDEQ), there are more than 1.3 million on-site wastewater treatment systems in Michigan, most of which are septic for single-family homes. MDEQ estimates that approximately 10 percent of these have failed and are polluting the environment. This failure rate could be even higher as counties that require septic inspection as part of real estate transactions report failure rates at 20 to 25 percent to the MDEQ.¹ The Statewide Failed Sewage System Evaluation Summary Report from 2013 (the last report

¹ Jeff Alexander, "Thousands of Failed Septic Tanks Threaten Michigan Waters," *Bridge*, May 14, 2013

generated), indicates 204 failed residential systems in Kalamazoo County. This is up by 87 residential units from 2011 and it only indicates the failures that were reported.

Failures in septic systems result in significant environmental issues, particularly related to groundwater which is the only source of drinking water in the Kalamazoo area.² Untreated sewage can help spread health issues like dysentery resulting from pathogens in drinking water and can damage the purity of our lakes and streams. In 2015 Michigan State University, through Professor Joan Rose who holds the Homer Nowlin Chair in Water Research, tested 64 rivers in the Lower Peninsula where signs of E.coli were routinely detected. The study indicated that the primary driver of fecal bacterial levels was from leaky septic tanks, the more septic systems in the area the higher levels detected.³ Scientists from the University also found the highest levels of genetic markers indicating human waste in five rivers statewide, one of which was the Kalamazoo River.⁴

Unfortunately, all things are not equal when it comes to septic tanks and public systems in the State of Michigan. MDEQ has rules and guidelines governing on-site wastewater systems, particularly related to construction, permits and inspection during construction. This permitting and review process is relegated to the local health departments. MDEQ indicates that the reviewing agency is to make inspections, as deemed necessary, during the construction of the system. The Kalamazoo County Sanitary Code is managed by the Environmental Health Division of the Health and Community Services Department. They also have language related to permitting, construction and inspections of septic systems during construction. However, neither oversight agency has any requirements for continuing inspections. Both organizations indicate that maintenance is the homeowners' responsibility and both provide guidelines for maintenance, like what is acceptable to be placed in the system. But, with no requirements for continued inspection there are no guarantees.

This is where the difference between on-site septic systems and public systems becomes most apparent from a community governance standpoint. While most homeowners are likely diligent in ensuring their septic system works, total reliance on individual oversight is problematic. With no requirements for continued inspections, systems could be failing without the homeowners' knowledge. In areas of the Township where sanitary sewer systems are available, this concern for groundwater and public health can be negated. Public health and safe groundwater can only be significantly addressed from a larger community standpoint, which is where the Township can play a role. Requiring mandatory hook-ups to the existing and developing sanitary sewer system can support these efforts.

² Environmental Health Division Website, Kalamazoo County

³ Marc P. Verhougstraete, Sherry L. Martin, Anthony D. Kendall, David W. Hyndman, and Joan B. Rose, "Linking Fecal Bacteria in Rivers to Landscape, Geochemical, and Hydrologic Factors and Sources at the Basin Scale," *Proceedings of the National Academy of Sciences* 73 (August 2015, vol. 112, no.33): 10419-10424

⁴ Jeff Alexander, "Thousands of Failed Septic Tanks Threaten Michigan Waters," *Bridge*, May 14, 2013

Public wastewater treatment plants are strictly governed by both state and federal laws. Discharge from public facilities are monitored by MDEQ and permits are required every five years. In addition, the City of Kalamazoo, who runs the facility for Oshtemo's waste, conducts regular testing and must provide the MDEQ annual reports on discharge into the Kalamazoo River. This governmental oversight provides more control than individual septic systems, limiting the discharge of pollutants into the environment. According to the City's website, the Kalamazoo Water Reclamation Plant has a reputation of producing some of the best effluent, or clean water, in the state.

The importance of utilizing public sanitary sewer systems is outlined in Public Health Code for the State of Michigan. Pursuant to Act 368 of the Public Acts of 1978, as amended, a local city, village or township can require an existing structure to connect to available public sanitary sewers. Available public sanitary sewer system means a public system located in a right of way, easement, highway, street, or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a dwelling in which sanitary sewage originates. The Public Health Code states under Section 12752:

"Public sanitary sewer systems are essential to the health, safety and welfare of the people of the state. Septic tank disposal systems are subject to failure due to soil conditions and other reasons. Failure or potential failure of a septic tank disposal system poses a threat to the public health, safety and welfare; presents a potential for ill health, transmission of disease, mortality and economic blight; and constitutes a threat to the quality of surface and subsurface waters in the state. The connection to available public sanitary sewer systems at the earliest, reasonable date is a matter for the protection of the public health, safety and welfare and necessary in the public interest which is declared as a matter of legislative determination."

Property Values

Residential property values are determined by a number of factors like location of the neighborhood, external characteristics or "curb appeal," internal characteristics like number of bedrooms, and supply and demand. According to Investopedia, an investing education internet site, property values are also determined by future governmental development in an area. Plans for schools, hospitals, roads, and other public infrastructure will have as much influence on land values as present and future development of commercial amenities.⁵ Based on this evaluation, property values in the Township should be influenced by the availability of public sanitary sewer.

To answer this question, W.E. Upjohn Institute (Institute) conducted a statistical analysis to try and quantify the impact of the Township sewer system on residential property values. The Institute sorted the parcel data into those connected to public sewer and those still on septic.

⁵ Robert Stammers, *Top 4 Things that Determines a Home's Value*, Investopedia, <http://www.investopedia.com/articles/mortgages-real-estate/08/housing-appreciation.asp#ixzz3q4DITIZJ>

They then grouped the parcels by acreage, house size and number of bedrooms. Groups of like parcels were then compared based on their connection to sewers. Essentially, like houses were compared with the only variable being whether the house was connected to the Township sewer.

A regression analysis was then conducted holding all variables constant while looking for a difference in property values between those that are connected and those that are still on septic. The results were quite interesting. A link between property values and being connected to the public sewer system was not found. However, there was a statistical significance between having access to public sewer and property values. A home where sewer is available is more valuable than a home where sewer is not located. According to the Institutes analysis, homeowners will not see an increase in home value upon connecting to a public system but will realize improved values when lines are installed adjacent to their homes.

Essentially, homes that have access to the public system but do not connect are reaping the benefits of that system, increased property values, without paying their fair share of the cost to support the system. An analogy could be made between public sewers and other public "systems" that the Township provides. Fire protection, for example, is paid for by a millage that is assessed to all property owners. An individual owner may never require access to fire protection but the importance of providing that public benefit is necessary to both the individual and the community as a whole and therefore everyone pays their fair share of the costs.

Cost Competitive

The proposal before the Board is to require connection to public sanitary sewer only when a septic system is 15 years or older. The W. E. Upjohn report highlights the fact that this is the optimum time to connect to public sanitary sewer. The report states that the cost to replace a septic system and the cost to connect are roughly the same – approximately \$10,000. It is important to note that the report dealt with replacing an old septic system not placing one on undeveloped land. Avoiding the second septic system versus the cost of public sanitary sewer over the next 15 to 20 years is practically a wash. The cost to install and maintain a septic system for 40 years is roughly \$26,327.33. The cost to connect and maintain the public sanitary sewer over that same time period is roughly \$27,577.78. The costs at this point are roughly even because septic systems typically have to be repaired or totally replaced after 15 or 20 years.

If the Township intervenes in the process after the septic system has reached 15 years of age, the homeowner has generally utilized the full benefit of that system. If they are then placed on public sanitary sewer, in 15 to 20 years the cost between the two systems will be virtually identical because the sanitary septic system will no longer need to be repaired or replaced. Even adding the additional cost of filling or crushing the septic tank can often be offset by not losing valuable landscaping. The competitiveness of cost coupled with the Township's installment payment mortgage agreement, which allows for a 15-year payoff for the installation of public

sanitary sewer, makes the cost of public sanitary sewer very viable. Moving past the 40 year time period, the cost effectiveness of sanitary sewer only increases.

On average, connecting to the public sanitary sewer system will cost approximately \$10,000 per household. There are several ways this costs can be managed. The table below outlines the different methods of paying for the hook-up, the average cost per year and the total cost to the homeowner:

Payment Method	Terms	Interest Rate	Cost Per Year	Total Cost
Cash to Township	0 Years	0%	\$10,000 (year one only)	\$10,000
State Assistance for Low-Income 65 and Older and the Disabled	At the sale of the home	0%	\$0	\$10,000
Home Equity Loan	15-Years	3.63%	\$864	\$12,983
Home Equity Loan	30-Years	4.04%	\$576	\$17,270
Township Financing	15-Years	5.63%	\$984	\$14,832

*Interest rates from BankRate.com on Tuesday, November 3, 2015

As can be seen, the most inexpensive route to the homeowner, outside of paying cash, is a home equity loan with a 15-year term. However, if the property owner is unable to access a private home equity loan, the Townships financial terms are not much more expensive overall. There is a \$1,849 difference in final costs between these two financing methods.

Overall Community Service

The introduction to Oshtemo's Master Plan (following a purpose statement relating to zoning (pg 9)) identifies that an important function of the Master Plan is to "...guide developers and potential homeowners in making investment decisions." This is followed by "...provides guidance and coordination in the provision of public services." The first identifies a dependency of private investors, to obligations of the Community. The second identifies the proactive means to fulfill this obligation through the provision of public services. The Board has propelled its "guidance and coordination" role forward through its adoption of a detailed Capital Improvements Plan.

The current challenge becomes not one of direction, guidance or coordination, but commitment. The CIP is currently silent with respect to certain financing needs—particularly as it relates to sanitary sewer. Current and previous Boards adopted a fee-based strategy that is designed to

largely pay for the costs of installed public infrastructure. Unfortunately, the current policy has a fatal flaw due to the timing mismatch of the cost-of-project (immediate) versus the connection-based revenues (delayed).

For the most part, the extension of sanitary sewer interceptors into the undeveloped fringe has proceeded forward. This has facilitated the orderly growth of the community. Private investors often recognize the increased value which utility extensions bring, and are therefore willing to wait on the service extensions, or are willing to participate directly in the cost of the service extensions. Prominent examples include the 9th St roadway and public sewer extension which was financed by Meijer, and the many private developments which have extended public utilities internally at private cost.

Unfortunately, the financial mismatch of the current strategy appears insurmountable when applied to long-term public sewer infrastructure investments to extend sewer service into existing neighborhoods. We have heard that developed neighborhoods are arguably the area of greatest need. Large, relatively dense populations on septic systems continue to generate increasing volumes of domestic wastewater that threaten our critical groundwater resources. Equally important is the need to respect the private investment decisions already made. Arguably, the Township is failing its obligation to help preserve these private investments when it fails to provide utility services, and allows roadways to decline. A review of the pavement ratings of local roads identifies (by policy) a direct and continual degradation of roads in unserved areas. This is because the reconstruction of road pavements where sanitary sewer is needed is contrary to current policy.

There is an identified “free-rider” effect for property owners that have access to sewer service, but are not connected. Without connecting, there is no benefit to the Community as septic wastewater continues to be discharged to groundwater, regardless of the community's public sewer investment. In the converse, we learned in 2011 that 33 percent of the Whitegate neighborhood is on their third septic system. While there is no “free rider” effect in this neighborhood, the owners continue to face a major, individualized risk. If their septic fails, they have no alternative to paying the cost of a septic system re-build. They lack a fallback (i.e. the “insurance” of an available public sewer) should their septic system fail. This risk-reduction may partially contribute to the free-rider effect that the Institute’s analysis discovered.

As noted earlier, there is no effective monitoring to assure the septic system is functional. This will continue indefinitely without some measure to assure eventual capture of the sanitary wastewater and capture of the public investment through the collection of connection fees. The Board's Capital Improvements Committee (CIC) identified this problem several years earlier. The CIC had recommended in advance of the CIP Plan that the Board adopt a mandatory connection policy.

More recently, the CIC has begun to review the basis of the current sanitary sewer connection fees. As noted, fees are designed to capture the costs of a generic sanitary sewer project within an existing subdivision. The complete project necessarily includes the reconstruction of the plat road. Both are to the benefit of the abutting property owners, and the collected fees are intended to recover these costs. The portion of work attributable to the roadway reconstruction is estimated to entail approximately 30% of the total project cost.

The CIC is also tasked to consider roadway capital projects. The current policy is focused upon regular maintenance (via chip-seals) to preserve existing pavements. Oshtemo has one of the highest average local road ratings within Kalamazoo County. When chip seals or hot-mix asphalt wedging is no longer viable, the roadway must be milled and overlaid, or reconstructed. By policy, 50 percent of this project cost is collected through a roadway special assessment. The CIC is beginning to see that once this inflection point is crossed (where a Special Assessment is required), there is great reluctance and controversy among property owner to pay such a large cost. The CIC committee has been examining other Townships (Alamo, Climax, Kalamazoo and Texas) that have adopted roadway funding by special millage or a special assessment as a supplemental funding source. More importantly for this discussion, should an alternative funding source become available for pavement reconstruction, the CIC believes a potential 30 percent cost reduction of the Township's sewer connection fee could be derived.

In summary, community volunteers, professional staff, and joint meetings of the Township Boards, have all helped guide the current CIC Plan. Challenges remain in moving the plan forward, including financial limitations. The CIC has identified that a policy of mandatory connections for utilities, plus the potential to combine utility fee reductions with new/alternate roadway funding may be one way forward for the Board to consider.

INFORMATION PROVIDED

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STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

Consider the proposed Ordinance amendment and submit it for first reading.

10-29-15

Oshtemo Township Sewer System Impact Analysis

The staff of the W.E. Upjohn Institute (Institute) examined several factors and used statistical analysis in an attempt to quantify the impact of the Oshtemo Township (Township) sewer system on residential property values. Institute used parcel data supplied by the Township as the primary data and parcel data supplied by the City of Portage as supporting data.

Methodology and Results

1. Using the parcel data supplied by the Township, Institute sorted the parcels into two main groups, those connected to the sewer system and those not connected to the sewer system.
2. Institute then used statistical software to sort the parcels into like groups based on the attributes of the parcel. Institute grouped the parcels based on acreage, size of the home on the parcel (square footage), and the number of bedrooms in the home on the parcel.
3. The groups of like parcels were then compared based on their connection to sewer status. For example, a set of three bedroom, ~2,000 square foot homes that each reside on approximately half an acre of land and are connected to the sewer system were compared to a set of three bedroom, ~2,000 square foot homes that each reside on approximately half an acre of land and are not connected to the sewer system.
4. Institute performed a regression analysis on the sorted data. The analysis held the attributes of the parcels constant while looking for a change in assessed value when comparing the parcels with homes connected to the sewer system to those not connected to the sewer system.
5. The analysis revealed that parcel with homes connected to the sewer system were no more or less valuable than those not hooked into the sewer system.
6. To verify the results, Institute performed a similar analysis on each of the parcel attributes (acreage, home size, and number of bedrooms). Predictably, an increase in each of the attributes resulted in a statistically significant increase in assessed value; e.g. an increase in the number of bedrooms while holding the square footage and acreage constant resulted in an increase in SEV. Increases in acreage and home size also had a predictable and statistically significant increase.

7. Since the results were inconclusive in demonstrating an impact of sewer connection on assessed value, Institute examined another variable. Institute used geographic information system software (GIS) and data provided by the Township to determine the parcels that have access to the sewer system regardless of connection status. Institute then assigned each parcel an attribute that demonstrated access, or lack of access to the sewer system.
8. A regression analysis was performed on the parcel data using access to the sewer system as the variable in place of sewer connection status; other parcel attributes were once again held constant.
9. The results demonstrated a statistically significant difference in assessed value between parcels with sewer access and those without sewer access across all property classes. This means that the data demonstrated a strong connection between access to sewer and increases in parcel values. Institute found that this connection diminishes when looking at individual property classes; additional information would help to pinpoint the reasons for this outcome. In general and across all property classes, parcels are more valuable when they have access to sewer.

Analysis

The data revealed that a link between sewer connection status and assessed value does not exist; a home that is connected to the sewer system is no more or less valuable than a comparable home not connected to the sewer system. Conversely, the data revealed a link between access to the sewer system and assessed value; a home that is located adjacent to sewer lines is more valuable than one that is not located adjacent to sewer lines. According to the data, homeowners will not see an increase in home value upon connecting to the sewer system but will realize an increase when sewer lines are installed adjacent to their homes. There are many possible explanations for these results; unfortunately, the limited nature of the available data does not allow for further examination. Direct surveys of homeowners who have, and have not, connected to the sewer system as well as interviews with local appraisers could help in developing meaning explanations for the differences in value.

Long Term Costs

There are long term costs associated with disposal of waste, regardless of the system that a homeowner chooses to employ. Use of a septic system typically is associated with infrequent major expenses, whereas use of a municipal sewer system typically bears frequent minor expenses. Many homeowners in Oshtemo Township have access to the municipal sewer system

but continue to use their own personal septic system. Many homeowners choose continued use of their septic system because of the major up from costs associated with hooking into the municipal system.

The long terms costs associated with ownership and maintenance of a septic system are fairly comparable to those associated with connecting to the municipal sewer system and the related user fees. The costs depart when examined at different points in time. The costs associated with each system of waste management have high front end expenses and lower annual expenses. The cost to replace a septic system and the cost to connect to the sewer system are near \$10,000; the cost to maintain and pump a septic system and the quarterly sewer user fees are around or less than \$200 per year.

Septic systems need routine (typically bi-annual) service. This service is estimated at \$220 per occurrence; or an annual cost of \$110. On average, and with proper maintenance, a septic system typically last around 20 years. A septic system can have various levels of usefulness and years of service remaining; this analysis examines the fiscal impact of decisions made at the point of septic failure. The cost of replacement was gleaned from the Township Sanitary Sewer Strategy Study and verified through cursory research.

In the analysis, the Institute assumes that the Township will delay much of the individual up-front costs associated with connecting to the municipal sewer system through debt financing. The annual percentage rate charged to the homeowner assumed in this analysis was 3%. This rate is not indicative of the rate given to resident through the Township, this rate is more indicative of favorable private home refinance rates or home equity lines of credit; exact rates will vary based on a number of conditions. The annual payments were calculated using a 15-year, 20-year, and 30-year term. Annual payments for the 15-year, 20-year, and 30-year debt service are \$980.60, \$798.62, and 607.11 respectively.

The estimated annual user fee was calculated using actual user fees collected over the past 12 months. The Institute collected actual user fees for randomly selected homes in the township; nine samples were taken, three each from four bedroom, three bedroom, and two bedroom houses. The results of the samples were then weighted to account for the relative share of each type of house that is connected to sewer in the Township. The average quarterly user fee is \$50.50; an annual expense of \$202.01.

Institute calculated the long-term costs associated with sewage disposal using the payment amount, cost to replace a septic system, and estimated annual expenses (applying a 2% annual inflation rate to annual expenses). Over the course of 20 years, the cost to own and maintain a septic system is \$10,622 (again, this assumes system replacement in year one), whereas the costs to connect to sewer are \$20,284 (15-year), \$21,381 (20-year), or \$17,551 (30-year). The 40-year costs associated with septic system ownership were \$26,327 (this total assumes two

septic replacements); the 40-year costs to connect to sewer are \$27,578 (15-year), \$28,674 (20-year), or \$30,915 (30-year). The cost to own and maintain a septic system is slightly lower than those associated with connecting to the sewer system over 20 and 40 years. Over the course of 60 years, connecting to a sewer system is substantially less expensive. The cost to own and maintain a septic system for 60 years is \$49,664. The cost to connect to the sewer system is \$38,416 (15-year), \$39,512 (20-year), or \$41,753 (30-year). See Table 1 for more detail.

The net present values of the four scenarios were calculated. Net present value (NPV) calculates the current value or cost of income streams or a series of costs using a discount rate. In this analysis, NPV was used to calculate the value (in today's dollars) of costs incurred in the future. NPV will favor delayed costs over higher early expenses because the funds used to pay the higher early expenses could be invested elsewhere at an assumed rate (discount rate). A relatively conservative eight percent (8%) discount rate (as a comparison, the most recent 20-year average of the S&P 500 Index was 9.63%) was used in this analysis. The NPV of maintaining a septic system over 20 years was \$-8,633.77; this means the expenses of owning the septic system over 20 years is equal to paying \$8,633.77 today. Even though the total expenses over 20 years are \$10,622 the NPV is \$-8,633.77, this is due to the fact that many of the expenses are incurred in the future and therefore discounted. The 20-year NPV calculations for connecting to the sewer system are as follows: \$-11,304.46 (15-year), \$-10,597.40 (20-year), \$-8,717.12 (30-year). The 30-year payback for a sewer connection is competitive with owning a septic over the course of 20 years; neither the 15-year nor the 20-year payback schedules are competitive with owning a septic over the course of 20 years. See Tables 1 and 2 for comparisons over 20, 40, and 60 years.

Table 1

	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr Total	\$ (10,622.46)	\$ (20,284.29)	\$ (21,380.72)	\$ (17,550.51)
40 Yr Total	\$ (26,327.33)	\$ (27,577.78)	\$ (28,674.22)	\$ (30,915.10)
60 Yr Total	\$ (49,663.94)	\$ (38,415.53)	\$ (39,511.96)	\$ (41,752.85)

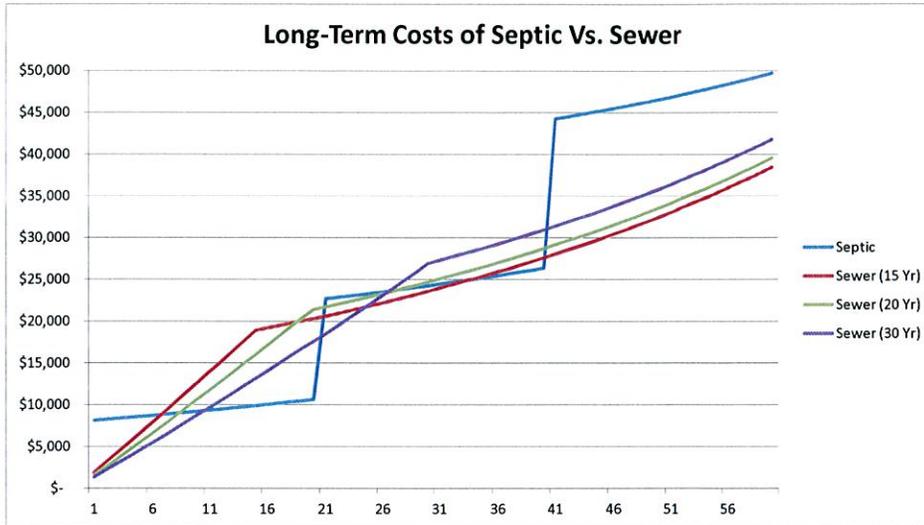
Table 2

	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr NPV	\$ (8,633.77)	\$ (11,304.46)	\$ (10,597.40)	\$ (8,717.12)
40 Yr NPV	\$ (11,377.99)	\$ (12,035.64)	\$ (11,328.57)	\$ (10,322.31)
60 Yr NPV	\$ (12,252.87)	\$ (12,268.74)	\$ (11,561.68)	\$ (10,555.41)

As you can see in Tables 1 and 2 sewer is more competitive over a longer period of time. Unfortunately, many, if not most, homeowners will not make decisions based on their financial impact over the course of 40 or 60 years. What Table 1 does not show is the competitiveness of sewer over the course of the first seven years, see Chart 1. Sewer is very competitive with septic ownership at the point of septic system failure and for about seven years after the point of failure. At the time of septic failure, sewer connection, with a delayed cost model, may seem

attractive to a homeowner who may not have large cash reserves to cover the high up-front cost of septic replacement.

Chart 1



A Second Scenario

The Township could help to offset some of the costs associated with connecting to the sewer system by installing sewer leads when roads are reconstructed. About 30% of the cost to connect to the sewer system is realized in the demolition and reconstruction of the road above the connecting pipes. The Township is contemplating a policy that call for the installation of sewer leads to each parcel when a road is reconstructed and sewer mains installed. This would significantly reduce the cost of connecting individual parcels to the sewer system. The Township would need to realize the additional costs of installing the sewer leads through some other mechanism. Nonetheless, the following calculations in tables 3 and 4 are based on the reduced individual expense. The same methodology was uses as before, only the cost to connect to sewer was changed.

Table 3

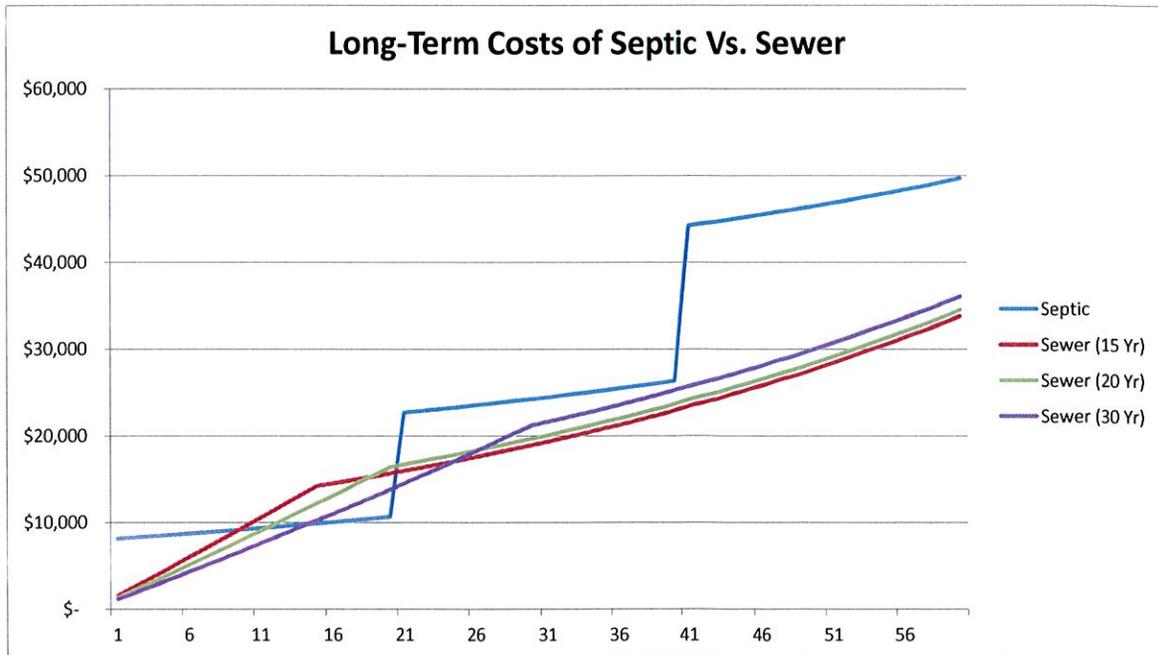
	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr Total	\$ (10,622.46)	\$ (15,622.86)	\$ (16,389.34)	\$ (13,756.07)
40 Yr Total	\$ (26,327.33)	\$ (22,916.35)	\$ (23,682.84)	\$ (25,223.44)
60 Yr Total	\$ (49,663.94)	\$ (33,754.10)	\$ (34,520.58)	\$ (36,061.19)

Table 4

	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr NPV	\$ (8,633.77)	\$ (8,644.51)	\$ (8,147.09)	\$ (6,854.40)
40 Yr NPV	\$ (11,377.99)	\$ (9,375.68)	\$ (8,878.27)	\$ (8,186.46)
60 Yr NPV	\$ (12,252.87)	\$ (9,608.78)	\$ (9,111.37)	\$ (8,419.56)

As you can see in tables 3 and 4, the cost to connect to sewer is much more competitive both in terms of actual costs and in net present value. It is still more economical, in actual costs, over the course of 20 years to reinstall a septic tank; over the course of roughly 8-13 years or longer than 20 years it is more economical to connect to the sewer system. See chart 2 below for a graphic representation.

Chart 2





Agenda Item #6 - Attachment 3

ENVIRONMENT + HEALTH + SCIENCE & TECHNOLOGY

Published: Aug. 3, 2015

SEPTIC TANKS AREN'T **KEEPING POO OUT OF RIVERS AND LAKES**

Contact(s): [Mackenzie Kastl](#), [Joan Rose](#)

The notion that septic tanks prevent fecal bacteria from seeping into rivers and lakes simply doesn't hold water, says a new Michigan State University study.

Water expert [Joan Rose](#) and her team of water detectives have discovered freshwater contamination stemming from septic systems. Appearing in the [Proceedings of the National Academy of Sciences](#), the study is the largest watershed study of its kind to date, and provides a basis for evaluating water quality and health implications and the impact of septic systems on watersheds.

"All along, we have presumed that on-site wastewater disposal systems, such as septic tanks, were working," said Rose, Homer Nowlin Endowed Chair in Water Research. "But in this study, sample after sample, bacterial concentrations were highest where there were higher numbers of septic systems in the watershed area."

Until now, it was assumed that the soil could filter human sewage, and that it works as a natural treatment system. Discharge-to-soil methods, a simple hole dug in the ground under an outhouse, for example, have been used for many years. Unfortunately, these systems do not keep E. coli and other pathogens from water supplies, Rose said.

"For years we have been seeing the effects of fecal pollution, but we haven't known where it is coming from," she said. "Pollution sources scattered in an area – called non-point – have historically been a significant challenge in managing water quality."

The researchers used source-tracking markers, a novel method Rose calls "CSI (Crime Scene Investigation) for water," to sample 64 river systems in Michigan for E. coli and the human fecal bacteria B-theta. Advances in source-tracking allow water scientists to track down the origin of non-point pollution more accurately than ever before.

Michigan, Florida and South Carolina, as well as resort areas near lakes all across the United States, rely heavily on septic tanks for human sewage. Though each state regulates septic tanks differently, more needs to be done in order to ensure humans are not contaminating surface waters by using septic tanks.

Continuing to use long-trusted methods of waste disposal systems may come at a hefty price, added Rose. The Environmental Protection Agency's latest [survey for capitol improvement](#) identifies the need to invest \$298 billion over the next 20 years on wastewater and stormwater infrastructure to meet the Clean Water Act public safety goals of swimmable and fishable waters.

"This study has important implications on the understanding of relationships between land use, water quality and human health as we go forward," she said. "Better methods will improve management decisions for locating, constructing and maintaining on-site wastewater treatment systems. It's financially imperative that we get it right."

This research was supported by grants from National Oceanic and Atmospheric Administration (Tipping Points Great Lakes Environmental Research Lab) and EPA (112013 and 118539). Contributing scientists were Marc Verhoughstraete, College of Public Health, University of Arizona; Sherry Martin, Anthony Kendall and David Hyndman, Department of Geological Sciences, MSU.

SEPTIC TANKS IN THE U.S.

- 30% of households in the U.S. have septic tanks
- 7% of the households in larger communities (urban, suburban) use septic tanks
- 77 million people live in small communities
- Other states with large numbers of small community housing units using outhouses/privies are:
 - Kentucky (55,764)
 - Pennsylvania (47,902)
 - Missouri (46,223)
 - North Carolina (45,461)
- The American Society of Civil Engineering has given our wastewater infrastructure a grade D
- There are more than 100 different pathogens found in sewage
- The human risks from exposure to human sewage include: diarrhea, chronic fatigue and viral meningitis

SOURCES: AMERICAN SOCIETY OF CIVIL ENGINEERING 2013 REPORT CARD FOR AMERICA'S INFRASTRUCTURE, U.S. CENSUS DATA



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Thousands of failed septic tanks across the state threaten Michigan's waters

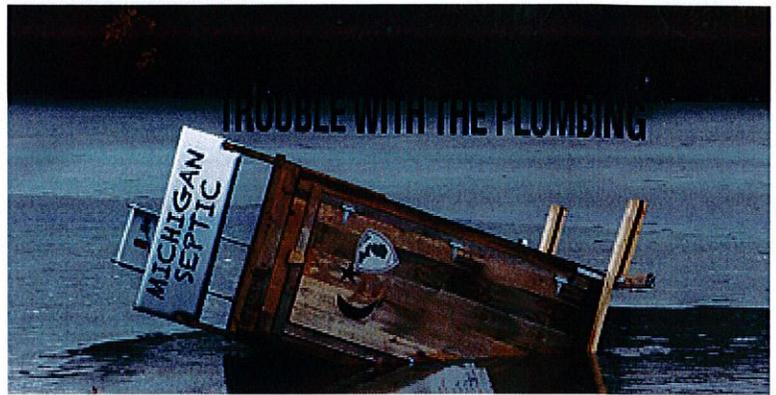
Jeff Alexander | Bridge Magazine By Jeff Alexander | Bridge Magazine

on May 14, 2013 at 9:11 AM, updated May 14, 2013 at 9:13 AM

Public health sanitarian Regina Young wasn't sure what her staff would encounter when the Barry-Eaton District Health Department clamped down on failed septic systems in 2007.

They quickly discovered more problems than anyone anticipated in just those two largely rural counties, said Young, supervisor of the Barry-Eaton District Health Department's Water Protection Team.

In the first six years of the program, Young's staff discovered nearly 1,000 failed septic systems and 300 houses *with no septic systems whatsoever*. In those cases, household sewage was piped into the nearest farm drain, lake or stream.



IT WENT WHERE?: More than 100,000 septic systems are estimated to be malfunctioning and polluting the surrounding environment. (Bridge photo illustration/A.J. Jones)

"The ways that people come up with to get rid of their sewage just blows your mind," Young said. "It's hard to think of a worst case example ... there were so many."

By catching and correcting failed septic systems and illicit sewage discharges over the past six years, Young said health officials kept 107 million gallons of raw sewage from reaching surface waters and groundwater in the two counties between Lansing and Holland.

Problems Extend Statewide

There are about 1.3 million on-site wastewater treatment systems in Michigan, most of which are septic systems for single-family homes. State officials estimate that 10 percent of those (130,000) have failed and are polluting the environment.

But the problem may be far worse. Several counties that require septic tank inspections during real estate transactions have reported a septic system failure rate of 20 percent to 25 percent, according to a Michigan Department of Environmental Quality report.



News and Analysis from
The Center for Michigan

Related: Michigan has nation's weakest regulations on septic systems

Failed septic systems are a concern because human sewage is loaded with pathogens that can threaten the health of people who swim in polluted waters or drink contaminated well water. Several experts interviewed by Bridge said water pollution from failed septic systems is a serious, but under-appreciated, problem across Michigan.

"It's affecting our groundwater and surface waters," said Joan Rose, a water quality expert who holds the Homer Nowlin Chair in Water Research at Michigan State University.

"We've tested rivers in the Lower Peninsula during low flow conditions (when most of the river water is groundwater, not runoff from the landscape) and we can detect signs of septic tank waste," Rose said. "The more sewage tanks that are in the area, the higher the human sewage markers in the water."

Among the rivers studied, MSU scientists found the highest levels of genetic markers, indicating the presence of human fecal matter, in the South Branch of the Black River in Southwest Michigan, Bear Creek, the Kalamazoo River, the Huron River and the Pere Marquette. Rose said there was no doubt that the fecal matter in those rivers came from leaky septic systems.

Human Waste has to Go Somewhere

Each day, Michigan residents discharge about 264 million gallons of wastewater into septic systems and other on-site treatment facilities. About 10 percent of that wastewater is piped into failed on-site treatment systems, according to state data.

Over the course of a year, that amounts to 9.4 billion gallons of untreated wastewater flowing into failed treatment systems, DEQ estimates.

FAILURE TO DISPOSE

Nearly 4,500 residential septic failures were reported to local Michigan health departments in 2011, the most recent statistics available. Suburban Oakland County alone accounted for nearly 1 of every 10 reported failures.



LOCATION	SINGLE FAMILY	TWO-FAMILY
Allegan	43	1
Barry-Eaton	132	1
Bay	27	0
Benzie-Leelanau	49	0
Berrien	145	3
Branch-Hillsdale-SJ	153	1
Calhoun	172	1
Central Mich.	430	4
Chippewa	27	0
Delta-Menominee	8	0
Dickinson-Iron	25	0
District # 2	43	1
District # 4	2	2
District #10	324	1
Genesee	75	0
Grand Traverse	63	0
Huron	49	0
Ingham	65	0
Ionia	36	0
Jackson	48	0
Kalamazoo	116	1
Kenil	227	2
Lapeer	49	0
Lenawee	22	1
Livingston	70	1
LMAS	66	0
Macomb	185	1
Marquette	22	0
Mid - Michigan	144	0
Midland	105	0
Monroe	53	0
Muskegon	119	0
Northwest Mich	207	0
Oakland	407	3
Ottawa	228	2
Saginaw	61	1
Sanilac	44	0
Shiawassee	87	16
St. Clair	91	0
Tuscola	31	0
VanBuren-Cass	90	0
Washtenaw	4	1
Wayne	12	0
Western UP	53	0
Total --	4,452	

*For map of multi-county health departments, go to <http://www.michigan.gov/mdeh/0,1607,7-132--96747--00.html> Source: Michigan Department of Environmental Quality

[View full size](#)

Some of that raw sewage — no one knows how much — ends up in lakes, streams and underground aquifers that supply drinking water wells.

Septic systems and other on-site wastewater treatment systems for homes and businesses work well when properly installed and maintained. The problem is that many homeowners fail to maintain septic systems because it's not required.

Michigan is the only state without a statewide code governing how septic systems are designed, installed and maintained. County health departments regulate where septic tanks can be installed, but just 11 of Michigan's 83 counties have programs that identify failed septic systems and force repairs.

The result is a patchwork of regulations and scores of failed septic systems that go undetected, said Richard A. Falardeau, chief of DEQ's environmental health section.

Septics Go Suburban

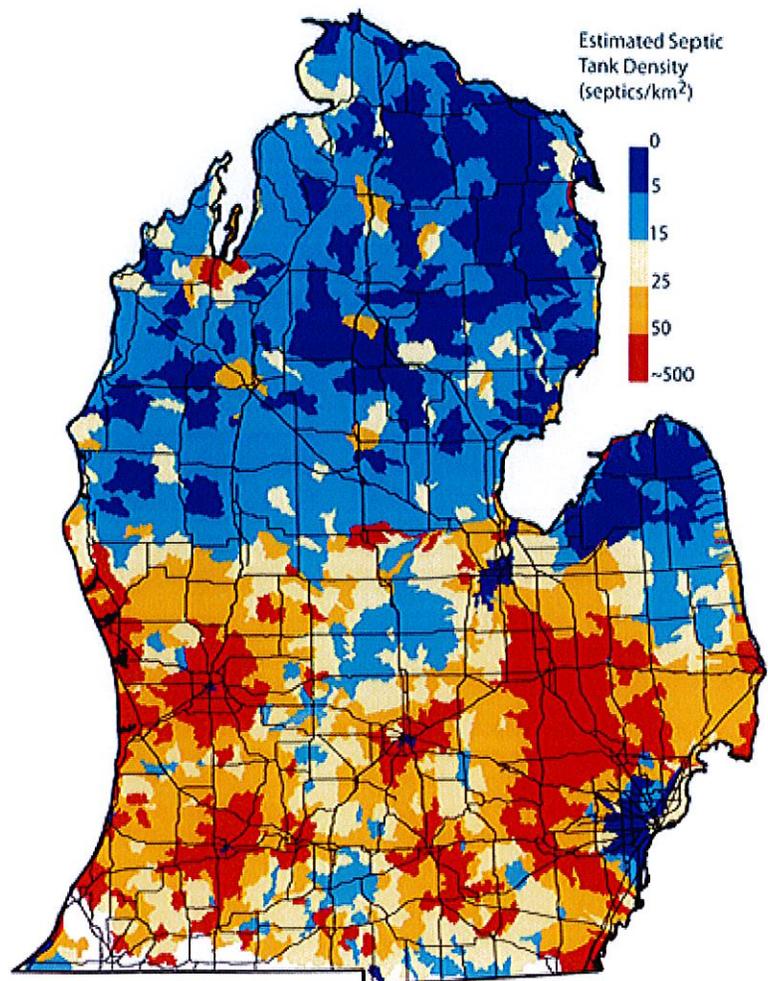
Septic systems were originally designed for rural areas, where homes often were too far away to connect to a centralized, municipal wastewater treatment system. Now the devices are a popular method of sewage disposal in many suburban communities.

The growth of suburbs over the past 50 years did more than transform the landscape: Urban sprawl also fueled a dramatic increase in the number of septic systems.

In 1990, 28 percent of single-family homes in Michigan were connected to septic systems, according to state data. By 2004, 50 percent of all new homes were using septic systems to handle household wastewater.

Local health departments issue more than 30,000 permits each year for new and replacement septic systems in Michigan.

"Back in the day we had dense communities and farms were the only places that had septic tanks. Along come interstates and urban



View full size

Michigan's million-plus septic systems are concentrated in suburban areas, according to this color-coded map from Michigan State University.

sprawl and now you have septic systems being used in a completely different manner than they were born into," said Jim Hegarty, a civil engineer and expert on wastewater treatment systems.

Nationally, 26 million homes and 60 million people use septic tanks or other on-site sewage treatment systems. The majority of those devices work as designed, but many states have reported septic system failure rates that rival Michigan's.

One of the worst cases of a failed septic system contaminating well water occurred in Door County, Wis., in 2007. More than 200 customers at a restaurant and six employees suffered intestinal ailments after drinking contaminated water.

Septics vs. Sewers

Larry Stephens, an engineer and president of the Michigan On-site Wastewater Recycling Association, said septic systems and other on-site wastewater treatment systems get a bum rap. He said small, decentralized treatment systems are more environmentally friendly than large municipal wastewater treatment facilities that serve entire communities.

"A properly maintained on-site treatment system is more sustainable than the centralized treatment systems," said Stephens, whose consulting firm oversees construction of on-site systems.

He said municipal sewer systems dump more untreated sewage into lakes and rivers than all the septic systems in Michigan combined. State data support his claim.

According to DEQ data, Michigan's municipal wastewater treatment facilities discharged 7.8 billion gallons of raw sewage and another 21.6 billion gallons of partially treated sewage into lakes and rivers in 2011. Most of those discharges occurred in Detroit and other cities where heavy rainfall overwhelmed combined sewer systems that treat both wastewater and stormwater. (See additional coverage on this at Bridge on May 16.)

"Wastewater treatment plants are supposed to fix their combined sewer overflows, but anytime untreated sewage enters the environment it is a risk," Rose said. "Septic tanks are a known risk contributing viruses to groundwater and surface water. They have been linked to (disease) outbreaks ... so we cannot ignore this."

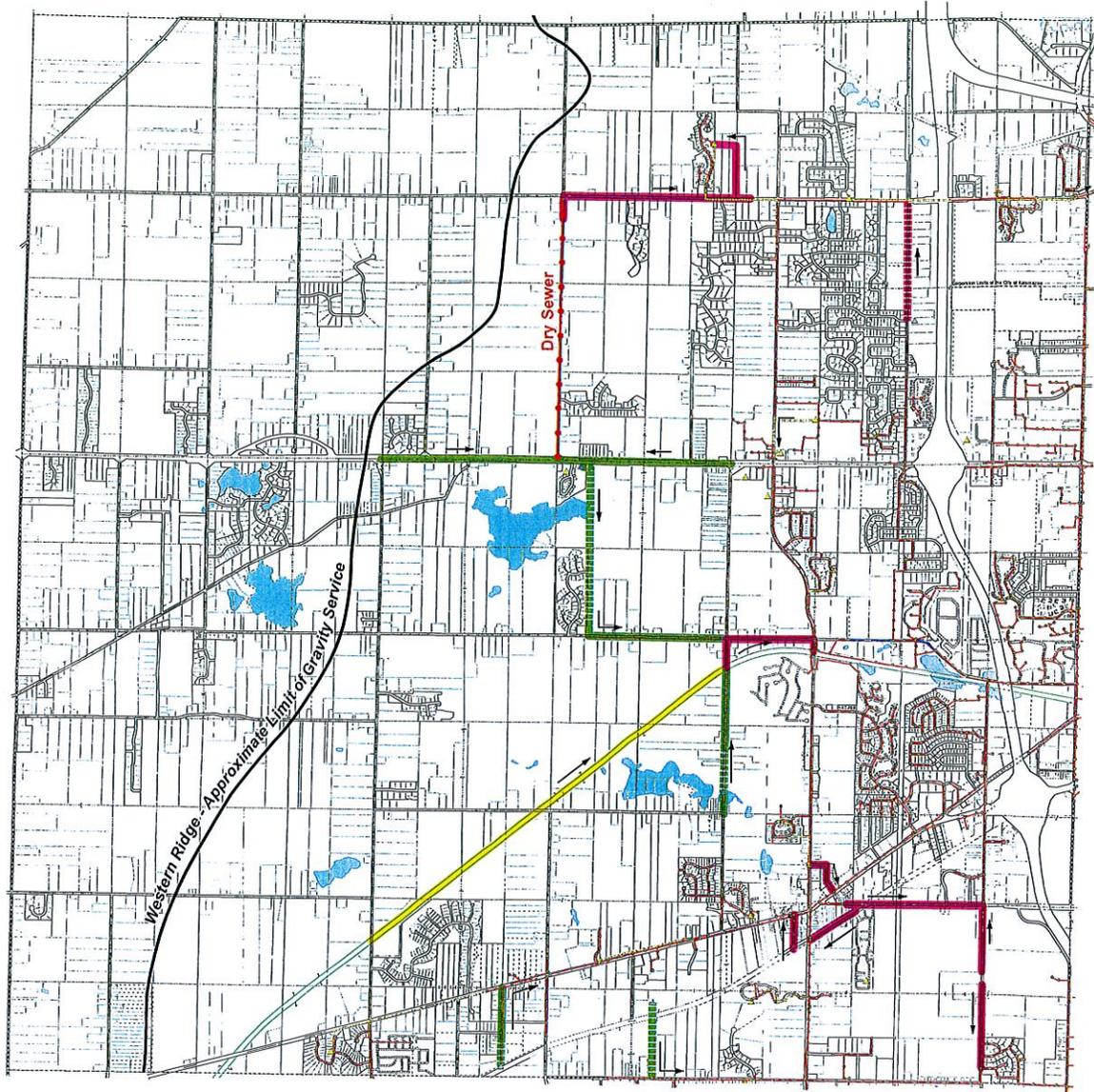
*Jeff Alexander is owner of J. Alexander Communications LLC and the author of "Pandora's Locks: The Opening of the Great Lakes - St. Lawrence Seaway." A former staff writer for the Muskegon Chronicle, Alexander writes a **blog on the Great Lakes.***

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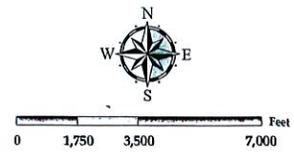
Charter Township of Oshtemo
 Kalamazoo County, Michigan

**Sanitary Sewer System Capital
 Improvements Plan**



Legend

	Planned Sanitary Pump Station		Planned Sanitary Extensions
	Sanitary Pump Station		2011-20 : Force Main
	Sanitary Manhole		2011-20 : Main
	Sanitary Sewer Line		2021-30 : Force Main
	Sanitary Force Main		2021-30 : Main
	Dry Sewer		2031-40 : Force Main
			2031-40 : Main



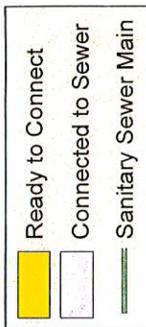
Created: June, 2003
 # Revision: June, 2006
 # Revision: March, 2009
 # Revision: April, 2010

Disclaimer: Illustrated sanitary sewer improvements represent known service extension challenges. The fruition of any specific service concept, project scope, or timeframe is not to be relied upon.

Prein&Newhof
 Phone: 269-372-1158
 2060329

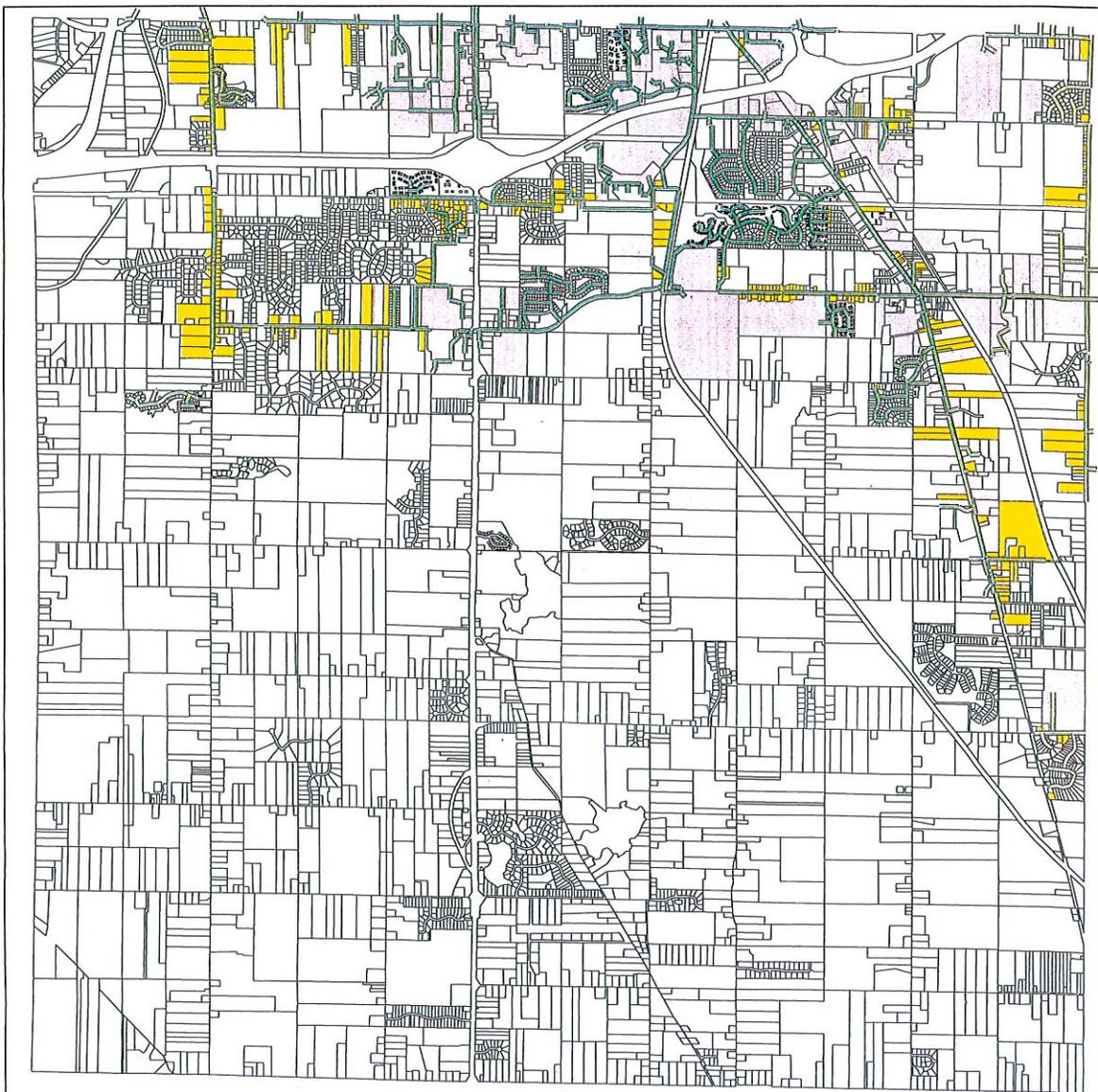
COORDINATE SYSTEM: State Plane 1883 - MI South
 FILE: J:\GIS_Client\GIS\2006-06-01\Proj\Sanitary\capimprovements\PlanMap_2006-06_11x17_P.mxd

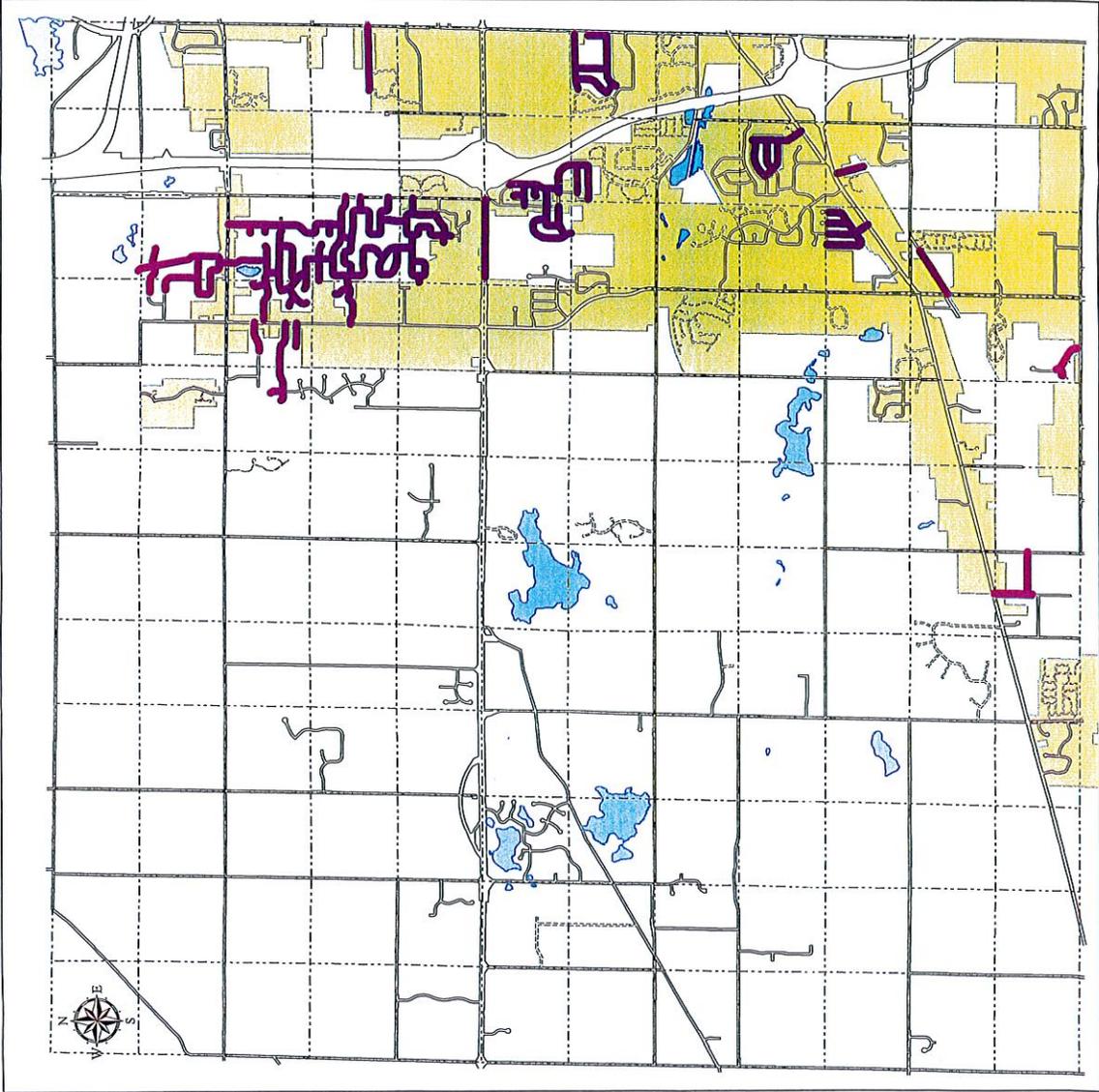
300 +/- Occupied Parcels Ready For Sanitary Connection Oshtemo TWP



Date: 11/4/2015

This map is for reference purposes only. While it is intended to be an accurate graphic representation, its accuracy cannot be guaranteed. Any conclusions or information derived from this map are at the users sole risk.





Atlantic	450,000
Beech Street	400,000
Breckenridge East	180,000
Country Club East	700,000
Country Club South	720,000
Country Club West	760,000
Country Trail and West Pine	720,000
Fairlane	775,800
Frie & Gibbs	500,000
Meadowbrook	1,060,000
Plainview	170,000
Sky Ridge	1,413,200
Twelve Oaks	270,000
West Main Focus (south)	490,000
West Port Trails	1,720,000
Westport East	1,740,000
Westport North	2,240,000
Westport South	2,410,000
Westport West	760,000

Sum: \$18,378,100

Sanitary Service Available

2016/2017 Ready* Neighborhood Sewer Extensions



* Assumes 2016 Completion of the N 10th St. Sewer & Pump Station



This map is for reference purposes only. While it is intended to be an accurate graphic representation, its accuracy cannot be guaranteed. Information derived from this map are at the user's sole risk.

Date: 11/14/2015

Charter Township of Oshtemo
Kalamazoo Co., Michigan

Color Rendering of the Orderly Extension of Public Sanitary Sewer Charter Township of Oshtemo

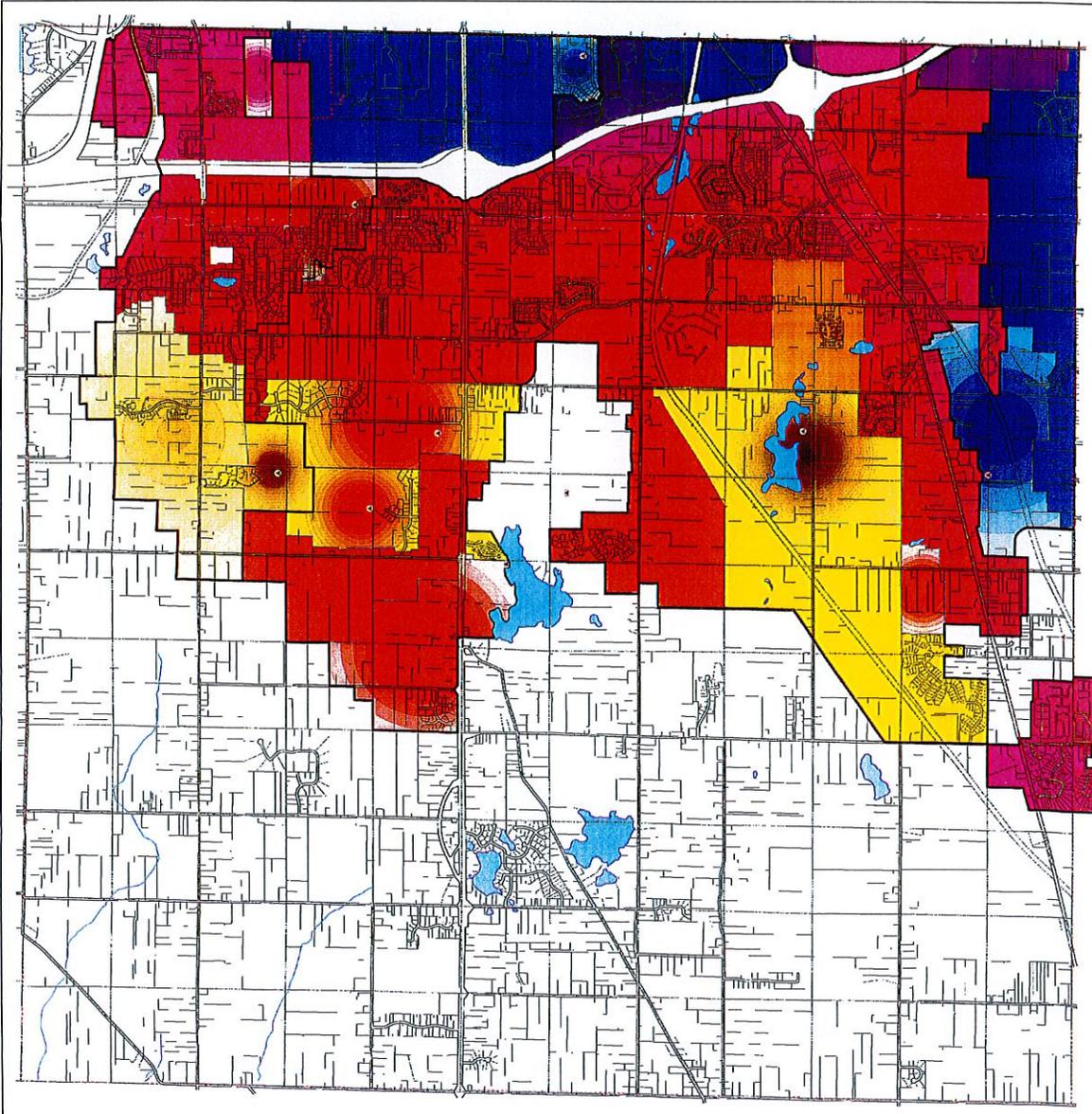
For this map, each colored polygon has been assigned a solid, background color that indicates consideration has been made in the Township Master Plan for the eventual extension of public sanitary sewer service. White parcels are beyond the current planning limit.

This type of rendering is often referred to as a heat map. The cooler colors (blue) are first, and the hottest colors (yellow) are last.

These colors also generally track both the oldest constructed and/lowest gravity sewer in elevation (blue). At the other extreme, the hottest color (yellow) will be the last built and will generally be higher in elevation.

As a general rule, the adjacent, cooler color must be built before sanitary sewer service can be provided to a warmer color.

An addition dimension are the features that may look like sun spots or a localized point-based color-ramp. This effect is used to indicate that a major new sanitary sewer pump station must be built before serving the area that surrounds and contains the point color-ramp. [Small red triangles suggest a possible location for these future pump stations.]



Date: 11/14/2015

This map is for reference purposes only. While it is intended to be an accurate graphic representation, its accuracy cannot be guaranteed. Any conclusions or information derived from this map are at the users sole risk.

Memo



To: Oshtemo Charter Township Board
From: James W. Porter *[Signature]*
Date: November 2, 2015
Subject: Proposed Amendment to the
 Begging, Panhandling and Soliciting Ordinance
 Being Ordinance No. 506 Adopted November 10, 2009

OBJECTIVE

There has been much discussion about the Supreme Court's ruling that struck down the State's anti-begging statute. Frankly, I think much of the news reporting on this subject has done a disservice to local communities trying to address specific panhandling problems. The purpose of this memo is to outline the differences between the Township's Ordinance and the State statute, which was struck down, and to provide a recommendation to add clarity to the existing Ordinance.

BACKGROUND

The Michigan Supreme Court in 2013 struck down Michigan's anti-begging statute because it was overly broad and a violation of First Amendment protections. The State statute, itself, simply said that a person "found begging in a public place" is guilty of a misdemeanor punishable by imprisonment of not more than 90 days or a fine of not more than \$500, or both. The Supreme Court found that this language was too broad and would, in fact, prohibit protected free speech because it would prohibit requesting assistance. The Court held the statute was not narrowly tailored to serve a compelling governmental interest, resulting in impeding a substantial amount of constitutionally-protected conduct, i.e., free speech.

INFORMATION PROVIDED

The Township's Ordinance, unlike the State statute, is fairly specific as to what is prohibited. A person cannot solicit on private property without first obtaining permission from the owner, and a person cannot solicit in a public place if:

1. They are under the influence of alcohol or a controlled substance;
2. In a public transportation vehicle;
3. In a public parking lot or public parking ramp or public building;

4. Within 20 feet of a public toilet;
5. Within 20 feet of an entrance to a bank, credit union, or automated teller machine.
6. From an operator or occupant of a motor vehicle;
7. Misrepresenting need;
8. In a group of two or more persons;
9. After sunset nor before sunrise;
10. Within 20 feet of an entrance to a building;
11. From a child under 16 years old; or
12. In an aggressive manner (as defined in the Ordinance)

It is unfortunate that after the Supreme Court ruling that there was virtually no enforcement of the local Township Ordinance against panhandlers because of an overly expansive reading of the Supreme Court ruling. However, we did continue to try to address aggressive panhandling, which I believe was appropriate. However, another issue has recently come to my attention from Lt. Faulk, and that concerns begging and panhandling from the road right-of-way.

REQUESTED BOARD ACTION

I have been informed that we have had complaints by various business owners from individuals panhandling along the public streets. In addition, we have had people who are panhandling in a fairly aggressive manner by walking out into traffic, knocking on windows and thereby impeding traffic. Oshtemo Township's Ordinance specifically prohibits soliciting from an operator or occupant of a motor vehicle, but because that could take place within a private parking lot, if permitted by the property owner, I am suggesting that we amend the Township Ordinance.

The Board should be aware that under MCL 257.676, a person is not to block, obstruct, impede or otherwise interfere with the normal flow of vehicular traffic. There have been a few townships recently that have amended their Begging and Panhandling Ordinances to coincide with State law on this issue.

I have been informed through Lt. Faulk and our other deputies that this type of activity does, in fact, impede traffic, and the Sheriff's Department has raised concerns about the public safety impact for not only those persons panhandling, but the drivers on our public roads when others stop to provide a donation to a panhandler.

It would be my recommendation for clarity to amend the Begging, Panhandling and Soliciting Ordinance, and have the Board set this matter for first reading at your next regularly scheduled Board meeting. See attached Ordinance Amendment.

OSHTEMO CHARTER TOWNSHIP ORDINANCE NO. _____

Adopted: _____, 201____

Effective: _____, 201____

OSHTEMO CHARTER TOWNSHIP ORDINANCE

This Ordinance amends Ordinance No. 506, being the Oshtemo Charter Township Begging, Panhandling and Soliciting Ordinance, adopted on November 10, 2009, and repeals all Ordinances or parts of Ordinances in conflict.

THE CHARTER TOWNSHIP OF OSHTEMO
KALAMAZOO COUNTY, MICHIGAN
ORDAINS:

SECTION I. AMENDMENT OF COMPILED SECTION 191.002. Section 191.002

Purpose is hereby amended to read as follows:

191.002 Purpose.

Sec. II.

The purpose of this Ordinance is to promote public health, safety and the general welfare by prohibiting begging, panhandling and soliciting in public areas which would interfere with public access, impede traffic, as well as keep the public free from intimidation or fear for their personal safety.

SECTION II. AMENDMENT OF COMPILED SECTION 191.004. Section 191.004 Regulations, Paragraph B, Subparagraph 6, is hereby amended to read as follows:

191.004 Regulations.

Sec. IV. The following actions shall constitute a violation of this Ordinance:

- B. No person shall solicit in or on a public place:
 - 6. From an operator or other occupant of a motor vehicle while entering, leaving, or operating within the road right-of-way;

SECTION III. EFFECTIVE DATE. This Ordinance shall take effect after publication in accordance with State law. All Ordinances or part of Ordinances in conflict herewith are hereby repealed.

DEBORAH L. EVERETT, CLERK
OSHTEMO CHARTER TOWNSHIP

**OSHTEMO CHARTER TOWNSHIP BOARD
7275 West Main Street
Kalamazoo, MI 49009
269.375.4260**

**December 8, 2015
BOARD WORK SESSION
5:00 p.m.
AGENDA**

- A. Call to Order
- B. Public Comment
- C. Update from Kalamazoo County
- D. Update on 2016 Police Protection Contract
- E. Discussion on Architectural Consultant Selection
- F. Other Business

**REGULAR MEETING
7:00 p.m.
AGENDA**

- 1. Call to Order
- 2. Pledge of Allegiance
- 3. Citizen Comments on Non-Agenda Items
- 4. Consent Agenda
 - a. Approve Minutes –November 10, 2015, Regular Meeting
 - b. Receipts & Disbursements Report
 - c. 2015 Township Property and Liability Insurance
 - d. Consideration of Miscellaneous 2015 Budget Adjustments
 - e. Sanitary Sewer Cleaning & Video – Stadium Drive
 - f. Consideration of 2016 Professional Consultants – Accounting, Auditing, Civil Engineering, IT
- 5. Consideration of Planning Commission Recommendation to Amend Zoning Ordinance for Sign Text Amendments
- 6. Consideration of Sanitary Sewer Ordinance Amendment – First Reading
- 7. Consideration of Panhandling Ordinance Amendment – Second Reading
- 8. Other Township Business
- 9. Board Member Comments
- 10. Adjournment

**Policy for Public Comment
Township Board Regular Meetings, Planning Commission & ZBA Meetings**

All public comment shall be received during one of the following portions of the Agenda of an open meeting:

a. Citizen Comment on Non-Agenda Items or Public Comment – while this is not intended to be a forum for dialogue and/or debate, if a citizen inquiry can be answered succinctly and briefly, it will be addressed or it may be delegated to the appropriate Township Official to respond at a later date.

b. After an agenda item is presented by staff and/or an applicant, public comment will be invited. At the close of public comment there will be board discussion prior to call for a motion.

Anyone wishing to make a comment will be asked to come to the podium to facilitate the audio/visual capabilities of the meeting room. Speakers will be invited to provide their name; it is not required unless the speaker wishes to have their comment recorded in the minutes.

All public comment offered during public hearings shall be directed, and relevant, to the item of business on which the public hearing is being conducted. Comment during the Public Comment or Citizen Comment on Non-Agenda Items may be directed to any issue.

All public comment shall be limited to four (4) minutes in duration unless special permission has been granted in advance by the Supervisor or Chairperson of the meeting.

Public comment shall not be repetitive, slanderous, abusive, threatening, boisterous, or contrary to the orderly conduct of business. The Supervisor or Chairperson of the meeting shall terminate any public comment which is in contravention of any of the principles and procedures set forth herein.

(adopted 5/9/2000)
(revised 5/14/2013)

**Policy for Public Comment
6:00 p.m. "Public Comment"/Portion of Township Board Meetings**

At the commencement of the meeting, the Supervisor shall poll the members of the public who are present to determine how many persons wish to make comments. The Supervisor shall allocate maximum comment time among persons so identified based upon the total number of persons indicating their wish to make public comments, but no longer than ten (10) minutes per person. Special permission to extend the maximum comment time may be granted in advance by the Supervisor based upon the topic of discussion.

While this is not intended to be a forum for dialogue and/or debate, if a citizen inquiry can be answered succinctly and briefly, it will be addressed or it may be delegated to the appropriate Township Official to respond at a later date.

Anyone wishing to make a comment will be asked to come to the podium to facilitate the audio/visual capabilities of the meeting room. Speakers will be invited to provide their name; it is not required unless the speaker wishes to have their comment recorded in the minutes.

Public comment shall not be repetitive, slanderous, abusive, threatening, boisterous, or contrary to the orderly conduct of business. The Supervisor shall terminate any public comment which is in contravention of any of the principles and procedures set forth herein.

(adopted 2/27/2001)
(revised 5/14/2013)

RECEIPTS & DISBURSEMENTS

**** GENERAL, FIRE, SEWER & WATER FUNDS ****

RECEIPTS 11/02/2015 thru 11/30/2015

Admin Site Plan/Crystal Car Wash	250.00
Admin Site Plan/SBA Network	250.00
Admin Site Plan/State Permits Inc	250.00
Land Division/Bomar	150.00
Sign Permits	125.00
Postage	5.00
Copies	75.08
Ordinance/Parking Violations	996.56
Sidewalk Permits/Inspections	200.00
Rent Deposits	1,250.00
OCC Rental	500.00
Grange Rental	100.00
Park Reservation/Heart Walk	300.00
Grave Sales	600.00
Grave Openings	1,020.00
Foundations	1,000.80
Address Sign	10.00
August Election Reimbursement/Kal County	4,525.34
Metal Bin Credit	46.60
Other Tax Revenue/Kal County	100.26
Liquor License Transfer Fee	250.00
KABA Start Up Reimbursement	4,338.00
False Alarm Fee	366.63
Water Receipts	25,625.18
Sewer Receipts	47,664.70
Total	89,999.15

DISBURSEMENTS

11/10/2015	Payroll/Office	35,196.55
11/13/2015	Payables	55,602.29
11/25/2015	Payroll/Office/Trustees/FF	58,957.82
11/27/2015	Payables	92,364.12
Total		242,120.78

INVOICE APPROVAL BY INVOICE REPORT FOR OSHTEMO TOWNSHIP
 EXP CHECK RUN DATES 11/13/2015 - 11/13/2015
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

BANK CODE: GEN

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

hoikka	Alberta Hoikka	11/10/2015	11032015	GEN	Election Worker	175.00
90046412	42 South 1st Street	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		175.00
		11/13/2015		N		

Paid

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 175.00

VENDOR TOTAL: 175.00

geppert	Alida Geppert	11/10/2015	11032015	GEN	Election Worker	150.00
90046455	1545 C Summer Ridge Drive	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		150.00
		11/13/2015		N		

Paid

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 150.00

VENDOR TOTAL: 150.00

atd	Auto Trim Design	11/13/2015	18512	GEN	FIRE DEPARTMENT HELMET NUMBER STICKERS	35.00
90046507	7178 Stadium Dr	11/13/2015	000007831	N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		35.00
		11/13/2015		N		

Paid

GL NUMBER 206-340-76600
 DESCRIPTION HELMET NUMBER STICKERS
 AMOUNT 35.00
 AMT RELIEVED 35.00

VENDOR TOTAL: 35.00

hahn	Barb Hahn	11/10/2015	11032015	GEN	Election Worker	150.00
90046442	8895 Stadium Dr	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		150.00
		11/13/2015		N		

Paid

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 150.00

VENDOR TOTAL: 150.00

User: DeannaJ

EXP CHECK RUN DATES 11/13/2015 - 11/13/2015

BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

DB: Oshtemo

Vendor name: Barb McMann
 Address: 10523 West L Avenue
 City/State/Zip: Kalamazoo MI, 49009

Vendor Code: 90046459
 Ref #: 90046459

Bank: GEN
 Invoice: Election Worker
 Hold: N
 Sep CK: N
 1099: N

Post Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015

Invoice: 11032015
 PO: 0.0000
 Disc. %: 0.0000

Gross Amount: 75.00
 Discount: 0.00
 Net Amount: 75.00

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	75.00
VENDOR TOTAL: 75.00		

GL NUMBER	DESCRIPTION	AMOUNT
90046454	Barbara Clark 6462 Caddam Wood Kalamazoo MI, 49009	150.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Paid	0.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
90046430	Barbara Johnson 6076 Fairgrove St Kalamazoo MI, 49009	150.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Paid	0.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Paid	0.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
90046447	Barbara Nieboer 3419 Winter Wheat Kalamazoo MI, 49004	150.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Paid	0.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Paid	0.00
VENDOR TOTAL: 150.00		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Paid	0.00
VENDOR TOTAL: 150.00		

BANK CODE: GEN

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

batteries	Batteries Plus	11/13/2015	385-329878	GEN	AA AND AAA BATTERIES FOR OUR SCBA	137.77
90046488	6370 28th Street SE	11/13/2015	000007846	N		0.00
	Grand Rapids MI, 49546	/ /	0.0000	N		137.77
		11/13/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-93300	AA DURACELL PROCELL BATTERIES	89.85	89.85
206-340-93300	AAA DURACELL PROCELL BATTERIED FOR VOICE	47.92	47.92
		137.77	137.77

VENDOR TOTAL: 137.77

bennett-1	DESCRIPTION	AMOUNT
90046432	Bennett, Lynnet	150.00
	5008 Bronson Blvd	0.00
	Portage MI, 49024	150.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

VENDOR TOTAL: 150.00

bwd	DESCRIPTION	AMOUNT
90046463	Best Way Disposal	90.00
	2314 Miller Rd	0.00
	Kalamazoo MI, 49001	90.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
107-756-93100	Maintenance Services	90.00

VENDOR TOTAL: 90.00

anderson-b	DESCRIPTION	AMOUNT
90046452	Bob Anderson	175.00
	10948 West L Ave	0.00
	Kalamazoo MI, 49009	175.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	175.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

VENDOR TOTAL: 175.00

cmu	Campbell Murch Memorials	11/10/2015	20150780	GEN	foundations	1,640.00
90046464	PO Box 100	11/13/2015	0.0000	N		0.00
	Mattawan MI, 49071	/ /		N		1,640.00
		11/13/2015		N		

Paid
 GL NUMBER
 101-001-64500
 DESCRIPTION
 Monument Installations
 AMOUNT
 1,640.00

VENDOR TOTAL: 1,640.00

benson-c	Carl Benson	11/10/2015	11032015	GEN	Election Worker	175.00
90046428	9679 Almena Dr	11/13/2015	0.0000	N		0.00
	Kalamazoo MI, 49009	/ /		N		175.00
		11/13/2015		N		

Paid
 GL NUMBER
 101-191-80800
 DESCRIPTION
 Precinct Workers
 AMOUNT
 175.00

VENDOR TOTAL: 175.00

charter	Charter Communications	11/10/2015	10282015	GEN	merging 2 accounts	6.09
90046465	PO Box 3019	11/13/2015	0.0000	N		0.00
	Milwaukee WI, 53201	/ /		N		6.09
		11/13/2015		N		

Paid
 GL NUMBER
 206-340-80900
 DESCRIPTION
 Computer Operations
 AMOUNT
 6.09

VENDOR TOTAL: 6.09

mckenna-c	Cheryl McKenna	11/09/2015	11032015	GEN	election worker	150.00
90046408	543 Pinehurst Blvd	11/13/2015	0.0000	N		0.00
	Kalamazoo MI, 49009	/ /		N		150.00
		11/13/2015		N		

Paid
 GL NUMBER
 101-191-80800
 DESCRIPTION
 Precinct Workers
 AMOUNT
 150.00

Vendor name: Chris Ball
 Address: 750 South Drake Rd
 City/State/zip: Kalamazoo MI, 49009

Vendor Code: Misc
 Ref #: 90046462

Bank: ofd tshirt buy back
 Hold: N
 Sep CK: Y
 1099: N

Invoice Description: ofd tshirt buy back

Gross Amount: 20.00
 Discount: 0.00
 Net Amount: 20.00

VENDOR TOTAL: 150.00

GL NUMBER: 206-336-72500
 DESCRIPTION: Clothing Allowance

Amount: 20.00

woodaz-c
 90046416
 Chris Woodaz
 10968 West L Ave
 Kalamazoo MI, 49009

Invoice Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015

Invoice: 11132015
 PO: 0.0000
 Disc. %: 0.0000

GEN: N
 Y
 N

DESCRIPTION: Election Worker

Amount: 150.00
 Discount: 0.00
 Net Amount: 150.00

VENDOR TOTAL: 20.00

dorman-c
 90046429
 Cindy Dorman
 6237 Suffield Lane
 Kalamazoo MI, 49009

Invoice Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015

Invoice: 11032015
 PO: 0.0000
 Disc. %: 0.0000

GEN: N
 N
 N

DESCRIPTION: Election Worker

Amount: 150.00
 Discount: 0.00
 Net Amount: 150.00

VENDOR TOTAL: 150.00

anderson-s
 90046453
 Clara Anderson
 10948 West L Ave
 Kalamazoo MI, 49009

Invoice Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015

Invoice: 11032015
 PO: 0.0000
 Disc. %: 0.0000

GEN: N
 N
 N

DESCRIPTION: Election Worker

Amount: 150.00
 Discount: 0.00
 Net Amount: 150.00

VENDOR TOTAL: 150.00

GL NUMBER: 101-191-80800
 DESCRIPTION: Precinct Workers

Amount: 150.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

VENDOR TOTAL: 150.00

vandyk	Connie Vandyk	11/10/2015	11032015	GEN	Election Worker	150.00
90046422	256 Round Hill Rd	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		150.00
		11/13/2015		N		

Paid

GL NUMBER DESCRIPTION AMOUNT

101-191-80800 Precinct Workers 150.00

VENDOR TOTAL: 150.00

ce-s1	Consumers Energy	11/10/2015	10312015	GEN	street lights	10,019.61
90046467	Payment Center	11/13/2015		N		0.00
	PO Box 740309	/ /	0.0000	N		10,019.61
	Cincinnati OH, 45274-0309	11/13/2015		N		

Paid

GL NUMBER DESCRIPTION AMOUNT

101-506-92600 Street Lighting 10,019.61

VENDOR TOTAL: 10,019.61

conLife	Consumers Life Insurance Company	11/10/2015	017031050-2	GEN	life and add	322.78
90046468	PO Box 951914	11/13/2015		N		0.00
	Cleveland OH, 44193	/ /	0.0000	N		322.78
		11/13/2015		N		

Paid

GL NUMBER DESCRIPTION AMOUNT

101-234-71600 Health & Life Insurance 189.00

206-336-71600 Health & Life Insurance 133.78

322.78

VENDOR TOTAL: 322.78

Vendor name: CTS Telecom Inc.
 Address: 13800 E Michigan
 City/State/Zip: Galesburg MI, 49053

Vendor Code: 90046466

Bank: GEN
 Invoice Description: telephone

cts	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046466	11/10/2015	1001488	GEN	telephone	705.10
	11/13/2015		N		0.00
	/ /	0.0000	N		705.10
	11/13/2015		N		

Paid

GL NUMBER: 101-249-85300
 Telephone: 469.76
 Telephone: 235.34
 Telephone: 705.10

VENDOR TOTAL: 705.10

MISC	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046469	11/10/2015	10272015	GEN	rental deposit refund	175.00
	11/13/2015		N		0.00
	/ /	0.0000	Y		0.00
	11/13/2015		N		175.00

Paid

GL NUMBER: 101-000-24800
 Rent Deposits: 175.00

VENDOR TOTAL: 175.00

ives	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046427	11/10/2015	11032015	GEN	Election Worker	150.00
	11/13/2015		N		0.00
	/ /	0.0000	N		0.00
	11/13/2015		N		150.00

Paid

GL NUMBER: 101-191-80800
 Precinct Workers: 150.00

VENDOR TOTAL: 150.00

french	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046424	11/10/2015	11032015	GEN	Election Worker	150.00
	11/13/2015		N		0.00
	/ /	0.0000	N		0.00
	11/13/2015		N		150.00

Paid

GL NUMBER: 101-191-80800
 Precinct Workers: 150.00

VENDOR TOTAL: 150.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

VENDOR TOTAL: 150.00

hartfieldd	Deborah Hartfield	11/10/2015	11032015	GEN	Election Worker	150.00
90046413	1223 S. VanKal	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		150.00
		11/13/2015		N		

Paid

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 150.00

VENDOR TOTAL: 150.00

dm	Des Moines Stamp	11/13/2015	1054373	GEN	KRISTINE BIDDLE DATE STAMP W/NAME/PROCE	70.00
90046489	851 Sixth Ave	11/13/2015	000007835	N		0.00
	PO Box 1798	/ /	0.0000	N		70.00
	Des Moines IA, 50306-1798	11/13/2015		N		

Paid

GL NUMBER 101-209-72800
 DESCRIPTION KRISTINE BIDDLE DATE STAMP W/NAME/PROCES
 AMOUNT 70.00
 AMT RELIEVED 70.00

VENDOR TOTAL: 70.00

nieboer-e	Edith Nieboer	11/10/2015	11032015	GEN	Election Worker	75.00
90046458	119 West F Ave	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		75.00
		11/13/2015		N		

Paid

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 75.00

VENDOR TOTAL: 75.00

User: DeanaJ
DB: Oshtemo

EXP CHECK RUN DATES 11/13/2015 - 11/13/2015
BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

Vendor name: Elaine Branch
Address: 7654 West Main
City/State/Zip: Kalamazoo MI, 49009

Vendor Code: 90046407
Ref #: 90046407

Post Date: 11/09/2015
CK Run Date: 11/13/2015
Disc. Date: / /
Due Date: 11/13/2015

Invoice: 11032015
PO: 0.0000
Disc. %: 0.0000

Bank: GEN
Hold: N
Sep CK: N
1099: N

Invoice Description: election worker

Gross Amount: 175.00
Discount: 0.00
Net Amount: 175.00

Paid

GL NUMBER: 101-191-80800
DESCRIPTION: Precinct Workers
AMOUNT: 175.00

VENDOR TOTAL: 175.00

evp
90046490
Emergency Vehicle Products
2975 Interstate Pkwy
Kalamazoo MI, 49048-9600

11/13/2015 8683 GEN 511 BROKEN EXHAUST REPAIR
11/13/2015 000007818 N
/ / 0.0000 N
11/13/2015 N

Paid

GL NUMBER: 206-340-86700
DESCRIPTION: 511 BROKEN EXHAUST REPAIR
AMOUNT: 211.55
AMT RELIEVED: 211.55

VENDOR TOTAL: 211.55

eps
90046470
Engineered Protections Systems, Inc
750 Front NW
Suite 200
Grand Rapids MI, 49504-4400

11/10/2015 a696748 GEN alarm - h2
11/13/2015 N
/ / 0.0000 N
11/13/2015 N

Paid

GL NUMBER: 206-340-93100
DESCRIPTION: Building Maintenance
AMOUNT: 126.54

VENDOR TOTAL: 126.54

Fleckenste
90046482
Fleckenstein Ron
3625 Whicker Pointe
Kalamazoo MI, 49006

11/12/2015 aug GEN retiree health reimbursement
11/13/2015 N
/ / 0.0000 Y
11/13/2015 N

Paid

GL NUMBER: 101-000-08300
DESCRIPTION: Due From Retiree Medical Trust Fund
AMOUNT: 204.70

VENDOR TOTAL: 204.70

BANK CODE: GEN
 Vendor name: Frances Wagner
 Address: 1818 N 7th Street
 City/State/Zip: Kalamazoo MI, 49009
 Vendor Code: MISC
 Ref #: 90046481
 Post Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015
 Invoice: 11012015
 PO: 0.0000
 Disc. %: 0.0000
 Sep CK: 1099
 Hold: GEN
 Invoice Description: rental deposit refund

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Sep CK	Hold	Invoice Description	Gross Amount	Discount	Net Amount
MISC	90046481	11/10/2015	11/13/2015	/ /	11/13/2015	11012015	0.0000	0.0000	1099	GEN	rental deposit refund	250.00	0.00	250.00

Paid
 GL NUMBER: 101-000-24800
 DESCRIPTION: Rent Deposits
 AMOUNT: 250.00
 VENDOR TOTAL: 250.00

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Sep CK	Hold	Invoice Description	Gross Amount	Discount	Net Amount
gould-f	90046444	11/10/2015	11/13/2015	/ /	11/13/2015	11032015	0.0000	0.0000		GEN	Election Worker	150.00	0.00	150.00

Paid
 GL NUMBER: 101-191-80800
 DESCRIPTION: Precinct Workers
 AMOUNT: 150.00
 VENDOR TOTAL: 150.00

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Sep CK	Hold	Invoice Description	Gross Amount	Discount	Net Amount
fok	90046491	11/13/2015	11/13/2015	/ /	11/13/2015	2208524:01	000007819	0.0000		GEN	532 REPLACEMENT COOLANT RESERVOIR	107.30	0.00	107.30

Paid
 GL NUMBER: 206-340-86700
 DESCRIPTION: 532 REPLACEMENT RESERVOIR
 AMOUNT: 107.30
 AMT RELIEVED: 107.30
 VENDOR TOTAL: 107.30

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Sep CK	Hold	Invoice Description	Gross Amount	Discount	Net Amount
fiala-g	90046449	11/10/2015	11/13/2015	/ /	11/13/2015	11032015	0.0000	0.0000		GEN	Election Worker	150.00	0.00	150.00

Paid
 GL NUMBER: 101-191-80800
 DESCRIPTION: Precinct Workers
 AMOUNT: 150.00
 VENDOR TOTAL: 150.00

BANK CODE: GEN
 Vendor name: Harriger, Kathleen
 Address: 5126 Green Meadow
 City/State/Zip: Kalamazoo MI, 49009
 Vendor Code: 90046446
 Ref #: 90046446
 Post Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015
 Invoice: 11032015
 PO: 0.0000
 Disc. %: 0.0000
 Sep CK: 1099
 Bank Hold: GEN
 Invoice Description: Election Worker
 Gross Amount: 150.00
 Discount: 0.00
 Net Amount: 150.00

Paid
 GL NUMBER: 101-191-80800
 DESCRIPTION: Precinct Workers
 AMOUNT: 150.00
 VENDOR TOTAL: 150.00

iaao
 90046493
 PO Lock Box #504183
 St Louis MO, 63150-4183
 11/13/2015
 2016 dues
 000007834
 0.0000
 11/13/2015
 IAAO MEMBERSHIP DUES 1/1/16-12/31/16 -
 190.00
 0.00
 190.00
 Paid
 GL NUMBER: 101-209-95800
 DESCRIPTION: IAAO MEMBERSHIP DUES 1/1/16-12/31/16 - K
 AMOUNT: 190.00
 AMT RELIEVED: 190.00
 VENDOR TOTAL: 190.00

iron
 90046494
 Iron Mountain
 PO Box 27128
 New York NY, 10087-7128
 11/13/2015
 1yh8284
 000007830
 0.0000
 11/13/2015
 FILE STORAGE FEE FOR NOV. 2015
 161.37
 0.00
 161.37
 Paid
 GL NUMBER: 101-250-95500
 DESCRIPTION: FILE STORAGE FEE FOR NOV. 2015
 AMOUNT: 161.37
 AMT RELIEVED: 161.37
 VENDOR TOTAL: 161.37

annen
 90046420
 Jacquelyn Annen
 1722 W. Kilgore
 Kalamazoo MI, 49008
 11/10/2015
 11032015
 11/13/2015
 0.0000
 11/13/2015
 Election Worker
 150.00
 0.00
 150.00
 Paid
 GL NUMBER: 101-191-80800
 DESCRIPTION: Precinct Workers
 AMOUNT: 150.00
 VENDOR TOTAL: 150.00

BANK CODE: GEN
 Vendor name Janet M Nichols
 Address 1809 Whitegate Lane
 City/State/Zip Kalamazoo MI, 49009

Vendor Code nichols-j
 Ref # 90046456
 Post Date 11/10/2015
 CK Run Date 11/13/2015
 Disc. Date / /
 Due Date 11/13/2015

Invoice 11032015
 PO 0.0000
 Disc. % 0.0000
 Invoice Description Election Worker

Bank Hold
 Sep CK
 1099
 Gross Amount 150.00
 Discount 0.00
 Net Amount 150.00

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 150.00
 VENDOR TOTAL: 150.00

Paid
 ellens
 90046451
 Janice Ellens
 1948 Quail Cove Drive
 Kalamazoo MI, 49009

Post Date 11/10/2015
 CK Run Date 11/13/2015
 Disc. Date / /
 Due Date 11/13/2015

Invoice 1103015
 PO 0.0000
 Disc. % 0.0000
 Invoice Description Election Worker

Bank Hold
 Sep CK
 1099
 Gross Amount 150.00
 Discount 0.00
 Net Amount 150.00

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 150.00
 VENDOR TOTAL: 150.00

Paid
 jean
 90046457
 Jean Barb
 7616 West Main
 Kalamazoo MI, 49009

Post Date 11/10/2015
 CK Run Date 11/13/2015
 Disc. Date / /
 Due Date 11/13/2015

Invoice 11032015
 PO 0.0000
 Disc. % 0.0000
 Invoice Description Election Worker

Bank Hold
 Sep CK
 1099
 Gross Amount 75.00
 Discount 0.00
 Net Amount 75.00

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 75.00
 VENDOR TOTAL: 75.00

Paid
 bourner
 90046410
 Jean Bourner
 2090 N 6th Street
 Kalamazoo MI, 49009

Post Date 11/09/2015
 CK Run Date 11/13/2015
 Disc. Date / /
 Due Date 11/13/2015

Invoice 11032015
 PO 0.0000
 Disc. % 0.0000
 Invoice Description election worker

Bank Hold
 Sep CK
 1099
 Gross Amount 150.00
 Discount 0.00
 Net Amount 150.00

GL NUMBER 101-191-80800
 DESCRIPTION Precinct Workers
 AMOUNT 150.00
 VENDOR TOTAL: 150.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PC	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

BANK CODE: GEN						
porter	Jim Porter	11/10/2015	10202015	GEN	parking reimbursement	
90046476	7275 West Main	11/13/2015		N		29.25
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		29.25

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-250-87000	Mileage	29.25

VENDOR TOTAL: 29.25

johnson-c	Johnson, Christine	11/10/2015	11032015	GEN	Election Worker	
90046450	2221 Quail Run Drive	11/13/2015		N		150.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		150.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

VENDOR TOTAL: 150.00

fiala	Judith Fiala	11/10/2015	11032015	GEN	Election Worker	
90046448	5832 Castleton Lane	11/13/2015		N		175.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		175.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	175.00

VENDOR TOTAL: 175.00

gould-j	Judy Gould	11/10/2015	11032015	GEN	Election Worker	
90046443	1919 Quail Run Drive	11/13/2015		N		175.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		175.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	175.00

VENDOR TOTAL: 175.00

INVOICE APPROVAL BY INVOICE REPORT FOR OSHTEMO TOWNSHIP
 EXP CHECK RUN DATES 11/13/2015 - 11/13/2015
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

User: DeannaJ
 DB: Oshtemo

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
	BANK CODE: GEN					
hertzell	Justine J Hertzell	11/10/2015	11032015	GEN	Election Worker	
90046417	2484 Isle Harbor Ct Kalamazoo MI, 49009	11/13/2015 / /	0.0000	N N N		175.00 0.00 175.00
Paid						

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	175.00
		VENDOR TOTAL:
		175.00

kcitwt-w	DESCRIPTION	AMOUNT
90046471	Kalamazoo City Treasurer 415 E Stockbridge Kalamazoo MI, 49001	453.09 0.00 453.09
Paid		
		VENDOR TOTAL:
		453.09

ko	DESCRIPTION	AMOUNT
90046497	Kalamazoo Oil Company 2601 N. Burdick Street Kalamazoo MI, 49007-1874	4,067.73 0.00 4,067.73
Paid		
		VENDOR TOTAL:
		4,067.73

GL NUMBER	DESCRIPTION	AMOUNT
206-340-86800	Fuel	4,067.73
		VENDOR TOTAL:
		4,067.73

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
kb	Kal-Blue Reprographics & Supplies	11/13/2015	21231	GEN	3 ROLLS PLORRER PAPER	56.09
90046495	914 E Vine Street	11/13/2015	000007817	N		0.00
	Kalamazoo MI, 49001-3083	/ /	0.0000	N		56.09
		11/13/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-249-72800	3 ROLLS PLORRER PAPER	51.09	51.09
101-249-72800	DELIVERY FEE	5.00	5.00
		56.09	56.09
	VENDOR TOTAL:	56.09	

gelling-ki

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
90046426	Katherine Turner		
	7060 Hawthorn Valley		
	Kalamazoo MI, 49009		
		150.00	0.00
			150.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-191-80800	Precinct Workers	150.00	
	VENDOR TOTAL:	150.00	

steadman

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
90046409	Kathryn Steadman		
	6124 Old Log Trail		
	Kalamazoo MI, 49009		
		150.00	0.00
			150.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-191-80800	Precinct Workers	150.00	
	VENDOR TOTAL:	150.00	

anderson-1

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
90046431	Linda Travis-Anderson		
	1788 Jefferson Rd		
	Otsego MI, 49078		
		150.00	0.00
			150.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-191-80800	Precinct Workers	150.00	
	VENDOR TOTAL:	150.00	

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

VENDOR TOTAL: 150.00

janssen-1	Lori Janssen	11/10/2015	11032015	GEN	Election Worker	150.00
90046441	PO Box 93	11/13/2015		N		
	Oshtemo MI, 49077	/ /	0.0000	N		0.00
		11/13/2015		N		150.00

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

VENDOR TOTAL: 150.00

vandenbos	LouAnn VanDenBos	11/10/2015	11032015	GEN	Election Worker	75.00
90046461	2660 Bluestone Circle	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		75.00
		11/13/2015		N		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	75.00

VENDOR TOTAL: 75.00

hutchins	Marcia Hutchins	11/10/2015	11032015	GEN	Election Worker	150.00
90046421	6816 Birdsong Ave	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		150.00
		11/13/2015		N		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

VENDOR TOTAL: 150.00

Maentz	Marcia Lynne Maentz	11/10/2015	11032015	GEN	Election Worker	150.00
90046435	3541 Irongate Court	11/13/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	N		150.00
		11/13/2015		N		

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

BANK CODE: GEN
 Vendor Code Vendor name Post Date Invoice Bank Invoice Description Gross Amount
 Ref # Address CK Run Date PO Hold Sep CK Discount
 City/State/Zip Disc. Date Disc. % Due Date 1099 Net Amount

VENDOR TOTAL:										150.00	
janssen-m	Marie Janssen	11/10/2015	11032015	GEN	Election Worker					150.00	
90046440	8670 Almena Dr	11/13/2015		N						0.00	
	Kalamazoo MI, 49009	/ /	0.0000	N						150.00	
		11/13/2015		N							
Paid											
GL NUMBER	DESCRIPTION									AMOUNT	
101-191-80800	Precinct Workers									150.00	
VENDOR TOTAL:										150.00	

french-m	Melissa French	11/10/2015	11032015	GEN	Election Worker					150.00	
90046425	10004 Stadium Dr	11/13/2015		N						0.00	
	Kalamazoo MI, 49009	/ /	0.0000	N						150.00	
		11/13/2015		N							
Paid											
GL NUMBER	DESCRIPTION									AMOUNT	
101-191-80800	Precinct Workers									150.00	
VENDOR TOTAL:										150.00	

Vendor Code Vendor name Address City/State/Zip
 Ref # Bank Invoice Description
 Hold Sep CK Gross Amount
 1099 Discount
 Net Amount

menards	11/13/2015	1706	GEN	OUTLET TESTER AND WINDSHIELD WASH	6.55
90046498	11/13/2015	000007838	N		6.55
	/ /	0.0000	N		0.00
	11/13/2015		N		6.55

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-72800	OUTLET TESTER	3.39	3.39
206-340-86700	GALLON OF WINDSHIELD WASH	3.16	3.16
		6.55	6.55

menards	11/13/2015	2093	GEN	WINDSHIELD WIPERS, ZIPTIES, CLOROX WIPE	21.96
90046499	11/13/2015	000007845	N		21.96
	/ /	0.0000	N		0.00
	11/13/2015		N		21.96

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-86700	WINDSHIELD WIPERS FOR 532	11.98	11.98
206-340-72800	PACKAGE OF ZIPTIES	4.99	4.99
206-340-93300	CLOROX WIES	4.99	4.99
		21.96	21.96

menards	11/12/2015	98828	GEN	DISH SOAP, SCREWS, DISH BRUSH, TRUFUEL	31.85
90046483	11/13/2015	000007673	N		31.85
	/ /	0.0000	N		0.00
	11/13/2015		N		31.85

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-72800	DISH SOAP FOR 5-2	3.00	3.00
206-340-72800	DISH WASHING BRUSH FOR 5-2 AND TAX	5.29	5.29
206-340-86700	SCREWS TO REPLACE 513 GROUND LIGHT	1.64	1.64
206-340-86800	TRUFUEL FOR 5-2 EQUIPMENT	21.92	21.92
		31.85	31.85

menards	11/12/2015	99003	GEN	CONSTRUCTION SUPPLIES FOR FIRE DEPARTME	161.62
90046484	11/13/2015	000007713	N		161.62
	/ /	0.0000	N		0.00
	11/13/2015		N		161.62

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
-----------	-------------	--------	--------------

User: DeannaJ
 DB: Oshtemo

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount

206-340-76000 CONSTRUCTION SUPPLIES 161.62 161.62

VENDOR TOTAL: 221.98

mer	Michigan Election Resources	11/10/2015	34733	GEN	NOMINATING PETITIONS	30.32
90046472	1616 Construction Drive	11/13/2015	000007815	N		0.00
	Kalamazoo MI, 49048	/	0.0000	N		30.32

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-191-72800	NOMINATING PETITIONS	24.00	24.00
101-191-72800	SHIPPING	6.32	6.32
		30.32	

VENDOR TOTAL: 30.32

numbj	Mika Meyers Becket & Jones PLC	11/10/2015	594826	GEN	legal fees	465.75
90046473	900 Monroe Ave NW	11/13/2015	0.0000	N		0.00
	Grand Rapids MI, 49503	/		N		465.75

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-223-82600	Legal Fees	465.75

VENDOR TOTAL: 465.75

mcmann-m	Mike McMann	11/10/2015	11032015	GEN	Election Worker	75.00
90046460	10523 West L Ave	11/13/2015	0.0000	N		0.00
	Kalamazoo MI, 49009	/		N		75.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	75.00

VENDOR TOTAL: 75.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
kg	Mlive Media Group	11/13/2015	10312015	GEN	legal notices	5,747.33
90046496	Dept 77571	11/13/2015		N		
	PO Box 77000	/ /	0.0000	N		0.00
	Detroit MI, 48277-0571	11/13/2015		N		5,747.33

GL NUMBER	DESCRIPTION	AMOUNT
101-249-90300	Legal Notices	3,470.48
101-805-90300	Legal Notices	1,642.77
206-336-82600	Legal Fees	634.08
		<u>5,747.33</u>

VENDOR TOTAL: 5,747.33

janssen-mo	Monica Janssen	11/10/2015	11032015	GEN	Election Worker	150.00
90046415	430 Admiral Ave	11/13/2015		N		0.00
	Portage MI, 49002	/ /	0.0000	N		150.00
		11/13/2015		N		

Paid	DESCRIPTION	AMOUNT
	Precinct Workers	150.00

VENDOR TOTAL: 150.00

mrc	MRC Industries, Inc.	11/10/2015	47995	GEN	cleaning - october	1,175.97
90046474	2538 South 26th Street	11/13/2015		N		0.00
	Kalamazoo MI, 49048	/ /	0.0000	N		1,175.97
		11/13/2015		N		

Paid	DESCRIPTION	AMOUNT
	Building Maintenance	130.66
	Maintenance Services	522.65
	Maintenance Services	522.66
		<u>1,175.97</u>

VENDOR TOTAL: 1,175.97

Vendor Code Vendor name Vendor name Bank Invoice Description Gross Amount
 Ref # Address Hold Sep CK Discount
 City/State/Zip City/State/Zip Disc. % Due Date Due Date 1099 Net Amount

Bank CODE: GEN
 miller-n Nancy Miller GEN Election Worker 150.00
 90046438 9316 Almema Dr N N 0.00
 Kalamazoo MI, 49009 N N 0.0000 150.00
 Paid 11/13/2015 11/13/2015

GL NUMBER DESCRIPTION AMOUNT
 101-191-80800 Precinct Workers 150.00

VENDOR TOTAL: 150.00

lagoni-n Natalie Lagoni GEN Election Worker 150.00
 90046434 2712 N Drake Rd N N 0.00
 Kalamazoo MI, 49006 N N 0.0000 150.00
 Paid 11/13/2015 11/13/2015

GL NUMBER DESCRIPTION AMOUNT
 101-191-80800 Precinct Workers 150.00

VENDOR TOTAL: 150.00

sikora Neil Sikora GEN Election Worker 150.00
 90046436 9643 West Kl N N 0.00
 Kalamazoo MI, 49009 N N 0.0000 150.00
 Paid 11/13/2015 11/13/2015

GL NUMBER DESCRIPTION AMOUNT
 101-191-80800 Precinct Workers 150.00

VENDOR TOTAL: 150.00

nfpa NFPA GEN NATIONAL FIRE CODE SUBSCRIPTION RENEWAL 1,450.00
 90046500 PO Box 9689 N N 0.00
 Manchester NH, 03108-9689 N N 0.0000 1,450.00
 Paid 11/13/2015 11/13/2015

GL NUMBER DESCRIPTION AMOUNT AMT RELIEVED
 206-336-95900 FIRE CODE SUBSCRIPTION RENEWAL 1,450.00 1,450.00

VENDOR TOTAL: 1,450.00

Vendor Code	Vendor name	Bank	Invoice Description	Gross Amount
Ref #	Address	Hold		Discount
	City/State/Zip	Sep CK		Net Amount

n/s	Niewoonder & Sons, Inc	GEN	SEASONAL CONTRACT FOR CEMETERY MOWING	
90046475	2319 N Drake	N		1,337.14
	Kalamazoo MI, 49006	N		0.00
		N		1,337.14

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-218-93100	SEASONAL MOWING, TRIM OF (3) CEMETERIES	1,337.14	1,337.16

VENDOR TOTAL: 1,337.14

nu	Nye Uniform	517834, 517837	CLASS A UNIFORMS	
90046521	1030 Scribner NW	N		592.00
	Grand Rapids MI, 49504	N		0.00
		N		592.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-336-72500	CLASS A POLYESTER DRESS BLOUSE	418.50	418.50
206-336-72500	CLASS A POLYESTER PANTS	121.50	121.50
206-336-72500	POLYESTER WHITE SHIRTS WITH CREASES	52.00	52.00
		592.00	

nu	Nye Uniform	528487/525226	UNIFORMS FOR NEW POCS	
90046501	1030 Scribner NW	N		339.50
	Grand Rapids MI, 49504	N		0.00
		N		339.50

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-336-72500	ELBECCO CARGO PANTS	133.00	133.00
206-336-72500	ELBECCO SS CLASS B SHIRT	89.00	89.00
206-336-72500	ELBECCO LS CLASS B SHIRT	97.00	97.00
206-336-72500	DUTY BELT	20.50	20.50
		339.50	

VENDOR TOTAL: 931.50

User: DeannaJ
 DB: Oshtemo

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
ocba	OCBA, Inc	11/12/2015	50912.9-14	GEN	FLESHER FIELD PHASE 2 IMPLEMENTATION FE	
90046486	521 S Riverview Dr	11/13/2015	000005979	N		390.96
	Kalamazoo MI, 49004	/ /	0.0000	N		0.00
		11/13/2015		N		390.96
Paid						
GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED			
107-756-98200.FF2013	FLESHER FIELD PHASE 2 IMPLEMENTATION FEE	390.96	390.96			
ocba	OCBA, Inc	11/12/2015	51504.01-7	GEN	DRAKE FARMSTEAD MASTER PLAN	
90046485	521 S Riverview Dr	11/13/2015	000007174	N		130.00
	Kalamazoo MI, 49004	/ /	0.0000	N		0.00
		11/13/2015		N		130.00
Paid						
GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED			
107-756-80800	DRAKE FARMSTEAD MASTER PLAN	130.00	263.93			
ocba	OCBA, Inc	11/13/2015	51511.01-2&1	GEN	BLANKET PO GREENWAYS - NON-MOTORIZED T	
90046502	521 S Riverview Dr	11/13/2015	000007820	N		836.50
	Kalamazoo MI, 49004	/ /	0.0000	N		0.00
		11/13/2015		N		836.50
Paid						
GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED			
107-756-80800	BLANKET/GRNWYS - NON-MOTORIZED TRL PLN'G	836.50	836.50			
VENDOR TOTAL:						1,357.46

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
glass	Pat Glass	11/10/2015	11032015	GEN	Election Worker	
90046418	6617 West G Ave	11/13/2015		N		150.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		150.00
Paid						
GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED			
101-191-80800	Precinct Workers	150.00				
VENDOR TOTAL:						150.00

Vendor Code	Vendor name	Bank	Invoice Description	Gross Amount
Ref #	Address	Hold		Discount
	City/State/Zip	Sep CK		Net Amount
		1099		
anson	Patricia Anson	GEN	Election Worker	150.00
90046437	7711 N 12th Street	N		0.00
	Kalamazoo MI, 49009	N		150.00

Paid

GL NUMBER 101-191-80800 DESCRIPTION Precinct Workers AMOUNT 150.00

VENDOR TOTAL: 150.00

woodaz	Patty Kay Woodaz	GEN	Election Worker	150.00
90046414	10968 West L Ave	N		0.00
	Kalamazoo MI, 49009	N		150.00

Paid

GL NUMBER 101-191-80800 DESCRIPTION Precinct Workers AMOUNT 150.00

VENDOR TOTAL: 150.00

MISC	Rebecca Hatfield	GEN	rental deposit refund	225.00
90046492	4114 S. 12th Street	N		0.00
	Kalamazoo MI, 49009	Y		225.00

Paid

GL NUMBER 101-000-24800 DESCRIPTION Rent Deposits AMOUNT 225.00

VENDOR TOTAL: 225.00

Vendor name: RI Stafford Excavating
 Address: PO Box 754
 City/State/Zip: Richland MI, 49083
 Vendor Code: 90046477
 Ref #: 90046477
 Post Date: 11/10/2015
 CK Run Date: 11/13/2015
 Disc. Date: / /
 Due Date: 11/13/2015
 Invoice: 1740
 PO: 0.0000
 Disc. %: 0.0000
 Bank: GEN
 Hold: N
 Sep CK: N
 1099: Y

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Bank	Hold	Sep CK	1099	Invoice Description	Gross Amount	Discount	Net Amount
90046477	90046477	11/10/2015	11/13/2015	/ /	11/13/2015	1740	0.0000	0.0000	GEN	N	N	Y	grave openings	2,100.00	0.00	2,100.00

Paid
 GL NUMBER: 101-218-80800
 DESCRIPTION: Contracted Grave Openings
 AMOUNT: 2,100.00

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Bank	Hold	Sep CK	1099	Invoice Description	Gross Amount	Discount	Net Amount
90046503	90046503	11/13/2015	11/13/2015	/ /	11/13/2015	1740	0.0000	0.0000	GEN	N	N	Y	EXCAVATION AT TOWNSHIP PARK	515.00	0.00	515.00

Paid
 GL NUMBER: 107-756-97400
 DESCRIPTION: EXCAVATION AT TOWNSHIP PARK
 AMOUNT: 515.00
 AMT RELIEVED: 515.00

VENDOR TOTAL: 2,615.00

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Bank	Hold	Sep CK	1099	Invoice Description	Gross Amount	Discount	Net Amount
90046445	90046445	11/10/2015	11/13/2015	/ /	11/13/2015	11032015	0.0000	0.0000	GEN	N	N	N	Election Worker	150.00	0.00	150.00

Paid
 GL NUMBER: 101-191-80800
 DESCRIPTION: Precinct Workers
 AMOUNT: 150.00

VENDOR TOTAL: 150.00

Vendor Code	Ref #	Post Date	CK Run Date	Disc. Date	Due Date	Invoice	PO	Disc. %	Bank	Hold	Sep CK	1099	Invoice Description	Gross Amount	Discount	Net Amount
90046504	90046504	11/13/2015	11/13/2015	/ /	11/13/2015	256004	0.0000	0.0000	GEN	N	N	N	OIL AND ANTI-FREEZE	54.84	0.00	54.84

Paid
 GL NUMBER: 206-340-86700
 DESCRIPTION: QUART OF OIL
 AMOUNT: 34.90
 AMT RELIEVED: 34.90
 GALLON OF ANTI-FREEZE
 AMOUNT: 19.94
 AMT RELIEVED: 19.94
 54.84
 AMT RELIEVED: 54.84
 VENDOR TOTAL: 54.84

INVOICE APPROVAL BY INVOICE REPORT FOR OSHTEMO TOWNSHIP
EXP CHECK RUN DATES 11/13/2015 - 11/13/2015
BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

Vendor Code	Vendor name	Bank	Invoice Description	Gross Amount
Ref #	Address	Hold		Discount
	City/State/Zip	Sep CK		Net Amount

11032015	11/10/2015	11032015	GEN	Election Worker	150.00
11/13/2015	11/13/2015	0.0000	N		0.00
/ /	/ /		N		150.00
11/13/2015	11/13/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

VENDOR TOTAL: 150.00

s&t	S & T Lawn Service	12439	GEN	DDA LAWN MAINT/OCC	248.00
90046487	3393 South 6th Street	000007228	N		0.00
	Kalamazoo MI, 49009	0.0000	N		248.00
/ /	/ /		N		
11/13/2015	11/13/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
900-728-93300	BLANKET PO/DDA LAWN MAINT/OCC	248.00	84.50

VENDOR TOTAL: 248.00

huff	Sabrina Huff	11032015	GEN	Election Worker	175.00
90046423	4678 Red Leaf Street	0.0000	N		0.00
	Kalamazoo MI, 49009		N		175.00
/ /	/ /		N		
11/13/2015	11/13/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	175.00

VENDOR TOTAL: 175.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

secant	Secant Technologies	11/13/2015	62472	GEN	24 PORT SWITCHBOARD FOR STATION 5-1	
90046506	6395 Technology Ave	11/13/2015	000007777	N		2,656.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		2,656.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
207-310-97000	CISCO 2960 POE 24-PORT SWITCH	1,859.00	1,859.00
207-310-97000	LABOR	797.00	797.00
		<u>2,656.00</u>	<u>2,656.00</u>

secant	Secant Technologies	11/13/2015	62564	GEN	POLICE OFFICE FAX MACHINE MAINTENANCE	
90046505	6395 Technology Ave	11/13/2015	000007841	N		246.50
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		246.50

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-201-80500	LABOR HOURS	246.50	246.50

secant	Secant Technologies	11/10/2015	62615	GEN	computer support	
90046478	6395 Technology Ave	11/13/2015	0.0000	N		2,135.15
	Kalamazoo MI, 49009	/ /		N		0.00
		11/13/2015		N		2,135.15

Paid

GL NUMBER	DESCRIPTION	AMOUNT
206-340-80900	Computer Operations	1,167.58
101-201-80500	Computer Support	967.57
		<u>2,135.15</u>

VENDOR TOTAL: 5,037.65

berish	Sharon Berish	11/09/2015	11032015	GEN	election worker	
90046411	1565 Skylark Ct	11/13/2015		N		150.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		150.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	150.00

VENDOR TOTAL: 150.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
sc	Siegfried Crandall	11/10/2015	86977	GEN	computer support	
90046480	246 E Kilgore Rd	11/13/2015		N		4,896.77
	Kalamazoo MI, 49002-5599	/ /	0.0000	N		0.00
		11/13/2015		N		4,896.77
Paid						
GL NUMBER	DESCRIPTION			AMOUNT		
206-340-80900	Computer Operations			2,275.30		
101-201-80500	Computer Support			2,501.47		
101-201-80500	computer support for police			120.00		
				<u>4,896.77</u>		
sc	Siegfried Crandall	11/10/2015	87044	GEN	accting support	
90046479	246 E Kilgore Rd	11/13/2015		N		2,191.25
	Kalamazoo MI, 49002-5599	/ /	0.0000	N		0.00
		11/13/2015		N		2,191.25
Paid						
GL NUMBER	DESCRIPTION			AMOUNT		
101-223-82500	Accounting & Audit Fees			1,291.25		
490-000-80800	Audit Fees			100.00		
206-336-82500	Accounting & Audit Fees			200.00		
491-000-80800	Audit Fees			100.00		
107-756-82500	Accounting & Audit Fees			100.00		
207-310-82500	Accounting & Audit Fees			100.00		
249-371-82500	Accounting & Audit Fees			100.00		
211-344-82500	Accounting & Audit Fees			100.00		
900-728-82500	Accounting & Audit Fees			100.00		
				<u>2,191.25</u>		
VENDOR TOTAL:						7,088.02
janssen-	Sue Janssen	11/10/2015	11032015	GEN	Election Worker	
90046439	2281 West E Ave	11/13/2015		N		175.00
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		175.00
Paid						
GL NUMBER	DESCRIPTION			AMOUNT		
101-191-80800	Precinct Workers			175.00		
VENDOR TOTAL:						175.00

Vendor Code	Vendor name	Bank	Invoice Description	Gross Amount
Ref #	Address	Hold		Discount
	City/State/Zip	Sep CK		Net Amount
MISC	Tammye Timmerman	GEN	rental deposit refund	175.00
90046508	1735 Tanager Lane	N		0.00
	Kalamazoo MI, 49009	Y		175.00
Paid		N		

GL NUMBER	DESCRIPTION	AMOUNT
101-000-24800	Rent Deposits	175.00

VENDOR TOTAL: 175.00

dorman	Invoice Date	Invoice	Description	Gross Amount
90046433	11/10/2015	11032015	Election Worker	175.00
	11/13/2015			0.00
Paid				175.00

GL NUMBER	DESCRIPTION	AMOUNT
101-191-80800	Precinct Workers	175.00

VENDOR TOTAL: 175.00

vanbelkum	Invoice Date	Invoice	Description	Gross Amount
90046509	11/13/2015	600249	SERVICE PHONE CALL TO SET UP KATHY'S NE	60.00
	11/13/2015	000007842		0.00
Paid				60.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-250-97000	SERVICE PHONE CALL TO SET UP COMPUTER	60.00	60.00

VENDOR TOTAL: 60.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

Walmart	Walmart	11/13/2015	4115	GEN	REHAB SUPPLIES FOR STRUCTURE FIRE ON 10	
90046519	PO Box 530932	11/13/2015	000007793	N		63.81
	Atlanta GA, 30353-0932	/ /	0.0000	N		0.00
		11/13/2015		N		63.81

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-72800	GATORADE	53.82	53.82
206-340-72800	WATER	9.99	9.99
		<u>63.81</u>	

Walmart	Walmart	11/13/2015	5517	GEN	FIRE STATION CLEANING SUPPLIES	
90046518	PO Box 530932	11/13/2015	000007832	N		34.64
	Atlanta GA, 30353-0932	/ /	0.0000	N		0.00
		11/13/2015		N		34.64

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-72800	CLEANING SUPPLIES	34.64	34.64

Walmart	Walmart	11/13/2015	856,5518,5516	GEN	COFFEE FOR TOWNSHIP AND FIRE DEPARTMENT	
90046520	PO Box 530932	11/13/2015	000007824	N		52.08
	Atlanta GA, 30353-0932	/ /	0.0000	N		0.00
		11/13/2015		N		52.08

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-249-72800	COFFEE	52.08	52.08

VENDOR TOTAL: 150.53

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
zop	Zemlick Office Products	11/13/2015	0129706-001	GEN		
90046511	3773 Sky King Blvd	11/13/2015	000007816	N		41.79
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		41.79
Paid						
GL NUMBER	DESCRIPTION				AMOUNT	AMT RELIEVED
101-249-72800	11 X 17 CASE OF COPY PAPER				41.79	41.79
zop	Zemlick Office Products	11/13/2015	0129708-001	GEN	CHAIRMAT, SUWARSKY	
90046512	3773 Sky King Blvd	11/13/2015	000007822	N		84.25
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		84.25
Paid						
GL NUMBER	DESCRIPTION				AMOUNT	AMT RELIEVED
101-249-72800	CHAIRMAT, SUWARSKY				84.25	84.25
zop	Zemlick Office Products	11/13/2015	0129893-001	GEN	PLANNER REFILL, HANGING FILES, 2 MECHAN	
90046513	3773 Sky King Blvd	11/13/2015	000007839	N		38.90
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		38.90
Paid						
GL NUMBER	DESCRIPTION				AMOUNT	AMT RELIEVED
101-249-72800	PLANNER REFILL				13.80	13.80
101-249-72800	HANGING FILES				17.55	17.55
101-249-72800	MECHANICAL PENCIL				3.83	3.83
101-249-72800	MECHANICAL PENCIL				3.72	3.72
					38.90	
zop	Zemlick Office Products	11/13/2015	0129894-001	GEN	CLEAR FILE TABS	
90046515	3773 Sky King Blvd	11/13/2015	000007823	N		5.40
	Kalamazoo MI, 49009	/ /	0.0000	N		0.00
		11/13/2015		N		5.40
Paid						
GL NUMBER	DESCRIPTION				AMOUNT	AMT RELIEVED
101-249-72800	CLEAR FILE TABS				2.64	2.64
101-249-72800	CLEAR FILE TABS				2.76	2.76
					5.40	
zop	Zemlick Office Products	11/13/2015	0129956-001	GEN	refund for returned merchandise	

BANK CODE: GEN
 Vendor name: 3773 Sky King Blvd
 Address: Kalamazoo MI, 49009
 City/State/Zip: Kalamazoo MI, 49009
 Vendor Code: 101-249-72800
 Ref #: 90046510
 Post Date: 11/13/2015
 CK Run Date: / /
 Disc. Date: / /
 Due Date: 11/13/2015
 Invoice: 0130162-001
 PO: 000007828
 Disc. %: 0.0000
 Bank: GEN
 Hold: N
 Sep CK: N
 1099: N

90046516 3773 Sky King Blvd
 Kalamazoo MI, 49009
 Paid
 AMOUNT (127.47)
 0.00
 (127.47)

GL NUMBER 101-249-72800 DESCRIPTION Supplies
 zop 90046510 Zemlick Office Products
 3773 Sky King Blvd
 Kalamazoo MI, 49009
 Paid
 AMOUNT (127.47)
 23.15
 35.10
 58.25
 0.00
 58.25

GL NUMBER 101-249-72800 DESCRIPTION FILE DRAWER RACKS, HANGING FILES
 101-249-72800
 Paid
 AMOUNT (127.47)
 23.15
 35.10
 58.25

zop 90046514 Zemlick Office Products
 3773 Sky King Blvd
 Kalamazoo MI, 49009
 Paid
 AMOUNT (127.47)
 23.15
 35.10
 58.25

GL NUMBER 101-249-72800 DESCRIPTION CALENDAR REFILL
 101-249-72800
 Paid
 AMOUNT (127.47)
 23.15
 35.10
 58.25

zop 90046517 Zemlick Office Products
 3773 Sky King Blvd
 Kalamazoo MI, 49009
 Paid
 AMOUNT (127.47)
 23.15
 35.10
 58.25

GL NUMBER 101-249-72800 DESCRIPTION Supplies
 101-249-72800
 Paid
 AMOUNT (127.47)
 23.15
 35.10
 58.25

VENDOR TOTAL: 26.83
 TOTAL - ALL VENDORS: 55,602.29

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
8th	8th District Court	11/25/2015	case#15094983a	GEN	PEO TICKET PAYMENT OWED TO 8TH DISTRICT	100.00
90046522	227 W Michigan	11/27/2015	000007873	N		0.00
	Kalamazoo MI, 49007	/ /	0.0000	N		100.00
		11/27/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
207-320-72800	PAYMENT TO 8TH DISTRICT COURT	100.00	100.00

VENDOR TOTAL: 100.00

aflac	DESCRIPTION	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046523	Aflac	11/25/2015	808231/380420	GEN	extra insurance Nov & Dec	2,278.92
	Attn: Remittance Processing Service	11/27/2015		N		
	1932 Wynnton Rd	/ /	0.0000	N		0.00
	Columbus GA, 31999-0797	11/27/2015		N		2,278.92

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-000-26700	AFLAC Insurance	568.76
206-000-26700	AFLAC Insurance	1,710.16
		<u>2,278.92</u>

VENDOR TOTAL: 2,278.92

apa	DESCRIPTION	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046524	American Planning Association	11/25/2015	105549-15104	GEN	PLANNING DUE - JULIE JOHNSTON	440.00
	PO Box 4291	11/27/2015	000007860	N		0.00
	Carol Stream IL, 60197-4291	/ /	0.0000	N		440.00
		11/27/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-805-95800	APA, MAP AND AICP DUES	440.00	440.00

VENDOR TOTAL: 440.00

Vendor Code Vendor name Vendor name Invoice Description Gross Amount
 Ref # Address Address Hold Sep CK Discount
 City/State/Zip City/State/Zip Disc. % Due Date Due Date 1099 Net Amount

apexcont	Apex Contractors, Inc.	Apex Contractors, Inc.	GRANGE HALL PLAYGROUND CONSTRUCTION	15,300.00
90046525	4101 27th Street	4101 27th Street	000007740	15,300.00
	Dorr MI, 49323-0010	Dorr MI, 49323-0010	0.0000	0.00
Paid			11/27/2015	15,300.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
107-756-98200.GRNG15	GRANGE HALL PLAYGROUND CONSTRUCTION	15,300.00	15,300.00
apexcont	Apex Contractors, Inc.	1609	EROSION BLANKET AT GRANGE HALL - PURCHA
90046526	4101 27th Street	000007826	610.00
	Dorr MI, 49323-0010	0.0000	0.00
Paid		11/27/2015	610.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
107-756-97400	EROSION BLANKET - PURCHASE AND INSTALL	610.00	610.00

VENDOR TOTAL: 15,910.00

ab	Arcadia Benefits Group, Inc	41863	FSA / HRA	440.00
90046527	612 S. Park Street	0.0000		0.00
	Kalamazoo MI, 49007			440.00
Paid		11/27/2015		

GL NUMBER	DESCRIPTION	AMOUNT
101-234-71600	HEALTH & LIFE INSURANCE - hra fees	50.00
206-336-71600	Health & Life Insurance - hra fees	30.00
101-234-71600	Health & Life Insurance - fsa fees	45.00
206-336-71600	Health & Life Insurance - fsa fees	15.00
101-234-71600	Annual Renewal	240.00
206-336-71600	Annual Renewal	60.00
		440.00

VENDOR TOTAL: 440.00

BANK CODE: GEN
 Vendor name Bank Invoice Description Gross Amount
 Address Hold Sep CK Discount
 City/State/Zip Due Date Disc. % PO 1099 Net Amount

att	AT&T	11/25/2015	269381851211	GEN	telephone - drake house	84.84
90046528	PO Box 5080	11/27/2015		N		0.00
	Carol Stream IL, 06197-5080	/ /	0.0000	N		84.84
		11/27/2015		N		

Paid
 GL NUMBER DESCRIPTION AMOUNT
 107-756-98100 Capital Outlay/Drake House 84.84
 VENDOR TOTAL: 84.84

belle	Belle Tire	11/25/2015	27068042	GEN	501 OIL CHANGE	88.18
90046529	3000 Enterprise	11/27/2015	000007866	N		0.00
	Allen Park MI, 48101	/ /	0.0000	N		88.18
		11/27/2015		N		

Paid
 GL NUMBER DESCRIPTION AMOUNT AMT RELIEVED
 206-340-86700 501 OIL CHANGE 88.18 88.18
 VENDOR TOTAL: 88.18

bcbs	Blue Cross Blue Shield of Michigan	11/25/2015	december	GEN	health insurance	19,732.67
90046530	PO Box 674416	11/27/2015		N		0.00
	Detroit MI, 48267-4416	/ /	0.0000	N		19,732.67
		11/27/2015		N		

Paid
 GL NUMBER DESCRIPTION AMOUNT
 101-234-71600 HEALTH & LIFE INSURANCE 10,414.45
 206-336-71600 Health & Life Insurance 5,371.69
 101-000-27800 H/D/V INSURANCE 3,946.53
 VENDOR TOTAL: 19,732.67

VENDOR TOTAL: 19,732.67

Vendor name: Bob Harvey
 Address: 7070 North 6th Street
 City/State/Zip: Kalamazoo MI, 49009

Bank: GEN
 Hold: N
 Sep CK: N
 1099: Y

Invoice Description: dump day worker 11/21

Post Date: 11/25/2015
 CK Run Date: 11/27/2015
 Disc. Date: / /
 Due Date: 11/27/2015

Invoice: 11212015
 PO: 0.0000
 Disc. %: 0.0000

Bank Code: GEN

Amount: 70.00

VENDOR TOTAL: 70.00

GL NUMBER: 101-249-95900
 DESCRIPTION: Trash Collection

Paid

ce-e Consumers Energy
 90046534 Payment Center
 PO Box 740309
 Cincinnati OH, 45271-0309

GL NUMBER	DESCRIPTION	AMOUNT
101-218-92100	twp office electric	797.24
101-218-92300	twp office gas	155.11
206-340-92100	St 1 electric	1,042.81
206-340-92300	st 1 gas	152.98
206-340-92100	st 2 electric	641.03
206-340-92300	st 2 gas	439.82
101-218-92300	maint bldg	45.43
101-218-92100	maint/veh bldg	114.07
107-756-92100	occ electric	140.32
107-756-92300	occ gas	49.10
107-756-92100	flesher electric	118.59
107-756-98100	drake house electric	87.97
107-756-98100	drake house gas	111.37
107-756-92100	old town hall electric	23.65
		<u>3,919.49</u>

VENDOR TOTAL: 3,919.49

Net Amount: 70.00

Discount: 0.00

Gross Amount: 70.00

INVOICE APPROVAL BY INVOICE REPORT FOR OSHTEMO TOWNSHIP
 EXP CHECK RUN DATES 11/27/2015 - 11/27/2015
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

User: DeannaJ
 DB: Oshtemo

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
ce-sl	Consumers Energy	11/25/2015	11/12/2015	GEN	street lights - stadium ride share	138.48
90046533	Payment Center PO Box 740309 Cincinnati OH, 45274-0309	11/27/2015		N		
Paid		/ /	0.0000	N		0.00
		11/27/2015		N		138.48

GL NUMBER	DESCRIPTION	AMOUNT
101-506-92600	Street Lighting	138.48

emp	DESCRIPTION	AMOUNT	VENDOR TOTAL:
90046536	Emergency Medical Products, Inc 25196 Network Place Chicago IL, 60673-1251	1752144, 19a02961 000007461 0.0000	138.48
Paid			127.36

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-75500	CASE OF INFECTION CONTROL KITS	127.36	201.35

MISC	DESCRIPTION	AMOUNT	VENDOR TOTAL:
90046556	Erma Powell 6733 Andover Drive Apt B Kalamazoo MI, 49009	11272015 11/27/2015 / / 0.0000	127.36
Paid			127.36

GL NUMBER	DESCRIPTION	AMOUNT
107-751-47300	Rental - Oshtemo Community Center	37.50

hopkins-fc	DESCRIPTION	AMOUNT	VENDOR TOTAL:
90046539	Hopkins Fundraising Consulting 5712 Highbury Ada MI, 49301	7805 000007805 / / 0.0000	37.50
Paid			37.50

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
107-756-80800	CAPITAL CAMPAIGN FEASIBILITY STUDY	5,000.00	5,000.00

BANK CODE: GEN
 Vendor name Post Date Invoice Bank Invoice Description Gross Amount
 Address CK Run Date PO Hold Discount
 City/State/zip Disc. Date Disc. % Sep CK Net Amount
 Due Date 1099

VENDOR TOTAL: 5,000.00

kchsd	Kalamazoo County HCS	11/25/2015	14-0016234	GEN	hhw - 3rd qtr	
90046541	3299 Gull Rd	11/27/2015		N		2,162.78
	Kalamazoo MI, 49048	/ /	0.0000	N		0.00
		11/27/2015		N		2,162.78

Paid
 GL NUMBER DESCRIPTION AMOUNT
 101-249-95600 Household Hazard Waste 2,162.78

VENDOR TOTAL: 2,162.78

krcr	Kalamazoo County Road Commission	11/25/2015	382	GEN	GRAVEL ROAD DUST CONTROL BY KCRC	
90046542	3801 E Kilgore Rd	11/27/2015	000007856	N		924.00
	Kalamazoo MI, 49001	/ /	0.0000	N		0.00
		11/27/2015		N		924.00

Paid
 GL NUMBER DESCRIPTION AMOUNT AMT RELIEVED
 101-506-95200 CALCIUM CHLORIDE APPLICATION 924.00 924.00

VENDOR TOTAL: 924.00

kansas	Kansas City Life Co	11/25/2015	1191342	GEN	ltd & std	
90046543	PO Box 8858	11/27/2015		N		624.36
	Carol Stream IL, 60197-8858	/ /	0.0000	N		0.00
		11/27/2015		N		624.36

Paid
 GL NUMBER DESCRIPTION AMOUNT
 101-234-71600 Disability Insurance 443.76
 206-336-71600 Health & Life Insurance 180.60

VENDOR TOTAL: 624.36

BANK CODE: GEN
 Vendor name: KAREN HIGH
 Address: 2308 TIPPERARY ROAD
 City/State/Zip: KALAMAZOO MI, 49008
 Vendor Code: KAREN HIGH
 Ref #: 90046538
 Post Date: 11/25/2015
 CK Run Date: 11/27/2015
 Disc. Date: / /
 Due Date: 11/27/2015
 Invoice: 11272015
 PO: 0.0000
 Disc. %: 0.0000
 Sep CK: 1099
 Bank: GEN
 Hold: N
 Invoice Description: conference expense
 Gross Amount: 1,292.49
 Discount: 0.00
 Net Amount: 1,292.49

Paid
 GL NUMBER: 101-805-95800
 DESCRIPTION: Education/Dues
 AMOUNT: 1,292.49
 VENDOR TOTAL: 1,292.49

suwarsky-k
 90046564
 Kevin Suwarsky
 27838 Rolling Pines Ct
 Lawton MI, 49065
 11/25/2015 70.00
 11/27/2015 0.0000
 / /
 11/27/2015
 GEN leaf day worker 11/21/2015
 N
 N
 N
 70.00
 0.00
 70.00

Paid
 GL NUMBER: 101-249-95900
 DESCRIPTION: Trash Collection
 AMOUNT: 70.00
 VENDOR TOTAL: 70.00

kss
 90046545
 KSS Enterprises
 616 E Vine Street
 Kalamazoo MI, 49001
 11/25/2015 952141
 11/27/2015 00007872
 / / 0.0000
 11/27/2015
 GEN MULTIFOLD TOWELS
 N
 N
 N
 85.22
 0.00
 85.22

Paid
 GL NUMBER: 206-340-93100
 DESCRIPTION: MULTIFOLD TOWELS FOR 5-1 & 5-2
 AMOUNT: 85.22
 AMT RELIEVED: 85.22

kss
 90046544
 KSS Enterprises
 616 E Vine Street
 Kalamazoo MI, 49001
 11/25/2015 952725
 11/27/2015 00007871
 / / 0.0000
 11/27/2015
 GEN EXPENDABLE SUPPLIES
 N
 N
 N
 312.32
 0.00
 312.32

Paid
 GL NUMBER: 101-218-76600
 DESCRIPTION: FOAMING SOAP
 101-218-76600 139.94
 206-340-93100 35.82
 206-340-93100 136.56
 AMOUNT: 139.94
 AMT RELIEVED: 139.94
 AMOUNT: 35.82
 AMT RELIEVED: 35.82
 AMOUNT: 136.56
 AMT RELIEVED: 136.56
 312.32
 0.00
 312.32

Vendor Code Vendor name Vendor name Invoice Description Gross Amount
 Ref # Address Address Hold Discount
 City/State/zip City/State/zip Sep CK Net Amount

lmm	Post Date	Invoice	GEN	newletters, tax bills, regular postage	397.54
90046546	11/25/2015	336393	N		
	11/27/2015		N	4,875.00	
	/ /	0.0000	N	0.00	
Paid	11/27/2015		N	4,875.00	
VENDOR TOTAL:					397.54

GL NUMBER DESCRIPTION AMOUNT
 101-249-73000 Postage 2,000.00
 101-174-73000 Postage - treasurer 2,645.00
 101-249-95700 Newsletter 230.00
 4,875.00

coash	Post Date	Invoice	GEN	minute transcriptionist	4,875.00
90046532	11/25/2015	11/27/2015	N		
	11/27/2015		N		
	/ /	0.0000	N		
Paid	11/27/2015		Y		
VENDOR TOTAL:					4,875.00

GL NUMBER DESCRIPTION AMOUNT
 101-805-70200 Salary 350.00

menards	Post Date	Invoice	GEN	3 BREAKERS FOR 521 GENERATOR	350.00
90046547	11/25/2015	7865	N		
	11/27/2015	000007865	N		
	/ /	0.0000	N		
Paid	11/27/2015		N		
VENDOR TOTAL:					350.00

GL NUMBER DESCRIPTION AMOUNT AMT RELIEVED
 206-340-86700 15 AMP BREAKER FOR 521 7.68
 206-340-86700 20 AMP BREAKERS FOR 521 15.36
 23.04

menards	Post Date	Invoice	GEN	3 BREAKERS FOR 521 GENERATOR	23.04
90046547	11/25/2015	7865	N		
	11/27/2015	000007865	N		
	/ /	0.0000	N		
Paid	11/27/2015		N		
VENDOR TOTAL:					23.04

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
City/State/zip		Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
mer	Michigan Election Resources	11/25/2015	34763	GEN	IMPRINT AV ENVELOPES/NOV ELECTION	261.10
90046548	1616 Construction Drive	11/27/2015	000007877	N		0.00
	Kalamazoo MI, 49048	/ /	0.0000	N		261.10
		11/27/2015		N		
Paid						
GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED			
101-191-72800	IMPRINT 1,000 AV OUTGOING ENVELOPES	104.44	104.44			
101-191-72800	IMPRINT 1,500 AV RETURN ENVELOPES	156.66	156.66			
		261.10	261.10			
		VENDOR TOTAL:		261.10		
numbj	Mika Meyers Becket & Jones PLC	11/25/2015	11132015	GEN	legal fees	871.75
90046549	900 Monroe Ave NW	11/27/2015		N		0.00
	Grand Rapids MI, 49503	/ /	0.0000	N		871.75
		11/27/2015		Y		
Paid						
GL NUMBER	DESCRIPTION	AMOUNT				
101-223-82600	Legal Fees	871.75				
		VENDOR TOTAL:		871.75		
msc	Miner Supply Co., Inc.	11/25/2015	455734	GEN	TISSUE AND TOWELS	208.60
90046550	922 47th Street SW	11/27/2015	000007863	N		0.00
	Wyoming MI, 49509	/ /	0.0000	N		208.60
		11/27/2015		N		
Paid						
GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED			
101-218-76600	BATH TISSUE	41.90	41.90			
206-340-93100	BATH TISSUE	41.90	41.90			
101-218-76600	MULTIFOLD TOWELS	62.40	62.40			
107-756-76600	MULTIFOLD TOWELS	20.80	20.80			
206-340-93100	MULTIFOLD TOWELS	41.60	41.60			
		208.60	208.60			
		VENDOR TOTAL:		208.60		

INVOICE APPROVAL BY INVOICE REPORT FOR OSHTEMO TOWNSHIP
 EXP CHECK RUN DATES 11/27/2015 - 11/27/2015
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

User: DeannaJ
 DB: Oshtemo

Vendor name: Office Depot
 Address: Dept .69-00827020
 City/State/Zip: PO Box 183174 Columbus OH, 43218

Post Date: 11/25/2015
 CK Run Date: 11/27/2015
 Disc. Date: / /
 Due Date: 11/27/2015

Invoice: 798797247001
 PO: 000007769
 Disc. %: 0.0000

Bank: GEN
 Hold: N
 Sep CK: N
 1099: N

Gross Amount: 57.52
 Discount: 0.00
 Net Amount: 57.52

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-249-72800	REPORT COVERS	27.50	27.50
101-249-72800	WITE OUT TAPE	13.44	13.44
101-249-72800	AA BATTERIES	16.58	16.58
Paid		57.52	57.52

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
90046554	DRIVER ORGANIZER	11.34	11.34
Paid		0.00	0.00
Paid		11.34	11.34

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
90046555	COPY PAPER 4 CASES	111.96	111.96
Paid		0.00	0.00
Paid		111.96	111.96

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	Curb Box Fees	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
491-000-68100	reimbursement for water connection	2,000.00	2,000.00
Paid		0.00	0.00
Paid		2,000.00	2,000.00

BANK CODE: GEN
 Vendor name: Quill
 Address: PO Box 37600
 City/State/Zip: Philadelphia PA, 19101-0600

Vendor Code	Post Date	Invoice	Bank	Invoice Description	Gross Amount
90046558	11/25/2015	9727391/9740002	GEN	REC'D DATE STAMP, PLANNER REFILL	48.38
	11/27/2015	000007862	N		0.00
	/ /	0.0000	N		48.38
	11/27/2015		N		

Ref #	Post Date	Invoice	Bank	Invoice Description	Gross Amount	Discount	Net Amount
	11/25/2015	9727391/9740002	GEN	REC'D DATE STAMP, PLANNER REFILL	48.38		48.38
	11/27/2015	000007862	N				
	/ /	0.0000	N				
	11/27/2015		N				

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-249-72800	REC'D DATE STAMP	36.99	36.99
101-249-72800	PLANNER REFILL	11.39	11.39
		48.38	48.38

ridge	DESCRIPTION	AMOUNT	AMT RELIEVED
90046559	Ridge Napa Auto Parts	14.10	14.10
	1655 South Drake St	0.00	0.00
	Kalamazoo MI, 49006	14.10	14.10

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-93100	COMPRESSOR SAFETY VALVE	14.10	14.10

ridge	DESCRIPTION	AMOUNT	AMT RELIEVED
90046560	Ridge Napa Auto Parts	18.39	18.39
	1655 South Drake St	0.00	0.00
	Kalamazoo MI, 49006	18.39	18.39

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-218-75100	510 AIR DOOR ACTUATOR	18.39	18.39

horton	DESCRIPTION	AMOUNT	AMT RELIEVED
90046540	Robert Horton	32.49	32.49
	398 Valencia Cove		
	Ellenton FL, 34222		

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
249-000-08300	Due From Retiree Medical Trust Fund	813.39	813.39

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
249-000-08300	Due From Retiree Medical Trust Fund	813.39	813.39

Vendor Code	Post Date	Invoice	Bank	Invoice Description	Gross Amount
horton	11/25/2015	11192015	GEN	retiree health reimbursement	813.39
90046540	11/27/2015		N		0.00
	/ /	0.0000	N		813.39
	11/27/2015		N		

GL NUMBER	DESCRIPTION	AMOUNT
249-000-08300	Due From Retiree Medical Trust Fund	813.39

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		
stc	State Tax Commission	11/25/2015	11272015	GEN	ASSESSING RENEWAL FEES STC FOR 2016	550.00
90046562	One Day Seminaar Course PO Box 30471 Lansing MI, 48909-7971	11/27/2015	000007852	N		550.00
		/ /	0.0000	N		0.00
		11/27/2015		N		550.00

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-209-95800	ASSESSING RENEWAL FEES 2016 STC	550.00	550.00

VENDOR TOTAL: 550.00

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
slp	Steenasma Lawn & Power	11/25/2015	295789	GEN	582 CHAINSAW REPAIR	65.45
90046563	7561 Stadium Drive Kalamazoo MI, 49009	11/27/2015	000007868	N		0.00
		/ /	0.0000	N		0.00
		11/27/2015		N		65.45

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
206-340-93300	582 CHAINSAW REPAIR	65.45	65.45

VENDOR TOTAL: 65.45

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
thomson	Thomson West	11/25/2015	832852142	GEN	OCT ON-LINE RESEARCH & SEPT. OVERAGE	641.46
90046565	P.O. Box 6292 Carol Stream IL, 60197-6292	11/27/2015	000007859	N		0.00
		/ /	0.0000	N		0.00
		11/27/2015		N		641.46

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-250-95500	OCT ONLINE RESEARCH & SEPT OVERAGE	641.46	641.46

VENDOR TOTAL: 641.46

INVOICE APPROVAL BY INVOICE REPORT FOR OSHTEMO TOWNSHIP
 EXP CHECK RUN DATES 11/27/2015 - 11/27/2015
 BOTH JOURNALIZED AND UNJOURNALIZED OPEN AND PAID

User: DeannaJ
 DB: Oshtemo

BANK CODE: GEN

Vendor Code	Vendor name	Post Date	Invoice	Bank	Invoice Description	Gross Amount
Ref #	Address	CK Run Date	PO	Hold		Discount
	City/State/Zip	Disc. Date	Disc. %	Sep CK		Net Amount
		Due Date		1099		

usps	United States Postal Service	11/25/2015	11252015	GEN	POST CARD STAMPS	36.00
90046571		11/27/2015	000007878	N		0.00
		/ /	0.0000	N		36.00
		11/27/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT	AMT RELIEVED
101-191-72800	POST CARD STAMPS	35.00	35.00
101-191-72800	POST CARD STAMPS	1.00	1.00
		<u>36.00</u>	<u>36.00</u>

VENDOR TOTAL: 36.00

unum-ltc	Unum Life Insurance Co	11/25/2015	0150830-001	GEN	long term care	379.60
90046566	PO Box 406990	11/27/2015		N		0.00
	Atlanta GA, 30384-6990	/ /	0.0000	N		379.60
		11/27/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-234-71600	Health & Life Insurance	304.60
206-336-71600	Health & Life Insurance	75.00
		<u>379.60</u>

VENDOR TOTAL: 379.60

MISC	Vanessa Coakley	11/25/2015	11142015	GEN	rental deposit refund	175.00
90046531	1133 Hawkins Court	11/27/2015		N		0.00
	Kalamazoo MI, 49009	/ /	0.0000	Y		175.00
		11/27/2015		N		

Paid

GL NUMBER	DESCRIPTION	AMOUNT
101-000-24800	Rent Deposits	175.00

VENDOR TOTAL: 175.00

Vendor Code Ref #	Vendor name Address City/State/Zip	Post Date CK Run Date Disc. Date Due Date	Invoice PO Disc. %	Bank Hold Sep CK 1099	Invoice Description	Gross Amount Discount Net Amount
vw 90046567	Verizon Wireless PO Box 15062 Albany NY, 12212-5062	11/25/2015 11/27/2015 / 11/27/2015	9755352826 0.0000	GEN N N N	fd vehicle computers	304.08 0.00 304.08
Paid						
GL NUMBER 206-340-85300	DESCRIPTION FD Vehicle Computer Connections		AMOUNT 304.08			
vw 90046568	Verizon Wireless PO Box 15062 Albany NY, 12212-5062	11/25/2015 11/27/2015 / 11/27/2015	9755489904 0.0000	GEN N N N	fd cell phones	151.20 0.00 151.20
Paid						
GL NUMBER 206-340-85300	DESCRIPTION FD Cell phones		AMOUNT 151.20			
VENDOR TOTAL: 455.28						
wsf 90046569	West Shore Fire 6620 Lake Michigan Drive PO Box 188 Allendale MI, 49401	11/25/2015 11/27/2015 / 11/27/2015	10396 000007876 0.0000	GEN N N N	SCBA REPAIRS	302.00 0.00 302.00
Paid						
GL NUMBER 206-340-93300	DESCRIPTION SCBA REPAIRS		AMOUNT 302.00		AMT RELIEVED 302.00	
VENDOR TOTAL: 302.00						
zop 90046570	Zemlick Office Products 3773 Sky King Blvd Kalamazoo MI, 49009	11/25/2015 11/27/2015 / 11/27/2015	0131253-001 000007850 0.0000	GEN N N N	2 WALL CALENDARS	10.58 0.00 10.58
Paid						
GL NUMBER 101-249-72800	DESCRIPTION WALL CALENDARS		AMOUNT 10.58		AMT RELIEVED 10.58	
VENDOR TOTAL: 10.58						
TOTAL - ALL VENDORS: 92,364.12						



Memorandum

Date: 4 December 2015
To: Township Board
From: Libby Heiny-Cogswell, Supervisor
Subject: 2016 Municipal Insurance Coverage

Objective

Update to the Oshtemo Township Board regarding the 2016 municipal insurance coverage in the total amount of \$65,181.

Background

The Township is in receipt of a Michigan Municipal Insurance Coverage Proposal from The Hartleb Agency for insurance coverage for property, liability, and vehicle coverage for the 2016 calendar year, a copy of which follows.

The proposal shows changes in property values due to the policy automatic inflation factor, with an overall premium increase is 4.67%. An outline of changes follows:

- 1) Overall Property Values have been increased by just over \$200,000
- 2) Electronic Data Processing Coverage - Hardware Limit was increased \$50,000
- 3) Overall Replacement Cost Values on the Fire Vehicles has been increase by \$64,000
- 4) Claims - there has been a increase in the number of claims recently filed. While the claims themselves have not been extremely bad, underwriting is concerned regarding the trend in frequency
- 5) Sewer backup coverage increased to \$15,000 total and \$5,000 per incident.

The Township receives excellent, responsive service from the Hartleb Agency and EMC insurance company.

The 2016 Township Budget includes itemization in the detail line items to cover this insurance cost. Per the adopted Purchasing Policy, no formal Board action is required. Please contact the Supervisor if you have any questions about this coverage.

Information Provided

2016 Hartleb Insurance Proposal

2015 Budget Adjustments

At the end of the year each department is reviewed for individual line items that have exceeded the initial budgeted amount. Line items within the department with a positive balance can be reduced to adjust those over budget. Revenue pertaining to a particular department is also shown to address deficits. For departments that remain over budget after adjustments, the fund carryover is increased to balance the budget.

		Budgeted	Revised	Variance
General Fund				
101173 Clerk	703 Salary-Staff	52,500	59,500	7,000
	715 Payroll Taxes	8,500	9,500	1,000
				<u>8,000</u>
<i>Began records retention project, all commercial, condo, apartment, and mobile home park plans have been scanned; currently working on residential plans, expect to finish by year's end. Prep time has exceeded initial estimate.</i>				
101174 Treasurer	703 Salary-Staff	14,000	12,500	-1,500
	730 Postage	4,500	6,000	1,500
				<u>0</u>
101191 Elections	728 Supplies	1,000	4,500	3,500
	730 Postage	1,000	2,500	1,500
	808 Precinct Workers	8,500	19,150	10,650
				<u>15,650</u>
101001 Revenue	607 Elec Reimbursement	8,500	25,000	<u>16,500</u>
<i>2 unplanned elections and 1 precinct relocation impacted supplies, postage and precinct worker line items. Reimbursement from State for May election and County for August and Nov elections offset the expenses</i>				
101201 IT	805 Computer Support	52,310	65,000	12,690
	808 Consultant/Special Projects	2,000	-	-2,000
	933 Equipment Maintenance	5,000	2,000	-3,000
				<u>7,690</u>
<i>Computer support for new telephone/voice mail system, computer related issues throughout the year</i>				
101209 Assessing	728 Supplies	2,000	3,000	1,000
	870 Mileage	600	800	200
	903 Legal Notices	-	700	700
	958 Education	3,500	3,600	100
	970 Capital Outlay	5,000	3,000	-2,000
				<u>0</u>
101218 Bldgs/ Grounds	760 Facility Supplies	3,200	3,700	500
	808 Grave Openings	12,400	16,500	4,100
				<u>4,600</u>
101001 Revenue	634 Grave Openings	12,400	17,505	5,105
<i>Grave openings expense exceeded budgeted amount/revenue also exceeded budgeted amount</i>				
101249 Gen Operations	704 In Lieu of Insurance	3,000	4,500	1,500
	730 Postage	12,000	15,000	3,000
	870 Engineering	1,000	1,500	500
	959 Trash Collection	30,000	36,000	6,000
	961 MTT Refunds	-	3,500	3,500
	970 Capital Outlay	28,000	29,100	1,100
	957 Newsletter	15,000	10,000	-5,000
	963 Contingency	11,649	1,049	-10,600
				<u>0</u>

		Budgeted	Revised	Variance
101805 Planning	820 Engineering	1,000	5,000	4,000
	958 Education	3,500	5,000	1,500
				<u>5,500</u>
101001 Revenue	614 Planning Escrow	0	14,250	14,250

Engineering expense exceeded budgeted amount/revenue from planning escrows also exceeded budgeted amount

Summary - 2 departments over budget - Clerk's Office (\$8,000) and IT (\$7,690)

Total General Fund Budget Adjustments **15,690**

General Fund Revenue

101001	401 Carryover	1,697,750	1,713,440	15,690
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Adjustments reflect approximately .003% of the General Fund and .001% of the overall budget.

Year end forecast is expenditures will not exceed revenues.

Parks Fund

107756 Parks	766 Expendable Supplies	2,500	3,500	1,000
	808 Consultant	64,200	58,700	-5,500
	825 Acct/Audit Fees	1,000	1,500	500
	931 Maint Services	18,000	17,000	-1,000
	981 Drake House	9,000	14,000	5,000
				<u>0</u>

Increase in Drake House expenses due to property taxes for 11 acres donated in 2015

Police Fund

207310 Police	702 Salary/Contract Admin	20400	17735	-2665
Contract	728 Supplies	-	165	165
	970 Capital Outlay	5,000	7,500	2,500
				<u>0</u>

Capital Outlay - police fund share of new phone/voice mail system

Building Dept

249371 Bldg Dept	808 Contracted Inspections	-	100	100
	976 Capital Outlay	15,000	32,000	17,000
249001 Revenue	401 Carryover	33,560	50,660	17,100

Building records digitization project expansion, additional KABA space planning project, additional building records file cabinet

Water Fund

491000 Water	826 Legal Fees	5,000	6,000	1,000
	962 Miscellaneous	-	615	615
	966 Curb Box Installs	35,000	73,000	38,000
				<u>39,615</u>
491000 Revenue	681 Curb Box Fees	30,000	75,250	75,250

Curb Box Installs exceeded budget/revenue also exceeded budgeted amount

DDA

900728 DDA	825 Audit Fees	1,500	1,700	200
	728 Supplies	1,000	800	-200
				<u>0</u>

		Budgeted	Revised	Variance
Fire Funds				
206336 Admin	825 Acct/Audit Fees	3,500	3,900	400
	955 Education Reimbursement	3,000	2,600	-400
				0
206340 Operations	705 Alarm Pay	120,384	89,664	-30,720
	708 Work Detail	5,151	7,151	2,000
	709 Station Staffing	81,965	100,000	18,035
	715 Payroll taxes	6,690	7,400	710
	755 EMS Supplies	3,000	5,000	2,000
	809 Computer Operations	23,972	34,972	11,000
	851 Radio Maintenance	5,000	6,000	1,000
	853 Telephone	12,580	14,650	2,070
	867 Vehicle Maintenance	70,000	90,000	20,000
	912 General Insurance	137,662	126,562	-11,100
	921 Electric	18,000	21,000	3,000
	933 Equipment Maintenance	15,000	9,000	-6,000
	961 BOR Refunds	-	7,800	7,800
	963 Contingency	35,000	13,000	-22,000
970 Capital Outlay	-	2,205	2,205	
				0

Alarm Pay/Station Staffing - staffing model was changed to support paid-on-call system; the result was to reduce the frequency that members had to respond to from home. This has caused a savings in the Alarm Pay and a reflective increase in the Station Staffing category. Doing so has served the community well.

Computer Operations - three unplanned events - unforeseen installation of infrastructure to support the replacement of telephone/voice mail system, conversion of storage space into office space to accommodate new police Lieutenant, and installation of data lines to support audio/visual equipment at Station 2.

Vehicle Maint - there were a number of unanticipated repairs needed - replaced warped cylinder heads on 1999 engine (\$14,422), significant electrical issues with rescue truck required rewiring (\$4,650), rust control to extend life of 2008 command car (\$2,518), rebuilding of worn electrical components on 2004 engine and radiator replacement (\$4,376), and replacement of tires for large trucks due to age and wear (\$8,857).

211344 Equipment	825 Audit Fees	1,000	1,500	500
	961 BOR Refunds	-	2,000	2,000
	976 Vehicle	128,000	135,000	7,000
	988 Contingency	20,000	10,500	-9,500
				0



Memo

To: Oshtemo Charter Township Board
From: Marc Elliott, P.E., Director of Public Works *ME*
Date: December 3, 2015
Subject: Contract for Services, 9th St Sanitary Sewer Video Inspection

OBJECTIVE

The objective of this request is interagency project coordination, efficient and cost effective management of shared infrastructure investments, and integrated sanitary sewer asset management.

In 2016 the Road Commission of Kalamazoo County will be constructing roadway alignment changes at the intersection of Stadium Drive and 9th St. The RCKC will also be milling and repaving 9th Street from Meridian to US 131. Oshtemo will be extending new sanitary sewer service into Atlantic Avenue. This sewer will be extended from the existing sewer which is under the 9th St pavement. The purpose of the sanitary sewer video inspection is to assure the existing sewer main at the intersection and in 9th Street is intact, and does not have any deficiencies which are currently hidden. Should deficiencies in the sanitary sewer be discovered, they will be corrected in advance of rebuilding the roadway.

BACKGROUND

In late 2013, Oshtemo Township submitted a \$634,365 grant application to the Michigan Department of Environmental Quality under the state's Stormwater, Asset Management and Wastewater ("SAW") Grant program. In April of 2014 we learned that Oshtemo's Application was found to be both administratively complete and administratively approved. Unfortunately, award of state funds was by lottery and Oshtemo was far down the list. In subsequent years, as the Legislature continues to fund this program, we may yet receive the offered 90% matching grant for the identified SAW project need.

Fortunately, having qualified for the SAW program, the law provides that eligible expenditures remain reimbursable by the state—once state funding becomes available.

INFORMATION PROVIDED

The oldest sewer pipe in this section was installed in 1970. The majority is nearly 25 years old. I do not believe any of this pipe has been surveyed or video inspected since initial installation. A sketch of the survey area is attached, as well as the video inspection project proposal. As noted in the proposal, a project result will be setting up an electronic database recordset of the asset rating/reliability in a form that is manageable in a modern geographic information system (GIS mapping).

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

We request that the board consider approval of the attached Prein&Newhof \$15,000 proposal to video inspect approximately 6100 lineal feet of public sanitary sewer and began implementation of an ongoing sewer asset management strategy as described in the Board's 2013 SAW Grant Application to the State of Michigan.

Note: Oshtemo requested the City perform this work. We do not have a response yet. To complete the work before severe weather we requesting authorization to proceed. If the City performs the work Oshtemo will not enter into this Contract.

Prein&Newhof

Engineers ■ Surveyors ■ Environmental ■ Laboratory

October 22, 2015
915

Mr. Marc Elliott, P.E.
Director of Public Works
Charter Township of Oshtemo
7275 W. Main Street
Kalamazoo, MI 49009

RE: Proposed Sewer Video Investigation and Asset Management

Dear Mr. Elliott

Thank you for contacting Prein&Newhof for Asset Management consulting services. Based on our discussion we understand that the Township is considering: 1) performing a video inspection of the sanitary sewer in 9th Street and Stadium Drive in the area of the RCKC 2016 project to determine its condition, and 2) begin an ongoing sewer asset management strategy that will capture and memorialize, within your GIS system, the data and condition of the sewer.

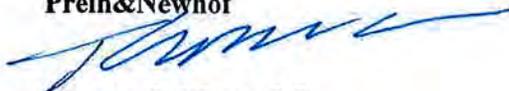
We propose to complete the following:

- A. Contract with a CCTV contractor to clean and video the sewers. Clean Earth has given us a quote for this work in the amount of \$6,900 video, \$3,660 cleaning.
- B. Office review of the videos to determine the condition rating of the sewers (PACP).
- C. Set up and populate the Township GIS to manage this data long term.

We will provide the above services for the lump sum price of \$15,000. If this proposal meets with your approval, please sign and date below returning one copy as acknowledgement of the attached Terms & Conditions and as authorization to proceed. A faxed or emailed signed version of the proposal is sufficient for scheduling; however, please return an original signed version for our records. If you have any questions, please contact our office.

Sincerely,

Prein&Newhof



Thomas C. Wheat, P.E.

TCW:tcw

APPROVED BY:

Date _____

Bill To/Ship To (if different than above)

Name: _____

Company: _____

Address: _____

Ph: _____

Fx: _____

Email: _____

Standard Terms & Conditions – Engineering

A. Execution

If the attached proposal / agreement is not executed within thirty (30) days from the date of the proposal / agreement letter, Prein&Newhof reserves the right to revise fees and schedule commitments.

B. Standard of Care

Prein&Newhof, Inc. (“Prein&Newhof”) will provide professional engineering services for Client in connection with the Project. Prein&Newhof will perform such services as expeditiously as is consistent with the professional skill and care in the orderly progress of the work.

Nothing contained in this Agreement shall require Prein&Newhof to exercise professional skill and judgment greater than that which can be reasonably expected from other engineers performing similar services and practicing in the same or similar locality. The standard of care shall exclusively be judged as of the time the services are rendered and not according to later standards. Prein&Newhof makes no warranties, expressed or implied.

Client recognizes that actual conditions may vary from those encountered at test locations made by us or provided to us by others, and that our data, interpretations and recommendations are based solely on the information available to us. We will be responsible for our data, interpretations and recommendations, but shall not be responsible for the interpretation by others of the information developed. Unless specifically stated herein, plans prepared under this agreement are not intended for machine guidance use or purposes. No guarantee is made that the electronic data systems or file structure used by the firm will be compatible with the electronic systems used by the contractor. Client also recognizes that monitoring of construction by a qualified engineering firm is essential to verifying that designs are appropriate for actual site conditions.

C Site Access Permission

In the event the project site is not owned by the client, the client must obtain all necessary permission for Prein&Newhof to enter and conduct investigations on the project site. It is assumed that the client possesses all necessary permits and licenses required for conducting the scope of work. Access negotiations may be performed at additional costs.

D. Unanticipated Hazardous Materials

Sites may contain hazardous materials where there is no reason to believe they could or should be present. Prein&Newhof and the Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition that may require us to renegotiate the scope of our services or terminate our work. We and the Client also agree that the discovery of unanticipated hazardous materials may make it necessary for us to take immediate measures to protect health and safety. Client agrees to compensate us for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials.

E. Underground Utilities

In the execution of our work, we will take reasonable precautions to avoid damage or injury to underground utilities and other underground structures, including contacting the MISS-DIG system and reviewing utility drawings that are provided to us. The Client agrees to hold Prein&Newhof harmless for any damages to below ground structures that are not brought to our attention and correctly shown or described on documents that we are furnished.

F. Public Liability Insurance

Prein&Newhof and our agents, staff and consultants employed by us are protected by worker’s compensation insurance and we have coverage under public liability and property damage insurance policies which we deem to be adequate. Certificates verifying our coverage can be provided to the client upon request. Within the limits and conditions of such insurance, we agree to indemnify and save client harmless from and against any loss, damage or liability to the extent caused by any negligent acts by us, our agents, staff or consultants employed by us. We shall not be responsible for any loss, damage, or liability beyond the amounts, limits and conditions of such insurance. We shall not be responsible for any loss, damage or liability arising from any negligent acts by client, its agents, staff and other consultants employed by the client.

G. Limitation of Professional Liability

Client and persons claiming through Client agree to limit the liability of Prein&Newhof its agents and employees, for all claims arising out of, in connection with, or resulting from, the performance of the services under this agreement to an amount of \$25,000 or the fee paid to us for professional services on this project, whichever is less.

Client acknowledges that Prein&Newhof is a corporation and agrees that any claim made by Client arising out of any act or omission of any director, officer, or of the employee of Prein&Newhof, in execution or performance of this Agreement, shall be made against Prein&Newhof, Inc. and not against such director, officer, or employee.

Client further acknowledges that Prein&Newhof has not agreed to provide and is not responsible for safety precautions and programs in connection with the project or work, including but not limited to signs, markings, barricades, temporary or permanent traffic control marking or devices, or temporary or permanent warning signs, devices, or markings. Prein&Newhof's role in working with contractors hired directly by the client is that of observer and not as supervisor. Prein&Newhof shall not be responsible for limiting access to the project site or for the safety of anyone but Prein&Newhof employees, or our subcontractors.

H. Ownership of Records

~~All field notes, original laboratory reports, original maps, drawings, mylar, studies, tests or other work products or supporting documentation shall remain the property of and under the control of Prein&Newhof. The client or the client's representative is entitled to inspect all such documents and to receive copies of the same at the client's request and expense. The client shall pay for document review, copy charges, and associated expenses should the records be subpoenaed.~~

Any electronic media (e-mail or computer files) transmitted are only for the convenience of the recipient. Any conclusions or information obtained or derived from the data on the electronic media will be at the users' sole risk. Prein&Newhof's responsibility is limited to only the printed copies (also known as hard copies) that are delivered pursuant to the service under the agreement with the client.

I. Terms of Payment

Unless alternate terms are included within the proposal / agreement, the project will be invoiced on a monthly basis until the completion of the project. All monthly invoices are payable within 30 days of the date of the invoice. Should full payment of the invoice not be received within 30 days, the amount due shall bear a service charge of 1.5 percent per month or 18 percent per year plus the cost of collection, including reasonable attorney's fees. If the client has any objections to any invoice submitted by Prein&Newhof, the client must so advise Prein&Newhof in writing within 14 days of receipt of the invoice.

J. Premature Project Termination

If the project is terminated in whole or in part, Prein&Newhof shall be entitled to be paid for all services performed prior to our receiving or issuing written notice of such termination, including reimbursable expenses, and for any shut-down costs incurred. Shut-down costs may, at our discretion, include expenses incurred for completion of analysis and records necessary to document our files and to protect our professional reputation.

In addition to any other remedies Prein&Newhof may have, Prein&Newhof shall have the absolute right to cease performing any basic or additional services in the event payment has not been made on a current basis.

K. Extended Project Cost Increases

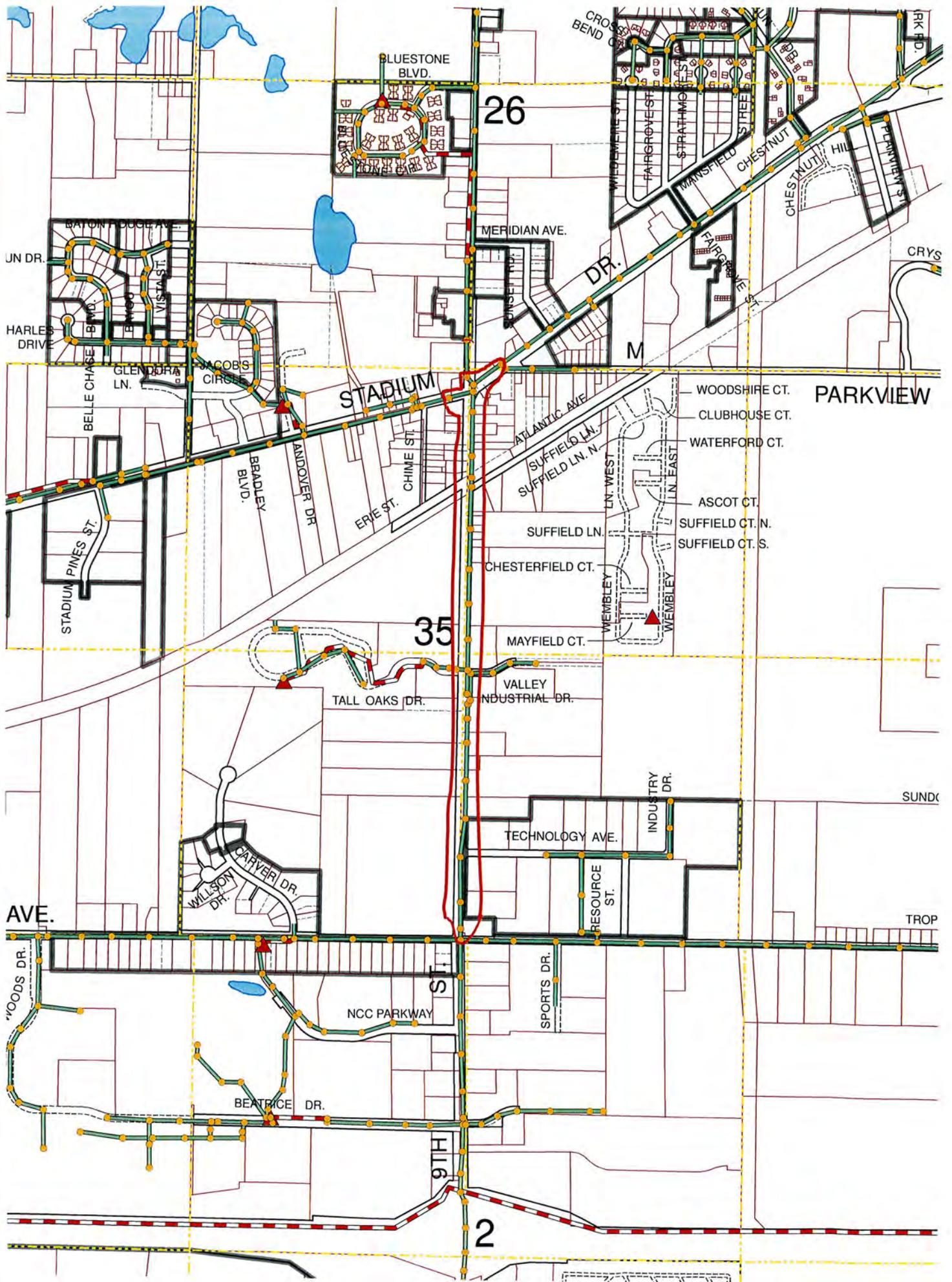
Any projected cost estimates provided by Prein&Newhof for work to be performed over an extended period of time may be subject to periodic cost increases imposed by our suppliers and increases in billing rates. The time and amount of any increases are unknown and Prein&Newhof must pass these periodic price increases on to the client following consultation with the client.

L. Consultation Beyond Scope of Work

Consultation, including but not limited to expert witness testimony, initiated by the client or client's representatives with Prein&Newhof after completion of the work specified herein will be considered beyond the scope of work presented herein and will be billed separately.

M. Non-scope Items

Our scope of work does not include evaluations regarding environmental conditions or contamination, wetlands or the presence of endangered species at the property or the potential impact of these on the future use of the property.



**APPOINTMENTS OF ACCOUNTING,
AUDITING, CIVIL ENGINEERING &
TRAFFIC ENGINEERING CONSULTANTS**

2016

Accounting
Siegfried, Crandall P.C.

Auditing
SeberTans, PLC

Civil Engineering (Primary)
Prein & Newhof

Civil Engineering (Secondary)*
Williams & Works

Traffic Engineering
Midwestern Consulting LLC
(James Valents, PE)

IT
Siegfried, Crandall P.C.

*For any review effort or project in which the Township is involved, the engineering consultant for any applicant or outside government entity shall be a Different engineering company than the township civil engineering consultant.

Memo



To: Oshtemo Charter Township Board
From: Julie Johnston, AICP
Date: November 17, 2015
Subject: Zoning Ordinance Amendments - Signs

OBJECTIVE

To conduct first reading of the proposed amendments to Section 76.000: Signs and Billboards of the Township's Zoning Ordinance.

BACKGROUND

Sign Type, Area and Height

Section 76.170 includes a table of sign regulations for commercial and office land uses. Presently, financial institutions are treated separately from other commercial uses. Our understanding is that this separation was created when financial institutions were inserted as a transitional use in the R-3 district. Therefore, the unique, more restrictive standards on this particular use protects the surrounding R-3 district from higher intensity signage. However, it also serves to limit signage opportunities for financial institutions in a more traditional commercial district (i.e. the C district).

Applicants have expressed concerns to the Township as to why a bank or credit union on Drake Road or West Main Street in the C district is not entitled to the same signage opportunities as a retail store or restaurant. Considering the likelihood of variance requests in the near future and the desire to treat like establishments the same, this Zoning Ordinance amendment was presented to the Planning Commission.

The concept presented to the Planning Commission and accepted with approval was to treat financial institutions like other commercial uses in the C district and like other non-residential uses in the R-3 district. The proposed amendment on the attached pages achieves that by simply removing the distinction for "financial institutions". By removing the language for "financial institutions", signage for such uses would be treated the same as "commercial establishments" or as "non-residential uses in the R-3 district", whichever is appropriate.

The change to the Ordinance results in a couple of implications. First, it will result in larger signage for banks and credit unions within commercial districts. Where they were previously limited to ground signs of 60 square feet and prohibited from having pole signs, such uses would now be permitted to have pole signs up to 60 square feet in size and ground signs up to 80 square feet in size. Wall signage really would not be impacted substantially. Second, from the

perspective of the financial institution, if located in the R-3 district, where such a use was previously permitted up to four wall signs, they would now be limited to a maximum of two wall signs.

Electronic Display Sign Percentage and Illumination

Section 76.410 provides the requirements for illumination of signage. Paragraph I addresses the percentage of a sign area that can be dedicated to changeable copy or electronic display boards. Currently the standard is set at 25 percent of the permitted sign area. The majority of signs in the commercial and office districts have a maximum sign area of either 60 square feet or 80 square feet. The corresponding maximum amount of electronic display board area is 15 square feet or 20 square feet.

A representative from SignArt, a local sign company, made a presentation to the Planning Commission regarding new technology and industry standards. According to the presentation, there are ratios that are ideal for video display boards. Such boards are becoming more like high definition televisions and thus try to achieve the same dimensional ratios as HDTV screens. In addition, it was explained that these boards come in whole foot squares, and therefore the dimensions cannot include fractions of a foot. It was indicated that a three foot by seven foot display board is an ideal dimension. However, this is a 21 square foot sign and exceeds the 25 percent requirement.

The Planning Commission is recommending a change to Section 76.410 that would allow 35 percent of the sign to be changeable copy or electronic display. This 10 percent increase will permit the development of signs more consistent with industry standards, allowing for newer technologies which should equate to higher quality signs.

In addition to the size of electronic displays, the Planning Commission was concerned with the illumination of these signs. It was suggested that these signs should be regulated to a certain brightness and that they be designed to dim depending on ambient lighting. Staff conducted research of how other communities regulate this need, how sign companies suggest illumination levels be handled, and vetted the proposed language with the representative from SignArt, who has followed the development of the proposed amendments. The proposed language in Section 76.410 would require all electronic signs to have a mechanism to dim the light so illumination does not exceed 0.3 foot candles over ambient light.

Finally, discussion was had on how to ensure this regulation is being followed as signs are installed. As part of the sign permit process, signs which include an electronic display will be required to submit a certificate of compliance. If concerns arise regarding the brightness of a sign, the ordinance indicates how foot candles will be measured so enforcement can be achieved.

INFORMATION PROVIDED

Text amendments for Sections 76.170, 76.300 and 76.410.

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

The Planning Commission and staff recommend a motion of approval from the Township Board for the proposed Zoning Ordinance amendments to Section 76.000 Signs and Billboards.

OSHTEMO CHARTER TOWNSHIP PLANNING COMMISSION

RECOMMENDATION OF THE OSHTEMO CHARTER TOWNSHIP
PLANNING COMMISSION RESULTING FROM A PUBLIC HEARING
CONDUCTED NOVEMBER 12, 2015.

The Oshtemo Charter Township Planning Commission hereby recommends
APPROVAL of the following amendments to Section 76.000, Subsections 76.170
Schedule B, 76.300 and 76.410:

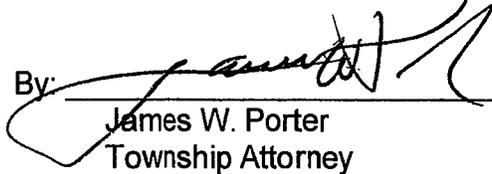
Amendment of Section 76.000 Signs and Billboards, Subsection 76.170
Commercial and office land uses to allow financial institutions such as
banks and credit unions the same signage allowances as other
commercial establishments by their removal from Schedule B.

Amendment of Section 76.000 Signs, Subsection 76.300 to require an
affidavit of code compliance, and Subsection 76.410 Lighting, Paragraph
H to require limitations on electronically changeable copy signs to 0.3 foot-
candles over ambient light levels as set forth in Paragraph H, Subsections
1-3, and Paragraph I to increase the allowed area of changeable copy
area (e.g. LED panels) on an allowable sign from 25% to 35%.

OSHTEMO CHARTER TOWNSHIP
PLANNING COMMISSION

Date: November 12, 2015

By:


James W. Porter
Township Attorney

Final Action by Oshtemo Charter Township Board

_____ APPROVED _____

_____ DENIED _____

_____ REFERRED BACK TO PLANNING COMMISSION

OSHTEMO CHARTER TOWNSHIP ORDINANCE NO. _____

Adopted: _____, 2015

Effective: _____, 2015

OSHTEMO CHARTER TOWNSHIP ORDINANCE

An Ordinance to amend the Oshtemo Charter Township Zoning Ordinance by the amendment of Section 76.000 Signs and Billboards, Subsection 76.170 Schedule B; the amendment of Subsection 76.300 and the amendment of Subsection 76.410. The Ordinance repeals all Ordinances or parts of Ordinances in conflict.

THE CHARTER TOWNSHIP OF OSHTEMO
KALAMAZOO COUNTY, MICHIGAN
ORDAINS:

SECTION I. AMENDMENT OF ZONING ORDINANCE COMPILED SECTION 76.000 SIGNS AND BILLBOARDS, SUBSECTION 76.170. Section 76.000 Signs and Billboards, Subsection 76.170, Schedule B is amended to allow financial institutions such as banks and credit unions the same signage allowances as other commercial establishments by their removal from Schedule B which shall read as follows:

76.170 Commercial and office land uses.

In all commercial and office uses the requirements of Schedule B shall govern sign use, area, type, height and numbers in addition to requirements elsewhere in this Ordinance.

SCHEDULE B

Use	Sign Type	Maximum Sign Area	Maximum Height	Sign Purpose	Maximum No. of Signs
Individual commercial establishments, including hotels without restaurants (not located within a multi-tenant commercial center)	a) wall sign	1 s.f. for each foot in length or height (whichever is greater) of the wall to which it is affixed (see footnote ¹)	30 feet	business or identification	4 per building (see footnote ³)
	b) pole sign	60 s.f.	20 feet		1 pole or ground mounted sign (see footnotes ² and ⁴)
	OR				
	ground sign	80 s.f.	10 feet		
	c) window signs and displays	25% of window area			
Multi-tenant commercial center, including hotels with restaurants	a) pole sign,	60 s.f. ⁵	20 feet	commercial center and/or individual tenant identification	1 pole or 1 ground sign (see footnotes ² and ⁴)
	OR				
	ground sign	80 s.f. ⁵	10 feet		
	b) wall sign,	80 s.f.	30 feet	identification of commercial center	1 per building wall not to exceed 4 per building
	OR				
	canopy/awning	32 s.f.	12 feet		
Commercial tenants within a multi-tenant commercial center (also see below)	a) wall sign	1 s.f. per linear foot of tenant space width not to exceed a sign length of more than 2/3 the subject tenant space width.	30 feet	business or identification	1 per exterior wall of the tenant premises, maximum of 2 (must be located upon premises of tenant)

	b) nameplate	6 s.f.	underside of building overhang	identification	1 per tenant
	c) window signs and displays	25% of total window area			
	individual pole and ground mounted signs prohibited				
Auto service stations and filling stations	a) pole sign	60 s.f.	20 feet	identification	1 pole or 1 ground sign (see footnote ²)
	OR				
	ground sign	80 s.f.	10 feet		
	b) wall sign	1 s.f. for each foot in length or height (whichever is greater) of the wall to which it is affixed (see footnote ¹)	25 feet	business or identification	4 per building (see footnote ³)
	c) window signs and displays	25% of window area			
Automobile sales	a) pole sign	60 s.f.	20 feet	identification	1 pole or ground sign for new car dealership, and/or 1 pole or ground sign for used car sales and/or 1 pole or ground sign for automotive service. Maximum of two (2) signs.
	OR				
	ground sign	80 s.f.	10 feet		
	b) wall sign	1 s.f. for each foot in length or height (whichever is greater) of the wall to which it is affixed (see footnote ¹)	25 feet	identification	4 per building (see footnote ³)

	c) window signs and displays	25% of window area			
Buildings within an office complex (as defined below)	a) wall sign	25 s.f.	20 feet	identification for offices within building	1 per tenant
	OR				
	wall sign	50 s.f.	20 feet	identification	1 per building
	b) ground sign	40 s.f.	5 feet		1 per building at site of building
	pole signs prohibited				
Buildings containing one or more offices which are under separate business management and not located within an office complex (as defined below)	a) wall sign,	25 s.f.	20 feet	identification for individual offices within building	1 per tenant
	OR				
	wall sign	50 s.f.	20 feet		1 per building
	b) ground sign	60 s.f.	8 feet	identification	1 per building
	pole signs prohibited				
Office complex (lot, parcel or building sites containing 2 or more office buildings)	ground sign	60 s.f.	8 feet	identification of complex and/or individual buildings therein	1 sign per street entrance not to exceed more than one per 2,600 lineal feet of continuous road frontage along the same public street
Off-premises signs prohibited, including billboard signs		None			None
Individual financial institutions (not located within a multi-tenant commercial center)	a) wall sign	1 s.f. for each foot in length or height (whichever is greater) of the wall to which it is affixed	20 feet	identification	4 per building, one per wall (see footnote ³)
	b) ground sign	60 s.f.	8 feet	identification	1 per building (see footnote ²)
	c) window signs and displays	25% of window area			
	pole signs prohibited				

Nonresidential uses in the R-3, Residence District (other than offices or financial services)	a) wall sign	50 s.f.	20 feet	identification	1 per wall, maximum of 2 per building
	b) ground sign	60 s.f.	8 feet	identification	1 per building
	pole signs prohibited				

¹ Wall length shall be measured in a straight line from the two farthest points on the subject side of the building regardless of any protrusions between said points which shall not be considered a separate wall(s).

² Lots, parcels, and building sites with frontage on more than one street may have one sign on each street frontage with one sign permitted a maximum sign area of 60 square feet and any additional signs limited to 30 square feet each.

³ More than one wall sign may be placed upon the same wall provided the combined square footage does not exceed the maximum display area permitted for that wall and/or the maximum number allowed for the building.

⁴ Individual commercial establishments and multi-tenant commercial centers with 400 feet or more of frontage shall be allowed one additional sign (ground sign or pole sign). Additional sign(s) shall not have a sign area or height greater than what is permitted in Schedule B.

⁵ Multi-tenant commercial centers shall be permitted an additional eight square feet of display area for each tenant over the first two. Total sign area shall not exceed 50 percent of the permitted sign area.

SECTION II. AMENDMENT OF ZONING ORDINANCE COMPILED SECTION 76.000 SIGNS AND BILLBOARDS, SUBSECTION 76.300 PERMITS REQUIRED AND CONDITIONS. Section 76.000 Signs and Billboards, Subsection 76.300 Permits required and conditions is hereby amended to read as follows:

76.300 Permits required and conditions.

Unless otherwise provided by this Section, all signs shall require permits and payment of fees. This shall include face changes for signs and billboards. No sign shall be installed or utilized until and unless a permit has been issued by the Township. No permit is required for the maintenance of a sign.

As a part of the permitting process for signs utilizing electronic changeable copy, an affidavit is required that indicates compliance with this Ordinance with regard to light levels, change of message time frames and transitions.

A permit issued pursuant to this Section becomes null and void if work is not commenced within 180 days of issuance. If work authorized by the permit is suspended or abandoned for more than 180 days, the permit must be renewed with an additional payment of one-half the original fee as provided on the fee schedule adopted by resolution of the Township Board and on file at the Township Hall.

SECTION III.

AMENDMENT OF COMPILED SECTION 76.000 SIGNS AND BILLBOARDS, SUBSECTION 76.410 LIGHTING, PARAGRAPHS H AND I. Section 76.000 Signs and Billboards, Subsection 76.410 Lighting, Paragraphs H and I of the Oshtemo Charter Township Zoning Ordinance are hereby amended to read as follows:

76.410

Lighting.

- H. Signs utilizing electronically changeable copy **signs** may not be so bright as to be objectionable or inappropriate for the surroundings. **An ambient light monitor shall be installed, which shall continuously monitor and automatically adjust the brightness level of the display based on ambient light conditions. The maximum brightness levels for digital signs shall not exceed 0.3 foot-candles over ambient light levels measured within 150 feet of the source. Brightness of electronically changeable copy signs shall be measured as follows:**
1. **At least 30 minutes following sunset, a foot-candle meter shall be used to obtain an ambient light reading for the location. This is done while the sign is off or displaying black copy. The reading shall be made with the meter aimed directly at the sign area at the pre-set location.**
 2. **The sign shall then be turned on to full white copy to take another reading with the meter at the same location.**
 3. **If the difference between the readings is 0.3 foot-candles or less, the brightness is properly adjusted.**
- I. Up to **25** 35 percent of the permitted sign area of an allowable sign may be dedicated to changeable copy or to electronically display the current time and/or temperature. This percentage shall be increased to 50 percent for filling stations solely for the purpose of displaying fuel prices within the additional area provided. This limit shall not apply to electronic billboards.

SECTION IV.

EFFECTIVE DATE AND REPEAL. All Ordinances or parts of Ordinances inconsistent with this amendment are hereby repealed. This Ordinance shall take effect upon publication after adoption in accordance with State law.

DEBORAH L. EVERETT, CLERK
OSHTEMO CHARTER TOWNSHIP

Memo



To: Oshtemo Charter Township Board
From: James W. Porter *[Handwritten Signature]*
Date: October 8, 2015
Subject: Proposed Wastewater Service Ordinance Amendment

OBJECTIVE

To amend the Township's Wastewater Service Ordinance.

BACKGROUND

Pursuant to MCL 333.12752, Section 12752 of the Public Health Code:

"Public sanitary sewer systems are essential to the health, safety, and welfare of the people of the state. Septic tank disposal systems are subject to failure due to soil conditions or other reasons. Failure or potential failure of septic tank disposal systems poses a threat to the public health, safety, and welfare; presents a potential for ill health, transmission of disease, mortality, and economic blight; and constitutes a threat to the quality of surface and subsurface waters of this state. The connection to available public sanitary sewer systems at the earliest, reasonable date is a matter for the protection of the public health, safety and welfare and necessary in the public interest which is declared as a matter of legislative determination."

Available public sanitary sewer is defined by MCL 333.12751, Section 12751 of the Michigan Public Health Code, as follows:

"(c) "Available Public sanitary sewer system" means a public sanitary sewer system located in a right of way, easement, highway, street, or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a structure in which sanitary sewage originates."

As the Board discussed, a proposed amendment to the Ordinance would require a mandatory connection for all sanitary sewer systems which reach or exceed the normal useful life of a septic system in Michigan, i.e., 15 years.

A question has arisen as to how the Township would require this connection, and the answer is relatively simple. MCL 333.12753, Section 12753 of the Michigan Public Health Code, Subsection (3) reads as follows:

“(3) Except as provided in subsection (4), the connection provided for in subsections (1) and (2) shall be completed promptly but not later than 18 months after the date of occurrence of the last of the following events or before the city, village, or township in which the sewage originates requires the connection:”

- (a) publication of a notice by the governmental entity . . . , or
- (b) modification of a structure so as to become a structure in which sanitary sewage originates.

Therefore, pursuant to Michigan law, anyone with available public sanitary sewer would have to connect not later than 18 months after published notice or generating sanitary sewage.

However, there was an exception provided to Subsection (3) and that is a township may enact an ordinance to adopt regulations to establish a different standard. The state statute says that the township “may” shorten the period for reasons of public health, but if there is no immediate public health reason, I believe that the Township then also has the latitude, per ordinance, to adopt a different standard regarding connection.

Given that, I thought it would be easier to use a 24-month notice period versus an 18-month notice period simply for ease of keeping the public record. However, the Board could reduce it to the 18-months as provided for in state law, or you could reduce it to an even shorter period after notice. Also, I believe the Township has the authority in lieu of published notice to provide direct notice to those with available public sewer at or nearing the end of its useful life.

It has come to our attention that the Kalamazoo County Health and Community Services Department, operating under a new Director, is generally supportive of requiring connection to available public sewer, but has given some indication that it is not as adamant about it as past administrations. Given that, it behooves the Township, for purposes of maintaining public health, safety, and welfare, to enact its own provisions to protect the Township residents.

INFORMATION PROVIDED

A copy of the proposed Wastewater Service Ordinance Amendment adding Subsection 8 to the Ordinance.

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

Consider the proposed Ordinance Amendment and set it for first reading.

OSHTEMO CHARTER TOWNSHIP ORDINANCE NO. ____

Adopted: _____, 2015

Effective: _____, 2015

OSHTEMO CHARTER TOWNSHIP ORDINANCE

This Ordinance amends Ordinance No. 208, being the Oshtemo Charter Township Wastewater Service Ordinance, adopted on February 19, 1985, as amended, and repeals all Ordinances or parts of Ordinances in conflict.

THE CHARTER TOWNSHIP OF OSHTEMO

KALAMAZOO COUNTY, MICHIGAN

ORDAINS:

SECTION I. ADDITION OF COMPILED SECTION 232.008 AND RENUMBERING SECTIONS 232.008 THROUGH 232.027. Sections 232.008 through 232.027 are renumbered to be Sections 232.009 through 232.028 and new Compiled Section 232.008 Timing of Connections is hereby added to read as follows:

232.008 Timing of Connections.

Sec. 8.

Any premises abutting a public sewer main, requiring sewage disposal service, and which is currently served by, or, at the end of the two-year notice period, will be served by, a septic system which is more than fifteen (15) years old, shall be connected to the abutting sewer system within two (2) years following the installation of said system, or, within two (2) years of notification of availability of sewer service by the Township, or at such earlier time as the private sewage disposal system serving the premises requires replacement, a new tile field, new dry well, or new septic tank. Wastewater and sewage disposal facilities in all buildings hereafter constructed shall be connected to the public sewer system if sewer mains are located in the abutting street at the boundaries of the site at the time of construction. New plats and subdivisions shall be developed with public water and/or sewer mains at the time of street construction if public water and/or sewer service is available at or near the boundaries of the plat or subdivision. The Township Board shall have the right to determine whether the service is sufficiently near to require such public service main installation.

SECTION II. This Ordinance shall take effect upon publication. All Ordinances or parts of Ordinances in conflict with any of the provisions of this Ordinance are hereby repealed.

DEBORAH L. EVERETT, CLERK
OSHEMO CHARTER TOWNSHIP

Memo



To: Oshtemo Charter Township Board

From: James Porter, Corporate Counsel
Marc Elliott, P.E., Director of Public Works
Julie Johnston, AICP, Director of Planning

Date: November 25, 2015

Mtg Date: December 8, 2015

Item #: 6

Subject: Sanitary Sewer Ordinance Amendments – First Reading

OBJECTIVE

First reading of the Sanitary Sewer Ordinance amendment, which would require mandatory hook-ups at the time public sanitary sewer is available and when a septic system is at least 15 years old.

BACKGROUND

November 10th Work Session

At the Board Work Session on November 10, 2015, the Board was provided information on the importance of this Ordinance amendment. The following materials were provided:

- A report from Township staff on groundwater protection, property values, cost competitiveness of sewer connections, and the overall community needs related to connections.
- A report from W.E. Upjohn titled Oshtemo Township Sewer System Impact Analysis. This report completed a statistical analysis to try and quantify the impact of the Township sewer system on residential property values. According to the analysis, homeowners will not see an increase in home value upon connecting to a public system but will realize improved values when lines are installed adjacent to their homes. The report also indicated that connecting to a public system is more cost effective when looking long term.

- Information from the Michigan State University study, which conducted research on 64 river systems in Michigan, the largest watershed study to date. The study provides a basis for evaluating water quality and health implications. It found that the primary driver of fecal bacterial levels was from leaky septic tanks. The more septic systems found in an area the higher the levels of fecal bacteria were detected.

In addition to the reports, experts were invited to the Work Session to help answer any questions the Board may have. These experts included:

- Rich Pierson, Executive Director of the Gull Lake Water and Sewer Authority
- Deb Cardiff, former Director of Kalamazoo County Health and Community Services
- Alan Smaka, P.E., Wightman and Associates

The Board discussed the information provided and a vote was taken regarding moving the ordinance amendment forward to first reading. The vote of five in favor and one against resulted in the ordinance moving forward to first reading, within one Trustee absent.

Proposed Policy/Calendar of Events

In order to move the proposed ordinance forward, many steps are going to be required before the first hook-up takes place. The following information is a general overview of how the Township may handle policy and/or issues that will be required:

December 2015 – First reading of the Ordinance: If first reading can take place in December, this will give staff time to meet with the Township's financial consultant. Determinations on cash flow for the future development of sewer and the timing we will need to employ to ensure financial solvency of the projects can be resolved.

January 2016 – Second reading of Ordinance: While second reading would enact the ordinance, for it to be enforced the Township would need to send notification to the first property owners who would be required to connect. Until the Township Board directs staff to send this notification, no action would be taken.

If the Township Board decides not to move forward with second reading of the proposed ordinance amendments at this time, it will be important to stop the engineering of the 10th Street sanitary sewer extension and pump station project. Continuation of this project only makes sense if mandatory connections are required.

If second reading is approved, the design of the first sewer projects within neighborhoods will begin.

February 2016 – Funding Structure: While the ordinance is in the process of being approved, staff will have continued to work with the financial consultant to develop the best possible funding options for the future development of sewers. As was discussed in previous meetings, road reconstruction will have to take place as part of the development of sewer. Approving an alternative funding source for the road reconstruction will lower the individual homeowner's one-time costs to connect to the sanitary sewer system. Staff will provide options to the Township Board in February on how this might be achieved.

Spring/Early Summer – Road Funding: Based on discussions from the winter, the Township Board will work towards setting up whatever funding mechanism is determined best for paying for road reconstruction.

Early Summer – Property Owner Notice: If all goes according to schedule, staff would send the first notices to property owners in June or July of 2016. These property owners would have until that same time in 2018 to hook up to the sewer system. According to the proposed ordinance amendments, all property owners receive two years from either the time they receive notice from the Township or from when the sewer is available. Notice could be achieved in the following ways:

- As the calendar of projects is determined, notice is provided two years in advance of the construction of the sewer. Property owners would then have to hook-up as the sewer is installed.
- As the calendar of projects is determined, notice is provided one year in advance of construction, allowing property owners approximately one year to hook-up after the sewer is installed.
- Notice is provided after the sewer project is complete, providing a two year time period to hook-up once the sewer has been installed.

Determining which neighborhoods would be the first to receive sanitary sewer involves a number of criteria. The Township Board would consider issues like age of the neighborhood and therefore the likelihood of aging septic systems, the condition of the road, the Township's Master Plan, any citizen requests to be hooked-up to sewer, etc.

June/July 2018 – First Hook-Ups: Based on the time line proposed, the first hook-ups would take place (at the latest) in June or July of 2018. At this time, the Township will need to be ready to handle any financing requests of property owners. Based on past Board discussions, staff recommends financing be either prime plus a quarter percent or the bond rate (if used by the Township) plus a quarter percent. The additional quarter above prime or the bond rate is to help offset the staff costs of managing the financing.

INFORMATION PROVIDED

Staff report from November 10, 2015 Work Session

W.E Upjohn Institute Report – Oshtemo Township Sewer System Impact Analysis

MSU Today Article – Septic Tanks aren't Keeping Poo out of Rivers and Lakes

Bridge Magazine Article – Thousands of Failed Septic Tanks across the State Threaten Michigan's Waters

Maps: Sanitary Sewer System Capital Improvements Plan

2016/2017 Ready – Neighborhood Sewer Extensions

Color Rendering of the Orderly Extension of Public Sanitary Sewer

Occupied Parcels Ready for Sanitary Connection

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

First reading of the Sanitary Sewer Ordinance amendments.

Memo



To: Oshtemo Charter Township Board
From: James Porter, Corporate Counsel
Marc Elliott, P.E., Director of Public Works
Julie Johnston, AICP, Director of Planning
Date: November 10, 2015
Subject: Mandatory Sewer Connections Report

OBJECTIVE

The following report will provide an overview of some of the issues and concerns that have been discussed by the Township Board related to the proposed mandatory sewer connection. The intent is to provide information that might help resolve these concerns to advance an Ordinance amendment to first reading.

BACKGROUND

Groundwater Protection

Septic systems and public sewer systems both have benefits and constraints that support their use in removal of wastewater. There are benefits to septic systems that centralized systems cannot address, like the ability to service more rural areas, allow development where public systems are not financially feasible, and new technologies that are making septic systems more environmentally sustainable. However, there are some disturbing statistics related to septic systems that warrant concern.

According to the Department of Environmental Quality (MDEQ), there are more than 1.3 million on-site wastewater treatment systems in Michigan, most of which are septic for single-family homes. MDEQ estimates that approximately 10 percent of these have failed and are polluting the environment. This failure rate could be even higher as counties that require septic inspection as part of real estate transactions report failure rates at 20 to 25 percent to the MDEQ.¹ The Statewide Failed Sewage System Evaluation Summary Report from 2013 (the last report

¹ Jeff Alexander, "Thousands of Failed Septic Tanks Threaten Michigan Waters," *Bridge*, May 14, 2013

generated), indicates 204 failed residential systems in Kalamazoo County. This is up by 87 residential units from 2011 and it only indicates the failures that were reported.

Failures in septic systems result in significant environmental issues, particularly related to groundwater which is the only source of drinking water in the Kalamazoo area.² Untreated sewage can help spread health issues like dysentery resulting from pathogens in drinking water and can damage the purity of our lakes and streams. In 2015 Michigan State University, through Professor Joan Rose who holds the Homer Nowlin Chair in Water Research, tested 64 rivers in the Lower Peninsula where signs of E.coli were routinely detected. The study indicated that the primary driver of fecal bacterial levels was from leaky septic tanks, the more septic systems in the area the higher levels detected.³ Scientists from the University also found the highest levels of genetic markers indicating human waste in five rivers statewide, one of which was the Kalamazoo River.⁴

Unfortunately, all things are not equal when it comes to septic tanks and public systems in the State of Michigan. MDEQ has rules and guidelines governing on-site wastewater systems, particularly related to construction, permits and inspection during construction. This permitting and review process is relegated to the local health departments. MDEQ indicates that the reviewing agency is to make inspections, as deemed necessary, during the construction of the system. The Kalamazoo County Sanitary Code is managed by the Environmental Health Division of the Health and Community Services Department. They also have language related to permitting, construction and inspections of septic systems during construction. However, neither oversight agency has any requirements for continuing inspections. Both organizations indicate that maintenance is the homeowners' responsibility and both provide guidelines for maintenance, like what is acceptable to be placed in the system. But, with no requirements for continued inspection there are no guarantees.

This is where the difference between on-site septic systems and public systems becomes most apparent from a community governance standpoint. While most homeowners are likely diligent in ensuring their septic system works, total reliance on individual oversight is problematic. With no requirements for continued inspections, systems could be failing without the homeowners' knowledge. In areas of the Township where sanitary sewer systems are available, this concern for groundwater and public health can be negated. Public health and safe groundwater can only be significantly addressed from a larger community standpoint, which is where the Township can play a role. Requiring mandatory hook-ups to the existing and developing sanitary sewer system can support these efforts.

² Environmental Health Division Website, Kalamazoo County

³ Marc P. Verhougstraete, Sherry L. Martin, Anthony D. Kendall, David W. Hyndman, and Joan B. Rose, "Linking Fecal Bacteria in Rivers to Landscape, Geochemical, and Hydrologic Factors and Sources at the Basin Scale," *Proceedings of the National Academy of Sciences* 73 (August 2015, vol. 112, no.33): 10419-10424

⁴ Jeff Alexander, "Thousands of Failed Septic Tanks Threaten Michigan Waters," *Bridge*, May 14, 2013

Public wastewater treatment plants are strictly governed by both state and federal laws. Discharge from public facilities are monitored by MDEQ and permits are required every five years. In addition, the City of Kalamazoo, who runs the facility for Oshtemo's waste, conducts regular testing and must provide the MDEQ annual reports on discharge into the Kalamazoo River. This governmental oversight provides more control than individual septic systems, limiting the discharge of pollutants into the environment. According to the City's website, the Kalamazoo Water Reclamation Plant has a reputation of producing some of the best effluent, or clean water, in the state.

The importance of utilizing public sanitary sewer systems is outlined in Public Health Code for the State of Michigan. Pursuant to Act 368 of the Public Acts of 1978, as amended, a local city, village or township can require an existing structure to connect to available public sanitary sewers. Available public sanitary sewer system means a public system located in a right of way, easement, highway, street, or public way which crosses, adjoins, or abuts upon the property and passing not more than 200 feet at the nearest point from a dwelling in which sanitary sewage originates. The Public Health Code states under Section 12752:

"Public sanitary sewer systems are essential to the health, safety and welfare of the people of the state. Septic tank disposal systems are subject to failure due to soil conditions and other reasons. Failure or potential failure of a septic tank disposal system poses a threat to the public health, safety and welfare; presents a potential for ill health, transmission of disease, mortality and economic blight; and constitutes a threat to the quality of surface and subsurface waters in the state. The connection to available public sanitary sewer systems at the earliest, reasonable date is a matter for the protection of the public health, safety and welfare and necessary in the public interest which is declared as a matter of legislative determination."

Property Values

Residential property values are determined by a number of factors like location of the neighborhood, external characteristics or "curb appeal," internal characteristics like number of bedrooms, and supply and demand. According to Investopedia, an investing education internet site, property values are also determined by future governmental development in an area. Plans for schools, hospitals, roads, and other public infrastructure will have as much influence on land values as present and future development of commercial amenities.⁵ Based on this evaluation, property values in the Township should be influenced by the availability of public sanitary sewer.

To answer this question, W.E. Upjohn Institute (Institute) conducted a statistical analysis to try and quantify the impact of the Township sewer system on residential property values. The Institute sorted the parcel data into those connected to public sewer and those still on septic.

⁵ Robert Stammers, *Top 4 Things that Determines a Home's Value*, Investopedia, <http://www.investopedia.com/articles/mortgages-real-estate/08/housing-appreciation.asp#ixzz3q4DITIZJ>

They then grouped the parcels by acreage, house size and number of bedrooms. Groups of like parcels were then compared based on their connection to sewers. Essentially, like houses were compared with the only variable being whether the house was connected to the Township sewer.

A regression analysis was then conducted holding all variables constant while looking for a difference in property values between those that are connected and those that are still on septic. The results were quite interesting. A link between property values and being connected to the public sewer system was not found. However, there was a statistical significance between having access to public sewer and property values. A home where sewer is available is more valuable than a home where sewer is not located. According to the Institutes analysis, homeowners will not see an increase in home value upon connecting to a public system but will realize improved values when lines are installed adjacent to their homes.

Essentially, homes that have access to the public system but do not connect are reaping the benefits of that system, increased property values, without paying their fair share of the cost to support the system. An analogy could be made between public sewers and other public "systems" that the Township provides. Fire protection, for example, is paid for by a millage that is assessed to all property owners. An individual owner may never require access to fire protection but the importance of providing that public benefit is necessary to both the individual and the community as a whole and therefore everyone pays their fair share of the costs.

Cost Competitive

The proposal before the Board is to require connection to public sanitary sewer only when a septic system is 15 years or older. The W. E. Upjohn report highlights the fact that this is the optimum time to connect to public sanitary sewer. The report states that the cost to replace a septic system and the cost to connect are roughly the same – approximately \$10,000. It is important to note that the report dealt with replacing an old septic system not placing one on undeveloped land. Avoiding the second septic system versus the cost of public sanitary sewer over the next 15 to 20 years is practically a wash. The cost to install and maintain a septic system for 40 years is roughly \$26,327.33. The cost to connect and maintain the public sanitary sewer over that same time period is roughly \$27,577.78. The costs at this point are roughly even because septic systems typically have to be repaired or totally replaced after 15 or 20 years.

If the Township intervenes in the process after the septic system has reached 15 years of age, the homeowner has generally utilized the full benefit of that system. If they are then placed on public sanitary sewer, in 15 to 20 years the cost between the two systems will be virtually identical because the sanitary septic system will no longer need to be repaired or replaced. Even adding the additional cost of filling or crushing the septic tank can often be offset by not losing valuable landscaping. The competitiveness of cost coupled with the Township's installment payment mortgage agreement, which allows for a 15-year payoff for the installation of public

sanitary sewer, makes the cost of public sanitary sewer very viable. Moving past the 40 year time period, the cost effectiveness of sanitary sewer only increases.

On average, connecting to the public sanitary sewer system will cost approximately \$10,000 per household. There are several ways this costs can be managed. The table below outlines the different methods of paying for the hook-up, the average cost per year and the total cost to the homeowner:

Payment Method	Terms	Interest Rate*	Cost Per Year	Total Cost
Cash to Township	0 Years	0%	\$10,000 (year one only)	\$10,000
State Assistance for Low-Income 65 and Older and the Disabled	At the sale of the home	0%	\$0	\$10,000
Home Equity Loan	15-Years	3.63%	\$864	\$12,983
Home Equity Loan	30-Years	4.04%	\$576	\$17,270
Township Financing	15-Years	5.63%	\$984	\$14,832

*Interest rates from BankRate.com on Tuesday, November 3, 2015

As can be seen, the most inexpensive route to the homeowner, outside of paying cash, is a home equity loan with a 15-year term. However, if the property owner is unable to access a private home equity loan, the Townships financial terms are not much more expensive overall. There is a \$1,849 difference in final costs between these two financing methods.

Overall Community Service

The introduction to Oshtemo’s Master Plan (following a purpose statement relating to zoning (pg 9)) identifies that an important function of the Master Plan is to “...guide developers and potential homeowners in making investment decisions.” This is followed by “...provides guidance and coordination in the provision of public services.” The first identifies a dependency of private investors, to obligations of the Community. The second identifies the proactive means to fulfill this obligation through the provision of public services. The Board has propelled its “guidance and coordination” role forward through its adoption of a detailed Capital Improvements Plan.

The current challenge becomes not one of direction, guidance or coordination, but commitment. The CIP is currently silent with respect to certain financing needs—particularly as it relates to sanitary sewer. Current and previous Boards adopted a fee-based strategy that is designed to

largely pay for the costs of installed public infrastructure. Unfortunately, the current policy has a fatal flaw due to the timing mismatch of the cost-of-project (immediate) versus the connection-based revenues (delayed).

For the most part, the extension of sanitary sewer interceptors into the undeveloped fringe has proceeded forward. This has facilitated the orderly growth of the community. Private investors often recognize the increased value which utility extensions bring, and are therefore willing to wait on the service extensions, or are willing to participate directly in the cost of the service extensions. Prominent examples include the 9th St roadway and public sewer extension which was financed by Meijer, and the many private developments which have extended public utilities internally at private cost.

Unfortunately, the financial mismatch of the current strategy appears insurmountable when applied to long-term public sewer infrastructure investments to extend sewer service into existing neighborhoods. We have heard that developed neighborhoods are arguably the area of greatest need. Large, relatively dense populations on septic systems continue to generate increasing volumes of domestic wastewater that threaten our critical groundwater resources. Equally important is the need to respect the private investment decisions already made. Arguably, the Township is failing its obligation to help preserve these private investments when it fails to provide utility services, and allows roadways to decline. A review of the pavement ratings of local roads identifies (by policy) a direct and continual degradation of roads in unserved areas. This is because the reconstruction of road pavements where sanitary sewer is needed is contrary to current policy.

There is an identified “free-rider” effect for property owners that have access to sewer service, but are not connected. Without connecting, there is no benefit to the Community as septic wastewater continues to be discharged to groundwater, regardless of the community’s public sewer investment. In the converse, we learned in 2011 that 33 percent of the Whitegate neighborhood is on their third septic system. While there is no “free rider” effect in this neighborhood, the owners continue to face a major, individualized risk. If their septic fails, they have no alternative to paying the cost of a septic system re-build. They lack a fallback (i.e. the “insurance” of an available public sewer) should their septic system fail. This risk-reduction may partially contribute to the free-rider effect that the Institute’s analysis discovered.

As noted earlier, there is no effective monitoring to assure the septic system is functional. This will continue indefinitely without some measure to assure eventual capture of the sanitary wastewater and capture of the public investment through the collection of connection fees. The Board’s Capital Improvements Committee (CIC) identified this problem several years earlier. The CIC had recommended in advance of the CIP Plan that the Board adopt a mandatory connection policy.

More recently, the CIC has begun to review the basis of the current sanitary sewer connection fees. As noted, fees are designed to capture the costs of a generic sanitary sewer project within an existing subdivision. The complete project necessarily includes the reconstruction of the plat road. Both are to the benefit of the abutting property owners, and the collected fees are intended to recover these costs. The portion of work attributable to the roadway reconstruction is estimated to entail approximately 30% of the total project cost.

The CIC is also tasked to consider roadway capital projects. The current policy is focused upon regular maintenance (via chip-seals) to preserve existing pavements. Oshtemo has one of the highest average local road ratings within Kalamazoo County. When chip seals or hot-mix asphalt wedging is no longer viable, the roadway must be milled and overlaid, or reconstructed. By policy, 50 percent of this project cost is collected through a roadway special assessment. The CIC is beginning to see that once this inflection point is crossed (where a Special Assessment is required), there is great reluctance and controversy among property owner to pay such a large cost. The CIC committee has been examining other Townships (Alamo, Climax, Kalamazoo and Texas) that have adopted roadway funding by special millage or a special assessment as a supplemental funding source. More importantly for this discussion, should an alternative funding source become available for pavement reconstruction, the CIC believes a potential 30 percent cost reduction of the Township's sewer connection fee could be derived.

In summary, community volunteers, professional staff, and joint meetings of the Township Boards, have all helped guide the current CIC Plan. Challenges remain in moving the plan forward, including financial limitations. The CIC has identified that a policy of mandatory connections for utilities, plus the potential to combine utility fee reductions with new/alternate roadway funding may be one way forward for the Board to consider.

INFORMATION PROVIDED

W.E Upjohn Institute Report – Oshtemo Township Sewer System Impact Analysis
MSU Today Article – Septic Tanks aren't Keeping Poo out of Rivers and Lakes
Bridge Magazine Article – Thousands of Failed Septic Tanks across the State Threaten Michigan's Waters
Maps: Sanitary Sewer System Capital Improvements Plan
2016/2017 Ready – Neighborhood Sewer Extensions
Color Rendering of the Orderly Extension of Public Sanitary Sewer
Occupied Parcels Ready for Sanitary Connection

STATEMENT OF WHAT YOU ARE ASKING BOARD TO APPROVE

Consider the proposed Ordinance amendment and submit it for first reading.

10-29-15

Oshtemo Township Sewer System Impact Analysis

The staff of the W.E. Upjohn Institute (Institute) examined several factors and used statistical analysis in an attempt to quantify the impact of the Oshtemo Township (Township) sewer system on residential property values. Institute used parcel data supplied by the Township as the primary data and parcel data supplied by the City of Portage as supporting data.

Methodology and Results

1. Using the parcel data supplied by the Township, Institute sorted the parcels into two main groups, those connected to the sewer system and those not connected to the sewer system.
2. Institute then used statistical software to sort the parcels into like groups based on the attributes of the parcel. Institute grouped the parcels based on acreage, size of the home on the parcel (square footage), and the number of bedrooms in the home on the parcel.
3. The groups of like parcels were then compared based on their connection to sewer status. For example, a set of three bedroom, ~2,000 square foot homes that each reside on approximately half an acre of land and are connected to the sewer system were compared to a set of three bedroom, ~2,000 square foot homes that each reside on approximately half an acre of land and are not connected to the sewer system.
4. Institute performed a regression analysis on the sorted data. The analysis held the attributes of the parcels constant while looking for a change in assessed value when comparing the parcels with homes connected to the sewer system to those not connected to the sewer system.
5. The analysis revealed that parcel with homes connected to the sewer system were no more or less valuable than those not hooked into the sewer system.
6. To verify the results, Institute performed a similar analysis on each of the parcel attributes (acreage, home size, and number of bedrooms). Predictably, an increase in each of the attributes resulted in a statistically significant increase in assessed value; e.g. an increase in the number of bedrooms while holding the square footage and acreage constant resulted in an increase in SEV. Increases in acreage and home size also had a predictable and statistically significant increase.

7. Since the results were inconclusive in demonstrating an impact of sewer connection on assessed value, Institute examined another variable. Institute used geographic information system software (GIS) and data provided by the Township to determine the parcels that have access to the sewer system regardless of connection status. Institute then assigned each parcel an attribute that demonstrated access, or lack of access to the sewer system.
8. A regression analysis was performed on the parcel data using access to the sewer system as the variable in place of sewer connection status; other parcel attributes were once again held constant.
9. The results demonstrated a statistically significant difference in assessed value between parcels with sewer access and those without sewer access across all property classes. This means that the data demonstrated a strong connection between access to sewer and increases in parcel values. Institute found that this connection diminishes when looking at individual property classes; additional information would help to pinpoint the reasons for this outcome. In general and across all property classes, parcels are more valuable when they have access to sewer.

Analysis

The data revealed that a link between sewer connection status and assessed value does not exist; a home that is connected to the sewer system is no more or less valuable than a comparable home not connected to the sewer system. Conversely, the data revealed a link between access to the sewer system and assessed value; a home that is located adjacent to sewer lines is more valuable than one that is not located adjacent to sewer lines. According to the data, homeowners will not see an increase in home value upon connecting to the sewer system but will realize an increase when sewer lines are installed adjacent to their homes. There are many possible explanations for these results; unfortunately, the limited nature of the available data does not allow for further examination. Direct surveys of homeowners who have, and have not, connected to the sewer system as well as interviews with local appraisers could help in developing meaning explanations for the differences in value.

Long Term Costs

There are long term costs associated with disposal of waste, regardless of the system that a homeowner chooses to employ. Use of a septic system typically is associated with infrequent major expenses, whereas use of a municipal sewer system typically bears frequent minor expenses. Many homeowners in Oshtemo Township have access to the municipal sewer system

but continue to use their own personal septic system. Many homeowners choose continued use of their septic system because of the major up from costs associated with hooking into the municipal system.

The long terms costs associated with ownership and maintenance of a septic system are fairly comparable to those associated with connecting to the municipal sewer system and the related user fees. The costs depart when examined at different points in time. The costs associated with each system of waste management have high front end expenses and lower annual expenses. The cost to replace a septic system and the cost to connect to the sewer system are near \$10,000; the cost to maintain and pump a septic system and the quarterly sewer user fees are around or less than \$200 per year.

Septic systems need routine (typically bi-annual) service. This service is estimated at \$220 per occurrence; or an annual cost of \$110. On average, and with proper maintenance, a septic system typically last around 20 years. A septic system can have various levels of usefulness and years of service remaining; this analysis examines the fiscal impact of decisions made at the point of septic failure. The cost of replacement was gleaned from the Township Sanitary Sewer Strategy Study and verified through cursory research.

In the analysis, the Institute assumes that the Township will delay much of the individual up-front costs associated with connecting to the municipal sewer system through debt financing. The annual percentage rate charged to the homeowner assumed in this analysis was 3%. This rate is not indicative of the rate given to resident through the Township, this rate is more indicative of favorable private home refinance rates or home equity lines of credit; exact rates will vary based on a number of conditions. The annual payments were calculated using a 15-year, 20-year, and 30-year term. Annual payments for the 15-year, 20-year, and 30-year debt service are \$980.60, \$798.62, and 607.11 respectively.

The estimated annual user fee was calculated using actual user fees collected over the past 12 months. The Institute collected actual user fees for randomly selected homes in the township; nine samples were taken, three each from four bedroom, three bedroom, and two bedroom houses. The results of the samples were then weighted to account for the relative share of each type of house that is connected to sewer in the Township. The average quarterly user fee is \$50.50; an annual expense of \$202.01.

Institute calculated the long-term costs associated with sewage disposal using the payment amount, cost to replace a septic system, and estimated annual expenses (applying a 2% annual inflation rate to annual expenses). Over the course of 20 years, the cost to own and maintain a septic system is \$10,622 (again, this assumes system replacement in year one), whereas the costs to connect to sewer are \$20,284 (15-year), \$21,381 (20-year), or \$17,551 (30-year). The 40-year costs associated with septic system ownership were \$26,327 (this total assumes two

septic replacements); the 40-year costs to connect to sewer are \$27,578 (15-year), \$28,674 (20-year), or \$30,915 (30-year). The cost to own and maintain a septic system is slightly lower than those associated with connecting to the sewer system over 20 and 40 years. Over the course of 60 years, connecting to a sewer system is substantially less expensive. The cost to own and maintain a septic system for 60 years is \$49,664. The cost to connect to the sewer system is \$38,416 (15-year), \$39,512 (20-year), or \$41,753 (30-year). See Table 1 for more detail.

The net present values of the four scenarios were calculated. Net present value (NPV) calculates the current value or cost of income streams or a series of costs using a discount rate. In this analysis, NPV was used to calculate the value (in today's dollars) of costs incurred in the future. NPV will favor delayed costs over higher early expenses because the funds used to pay the higher early expenses could be invested elsewhere at an assumed rate (discount rate). A relatively conservative eight percent (8%) discount rate (as a comparison, the most recent 20-year average of the S&P 500 Index was 9.63%) was used in this analysis. The NPV of maintaining a septic system over 20 years was \$-8,633.77; this means the expenses of owning the septic system over 20 years is equal to paying \$8,633.77 today. Even though the total expenses over 20 years are \$10,622 the NPV is \$-8,633.77, this is due to the fact that many of the expenses are incurred in the future and therefore discounted. The 20-year NPV calculations for connecting to the sewer system are as follows: \$-11,304.46 (15-year), \$-10,597.40 (20-year), \$-8,717.12 (30-year). The 30-year payback for a sewer connection is competitive with owning a septic over the course of 20 years; neither the 15-year nor the 20-year payback schedules are competitive with owning a septic over the course of 20 years. See Tables 1 and 2 for comparisons over 20, 40, and 60 years.

Table 1

	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr Total	\$ (10,622.46)	\$ (20,284.29)	\$ (21,380.72)	\$ (17,550.51)
40 Yr Total	\$ (26,327.33)	\$ (27,577.78)	\$ (28,674.22)	\$ (30,915.10)
60 Yr Total	\$ (49,663.94)	\$ (38,415.53)	\$ (39,511.96)	\$ (41,752.85)

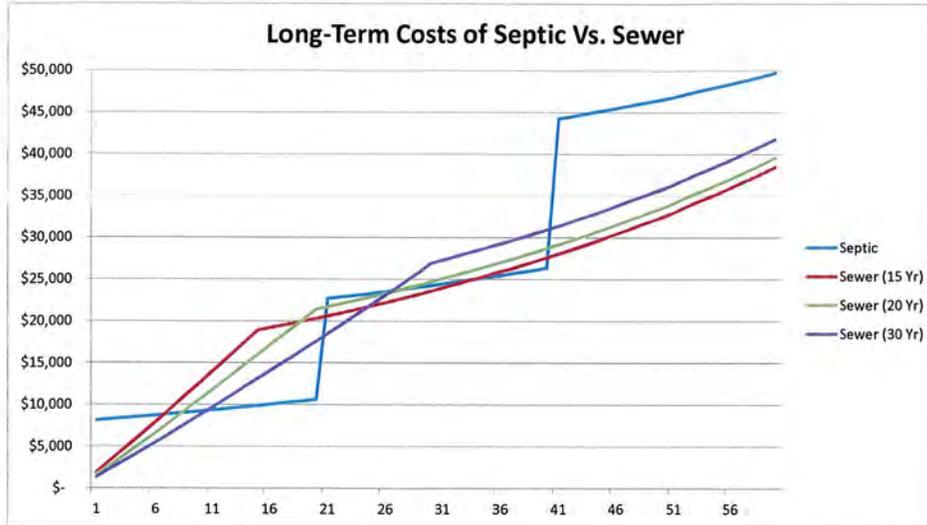
Table 2

	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr NPV	\$ (8,633.77)	\$ (11,304.46)	\$ (10,597.40)	\$ (8,717.12)
40 Yr NPV	\$ (11,377.99)	\$ (12,035.64)	\$ (11,328.57)	\$ (10,322.31)
60 Yr NPV	\$ (12,252.87)	\$ (12,268.74)	\$ (11,561.68)	\$ (10,555.41)

As you can see in Tables 1 and 2 sewer is more competitive over a longer period of time. Unfortunately, many, if not most, homeowners will not make decisions based on their financial impact over the course of 40 or 60 years. What Table 1 does not show is the competitiveness of sewer over the course of the first seven years, see Chart 1. Sewer is very competitive with septic ownership at the point of septic system failure and for about seven years after the point of failure. At the time of septic failure, sewer connection, with a delayed cost model, may seem

attractive to a homeowner who may not have large cash reserves to cover the high up-front cost of septic replacement.

Chart 1



A Second Scenario

The Township could help to offset some of the costs associated with connecting to the sewer system by installing sewer leads when roads are reconstructed. About 30% of the cost to connect to the sewer system is realized in the demolition and reconstruction of the road above the connecting pipes. The Township is contemplating a policy that call for the installation of sewer leads to each parcel when a road is reconstructed and sewer mains installed. This would significantly reduce the cost of connecting individual parcels to the sewer system. The Township would need to realize the additional costs of installing the sewer leads through some other mechanism. Nonetheless, the following calculations in tables 3 and 4 are based on the reduced individual expense. The same methodology was uses as before, only the cost to connect to sewer was changed.

Table 3

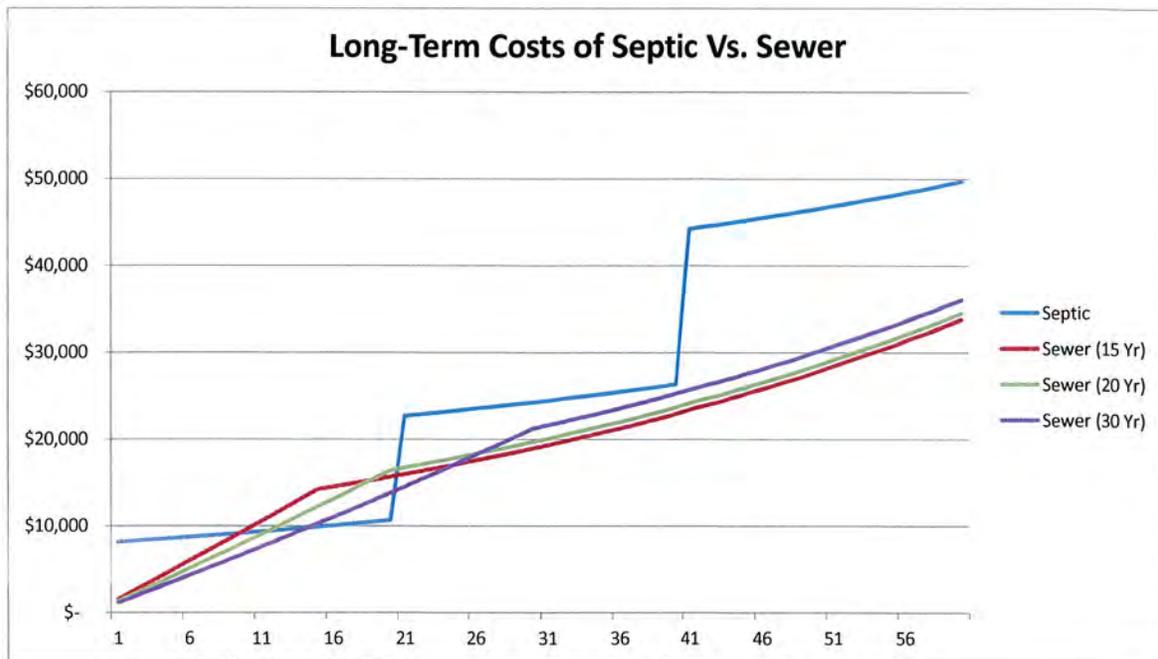
	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr Total	\$ (10,622.46)	\$ (15,622.86)	\$ (16,389.34)	\$ (13,756.07)
40 Yr Total	\$ (26,327.33)	\$ (22,916.35)	\$ (23,682.84)	\$ (25,223.44)
60 Yr Total	\$ (49,663.94)	\$ (33,754.10)	\$ (34,520.58)	\$ (36,061.19)

Table 4

	Septic	Sewer (15 Yr)	Sewer (20 Yr)	Sewer (30 Yr)
20 Yr NPV	\$ (8,633.77)	\$ (8,644.51)	\$ (8,147.09)	\$ (6,854.40)
40 Yr NPV	\$ (11,377.99)	\$ (9,375.68)	\$ (8,878.27)	\$ (8,186.46)
60 Yr NPV	\$ (12,252.87)	\$ (9,608.78)	\$ (9,111.37)	\$ (8,419.56)

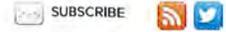
As you can see in tables 3 and 4, the cost to connect to sewer is much more competitive both in terms of actual costs and in net present value. It is still more economical, in actual costs, over the course of 20 years to reinstall a septic tank; over the course of roughly 8-13 years or longer than 20 years it is more economical to connect to the sewer system. See chart 2 below for a graphic representation.

Chart 2



Michigan State University masthead graphic

Search...



Agenda Item #6 - Attachment 3

Published: Aug. 3, 2015

SEPTIC TANKS AREN'T KEEPING POO OUT OF RIVERS AND LAKES

Contact(s): [Mackenzie Kastl](#), [Joan Rose](#)

The notion that septic tanks prevent fecal bacteria from seeping into rivers and lakes simply doesn't hold water, says a new Michigan State University study.

Water expert [Joan Rose](#) and her team of water detectives have discovered freshwater contamination stemming from septic systems. Appearing in the [Proceedings of the National Academy of Sciences](#), the study is the largest watershed study of its kind to date, and provides a basis for evaluating water quality and health implications and the impact of septic systems on watersheds.

"All along, we have presumed that on-site wastewater disposal systems, such as septic tanks, were working," said Rose, Homer Nowlin Endowed Chair in Water Research. "But in this study, sample after sample, bacterial concentrations were highest where there were higher numbers of septic systems in the watershed area."

Until now, it was assumed that the soil could filter human sewage, and that it works as a natural treatment system. Discharge-to-soil methods, a simple hole dug in the ground under an outhouse, for example, have been used for many years. Unfortunately, these systems do not keep E. coli and other pathogens from water supplies, Rose said.

"For years we have been seeing the effects of fecal pollution, but we haven't known where it is coming from," she said. "Pollution sources scattered in an area – called non-point – have historically been a significant challenge in managing water quality."

The researchers used source-tracking markers, a novel method Rose calls "CSI (Crime Scene Investigation) for water," to sample 64 river systems in Michigan for E. coli and the human fecal bacteria B-theta. Advances in source-tracking allow water scientists to track down the origin of non-point pollution more accurately than ever before.

Michigan, Florida and South Carolina, as well as resort areas near lakes all across the United States, rely heavily on septic tanks for human sewage. Though each state regulates septic tanks differently, more needs to be done in order to ensure humans are not contaminating surface waters by using septic tanks.

Continuing to use long-trusted methods of waste disposal systems may come at a hefty price, added Rose. The Environmental Protection Agency's latest [survey for capitol improvement](#) identifies the need to invest \$298 billion over the next 20 years on wastewater and stormwater infrastructure to meet the Clean Water Act public safety goals of swimmable and fishable waters.

"This study has important implications on the understanding of relationships between land use, water quality and human health as we go forward," she said. "Better methods will improve management decisions for locating, constructing and maintaining on-site wastewater treatment systems. It's financially imperative that we get it right."

This research was supported by grants from National Oceanic and Atmospheric Administration (Tipping Points Great Lakes Environmental Research Lab) and EPA (112013 and 118539). Contributing scientists were Marc Verhougstraete, College of Public Health, University of Arizona; Sherry Martin, Anthony Kendall and David Hyndman, Department of Geological Sciences, MSU.

SEPTIC TANKS IN THE U.S.

- 30% of households in the U.S. have septic tanks
- 7% of the households in larger communities (urban, suburban) use septic tanks
- 77 million people live in small communities
- Other states with large numbers of small community housing units using outhouses/prives are:
 - Kentucky (55,764)
 - Pennsylvania (47,902)
 - Missouri (46,223)
 - North Carolina (45,461)
- The American Society of Civil Engineering has given our wastewater infrastructure a grade D
- There are more than 100 different pathogens found in sewage
- The human risks from exposure to human sewage include: diarrhea, chronic fatigue and viral meningitis

SOURCES: AMERICAN SOCIETY OF CIVIL ENGINEERING 2013 REPORT CARD FOR AMERICA'S INFRASTRUCTURE; U.S. CENSUS DATA



Thousands of failed septic tanks across the state threaten Michigan's waters

Jeff Alexander | Bridge Magazine By Jeff Alexander | Bridge Magazine

on May 14, 2013 at 9:11 AM, updated May 14, 2013 at 9:13 AM

Public health sanitarian Regina Young wasn't sure what her staff would encounter when the Barry-Eaton District Health Department clamped down on failed septic systems in 2007.

They quickly discovered more problems than anyone anticipated in just those two largely rural counties, said Young, supervisor of the Barry-Eaton District Health Department's Water Protection Team.

In the first six years of the program, Young's staff discovered nearly 1,000 failed septic systems and 300 houses *with no septic systems whatsoever*. In those cases, household sewage was piped into the nearest farm drain, lake or stream.



IT WENT WHERE?: More than 100,000 septic systems are estimated to be malfunctioning and polluting the surrounding environment. (Bridge photo illustration/A.J. Jones)

"The ways that people come up with to get rid of their sewage just blows your mind," Young said. "It's hard to think of a worst case example ... there were so many."

By catching and correcting failed septic systems and illicit sewage discharges over the past six years, Young said health officials kept 107 million gallons of raw sewage from reaching surface waters and groundwater in the two counties between Lansing and Holland.

Problems Extend Statewide

There are about 1.3 million on-site wastewater treatment systems in Michigan, most of which are septic systems for single-family homes. State officials estimate that 10 percent of those (130,000) have failed and are polluting the environment.

But the problem may be far worse. Several counties that require septic tank inspections during real estate transactions have reported a septic system failure rate of 20 percent to 25 percent, according to a Michigan Department of Environmental Quality report.



News and Analysis from
The Center for Michigan

Related: Michigan has nation's weakest regulations on septic systems

Failed septic systems are a concern because human sewage is loaded with pathogens that can threaten the health of people who swim in polluted waters or drink contaminated well water. Several experts interviewed by Bridge said water pollution from failed septic systems is a serious, but under-appreciated, problem across Michigan.

"It's affecting our groundwater and surface waters," said Joan Rose, a water quality expert who holds the Homer Nowlin Chair in Water Research at Michigan State University.

"We've tested rivers in the Lower Peninsula during low flow conditions (when most of the river water is groundwater, not runoff from the landscape) and we can detect signs of septic tank waste," Rose said. "The more sewage tanks that are in the area, the higher the human sewage markers in the water."

Among the rivers studied, MSU scientists found the highest levels of genetic markers, indicating the presence of human fecal matter, in the South Branch of the Black River in Southwest Michigan, Bear Creek, the Kalamazoo River, the Huron River and the Pere Marquette. Rose said there was no doubt that the fecal matter in those rivers came from leaky septic systems.

Human Waste has to Go Somewhere

Each day, Michigan residents discharge about 264 million gallons of wastewater into septic systems and other on-site treatment facilities. About 10 percent of that wastewater is piped into failed on-site treatment systems, according to state data.

Over the course of a year, that amounts to 9.4 billion gallons of untreated wastewater flowing into failed treatment systems, DEQ estimates.

FAILURE TO DISPOSE

Nearly 4,500 residential septic failures were reported to local Michigan health departments in 2011, the most recent statistics available. Suburban Oakland County alone accounted for nearly 1 of every 10 reported failures.



LOCATION	SINGLE FAMILY	TWO-FAMILY
Allegan	43	1
Barry-Eaton	132	1
Bay	27	0
Benzie-Leelanau	49	0
Berrien	145	3
Branch-Hillsdale-SJ	153	1
Calhoun	172	1
Central Mich.	430	4
Chippewa	27	0
Delta-Menominee	8	0
Dickinson-Iron	25	0
District # 2	43	1
District # 4	2	2
District #10	324	1
Genesee	75	0
Grand Traverse	63	0
Huron	49	0
Ingham	65	0
Ionia	36	0
Jackson	48	0
Kalamazoo	116	1
Kenil	227	2
Lapeer	49	0
Lenawee	22	1
Livingston	70	1
LMAS	66	0
Macomb	185	1
Marquette	22	0
Mid - Michigan	144	0
Midland	105	0
Monroe	53	0
Muskegon	119	0
Northwest Mich	207	0
Oakland	407	3
Ottawa	228	2
Saginaw	61	1
Sanilac	44	0
Shiawassee	87	16
St. Clair	91	0
Tuscola	31	0
VanBuren-Cass	90	0
Washtenaw	4	1
Wayne	12	0
Western UP	53	0
Total --	4,452	

*For map of multi-county health departments, go to <http://www.michigan.gov/mdeh/0,1607,7-132--96747--,00.html> Source: Michigan Department of Environmental Quality

View full size

Some of that raw sewage — no one knows how much — ends up in lakes, streams and underground aquifers that supply drinking water wells.

Septic systems and other on-site wastewater treatment systems for homes and businesses work well when properly installed and maintained. The problem is that many homeowners fail to maintain septic systems because it's not required.

Michigan is the only state without a statewide code governing how septic systems are designed, installed and maintained. County health departments regulate where septic tanks can be installed, but just 11 of Michigan's 83 counties have programs that identify failed septic systems and force repairs.

The result is a patchwork of regulations and scores of failed septic systems that go undetected, said Richard A. Falardeau, chief of DEQ's environmental health section.

Septics Go Suburban

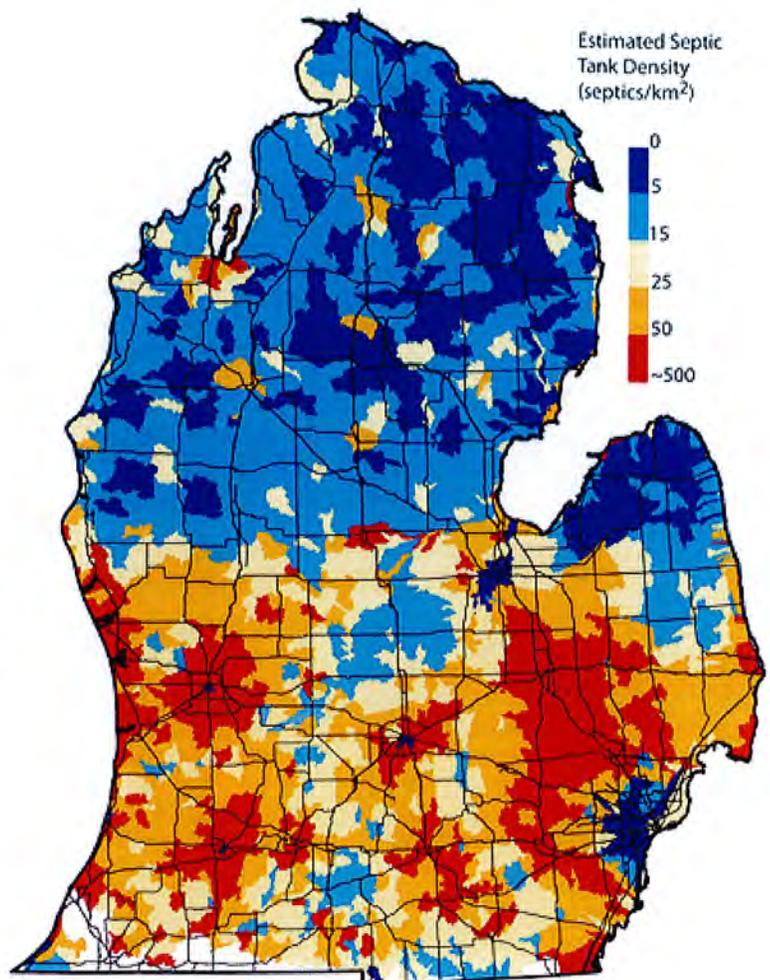
Septic systems were originally designed for rural areas, where homes often were too far away to connect to a centralized, municipal wastewater treatment system. Now the devices are a popular method of sewage disposal in many suburban communities.

The growth of suburbs over the past 50 years did more than transform the landscape: Urban sprawl also fueled a dramatic increase in the number of septic systems.

In 1990, 28 percent of single-family homes in Michigan were connected to septic systems, according to state data. By 2004, 50 percent of all new homes were using septic systems to handle household wastewater.

Local health departments issue more than 30,000 permits each year for new and replacement septic systems in Michigan.

"Back in the day we had dense communities and farms were the only places that had septic tanks. Along come interstates and urban



View full size

Michigan's million-plus septic systems are concentrated in suburban areas, according to this color-coded map from Michigan State University.

sprawl and now you have septic systems being used in a completely different manner than they were born into," said Jim Hegarty, a civil engineer and expert on wastewater treatment systems.

Nationally, 26 million homes and 60 million people use septic tanks or other on-site sewage treatment systems. The majority of those devices work as designed, but many states have reported septic system failure rates that rival Michigan's.

One of the worst cases of a failed septic system contaminating well water occurred in Door County, Wis., in 2007. More than 200 customers at a restaurant and six employees suffered intestinal ailments after drinking contaminated water.

Septics vs. Sewers

Larry Stephens, an engineer and president of the Michigan On-site Wastewater Recycling Association, said septic systems and other on-site wastewater treatment systems get a bum rap. He said small, decentralized treatment systems are more environmentally friendly than large municipal wastewater treatment facilities that serve entire communities.

"A properly maintained on-site treatment system is more sustainable than the centralized treatment systems," said Stephens, whose consulting firm oversees construction of on-site systems.

He said municipal sewer systems dump more untreated sewage into lakes and rivers than all the septic systems in Michigan combined. State data support his claim.

According to DEQ data, Michigan's municipal wastewater treatment facilities discharged 7.8 billion gallons of raw sewage and another 21.6 billion gallons of partially treated sewage into lakes and rivers in 2011. Most of those discharges occurred in Detroit and other cities where heavy rainfall overwhelmed combined sewer systems that treat both wastewater and stormwater. (See additional coverage on this at Bridge on May 16.)

"Wastewater treatment plants are supposed to fix their combined sewer overflows, but anytime untreated sewage enters the environment it is a risk," Rose said. "Septic tanks are a known risk contributing viruses to groundwater and surface water. They have been linked to (disease) outbreaks ... so we cannot ignore this."

*Jeff Alexander is owner of J. Alexander Communications LLC and the author of "Pandora's Locks: The Opening of the Great Lakes - St. Lawrence Seaway." A former staff writer for the Muskegon Chronicle, Alexander writes a **blog on the Great Lakes.***

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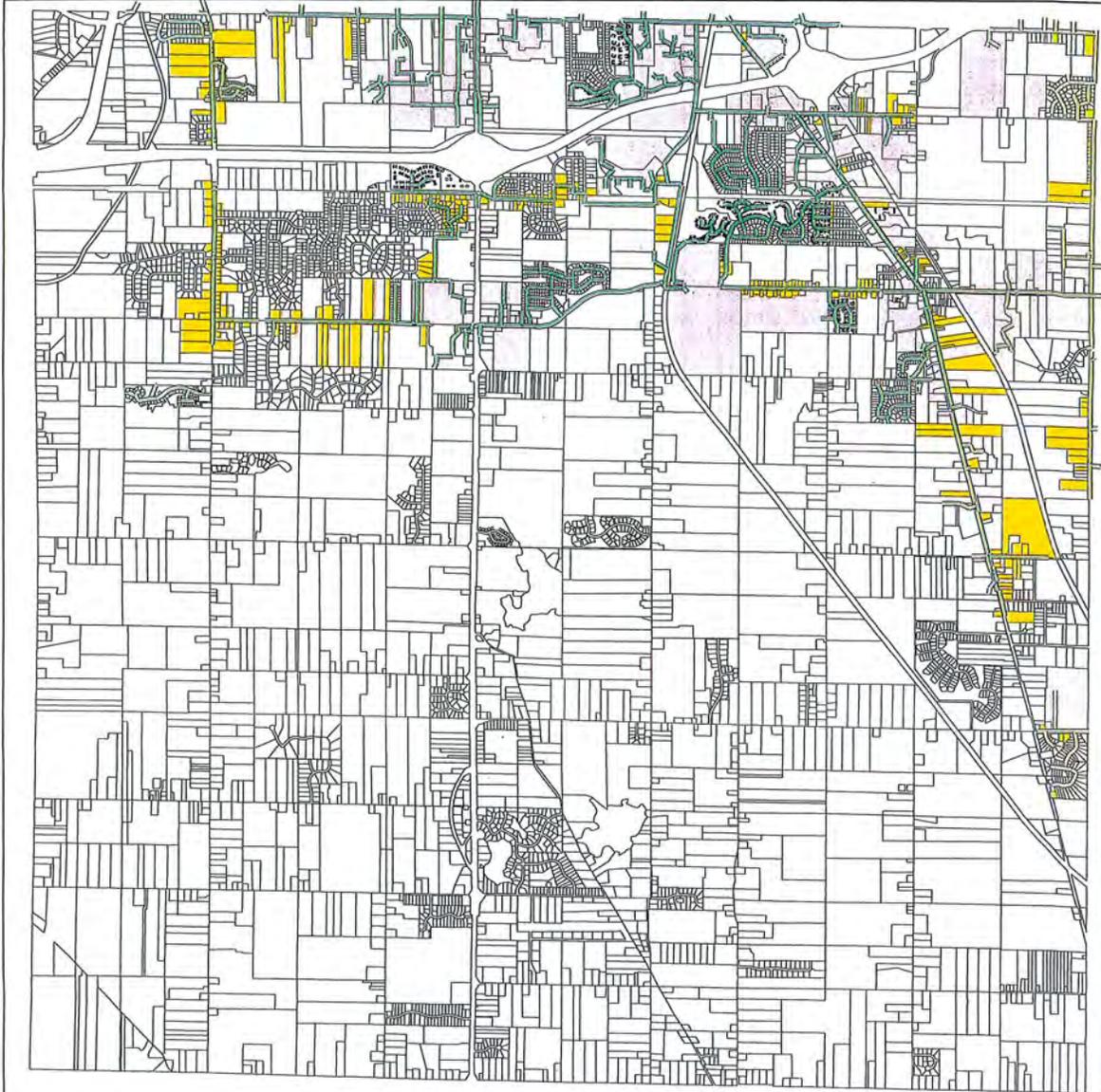
300 +/- Occupied Parcels Ready For Sanitary Connection Oshtemo TWP

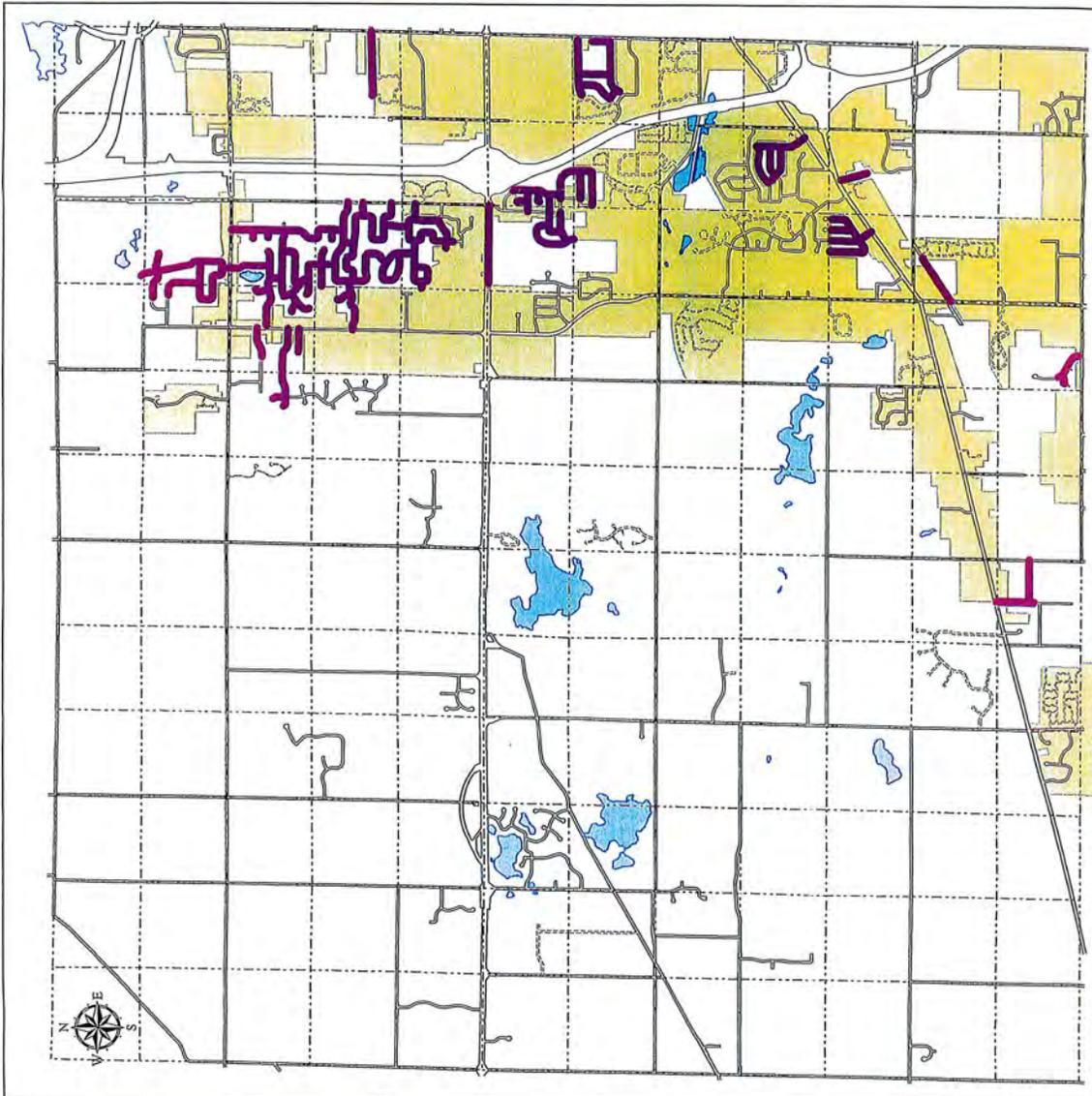
	Ready to Connect
	Connected to Sewer
	Sanitary Sewer Main



Date: 11/14/2015

This map is for reference purposes only. While it is intended to be an accurate graphic representation, its accuracy cannot be guaranteed. Any conclusions or information derived from this map are at the users sole risk.





Atlantic	450,000
Beech Street	400,000
Breckenridge East	180,000
Country Club East	700,000
Country Club South	720,000
Country Club West	760,000
Country Trail and West Pine	720,000
Fairlane	775,800
Frie & Gibbs	500,000
Meadowbrook	1,060,000
Plainview	170,000
Sky Ridge	1,413,200
Twelve Oaks	270,000
West Main Focus (south)	490,000
West Port Trails	1,720,000
Westport East	1,740,000
Westport North	2,240,000
Westport South	2,410,000
Westport West	760,000

Sum: \$18,378,100

Sanitary Service Available

**2016/2017 Ready*
Neighborhood Sewer Extensions**



The map is for reference purposes only. While it is intended to be an accurate graphic representation, its accuracy cannot be guaranteed. osptemo does not assume any liability for the map or the data used in its preparation.

Date: 11/4/2015

* Assumes 2016 Completion of the N 10th St. Sewer & Pump Station



Charter Township of Oshtemo
Kalamazoo Co., Michigan

Color Rendering of the Orderly Extension of Public Sanitary Sewer Charter Township of Oshtemo

Charter Township of Oshtemo

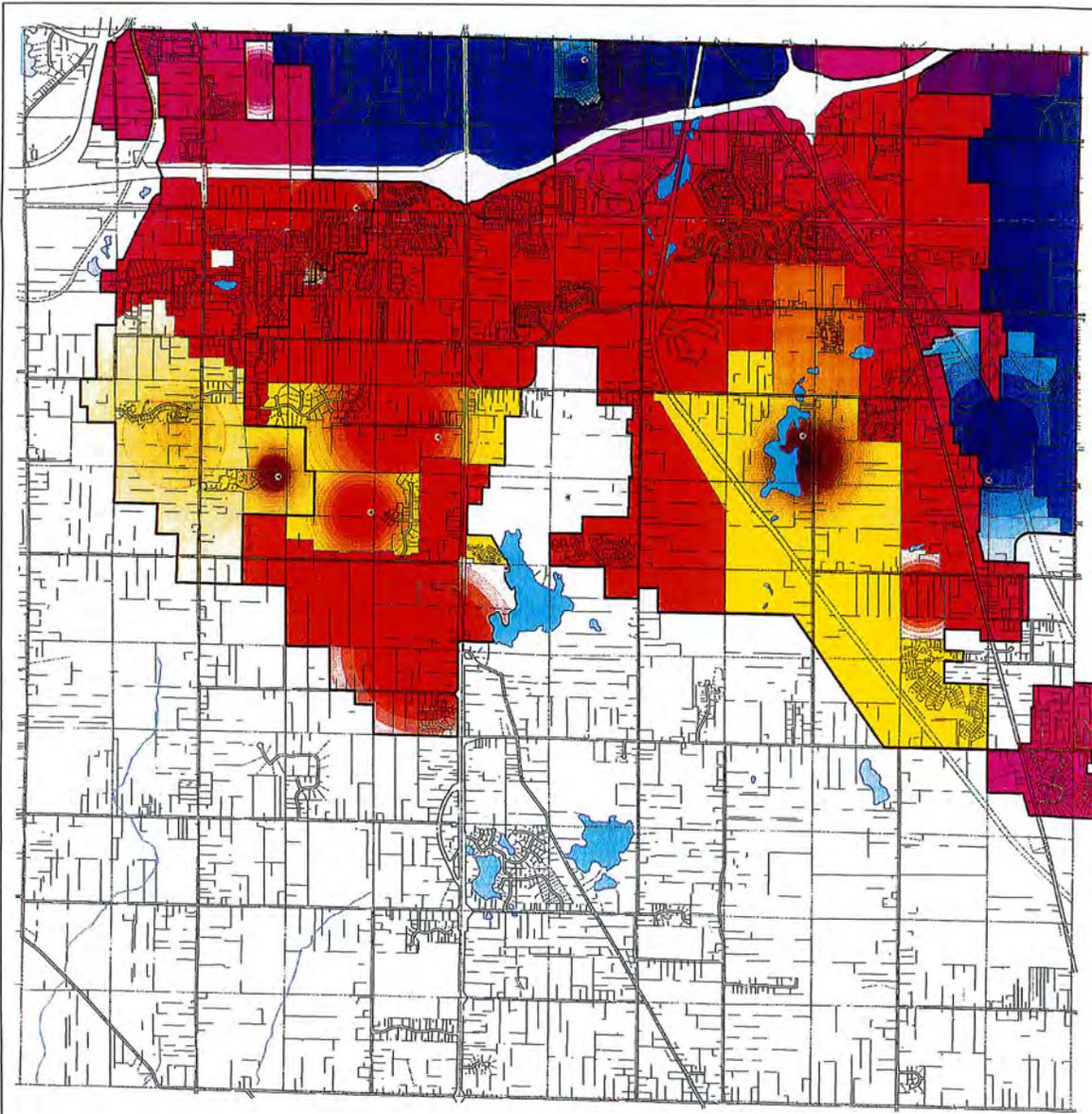
For this map, each colored polygon has been assigned a solid, background color that indicates consideration has been made in the Township Master Plan for the eventual extension of public sanitary sewer service. White parcels are beyond the current planning limit.

This type of rendering is often referred to as a heat map. The cooler colors (blue) are first, and the hottest colors (yellow) are last.

These colors also generally track both the oldest constructed and/lowest gravity sewer in elevation (blue). At the other extreme, the hottest color (yellow) will be the last built and will generally be higher in elevation.

As a general rule, the adjacent, cooler color must be built before sanitary sewer service can be provided to a warmer color.

An addition dimension are the features that may look like sun spots or a localized point-based color-ramp. This effect is used to indicate that a major new sanitary sewer pump station must be built before serving the area that surrounds and contains the point color-ramp. [Small red triangles suggest a possible location for these future pump stations.]



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Date: 11/14/2015

Memo



To: Oshtemo Charter Township Board
From: James W. Porter
Date: November 2, 2015
Subject: Proposed Amendment to the
 Begging, Panhandling and Soliciting Ordinance
 Being Ordinance No. 506 Adopted November 10, 2009

OBJECTIVE

There has been much discussion about the Supreme Court's ruling that struck down the State's anti-begging statute. Frankly, I think much of the news reporting on this subject has done a disservice to local communities trying to address specific panhandling problems. The purpose of this memo is to outline the differences between the Township's Ordinance and the State statute, which was struck down, and to provide a recommendation to add clarity to the existing Ordinance.

BACKGROUND

The Michigan Supreme Court in 2013 struck down Michigan's anti-begging statute because it was overly broad and a violation of First Amendment protections. The State statute, itself, simply said that a person "found begging in a public place" is guilty of a misdemeanor punishable by imprisonment of not more than 90 days or a fine of not more than \$500, or both. The Supreme Court found that this language was too broad and would, in fact, prohibit protected free speech because it would prohibit requesting assistance. The Court held the statute was not narrowly tailored to serve a compelling governmental interest, resulting in impeding a substantial amount of constitutionally-protected conduct, i.e., free speech.

INFORMATION PROVIDED

The Township's Ordinance, unlike the State statute, is fairly specific as to what is prohibited. A person cannot solicit on private property without first obtaining permission from the owner, and a person cannot solicit in a public place if:

1. They are under the influence of alcohol or a controlled substance;
2. In a public transportation vehicle;
3. In a public parking lot or public parking ramp or public building;

4. Within 20 feet of a public toilet;
5. Within 20 feet of an entrance to a bank, credit union, or automated teller machine.
6. From an operator or occupant of a motor vehicle;
7. Misrepresenting need;
8. In a group of two or more persons;
9. After sunset nor before sunrise;
10. Within 20 feet of an entrance to a building;
11. From a child under 16 years old; or
12. In an aggressive manner (as defined in the Ordinance)

It is unfortunate that after the Supreme Court ruling that there was virtually no enforcement of the local Township Ordinance against panhandlers because of an overly expansive reading of the Supreme Court ruling. However, we did continue to try to address aggressive panhandling, which I believe was appropriate. However, another issue has recently come to my attention from Lt. Faulk, and that concerns begging and panhandling from the road right-of-way.

REQUESTED BOARD ACTION

I have been informed that we have had complaints by various business owners from individuals panhandling along the public streets. In addition, we have had people who are panhandling in a fairly aggressive manner by walking out into traffic, knocking on windows and thereby impeding traffic. Oshtemo Township's Ordinance specifically prohibits soliciting from an operator or occupant of a motor vehicle, but because that could take place within a private parking lot, if permitted by the property owner, I am suggesting that we amend the Township Ordinance.

The Board should be aware that under MCL 257.676, a person is not to block, obstruct, impede or otherwise interfere with the normal flow of vehicular traffic. There have been a few townships recently that have amended their Begging and Panhandling Ordinances to coincide with State law on this issue.

I have been informed through Lt. Faulk and our other deputies that this type of activity does, in fact, impede traffic, and the Sheriff's Department has raised concerns about the public safety impact for not only those persons panhandling, but the drivers on our public roads when others stop to provide a donation to a panhandler.

It would be my recommendation for clarity to amend the Begging, Panhandling and Soliciting Ordinance, and have the Board set this matter for first reading at your next regularly scheduled Board meeting. See attached Ordinance Amendment.

OSHTEMO CHARTER TOWNSHIP ORDINANCE NO. _____

Adopted: _____, 201__

Effective: _____, 201__

OSHTEMO CHARTER TOWNSHIP ORDINANCE

This Ordinance amends Ordinance No. 506, being the Oshtemo Charter Township Begging, Panhandling and Soliciting Ordinance, adopted on November 10, 2009, and repeals all Ordinances or parts of Ordinances in conflict.

THE CHARTER TOWNSHIP OF OSHTEMO
KALAMAZOO COUNTY, MICHIGAN
ORDAINS:

SECTION I. AMENDMENT OF COMPILED SECTION 191.002. Section 191.002

Purpose is hereby amended to read as follows:

191.002 Purpose.

Sec. II.

The purpose of this Ordinance is to promote public health, safety and the general welfare by prohibiting begging, panhandling and soliciting in public areas which would interfere with public access, impede traffic, as well as keep the public free from intimidation or fear for their personal safety.

SECTION II. AMENDMENT OF COMPILED SECTION 191.004. Section 191.004 Regulations, Paragraph B, Subparagraph 6, is hereby amended to read as follows:

191.004 Regulations.

Sec. IV. The following actions shall constitute a violation of this Ordinance:

- B. No person shall solicit in or on a public place:
 - 6. From an operator or other occupant of a motor vehicle while entering, leaving, or operating within the road right-of-way;

SECTION III. EFFECTIVE DATE. This Ordinance shall take effect after publication in accordance with State law. All Ordinances or part of Ordinances in conflict herewith are hereby repealed.

DEBORAH L. EVERETT, CLERK
OSHTEMO CHARTER TOWNSHIP