PROJECT PLAN FOR
WASTEWATER TREATMENT
PLANT UPGRADES
FOR CITY OF HOWELL

Draft: May 2019
HRC Job No. 20190125

DRAFT

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# Table of Contents

**SECTION 1.0 — SUMMARY AND RECOMMENDATIONS** .......................................................... 1-1

1.1 **SUMMARY** .................................................................................................................. 1-1
1.2 **CONCLUSIONS** ......................................................................................................... 1-1
1.3 **RECOMMENDATIONS** ............................................................................................... 1-1

**SECTION 2.0 — PROJECT BACKGROUND** ....................................................................... 2-1

2.1 **STUDY AREA DESCRIPTION** ..................................................................................... 2-1
2.2 **EXISTING FACILITIES — COLLECTION SYSTEM** ....................................................... 2-5
2.3 **EXISTING FACILITIES — PUBLICLY OWNED TREATMENT WORKS (POTW), GENERAL** .................................................................................................................. 2-6
2.4 **EXISTING FACILITIES — SYSTEM INFRASTRUCTURE** ......................................... 2-7
2.5 **NEED FOR PROJECT** .................................................................................................. 2-11

**SECTION 3.0 — ALTERNATIVE ANALYSIS** ..................................................................... 3-1

3.1 **ALTERNATIVE 1 — UPGRADE WASTEWATER TREATMENT PLANT FACILITIES** ................. 3-1
3.2 **ALTERNATIVE 2 — NO ACTION** ................................................................................ 3-3
3.3 **ALTERNATIVE 3 — FOOTING DRAIN DISCONNECTION** ............................................. 3-3
3.4 **ALTERNATIVE 4 — REGIONALIZATION** ...................................................................... 3-3
3.5 **ALTERNATIVES ANALYSIS** ........................................................................................ 3-4

**SECTION 4.0 — SELECTED ALTERNATIVE** ................................................................. 4-5

4.1 **PROPOSED FACILITIES** ............................................................................................. 4-5
4.2 **SCHEDULE** ................................................................................................................ 4-5
4.3 **COST ESTIMATE** ....................................................................................................... 4-5
4.4 **AUTHORITY TO IMPLEMENT SELECTED ALTERNATIVE** ......................................... 4-6
4.5 **USER COSTS AND COST SHARING** ......................................................................... 4-6

**SECTION 5.0 — FISCAL SUSTAINABILITY PLAN** ......................................................... 5-1

**SECTION 6.0 — ENVIRONMENTAL IMPACTS** .......................................................... 6-1

6.1 **GENERAL** .................................................................................................................. 6-1
6.2 **ANALYSIS OF IMPACTS** .......................................................................................... 6-2

**SECTION 7.0 — MITIGATION** ...................................................................................... 7-1

7.1 **SHORT-TERM, CONSTRUCTION-RELATED MITIGATION** ............................................. 7-1
7.2 **MITIGATION OF LONG-TERM IMPACTS** ................................................................. 7-1
7.3 **MITIGATION OF INDIRECT IMPACTS** ....................................................................... 7-1
SECTION 8.0 — PUBLIC PARTICIPATION.................................................................................................................. 8-1

8.1 GENERAL .......................................................................................................................................................... 8-1
8.2 CHANGES MADE FROM DRAFT PLAN........................................................................................................... 8-1
8.3 RESOLUTION ..................................................................................................................................................... 8-1
8.4 PUBLIC HEARING ............................................................................................................................................ 8-1

SECTION 9.0 — GLOSSARY..................................................................................................................................... 9-1

APPENDICES

List of Appendices

Current NPDES Permit............................................................................................................................................. Appendix A
Significant Industrial Users........................................................................................................................................ Appendix B
Cost estimates.......................................................................................................................................................... Appendix C
Current Asset Registry .......................................................................................................................................... Appendix D
Footing Drain Disconnection Discussion ........................................................................................................ Appendix E
[NOT INCLUDED] Council Resolution ................................................................................................................ Appendix F
Correspondence.................................................................................................................................................... Appendix G
Affidavit of Publication, Public Hearing, Transcripts and Attendance List ...................................................... Appendix H
PPL Scoring Form.................................................................................................................................................. Appendix I
List of Figures

Figure 2-1: WWTP Service Area .................................................................End of Section 2.0
Figure 2-2: Current Land Use .................................................................End of Section 2.0
Figure 2-3: Future Land Use .................................................................End of Section 2.0
Figure 2-4: Marion Township Current Land Use .....................................End of Section 2.0
Figure 2-5 Marion Township Future Land Use .........................................End of Section 2.0
Figure 2-6 Wetland Map .........................................................................End of Section 2.0
Figure 2-7 FEMA Floodplain Map ..........................................................End of Section 2.0
Figure 2-8 Pump Station Locations ..........................................................End of Section 2.0
Figure 2-9 Existing Site Plan .....................................................................End of Section 2.0
Figure 2-10 Process Flow Diagram Liquid Stream ...................................End of Section 2.0
Figure 2-11 Process Flow Diagram Solid Stream .....................................End of Section 2.0
Figure 3-1 Alternative 1 Site Plan ...........................................................End of Section 3.0
Figure 3-2 Solids Dewatering Building Concept Drawing .......................End of Section 3.0

List of Tables

Table 2-1: Study Area Land Cover – City of Howell/Marion Township ......................... 2-1
Table 2-2: Population Projections ................................................................ 2-2
Table 2-3: Study Area Household Income ..................................................... 2-2
Table 2-4: 2018 Average POTW Data .......................................................... 2-7
Table 4-1: Proposed SRF Project Schedule .................................................. 4-5
Table 4-2: Proposed Design and Construction Schedule ................................ 4-5
Table 4-3: Total Project Estimated Cost Summary ........................................ 4-6
Table 4-4: User Cost Summary ..................................................................... 4-6
SECTION 1.0 — SUMMARY AND RECOMMENDATIONS

1.1 SUMMARY

The Project Plan for the City of Howell Wastewater Treatment Plant (WWTP) improvements has been prepared using the Project Plan Preparation Guidance of the State Revolving Fund (SRF) Administrative Rules, and with assistance from EGLE’s Environmental Science and Services Division (ESSD). The SRF provides for financial assistance in the form of low interest loans, currently at 2.0%. These rules call for compliance with the basic Federal Planning Requirements and the National Environmental Policy Act (NEPA). This Project Plan will serve as a basis for project prioritization and must be submitted to the EGLE by July 1, 2019 in order to be on the project priority list for the fiscal year 2020 (October 1, 2019 to September 30, 2020).

1.2 CONCLUSIONS

The following is a summary of the existing issues this Project Plan identified at the City of Howell WWTP:

- Influent pumping, UV disinfection and other facilities lack sufficient wet weather capacity.
- No backup fine screen unit is present.
- The grit removal process is exposed to the elements and should be enclosed.
- Existing primary and final clarifiers and sludge pumps have deteriorated and require various upgrades.
- An additional aeration tank is needed, and existing aeration tanks require modifications in order to allow them to adequately handle increased organic loading from the Pepsi Bottling Group facility.
- A new chemical feed system is required to provide a backup mechanism for phosphorus removal.
- A new solids dewatering building and process is required to allow for landfilling of solids.
- The Laboratory, Administration Building, and other buildings at the site are aging and require upgrades.
- Plant infrastructure including motor control centers, service water system, and driveway require upgrades and/or replacement.

1.3 RECOMMENDATIONS

The selected projects identified in this Plan are the most cost-effective and environmentally-sound alternatives. The following recommendations are therefore made:

- The City Council should pass a resolution formally adopting this Project Plan.
- The City should apply for a low-interest loan under the SRF program.
- The City should continue its involvement/support of on-going programs relating to water pollution control and energy reduction.
SECTION 2.0 — PROJECT BACKGROUND

2.1 STUDY AREA DESCRIPTION

2.1.1 General

The City of Howell is located in Livingston County, Michigan. The total City area is approximately 5.3 square miles or 3,392 acres. The City's WWTP is located at 1191 South Michigan Avenue. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001.

The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. The WWTP service area is shown on Figure 2-1.

2.1.2 Land Use

The largest three (3) land use types within the City of Howell (excluding open space and utilities) are residential (26.6%), government/institutional (16.0%) and industrial (13.1%). The existing and proposed land use within the City of Howell and Marion Township are shown in Figures 2-2 through 2-5 and summarized as follows:

Table 2-1: Study Area Land Cover – City of Howell/Marion Township

<table>
<thead>
<tr>
<th>Land Cover Type</th>
<th>City of Howell</th>
<th>Marion Township</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acreage</td>
<td>Percent of Total Area</td>
</tr>
<tr>
<td>Residential</td>
<td>903</td>
<td>26.6%</td>
</tr>
<tr>
<td>Commercial</td>
<td>289</td>
<td>8.5%</td>
</tr>
<tr>
<td>Industrial</td>
<td>446</td>
<td>13.1%</td>
</tr>
<tr>
<td>Institutional</td>
<td>541</td>
<td>16.0%</td>
</tr>
<tr>
<td>Agricultural</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Water/Wetlands</td>
<td>257</td>
<td>7.6%</td>
</tr>
<tr>
<td>Transportation (inc. airport)</td>
<td>597</td>
<td>17.6%</td>
</tr>
<tr>
<td>Outdoor Recreation</td>
<td>359</td>
<td>10.6%</td>
</tr>
<tr>
<td>Total</td>
<td>3,392</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: 2008 Southeastern Michigan Council of Governments (SEMCOG) Data
2.1.3 Population Data

Population numbers and projections for the City of Howell came from the SEMCOG database. July 2018 SEMCOG data estimated the average household size in the City at 2.18 people per household. The population projections over the next 20 years for the City of Howell and Marion Township are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>City of Howell Population</th>
<th>Marion Township Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>9,489</td>
<td>9,996</td>
</tr>
<tr>
<td>2018</td>
<td>9,203</td>
<td>10,824</td>
</tr>
<tr>
<td>2040</td>
<td>10,951*</td>
<td>12,815*</td>
</tr>
<tr>
<td>2045</td>
<td>11,256*</td>
<td>13,071*</td>
</tr>
</tbody>
</table>

* SEMCOG projections

Recent projections show the 2018 population having decreased slightly since the 2010 Census in the City of Howell, while Marion Township has gained population. By 2045 the population in both areas is expected to increase by approximately 21% relative to present day values.

2.1.4 Economic Characteristics

Major employers in the region include Pepsi, Citizens Insurance and Thai Summit.

SEMCOGs median household incomes for the City of Howell and Marion Township are noted below in Table 2-3.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Median Annual Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Howell</td>
<td>$41,452</td>
</tr>
<tr>
<td>Marion Township</td>
<td>$82,787</td>
</tr>
</tbody>
</table>

2.1.5 Cultural and Environmental Settings

Cultural Setting:

Livingston County and the City of Howell have many archaeological and cultural resources. However, none of these will be impacted by the proposed project. All work will be undertaken at the existing WWTP site. The WWTP site is generally not viewed by the public and therefore all work proposed within on that site will not have any impacts. The State Historic Preservation Office (SHPO) was contacted to aid in the identification of significant historical and archaeological sites which may be affected by the project. All correspondence related to this matter are included in Appendix G.
Air Quality:

Mobile source emissions, mainly from automobiles, are the primary source of outdoor air pollution in this area. The area has the noise pollution characteristics of a typical urban, industrialized community. No noise pollution problems exist in residential areas, other than from traffic noise from adjacent major roadways. Commercial and business areas experience only normal traffic noise.

Wetlands:

The major water body in the City of Howell is Thompson Lake, which is fed by natural springs and the local watershed. Thompson Lake is located in the northeast portion of the City. There are localized wetlands associated with the lake. There are wetlands associated with the Marion-Genoa Drain, which is the outlet for the WWTP. However, there are not wetlands associated with the existing plant footprint, which is where the work is anticipated. For final design, any wetlands that may be impacted would be flagged and the appropriate permits will be applied for. However, it is not anticipated to be an issue for this project.

One of the Phase II projects, bioxide improvements at the Marion Township pump station, will be located off of the WWTP site. This location does not have any wetland within the proposed work area.

Wetland maps are shown in Figure 2-6.

Coastal Zones:

None exist in the study area.

Floodplains:

The WWTP was constructed close to the Marion & Genoa Drain in order to allow the plant to discharge into the drain (in accordance with its NPDES permit). Because of this, part of the project area overlaps with the 100-year floodplain of the Marion and Genoa Drain. This was determined by reviewing the National Flood Insurance Map for the area. Steps will be taken to avoid any work which would affect the floodplain. Any work which does impact the floodplain will only be undertaken after first contacting EGLE and obtaining the appropriate permits.

FEMA floodplain maps are shown in Figure 2-7.

Natural or Wild and Scenic Rivers:

The rivers within the study area have recreational and aesthetic value but are not classified as “Natural” or “Wild and Scenic” by the Michigan Department of Natural Resources (MDNR).
Surface Waters:

Major surface water bodies in the City of Howell include Thompson Lake on the east boundary and other small lakes throughout the City. Other surface water bodies include the southwest branch of the Shiawassee River, the Marion and Genoa Drains and other miscellaneous drains throughout the City.

Recreation Facilities:

The City of Howell and surrounding communities has 21 parks which offer a wide selection of activities, including ball fields, a boat launch, tennis courts, and walking/biking trails. In addition to these parks, the City has several other publicly owned facilities including an Aquatic Center, Teen Center, and Senior Center. No parks or other publicly owned facilities will be impacted by the proposed work.

Topography:

The terrain within the City of Howell is characterized by rolling topography and scattered small lakes. The lowest elevation is 835 feet (above sea level) and the highest point is 1070 feet. The largest body of water, Thompson Lake static water level is approximately 904 feet with the majority of the City of Howell between 910 and 950 feet.

Geology:

Livingston County mainly consists of outwash deposits. This glacial material, referred to as glacial drift, was deposited as the glaciers receded from this area of the continent approximately 18,000 years ago. Underlying the glacial drift is bedrock, which consists of gently to rolling sedimentary rock formation. Four types of bedrock make up the bedrock surface in Livingston County, which include Marshall Sandstone, Coldwater Shale, Michigan Shale, and Saginaw Shale.

Soils:

According to the Michigan Geographic System Soils layer, the project area mainly consists of four types of soils, Boyer-Fox-Wasepi, Miami-Conover-Brookston, Miami-Hillsdale-Edwards and Spinks-Houghton-Boyer.

As part of the final design process, soil borings will be taken near the proposed work areas to determine if any special construction methods will be needed.

Agricultural Resources:

There is no agricultural land located within the City limits. Marion Township has approximately 5,840 acres of agricultural land. However, the proposed work is all on the Howell WWTP property. Therefore, the Township agricultural resources will not be impacted by the proposed work.
Existing Plant and Animal Communities:

Wildlife within the study area includes animals and birds normally associated with urban or agricultural environments.

The Michigan Natural Feature Inventory and U.S. Fish and Wildlife (USFW) Technical Assistance website was reviewed for federally or state listed threatened and endangered species. According to the USFW website, two (2) endangered species, the Indiana bat and Snuffbox mussel, are listed as being located within Livingston County. The Indiana bat usually lives in wooded areas. The Snuffbox mussel lives in medium sized creeks with swift currents. In addition to the two (2) endangered species, there is also one candidate species, the Eastern Massasauga rattlesnake, known to occur in Livingston County. The usual habitat for this type of snake is wetland areas and prairie fens. As all of the work is to take place on the existing WWTP property, which is already developed, therefore will be no impacts to these types of habitats.

According to the USFW Technical Assistance website, there is one (1) threatened plant species, the East Prairie Fringed Orchid, known to occur in Livingston County. Again, because all work is proposed on the WWTP site, which is already developed, there will be no impacts to the plant. The US Fish and Wildlife and the Michigan Natural Features Inventory (MNFI) were contacted regarding endangered species. MNFI has indicated that there is one state-threatened species, the spotted turtle, which may be located in the project area. However, the proposed improvements are all to take place at the WWTP facility. One of the Phase II projects will take place at an existing pump station site.

All correspondence regarding endangered/threatened plants or animals is included in Appendix G.

2.2 EXISTING FACILITIES – COLLECTION SYSTEM

The collection system has been studied and improvements made to reduce inflow and infiltration over the years. At this time, there are no plans for further improvements to the existing sewer system. The collection system was not examined in detail as part of this Project Plan.

The City’s sanitary sewer system consists of approximately 43 miles of 6” to 36” diameter sanitary sewer. In addition to the collection system, there are 13 pump stations located in the City of Howell and an additional 9 pump station on the Marion Township system. These pump stations are primarily in good condition and are not in need of upgrades at this time (with the exception of the Dam Site pump station which is currently being upgraded). The pump stations are listed below:

- Town Commons
- Old High School
- Dam Site
- Peninsula
- Bush Street
- West Street
- Citizens
- Fowler
The location of these pump stations is shown in Figure 2-8. As previously noted, the existing wastewater collection system will not be reviewed as part of this Project Plan. There are no issues or deficiencies to report related to sanitary flow issues, overflows or bypasses. The proposed Project Plan will strictly focus on the WWTP.

The City has experienced significant amounts of inflow and infiltration (I&I) in recent decades. A study was conducted from 2002-2004 in which sewer metering and smoke testing were performed in order to identify sources of I&I. Recommendations were made identifying which I&I sources were cost effective to remove. At this time The City has completed implementing these recommendations. One major source of I&I which remains in place is footing drains from private residences constructed prior to 1985. These footing drains still contribute I&I to the collection system during wet weather.

2.3 EXISTING FACILITIES – PUBLICLY OWNED TREATMENT WORKS (POTW), GENERAL

The City of Howell Wastewater Treatment Plant (WWTP) has a permitted annual average daily flow rating of 2.45 MGD and is currently operating at an average daily flow rate of approximately 1.3 MGD. The maximum hydraulic capacity of approximately 8.6 MGD is moderated by the provision of off-line raw wastewater storage in the equalization tank. The plant was built in 1936 with major expansions in 1978 and 2000. A Project Plan was prepared in 2012 that identified needed improvements to the facility to help safeguard reliable treatment for the subsequent 20 years. Most of the recommended improvements have not been implemented to date, although some have. A site plan of the WWTP is shown in Figure 2-9.

The WWTP is located at 1191 S Michigan Ave, with all collected wastewater being received at the plant, treated and continuously discharged to the Marian-Genoa Drain. The WWTP has a preliminary treatment system consisting of raw sewage pumping, fine screening, grit treatment and flow measurement. Pretreated wastewater proceeds by gravity through the primary clarifiers, aeration tanks utilizing an activated sludge process, and secondary clarifier tanks. Secondary clarifier effluent flows to the UV system and then to the drain for discharge. Excess influent wastewater can be redirected to the equalization tank on site for storage prior to being returned for treatment through the main process stream. Waste activated sludge from the secondary settling tanks is stored in on-site storage tanks and dewatered for landfill disposal or gravity thickened for land application disposal. Ferric chloride can be added at either the primary settling tanks or the mixed liquor splitter box for the removal of phosphorus. Sludge storage tanks hold and naturally digest the sludge, providing stabilization of the byproduct sludge prior to final disposal via landfill. The plant was previously able to land apply their sludge but has discontinued this practice due to concerns related to PFAS. These systems are described in greater detail in the next sections.

The City of Howell is under contractual obligation to provide wastewater treatment service to Marion Township at a rate of 0.65 MGD, or approximately 26.5% of the Plant’s rated 2.45 MGD average daily flow. Currently flow from the township accounts for only about 20% of the daily average influent flow of 1.3 MGD. It is expected that flows from Marion Township will increase over time as the sewer system is built out to eventually reach to full contracted capacity. The Township is responsible for paying a portion of the costs of any improvements at the Plant.

≡ Rolling Oaks
≡ Lake Street
≡ Browning
≡ Roselane
≡ Beech Street
The Plant also currently receives pretreated industrial flow from a Pepsi Bottling Group facility, the City’s largest user, which maintains an industrial pretreatment program in compliance with the City’s IPP ordinance.

Table 2-4 summarizes the average effluent data for 2018. The plant meets the requirements of its National Pollution Discharge Elimination System (NPDES) permit.

<table>
<thead>
<tr>
<th>2018 Average Effluent (mg/l)</th>
<th>CBOD5</th>
<th>TSS</th>
<th>Total P</th>
<th>NH3-N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0</td>
<td>5.7</td>
<td>0.374</td>
<td>0.062</td>
</tr>
</tbody>
</table>

The City of Howell WWTP is effectively treating the wastewater flows received from the areas tributary to the facility. Appendix A contains a copy of the City’s current NPDES permit. This permit includes all of the plant’s effluent limitations and monitoring requirements. The City has had some minor violations at their plant in the past five (5) years, generally related to reporting errors. These were not significant and will not affect the proposed work at the plant.

EGLE performed a Compliance Evaluation Inspection (CEI) of the plant on October 25, 2012. This inspection found that the plant was in compliance with its NPDES permit and that District Office is in support of the proposed projects outlined herein.

The City has implemented an industrial pretreatment program (IPP), which regulates discharges into the City’s sewerage systems. The significant industrial users of the system are Chem-Trend, Pepsi, and Diamond Chrome. All four of these facilities have an active IPP discharge permit.

### 2.4 EXISTING FACILITIES – SYSTEM INFRASTRUCTURE

The Project Priority List scoring form (previously known as the Data Discharge form) required for the Project Plan is provided in Appendix I.

#### 2.4.1 Liquid Stream

**General**

The current average flow is approximately 1.3 MGD and the design treatment capacity is 2.45 MGD average flow, 5.0 MGD peak equalized flow and 8.6 MGD peak instantaneous flow. The WWTP improvements completed in 2000 were designed to accommodate future expansion of the WWTP to increase the design treatment capacity to 3.6 MGD average flow. A process flow diagram of the liquid treatment stream is shown in Figure 2-10.
Influent Pumping

The three influent screw pumps are rated for the design peak flows with one pump out-of-service (each pump has a capacity of 4.3 mgd). These screw pumps provide the lift necessary to allow the flow to travel through the plant by gravity from this point forward.

The existing screw pumps have deteriorated significantly due to poor ventilation in the old screw pump covers, which created corrosive conditions. The ventilation issues have been corrected, but the screw pumps themselves will need to be replaced in the next 3 years. As discussed in other sections of this report, the pumping capacity of this station is not adequate and needs to be increased.

In addition, due to the way the screw pumps are configured with the incoming main trunk sewer, the trunk sewer is not allowed to free discharge adequately and the main sewer fills with sediment due to the flow backing up. This creates a maintenance problem, as this sediment which has settled in the sewer needs to be removed on a regular basis. This should be corrected with the new headworks design.

Fine Screening

An automatic fine screen is provided in the headworks building downstream of the screw pumps and is rated for the peak flow. Screening from this equipment are washed and compacted before disposal in a dumpster.

There is no backup or redundant flow channel present on the existing screen. Under any flow conditions, if the equipment malfunctions or blinds off, (which has occurred) it results in flows spilling over the influent channel to the dumpster area below.

The existing screening equipment, along with the washer/compactor are in need of replacement within the next 5 years. In addition, a second channel should be provided with a manual bar rack and stop logs (or gates) to provide shutoff of flow between channels and to allow for emergency overflow to be routed through the bypass channel.

Influent Flow Measurement

The 18-inch Parshall flume used for influent flow measurement is operating properly during normal flow conditions. No improvements to this flume are recommended as part of this project.

Grit Removal

The existing 12-foot diameter vortex style grit removal tank is located downstream of the fine screen/Parshall flume, just outside of this building. It is rated for a peak flow of 12 MGD. This system consists of a motor operated grit paddle to keep organic materials in suspension in the tank and a grit pump to remove settled grit from the tank. From here, the pumped grit flows by gravity down to a grit classifier which further separates the grit particles from the water before disposal in a dumpster.

The grit pump and discharge piping from this tank are exposed to the outside elements and are subject to freezing. A building enclosure should be provided to enclose this entire system to protect it from the weather. The electrical equipment which would be housed in this building should be upgraded to be rated for an explosion proof environment.
Equalization

There are four existing equalization tanks used for wet weather storage that provide a total volume of approximately 0.5 million gallons. They are equipped with a coarse bubble aeration system and their own dedicated blower for odor control. These tanks are sized adequately for the flows to the plant.

No work is planned for these tanks in the next 20 years.

Primary Clarification

Two 45-foot diameter primary clarifiers are provided downstream of the grit tank. The clarifiers are connected and contained primary sludge pumps in a shared building between the clarifiers. Although these tanks do not have the rated capacity for peak hour flows as determined by the Recommended Standards for Wastewater Facilities (AKA Ten State Standards) their performance is adequate and similar to other facilities which operate their primary tanks at high loadings under wet weather flows.

The existing primary clarifier mechanisms should both be replaced within the next 3 years. In addition, the concrete tanks have significant cracking/spalling/deterioration issues which must be addressed, or they will continue to deteriorate and become more expensive to repair. The sludge pumps and associated valves are also in need of replacement.

Aeration Tanks and Blowers

There are four existing aeration tanks at the plant with a total volume of 1.15 million gallons. Each tank is similarly sized and is provided with ceramic, fine bubble diffusers and a low-pressure aeration system. This aeration system is fed with four (4) identical 125 HP multistage centrifugal blowers which were constructed in a new blower building provided as part of the 2000 expansion project.

Given that the flows and organic loadings are significantly lower than anticipated as part of the 2000 expansion project, the blowers are generally oversized for the current oxygen demands. An automatic blower control system should be installed consisting of dissolved oxygen probes in the aeration tanks, inlet throttling valves on the blowers and/or installation of a new, smaller blower, and a control system. This will provide energy savings and better regulated mixed liquor in the aeration tanks, controlling the dissolved oxygen level to an optimum point.

The tanks have experienced some wear and are in need of rehabilitation within the next 20 years. The effluent gates and air piping valves are deteriorated and should be replaced. In addition, there are several joints on the existing air piping which are leaking and should be fixed.

Final Clarification

There are three existing 55-foot diameter final clarifiers. These have adequate capacity for the existing and projected flows. One of these clarifiers was installed as part of the 2000 expansion project and is in good working order. The two older final clarifiers were built in 1978, and one of them was completely overhauled in 2015 and is currently in good working order. The remaining older clarifier needs to be rehabilitated in the next 3 years in order to maintain continued operation.
**Chemical Feed**

There is an existing ferric chloride feed system, which is used for phosphorus reduction, housed in the filter building. Due to inadequate venting of the chemical storage tanks, fumes from the stored chemicals have deteriorated electrical equipment in this building.

In addition, the chemical feed equipment (including feed pumps, day tank and two storage tanks) will need to be replaced in the next 3 years due to their age and condition.

**UV Disinfection**

The existing UV system is a vertical bulb style system consisting of two channels and eight banks of bulbs. This system is housed outside in concrete channels that have outlived their useful life and are not easily expandable. The system is outdoors which makes maintenance difficult.

A new building should be installed over the system, and the system needs to be expanded as noted in Section 2.5 of this report. Either the existing concrete channels should be rehabilitated, or new channels constructed to accommodate the needed increase in flow through the system.

**2.4.2 Solid Stream**

**Sludge Stabilization, Thickening and Storage**

For many years the Plant utilized its sludge storage tanks to gravity thicken the primary and waste activated sludge prior to land application. This was sufficient to meet standards necessary for land application, which was performed by a private contractor. However, in August 2018 the Plant was advised by EGLE to terminate land application due to concerns related to PFAS. The City followed this advice and has now begun to dewater their sludge in order to landfill residual solids, rather than disposal through land application.

A temporary belt filter press was put into use in 2017 and is now used as a primary means of solids dewatering. It does not have adequate capacity or redundancy to meet the plant’s need for solids disposal under current or projected conditions. It was installed as a stop-gap measure to get the plant thru until a permanent solution could be implemented. A new solids handling facility is required to meet this need.

Additional sludge storage facilities are present at the site. These tanks can be rehabilitated and repurposed to provide increased storage and thickening capacity to work in conjunction with a new solids handling process.

A process flow diagram of the solids handling stream is shown in Figure 2-11.

**Return Sludge Pumping**

There are five existing 10HP return activated sludge (RAS) pumps servicing the existing three final clarifiers. These pumps are controlled with throttling valves to regulate the flow. The existing RAS pumps, valves and flow meters have exceeded their useful life and require replacement within the next 3 years.
Primary Sludge Pumping

There are two existing 10 HP primary sludge waste pumps servicing the existing two primary clarifiers. These pumps are controlled with throttling valves to regulate the flow. The existing pumps, valves and flow meters have exceeded their useful life and require replacement within the next 3 years.

2.4.3 Plant Infrastructure

Electrical Systems

Some of the existing electrical equipment including the primary switchgear, the main standby generator, and transfer switches were replaced in 2017. However, the motor control centers were not replaced as a part of that project are in need of replacement within the next 5 years.

Service Water System

The Plant utilizes potable water as its source of service water for yard hydrants, seal water, and other process support applications throughout the plant. The potable water connection fills the backwash storage tank, water from that tank is then pumped using two centrifugal pumps to a pressure tank, from which it is distributed to a network of pipes which run throughout the plant. The system is housed in the basement of the filter building.

The system functions adequately as designed; however, the FEW pumps and yard hydrants are reaching the end of their useful life and should be replaced within the next 3 years. Updated solids handling equipment may require additional service water capacity as well.

Administration Building, Lab, and Other Buildings

The existing laboratory and Administration building at the plant are original to the plant’s initial construction in the 1970’s, as are many of the other buildings at the site. The Laboratory and Administration Building have been in continuous use for almost 50-years. The facilities have suffered significant wear during those years, while at the same time the technological and scientific requirements for management a wastewater treatment plant have changed drastically. Many of the other buildings on the site have failing or deteriorated brickwork, doors and windows. This includes the RAS pump building, primary tank building, filter building, garage, lime handling building, service building and generator/switchgear building.

2.5 NEED FOR PROJECT

The WWTP is generally in compliance with the requirements of the NPDES permit and there are no orders of enforcement in place. However, there are numerous issues that need to be addressed immediately.

The plant has had a number of incidents over the past few years during significant rain events when all of the raw sewage pumps turned on. This means that the sewer collection system is discharging approximately the plant’s firm capacity (8.6 mgd) for a 25 year rain storm event. This is despite the plant only being at approximately 55% of its average daily flow capacity. To accommodate the additional growth in the existing sewer system from Marion
Township already planned to bring the plant’s average yearly flows to 2.45 mgd, additional capacity is needed at the plant. We propose to increase the firm pumping capacity of the plant to approximately 11.5 mgd to accommodate this and to increase the peak hydraulic/treatment capacity thru the plant to approximately 8.0 mgd (the equalization tanks will still be used to reduce the peak flow thru the plant). This will involve not only increasing the headwork’s capacity, but also modifications to piping/gates throughout the plant and increasing the UV disinfection system capacity as further described in this report.

Due to concerns related to PFAS contamination, EGLE has advised the Plant stop land applying their biosolids and send them to a landfill instead. Making this operational change is very difficult with the Plant’s existing facilities. Continuation of landfilling on a long-term basis will require renovations to the Plant’s solids handling facilities.

The Pepsi Bottling Group has reached an agreement with the City of Howell and Marion Township that would allow the bottling facility to decommission their pretreatment process and instead send raw wastewater directly to the WWTP. Because the Plant currently receives pretreated wastewater, the flow rate to the Plant would not increase. However, this would mean an average of 3,500 lb./day of additional BOD loading would be sent to the Plant. In exchange Pepsi has agreed to pay for the required capital costs necessary to retrofit the Plant to handle this additional loading.

In addition, there are many facilities at the plant which require replacement or rehabilitation within the next 20-years, as described above and analyzed recently as part of the City’s Asset Management Plan. Without the construction of the proposed project, the water quality of the Marion-Genoa Drain would be degraded as the plant may not be able to continue providing proper treatment.
City of Howell Wastewater Treatment Plant – SRF Project Plan

WWTP Service Area

Legend
- Marion Twp Sanitary Sewer District
- Howell Sanitary Service Area

1 inch = 3,000 feet

Figure 2-1
City of Howell Current Land Use
City of Howell Wastewater Treatment Plant – SRF Project Plan

City of Howell Future Land Use
Marion Township Generalized Current Land Use

- Agriculture
- Commercial
- Extractive
- Industrial
- Recreation & Open Space
- Highways
- Residential
- Residential Developments
- Existing Subdivision
- Utilities
- Vacant/Undeveloped
- Lakes, Ponds, & Streams
- Wetlands
- Woodlands

City of Howell Wastewater Treatment Plant – SRF Project Plan

Marion Township Current Land Use
Source: DEQ Wetland Map Viewer
Retrieved: March 6, 2019
URL: https://www.mcgi.state.mi.us/wetlands/mcgiMap.html#
City of Howell Wastewater Treatment Plant – SRF Project Plan

FEMA Floodplain Map

Source: FEMA Flood Map Service Center
Retrieved: March 6, 2019
Map No: 26093C0306D, 8D
Pump Station Map

City of Howell Wastewater Treatment Plant – SRF Project Plan

Job No. 20190125
Date June 2019
Figure No. 2-8

Y:\201901\20190125\03_Studies\Working\Project Plan\Figures
SECTION 3.0 — ALTERNATIVE ANALYSIS

The alternatives considered for each improvement element are described in the following narratives. A technical basis has been developed for each improvement element and an economic comparison of alternatives completed where appropriate.

3.1 ALTERNATIVE 1 – UPGRADE WASTEWATER TREATMENT PLANT FACILITIES

A site plan showing much of the work proposed in Alternative 1 is shown in Figure 3-1.

3.1.1 Headworks

The Headworks capacity will be increased from 8.6 mgd to 11.5 mgd to accommodate the existing wet weather flow conditions and future growth in the sewer system as previously described in Section 2.5. This will involve a new wet well, fine screening and raw sewage pumping/metering which will be located adjacent to the existing headworks building as shown on the proposed Site plan. This building will be equipped with an odor control system as well.

The new wet well will allow for a free discharge of flow to minimize the current maintenance problems of sediment filling up the main trunk sewer as previously noted.

The existing grit system will be maintained as part of the project. A structure will be provided to enclose the existing grit tank to protect it from the elements. The electrical equipment that will be housed in this building will be upgraded to be rated for an explosion proof environment. The grit piping leaving this building which will remain exposed to the elements will be insulated and heat traced.

3.1.2 Primary Tanks

Each of the existing primary clarifier mechanisms will be replaced in-kind. A number of existing cracks and damaged areas of concrete in the existing primary clarifiers will be repaired and/or rehabilitated. Primary sludge pumps/valves will be replaced as well. The piping in the primary tank building which feed the primary tanks will be upsized to accommodate the increased flows from the headworks.

3.1.3 Aeration Tanks

Process modifications will be required to accommodate the increased organic loading that will be coming from the Pepsi Bottling Group facility. A new aeration tank will be constructed immediately next to the existing tanks and the aeration process will be converted to a BNR process to provide improved treatment efficiency and to minimize chemical phosphorous removal. This new process was modeled using Biowin computer simulation modeling for activated sludge treatment plants to confirm that this approach would be the most technically viable option for the increased loadings and change of conditions.

To improve aeration control, an automatic blower control system will be installed consisting of a dissolved oxygen probe in the aeration tanks, inlet throttling valves on the new turbo blowers and a control system which will regulate
air flow to achieve a desired dissolved oxygen set point. In addition, effluent gates, air piping valves and leaking air joints on existing tanks will be rehabilitated.

3.1.4 Final Clarifiers

The older final clarifier mechanism/weirs will each be replaced in-kind. New baffling will also be added to enhance the settling efficiency. The tank will undergo structural inspection, and concrete repairs will be performed to correct cracks and other deterioration as required. All of the existing RAS pumps, flowmeters, and valves will be replaced and upgraded as well.

3.1.5 Disinfection

The UV disinfection system will be upgraded to account for the increased flows thru the plant. The design capacity of the new system will be 8.0 mgd. A building will house the UV disinfection equipment. This building will be provided with adequate access, lighting and heating/ventilation.

3.1.6 Solids Dewatering

A new solids dewatering building will be constructed with two dewatering presses, feed pumps, polymer system, sludge cake disposal conveyance, dumpster removal system for two dumpster bays, and odor control system. The intended operation of the presses for an average week is 6 hours per day, 4 days per week at the 2.45 MGD buildout flows.

The existing, decommissioned Haag tank will be reutilized for aerated sludge storage for feed to the sludge presses. New mixers will be installed to provide aeration and mixing. The location of this new facility is shown on the proposed site plan in Figure 3-1 and a concept layout of the building is shown in Figure 3-2.

3.1.7 Plant Driveway

The Plant driveway has deteriorated significantly in many areas and due to the proposed construction work will need to be repaved.

3.1.8 SCADA system.

The SCADA system at the plant will be upgraded

3.1.9 Motor Control Centers

The existing MCC throughout the plant are over 40 years of age and have proven to be unreliable. These MCC are no longer supported by the original manufacturer and parts are no longer available. All of the MCCs should be considered for replacement in the near future. In some cases, the replacement MCC could be smaller and contain less starters or breakers if their intended usage has changed.

3.1.10 Service Water System

The existing service water pumps and yard hydrants will be replaced. These facilities have reached the end of their useful life. The sizing of the pumps will likely need to increase to provide additional service water to the new solids dewatering process, which can be water-intensive.
3.1.11 Chemical Feed System

Although the plant will be converted to a biological phosphorous removal process, chemical phosphorous removal facilities will remain available for use in emergencies. A skid-mounted Ferric Chloride feed system will be provided, configured to be fed from standard chemical totes.

3.1.12 Lab and Admin Building

The existing laboratory and Administration building at the plant will be rehabilitated and expanded to accommodate the existing plant operations. The remaining buildings on the site from the original 1970’s construction will also be rehabilitated with brickwork rehab, door/windows/roof replacement. This includes the RAS pump building, primary tank building, filter building, garage, lime handling building, service building and generator/switchgear building.

3.2 ALTERNATIVE 2 – NO ACTION

If no action is taken, the existing plant equipment and structures will continue to degrade to the point that they will not be able to treat wastewater to comply with the requirements of the NPDES permit. In addition, there are numerous deficiencies in the existing plant which compromise worker safety and plant operations. These need to be corrected right away to avoid potential harm to workers, unnecessary upsets to the plant and failures to the facility.

3.3 ALTERNATIVE 3 – FOOTING DRAIN DISCONNECTION

This alternative would encompass all elements of Alternative 1, except that the capacity of the headworks and UV disinfection systems would remain unchanged. Instead a number of residential footing drains would be disconnected to bring wet weather peak flows down to a level that the Plant could handle. Note that the headworks and UV systems would still have to be rehabilitated due to their present condition, as discussed previously. This alternative was not found to be feasible.

This alternative is discussed further in Appendix E.

3.4 ALTERNATIVE 4 – REGIONALIZATION

The regionalization alternative would involve completely decommissioning the WWTP and piping the waste to a facility with enough spare capacity to accommodate the flow. This would be technically challenging for the Howell Plant as it is already a regional facility, providing wastewater treatment to both the City of Howell and Marion Township. Because of the size of the Plant, the closest facilities that would have enough spare capacity would be the Lansing Wastewater Treatment Plant or the Flint Water Pollution Control Facility.

Sending flow from the Plant to one of these facilities would require the construction of over 30 miles of forcemain and multiple large pumping stations. The facility receiving the sewage would require modification of a similar scale to what is proposed for the Howell Plant in Alternative 1. Acquiring the approval for the forcemain (which would
cross county lines) would be time consuming and likely delay the project by several years. A tremendous amount of energy would be consumed by the pumping stations alone, before treatment of the wastewater begins.

3.5 ALTERNATIVES ANALYSIS

Alternative 1 is the only feasible alternative which also meets the City’s needs and prevents degradation in water quality. This is recommended as the selected alternative.
Wastewater Treatment Plant Upgrades

City of Howell

SECTION 4.0 — SELECTED ALTERNATIVE

4.1 PROPOSED FACILITIES

The proposed project consists of all renovations and improvements described previously under Alternative 1.

4.2 SCHEDULE

Table 4-1 provides a proposed schedule for the Project Plan submittal and associated deadlines. Table 4-2 presents the overall schedule proposed for the WWTP improvement project as outlined in this report.

Table 4-1: Proposed SRF Project Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Complete on or Before</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Hearing Notice</td>
<td>May 10, 2019</td>
</tr>
<tr>
<td>Place Draft Project Plan on Public Record</td>
<td>May 10, 2019</td>
</tr>
<tr>
<td>Formal Public Hearing</td>
<td>June 10, 2019</td>
</tr>
<tr>
<td>Submit Final Project Plan to EGLE</td>
<td>July 1, 2019</td>
</tr>
</tbody>
</table>

Table 4-2: Proposed Design and Construction Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Engineering Services</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWTP Improvements</td>
<td>Design</td>
<td>2019-2020</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>2020-2022</td>
</tr>
</tbody>
</table>

4.3 COST ESTIMATE

The estimated 2019 total project cost for the proposed project is $14.66 million. A detailed opinion of probable project cost is shown in Appendix C, along with present worth and user fee analyses. Table 4-3 provides a summary of the estimated costs. The expected operation, maintenance and replacement (OM&R) costs for this project will be a net increase due to the additional operational complexity and higher organic loadings from Pepsi.
4.4 AUTHORITY TO IMPLEMENT SELECTED ALTERNATIVE

The City Council has the legal authority to implement the work proposed in this Project Plan. A copy of the draft resolution is provided in Appendix F.

4.5 USER COSTS AND COST SHARING

The costs as described above will be paid for by user charges. Detailed user cost calculations are shown in Appendix C. Table 4-4 below shows the estimated user cost for users associated with this project over a 20-year period for City of Howell users.

<table>
<thead>
<tr>
<th>Description</th>
<th>Basis</th>
<th>Annual Cost</th>
<th>Monthly Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Howell Obligation</td>
<td>See Appendix C</td>
<td>$436,260</td>
<td></td>
</tr>
<tr>
<td>Residential User Contribution</td>
<td>53% of Flow</td>
<td>$231,218</td>
<td>$19,268</td>
</tr>
<tr>
<td>Project Cost per Residential User</td>
<td>2461 Users</td>
<td>$93.95</td>
<td>$7.83</td>
</tr>
</tbody>
</table>
SECTION 5.0 — FISCAL SUSTAINABILITY PLAN

A fiscal sustainability plan will be developed for those facilities which are installed, replaced or rehabilitated under this project. This will be done by building on the Plant’s existing asset management plan. The Plant’s asset inventory is a key part of their asset management plan and is shown in Appendix D.

The existing asset registry will be updated with information on facilities impacted by the project. Data for existing equipment will be updated with new model numbers and rehabilitation dates. New equipment will be added to the inventory. At the conclusion of the project the inventory will be fully updated to accurately reflect the equipment that is currently installed at the site.

Condition and performance data will be updated as well. New pumps and blowers will have their duty points recorded during startup. This will provide a benchmark to judge future performance by. Other critical mechanical equipment will have data such as full load amp draws recorded for this purpose as well. Condition information for existing items will be updated to reflect any rehabilitation work that was completed.

Useful life estimates will be updated for rehabilitated assets and solicited from manufacturers of newly installed assets. These estimates will be used to plan for future service and replacement costs. Operations and Maintenance manuals will be provided for all new equipment, along with onsite training. This will ensure that Plant staff have the knowledge necessary to perform maintenance and repairs. Water and energy conservation efforts will be implemented as a part of the fiscal sustainability plan as well.
SECTION 6.0 — ENVIRONMENTAL IMPACTS

6.1 GENERAL

The anticipated environmental impacts resulting from the construction of the selected plan include beneficial & adverse, short term & long term, and irreversible impacts. The following is a discussion of the environmental impacts of the selected plan.

6.1.1 Beneficial and Adverse Impacts

Construction activities associated with the proposed WWTP improvements will take place on the existing treatment plant property. Construction and equipment manufacturing related jobs would be generated, and local contractors would have an equal opportunity to bid on the construction contracts.

Implementation of the Project Plan would create temporary disruption due to required construction. This includes noise & dust generated by the work and possible erosion of spoils from open excavation. The assessment of alternate solutions and sites for the proposed project included identification of any important resources of either historic or environmental value which are protected by law and should be avoided.

6.1.2 Short and Long Term Impacts

The short-term adverse impacts associated with construction activities would be minimal, and mitigatable, in comparison to the resulting long-term beneficial impacts. Short-term impacts include traffic disruption, dust and noise. No long-term negative impacts are anticipated. The long-term positive impacts include increased redundancy at the plant and the ability to continue providing adequate treatment to protect water quality. These impacts also include improved processing at the plant and reduced wear on the plant equipment.

6.1.3 Irreversible Impacts

The investment in non-recoverable resources committed to the Project Plan would be traded off for the improved performance of the facilities during the life of the system. The commitment of resources includes public capital, energy, labor and unsalvageable materials. These non-recoverable resources would be foregone for the provision of the proposed improvements.

Construction accidents associated with this project may cause irreversible bodily injuries or death. Accidents may also cause damage to or destruction of equipment and other resources.
6.2 ANALYSIS OF IMPACTS

6.2.1 Direct Impacts

Local Air Quality

There will be minimal direct impacts on local air quality during the construction phases of these projects. Any effects on air quality will be due to dust and emissions from construction equipment. An asbestos survey will be conducted to determine if any facilities undergoing retrofitting contain any ACM.

Archaeological, Historical or Cultural Resources

There are no impacts on archaeological, tribal, historical, or cultural resources due to this project.

Impacts Upon the Existing or Future Quality of Local Groundwater and Surface Waters

Construction will occur on the WWTP site, which is adjacent to the Marion-Genoa Drain. Appropriate measures will be taken during construction to avoid detrimental impact to the drain. All necessary permits will be obtained prior to the proposed activities. There are no impacts anticipated to the local groundwater.

A detailed topographical survey will be conducted prior to construction to determine if the floodplain will be impacted by the project.

Impacts Upon Sensitive Features

Since the work is expected to take place within the existing footprint of the WWTP, most construction will take place outside of the designated floodplain, wetland areas, or other sensitive areas. Some of the existing WWTP facilities are within the 100-year floodplain, including two sludge storage tanks and the garage. However, all work on these facilities will take place within the building envelope so the floodplain will not be impacted.

Impacts Upon People and The Local Economy

Short-term impacts to people will occur during the construction phase. Increased construction traffic will occur in the localized area of the WWTP. All City of Howell sanitary sewer users will experience beneficial long term impacts due to the level of service to which they expect being maintained by these improvements.

The local economy will be stimulated for contractors and suppliers of the materials, labor, and equipment necessary to construct the project.

Operational Impacts

The proposed project will improve the operational efficiency of the WWTP.
6.2.2 Indirect Impacts

Changes in Rate, Density, Or Type of Residential, Commercial, or Industrial Development and the Associated Transportation Changes

No changes are anticipated to the above.

Changes in Land Use

No changes are anticipated to the above. All improvements to the WWTP will be completed on the existing WWTP site.

Changes in Air or Water Quality Due to Facilitated Development

There will be no changes to air or water quality due to development. There will be no direct correlation to development as a result of this project.

Changes to The Natural Setting or Sensitive Features Resulting from Secondary Growth

There should be no changes to the natural setting or sensitive features resulting from secondary growth.

Impacts on Cultural, Human, Social and Economic Resources

No changes are anticipated to the above.

Impacts of Area Aesthetics

All of the proposed WWTP work will be completed on the existing site which is largely isolated from public view.

Resource Consumption Over the Useful Life of the Treatment Works, Especially the Generation of Solid Wastes

No changes are anticipated to the above.

6.2.3 Cumulative Impacts

Siltation

Siltation may occur during the construction phase of the project. Proper soil erosion and sedimentation control practices will be followed to reduce the impacts of siltation on surrounding areas.

Water Quality Impacts from Direct Discharges and Non-Point Sources

No water quality impacts are proposed by this project.

Indirect Impacts from Development

There should not be development as a result of this project.
The Impacts from Multiple Public Works Projects Occurring in the Same Vicinity

There will only be short term traffic impacts during the construction phase of this project and proper traffic control measures will be followed.
SECTION 7.0 — MITIGATION

7.1 SHORT-TERM, CONSTRUCTION-RELATED MITIGATION

Environmental disruption will occur during construction. Guidelines will be established for cover vegetation removal, dust control, traffic control and accident prevention. Once construction is completed those short-term effects will stop and the area will be returned to the original conditions.

The soil erosion impact would be mitigated through the contractor’s required compliance with a program for control of soil erosion and sedimentation as specified in Part 91 of Michigan Act 451, P.A. of 1994. The use of soil erosion and sedimentation controls (i.e. straw bales, sedimentation basins, catch basin inserts, silt fencing, etc.) will protect the Marion and Genoa Drain.

Careful considerations will be taken during the construction planning process to ensure that the plant remains in service while the improvements are underway. Construction equipment will be maintained in good condition to decrease noise. All access roads will be swept as necessary to avoid tracking sediment onto public roads.

Licensed abatement professionals will be utilized for any demolition work involving ACM. All demolished materials will be disposed of appropriately. Appropriate permitting procedures will be followed if it is found that any of the work will impact the floodplain.

7.2 MITIGATION OF LONG-TERM IMPACTS

General construction activities will prohibit the disposal of soils in wetlands, floodplains, or other sensitive areas. Catch basins will be protected where earth changing activities will take place.

7.3 MITIGATION OF INDIRECT IMPACTS

The current trend in the City of Howell is that the land use is largely dominated by residential properties. According to the City of Howell’s master planning for land use, this will not change. Considering that a vast majority of the residents within the City limits already are connected to the wastewater system, a substantial increase in flow is not expected from within the City limits.

An increase in flow may be generated from outside the City, such as in Marion Township. A copy of the zoning and land use maps for the City of Howell and for Marion Township (both current and future) are shown in Figures 2-2 through 2-5.

The City of Howell ordinances can be found on their website. Their general rules are the same as the EGLE permits require, such as storm water containment, soil erosion and sedimentation control.
SECTION 8.0 — PUBLIC PARTICIPATION

8.1 GENERAL

The Project Plan was advertised in the local newspaper on May 10, 2019 (refer to Appendix H). Copies of the Project Plan were placed at several locations throughout the City for the public's review. These locations include:

- Howell City Hall, 611 E. Grand River
- Howell DPW, 150 Marion Street

A formal public hearing will be held on June 10, 2019 to review the proposed Project Plan. The hearing was held to review the information contained in the Plan, review the estimated user costs and to receive comments of interested persons. This meeting was held during a regular Council Meeting. Copies of correspondence related to agency notifications and other relevant documents are included in Appendix H.

8.2 CHANGES MADE FROM DRAFT PLAN

Changes from made to previous drafts of this Project Plan will be noted in this section in the final document.

8.3 RESOLUTION

The City Council made a formal resolution regarding this Plan at their regular meeting following the public hearing on June 10, 2019. The resolution is included in Appendix F.

8.4 PUBLIC HEARING

Representatives from the City and Hubbell, Roth & Clark, Inc. (the City’s Consulting Engineer) were present at the public hearing. Appendix H includes an affidavit of publication for the meeting notice, attendance list and a photocopy of the slides presented at the hearing. Appendix H also includes a verbatim transcript of the meeting which was transcribed from a recording of the meeting.
### SECTION 9.0 — GLOSSARY

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-year Storm</td>
<td>A storm of a designated duration (ranging from 30 minutes to 24 hours) that has a 10% chance of occurring in a given year.</td>
</tr>
<tr>
<td>100-year Storm</td>
<td>A storm of a designated duration (ranging from 30 minutes to 24 hours) that has a 1% chance of occurring in a given year.</td>
</tr>
<tr>
<td>ACM</td>
<td>Asbestos Containing Materials</td>
</tr>
<tr>
<td>Activated Sludge</td>
<td>Product that results when primary effluent is mixed with bacteria-laden sludge and then agitated and aerated to promote biological treatment, speeding the breakdown of organic matter in raw sewage undergoing secondary waste treatment.</td>
</tr>
<tr>
<td>Activated Sludge Process</td>
<td>Biological treatment process in which wastewater and biological sludge is mixed and aerated to facilitate aerobic decomposition by microbes.</td>
</tr>
<tr>
<td>Aeration</td>
<td>Addition of air/oxygen to wastewater to maintain aerobic biological conditions.</td>
</tr>
<tr>
<td>Aeration Tanks</td>
<td>A chamber used to inject air into water.</td>
</tr>
<tr>
<td>Anaerobic Digester</td>
<td>A structure or device that promotes the biochemical degradation of complex organic material, such as waste activated sludge, into methane gas and other by-products.</td>
</tr>
<tr>
<td>Average Flow</td>
<td>The average quantity of flow that passes a point over a given period of time.</td>
</tr>
<tr>
<td>Biochemical Oxygen Demand (BOD)</td>
<td>The quantity of oxygen used in the aerobic decomposition of organic matter, usually expressed in parts per million. The degree of BOD removal is used as a measure in determining the efficiency of a sewage treatment plant as well as in measuring stream water quality.</td>
</tr>
<tr>
<td>BNR</td>
<td>Biological Nitrogen Removal. A wastewater process which encourages growth of microorganisms that can uptake certain nutrients.</td>
</tr>
<tr>
<td>Bypass</td>
<td>The measurable diversion of raw sewage out of the sewer system.</td>
</tr>
<tr>
<td>cfs</td>
<td>Cubic feet per second.</td>
</tr>
<tr>
<td>Chlorination</td>
<td>The application of chlorine to water, generally for the purpose of disinfection.</td>
</tr>
<tr>
<td>Cost-Effectiveness Analysis</td>
<td>An analysis performed to determine which alternate collection or treatment system would result in the minimum total resource cost to meet the requirements. A cost-effectiveness analysis for a sewer system determines this by comparing with total costs for transportation and treatment of the infiltration/inflow.</td>
</tr>
</tbody>
</table>
- **Cost-Effectiveness Guidelines**: Developed by EPA to aid grantees in the selection of a system component which will result in the minimum total resources cost over a fixed period of time to meet federal, state, and local requirements.

- **Dechlorination**: A process of removing residual chlorine from disinfected wastewater prior to discharge into the environment.

- **Design Flow**: The average daily flow that a treatment plant or other facility is designed to accommodate. Usually expressed in millions of gallons per day (MGD) or cubic feet per second (cfs).

- **Design Period**: Time span over which proposed collector or treatment facilities are expected to be operating; period over which facility costs are amortized.

- **Drainage District or Watershed**: The tributary area of a particular point on a channel system that contributes storm water runoff upstream of that point.

- **Effluent**: The flow exiting a treatment process.

- **EGLE**: Michigan Department of Environment, Great Lakes, and Energy. This statewide environmental agency was formally known as the Michigan Department of Environmental Quality (MDEQ) prior to April 22, 2019

- **Environmental Impact Assessment (EIA)**: A preliminary evaluation of the potential environmental impacts (positive and negative) of a proposed federally funded project. It should be submitted as part of the Project Plan.

- **Environmental Impact Statement (EIS)**: A detailed analysis of the potential environmental impacts of a proposed project required when the EPA Regional Administrator determines that a project is highly controversial or may have significant adverse environmental effects.

- **FEMA**: Federal Emergency Management Agency.

- **Flood**: An overflow of lands not normally covered by water that is used or are usable to man. Normally a “flood” is considered as any temporary rise in stream flow and stage that results in significant adverse effects in the vicinity. (See surface runoff for comparison.)

- **Floodplain**: The relatively flat area or low land adjoining the channel of a river or stream, which has been or may be covered by flood water. Formally defined as the area that would be flooded during a 100-year storm.

- **Floodway**: The channel of the stream plus any adjacent flood plain areas that must be kept free of encroachment such that a 100-year flood can be transported without increasing upstream water elevations more than 0.10 feet.

- **Force Mains**: Pipes used to transport wastewater under pressure against the force of gravity.

- **gpd**: Gallons per day.
• **gpm**  Gallons per minute.

• **Grit**  Sand, gravel, cinders, and other heavy solid matter that have settling velocities substantially higher than those of putrescible organic solids in wastewater.

• **Grit Chamber**  Detention chamber or an enlargement of a sewer, designed to reduce flow velocity of the liquid so that separation of mineral from organic solids by differential sedimentation is permitted.

• **Head**  A measure of pressure exerted by a fluid expressed as the height of an enclosed column of the fluid that could be balanced by the pressure in the system.

• **Head loss**  The difference in water level between the upstream and downstream sides of a treatment process attributed to friction losses.

• **Hydraulic Gradient**  The slope of the hydraulic grade line. This is the slope of the wastewater surface in an open channel or the slope of the water pressure for pipes under pressure.

• **Hydraulic Loading**  Total volume of liquid applied per unit of time to a tank or treatment process.

• **Hydrograph**  A curve denoting the discharge of flow over a period of time.

• **Infiltration/Inflow (I/I)**  The total quantity of water from both infiltration and inflow without distinguishing the source.

• **Infiltration**  The water entering a sewer system from the soil through defective pipes, foundation drains, pipe joints, connections and manhole walls.

• **Inflow**  The water discharged into a sewer system from roof drains, cooling water discharges, drains from springs and swampy areas, manhole covers, cross-connections from storm sewers and combined sewers, catch basins, storm waters, surface runoff, street wash waters or drainage.

• **Influent**  The flow entering a treatment process.

• **Interceptor**  Any pipe, regardless of size that carries wastewater directly to the treatment plant. Generally, they are the largest pipes in the collection system.

• **Lateral**  The pipe to which individual houses and business establishments connect to public sewers.

• **Lagoon (Polishing Pond)**  A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater effluents from other biological processes; also used for storage of wastewater.

• **Lift Station (Pump Station)**  A facility within a sanitary sewer system which pumps flows from a lower elevation to a higher elevation.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main/Submain</td>
<td>The word “main” is frequently used loosely to indicate a large pipe, which is not a lateral and not an interceptor. If frequently forms one of the larger branches of a complex collection system.</td>
</tr>
<tr>
<td>MDNR</td>
<td>Michigan Department of Natural Resources</td>
</tr>
<tr>
<td>Mesophilic Anaerobic Digestion</td>
<td>An anaerobic digestion process which is operated at a temperature of approximately 95° F.</td>
</tr>
<tr>
<td>MGD</td>
<td>Millions of gallons per day.</td>
</tr>
<tr>
<td>MH</td>
<td>Manhole.</td>
</tr>
<tr>
<td>National Pollutant Discharge Elimination System (NPDES)</td>
<td>The effluent discharge permit system established under the 1972 Federal Water Pollution Control Administration as part of the Clean Water Act, which places conditions on the type and concentration of pollutants that discharge to a waterway of the United States.</td>
</tr>
<tr>
<td>Nitrification</td>
<td>The ammonia released from organic compounds, plus that from other sources such as industrial wastes and agricultural runoff, is oxidized to nitrate by a special group of nitrifying bacteria as their source of energy in a process called Nitrification.</td>
</tr>
<tr>
<td>NH₃</td>
<td>The chemical formula for ammonia, which is a compound of hydrogen and nitrogen that occurs extensively in nature.</td>
</tr>
<tr>
<td>Peak Flow</td>
<td>The maximum quantity of flow that passes a point over a given period of time.</td>
</tr>
<tr>
<td>Point Source Pollution</td>
<td>Pollutants that enter the water untreated from any discernible, confined, and discrete conveyance such as a sewer pipe, culvert, tunnel, or other channel or conduit.</td>
</tr>
<tr>
<td>Preliminary Treatment System</td>
<td>A system of treatment steps that generally includes screening, grit removal, pre-aeration, and/or flow equalization that prepare wastewater influent for further treatment.</td>
</tr>
<tr>
<td>Primary Impacts</td>
<td>Those which can be attributed directly to a proposed action.</td>
</tr>
<tr>
<td>Primary Clarifier</td>
<td>The first settling tank for the removal of settleable solids through which wastewater is passed in a treatment works.</td>
</tr>
<tr>
<td>Primary Sludge</td>
<td>Sludge produced in a primary waste treatment unit.</td>
</tr>
<tr>
<td>Primary Treatment</td>
<td>The process to remove settleable pollutants. Treatment steps including sedimentation to produce an effluent suitable for biological treatment.</td>
</tr>
<tr>
<td>Sanitary Sewer</td>
<td>A sewer intended to carry only sanitary and industrial wastewater from residences, commercial buildings, industrial plants, and institutions, including service connections.</td>
</tr>
<tr>
<td>Sanitary Sewer System (Sewage Collection System)</td>
<td>The entire network of sanitary sewers and pumping stations which collect a municipality’s wastewater.</td>
</tr>
</tbody>
</table>
• **Screening**  The removal of relatively coarse floating and suspended solids by straining through racks or screens.

• **Secondary Impacts**  Those resulting from indirect or induced changes in community land use patterns, population and economic growth, and environmental quality resulting from induced growth.

• **Secondary Treatment**  The second step in most publicly owned waste treatment systems in which bacteria consume the organic parts of the waste. It is accomplished by bringing together waste, bacteria, and oxygen in trickling filters or in the activated sludge process. This treatment removes floating and settleable solids and about 90 percent of the oxygen-demanding substances and suspended solids. Disinfection is the final stage of secondary treatment.

• **Service Area**  The area which will be serviced by a wastewater treatment system.

• **Sewage**  Sewage refers to the wastewater from residential, commercial, and industrial establishments, which flows through the pipes to a treatment plant.

• **Sewer**  Sewer refers to the pipe used to transport wastewater.

• **Sewer or Sanitary District**  A sewer district is usually either a semi-autonomous governmental unit whose purpose is the provision of sewerage or a special assessment district within which sewerage facilities are provided to residents.

• **Sludge**  The accumulated settled solids deposited from sewage or industrial wastes, raw or treated, in tanks or basins, and containing more or less water forming a semi-liquid mass.

• **Solids Dewatering**  A process which removes excess water from sludge in order to separate the solids. This is done to allow the solids to be landfilled more easily.

• **State Revolving Fund (SRF)**  This program was established to provide low cost financing for the construction of publicly owned water pollution control facilities. The program is jointly administered by the Michigan Municipal Bond Authority and the Michigan Department of Environmental Quality.

• **Storm Sewer**  A sewer intended to carry only storm waters, surface runoff, street wash waters, and drainage.

• **Surface Runoff**  Water that is derived directly from precipitation and passes over the ground into storm sewers and water-courses (see “Flood” for comparison).

• **Suspended Solids (SS)**  Small particles of solid pollutants in sewage that contribute to turbidity and resist separation by conventional means.

• **Ten State Standards**  Recommended standards for water and wastewater facilities by the Committee of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers.
- **Tertiary Treatment**: Advanced cleaning of wastewater that goes beyond the secondary or biological stage, removing nutrients such as phosphorus, nitrogen, and most BOD and suspended solids.

- **Thermophilic Anaerobic Digestion**: An anaerobic digestion process which is operated at a temperature of approximately 131° F.

- **Total P**: Total phosphorus.

- **TCRPC**: Tri-County Regional Planning Commission

- **TSS**: Total Suspended Solids. A measure of the suspended solids in wastewater, effluent, or water bodies, determined by tests for "total suspended non-filterable solids."

- **Trunk Sewer**: Generally, a large diameter municipal sewer that collects flow from smaller diameter municipal sewers and discharges to an interceptor sewer.

- **US EPA**: The United States Environmental Protection Agency.

- **User Charge**: Fees levied upon users of a water or wastewater system, based on the volume and/or characteristics of the water.

- **Vactor Receiving Station**: Container filter is used for dewatering and disposal of scum, grease, grit from sanitary sewer system and POTW.

- **Volatile Solids**: Those solids in water or other liquids that are lost on ignition of the dry solids at 550° centigrade.

- **Water Quality Criteria**: The levels of pollutants that affect the suitability of water for a given use. Generally, water use classification includes: public water supply, recreation, propagation of fish and other aquatic life, agricultural use and industrial use.
Appendix A — Current NPDES Permit
PERMIT NO. MI0021113

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq., as amended; the "Federal Act"); Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Part 41, Sewerage Systems, of the NREPA; and Michigan Executive Order 2011-1,

City of Howell
611 East Grand River
Howell, MI 48843

is authorized to discharge from the Howell Wastewater Treatment Plant located at

1191 South Michigan Avenue
Howell, MI 48843

designated as Howell WWTP

to the receiving water named the Marion and Genoa Drain in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit.

This permit is based on a complete application submitted on April 5, 2016 and amended on June 22, 2016.

This permit takes effect on April 1, 2019. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MI0021113 (expiring October 1, 2016).

This permit and the authorization to discharge shall expire at midnight, October 1, 2023. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department of Environmental Quality (Department) by April 4, 2023.

Issued: March 26, 2019

Original signed by Christine Alexander
Christine Alexander, Manager
Permits Section
Water Resources Division
PERMIT FEE REQUIREMENTS

In accordance with Section 324.3120 of the NREPA, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1.

Annual Permit Fee Classification: Municipal Major, less than 10 MGD (Individual Permit)

In accordance with Section 324.3118 of the NREPA, the permittee shall make payment of an annual storm water fee to the Department for each January 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by March 15 for notices mailed by February 1. The fee is due no later than 45 days after receiving the notice for notices mailed after February 1.

In accordance with Section 324.3132 of the NREPA, the permittee shall make payment of an annual biosolids land application fee to the Department if the permittee land applies biosolids. In response to the Department's annual notice, the permittee shall submit the fee, which shall be postmarked no later than January 31 of each year.

CONTACT INFORMATION

Unless specified otherwise, all contact with the Department required by this permit shall be made to the Lansing District Office of the Water Resources Division. The Lansing District Office is located at 525 West Allegan Street, 1st Floor, South Tower, Lansing, MI 48933, Telephone: 517-284-6651, Fax: 517-241-3571.

CONTESTED CASE INFORMATION

Any person who is aggrieved by this permit may file a sworn petition with the Michigan Administrative Hearing System within the Michigan Department of Licensing and Regulatory Affairs, c/o the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Licensing and Regulatory Affairs may reject any petition filed more than 60 days after issuance as being untimely.
# PART I

## Section A. Limitations and Monitoring Requirements

### 1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Marion and Genoa Drain at Latitude 42.59305, Longitude -83.93000. Such discharge shall be limited and monitored by the permittee as specified below.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Limits for Quantity or Loading</th>
<th>Maximum Limits for Quality or Concentration</th>
<th>Monitoring Frequency</th>
<th>Sample Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly 7-Day Daily Units</td>
<td>Monthly 7-Day Daily Units</td>
<td>Frequency</td>
<td>Type</td>
</tr>
<tr>
<td>Flow (report)</td>
<td>--- (report) MGD</td>
<td>--- --- --- ---</td>
<td>Daily Total</td>
<td>Daily Flow</td>
</tr>
<tr>
<td>Carbonaceous Biochemical Oxygen Demand (CBOD₅)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May - October</td>
<td>80 200 (report) lbs/day</td>
<td>4 --- --- 10 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>180 290 (report) lbs/day</td>
<td>9 --- --- 14 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>December - March</td>
<td>410 610 (report) lbs/day</td>
<td>20 --- --- 30 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>310 470 (report) lbs/day</td>
<td>15 --- --- 23 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>410 610 (report) lbs/day</td>
<td>20 30 (report) mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>Ammonia Nitrogen (as N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May - October</td>
<td>10 41 (report) lbs/day</td>
<td>0.5 --- 2.0 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>--- 120 (report) lbs/day</td>
<td>--- --- 6.0 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>December - March</td>
<td>--- 200 (report) lbs/day</td>
<td>--- --- 10 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>--- 140 (report) lbs/day</td>
<td>--- --- 6.9 mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>Total Phosphorus (as P) 10</td>
<td>--- (report) lbs/day</td>
<td>0.5 --- (report) mg/l</td>
<td>Daily 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>Fecal Coliform Bacteria</td>
<td>--- --- --- ---</td>
<td>200 400 (report) cts/100 ml</td>
<td>Daily Grab</td>
<td></td>
</tr>
<tr>
<td>Perfluorooctane Sulfonate (PFOS)</td>
<td>(report) (report) lbs/day (report)</td>
<td>(report) ng/l</td>
<td>Monthly Grab</td>
<td></td>
</tr>
<tr>
<td>Perfluorooctanoic Acid (PFOA)</td>
<td>(report) (report) lbs/day (report)</td>
<td>(report) ng/l</td>
<td>Monthly Grab</td>
<td></td>
</tr>
<tr>
<td>Total Residual Chlorine</td>
<td>--- --- --- ---</td>
<td>--- --- 38 µg/l</td>
<td>Daily Grab</td>
<td></td>
</tr>
<tr>
<td>See Part I.A.1.j</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole Effluent Toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Toxicity</td>
<td>--- --- --- ---</td>
<td>--- --- (report)</td>
<td>Monthly 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>Chronic Toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>until September 30, 2019</td>
<td>--- --- --- ---</td>
<td>--- --- (report)</td>
<td>Monthly 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>beginning October 1, 2019</td>
<td>--- --- --- ---</td>
<td>1.1 --- (report)</td>
<td>Monthly 24-Hr Composite</td>
<td></td>
</tr>
<tr>
<td>Total Mercury</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-- Corrected</td>
<td>(report) --- (report) lbs/day (report)</td>
<td>(report) ng/l</td>
<td>Quarterly Calculation</td>
<td></td>
</tr>
<tr>
<td>-- Uncorrected</td>
<td>--- --- --- ---</td>
<td>(report) ng/l</td>
<td>Quarterly Grab</td>
<td></td>
</tr>
<tr>
<td>-- Field Duplicate</td>
<td>--- --- --- ---</td>
<td>(report) ng/l</td>
<td>Quarterly Grab</td>
<td></td>
</tr>
<tr>
<td>-- Field Blank</td>
<td>--- --- --- ---</td>
<td>(report) ng/l</td>
<td>Quarterly Preparation</td>
<td></td>
</tr>
<tr>
<td>-- Laboratory Method Blank</td>
<td>--- --- --- ---</td>
<td>(report) ng/l</td>
<td>Quarterly Preparation</td>
<td></td>
</tr>
</tbody>
</table>
PART I

Section A. Limitations and Monitoring Requirements

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Quantity or Loading</th>
<th>Quality or Concentration</th>
<th>Monitoring Frequency</th>
<th>Sample Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly 7-Day Daily</td>
<td>Monthly 7-Day Daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum % Removal</td>
<td></td>
<td></td>
<td>Monthly Calculation</td>
<td></td>
</tr>
<tr>
<td>CBOD₅</td>
<td></td>
<td></td>
<td>Monthly</td>
<td></td>
</tr>
<tr>
<td>December - March</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>TSS</td>
<td></td>
<td></td>
<td>Monthly</td>
<td></td>
</tr>
<tr>
<td>December - April</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td>Daily</td>
<td></td>
</tr>
<tr>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td></td>
<td></td>
<td>Daily</td>
<td></td>
</tr>
<tr>
<td>May - October</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>November - April</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

The following design flow was used in determining the above limitations, but is not to be considered a limitation or actual capacity: 2.45 MGD.

a. Narrative Standard
The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.

b. Sampling Locations
Samples for CBOD₅, Total Suspended Solids, Ammonia Nitrogen, Whole Effluent Toxicity, and Total Phosphorus shall be taken prior to disinfection. Samples for Dissolved Oxygen, Fecal Coliform Bacteria, Total Residual Chlorine, Total Mercury, and pH shall be taken after disinfection. The Department may approve alternate sampling locations which are demonstrated by the permittee to be representative of the effluent.

c. Quarterly Monitoring
Quarterly samples shall be taken during the months of January, April, July, and October. If the facility does not discharge during these months, the permittee shall sample the next discharge occurring during the period in question. If the facility does not discharge during the period in question, a sample is not required for that period. For any month in which a sample is not taken, the permittee shall enter "*G" on the Discharge Monitoring Report.

d. Ultraviolet Disinfection
It is understood that ultraviolet light will be used to achieve compliance with the fecal coliform limitations. If disinfection other than ultraviolet light will be used, the permittee shall notify the Department in accordance with Part II.C.12. - Changes in Facility Operations.

e. Percent Removal Requirements
These requirements shall be calculated based on the monthly (30-day) effluent CBOD₅ and Total Suspended Solids concentrations and the monthly influent concentrations for approximately the same period.
Section A. Limitations and Monitoring Requirements

f. Final Effluent Limitation for Total Mercury
The final limit for total mercury is the Discharge Specific Level Currently Achievable (LCA) based on a multiple discharger variance from the water quality-based effluent limit of 1.3 ng/l, pursuant to R 323.1103(9) of the Water Quality Standards. Compliance with the LCA shall be determined as a 12-month rolling average, the calculation of which may be done using blank-corrected sample results. The 12-month rolling average shall be determined by adding the present monthly average result to the preceding 11 monthly average results then dividing the sum by 12. For facilities with quarterly monitoring requirements for total mercury, quarterly monitoring shall be equivalent to three (3) months of monitoring in calculating the 12-month rolling average. Facilities that monitor more frequently than monthly for total mercury must determine the monthly average result, which is the sum of the results of all data obtained in a given month divided by the total number of samples taken, in order to calculate the 12-month rolling average. If the 12-month rolling average for any quarter is less than or equal to the LCA, the permittee will be considered to be in compliance for total mercury for that quarter, provided the permittee is also in full compliance with the Pollutant Minimization Program for Total Mercury, set forth in Part I.A.3.

g. Total Mercury Testing and Additional Reporting Requirements
The analytical protocol for total mercury shall be in accordance with EPA Method 1631, Revision E, “Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry,” EPA-821-R-02-019, August 2002. The quantification level for total mercury shall be 0.5 ng/l, unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination.

The use of clean technique sampling procedures is required unless the permittee can demonstrate to the Department that an alternative sampling procedure is representative of the discharge. Guidance for clean technique sampling is contained in EPA Method 1669, “Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels,” EPA-821-R96-001, July 1996. Information and data documenting the permittee's sampling and analytical protocols and data acceptability shall be submitted to the Department upon request.

In order to demonstrate compliance with EPA Method 1631E and EPA Method 1669, the permittee shall report, on the daily sheet, the analytical results of all field blanks and field duplicates collected in conjunction with each sampling event, as well as laboratory method blanks when used for blank correction. The permittee shall collect at least one (1) field blank and at least one (1) field duplicate per sampling event. If more than ten (10) samples are collected during a sampling event, the permittee shall collect at least one (1) additional field blank AND field duplicate for every ten (10) samples collected. Only field blanks or laboratory method blanks may be used to calculate a concentration lower than the actual sample analytical results (i.e., a blank correction). Only one (1) blank (field OR laboratory method) may be used for blank correction of a given sample result, and only if the blank meets the quality control acceptance criteria. If blank correction is not performed on a given sample analytical result, the permittee shall report under ‘Total Mercury – Corrected’ the same value reported under ‘Total Mercury – Uncorrected.’ The field duplicate is for quality control purposes only; its analytical result shall not be averaged with the sample result.

h. Monitoring Frequency Reduction for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic Acid (PFOA)
After the submittal of 24 months of monthly data or at least 10 equally spaced data points over a minimum of 3 months, the permittee may request, in writing, Department approval of a reduction in monitoring frequency for PFOS and/or PFOA. This request shall contain an explanation as to why the reduced monitoring is appropriate. Upon receipt of written approval and consistent with such approval, the permittee may reduce the monitoring frequency indicated in Part I.A.1. of this permit. The monitoring frequency for PFOS and/or PFOA, shall not be reduced to less than annually. The Department may revoke the approval for reduced monitoring at any time upon notification to the permittee.
PART I

Section A. Limitations and Monitoring Requirements

i. Whole Effluent Toxicity Requirements
Test species shall include fathead minnow and Ceriodaphnia dubia. Testing and reporting procedures shall follow procedures contained in EPA/600/4-91/002, “Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (Fourth Edition).” When the effluent ammonia nitrogen (as N) concentration is greater than 3 mg/l, the pH of the toxicity test shall be maintained at a pH of 8 Standard Units. The acute toxic unit value (TUA) and chronic toxic unit value (TUC) for each species tested shall be reported on the Discharge Monitoring Report (DMR). If multiple chronic toxicity tests for the same species are performed during the month, the maximum TUA value and monthly average TUC value for the species shall be reported. For each species not tested, the permittee shall enter “*W” on the DMR. Completed toxicity test reports for each test conducted shall be retained by the permittee in accordance with the requirements of Part II.B.5. of this permit and shall be available for review by the Department upon request. After nine (9) months of toxicity testing and upon approval from the Department, the monitoring frequency may be reduced to no less than annually if the test data indicate that the toxicity requirements of R 323.1219 of the Michigan Administrative Code are consistently being met. After twelve (12) months of toxicity testing and upon approval from the Department, the chronic toxicity tests may be performed using the more sensitive species identified in the chronic toxicity database. If a more sensitive species cannot be identified, the chronic toxicity tests shall be performed with both species. Toxicity test data acceptability is contingent upon validation of the test method by the testing laboratory. Such validation shall be submitted to the Department upon request.

1) When monitoring shows persistent exceedance of the 1.1 TUC limit or the 1.0 TUA limit for effluent toxicity, the Department will determine whether the permittee must implement the toxicity control program requirements specified in 2) below.

2) Upon written notification by the Department, the following conditions apply. Within 90 days of the notation, the permittee shall implement a Toxicity Reduction Evaluation (TRE). The objective of the TRE shall be to reduce the toxicity of the final effluent from Monitoring Point 001A to < 1.1 TUC and < 1.0 TUA. The following documents are available as guidance to reduce toxicity to acceptable levels: Phase I, EPA/600/6-91/005F (chronic), EPA/600/6-91/003 (acute); Phase II, EPA/600/R-92/080 (acute and chronic); Phase III, EPA/600/R-92/081 (acute and chronic); and Publicly Owned Treatment Works (POTWs), EPA/833B-99/002. Annual reports shall be submitted to the Department within 30 days of the completion of the last test of each annual cycle.

j. Filamentous Bacteria Control
The permittee is authorized to use chlorine for the occasional treatment of filamentous bacteria at the facility. Total Residual Chlorine (TRC) monitoring is only required during periods of chlorine use and subsequent discharge. The permittee shall enter a *G on the Discharge Monitoring Report when no chlorine is used. Compliance with the Total Residual Chlorine limit shall be determined on the basis of one or more grab samples. If more than one (1) sample per day is taken, the additional samples shall be collected in near equal intervals over at least eight (8) hours. The samples shall be analyzed immediately upon collection and the average reported as the daily concentration. Samples shall be analyzed in accordance with Part II.B.2. of this permit.

The permittee may use dechlorination techniques to achieve the applicable TRC limitations, using sodium thiosulfate, sodium sulfite, sodium bisulfite, or other dechlorinating reagents approved by the Department. The quantity of the reagent(s) used shall be limited to 0.6 times the stoichiometric amount of TRC for sodium thiosulfate, 1.5 times the stoichiometric amount of TRC for sodium sulfite, and 1.8 times the stoichiometric amount of TRC for sodium sulfite. The TRC samples taken to determine the amount of each chemical to add shall be taken upstream of dechlorination. The Department may approve the use of additional quantities of reagents which are demonstrated to be protective of water quality standards.
## Section A. Limitations and Monitoring Requirements

### 2. Quantification Levels and Analytical Methods for Selected Parameters

Quantification levels (QLs) are specified for selected parameters in the table below. These QLs shall be considered the maximum acceptable unless a higher QL is appropriate because of sample matrix interference. Justification for higher QLs shall be submitted to the Department within 30 days of such determination. Where necessary to help ensure that the QLs specified can be achieved, analytical methods may also be specified in the table below. The sampling procedures, preservation and handling, and analytical protocol for all monitoring conducted in compliance with this permit, including monitoring conducted to meet the requirements of the application for permit reissuance, shall be in accordance with the methods specified in the table below, or in accordance with Part II.B.2. of this permit if no method is specified in the table below, unless an alternate method is approved by the Department. **Not all QLs are expressed in the same units in the table below.** The table is continued on the following page.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>QL</th>
<th>Units</th>
<th>Analytical Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Diphenylhydrazine (as Azobenzene)</td>
<td>3.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>2,4,6-Trichlorophenol</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>2,4-Dinitrophenol</td>
<td>19</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>3,3’-Dichlorobenzidine</td>
<td>1.5</td>
<td>ug/l</td>
<td>EPA Method 605</td>
</tr>
<tr>
<td>4-Chloro-3-Methylphenol</td>
<td>7.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>4,4’-DDD</td>
<td>0.05</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>4,4’-DDE</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>4,4’-DDT</td>
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<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Acrylonitrile</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Aldrin</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Alpha-Hexachlorocyclohexane</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Antimony, Total</td>
<td>1</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Arsenic, Total</td>
<td>1</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Barium, Total</td>
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<td>ug/l</td>
<td></td>
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<tr>
<td>Benzidine</td>
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<td>Beryllium, Total</td>
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<td></td>
</tr>
<tr>
<td>Beta-Hexachlorocyclohexane</td>
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<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Bis (2-Chloroethyl) Ether</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Bis (2-Ethylhexyl) Phthalate</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Boron, Total</td>
<td>20</td>
<td>ug/l</td>
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</tr>
<tr>
<td>Cadmium, Total</td>
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<td>ug/l</td>
<td></td>
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<td>Chlordane</td>
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<td>ug/l</td>
<td>EPA Method 608</td>
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<tr>
<td>Chloride</td>
<td>1.0</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>Chromium, Hexavalent</td>
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<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Chromium, Total</td>
<td>10</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Copper, Total</td>
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<td>ug/l</td>
<td></td>
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<tr>
<td>Cyanide, Available</td>
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<td>EPA Method OIA 1677</td>
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<td>Cyanide, Total</td>
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<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Delta-Hexachlorocyclohexane</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
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<tr>
<td>Dieldrin</td>
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<td>EPA Method 608</td>
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<tr>
<td>Di-N-Butyl Phthalate</td>
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<tr>
<td>Endosulfan I</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Endosulfan II</td>
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<td>EPA Method 608</td>
</tr>
<tr>
<td>Endosulfan Sulfate</td>
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<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Endrin</td>
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<td>ug/l</td>
<td>EPA Method 608</td>
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<tr>
<td>Endrin Aldehyde</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
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<tr>
<td>Fluoranthene</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Heptachlor</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>Heptachlor Epoxide</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
</tbody>
</table>
### Part I

#### Section A. Limitations and Monitoring Requirements

<table>
<thead>
<tr>
<th>Parameter</th>
<th>QL</th>
<th>Units</th>
<th>Analytical Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexachlorobenzene</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 612</td>
</tr>
<tr>
<td>Hexachlorobutadiene</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 612</td>
</tr>
<tr>
<td>Hexachlorocyclopentadiene</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 612</td>
</tr>
<tr>
<td>Hexachloroethane</td>
<td>5.0</td>
<td>ug/l</td>
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</tr>
<tr>
<td>Lead, Total</td>
<td>1</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Lindane</td>
<td>0.01</td>
<td>ug/l</td>
<td>EPA Method 608</td>
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<tr>
<td>Lithium, Total</td>
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<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Mercury, Total</td>
<td>0.5</td>
<td>ng/l</td>
<td>EPA Method 1631E</td>
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<tr>
<td>Nickel, Total</td>
<td>5</td>
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<tr>
<td>PCB-1016</td>
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<td>ug/l</td>
<td>EPA Method 608</td>
</tr>
<tr>
<td>PCB-1221</td>
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<td>ug/l</td>
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</tr>
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<td>PCB-1232</td>
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<td>PCB-1242</td>
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<td>PCB-1248</td>
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<td>PCB-1254</td>
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<td>PCB-1260</td>
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</tr>
<tr>
<td>Pentachlorophenol</td>
<td>1.8</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Perfluorooctane sulfonate (PFOS)</td>
<td>2.0</td>
<td>ng/l</td>
<td>ASTM D7979 or an isotope dilution method (sometimes referred to as Method 537 modified)</td>
</tr>
<tr>
<td>Perfluorooctanoic acid (PFOA)</td>
<td>2.0</td>
<td>ng/l</td>
<td>ASTM D7979 or an isotope dilution method (sometimes referred to as Method 537 modified)</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Phosphorus (as P), Total</td>
<td>10</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Selenium, Total</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Silver, Total</td>
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<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Strontium, Total</td>
<td>1000</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>2.0</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>Sulfides, Dissolved</td>
<td>20</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Thallium, Total</td>
<td>1</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>Toxaphene</td>
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<tr>
<td>Vinyl Chloride</td>
<td>0.25</td>
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<tr>
<td>Zinc, Total</td>
<td>10</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>
PART I

Section A. Limitations and Monitoring Requirements

3. Additional Monitoring Requirements

As a condition of this permit, the permittee shall monitor the discharge from Monitoring Point 001A for the constituents identified below. This monitoring is an application requirement of 40 CFR 122.21(j), effective December 2, 1999. Testing shall be conducted in October 2019, May 2020, March 2021, and August 2022. Grab samples shall be collected for total mercury, available cyanide, total phenols, and the Volatile Organic Compounds identified below. For all other parameters, 24-hour composite samples shall be collected.

For selected parameters required under this section, the quantification levels and analytical methods shall be as specified under Quantification Levels and Analytical Methods for Selected Parameters, below, unless a higher quantification level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to the Department within 30 days of such determination.

The results of such additional monitoring shall be submitted with the application for reissuance (see the cover page of this permit for the application due date). The permittee shall notify the Department within 14 days of completing the monitoring for each month specified above in accordance with Part II.C.5. Additional reporting requirements are specified in Part II.C.11. The permittee shall report to the Department any whole effluent toxicity test results greater than 1.0 TUₐ or 1.0 TUₐ within five (5) days of becoming aware of the result. If, upon review of the analysis, it is determined that additional requirements are needed to protect the receiving waters in accordance with applicable water quality standards, the permit may then be modified by the Department in accordance with applicable laws and rules.

Hardness

calcium carbonate

Metals (Total Recoverable), Cyanide and Total Phenols

<table>
<thead>
<tr>
<th>Constituent</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>antimony</td>
<td>arsenic</td>
</tr>
<tr>
<td>beryllium</td>
<td>boron</td>
</tr>
<tr>
<td>copper</td>
<td>lead</td>
</tr>
<tr>
<td>silver</td>
<td>thallium</td>
</tr>
<tr>
<td>total phenolic compounds</td>
<td></td>
</tr>
</tbody>
</table>

Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Constituent</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>acrolein</td>
<td>acrylonitrile</td>
</tr>
<tr>
<td>carbon tetrachloride</td>
<td>chlorobenzene</td>
</tr>
<tr>
<td>2-chloroethyl vinyl ether</td>
<td>chloroform</td>
</tr>
<tr>
<td>1,2-dichloroethane</td>
<td>trans-1,2-dichloroethylene</td>
</tr>
<tr>
<td>1,3-dichloropropylene</td>
<td>ethylbenzene</td>
</tr>
<tr>
<td>methylene chloride</td>
<td>1,1,2,2,-tetrachloroethane</td>
</tr>
<tr>
<td>1,1,1-trichloroethane</td>
<td>1,1,2-trichloroethane</td>
</tr>
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Acid-Extractable Compounds

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<tbody>
<tr>
<td>p-chloro-m-cresol</td>
<td>2-chlorophenol</td>
</tr>
<tr>
<td>4,6-dinitro-o-cresol</td>
<td>2,4-dinitrophenol</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
<td>phenol</td>
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Base/Neutral Compounds

<table>
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</thead>
<tbody>
<tr>
<td>acenaphthene</td>
<td>acenaphthylene</td>
</tr>
<tr>
<td>benzo(a)anthracene</td>
<td>benzo(a)pyrene</td>
</tr>
<tr>
<td>benzo(k)fluoranthene</td>
<td>bis(2-chloroethoxy)methane</td>
</tr>
<tr>
<td>bis(2-ethylhexyl)phthalate</td>
<td>4-bromophenyl phenyl ether</td>
</tr>
<tr>
<td>4-chlorophenyl phenyl ether</td>
<td>chrysene</td>
</tr>
<tr>
<td>dibenzo(a,h)anthracene</td>
<td>1,2-dichlorobenzene</td>
</tr>
<tr>
<td>3,3‘-dichlorobenzidine</td>
<td>diethyl phthalate</td>
</tr>
<tr>
<td>2,6-dinitrotoluene</td>
<td>1,2-diphenylhydrazine</td>
</tr>
<tr>
<td>Hexachlorobenzene</td>
<td>hexachlorobutadiene</td>
</tr>
<tr>
<td>indeno(1,2,3-cd)pyrene</td>
<td>isophorone</td>
</tr>
<tr>
<td>n-nitrosodi-n-propylamine</td>
<td>n-nitrosodimethylamine</td>
</tr>
<tr>
<td>pyrene</td>
<td>1,2,4-trichlorobenzene</td>
</tr>
</tbody>
</table>
Section A. Limitations and Monitoring Requirements

4. Pollutant Minimization Program for Total Mercury

The goal of the Pollutant Minimization Program is to maintain the effluent concentration of total mercury at or below 1.3 ng/l. The permittee shall continue to implement the Pollutant Minimization Program approved on May 26, 2010, and modifications thereto, to proceed toward the goal. The Pollutant Minimization Program includes the following:

a. an annual review and semi-annual monitoring of potential sources of mercury entering the wastewater collection system;

b. a program for quarterly monitoring of influent and periodic monitoring of sludge for mercury; and

c. implementation of reasonable cost-effective control measures when sources of mercury are discovered. Factors to be considered include significance of sources, economic considerations, and technical and treatability considerations.

On or before March 31 of each year, the permittee shall submit a status report for the previous calendar year to the Department that includes 1) the monitoring results for the previous year, 2) an updated list of potential mercury sources, and 3) a summary of all actions taken to reduce or eliminate identified sources of mercury.

Any information generated as a result of the Pollutant Minimization Program set forth in this permit may be used to support a request to modify the approved program or to demonstrate that the Pollutant Minimization Program requirement has been completed satisfactorily.

A request for modification of the approved program and supporting documentation shall be submitted in writing to the Department for review and approval. The Department may approve modifications to the approved program (approval of a program modification does not require a permit modification), including a reduction in the frequency of the requirements under items a. and b.

This permit may be modified in accordance with applicable laws and rules to include additional mercury conditions and/or limitations as necessary.

5. Pollutant Minimization and Source Evaluation Program for Perfluorooctane Sulfonate (PFOS) and/or Perfluorooctanoic Acid (PFOA)

The goal of the Pollutant Minimization and Source Evaluation Program is to identify and address sources of perfluorooctane sulfonate (PFOS) and/or perfluorooctanoic acid (PFOA) and to reduce and maintain the effluent concentrations of PFOS and/or PFOA at or below the water quality-based effluent limits (WQBELs). The WQBELs are 12 ng/L for PFOS and 15 ug/L for PFOA.

On or before June 30, 2019, the permittee shall submit an approvable Pollutant Minimization and Source Evaluation Program for PFOS and/or PFOA to proceed toward the goal. The Pollutant Minimization and Source Evaluation Program shall continue work under the IPP Interim Initiative and shall include the following at a minimum:

a. Identification of and strategies to identify any additional potential and probable PFOS and/or PFOA sources

b. Monitoring plan for the permitted facility’s influent and effluent and effluent from potential sources

c. Implemented measures thus far to eliminate, reduce, and/or control sources, and an assessment of the degree of success and the strategies used to measure success

d. Proposed measures and implementation schedules for elimination, control, and/or reduction of the identified sources (prioritizing highest loadings and concentrations), and the strategies that will be used to measure success
Section A. Limitations and Monitoring Requirements

The Pollutant Minimization and Source Evaluation Program shall be implemented upon approval by the Department.

On or before May 1 of each year following Pollutant Minimization and Source Evaluation Program implementation, the permittee shall submit to the Department a status report for the previous calendar year. Upon written notification by the Department, the permittee may be required to submit more frequent status reports. Status reports at a minimum shall include:

a. Complete listing of PFOS and/or PFOA sources
b. Summary of influent and effluent monitoring data
c. Summary of monitoring data from known or potential sources
d. History and compliance status for sources
e. Implemented measures to eliminate, reduce, or control sources, (prioritizing highest loadings and concentrations), and an assessment of the degree of success and the strategies used to measure success
f. Proposed measures and schedules for elimination, control, or reduction of any newly identified PFOS and/or PFOA sources (prioritizing highest loadings and concentrations), and the strategies that will be used to measure success
g. Barriers to implementation and revisions to the implementation schedule
h. Laboratory reports, if not previously supplied

Any information generated as a result of the Pollutant Minimization and Source Evaluation Program set forth in this permit may be used to support a request to modify the Pollutant Minimization and Source Evaluation Program or to demonstrate that the requirement has been completed satisfactorily. A request for modification of the approved Pollutant Minimization and Source Evaluation Program shall be submitted in writing to the Department along with supporting documentation for review and approval. The Department may approve modifications to the approved Pollutant Minimization and Source Evaluation Program, including a reduction in the frequency of the influent and known or potential source monitoring requirements. Approval of a Pollutant Minimization and Source Evaluation Program modification does not require a permit modification.

This permit may be modified in accordance with applicable laws and rules to include additional PFOS and/or PFOA conditions and/or limitations as necessary.

6. Untreated or Partially Treated Sewage Discharge Reporting and Testing Requirements

In accordance with Section 324.3112a of the NREPA, if untreated sewage, including sanitary sewer overflows (SSO) and combined sewer overflows (CSO), or partially treated sewage is directly or indirectly discharged from a sewer system onto land or into the waters of the state, the entity responsible for the sewer system shall immediately, but not more than 24 hours after the discharge begins, notify, by telephone, the Department, local health departments, a daily newspaper of general circulation in the county in which the permittee is located, and a daily newspaper of general circulation in the county or counties in which the municipalities whose waters may be affected by the discharge are located that the discharge is occurring.

The permittee shall also annually contact municipalities, including the superintendent of a public drinking water supply with potentially affected intakes, whose waters may be affected by the permittee's discharge of combined sewage, and if those municipalities wish to be notified in the same manner as specified above, the permittee shall provide such notification. Such notification shall also include a daily newspaper in the county of the affected municipality.
PART I

Section A. Limitations and Monitoring Requirements

At the conclusion of the discharge, written notification shall be submitted in accordance with and on the “Report of Discharge Form” available via the internet at: http://www.deq.state.mi.us/csosso/, or, alternatively for combined sewer overflow discharges, in accordance with notification procedures approved by the Department.

In addition, in accordance with Section 324.3112a of the NREPA, each time a discharge of untreated sewage or partially treated sewage occurs, the permittee shall test the affected waters for *Escherichia coli* to assess the risk to the public health as a result of the discharge and shall provide the test results to the affected local county health departments and to the Department. The testing shall be done at locations specified by each affected local county health department but shall not exceed 10 tests for each separate discharge event. The affected local county health department may waive this testing requirement, if it determines that such testing is not needed to assess the risk to the public health as a result of the discharge event. The results of this testing shall be submitted with the written notification required above, or, if the results are not yet available, submit them as soon as they become available. This testing is not required, if the testing has been waived by the local health department, or if the discharge(s) did not affect surface waters.

Permittees accepting sanitary or municipal sewage from other sewage collection systems are encouraged to notify the owners of those systems of the above reporting and testing requirements.

7. Facility Contact

The “Facility Contact” was specified in the application. The permittee may replace the facility contact at any time, and shall notify the Department in writing within 10 days after replacement (including the name, address and telephone number of the new facility contact).

a. The facility contact shall be (or a duly authorized representative of this person):
   - for a corporation, a principal executive officer of at least the level of vice president; or a designated representative if the representative is responsible for the overall operation of the facility from which the discharge originates, as described in the permit application or other NPDES form,
   - for a partnership, a general partner,
   - for a sole proprietorship, the proprietor, or
   - for a municipal, state, or other public facility, either a principal executive officer, the mayor, village president, city or village manager or other duly authorized employee.

b. A person is a duly authorized representative only if:
   - the authorization is made in writing to the Department by a person described in paragraph a. of this section; and
   - the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the facility (a duly authorized representative may thus be either a named individual or any individual occupying a named position).

Nothing in this section obviates the permittee from properly submitting reports and forms as required by law.
Section A. Limitations and Monitoring Requirements

8. Monthly Operating Reports

Part 41 of Act 451 of 1994 as amended, specifically Section 324.4106 and associated R 299.2953, requires that the permittee file with the Department, on forms prescribed by the Department, reports showing the effectiveness of the treatment facility operation and the quantity and quality of liquid wastes discharged into waters of the state.

Since this permit includes modifications to the monitoring requirements in the previously-issued permit, the previously approved treatment facility monitoring program shall be revised. Within thirty (30) days of the effective date of this permit, the permittee shall submit to the Department a revised treatment facility monitoring program to meet this requirement. Upon approval by the Department the permittee shall implement the revised treatment facility monitoring program. The reporting forms and guidance are available on the DEQ web site at http://www.michigan.gov/deq/0,1607,7-135-3313_44117---,00.html. The permittee may use alternative operating forms if they are consistent with the approved monitoring program. These forms shall be maintained on site and shall be provided to the Department for review upon request. These treatment facility monitoring records shall be maintained for a minimum of three years.

9. Asset Management

The permittee shall at all times properly operate and maintain all facilities (i.e., the sewer system and treatment works as defined in Part 41 of the NREPA), and control systems installed or used by the permittee to operate the sewer system and treatment works and achieve and maintain compliance with the conditions of this permit (also see Part II.D.3 of this permit). The requirements of an Asset Management Program function to achieve the goals of effective performance, adequate funding, and adequate operator staffing and training. Asset management is a planning process for ensuring that optimum value is gained for each asset and that financial resources are available to rehabilitate and replace those assets when necessary. Asset management is centered on a framework of five (5) core elements: the current state of the assets; the required sustainable level of service; the assets critical to sustained performance; the minimum life-cycle costs; and the best long-term funding strategy.

a. Asset Management Program Requirements

On or before September 1, 2019, the permittee shall submit to the Department an Asset Management Plan for review and approval. An approvable Asset Management Plan shall contain a schedule for the development and implementation of an Asset Management Program that meets the requirements outlined below in 1) – 4). A copy of any Asset Management Program requirements already completed by the permittee should be submitted as part of the Asset Management Plan. Upon approval by the Department the permittee shall implement the Asset Management Plan. (The permittee may choose to include the Operation and Maintenance Manual required under Part II.C.14. of this permit as part of their Asset Management Program).

1) Maintenance Staff. The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. The level of staffing needed shall be determined by taking into account the work involved in operating the sewer system and treatment works, planning for and conducting maintenance, and complying with this permit.

2) Collection System Map. The permittee shall complete a map of the sewer collection system it owns and operates. The map shall be of sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up-to-date and available for review by the Department. Note: Items below referencing combined sewer systems are not applicable to separate sewer systems. Such map(s) shall include but not be limited to the following:

a) all sanitary sewer lines and related manholes;

b) all combined sewer lines, related manholes, catch basins and CSO regulators;

c) all known or suspected connections between the sanitary sewer or combined sewer and storm drain systems;
Section A. Limitations and Monitoring Requirements

d) all outfalls, including the treatment plant outfall(s), combined sewer treatment facility outfalls, untreated CSOs, and any known SSOs;

e) all pump stations and force mains;

f) the wastewater treatment facility(ies), including all treatment processes;

g) all surface waters (labeled);

h) other major appurtenances such as inverted siphons and air release valves;
i) a numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;

j) the scale and a north arrow;

k) the pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow; and

l) the manhole interior material, rim elevation (optional), and invert elevations.

3) Inventory and assessment of fixed assets. The permittee shall complete an inventory and assessment of operations-related fixed assets. Fixed assets are assets that are normally stationary (e.g., pumps, blowers, and buildings). The inventory and assessment shall be based on current conditions and shall be kept up-to-date and available for review by the Department.

a) The fixed asset inventory shall include the following:

   (1) a brief description of the fixed asset, its design capacity (e.g., pump: 120 gallons per minute), its level of redundancy, and its tag number if applicable;

   (2) the location of the fixed asset;

   (3) the year the fixed asset was installed;

   (4) the present condition of the fixed asset (e.g., excellent, good, fair, poor); and

   (5) the current fixed asset (replacement) cost in dollars for year specified in accordance with approved schedules;

b) The fixed asset assessment shall include a “Business Risk Evaluation” that combines the probability of failure of the fixed asset and the criticality of the fixed asset, as follows:

   (1) Rate the probability of failure of the fixed asset on a scale of 1-5 (low to high) using criteria such as maintenance history, failure history, and remaining percentage of useful life (or years remaining);

   (2) Rate the criticality of the fixed asset on a scale of 1-5 (low to high) based on the consequence of failure versus the desired level of service for the facility; and

   (3) Compute the Business Risk Factor of the fixed asset by multiplying the failure rating from (1) by the criticality rating from (2).
PART I

Section A. Limitations and Monitoring Requirements

4) **Operation, Maintenance & Replacement (OM&R) Budget and Rate Sufficiency for the Sewer System and Treatment Works.** The permittee shall complete an assessment of its user rates and replacement fund, including the following:

a) beginning and end dates of fiscal year;
b) name of the department, committee, board, or other organization that sets rates for the operation of the sewer system and treatment works;
c) amount in the permittee’s replacement fund in dollars for year specified in accordance with approved schedules;
d) replacement fund strategy of all assets with a useful life of 20 years or less;
e) expenditures for maintenance, corrective action and capital improvement taken during the fiscal year;
f) OM&R budget for the fiscal year; and

g) rate calculation demonstrating sufficient revenues to cover OM&R expenses. If the rate calculation shows there are insufficient revenues to cover OM&R expenses, the permittee shall document, within three (3) fiscal years after submittal of the Asset Management Plan, that there is at least one rate adjustment that reduces the revenue gap by at least 10 percent. The permittee may prepare and submit an alternate plan, subject to Department approval, for addressing the revenue gap. The ultimate goal of the Asset Management Program is to ensure sufficient revenues to cover OM&R expenses.

b. Reporting
Following Department approval of the permittee’s Asset Management Plan, the permittee shall develop a written report that summarizes asset management activities completed during the previous year and planned for the upcoming year. The written report shall be submitted to the Department on or before **August 1, of each year**. The written report shall include:

1) a description of the staffing levels maintained during the year;
2) a description of inspections and maintenance activities conducted and corrective actions taken during the previous year;
3) expenditures for collection system maintenance activities, treatment works maintenance activities, corrective actions, and capital improvement during the previous year;
4) a summary of assets/areas identified for inspection/action (including capital improvement) in the upcoming year based on the five (5) core elements and the Business Risk Factors;
5) a maintenance budget and capital improvement budget for the upcoming year that take into account implementation of an effective Asset Management Program that meets the five (5) core elements;
6) an updated asset inventory based on the original submission; and
7) an updated OM&R budget with an updated rate schedule that includes the amount of insufficient revenues, if any.
Section A. Limitations and Monitoring Requirements

10. Discharge Monitoring Report – Quality Assurance Study Program

The permittee shall participate in the Discharge Monitoring Report – Quality Assurance (DMR-QA) Study Program. The purpose of the DMR-QA Study Program is to annually evaluate the proficiency of all in-house and/or contract laboratory(ies) that perform, on behalf of the facility authorized to discharge under this permit, the analytical testing required under this permit. In accordance with Section 308 of the Clean Water Act (33 U.S.C. § 1318); and R 323.2138 and R 323.2154 of Part 21, Wastewater Discharge Permits, promulgated under Part 31 of the NREPA, participation in the DMR-QA Study Program is required for all major facilities, and for minor facilities selected for participation by the Department.

Annually and in accordance with DMR-QA Study Program requirements and submittal due dates, the permittee shall submit to the Michigan DMR-QA Study Program state coordinator all documentation required by the DMR-QA Study. DMR-QA Study Program participation is required only for the analytes required under this permit and only when those analytes are also identified in the DMR-QA Study.

If the permitted facility’s status as a major facility should change, participation in the DMR-QA Study Program may be reevaluated. Questions concerning participation in the DMR-QA Study Program should be directed to the Michigan DMR-QA Study Program state coordinator.

All forms and instructions required for participation in the DMR-QA Study Program, including submittal due dates and state coordinator contact information, can be found at http://www.epa.gov/compliance/discharge-monitoring-report-quality-assurance-study-program.
Section B. Storm Water Pollution Prevention

1. Final Effluent Limitations and Monitoring Requirements

The permittee is authorized to discharge storm water associated with industrial activity, as defined under 40 CFR 122.26(b)(14)(i-ix), to the surface waters of the state. Such discharge shall be limited and monitored by the permittee as specified below.

a. Narrative Standard
   The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.

b. Visual Assessment of Storm Water Discharges
   To ensure that storm water discharges from the facility do not violate the narrative standard in the receiving waters, storm water discharges shall be visually assessed in accordance with this permit.

c. Implementation of Storm Water Pollution Prevention Plan
   The permittee shall implement an acceptable Storm Water Pollution Prevention Plan (SWPPP) as required by this permit.

d. Certified Operator
   The permittee shall have an Industrial Storm Water Certified Operator who has supervision over the facility’s storm water treatment and control measures included in the SWPPP.
PART I

Section B. Storm Water Pollution Prevention

The Storm Water Pollution Prevention Plan (SWPPP) is a written procedure to reduce the exposure of storm water to significant materials and to reduce the amount of significant materials in the storm water discharge. An acceptable SWPPP shall identify potential sources of contamination and describe the controls necessary to reduce their impacts in accordance with Part I.B.2. through Part I.B.8. of this permit.

2. Source Identification

To identify potential sources of significant materials that can pollute storm water and subsequently be discharged from the facility, the SWPPP shall, at a minimum, include the following:

a. A site map identifying:
   1) buildings and other permanent structures;
   2) storage or disposal areas for significant materials;
   3) secondary containment structures and descriptions of the significant materials contained within the primary containment structures;
   4) storm water discharge points (which include outfalls and points of discharge), numbered or otherwise labeled for reference;
   5) location of storm water and non-storm water inlets (numbered or otherwise labeled for reference) contributing to each discharge point;
   6) location of NPDES-permitted discharges other than storm water;
   7) outlines of the drainage areas contributing to each discharge point;
   8) structural controls or storm water treatment facilities;
   9) areas of vegetation (with brief descriptions such as lawn, old field, marsh, wooded, etc.);
   10) areas of exposed and/or erodible soils and gravel lots;
   11) impervious surfaces (e.g., roofs, asphalt, concrete, etc.);
   12) name and location of receiving water(s); and
   13) areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the NREPA.

b. A list of all significant materials that could pollute storm water. For each material listed, the SWPPP shall include each of the following descriptions:
   1) the ways in which each type of significant material has been, or has reasonable potential to become, exposed to storm water (e.g., spillage during handling; leaks from pipes, pumps, and vessels; contact with storage piles, contaminated materials, or soils; waste handling and disposal; deposits from dust or overspray; etc.).
PART I

Section B. Storm Water Pollution Prevention

2) identification of the discharge point(s) and the inlet(s) contributing the significant material to each discharge point through which the significant material may be discharged if released; and

3) an evaluation of the reasonable potential for contribution of significant materials to storm water from at least the following areas or activities:
   a) loading, unloading, and other significant material-handling operations;
   b) outdoor storage, including secondary containment structures;
   c) outdoor manufacturing or processing activities;
   d) significant dust- or particulate-generating processes;
   e) discharge from vents, stacks, and air emission controls;
   f) on-site waste disposal practices;
   g) maintenance and cleaning of vehicles, machines, and equipment;
   h) areas of exposed and/or erodible soils;
   i) Sites of Environmental Contamination listed under Part 201 (Environmental Response) of the NREPA;
   j) areas of significant material residues;
   k) areas where animals (wild or domestic) congregate and deposit wastes; and
   l) other areas where storm water may come into contact with significant materials.

c. A listing of significant spills and significant leaks of polluting materials that occurred in areas that are exposed to precipitation or that discharge to a point source at the facility. The listing shall include spills that occurred over the three (3) years prior to the effective date of a permit authorizing discharge. The listing shall include the date, volume, and exact location of the release, and the action taken to clean up the material and/or prevent exposure to storm water or contamination of surface waters of the state. Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP and is cause for the SWPPP to be updated as appropriate within 14 calendar days of obtaining knowledge of the spill or loss.

d. A determination as to whether its facility discharges storm water to a water body for which an EPA-approved Total Maximum Daily Load (TMDL) has been established. If so, the permittee shall assess whether the TMDL requirements for the facility’s discharge are being met through the existing SWPPP controls or whether additional control measures are necessary. The permittee’s assessment of whether the TMDL requirements are being met shall focus on the effectiveness, adequacy, and implementation of the permittee’s SWPPP controls.

e. A summary of existing storm water discharge sampling data (if available), describing pollutants in storm water discharges at the facility. This summary shall be accompanied by a description of the suspected source(s) of the pollutants detected.
PART I

Section B. Storm Water Pollution Prevention

3. Nonstructural Controls

To prevent significant materials from contacting storm water at the source, the SWPPP shall, at a minimum, include each of the following nonstructural controls:

a. Written procedures and a schedule for routine preventive maintenance. Preventive maintenance procedures shall describe routine inspections and maintenance of storm water management and control devices (e.g., cleaning of oil/water separators and catch basins, routine housekeeping activities, etc.), as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to the storm sewer system or the surface waters of the state. The routine inspection shall include areas of the facility in which significant materials have the reasonable potential to contaminate storm water. A written report of the inspection and corrective actions shall be retained in accordance with Record Keeping, below.

b. Written procedures and a schedule for good housekeeping to maintain a clean, orderly facility. Good housekeeping procedures shall include routine inspections that focus on the areas of the facility that have a reasonable potential to contaminate storm water entering the property. The routine housekeeping inspections may be combined with the routine inspections for the preventive maintenance program. A written report of the inspection and corrective actions shall be retained in accordance with Record Keeping, below.

c. Written procedures and a schedule for quarterly comprehensive site inspections, to be conducted by the Industrial Storm Water Certified Operator. At a minimum, one inspection shall be performed within each of the following quarters: January-March, April-June, July-September, and October-December. The comprehensive site inspections shall include, but not be limited to, inspection of structural controls in use at the facility, and the areas and equipment identified in the routine preventive maintenance and good housekeeping procedures. These inspections shall also include a review of the routine preventive maintenance reports, good housekeeping inspection reports, and any other paperwork associated with the SWPPP. The permittee may request Department approval of an alternate schedule for comprehensive site inspections. A written report of the inspection and corrective actions shall be retained in accordance with Record Keeping, below, and the following shall be included on the comprehensive inspection form/report:

1) Date of the inspection.
2) Name(s), title(s), and certification number(s) of the personnel conducting the inspection.
3) Precipitation information (i.e., a description of recent rainfall/snowmelt events).
4) All observations relating to the implementation of control measures. Items to include if applicable:
   a) updates on corrective actions implemented due to previously identified pollutant and/or discharge issues;
   b) any evidence of, or the potential for, pollutants to discharge to the drainage system or receiving waters and the condition of and around the discharge point including flow dissipation measures needing maintenance or repairs;
   c) any control measures needing maintenance or repairs; and
   d) any additional control measures needed to comply with permit requirements.
PART I

Section B. Storm Water Pollution Prevention

5) Any required revisions to the SWPPP resulting from the inspection.

6) A written certification stating the facility is in compliance with this permit and the SWPPP, or, if there are instances of noncompliance, they are identified.

7) Written procedures and a schedule for quarterly visual assessments of storm water discharges. At a minimum, one visual assessment shall be conducted within each of the following quarters: January-March, April-June, July-September, and October-December. These assessments shall be conducted as part of the comprehensive site inspection within one month of control measure observations made in accordance with 4), above. If the Department has approved an alternate schedule for the comprehensive site inspection, the visual assessment may likewise be conducted in accordance with the same approved alternate schedule.

The following are the requirements of the visual assessment. The permittee shall develop and clearly document, in writing, procedures for meeting these requirements:

a) Within six (6) months of the effective date of this permit, the permittee shall develop written procedures for conducting the visual assessment and incorporate these procedures into the SWPPP. If Qualified Personnel rather than an Industrial Storm Water Certified Operator will collect storm water samples, these procedures shall include a written description of the training given to these personnel to qualify them to collect the samples, as well as documentation verifying that these personnel have received this training. The first visual assessment shall be conducted in conjunction with the next occurring comprehensive inspection. If changes resulting in altered drainage patterns occur at the facility, the permittee shall modify the procedures for conducting the visual assessment in accordance with the requirements of Keeping SWPPPs Current, below, and these modifications shall be incorporated into the SWPPP prior to conducting the next visual assessment.

b) A visual assessment shall be conducted of a representative storm water sample collected from each storm water discharge point. Storm water samples shall be visually assessed for conditions that could cause a violation of water quality standards as defined in Water Quality Standards, below. The visual assessment shall be made of the storm water sample in a clean, clear glass or plastic container. Only an Industrial Storm Water Certified Operator shall conduct this visual assessment. Visual assessment of the storm water sample shall be conducted within 48 hours of sample collection.

Representative storm water samples shall be collected:

(1) from each storm water discharge point identified as set forth under Source Identification, above. These samples may be collected by one or more of the following: an Industrial Storm Water Certified Operator; and/or an individual who meets qualifications acceptable to the Department and who is authorized by an Industrial Storm Water Certified Operator to collect the sample (“Qualified Personnel”); and/or an automated sampling device; and

(2) within the first 30 minutes of the start of a discharge from a storm event and on discharges that occur at least 72 hours (3 days) from the previous discharge. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample shall be collected as soon thereafter as practicable, but not exceeding 60 minutes. In the case of snowmelt, samples shall be collected during a period with measurable discharge from the site.
PART I

Section B. Storm Water Pollution Prevention

c) A visual assessment shall be conducted of the storm water **discharge at each storm water discharge point**. (If an automated sampling device is used to collect the storm water sample, this requirement is waived). Either an Industrial Storm Water Certified Operator and/or Qualified Personnel may conduct this visual assessment. This visual assessment may be conducted directly – by someone physically present at the storm water discharge at each storm water discharge point; or it may be conducted indirectly – through the use of a visual recording taken of the storm water discharge at each storm water discharge point. Direct visual assessment shall be conducted at the same time that the storm water sample is collected. Indirect visual assessment shall be conducted using a visual recording taken of the storm water discharge at the same time that the storm water sample was collected.

d) Visual assessments shall be documented. This documentation shall be retained in accordance with Record Keeping, below, and shall include the following:

1. sampling location(s) at the storm water discharge point(s) identified on the site map (see Source Identification, above);
2. storm event information (i.e., length of event expressed in hours, approximate size of event expressed in inches of precipitation, duration of time since previous event that caused a discharge, and date and time the discharge began);
3. date and time of the visual assessment of each storm water discharge at each storm water discharge point;
4. name(s) and title(s) of the Industrial Storm Water Certified Operator or Qualified Personnel who conducted the visual assessment of the storm water discharge at each storm water discharge point. If an automated sampling device was used to collect the storm water sample associated with this discharge point, this documentation requirement is waived;
5. observations made during visual assessment of the storm water discharge at each storm water discharge point. If an automated sampling device was used to collect the storm water sample associated with this discharge point, this documentation requirement is waived;
6. if applicable, any visual recordings used to conduct the visual assessment of the storm water discharge at each storm water discharge point;
7. date and time of sample collection for each storm water sample;
8. name(s) and title(s) of the Industrial Storm Water Certified Operator or Qualified Personnel who collected the storm water sample. If an automated sampling device was used to collect the storm water sample, the permittee shall document that, instead;
9. date and time of the visual assessment of each storm water sample;
10. name(s), title(s), and operator number(s) of the Industrial Storm Water Certified Operator(s) who conducted the visual assessment of each storm water sample;
11. observations made during visual assessment of each storm water sample;
12. full-color photographic evidence of the storm water sample against a white background;
13. nature of the discharge (i.e., rainfall or snowmelt);
PART I

Section B. Storm Water Pollution Prevention

(14) probable sources of any observed storm water contamination; and

(15) if applicable, an explanation for why it was not possible to collect samples within the first 30 minutes of discharge.

e) When adverse weather conditions prevent a visual assessment during the quarter, a substitute visual assessment shall be conducted during the next qualifying storm event. Documentation of the rationale for no visual assessment during a quarter shall be included with the SWPPP records as described in Record Keeping, below. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, electrical storms, or situations that otherwise make sampling impractical such as drought or extended frozen conditions.

f) If the facility has two (2) or more discharge points that are believed to discharge substantially identical storm water effluents, the facility may conduct visual assessments of the discharge at just one (1) of the discharge points and report that the results also apply to the other substantially identical discharge point(s). The determination of substantially identical discharge points is to be based on the significant material evaluation conducted as set forth under Source Identification, above, and shall be clearly documented in the SWPPP. Visual assessments shall be conducted on a rotating basis of each substantially identical discharge point throughout the period of coverage under this permit.

d. A description of material handling procedures and storage requirements for significant materials. Equipment and procedures for cleaning up spills shall be identified in the SWPPP and made available to the appropriate personnel. The procedures shall identify measures to prevent spilled materials or material residues from contaminating storm water entering the property. The SWPPP shall include language describing what a reportable spill or release is and the appropriate reporting requirements in accordance with Part II.C.6. and Part II.C.7. The SWPPP may include, by reference, requirements of either a Pollution Incident Prevention Plan (PIPP) prepared in accordance with the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code); a Hazardous Waste Contingency Plan prepared in accordance with 40 CFR 264 and 265 Subpart D, as required by Part 111 of the NREPA; or a Spill Prevention Control and Countermeasure (SPCC) plan prepared in accordance with 40 CFR 112.

e. Identification of areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion. Gravel lots shall be included. The SWPPP shall also identify measures used to control soil erosion and sedimentation.

f. A description of the employee training program that will be implemented on an annual basis to inform appropriate personnel at all levels of their responsibility as it relates to the components and goals of the SWPPP. The SWPPP shall identify periodic dates for the employee training program. Records of the employee training program shall be retained in accordance with Record Keeping, below.

g. Identification of actions to limit the discharge of significant materials in order to comply with TMDL requirements, if applicable.

h. Identification of significant materials expected to be present in storm water discharges following implementation of nonstructural preventive measures and source controls.
PART I

Section B. Storm Water Pollution Prevention

4. **Structural Controls**

Where implementation of the measures required by Nonstructural Controls, above, does not control storm water discharges in accordance with Water Quality Standards, below, the SWPPP shall provide a description of the location, function, design criteria, and installation/construction schedule of structural controls for prevention and treatment. Structural controls may be necessary:

a. to prevent uncontaminated storm water from contacting, or being contacted by, significant materials; or

b. if preventive measures are not feasible or are inadequate to keep significant materials at the site from contaminating storm water. Structural controls shall be used to treat, divert, isolate, recycle, reuse, or otherwise manage storm water in a manner that reduces the level of significant materials in the storm water and provides compliance with water quality standards as identified in Water Quality Standards, below.

5. **Keeping SWPPPs Current**

a. The permittee and/or the Industrial Storm Water Certified Operator shall review the SWPPP annually after it is developed and maintain a written report of the review in accordance with Record Keeping, below. Based on the review, the permittee or the Industrial Storm Water Certified Operator shall amend the SWPPP as needed to ensure continued compliance with the terms and conditions of this permit. The written report shall be submitted to the Department on or before January 10th of each year.

b. The SWPPP developed under the conditions of a previous permit shall be amended as necessary to ensure compliance with this permit.

c. The SWPPP shall be updated or amended whenever changes at the facility have the potential to increase the exposure of significant materials to storm water, significant spills occur at the facility, or when the SWPPP is determined by the permittee or the Department to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Updates based on increased activity or spills at the facility shall include a description of how the permittee intends to control any new sources of significant materials, or respond to and prevent spills in accordance with the requirements of this permit (see Source Identification; Nonstructural Controls; and Structural Controls, above).

d. The Department may notify the permittee at any time that the SWPPP does not meet minimum requirements of this permit. Such notification shall identify why the SWPPP does not meet minimum requirements of this permit. The permittee shall make the required changes to the SWPPP within 30 days after such notification from the Department or authorized representative and shall submit to the Department a written certification that the requested changes have been made.

e. Amendments to the SWPPP shall be signed and retained on-site with the SWPPP pursuant to Signature and SWPPP Review, below.
PART I

Section B. Storm Water Pollution Prevention

6. Industrial Storm Water Certified Operator Update

If the Industrial Storm Water Certified Operator is changed or an Industrial Storm Water Certified Operator is added, the permittee shall provide the name and certification number of the new Industrial Storm Water Certified Operator to the Department. If a facility has multiple Industrial Storm Water Certified Operators, the names and certification numbers of all shall be included in the SWPPP.

7. Signature and SWPPP Review

a. The SWPPP shall be reviewed and signed by the Industrial Storm Water Certified Operator(s) and by either the permittee or an authorized representative in accordance with 40 CFR 122.22. The SWPPP and associated records shall be retained on-site at the facility that generates the storm water discharge.

b. The permittee shall make the SWPPP, reports, log books, storm water discharge sampling data (if collected), and items required by Record Keeping, below, available upon request to the Department. The Department makes the non-confidential business portions of the SWPPP available to the public.

8. Record Keeping

The permittee shall maintain records of all SWPPP-related inspection and maintenance activities. Records shall also be kept describing incidents such as spills or other discharges that can affect the quality of storm water. All such records shall be retained for three (3) years. The following records are required by this permit (see Nonstructural Controls; and Keeping SWPPPs Current, above):

a. routine preventive maintenance inspection reports;

b. routine good housekeeping inspection reports;

c. comprehensive site inspection reports;

d. documentation of visual assessments;

e. employee training records; and

f. written summaries of the annual SWPPP review.

9. Water Quality Standards

At the time of discharge, there shall be no violation of water quality standards in the receiving waters as a result of the storm water discharge. This requirement includes, but is not limited to, the following conditions:

a. In accordance with R 323.1050 of the Part 4 Rules promulgated pursuant to Part 31 of the NREPA, the receiving waters shall not have any of the following unnatural physical properties as a result of this discharge in quantities which are, or may become, injurious to any designated use: turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits.

b. Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the Department, followed by a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition.

c. Any pollutant for which a level of control is specified to meet a TMDL established by the Department shall be controlled at the facility so that its discharge is reduced by/to the amount specified in the TMDL.
PART I

Section B. Storm Water Pollution Prevention

10. Prohibition of Non-Storm Water Discharges
Discharges of material other than storm water shall be in compliance with an NPDES permit issued for the discharge. Storm water shall be defined to include all of the following non-storm water discharges, provided pollution prevention controls for the non-storm water component are identified in the SWPPP:

a. discharges from fire hydrant flushing;
b. potable water sources, including water line flushing;
c. water from fire system testing and fire-fighting training without burned materials or chemical fire suppressants;
d. irrigation drainage;
e. lawn watering;
f. routine building wash-down that does not use detergents or other compounds;
g. pavement wash waters where contamination by toxic or hazardous materials has not occurred (unless all contamination by toxic or hazardous materials has been removed) and where detergents are not used;
h. uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
i. springs;
j. uncontaminated groundwater;
k. foundation or footing drains where flows are not contaminated with process materials such as solvents; and
l. discharges from fire-fighting activities. Discharges from fire-fighting activities are exempted from the requirement to be identified in the SWPPP.

11. Tracer Dye Discharges
This permit does not authorize the discharge of tracer dyes without approval from the Department. Requests to discharge tracer dyes shall be submitted to the Department in accordance with Rule 1097 (R 323.1097 of the Michigan Administrative Code).
PART I

Section C. Industrial Waste Pretreatment Program

1. **Michigan Industrial Pretreatment Program**
   a. The permittee shall implement the Michigan Industrial Pretreatment Program approved on September 5, 1985, and any subsequent modifications approved up to the issuance of this permit.
   b. The permittee shall comply with R 323.2301 through R 323.2317 of the Michigan Administrative Code (Part 23 Rules) and the approved Michigan Industrial Pretreatment Program.
   c. The permittee shall have the legal authority and necessary interjurisdictional agreements that provide the basis for the implementation and enforcement of the approved Michigan Industrial Pretreatment Program throughout the service area. The legal authority and necessary interjurisdictional agreements shall include, at a minimum, the authority to carry out the activities specified in R 323.2306(a).
   d. The permittee shall develop procedures which describe, in sufficient detail, program commitments which enable implementation of the approved Michigan Industrial Pretreatment Program and the Part 23 Rules in accordance with R 323.2306(c).
   e. The permittee shall establish an interjurisdictional agreement (or comparable document) with all tributary governmental jurisdictions. Each interjurisdictional agreement shall contain, at a minimum, the following:
      1) identification of the agency responsible for the implementation and enforcement of the approved Michigan Industrial Pretreatment Program within the tributary governmental jurisdiction's boundaries; and
      2) the provision of the legal authority which provides the basis for the implementation and enforcement of the approved Michigan Industrial Pretreatment Program within the tributary governmental jurisdiction's boundaries.
   f. The permittee shall prohibit discharges that:
      1) cause, in whole or in part, the permittee's failure to comply with any condition of this permit or the NREPA;
      2) restrict, in whole or in part, the permittee's management of biosolids;
      3) cause, in whole or in part, operational problems at the treatment facility or in its collection system;
      4) violate any of the general or specific prohibitions identified in R 323.2303(1) and (2);
      5) violate categorical standards identified in R 323.2311; and
      6) violate local limits established in accordance with R 323.2303(4).
   g. The permittee shall maintain a list of its nondomestic users that meet the criteria of a significant industrial user as identified in R 323.2302(cc).
   h. The permittee shall develop an enforcement response plan which describes, in sufficient detail, program commitments which will enable the enforcement of the approved Michigan Industrial Pretreatment Program and the Part 23 Rules in accordance with R 323.2306(g).
   i. The Department may require modifications to the approved Michigan Industrial Pretreatment Program which are necessary to ensure compliance with the Part 23 Rules in accordance with R 323.2309.
PART I

Section C. Industrial Waste Pretreatment Program

j. The permittee shall not implement changes or modifications to the approved Michigan Industrial Pretreatment Program without notification to the Department.

k. The permittee shall maintain an adequate revenue structure and staffing level for effective implementation of the approved Michigan Industrial Pretreatment Program.

l. The permittee shall develop and maintain, for a minimum of three (3) years, all records and information necessary to determine nondomestic user compliance with the Part 23 Rules and the approved Michigan Industrial Pretreatment Program. This period of retention shall be extended during the course of any unresolved enforcement action or litigation regarding a nondomestic user or when requested by the Department or the United States Environmental Protection Agency. All of the aforementioned records and information shall be made available upon request for inspection and copying by the Department and the United States Environmental Protection Agency.

m. The permittee shall evaluate the approved Michigan Industrial Pretreatment Program for compliance with the Part 23 Rules and the prohibitions set forth in item f. above. Based upon this evaluation, the permittee shall propose to the Department all necessary changes or modifications to the approved Michigan Industrial Pretreatment Program no later than the next Industrial Pretreatment Program Annual Report due date (see item o. below).

n. The permittee shall develop and enforce local limits to implement the prohibitions set forth in item f. above. Local limits shall be based upon data representative of actual conditions demonstrated in a maximum allowable headworks loading analysis.

o. On or before April 1 of each year, the permittee shall submit to the Department, as required by R 323.2310(8), an Industrial Pretreatment Program Annual Report on the status of program implementation and enforcement activities. The reporting period shall begin on January 1 and end on December 31. At a minimum, the Industrial Pretreatment Program Annual Report shall contain the following items:

1) additions, deletions, and any other modifications to the permittee's previously submitted nondomestic user inventory (R 323.2306(c)(i));

2) additions, deletions, and any other modifications to the permittee's approved Significant Industrial User List (R 323.2306(h));

3) a listing of the names of Significant Industrial Users not inspected by the permittee at least once during the reporting period or at the frequency committed to in the approved Michigan Industrial Pretreatment Program;

4) a listing of the names of Significant Industrial Users not sampled for all required pollutants by the permittee at least once during the reporting period or at the frequency committed to in the approved Michigan Industrial Pretreatment Program;

5) a listing of the names of Significant Industrial Users without a permit at any time during the reporting period;

6) a listing of the names of categorical industrial users in significant noncompliance for each of the criteria defined in R 323.2302(dd)(i)-(viii);

7) proof of publication of all categorical industrial users in significant noncompliance in the largest daily newspaper in the municipality in which the permittee is located;
PART I

Section C. Industrial Waste Pretreatment Program

8) a summary of the enforcement activities by the permittee during the report period. This Summary shall include:
   a) a listing of the names of nondomestic users which were the subject of an enforcement action;
   b) the enforcement action taken and the date the action was taken; and
   c) whether the nondomestic user returned to compliance by the end of the reporting period (include date nondomestic user returned to compliance).

9) a listing of the names of Significant Industrial Users who did not submit pretreatment reports in accordance with requirements specified in their permit during the reporting period;

10) a listing of the names of Significant Industrial Users who did not self-monitor in accordance with requirements specified in their permit during the reporting period;

11) a summary of results of all the sampling and analyses performed of the wastewater treatment plant’s influent, effluent, and biosolids conducted in accordance with approved methods during the reporting period. The summary shall include the monthly average, daily maximum, quantification level, and number of samples analyzed for each pollutant. At a minimum, the results of analyses for all locally limited parameters for at least one monitoring event that tests influent, effluent and biosolids during the reporting period shall be submitted with each report, unless otherwise required by the Department. Sample collection shall be at intervals sufficient to provide pollutant removal rates, unless the pollutant is not measurable; and

12) any other relevant information as requested by the Department.

p. The permittee is required under this permit and R 323.2303(4) of the Michigan Administrative Code to review and update their local limits when:

1) New pollutants are introduced
2) New pollutants that were previously unevaluated are identified
3) New water quality or biosolids standards are established or additional information becomes available about the nature of pollutants, such as removal rates and accumulation in biosolids.
4) Substantial increases of pollutants are proposed as required in the notification of new or increased uses in accordance with the provisions of 40 CFR 122.42.
PART I

Section D. Residuals Management Program

1. Residuals Management Program for Land Application of Biosolids

The permittee is authorized to land-apply bulk biosolids or prepare bulk biosolids for land application in accordance with the permittee’s approved Residuals Management Program (RMP) approved on November 8, 2000 and approved modifications thereto in accordance with the requirements established in R 323.2401 through R 323.2418 of the Michigan Administrative Code (Part 24 Rules). The approved RMP, and any approved modifications thereto, are enforceable requirements of this permit. Incineration, landfilling and other residual disposal activities shall be conducted in accordance with Part II.D.7. of this permit. The Part 24 Rules can be obtained via the internet (http://www.michigan.gov/deq/ and on the left side of the screen click on Water, Biosolids & Industrial Pretreatment, Biosolids then click on Biosolids laws and Rules Information which is under the Laws & Rules banner in the center of the screen).

a. Annual Report
   On or before October 30 of each year, the permittee shall submit an annual report to the Department for the previous fiscal year of October 1 through September 30. The report shall be submitted electronically via the Department’s MiWaters system at https://miwaters.deq.state.mi.us. At a minimum, the report shall contain:

   1) a certification that current residuals management practices are in accordance with the approved RMP, or a proposal for modification to the approved RMP; and


b. Modifications to the Approved RMP
   Prior to implementation of modifications to the RMP, the permittee shall submit proposed modifications to the Department for approval. The approved modification shall become effective upon the date of approval. Upon written notification, the Department may impose additional requirements and/or limitations to the approved RMP as necessary to protect public health and the environment from any adverse effect of a pollutant in the biosolids.

c. Record Keeping
   Records required by the Part 24 Rules shall be kept for a minimum of five years. However, the records documenting cumulative loading for sites subject to cumulative pollutant loading rates shall be kept as long as the site receives biosolids.

d. Contact Information
   RMP-related submittals shall be made to the Department.
PART II

Section A. Definitions

Part II may include terms and /or conditions not applicable to discharges covered under this permit.

Acute toxic unit (TUₚ) means 100/LC₅₀ where the LC₅₀ is determined from a whole effluent toxicity (WET) test which produces a result that is statistically or graphically estimated to be lethal to 50% of the test organisms.

Annual monitoring frequency refers to a calendar year beginning on January 1 and ending on December 31. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Authorized public agency means a state, local, or county agency that is designated pursuant to the provisions of section 9110 of Part 91 of the NREPA to implement soil erosion and sedimentation control requirements with regard to construction activities undertaken by that agency.

Best management practices (BMPs) means structural devices or nonstructural practices that are designed to prevent pollutants from entering into storm water, to direct the flow of storm water, or to treat polluted storm water.

Bioaccumulative chemical of concern (BCC) means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum bioaccumulation concentration factor (BAF) information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in Table 5 of R 323.1057 of the Water Quality Standards.

Biosolids are the solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. This includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed scum or solids.

Bulk biosolids means biosolids that are not sold or given away in a bag or other container for application to a lawn or home garden.

Certificate of Coverage (COC) is a document, issued by the Department, which authorizes a discharge under a general permit.

Chronic toxic unit (TUₜ) means 100/MATC or 100/IC₂₅, where the maximum acceptable toxicant concentration (MATC) and IC₂₅ are expressed as a percent effluent in the test medium.

Class B biosolids refers to material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with the Part 24 Rules. Processes include aerobic digestion, composting, anaerobic digestion, lime stabilization and air drying.

Combined sewer system is a sewer system in which storm water runoff is combined with sanitary wastes.
PART II

Section A. Definitions

**Daily concentration** is the sum of the concentrations of the individual samples of a parameter divided by the number of samples taken during any calendar day. If the parameter concentration in any sample is less than the quantification limit, regard that value as zero when calculating the daily concentration. The daily concentration will be used to determine compliance with any maximum and minimum daily concentration limitations (except for pH and dissolved oxygen). When required by the permit, report the maximum calculated daily concentration for the month in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the Discharge Monitoring Reports (DMRs).

For pH, report the maximum value of any individual sample taken during the month in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMRs and the minimum value of any individual sample taken during the month in the “MINIMUM” column under “QUALITY OR CONCENTRATION” on the DMRs. For dissolved oxygen, report the minimum concentration of any individual sample in the “MINIMUM” column under “QUALITY OR CONCENTRATION” on the DMRs.

**Daily loading** is the total discharge by weight of a parameter discharged during any calendar day. This value is calculated by multiplying the daily concentration by the total daily flow and by the appropriate conversion factor. The daily loading will be used to determine compliance with any maximum daily loading limitations. When required by the permit, report the maximum calculated daily loading for the month in the “MAXIMUM” column under “QUANTITY OR LOADING” on the DMRs.

**Daily monitoring frequency** refers to a 24-hour day. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

**Department** means the Michigan Department of Environmental Quality.

**Detection level** means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

**Discharge** means the addition of any waste, waste effluent, wastewater, pollutant, or any combination thereof to any surface water of the state.

**EC<sub>50</sub>** means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.

**Fecal coliform bacteria monthly**

FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – Fecal coliform bacteria monthly is the geometric mean of all daily concentrations determined during a discharge event. Days on which no daily concentration is determined shall not be used to determine the calculated monthly value. The calculated monthly value will be used to determine compliance with the maximum monthly fecal coliform bacteria limitations. When required by the permit, report the calculated monthly value in the “AVERAGE” column under “QUALITY OR CONCENTRATION” on the DMR. If the period in which the discharge event occurred was partially in each of two months, the calculated monthly value shall be reported on the DMR of the month in which the last day of discharge occurred.

FOR ALL OTHER DISCHARGES – Fecal coliform bacteria monthly is the geometric mean of all daily concentrations determined during a reporting month. Days on which no daily concentration is determined shall not be used to determine the calculated monthly value. The calculated monthly value will be used to determine compliance with the maximum monthly fecal coliform bacteria limitations. When required by the permit, report the calculated monthly value in the “AVERAGE” column under “QUALITY OR CONCENTRATION” on the DMR.
Part II

Section A. Definitions

Fecal coliform bacteria 7-day
For WWSLs that collect and store wastewater and are authorized to discharge only in the spring and/or fall on an intermittent basis – Fecal coliform bacteria 7-day is the geometric mean of the daily concentrations determined during any 7 consecutive days of discharge during a discharge event. If the number of daily concentrations determined during the discharge event is less than 7 days, the number of actual daily concentrations determined shall be used for the calculation. Days on which no daily concentration is determined shall not be used to determine the value. The calculated 7-day value will be used to determine compliance with the maximum 7-day fecal coliform bacteria limitations. When required by the permit, report the maximum calculated 7-day geometric mean value for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. If the 7-day period was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

For all other discharges – Fecal coliform bacteria 7-day is the geometric mean of the daily concentrations determined during any 7 consecutive days in a reporting month. If the number of daily concentrations determined is less than 7, the actual number of daily concentrations determined shall be used for the calculation. Days on which no daily concentration is determined shall not be used to determine the value. The calculated 7-day value will be used to determine compliance with the maximum 7-day fecal coliform bacteria limitations. When required by the permit, report the maximum calculated 7-day geometric mean for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. The first calculation shall be made on day 7 of the reporting month, and the last calculation shall be made on the last day of the reporting month.

Flow-proportioned sample is a composite sample with the sample volume proportional to the effluent flow.

General permit means a National Pollutant Discharge Elimination System permit issued authorizing a category of similar discharges.

Geometric mean is the average of the logarithmic values of a base 10 data set, converted back to a base 10 number.

Grab sample is a single sample taken at neither a set time nor flow.

IC$_{25}$ means the toxicant concentration that would cause a 25% reduction in a nonquantal biological measurement for the test population.

Illicit connection means a physical connection to a municipal separate storm sewer system that primarily conveys non-storm water discharges other than uncontaminated groundwater into the storm sewer; or a physical connection not authorized or permitted by the local authority, where a local authority requires authorization or a permit for physical connections.

Illicit discharge means any discharge to, or seepage into, a municipal separate storm sewer system that is not composed entirely of storm water or uncontaminated groundwater. Illicit discharges include non-storm water discharges through pipes or other physical connections; dumping of motor vehicle fluids, household hazardous wastes, domestic animal wastes, or litter; collection and intentional dumping of grass clippings or leaf litter; or unauthorized discharges of sewage, industrial waste, restaurant wastes, or any other non-storm water waste directly into a separate storm sewer.

Individual permit means a site-specific NPDES permit.
PART II

Section A. Definitions

**Inlet** means a catch basin, roof drain, conduit, drain tile, retention pond riser pipe, sump pump, or other point where storm water or wastewater enters into a closed conveyance system prior to discharge off site or into waters of the state.

**Interference** is a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: 1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and 2) therefore, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or, of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act. [This definition does not apply to sample matrix interference].

**Land application** means spraying or spreading biosolids or a biosolids derivative onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids or biosolids derivative can either condition the soil or fertilize crops or vegetation grown in the soil.

**LC$_{50}$** means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

**Maximum acceptable toxicant concentration (MATC)** means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

**Maximum extent practicable** means implementation of best management practices by a public body to comply with an approved storm water management program as required by a national permit for a municipal separate storm sewer system, in a manner that is environmentally beneficial, technically feasible, and within the public body's legal authority.

**MGD** means million gallons per day.

**Monthly concentration** is the sum of the daily concentrations determined during a reporting period divided by the number of daily concentrations determined. The calculated monthly concentration will be used to determine compliance with any maximum monthly concentration limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the calculated monthly concentration in the “AVERAGE” column under “QUALITY OR CONCENTRATION” on the DMR.

For minimum percent removal requirements, the monthly influent concentration and the monthly effluent concentration shall be determined. The calculated monthly percent removal, which is equal to 100 times the quantity [1 minus the quantity (monthly effluent concentration divided by the monthly influent concentration)], shall be reported in the “MINIMUM” column under “QUALITY OR CONCENTRATION” on the DMRs.

**Monthly loading** is the sum of the daily loadings of a parameter divided by the number of daily loadings determined during a reporting period. The calculated monthly loading will be used to determine compliance with any maximum monthly loading limitations. Days with no discharge shall not be used to determine the value. When required by the permit, report the calculated monthly loading in the “AVERAGE” column under “QUANTITY OR LOADING” on the DMR.

**Monthly monitoring frequency** refers to a calendar month. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.
PART II

Section A. Definitions

**Municipal separate storm sewer** means a conveyance or system of conveyances designed or used for collecting or conveying storm water which is not a combined sewer and which is not part of a publicly-owned treatment works as defined in the Code of Federal Regulations at 40 CFR 122.2.

**Municipal separate storm sewer system (MS4)** means all separate storm sewers that are owned or operated by the United States, a state, city, village, township, county, district, association, or other public body created by or pursuant to state law, having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law, such as a sewer district, flood control district, or drainage district, or similar entity, or a designated or approved management agency under Section 208 of the Federal Act that discharges to the waters of the state. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

**National Pretreatment Standards** are the regulations promulgated by or to be promulgated by the Federal Environmental Protection Agency pursuant to Section 307(b) and (c) of the Federal Act. The standards establish nationwide limits for specific industrial categories for discharge to a POTW.

**No observed adverse effect level (NOAEL)** means the highest tested dose or concentration of a substance which results in no observed adverse effect in exposed test organisms where higher doses or concentrations result in an adverse effect.

**Noncontact cooling water** is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product or finished product.

**Nondomestic user** is any discharger to a POTW that discharges wastes other than or in addition to water-carried wastes from toilet, kitchen, laundry, bathing or other facilities used for household purposes.

**Outfall** is the location at which a point source discharge enters the surface waters of the state.

**Part 91 agency** means an agency that is designated by a county board of commissioners pursuant to the provisions of section 9105 of Part 91 of the NREPA; an agency that is designated by a city, village, or township in accordance with the provisions of section 9106 of Part 91 of the NREPA; or the Department for soil erosion and sedimentation activities under Part 615, Part 631, or Part 632 pursuant to the provisions of section 9115 of Part 91 of the NREPA.

**Part 91 permit** means a soil erosion and sedimentation control permit issued by a Part 91 agency pursuant to the provisions of Part 91 of the NREPA.

**Partially treated sewage** is any sewage, sewage and storm water, or sewage and wastewater, from domestic or industrial sources that is treated to a level less than that required by the permittee’s National Pollutant Discharge Elimination System permit, or that is not treated to national secondary treatment standards for wastewater, including discharges to surface waters from retention treatment facilities.

**Point of discharge** is the location of a point source discharge where storm water is discharged directly into a separate storm sewer system.

**Point source discharge** means a discharge from any discernible, confined, discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, or rolling stock. Changing the surface of land or establishing grading patterns on land will result in a point source discharge where the runoff from the site is ultimately discharged to waters of the state.

**Polluting material** means any material, in solid or liquid form, identified as a polluting material under the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code).

**POTW** is a publicly owned treatment work.
PART II

Section A. Definitions

Pretreatment is reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties to a less harmful state prior to discharge into a public sewer. The reduction or alteration can be by physical, chemical, or biological processes, process changes, or by other means. Dilution is not considered pretreatment unless expressly authorized by an applicable National Pretreatment Standard for a particular industrial category.

Public (as used in the MS4 individual permit) means all persons who potentially could affect the authorized storm water discharges, including, but not limited to, residents, visitors to the area, public employees, businesses, industries, and construction contractors and developers.

Public body means the United States; the state of Michigan; a city, village, township, county, school district, public college or university, or single-purpose governmental agency; or any other body which is created by federal or state statute or law.

Qualified Personnel means an individual who meets qualifications acceptable to the Department and who is authorized by an Industrial Storm Water Certified Operator to collect the storm water sample.

Qualifying storm event means a storm event causing greater than 0.1 inch of rainfall and occurring at least 72 hours after the previous measurable storm event that also caused greater than 0.1 inch of rainfall. Upon request, the Department may approve an alternate definition meeting the condition of a qualifying storm event.

Quantification level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant.

Quarterly monitoring frequency refers to a three month period, defined as January through March, April through June, July through September, and October through December. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

Regional Administrator is the Region 5 Administrator, U.S. EPA, located at R-19J, 77 W. Jackson Blvd., Chicago, Illinois 60604.

Regulated area means the permittee’s urbanized area, where urbanized area is defined as a place and its adjacent densely-populated territory that together have a minimum population of 50,000 people as defined by the United States Bureau of the Census and as determined by the latest available decennial census.

Secondary containment structure means a unit, other than the primary container, in which significant materials are packaged or held, which is required by State or Federal law to prevent the escape of significant materials by gravity into sewers, drains, or otherwise directly or indirectly into any sewer system or to the surface or ground waters of this state.

Separate storm sewer system means a system of drainage, including, but not limited to, roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, or man-made channels, which is not a combined sewer where storm water mixes with sanitary wastes, and is not part of a POTW.

Significant industrial user is a nondomestic user that: 1) is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or 2) discharges an average of 25,000 gallons per day or more of process wastewater to a POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process waste stream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the permittee as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW’s treatment plant operation or violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).
PART II

Section A. Definitions

Significant materials Significant Materials means any material which could degrade or impair water quality, including but not limited to: raw materials; fuels; solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see 40 CFR 372.65); any chemical the facility is required to report pursuant to Section 313 of Emergency Planning and Community Right-to-Know Act (EPCRA); polluting materials as identified under the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code); Hazardous Wastes as defined in Part 111 of the NREPA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills and significant leaks means any release of a polluting material reportable under the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code).

Special-use area means secondary containment structures required by state or federal law; lands on Michigan’s List of Sites of Environmental Contamination pursuant to Part 201, Environmental Remediation, of the NREPA; and/or areas with other activities that may contribute pollutants to the storm water for which the Department determines monitoring is needed.

Stoichiometric means the quantity of a reagent calculated to be necessary and sufficient for a given chemical reaction.

Storm water means storm water runoff, snow melt runoff, surface runoff and drainage, and non-storm water included under the conditions of this permit.

Storm water discharge point is the location where the point source discharge of storm water is directed to surface waters of the state or to a separate storm sewer. It includes the location of all point source discharges where storm water exits the facility, including outfalls which discharge directly to surface waters of the state, and points of discharge which discharge directly into separate storm sewer systems.

SWPPP means the Storm Water Pollution Prevention Plan prepared in accordance with this permit.

Tier I value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier I toxicity database.

Tier II value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier II toxicity database.

Total maximum daily loads (TMDLs) are required by the Federal Act for waterbodies that do not meet water quality standards. TMDLs represent the maximum daily load of a pollutant that a waterbody can assimilate and meet water quality standards, and an allocation of that load among point sources, nonpoint sources, and a margin of safety.

Toxicity reduction evaluation (TRE) means a site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

Water Quality Standards means the Part 4 Water Quality Standards promulgated pursuant to Part 31 of the NREPA, being R 323.1041 through R 323.1117 of the Michigan Administrative Code.

Weekly monitoring frequency refers to a calendar week which begins on Sunday and ends on Saturday. When required by this permit, an analytical result, reading, value or observation shall be reported for that period if a discharge occurs during that period.

WWSL is a wastewater stabilization lagoon.

WWSL discharge event is a discrete occurrence during which effluent is discharged to the surface water up to 10 days of a consecutive 14 day period.
PART II

Section A. Definitions

3-portion composite sample is a sample consisting of three equal-volume grab samples collected at equal intervals over an 8-hour period.

7-day concentration
FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – The 7-day concentration is the sum of the daily concentrations determined during any 7 consecutive days of discharge during a WWSL discharge event divided by the number of daily concentrations determined. If the number of daily concentrations determined during the WWSL discharge event is less than 7 days, the number of actual daily concentrations determined shall be used for the calculation. The calculated 7-day concentration will be used to determine compliance with any maximum 7-day concentration limitations. When required by the permit, report the maximum calculated 7-day concentration for the WWSL discharge event in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMR. If the WWSL discharge event was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

FOR ALL OTHER DISCHARGES – The 7-day concentration is the sum of the daily concentrations determined during any 7 consecutive days in a reporting month divided by the number of daily concentrations determined. If the number of daily concentrations determined is less than 7, the actual number of daily concentrations determined shall be used for the calculation. The calculated 7-day concentration will be used to determine compliance with any maximum 7-day concentration limitations in the reporting month. When required by the permit, report the maximum calculated 7-day concentration for the month in the “MAXIMUM” column under “QUALITY OR CONCENTRATION” on the DMR. The first 7-day calculation shall be made on day 7 of the reporting month, and the last calculation shall be made on the last day of the reporting month.

7-day loading
FOR WWSLs THAT COLLECT AND STORE WASTEWATER AND ARE AUTHORIZED TO DISCHARGE ONLY IN THE SPRING AND/OR FALL ON AN INTERMITTENT BASIS – The 7-day loading is the sum of the daily loadings determined during any 7 consecutive days of discharge during a WWSL discharge event divided by the number of daily loadings determined. If the number of daily loadings determined during the WWSL discharge event is less than 7 days, the number of actual daily loadings determined shall be used for the calculation. The calculated 7-day loading will be used to determine compliance with any maximum 7-day loading limitations. When required by the permit, report the maximum calculated 7-day loading for the WWSL discharge event in the “MAXIMUM” column under “QUANTITY OR LOADING” on the DMR. If the WWSL discharge event was partially in each of two months, the value shall be reported on the DMR of the month in which the last day of discharge occurred.

FOR ALL OTHER DISCHARGES – The 7-day loading is the sum of the daily loadings determined during any 7 consecutive days in a reporting month divided by the number of daily loadings determined. If the number of daily loadings determined is less than 7, the actual number of daily loadings determined shall be used for the calculation. The calculated 7-day loading will be used to determine compliance with any maximum 7-day loading limitations in the reporting month. When required by the permit, report the maximum calculated 7-day loading for the month in the “MAXIMUM” column under “QUANTITY OR LOADING” on the DMR. The first 7-day calculation shall be made on day 7 of the reporting month, and the last calculation shall be made on the last day of the reporting month.

24-hour composite sample is a flow-proportioned composite sample consisting of hourly or more frequent portions that are taken over a 24-hour period. A time-proportioned composite sample may be used upon approval of the Department if the permittee demonstrates it is representative of the discharge.
PART II

Section B. Monitoring Procedures

1. Representative Samples
Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Test Procedures
Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. Test procedures used shall be sufficiently sensitive to determine compliance with applicable effluent limitations. Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Section Manager of the Permits Section, Water Resources Division, Michigan Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan, 48909-7958. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee’s laboratory Quality Control/Quality Assurance program.

3. Instrumentation
The permittee shall periodically calibrate and perform maintenance procedures on all monitoring instrumentation at intervals to ensure accuracy of measurements.

4. Recording Results
For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: 1) the exact place, date, and time of measurement or sampling; 2) the person(s) who performed the measurement or sample collection; 3) the dates the analyses were performed; 4) the person(s) who performed the analyses; 5) the analytical techniques or methods used; 6) the date of and person responsible for equipment calibration; and 7) the results of all required analyses.

5. Records Retention
All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the Department.
PART II

Section C. Reporting Requirements

1. Start-up Notification

If the permittee will not discharge during the first 60 days following the effective date of this permit, the permittee shall notify the Department within 14 days following the effective date of this permit, and then 60 days prior to the commencement of the discharge.

2. Submittal Requirements for Self-Monitoring Data

Part 31 of the NREPA (specifically Section 324.3110(7)); and R 323.2155(2) of Part 21, Wastewater Discharge Permits, promulgated under Part 31 of the NREPA, allow the Department to specify the forms to be utilized for reporting the required self-monitoring data. Unless instructed on the effluent limitations page to conduct “Retained Self-Monitoring,” the permittee shall submit self-monitoring data via the Department’s MiWaters system.

The permittee shall utilize the information provided on the MiWaters website, located at https://miwaters.deq.state.mi.us, to access and submit the electronic forms. Both monthly summary and daily data shall be submitted to the Department no later than the 20th day of the month following each month of the authorized discharge period(s). The permittee may be allowed to submit the electronic forms after this date if the Department has granted an extension to the submittal date.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page (or otherwise authorized by the Department in accordance with the provisions of this permit) to conduct retained self-monitoring, the permittee shall maintain a year-to-date log of retained self-monitoring results and, upon request, provide such log for inspection to the staff of the Department. Retained self-monitoring results are public information and shall be promptly provided to the public upon request.

The permittee shall certify, in writing, to the Department, on or before January 10th (April 1st for animal feeding operation facilities) of each year, that: 1) all retained self-monitoring requirements have been complied with and a year-to-date log has been maintained; and 2) the application on which this permit is based still accurately describes the discharge. With this annual certification, the permittee shall submit a summary of the previous year’s monitoring data. The summary shall include maximum values for samples to be reported as daily maximums and/or monthly maximums and minimum values for any daily minimum samples.

Retained self-monitoring may be denied to a permittee by notification in writing from the Department. In such cases, the permittee shall submit self-monitoring data in accordance with Part II.C.2., above. Such a denial may be rescinded by the Department upon written notification to the permittee. Reissuance or modification of this permit or reissuance or modification of an individual permittee’s authorization to discharge shall not affect previous approval or denial for retained self-monitoring unless the Department provides notification in writing to the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased frequency shall also be indicated.

Monitoring required pursuant to Part 41 of the NREPA or Rule 35 of the Mobile Home Park Commission Act (Act 96 of the Public Acts of 1987) for assurance of proper facility operation shall be submitted as required by the Department.
PART II

Section C. Reporting Requirements

5. Compliance Dates Notification
Within 14 days of every compliance date specified in this permit, the permittee shall submit a written notification to the Department indicating whether or not the particular requirement was accomplished. If the requirement was not accomplished, the notification shall include an explanation of the failure to accomplish the requirement, actions taken or planned by the permittee to correct the situation, and an estimate of when the requirement will be accomplished. If a written report is required to be submitted by a specified date and the permittee accomplishes this, a separate written notification is not required.

6. Noncompliance Notification
Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the NREPA, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

a. 24-Hour Reporting
Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.

b. Other Reporting
The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Written reporting shall include: 1) a description of the discharge and cause of noncompliance; and 2) the period of noncompliance, including exact dates and times, or, if not yet corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

7. Spill Notification
The permittee shall immediately report any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code), by calling the Department at the number indicated on the second page of this permit (or, if this is a general permit, on the COC); or, if the notice is provided after regular working hours, call the Department’s 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from out-of-state dial 1-517-373-7660).

Within ten (10) days of the release, the permittee shall submit to the Department a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventive measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

8. Upset Noncompliance Notification
If a process "upset" (defined as an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee) has occurred, the permittee who wishes to establish the affirmative defense of upset, shall notify the Department by telephone within 24 hours of becoming aware of such conditions; and within five (5) days, provide in writing, the following information:

a. that an upset occurred and that the permittee can identify the specific cause(s) of the upset;
PART II

Section C. Reporting Requirements

b. that the permitted wastewater treatment facility was, at the time, being properly operated and maintained (note that an upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation); and

c. that the permittee has specified and taken action on all responsible steps to minimize or correct any adverse impact in the environment resulting from noncompliance with this permit.

No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

In any enforcement proceedings, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

9. Bypass Prohibition and Notification

a. Bypass Prohibition

Bypass is prohibited, and the Department may take an enforcement action, unless:

1) bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass; and

3) the permittee submitted notices as required under 9.b. or 9.c. below.

b. Notice of Anticipated Bypass

If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least ten (10) days before the date of the bypass, and provide information about the anticipated bypass as required by the Department. The Department may approve an anticipated bypass, after considering its adverse effects, if it will meet the three (3) conditions listed in 9.a. above.

c. Notice of Unanticipated Bypass

The permittee shall submit notice to the Department of an unanticipated bypass by calling the Department at the number indicated on the second page of this permit (if the notice is provided after regular working hours, use the following number: 1-800-292-4706) as soon as possible, but no later than 24 hours from the time the permittee becomes aware of the circumstances.

d. Written Report of Bypass

A written submission shall be provided within five (5) working days of commencing any bypass to the Department, and at additional times as directed by the Department. The written submission shall contain a description of the bypass and its cause; the period of bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the Department.

e. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of 9.a., 9.b., 9.c., and 9.d., above. This provision does not relieve the permittee of any notification responsibilities under Part II.C.11. of this permit.
PART II

Section C. Reporting Requirements

f. Definitions
   1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
   2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

10. Bioaccumulative Chemicals of Concern (BCC)
Consistent with the requirements of R 323.1098 and R 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

11. Notification of Changes in Discharge
The permittee shall notify the Department, in writing, as soon as possible but no later than 10 days of knowing, or having reason to believe, that any activity or change has occurred or will occur which would result in the discharge of: 1) detectable levels of chemicals on the current Michigan Critical Materials Register, priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, or the Pollutants of Initial Focus in the Great Lakes Water Quality Initiative specified in 40 CFR 132.6, Table 6, which were not acknowledged in the application or listed in the application at less than detectable levels; 2) detectable levels of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information; or 3) any chemical at levels greater than five times the average level reported in the complete application (see the first page of this permit, for the date(s) the complete application was submitted). Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the compliance schedules.

12. Changes in Facility Operations
Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters must be reported to the Department by a) submission of an increased use request (application) and all information required under R 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: 1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; 2) the action or activity will not result in violations of the effluent limitations specified in this permit; 3) the action or activity is not prohibited by the requirements of Part II.C.10.; and 4) the action or activity will not require notification pursuant to Part II.C.11. Following such notice, the permit or, if applicable, the facility’s COC may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

13. Transfer of Ownership or Control
In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the Department 30 days prior to the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing: 1) the legal name and address of the new owner; 2) a specific date for the effective transfer of permit responsibility, coverage and liability; and 3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the Department may propose modification of this permit in accordance with applicable laws and rules.
PART II

Section C. Reporting Requirements


For wastewater treatment facilities that serve the public (and are thus subject to Part 41 of the NREPA), Section 4104 of Part 41 and associated Rule 2957 of the Michigan Administrative Code allow the Department to require an Operations and Maintenance (O&M) Manual from the facility. An up-to-date copy of the O&M Manual shall be kept at the facility and shall be provided to the Department upon request. The Department may review the O&M Manual in whole or in part at its discretion and require modifications to it if portions are determined to be inadequate.

At a minimum, the O&M Manual shall include the following information: permit standards; descriptions and operation information for all equipment; staffing information; laboratory requirements; record keeping requirements; a maintenance plan for equipment; an emergency operating plan; safety program information; and copies of all pertinent forms, as-built plans, and manufacturer’s manuals.

Certification of the existence and accuracy of the O&M Manual shall be submitted to the Department at least sixty days prior to start-up of a new wastewater treatment facility. Recertification shall be submitted sixty days prior to start-up of any substantial improvements or modifications made to an existing wastewater treatment facility.

15. Signatory Requirements

All applications, reports, or information submitted to the Department in accordance with the conditions of this permit and that require a signature shall be signed and certified as described in the Federal Act and the NREPA.

The Federal Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

The NREPA (Section 3115(2)) provides that a person who at the time of the violation knew or should have known that he or she discharged a substance contrary to this part, or contrary to a permit, COC, or order issued or rule promulgated under this part, or who intentionally makes a false statement, representation, or certification in an application for or form pertaining to a permit or COC or in a notice or report required by the terms and conditions of an issued permit or COC, or who intentionally renders inaccurate a monitoring device or record required to be maintained by the Department, is guilty of a felony and shall be fined not less than $2,500.00 or more than $25,000.00 for each violation. The court may impose an additional fine of not more than $25,000.00 for each day during which the unlawful discharge occurred. If the conviction is for a violation committed after a first conviction of the person under this subsection, the court shall impose a fine of not less than $25,000.00 per day and not more than $50,000.00 per day of violation. Upon conviction, in addition to a fine, the court in its discretion may sentence the defendant to imprisonment for not more than 2 years or impose probation upon a person for a violation of this part. With the exception of the issuance of criminal complaints, issuance of warrants, and the holding of an arraignment, the circuit court for the county in which the violation occurred has exclusive jurisdiction. However, the person shall not be subject to the penalties of this subsection if the discharge of the effluent is in conformance with and obedient to a rule, order, permit, or COC of the Department. In addition to a fine, the attorney general may file a civil suit in a court of competent jurisdiction to recover the full value of the injuries done to the natural resources of the state and the costs of surveillance and enforcement by the state resulting from the violation.

16. Electronic Reporting

Upon notice by the Department that electronic reporting tools are available for specific reports or notifications, the permittee shall submit electronically all such reports or notifications as required by this permit.
PART II

Section D. Management Responsibilities

1. Duty to Comply
All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit, more frequently than, or at a level in excess of, that authorized, shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit constitutes a violation of the NREPA and/or the Federal Act and constitutes grounds for enforcement action; for permit or Certificate of Coverage (COC) termination, revocation and reissuance, or modification; or denial of an application for permit or COC renewal.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Operator Certification
The permittee shall have the waste treatment facilities under direct supervision of an operator certified at the appropriate level for the facility certification by the Department, as required by Sections 3110 and 4104 of the NREPA. Permittees authorized to discharge storm water shall have the storm water treatment and/or control measures under direct supervision of a storm water operator certified by the Department, as required by Section 3110 of the NREPA.

3. Facilities Operation
The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures.

4. Power Failures
In order to maintain compliance with the effluent limitations of this permit and prevent unauthorized discharges, the permittee shall either:

a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit; or

b. upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, the permittee shall halt, reduce or otherwise control production and/or all discharge in order to maintain compliance with the effluent limitations and conditions of this permit.

5. Adverse Impact
The permittee shall take all reasonable steps to minimize or prevent any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any effluent limitation specified in this permit including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in noncompliance.
PART II

Section D. Management Responsibilities

6. Containment Facilities
The permittee shall provide facilities for containment of any accidental losses of polluting materials in accordance with the requirements of the Part 5 Rules (R 324.2001 through R 324.2009 of the Michigan Administrative Code). For a Publicly Owned Treatment Work (POTW), these facilities shall be approved under Part 41 of the NREPA.

7. Waste Treatment Residues
Residuals (i.e. solids, sludges, biosolids, filter backwash, scrubber water, ash, grit, or other pollutants or wastes) removed from or resulting from treatment or control of wastewaters, including those that are generated during treatment or left over after treatment or control has ceased, shall be disposed of in an environmentally compatible manner and according to applicable laws and rules. These laws may include, but are not limited to, the NREPA, Part 31 for protection of water resources, Part 55 for air pollution control, Part 111 for hazardous waste management, Part 115 for solid waste management, Part 121 for liquid industrial wastes, Part 301 for protection of inland lakes and streams, and Part 303 for wetlands protection. Such disposal shall not result in any unlawful pollution of the air, surface waters or groundwaters of the state.

8. Right of Entry
The permittee shall allow the Department, any agent appointed by the Department, or the Regional Administrator, upon the presentation of credentials and, for animal feeding operation facilities, following appropriate biosecurity protocols:

a. to enter upon the permittee’s premises where an effluent source is located or any place in which records are required to be kept under the terms and conditions of this permit; and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

9. Availability of Reports
Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (R 323.2128 of the Michigan Administrative Code), all reports prepared in accordance with the terms of this permit, shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the NREPA.

10. Duty to Provide Information
The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or the facility’s COC, or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
PART II

Section E. Activities Not Authorized by This Permit

1. Discharge to the Groundwaters
This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the NREPA.

2. POTW Construction
This permit does not authorize or approve the construction or modification of any physical structures or facilities at a POTW. Approval for the construction or modification of any physical structures or facilities at a POTW shall be by permit issued under Part 41 of the NREPA.

3. Civil and Criminal Liability
Except as provided in permit conditions on “Bypass” (Part II.C.9. pursuant to 40 CFR 122.41(m)), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee’s control, such as accidents, equipment breakdowns, or labor disputes.

4. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

5. State Laws
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Federal Act.

6. Property Rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality permits, or approvals from other units of government as may be required by law.
| Significant Industrial User (SIU) / Categorical Industrial User (CIU) Name | SIU/CIU Site Address | SIU/CIU City | SIU/CIU County | SIU/CIU State | SIU/CIU Zip | SIU/CIU Legal Name | SIU/CIU SIC Code(s) or NAICS Code(s) | SIU/CIU SIC/NAICS Primary Code Indicator | Industrial User Type (SIU/CIU) | SIU/CIU Subject to Local Limits? (Yes/No) | If CIU, are any local limits more restrictive than Categorical Standards? (Yes/No/NA) | For CIUs, list all applicable Categories by 40 CFR Part Number(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diamond Chrome Plating | 604 S. Michigan Ave. | Howell | Livingston | Michigan | 48843 | Diamond Chrome Plating, Inc. | 3471 | Electroplating (Existing) | CIU | Yes | Yes | 413-Subpart A, 413.14 Parts (a), (b) & (f), 433.11 ©, 403.3 (m)(1)(2) & (3) |
| Pepsi- MBR Pretreatment | 755 McPherson Park Dr. | Howell | Livingston | Michigan | 48843 | Pepsi Bottling Group, LLC | 2086 | Bottled & Canned Soft Drinks | SIU | Yes | NA |
| Pepsi- R.O. | 755 McPherson Park Dr. | Howell | Livingston | Michigan | 48843 | Pepsi Bottling Group, LLC | 2086 | Bottled & Canned Soft Drinks | SIU | Yes | NA |
| ChemTrend | 1445 W. McPherson Park Dr. | Howell | Livingston | Michigan | 48843 | ChemTrend, Limited Partnership | 2899 | Chemical and Chemical Preparations | SIU | Yes | NA |
Appendix C — Cost Estimates
## ENGINEER'S OPINION OF PROBABLE PROJECT COST

**PROJECT:** City of Howell WWTP  
**DATE:** 5/1/2019  
**LOCATION:** Howell, MI  
**PROJECT NO.:** 20190125  
**BASIS FOR ESTIMATE:** [x] CONCEPTUAL  
**ESTIMATOR:** TSW  
**WORK:** SRF Project Plan  
**CHECKED BY:** WWTP Rehabilitation Project  
**CURRENT ENR:** 11186

### Alternative 1

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<td>Headworks replacement</td>
<td>1</td>
<td>LS</td>
<td>$2,533,220</td>
<td>$2,533,220</td>
</tr>
<tr>
<td>3.1.2</td>
<td>Primary Tanks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary Tank concrete repairs</td>
<td>1</td>
<td>LS</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td></td>
<td>Primary Tank mechanism replacement</td>
<td>2</td>
<td>EA</td>
<td>$245,000</td>
<td>$490,000</td>
</tr>
<tr>
<td></td>
<td>Primary sludge pumps with VFDs</td>
<td>2</td>
<td>EA</td>
<td>$35,000</td>
<td>$70,000</td>
</tr>
<tr>
<td></td>
<td>Primary sludge valves with motor operators</td>
<td>4</td>
<td>EA</td>
<td>$13,000</td>
<td>$52,000</td>
</tr>
<tr>
<td></td>
<td>Upgrade primary piping/aeration gates</td>
<td>1</td>
<td>LS</td>
<td>$75,000</td>
<td>$75,000</td>
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<tr>
<td>3.1.3</td>
<td>Aeration Tanks</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>New Aeration Tank construction</td>
<td>1</td>
<td>LS</td>
<td>$940,000</td>
<td>$940,000</td>
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<td></td>
<td>Aeration butterfly valves</td>
<td>8</td>
<td>EA</td>
<td>$2,000</td>
<td>$16,000</td>
</tr>
<tr>
<td></td>
<td>Aeration piping leak fixes/replace piping</td>
<td>1</td>
<td>LS</td>
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<tr>
<td></td>
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<td>1</td>
<td>LS</td>
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</tr>
<tr>
<td>3.1.4</td>
<td>Final Clarifiers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Final Clarifier tank rehab/new mechanism</td>
<td>1</td>
<td>LS</td>
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<tr>
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<td>RAS pumps with VFDs</td>
<td>4</td>
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<td></td>
<td>RAS pump VFD, valve/flowmeter improvements</td>
<td>1</td>
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<td>3.1.5</td>
<td>Disinfection</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>UV Disinfection system replacement/building</td>
<td>1</td>
<td>LS</td>
<td>$800,000</td>
<td>$800,000</td>
</tr>
<tr>
<td>3.1.6</td>
<td>Solids Dewatering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New solids dewatering building and process</td>
<td>1</td>
<td>LS</td>
<td>$3,400,000</td>
<td>$3,400,000</td>
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<tr>
<td>3.1.7</td>
<td>Plant Driveway</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Plant Driveway repaving</td>
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<td>3.1.8</td>
<td>SCADA</td>
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<td>SCADA system improvements</td>
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<td>LS</td>
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<td>$300,000</td>
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<tr>
<td>3.1.9</td>
<td>Motor Control Centers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Replace motor control centers</td>
<td>1</td>
<td>LS</td>
<td>$390,000</td>
<td>$390,000</td>
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<td>3.1.10</td>
<td>Service Water System</td>
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<td></td>
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<td></td>
<td>Yard hydrants/piping replace</td>
<td>10</td>
<td>EA</td>
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<td>$15,000</td>
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<td>Service water system improvements</td>
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<td>LS</td>
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<td>3.1.11</td>
<td>Chemical Feed System</td>
<td></td>
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<td></td>
<td>New chemical feed system</td>
<td>1</td>
<td>LS</td>
<td>$50,000</td>
<td>$50,000</td>
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<tr>
<td>3.1.12</td>
<td>Lab and Administration Building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administration building upgrades, addition, laboratory</td>
<td>2300</td>
<td>SF</td>
<td>$150</td>
<td>$345,000</td>
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<td>Building improvements</td>
<td>1</td>
<td>LS</td>
<td>$240,600</td>
<td>$240,600</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$11,278,000</strong></td>
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</tbody>
</table>

| **Engineering, Contingencies and Inflation Adjustment** | **30 %** | **$3,384,000** |

| **TOTAL PROJECT COST** | | **$14,660,000** |
# CONSTRUCTION COST

<table>
<thead>
<tr>
<th></th>
<th>CAPITAL COST(^{(1)})</th>
<th>SERVICE LIFE (YEARS)</th>
<th>PRESENT WORTH(^{(2)})</th>
<th>ANNUAL EQUIVALENT COST</th>
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<tbody>
<tr>
<td>Structural / Site Work - Phase I Projects</td>
<td>$6,660,000</td>
<td>50</td>
<td>$2,821,000.00</td>
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<tr>
<td>Mechanical/Electrical - Phase I Projects</td>
<td>$8,000,000</td>
<td>20</td>
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<td>Interest During Construction</td>
<td>$293,200.00</td>
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<td>$293,200.00</td>
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<tr>
<td>(Assumes 2 year interest at 2.0%)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CONSTRUCTION COST</strong></td>
<td><strong>$14,953,200.00</strong></td>
<td></td>
<td><strong>$11,114,200.00</strong></td>
<td><strong>$567,000.00</strong></td>
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## ANNUAL OPERATION AND MAINTENANCE COST

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNUAL O, M &amp; R COST (NON-ENERGY)</td>
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<td></td>
<td></td>
<td>$2,938,000.00</td>
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<tr>
<td>ANNUAL O, M &amp; R COST (ENERGY)</td>
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<td>$0</td>
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<td><strong>TOTAL COST</strong></td>
<td><strong>$14,953,200.00</strong></td>
<td><strong>$14,052,200.00</strong></td>
<td><strong>$717,000.00</strong></td>
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</tbody>
</table>

Notes:

\(^{(1)}\) December 2018 ENR 20 Cities CCI = 11186

\(^{(2)}\) Cost is based on a study period of 20 years and a discount rate of 0.20%.

Present Worth Costs are based on Straight Line Depreciation and no inflation.
### City of Howell

**SRF Project Plan**  
**Wastewater Treatment Plant Upgrades**  
**Selected Alternative**  
**User Fee Calculation**

#### Capital Cost

<table>
<thead>
<tr>
<th>BASIS</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>See project cost estimate</td>
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#### Cost Sharing

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Basis</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>Pepsi</td>
<td>Fixed $3,500,000</td>
<td>$3,500,000</td>
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<tr>
<td>Marion Township Contribution</td>
<td>36.08% of Remaining</td>
<td>$4,026,528</td>
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<tr>
<td>City of Howell Contribution</td>
<td>63.92% of Remaining</td>
<td>$7,133,472</td>
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</tbody>
</table>

#### City of Howell Project Cost Per User

<table>
<thead>
<tr>
<th>Description</th>
<th>Basis</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Howell Annual Payment</td>
<td>20-years at 2%</td>
<td>$436,260</td>
</tr>
<tr>
<td>Residential Users Annual Contribution</td>
<td>53% of flow</td>
<td>$231,218</td>
</tr>
<tr>
<td>Annual Project Cost per Residential User</td>
<td>2,461 Users</td>
<td>$93.95</td>
</tr>
<tr>
<td>Monthly Project Cost per Residential User</td>
<td>12 months per year</td>
<td>$7.83</td>
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</tbody>
</table>

**Notes:**  
December 2018 ENR 20 Cities CCI = 11186
Appendix D — Current Asset Registry
Howell Wastewater Treatment Plant
Asset Inventory

Asset Name
Headworks
Screw Pump No.1
Screw Pump No.2
Screw Pump No.3
Flume
Grit Removel Tank Drive
Grit Classifier
Grit Removel Tank
Pista Grit Chamber w/ Turbo Pump
Influent Wet Well
Screw pump Grease Pump No. 1
Screw pump Grease Pump No. 2
Screw pump Grease Pump No. 3
Fine Bar Screen
Shaftless Screw Conveyor Compactor
Grit Tank Stop Gate
Grit Tank Stop Gate
Grit Tank Stop Gate
Grit Tank Stop Gate
Influent Sluice Gates
Raw Influent Sampler
Grit System Control Panel
Fine Screen Control Panel
Extruded Flat Aluminium Panel Covers for Influent/Screw Pumps
Access Hatch on Curb
Odor Control Unit (new)
Standby Self Priming Pump
Blower for Odor Control unit
Exposed Process Piping
PVC Odor Central Ductwork
Grease Filter for Odor Control
Level Sensor for Influent Wet Well
Odor Control Unit (old)
Equalization
Aeration Blower for Equalization Basin 1&2
Coarse Bubble Air Diffusers
Equalization Basin
Level Sensor for Equalization Basin #1
Level Sensor for Equalization Basin #2
Equalization Basin Influent Slide Gate
Butterfly Valve
Butterfly Valve
Air Control Valve w/ Actuator
Air Control Valve w/ Actuator
Exposed Process Piping
Primary Clarification
Sample Pump
Primary Sludge Magnetic Flowmeter
Primary Settling Tank No. 1
Primary Settling Tank No. 2
Plug Valve for Primary Settling Tank No.1 PV-2
Primary Settling Tank No. 1 Plug Valve Actuator
Plug Valve for Primary Settling Tank No. 2 PV-3
Primary Sludge Pump No. 1
Primary Sludge Pump No. 2
Sump Pump for Primary
Primary Influent Gate Valves
Primary Tank Drive No. 1
Primary Tank Drive No. 2
Primary Tank Weirs/Baffles
Shut Off Plug Valve
Shut Off Plug Valve
Shut Off Plug Valve
Exposed Process Piping
Aeration
Aeration Tank #1
Aeration Tank #2
Aeration Tank #3
Aeration Tank #4
Aeration Tank Fine Bubble Diffusers
Fine Bubble Diffuser Cleaning System
Level Sensors for Aeration Tanks
V-Notch Effluent Weirs for Aeration Tanks
Discharge Butterfly Valve for Aeration Blower No. 1
Aeration Blower No. 1 Butterfly Valve Actuator
Discharge Butterfly Valve for Aeration Blower No. 2
Aeration Blower No. 2 Butterfly Valve Actuator
Discharge Butterfly Valve for Aeration Blower No. 3
Aeration Blower No. 3 Butterfly Valve Actuator

Condition

Consequence of Failure Installation Date

3
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2000
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2016
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2000

2014

Model Number

11

12

U-320/SP280-P/SS 304
Series HY-Q 723
Series HY-Q 723
Series HY-Q 723
Series HY-Q 723

July 27, 2018

Capacity / Size

Manufacturer

O&M Manual Available

2987 GPM @ 30 RPM, Dia. 54", Lincoln Motor: 50 HP @ 1750 RPM
2987 GPM @ 30 RPM, Dia. 54", Lincoln Motor: 50 HP @ 1750 RPM
2987 GPM @ 30 RPM, Dia. 54", Lincoln Motor: 50 HP @ 1750 RPM
18"
3/4 HP

Lakeside Equipment Corp.
Lakeside Equipment Corp.
Lakeside Equipment Corp.

Pump: 250 GPM @ 17' TDH, Motor: 5HP @ 1200 RPM, Chamber: 6'-3" to 6'-9"

Smith & Loveless

1/3 HP
1/3 HP
1/3 HP
42" wide, bar space 10 mm, 5 HP
70 - 141 cu. Ft./hr, 4 HP
30" X 62"
60" X 54"
48" X 63"
24.5" X 65"
3'0" x 3'6"

Lakeside Equipment Corp.
Lakeside Equipment Corp.
Lakeside Equipment Corp.
Headworks
Headworks
Rodney Hunt
Rodney Hunt
Rodney Hunt
Rodney Hunt
Rodney Hunt
Hach
Smith and Loveless
Headworks
RPS Engineering
RPS Engineering
PureAir Filtration
Godwin
PlastiCair

Y
Y
Y
N
N
N
N
Y
N
N
N
N
Y
Y
Y
Y
Y
Y
N
N
N
N
Y
Y
Y

2' X 2', Curb: 6"
Up to 1200 CFM

VBS-5
0127625-84

2014
2014
2014
2014

1200 CFM @ 6.5", 3 HP @ 1755 RPM
4" - 24" Ductile Iron Pipe

Viron
Pure Air
Milltronics

MiniRanger Plus
2000

2000
1960

Smith and Loveless
Smith and Loveless

N

Dual Netpro 400 CFM, 1.5 HP
74106A3
Model CBS-24

12 SCFM
12 Ft. Depth, 500,000 Gallons

MiniRange Plus
MiniRange Plus

Milltronics
Milltronics
24"X24"
8" Shut off
6" Shut off Air
8", EIM w/ actuator
4", EIM w/ actuator
4" to 14" Ductile Iron

M&H
M&H
M&H
M&H

1 HP, 1750 RPM, 25 GPM @ 30' TDH
6"

ITT AC Pumps
ABB

4"
6"
6"
300 GPM @ 9' TDH @ 970 RPM, 100 GPM @ 43' TDH @ About 1520 RPM, Reliance Motor: 10 HP @ 1750 RPM
300 GPM @ 9' TDH @ 970 RPM, 100 GPM @ 43' TDH @ About 1520 RPM, Reliance Motor: 10 HP @ 1750 RPM
1.5 HP
16"
.5 HP, 45'
.5 HP, 45'
45', Stainless Steel
4"
6"
6"
6" to 20" Ductile Iron

Clow
EIM
Clow
Vaughn
Vaughn

2000
C529

H4K6S-078
H4K6S-078

18341B-2
18341B-1

Hoffman
Wilfley Weber

M&H Dresser
WesTech
WesTech

Sanitaire
Sanitaire
Milltronics
6' 120° V-Notch
8"
8"
8"
8"
8"
8"

Asset Registry Page 1 of 6

N
N
N
N
N
N
N
Y
Y
N
N
N
N

DeZurik
DeZurik
DeZurik

20 Ft. Depth, 265,000 Gallons
20 Ft. Depth, 265,000 Gallons
20 Ft. Depth, 265,000 Gallons
20 Ft. Depth, 265,000 Gallons

Hydroranger

N
Y
N
N
N
N
N
N

M&H
EIM
M&H
EIM
M&H
EIM

N
N
N
N
N
N
N
N
N
N
N
N
N
N

Job No. 20160988


Asset Name | Condition | Consequence of Failure | Installation Date | Model Number | Capacity / Size | Manufacturer | O&M Manual Available
--- | --- | --- | --- | --- | --- | --- | ---
Lime Handling Sump Pump | 3 | 1 | 2000 | | | | |
Liquid Lime Storage Tank | 5 | 1 | 2000 | | | Watson | |
Liquid Lime Feed Pump | 5 | 1 | 2000 | | | Allen Bradley | |
Lime Solution Day Tank w/ Mixer Motor | 4 | 1 | 2000 | | | Lightnin | |
Level Sensor for Lime Solution Day Tank | 5 | 1 | 2000 | MineFare Plus | | | |
Lime Stabilization/Sludge Tank w/ Mixer Motor | 5 | 1 | 2000 | | | Lightnin | |
Level Sensor for Lime Stabilization/Sludge Tank | 5 | 1 | 2000 | | | Roots | |
Blower for WAS Tank | 7 | 3 | 2000 | 68RAU-U | 694 SCFM @ 8.5 psi, 40 HP | Roots | Y
Lime Storage Tank Mixer | 4 | 1 | 2000 | VQ1550 | Motor: 2 HP @ 1800 RPM, in-tank shaft: diameter: 1", length: 61.68, Length: 60.5 ft, Agma SF: 2 | Lightnin | Y
Sludge Pumps | 5 | 2 | 2000 | 2H150G1 CDQ AAA | Capacity: 246 GPM @ 60 PSI @ 295 RPM, Baldor Motor: 30 HP @ 1500 RPM | Mayo | Y
Lime Transfer Pump | 5 | 2 | 2000 | A6F CDQ AAA | Capacity: 21 GPM @ 20 PSI @ 150 RPM, Baldor Motor: 3 HP @ 1800 RPM | Mayo | Y
Plug Valves | 3 | 1 | 1980 | | | | |
Plug Valve | 3 | 1 | 2000 | | | | |
Plug Valves | 3 | 1 | 1980 | | | | |
Lime Feed Pump | 5 | 1 | 2000 | A10 CDQ AAA | Capacity: 4 GPM @ 20 PSI @ 155 RPM, Baldor Motor: 1 HP @ 1800 RPM | Gould-ITE | Y
Lime Handling & Primary Building Sump Pump | 3 | 1 | 2000 | J885 | Up to 128 GPM @ 12" TDH, Goulds Motor: 1/3 HP @ 1750 RPM | Gould-ITE | Y
WAS RFD Feed Flow Meter | 4 | 1 | 2000 | | | | |
Air Butterfly Valve | 3 | 3 | 2000 | | | | |
Bell Filter Press | 2 | 3 | 2017 | | | | |
Bell Filter Press Conveyor | 2 | 3 | 2017 | | | | |
Bell Filter Feed Pump | 3 | 3 | 2017 | | | | |
Bell Filter Polymer System | 2 | 3 | 2017 | | | | |
Bell Filter Building | 2 | 3 | 2017 | Insulated FRP | | RM Products | Y
Exposed Process Piping | 3 | 3 | 2000 | | | | |
Gravity Storm Sewer | 3 | 3 | | 375 of 12"-15" | | | |
Gravity Storm Sewer | 3 | 3 | | 450 of 18"-30" | | | |
Plant Outlet Pipe | 3 | 5 | | | | | |
Sanitary Sewer | 3 | 4 | 2000 | 888" of 6"-18", Clay | | | |
Sanitary Sewer | 3 | 4 | 2000 | 131.6" of 6-18" Clay | | | |
Sanitary Sewer | 3 | 4 | 1970 | 431" of 12", Clay | | | |
Buried Pressure Piping | 3 | 4 | 2000 | 914' of 6"-10" DIP | | | |
Buried Pressure Piping | 3 | 4 | 2000 | 507' of 12", 10" DIP | | | |
Buried Pressure Piping | 3 | 4 | 2000 | 575' of 20", 14" DIP | | | |
Buried Pressure Piping | 3 | 4 | 2000 | 1395' of 8"-10" DIP | | | |
Buried Pressure Piping | 3 | 4 | 1970 | 1246' of 12"-18" DIP | | | |
Service/PAW Pipe - Buried | 3 | 4 | 1980-2000 | | | | |
Site Lighting | 3 | 3 | 2000 | | | | |
Yard Hydrants | 4 | 3 | 1980 | | | | |
Electrical: | | | | | | | |
Generator | 1 | 3 | 2017 | 500kW/1500V @ 480V | | Caterpillar | Y
Aeration Blower Generator | 2 | 3 | 2000 | 306 kV | | Cummins | N
Low Voltage Switchgear | 1 | 5 | 2017 | 600A, 1P | | Eaton | Y
Chemical Handling Building MCC (MCC-A) | 4 | 4 | 1978 | 6 Sections, 600A, 480V | | Gould-ITE | N
UV Building MCC (MCC-B) | 3 | 3 | 1978 | 600A, 480V, 3s 3w | | Gould-ITE | N
Air Duct Power Panel (PP-02) | 2 | 2 | 1978 | 200A, 120/208V, 3s 3w | | Gould-ITE | N
Primary Settling Tank MCC (MCC-F) | 2 | 4 | 1978 | 600A, 480V, 3s 3w | | Gould-ITE | N
Final Settling Tank MCC (MCC-G) | 2 | 3 | 1978 | 600A, 480V, 3s 3w | | Gould-ITE | N
Garage and Workshop (PP-02) | 2 | 2 | 1978 | 600A, 480V, 3s 3w | | Gould-ITE | N
Lime Handling MCC (MCC-I) | 2 | 3 | 1978 | 600A, 480V, 3s 3w | | Gould-ITE | N
Thickener Building MCC (MCC-E) | 2 | 3 | 1978 | 600A, 480V, 3s 3w | | Gould-ITE | N
Blower Building MCC (MCC-G) | 2 | 4 | 2000 | 800A, 480V, 3s 3w | | Cutler Hammer | N
Headworks Building MCC (MCC-M) | 2 | 2 | 2000 | 2.84kA, 13.2kV, 30E | | | |
Primary Switch 5-1 | 2 | 5 | 1978 | 2.84kA, 13.2kV, 30E | | S&C | |
Primary Switch 5-2 | 2 | 5 | 2000 | 2.84kA, 13.2kV, 30E | | | |
Primary Transformer | 2 | 5 | 2000 | 277/480V | | | |
Primary Transformer at Blower Building | 2 | 5 | 2000 | 500kVA, 277/480V | | Gould-ITE | N
Lab-MDP | 2 | 4 | 1978 | 400/600V | | Gould-ITE | N
Other: | | | | | | | |
Service Water Pump No. 1 | 5 | 4 | 2000 | 7.5 HP | ITT AC | N
Service Water Pump No. 2 | 3 | 4 | 2000 | 7.5 HP | ITT AC | N
Secondary Efficient Sampler | 3 | 3 | | | | | |
Primary Efficient Sampler | 3 | 3 | | | | | |
Final Efficient Sampler | 3 | 3 | | | | | |
Ferric Chloride Tank | 4 | 4 | 1980 | 400 Gal. | | Design Tanks | N
Ferric Chloride Day Tank | 3 | 4 | 1980 | 275 Gal. | | Design Tanks | N
Filter Building | 3 | 3 | 1980 | | | | |
UV Sample Pump | 4 | 3 | 2000 | 2 HP | | | |
Pressure Filter Building Sump Pump | 1 | 3 | 2012 | | | | |
Ferric Chloride Pump No. 1 | 4 | 3 | 2012 | | | | |
Ferric Chloride Pump No. 2 | 4 | 3 | 2012 | | | | |
Rotary Screw Compressor | 3 | 3 | 2000 | GA22 | | Atlas Copco | N
Hydropneumatic Tank | 3 | 3 | 2000 | | | | |
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### Pump Stations:

**Submersible/Gripper Prefab Station**
- Manufacturer: Gorman Rupp
- Capacity: 500 GPM @ 35' TDH

**Discharge Plug Valve for Pump No. 1**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Check Valve for Pump No. 1**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Discharge Plug Valve for Pump No. 2**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Check Valve for Pump No. 2**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Fiberglass Enclosure**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Wet Well Pumping/Supports**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Concrete Wet Well**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Borrowing Lift Station**
- Manufacturer: Barnes
- Capacity: 500 GPM @ 35' TDH

**Discharge Plug Valve for Pump No. 1**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Check Valve for Pump No. 1**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Discharge Plug Valve for Pump No. 2**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Check Valve for Pump No. 2**
- Model: TGA15-8
- Capacity: 500 GPM @ 35' TDH

**Fiberglass Enclosure**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Wet Well Pumping/Supports**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Concrete Wet Well**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Dash Board**

**Duplex Self Priming**
- Manufacturer: Gorman Rupp
- Capacity: 400 GPM @ 48' TDH

**Discharge Plug Valve for Pump No. 1, wrench nut**
- Model: TGA15-8
- Capacity: 500 GPM @ 48' TDH

**Check Valve for Pump No. 1**
- Model: TGA15-8
- Capacity: 500 GPM @ 48' TDH

**Automated Air Release Valves**
- Manufacturer: Olympian
- Capacity: 400 GPM @ 48' TDH

**Discharge Plug Valve for Pump No. 2, wrench nut**
- Model: TGA15-8
- Capacity: 500 GPM @ 48' TDH

**Check Valve for Pump No. 2**
- Model: TGA15-8
- Capacity: 500 GPM @ 48' TDH

**Fiberglass Enclosure**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Standby Generator**
- Model: GF383

**Wet Well Pumping/Supports**
- Model: GF383

**Concrete Wet Well**
- Model: GF383

**Clean**

**Submersible**
- Manufacturer: ABS Pumps
- Capacity: 114 GPM @ 29.5' TDH

**Pump No. 1**
- Model: A250-4x
- Capacity: 500 GPM @ 48' TDH

**Check Valve for Pump No. 1**
- Model: A250-4E
- Capacity: 500 GPM @ 48' TDH

**Discharge Plug Valve for Pump No. 1, wrench nut**
- Model: A250-4E
- Capacity: 500 GPM @ 48' TDH

**Pump No. 2**
- Model: A250-4x
- Capacity: 500 GPM @ 48' TDH

**Check Valve for Pump No. 2**
- Model: A250-4E
- Capacity: 500 GPM @ 48' TDH

**Concrete Enclosure**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Wet Well Pumping/Supports**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Concrete Wet Well**
- Capacity: 1 Sq. Foot, 20 Ft. Depth, (2) 7.5 HP Pumps

**Dam**

**Submersible**
- Manufacturer: ABS Pumps
- Capacity: 342 GPM @ 72'

**Pump No. 1**
- Model: A250-4x
- Capacity: 500 GPM @ 48' TDH

**Check Valve for Pump No. 1**
- Model: A250-4E
- Capacity: 500 GPM @ 48' TDH

**Discharge Plug Valve for Pump No. 1, wrench nut**
- Model: A250-4E
- Capacity: 500 GPM @ 48' TDH

**Pump No. 2**
- Model: A250-4x
- Capacity: 500 GPM @ 48' TDH

**Check Valve for Pump No. 2**
- Model: A250-4E
- Capacity: 500 GPM @ 48' TDH
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Appendix E — Footing Drain Disconnection Discussion
Memorandum

Subject: Footing Drain Disconnection Discussion
City of Howell Wastewater Treatment Plant
Appendix

HRC Job No. 20190125
May 2019

After the completion of an I&I study in 2004, the City worked to remove those I&I sources which the report identified as cost effective. At this time the City’s efforts to remove those sources have been completed. The work done by the City appears to have resulted in a reduction in wet weather flows generated by the system, as the number of high wet weather flow events per year has decreased steadily over the past 10-years. However, these peak flow events have not been eliminated.

One remaining source of I&I which has not been cost effective to remove is the contribution from private residences with footing drains connected to the sanitary sewer system. Constructing homes with connected footing drains was once standard practice in the City. However, this practice was eliminated in 1985 when the City’s ordinance was revised stating that newly constructed homes could no longer be built with connected footing drains. It is therefore reasonable to assume that all homes built in the City of Howell prior to 1985 were constructed with footing drains connected to the sanitary sewer system, while homes built since then were not. A review of parcel data provided by SEMCOG shows that of the total 1,944 homes in the City, there are 1,264 homes in the City of Howell built before 1985.

The average flow observed at the WWTP is 1.3 MGD, while peak wet weather flows can reach the firm capacity of the plant, 8.6 MGD. This means that wet weather I&I is responsible for approximately 7.3 MGD in additional peak flow. This averages out to 4 gpm of additional wet weather flow per footing drain. A wet weather contribution ranging from 2 gpm to 5 gpm per footing drain are considered typical. The City of Ann Arbor observed an average rate of 4 gpm per footing drain during their disconnection project several years ago. The average footing drain rate calculated for the City of Howell appears to be reasonable.

As indicated in Section 3 of the SRF Project Plan, the City of Howell is contractually obligated to provide average yearly treatment capacity of 0.65 mgd to Marion Township. The plant is rated at 2.45 mgd, so there is capacity for future connections of approximately 1.1 mgd in addition to the current 1.3 MGD average daily flow. The peak flow from this average contribution is approximately 2.9 mgd. Adding this to the existing 8.6 mgd firm capacity results in a new firm capacity requirement of 11.5 mgd.

In order to achieve the same effect as increasing the Plant’s peak wet weather capacity from 8.6 MGD to 11.5 MGD, a sufficient number of footing drains would have to be disconnected to eliminate 2.9 MGD of peak wet weather flow. Based on the average footing drain contribution calculated above, this would equate to disconnecting the footing drains of approximately 503 homes.

Disconnecting a footing drain is estimated to cost about $12,000 per home, based on the City of Ann Arbor’s footing drain disconnection program. The total project cost would be approximately $6.04 million. There are also potential legal complications due to the fact that FD connections were originally acceptable under the City’s ordinance until the ordinance was changed. Homes built prior to the date when the ordinance changed were built in compliance with the City’s standards. Mandating disconnection can expose a community to potential resistance and lawsuits.
Most of the wastewater treatment plant improvements detailed in Alternative 1 (described in Section 3 in the SRF Project Plan) would still be required along with these footing drain disconnections, with a few exceptions. The full $75,000 cost of the primary piping and aeration upgrades would be removed from the project, the headworks rehabilitation cost would be reduced by $2,000,000, and the UV disinfection improvement cost would be reduced by $200,000. This means the total cost of the work to be done at the WWTP would decrease by $2.28 million relative to Alternative 1; however, there would be an increase of $6.04 million in footing drain disconnection cost.

Based on this analysis, footing drain removal is not only infeasible, but is also a less cost-effective solution than increasing the WWTP’s wet weather capacity as described in Alternative 1. A summary of footing drain contribution and drain removal calculations, as well as a cost comparison between Alternative 1 and the footing drain disconnection alternative are shown below:

### Footing Drain Flow Contribution and Removal

<table>
<thead>
<tr>
<th>Typical Dry Weather Flow</th>
<th>1.3 MGD</th>
</tr>
</thead>
<tbody>
<tr>
<td>903 gpm</td>
<td></td>
</tr>
<tr>
<td>Peak Wet Weather Flow</td>
<td>8.6 MGD</td>
</tr>
<tr>
<td>5972 gpm</td>
<td></td>
</tr>
<tr>
<td>Flow From Wet Weather I&amp;I</td>
<td>7.3 MGD</td>
</tr>
<tr>
<td>5069 gpm</td>
<td></td>
</tr>
<tr>
<td>City of Howell Footing Drain Data</td>
<td>680 disconnected footing drains (built 1985 and later)</td>
</tr>
<tr>
<td></td>
<td>1264 Connected footing drains (built 1984 and earlier)</td>
</tr>
<tr>
<td></td>
<td><strong>4.01 gpm per footing drain</strong></td>
</tr>
<tr>
<td>Required Footing Drain Disconnection</td>
<td>2.9 MGD additional capacity needed</td>
</tr>
<tr>
<td></td>
<td>2014 gpm (converted from above)</td>
</tr>
<tr>
<td></td>
<td>503 Footing drain disconnections required</td>
</tr>
<tr>
<td>Cost Estimate</td>
<td>$12,000</td>
</tr>
<tr>
<td></td>
<td>Typical cost per footing drain disconnection</td>
</tr>
<tr>
<td></td>
<td><strong>$6,036,000 Total cost of footing drain disconnection alternative</strong></td>
</tr>
</tbody>
</table>

### Cost Comparison

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1</th>
<th>Footing Drain Disconnection Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWTP Improvements</td>
<td>$14.66 million</td>
<td>$12.38 million</td>
</tr>
<tr>
<td>Footing drain disconnections</td>
<td>$0</td>
<td>$6.04 million</td>
</tr>
<tr>
<td>Total</td>
<td><strong>$14.66 million</strong></td>
<td><strong>$18.42 million</strong></td>
</tr>
</tbody>
</table>
Appendix G — Correspondence
February 20, 2019

Bay Mills Indian Community
12140 W Lakeshore Drive
Brimley, MI 49715

Attn: Ms. Paula Carrick, THPO

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Ms. Carrick:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon any historic properties with religious and/or cultural significance in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
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- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site consists of improvements to an existing wastewater plant and involves replacement of existing facilities, no impacts are expected from the proposed project upon any historic properties with religious and/or cultural significance.
On behalf of the City of Howell, we are providing you with the opportunity to comment on the above referenced project to assure that it will not cause an impact to any historical properties with religious and/or cultural significance in which you may be aware. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
      City of Howell; S. Charles, E. Suida, M. Davis
      HRC; N. Faught, A. Malczewski, File
February 20, 2019

Grand Traverse Band of Ottawa and Chippewa Indians
2605 NW Bayshore Drive
Peshawbetown, MI 49682

Attn: Ms. Cindy Winslow

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Ms. Winslow:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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WWTP Service Area Map

pc: MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
February 20, 2019

Hannahville Potawatomi Indian Community
N-14911 Hannahville B-1 Road
Wilson, MI 49896

Attn: Mr. Earl Meshigaud

Re: Notice and Opportunity to Comment HRC Job No. 20190125
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mr. Meshigaud:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Keweenaw Bay Indian Community
16429 Beartown Road
Baraga, MI 49908

Attn: Mr. Gary Loonsfoot, Jr., THPO

Re: Notice and Opportunity to Comment
Water System Improvement Program
City of Howell, Livingston County

Dear Mr. Loonsfoot, Jr:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Lac Vieux Desert Band of Lake Superior Chippewa Indians
PO Box 249
Watersmeet, MI 49969

Attn: Mr. Giiwegiizhigookway Martin, THPO

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mr. Martin:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process, a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Little River Band of Ottawa Indians
2608 Government Center Drive
Manistee, MI 49660

Attn: Mr. Jay Sam, Director

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mr. Sam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Little Traverse Bay Band of Odawa
7500 Odawa Circle
Harbor Springs, MI 49740

Attn: Mr. Wes Andrews

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mr. Andrews:

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Dan Royal, P.E.

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pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Match-e-be-nash-shee-wish Gun Lake Band of Potawatomi Indians
2872 Mission Drive
Shelbyville, MI 49344

Attn: Ms. Heather Bush

Re: Notice and Opportunity to Comment HRC Job No. 20190125
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Ms. Bush:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Nottawaseppi Band of Huron Potawatomi
1485 Mno-Bmadzewen Way
Fulton, MI 49052

Attn: Mon-ee Zapata, Cultural Specialist

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mon-ee Zapata:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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pc:  MDEQ; E. Pocan
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February 20, 2019

Pokagon Band of Potawatomi
58620 Sink Road
Dowagiac, MI 49047

Attn: Mr. Marcus Winchester, THPO

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mr. Winchester:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

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The proposed project site consists of improvements to an existing wastewater plant and involves replacement of existing facilities, no impacts are expected from the proposed project upon any historic properties with religious and/or cultural significance.

On behalf of the City of Howell, we are providing you with the opportunity to comment on the above referenced project to assure that it will not cause an impact to any historical
properties with religious and/or cultural significance in which you may be aware. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

[Signature]

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Saginaw Chippewa Indian Tribe of MI
6650 E. Broadway
Mt Pleasant, MI 48858

Attn: Mr. William Johnson, Interim THPO

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Mr. Johnson:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon any historic properties with religious and/or cultural significance in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site consists of improvements to an existing wastewater plant and involves replacement of existing facilities, no impacts are expected from the proposed project upon any historic properties with religious and/or cultural significance.

On behalf of the City of Howell, we are providing you with the opportunity to comment on the above referenced project to assure that it will not cause an impact to any historical
properties with religious and/or cultural significance in which you may be aware. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc:    MDEQ; E. Pocan
       City of Howell; S. Charles, E. Suida, M. Davis
       HRC; N. Faught, A. Malczewski, File
February 20, 2019

Sault Ste. Marie Tribe of Chippewa
523 Ashmun
Sault Ste Marie, MI 49783

Attn: Ms. Colleen Medicine

Re: Notice and Opportunity to Comment
Wastewater Treatment Plant Upgrades
City of Howell, Livingston County

Dear Ms. Medicine:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires fulfillment of a review process through Section 106 of the National Historic Preservation Act. During this process a federal agency or applicant is required to consult with Tribal Historic Preservation Officers (THPO) and federally recognized Indian tribes to determine the potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon any historic properties with religious and/or cultural significance in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site consists of improvements to an existing wastewater plant and involves replacement of existing facilities, no impacts are expected from the proposed project upon any historic properties with religious and/or cultural significance.

On behalf of the City of Howell, we are providing you with the opportunity to comment on the above referenced project to assure that it will not cause an impact to any historical
properties with religious and/or cultural significance in which you may be aware. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
   City of Howell; S. Charles, E. Suida, M. Davis
   HRC; N. Faught, A. Malczewski, File
February 20, 2019

NESHAP Asbestos Program
Department of Environmental Quality – Air Quality
P.O. Box 30260
Lansing, MI 48909-7760

Attn: Ms. Karen Kajiya-Mills, Program Manager

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Ms. Kajiya-Mills:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts due to removal of building materials containing asbestos in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the upgrades required for the project. Since the proposed project does not plan for the removal of any building materials containing asbestos, no impacts are expected from the proposed project upon any NESHAP regulations. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to NESHAP regulations in the project vicinity.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

MDOT Bureau of Aeronautics
2700 Port Lansing Road
Lansing, MI 48906-2160

Attn: Ms. Molly Lamrouex, Aeronautics Environmental Specialist

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Ms. Lamrouex:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on airspace and airports in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon Federal Aviation Administration (FAA) regulations and the Michigan Tall Structure Act (1950 PA 327). The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon any airspace and airports. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any airspace or airports in the project vicinity.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Michigan Department of Agriculture & Rural Development
Farmland Preservation Program
Environmental Stewardship Division
P.O. Box 30499
Lansing, MI 48909

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

HRC Job No. 20190125

Dear Sir or Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on significant farmland or agricultural lands in the vicinity of the project.

We are requesting information regarding the impacts of the above referenced proposed project upon The Farmland and Open Space Preservation Act (Part 361 of the NREPA) or PA 116. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon any significant farmland or agricultural lands. Please see attached aerial images and zoning maps which show a lack of existing significant farmlands in the project area. Both the City of Howell and Howell Township zoning maps from their websites are referenced. We are requesting a review to confirm that the above referenced project will...
not cause an impact to any significant farmland or agricultural lands in the project vicinity.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map
Project Area Zoning Map
Howell Township Zoning Map
City of Howell Zoning Map
Project Area Aerial Images

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Howell Township
3525 Byron Road
Howell, MI 48855

Attn: Mr. Mike Coddington, Supervisor

Re: Project Notification
Wastewater Treatment Plant Upgrades
City of Howell

HRC Job No. 20190125

Dear Mr. Coddington:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on planning or local development plans in the area.

We are requesting information regarding the impacts of the above referenced proposed project upon any planning or local development plans in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon any planning or local developments. We are requesting a review to confirm that the above referenced project will not cause an impact to any planning or local development plans.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Farmland Preservation Program
USDA Natural Resources Conservation Service
3001 Coolidge Road, Suite 250
East Lansing, MI 48823-6362

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Sir or Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on prime and unique farmland in the vicinity of the project.

We are requesting information regarding the impacts of the above referenced proposed project upon the Farmland Protection Policy Act regulations. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no conversions of farmland to nonagricultural uses are expected. Please see attached zoning map which shows a lack of existing significant farmlands in the project area and reveals no agricultural zones within the project. We are requesting a review to confirm that the above referenced project will not cause an impact to any significant farmland or agricultural lands in the project vicinity.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map
County Zoning Map

pc:  MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
February 20, 2019

Livingston County Health Department
2300 E Grand River Ave, Ste 102
Howell, MI 48843

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

HRC Job No. 20190125

Dear Sir/Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts to on-site septic systems in the vicinity of the project.

We are requesting information regarding the acceptability of the proposed action as it relates to on-site septic systems. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon any on-site septic systems. We are requesting a review to confirm that the above referenced project will not cause an impact to any on-site septic systems.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.
If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Michigan Natural Features Inventory
P.O. Box 30444
Lansing, MI 48909-7944

Re: Protected Plants and Animals Review
Wastewater Treatment Plant Upgrades
City of Howell, Michigan

HRC Job No. 20190125

Dear Endangered Species Specialist:

The City of Howell, Michigan is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on protected plants and animals in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon protected plants and animals. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

On behalf of the City of Howell, we have completed the U.S. Fish and Wildlife Service streamlined review process which indicates this proposed project would have “no effect” on any endangered species in the project vicinity, please see attached documentation. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any protected plants and animals in the project vicinity.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.
If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments:
Project Location Map
WWTP Service Area Map
Documentation of review process

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Michigan Department of Environmental Quality
Water Resources Division
Lansing District Office
PO Box 30242
Lansing, MI 48909

Attn: Ms. Christe Alwin

Re: Regional Environmental Planning Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Ms. Alwin:

The City of Howell, Michigan is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on land-water interfaces, including Inland Lakes and Streams, Floodplains, Wetlands, Great Lakes Shorelands, Navigable Waters and Army Corps of Engineers (ACE) Regulated Activities.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon the previously detailed land-water interfaces in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

We have identified that this reconstruction should have no impact on any of the land-water interfaces listed above, due to the location of the project area. Please see attached figures for concurrence with this determination.
All upgrades being completed are within the WWTP facility; therefore, no drains or rivers should be impacted by the above referenced project since the project occurs within facility boundaries and does not come in contact with the nearby Marion and Genoa Drain. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any Inland Lakes and Streams.

On behalf of the City of Howell, we have identified that the water treatment plant is within floodplain limits based on the FEMA Floodplain Maps. Attached is a figure of the exact location. However, the isolated improvement locations are planned to not occur near the floodplains so as to not impact the floodplains. However, if construction must be located within the 100-year floodplain, mitigation measures and soil erosion efforts will be undertaken to protect the floodplains influenced by the project, including but not limited to silt fences, turbidity curtains, stone check dams, gravel access drives, rip-rap, etc. Additionally, any excavations will be filled with appropriate backfill materials, compacted and restored to existing grade. Since the majority of the work will be completed within existing structures, no impacts to any existing floodplain areas are expected. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any floodplains in the project vicinity.

The solids dewatering building is the only structure within wetland boundaries throughout the entire project. However, since the majority of the work will be within existing structures in the WWTP, no impacts to any existing wetland areas are expected. Attached is a map of the known wetlands in the project area. However, if project work is required within an existing wetland, necessary mitigation measures will be undertaken to protect the wetlands influenced by the project. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any wetlands in the project vicinity.

Since the proposed project involves improvements to existing facilities that are not located along a shoreline or within navigable waters of the United States, no impacts are expected from the proposed project upon Great Lakes Shorelands, Navigable Waters or ACE Regulated Activities. On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any Great Lakes Shorelands, Navigable Waters or ACE Regulated Activities.

If not already obtained, the appropriate joint permit applications will be completed and the necessary permits obtained prior to any construction activities in this project area.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.
If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments:
Project Location Map
WWTP Service Area
FEMA Floodplain Project Area Map
Wetlands Project Area Map

pc: MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
February 20, 2019

Marion Township
2877 W Coon Lake Road
Marion, MI 48843

Attn: Mr. Bob Hanvey, Township Supervisor

Re: Project Notification
Wastewater Treatment Plant Upgrades
City of Howell

HRC Job No. 20190125

Dear Mr. Hanvey:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on planning or local development plans in the area.

We are requesting information regarding the impacts of the above referenced proposed project upon any planning or local development plans in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon any planning or local developments. We are requesting a review to confirm that the above referenced project will not cause an impact to any planning or local development plans.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

Michigan Department of Environmental Quality
Lansing District Office
Remediation and Redevelopment Division
PO Box 30242
Lansing, MI 48909

Attn: Mr. Dennis Eagle

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Mr. Eagle:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. Project Plan requires a review to determine any potential impacts to contaminated sites in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon contaminated sites based on Part 201 and Part 213 of Michigan’s Natural Resources and Environmental Protection Act (NREPA). The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon any NREPA regulations. We are requesting a review to confirm that the above referenced project will not cause an impact to Part 201 or Part 213 of the NREPA.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines. If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
February 20, 2019

Michigan Department of Environmental Quality
Office of Waste Management and Radiological Protection Division
P.O. Box 30242
Lansing, MI 48909

Re: Impact Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Sir or Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts to the disposal of waste materials in accordance with Michigan’s Natural Resources and Environmental Protection Act (NREPA) as a result of the project.

On behalf of the City of Howell, we are requesting information regarding the potential impacts of the above referenced project based on Part 111, Part 115 and Part 121 of Michigan’s Natural Resources and Environmental Protection Act (NREPA) and the Hazardous Materials Transportation Act. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project involves replacement of existing facilities. No removal or disposal of building materials which contain lead, mercury, PCBs, or similar contaminants is expected. There may be existing facilities that were constructed during a period when lead paint was being used. However, in any case contaminants are discovered on the premises during construction, precaution and proper disposal will be implemented to follow regulations. We are requesting a review to confirm that the above referenced project will not impact Part 111, Part 115, or Part 121 of the NREPA.
Additionally, since all replacements and pipe cleaning will be performed on the water system throughout the City, liquid industrial waste (LIW) is not an anticipated byproduct of the project. Therefore, knowledge of proper transportation and disposal requirements for LIW is not expected for this project.

We request, on behalf of the City of Howell, your explanation and concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

pc: MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
February 20, 2019

Natural River Administration
DNR Fisheries Division
PO Box 30446
Lansing, MI 48909-7946

Re: Wild and Scenic Rivers Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Sir/Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on state or federally-designated wild, scenic, or natural rivers or tributaries in the vicinity of the project.

We are requesting information regarding the impacts of the above referenced proposed project upon protected state or federally-designated wild, scenic, or natural rivers or tributaries. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. According to the Nationwide Rivers Inventory on the National Park Service Website, the Huron River watershed runs through Livingston County but has no impact on the City of Howell. The City of Howell also doesn’t contain any rivers that are considered a state-designated river segments. Please see attached documentation of the Nationwide Rivers Inventory and the National Wild Fish Healthy Survey Database Map for more information. In conclusion, it does not appear that the project will interface with any impact on local rivers.
We are requesting a review to confirm that the above referenced project will not cause an impact to any state or federally designated wild, scenic, or natural rivers or tributaries.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map
National River Inventory Documentation
Wild Fish Healthy Survey Database Map

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

USDA Forest Service
1400 Independence Ave, SW
Washington, DC 20250-1111

Re: Federal Wild and Scenic Rivers Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Sir/Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on state or federally-designated wild, scenic, or natural rivers or tributaries in the vicinity of the project. Michigan’s Department of Natural Resources (DNR), Natural Rivers Program reviewed the proposed project and determined that “the project area is not within any state designated Natural River zoning district [and therefore] a permit is NOT required under Part 305, Natural Rivers, to complete the proposed activities.” The DNR response also referred us to the United States Forest Service (USFS) to determine the impacts of the proposed project on federally-designated wild and scenic rivers.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon protected federally-designated wild, scenic, or natural rivers or tributaries. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. According to the Nationwide Rivers Inventory on the National Park Service Website, no rivers run through the project area in Howell. According to the Nation Wild Fish Health Survey Database, the Marion and...
Genoa Drain run through the City of Howell but will also have no encounter with the project area. The Drain is located South of the project Area. Please see attached map of the Drain and documentation of the Nationwide Rivers Inventory and the National Wild Fish Health Survey Map for more information. In conclusion, neither the Marion and Genoa Drain nor local rivers should be impacted by the above referenced project.

On behalf of the City of Howell, we are requesting a review to confirm that the above referenced project will not cause an impact to any federally designated wild, scenic, or natural rivers or tributaries.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map
National River Inventory Documentation
Wild Fish Healthy Survey Database Map
Marion and Genoa Drain Map

pc: MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
February 20, 2019

U.S Fish and Wildlife Service
East Lansing Field Office
2651 Coolidge Road
Lansing, MI 48823-6360

Re: Protected Plants and Animals Review
Wastewater Treatment Plant Upgrades
City of Howell

Dear Endangered Species Specialist:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on protected plants and animals in the vicinity of the project.

We are requesting information regarding the impacts of the above referenced proposed project upon protected plants and animals. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

The proposed project site covers mostly urban areas and will utilize existing WWTP facility to complete the upgrades required for the project. We have reviewed the U.S. Fish and Wildlife Service streamlined review process and determined that "suitable habitat may be present, and no other data indicate species or critical habitat are absent.” Therefore, we are requesting a review from the U.S. Fish and Wildlife Service to indicate if the above referenced project will cause an impact to any protected plants and animals in the project vicinity. Please see attached documentation from the Environmental Conservation Online System for more information for this review.
We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map
ECOS Endangered Species Documentation

pc: MDEQ; E. Pocan
City of Howell; S. Charles, E. Suida, M. Davis
HRC; N. Faught, A. Malczewski, File
February 20, 2019

State Historic Preservation Office
Cultural Resources Management and Planning Section
735 East Michigan Avenue
P.O. Box 30044
Lansing, MI 48909-7944

Re: Historic Review
Wastewater Treatment Plant Upgrades
City of Howell, Michigan

Dear Sir/Madam:

The City of Howell, Michigan is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on any historic properties with religious and/or cultural significance in the vicinity of the project.

On behalf of the City of Howell, we are requesting information regarding the impacts of the above referenced proposed project upon any historic properties with religious and/or cultural significance in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

Since the proposed project involves replacement of existing facilities, no impacts are expected that could cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data in the vicinity of the project. In order to comply with the Archeological and Historic Preservation Act of 1974, your office must be notified as part of the development of the Project Plan. Attached is an application for Section 106 review and all its necessary attachments to fulfill this obligation. On behalf of the City of Howell, we are requesting your determination of the potential for...
irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data that may be caused by this project.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments:
Project Location Map
WWTP Location Map with APE
Copy of Application for Section 106 Review
Photographs for Section V. of Application
USGS Quad Section Map
City of Howell Zoning Map
Register of Historic Places Map

pc: MDEQ; E. Pocan
   City of Howell; S. Charles, E. Suida, M. Davis
   HRC; N. Faught, A. Malczewski, File
February 20, 2019

Southeast Michigan Council of Governments
1001 Woodward Avenue, Suite 1400
Detroit, MI 48226-1927

Re: Regional Environmental Planning Review
Wastewater Treatment Plant Upgrades
City of Howell

HRC Job No. 20190125

Dear Sir/Madam:

The City of Howell is submitting a Project Plan to the Michigan Department of Environmental Quality (MDEQ) for acceptance into the State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (SWQIF) Loan Program. The Project Plan requires a review to determine any potential impacts on any local development plans, area wide waste treatment management plans and/or regional water quality management plans.

We are requesting information regarding the impacts of the above referenced proposed project upon any local development plans, area wide waste treatment management plans and/or regional water quality management plans in the vicinity of the project. The project construction at the Wastewater Treatment Plant (WWTP) will involve the following:

- Improvements of the existing primary tanks and second clarifiers.
- Improvements of the aeration basins with the addition of one new aeration basin and a new blower building.
- Expansion of the UV disinfection building and the headworks building.
- Solids dewatering improvements including construction of a new solids dewatering building.
- General improvements to the plant facilities.

The project area is the Howell WWTP located at 1191 South Michigan Avenue in Section 1 of Livingston County, T2N, R4E. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. In order to increase capacity of the plant and keep the structural integrity of the facility, additional upgrades and improvements are being proposed. The City’s WWTP treats the wastewater discharges from the entire City of Howell as well as portions of Marion Township. Please see attached for sanitary service area and the study area for the WWTP improvements project.

All population figures and projections referenced in the project plan will be collected from the Southeast Michigan Council of Governments (SEMCOG) Community Profiles, which can be found at the following web address:

We request, on behalf of the City of Howell, notification if an alternative source for the population data is recommended.
The proposed project site will be utilizing the existing Howell WWTP to complete the improvements and upgrades required for the project. Since the proposed project involves improvements to existing facilities, no impacts are expected from the proposed project upon local development plans, area wide waste treatment management plans and/or regional water quality management plans. We are requesting a review to confirm that the above referenced project will not cause an impact to any local development plans, area wide waste treatment management plans and/or regional water quality management plans.

We request, on behalf of the City of Howell, your concurrence with this determination. We appreciate your review and would be grateful for a response by Friday, April 19, 2019 so that we may meet program deadlines.

Additionally, a copy of the Project Plan Draft will be sent to your office upon completion for your review and approval.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Dan Royal, P.E.

Attachments
Project Location Map
WWTP Service Area Map

cp: MDEQ; E. Pocan
    City of Howell; S. Charles, E. Suida, M. Davis
    HRC; N. Faught, A. Malczewski, File
CITY OF HOWELL
WASTEWATER TREATMENT PLANT
UPGRADES

FEMA Floodplains Map

LEGEND
- Project Area
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway

WITHIN FLOODPLAIN LIMITS

HRC Job #: 20190125
Date: February 2019
Section 7 Consultation Technical Assistance
Step-by-Step Instructions - Step 1

Step 1. Based on your project type (listed below), either contact the appropriate Ecological Services Field Office or proceed to Step 2:

- For wind energy projects, contact the Ecological Services Field Office located in the state where the project would occur for assistance.
- For projects installing towers that use guy wires or are over 200 feet in height, contact the Ecological Services Field Office located in the state where the project would occur for assistance.
- For all other projects, continue with Step 2.

Previous - Next (Step 2)
Step 2. Determine whether a listed or proposed species or designated or proposed critical habitat may be present within the action area.

A. Check the species list to determine whether any species or critical habitat may be present in the county(ies) of the proposed project.
   • If no species or critical habitat is listed, conclude "no species present" and document your finding. No further consultation required.
   • If any species or critical habitat is listed, print the species list and continue to B.

B. If a listed/proposed species or critical habitat is in the county where your project is located and your project is any of the following:
   • within a developed area,
   • a HUD project,
   • a pipeline project,
   • a buried utilities project,
   • a telecommunication project, or
   • a request for a Conditional Letter of Map Revision (CLOMR) from FEMA,
   then follow this link for instructions specific to those types of projects.

   If your project type is not listed above, continue to C.

C. Go to the pertinent species information pages, define your action area, and cross-reference the species information with your knowledge of the project site.
   ◦ If suitable habitat is not present in the action area, conclude "species and critical habitat not present" and document your finding. No further consultation is required.
   ◦ If suitable habitat is present, but data (e.g., surveys) indicate species and critical habitat are absent from the action area, conclude "species and critical habitat not present" and document your finding. No further consultation required.
   ◦ If suitable habitat is present, and no other data indicate species or critical habitat are absent, conclude "species or critical habitat may be present" and proceed to Step 3.
   ◦ If suitable habitat is present, and no other data indicate species or critical habitat are absent, you may conduct a survey to determine whether listed species or critical habitat are present. Please contact the Ecological Services Field Office located in the state where the project would occur for more information.
S7 Consultation Technical Assistance
Decision Process for "No Effect" Determinations

Certain projects nearly always warrant a "No Effect" determination. This website is intended to assist project proponents in determining whether their project qualifies as one of these types of projects, and if so, to provide a streamlined mechanism for documenting their "No Effect" finding. If your project does not meet the criteria below (and associated pages), your action requires further review. To assist with this more detailed review, you will be linked back to Step 2 of our S7 Technical Assistance website.

**Step 3**. Click on the type of project to continue with the "no effect" decision process:
- [HUD Project](#)
- [Pipeline or Buried Utilities Project](#)
- [Telecommunication Project](#)
- [Conditional Letter of Map Revision (CLOMR) request to FEMA](#)
- [Project within a Developed Area (project type is not one of the 4 listed above). A developed area is already paved or supports structures and the only vegetation is limited to frequently mowed grass or conventional landscaping.](#)

* In **Step 2** you determined that listed species or critical habitat may be present in the county(ies) of the proposed project.

Back to S7 Consultation Technical Assistance
Back to S7 Consultation page
**S7 Consultation Technical Assistance**
**Decision Process for "No Effect" Determinations**

**Pipeline or Buried Utilities Projects - Step 4**

*Step 4.* Is your project located entirely within existing, fenced, graveled/mowed, and maintained facility yards?

- **Yes** - Click here to continue with the "no effect" determination process.
- **No** - Your project requires further review. Click here to return to Step 2 of the S7 Technical Assistance web pages.
Endangered Species

S7 Consultation Technical Assistance
Decision Process for "No Effect" Determinations

Pipeline or Buried Utilities Projects - Step 5

**Step 5.** Is the Karner blue butterfly on the county list?

Yes - Your project requires further review. [Click here to return to Step 2 of the S7 Technical Assistance web pages.]

No - [Click here to continue with the "no effect" determination process.]
S7 Consultation Technical Assistance
Decision Process for "No Effect" Determinations

Pipeline or Buried Utilities Projects - Step 6

Step 6. "No Effect" Determination and Documentation

A "No Effect" determination is appropriate for your project. As it is located entirely within existing, fenced, graveled/mowed, and maintained facility yards and the Karner blue butterfly is not on the county list, your project will not affect suitable habitat for any listed species. Therefore, no listed species or designated critical habitat is anticipated to be directly or indirectly affected by this action.

To document your section 7 review and "no effect" determination, we recommend that you print this page (go to File<Print Preview), fill-in the project name and date, attach your species list, and file in your administrative record.

Pipeline Project Name: CITY OF HOWELL: Water Main Replacement Project
Date: February 13, 2019

Back
Home - "No Effect" Determination Process
<table>
<thead>
<tr>
<th>County</th>
<th>Species</th>
<th>Status</th>
<th>Habitat Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lenawee</strong></td>
<td><strong>Pitcher’s thistle</strong> <em>(Cirsium pitcheri)</em></td>
<td>Threatened</td>
<td>Stabilized dunes and blowout areas</td>
</tr>
<tr>
<td></td>
<td><strong>Whooping cane</strong> <em>(Grus americanus)</em></td>
<td><strong>Non-essential</strong></td>
<td>Open wetlands and lakeshores</td>
</tr>
<tr>
<td></td>
<td><strong>Indiana bat</strong> <em>(Myotis sodalis)</em></td>
<td>Endangered</td>
<td>Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.</td>
</tr>
<tr>
<td></td>
<td><strong>Northern long-eared bat</strong> <em>(Myotis septentrionalis)</em></td>
<td>Threatened</td>
<td>Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.</td>
</tr>
<tr>
<td></td>
<td><strong>Eastern massasauga</strong> <em>(Sistrurus catenatus)</em></td>
<td>Threatened</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Poweshiek skipperling</strong> <em>(Oarisma poweshiek)</em></td>
<td>Endangered</td>
<td>Wet prairie and fens</td>
</tr>
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<td><strong>Snuffbox</strong> <em>(Epioblasma triquetra)</em></td>
<td>Endangered</td>
<td>Small to medium-sized creeks and some larger rivers, in areas with a swift current</td>
</tr>
<tr>
<td></td>
<td><strong>Eastern prairie fringed orchid</strong> <em>(Platanthera leucophaea)</em></td>
<td>Threatened</td>
<td>Mesic to wet prairies and meadows</td>
</tr>
</tbody>
</table>
The following report contains species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC application.

### County: Livingston, Michigan

Need to contact a FWS field office about a species? Follow this link to find your local FWS Office.

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Population</th>
<th>Status</th>
<th>Lead Office</th>
<th>Recovery Plan</th>
<th>Recovery Plan Action Status</th>
<th>Recovery Plan Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clams</td>
<td>Snuffbox mussel (<em>Epioblasma trigona</em>)</td>
<td>Wherever found</td>
<td>Endangered</td>
<td>Ohio Ecological Services Field Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowering Plants</td>
<td>Eastern prairie fringed orchid (<em>Prairietophaea leucophaea</em>)</td>
<td>Wherever found</td>
<td>Threatened</td>
<td>Chicago Ecological Service Field Office</td>
<td>Eastern Prairie Fringed Orchid</td>
<td>Implementation Progress</td>
<td>Final</td>
</tr>
<tr>
<td>Insects</td>
<td>Poweshiek skipperling (<em>Oreomegacris poweshiek</em>)</td>
<td>Wherever found</td>
<td>Endangered</td>
<td>Minnesota-Wisconsin Ecological Services Field Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammals</td>
<td>Indiana bat (<em>Myotis sodalis</em>)</td>
<td>Wherever found</td>
<td>Endangered</td>
<td>Indiana Ecological Services Field Office</td>
<td>Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision</td>
<td>Implementation Progress</td>
<td>Draft Revision 1</td>
</tr>
<tr>
<td>Mammals</td>
<td>Northern Long-Eared Bat (<em>Myotis septentrionalis</em>)</td>
<td>Wherever found</td>
<td>Threatened</td>
<td>Minnesota-Wisconsin Ecological Services Field Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reptiles</td>
<td>Eastern Massasauga (rattlesnake) (<em>Sistrurus catenatus</em>)</td>
<td>Wherever found</td>
<td>Threatened</td>
<td>Chicago Ecological Service Field Office</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary:
No Historic Properties were discovered using National Park Service National Register of Historic Places, per submission of the State Historic Preservation Office Application, Section 106 Review.
Howell WWTP

Marion and Genoa Drain

Address: 1191 S Michigan Ave

I-96
S Michigan Ave

CITY OF HOWELL
WASTEWATER TREATMENT PLANT UPGRADES

LEGEND

DO Control & Blower Upgrades

Aeration Addition

Headworks Bldg. Upgrades

Solids Dewatering Upgrades

Biological Nutrient Rem. Addition

Chemical Feed Upgrades

Clarifier Rehab

UV Chamber Addition

Sludge Pump Upgrades

SCADA & Lab/ Admin. Building Upgrades

Headworks Bldg. Upgrades

Solids Dewatering Upgrades

UV Chamber Addition

Howell WWTP

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Address: 1191 S Michigan Ave

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SCADA & Lab/ Admin. Building Upgrades

Headworks Bldg. Upgrades

Solids Dewatering Upgrades

UV Chamber Addition
Project Location Map

LEGEND

- Project Area
- Area of Potential Effect

CITY OF HOWELL
WASTEWATER TREATMENT PLANT UPGRADES

WWTP Project Location: Area of Potential Effect

Marion and Genoa Drain

I-96

S Michigan Ave

CITY OF HOWELL
WASTEWATER TREATMENT PLANT UPGRADES

Date: Feb 2019

HRC Job #: 20190125

Howell WWTP Address: 1191 S Michigan Ave

Area of Potential Effect (APE): WWTP Facility

HRC Job #: 20190125
LOCATION MAP
Howell Waste Water Treatment Plant Improvements
PROJECT PLAN
Submit one copy for each project for which review is requested. This application is required. Please type. Applications must be complete for review to begin. Incomplete applications will be sent back to the applicant without comment. Send only the information and attachments requested on this application. Materials submitted for review cannot be returned. Due to limited resources we are unable to accept this application electronically.

I. GENERAL INFORMATION

☒ THIS IS A NEW SUBMITTAL ☐ THIS IS MORE INFORMATION RELATING TO ER#

a. Project Name: WASTEWATER TREATMENT PLANT UPGRADES
b. Project Address (if available): See Project Area Map for entire project location.
c. Municipal Unit: City of Howell County: Livingston County
d. Federal Agency, Contact Name and Mailing Address (If you do not know the federal agency involved in your project please contact the party requiring you to apply for Section 106 review, not the SHPO, for this information): Eric Pocan, Project Manager, Michigan Department ofEnvironmental Quality, Revolving Loan Section, Constitution Hall 525 West Allegan Street P.O. Box 30241, Lansing, MI 48909-7741, (p) (517)284-5416, pocane@michigan.gov
e. State Agency (if applicable), Contact Name and Mailing Address: Eric Pocan, Project Manager, Michigan Department of Environmental Quality, Revolving Loan Section, Constitution Hall 525 West Allegan Street P.O. Box 30241, Lansing, MI 48909-7741, (p) (517)284-5416, pocane@michigan.gov
f. Consultant or Applicant Contact Information (if applicable) including mailing address: Trevor Wagemaker, P.E., Associate, Hubbell, Roth & Clark, Inc., 555 Hulet Drive, Bloomfield Hills, MI 48303, (o) (248)454-6300, (p) (517)545-6564, twagenmaker@hrc-engr.com

II. GROUND DISTURBING ACTIVITY (INCLUDING EXCAVATION, GRADING, TREE REMOVALS, UTILITY INSTALLATION, ETC.)

DOES THIS PROJECT INVOLVE GROUND-DISTURBING ACTIVITY? ☐ YES ☑ NO (If no, proceed to section III.)

Exact project location must be submitted on a USGS Quad map (portions, photocopies of portions, and electronic USGS maps are acceptable as long as the location is clearly marked).

a. USGS Quad Map Name: Howell, Michigan
b. Township: T2N Range: R4E Section: 1
c. Description of width, length and depth of proposed ground disturbing activity: The width, length, and depth of proposed will vary from area to area. All the depths of the newly proposed buildings will be approximately 20-feet deep. The total square-footage of all proposed buildings is approximately 520,000 square-feet. However, majority of the work being completed are improvements to existing buildings above ground.
d. Previous land use and disturbances: The site location has been a WWTP since the 1930s, with many additions and improvements within the years to keep at capacity for the growing City and Township populations.
e. Current land use and conditions: The current land use is still a WWTP and is zoned as light industrial district.
f. Does the landowner know of any archaeological resources found on the property? ☐ YES ☑ NO

Please describe:

III. PROJECT WORK DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)

Note: Every project has an APE.
a. Provide a detailed written description of the project (plans, specifications, Environmental Impact Statements (EIS), Environmental Assessments (EA), etc. cannot be substituted for the written description): Upgrades at the Howell Wastewater Treatment Plant (WWTP) located at 1191 South Michigan Avenue. The facility serves the City of Howell and a portion of Marion Township. The project need is to increase capacity due to the facility serving a larger population and parts of the facility have lost their structural integrity from exceeded its useful life. The plant was originally constructed in 1936 and was modified and/or expanded in 1960, 1978 and 2001. Improvements at SCADA, the Headworks building, the solids dewatering building, the DO control and blower, the UV disinfection chamber, the chemical feed facility, and the laboratory and administrative building will be completed. WWTP additions will be conducted at the aeration tank basin, the biological nutrient removal basin, and the sludge dewatering and solids processing facility. Lastly, replacement of the RAS sludge pump and piping at the WWTP is necessary.

b. Provide a localized map indicating the location of the project; road names must be included and legible.

c. On the above-mentioned map, identify the APE.

d. Provide a written description of the APE (physical, visual, auditory, and sociocultural), the steps taken to identify the APE, and the justification for the boundaries chosen. The Areas of Potential Effects is limited to the Howell Wastewater Treatment Plant site because no new facilities are proposed outside of their properties.
IV. IDENTIFICATION OF HISTORIC PROPERTIES

a. List and date all properties 50 years of age or older located in the APE. If the property is located within a National Register eligible, listed or local district it is only necessary to identify the district: The Wastewater Treatment Plant, is older than 50 years of age. It was originally constructed 1936, with several years of renovation and upgrades since then.

b. Describe the steps taken to identify whether or not any historic properties exist in the APE and include the level of effort made to carry out such steps: Research was performed to determine the location of historical features in the area. This included using the National Register’s website to map all State and Federally-registered sites. (https://www.nps.gov/maps/full.html?mapid=7ad17cc9-b808-4ff8-a2f9-a99909164466)

c. Based on the information contained in “b”, please choose one:
   - Historic Properties Present in the APE
   - No Historic Properties Present in the APE

d. Describe the condition, previous disturbance to, and history of any historic properties located in the APE:

V. PHOTOGRAPHS

Note: All photographs must be keyed to a localized map.

a. Provide photographs of the site itself.

b. Provide photographs of all properties 50 years of age or older located in the APE (faxed or photocopied photographs are not acceptable).

VI. DETERMINATION OF EFFECT

☐ No historic properties affected based on [36 CFR § 800.4(d)(1)], please provide the basis for this determination.

☐ No Adverse Effect [36 CFR § 800.5(b)] on historic properties, explain why the criteria of adverse effect, 36 CFR Part 800.5(a)(1), were found not applicable.

☐ Adverse Effect [36 CFR § 800.5(d)(2)] on historic properties, explain why the criteria of adverse effect, [36 CFR Part 800.5(a)(1)], were found applicable.

Please print and mail completed form and required information to:
State Historic Preservation Office, Cultural Resources Management and Planning Section, 735 East Michigan Avenue, P.O. Box 30044, Lansing, MI 48909
Figure 1 - Service Area
Howell Waste Water Treatment Plant Improvements
PROJECT PLAN

SITE PHOTOS

Howell Waste Water Treatment Plant Improvements
PROJECT PLAN

Figure No. 1-6
Supplemental Research Resources for Assessing Nationwide River Inventory River Values

- Check the NRI to see what ORVs are listed and to see if notes have been made there: http://www.nps.gov/ncrc/programs/rtca/nri/index.html as a good starting point. Identify the river values for the segment of interest and with a primary focus of further research on these values.
- Look at maps and aerials on arcgis online, Delorme Atlas, Forest Service, National Park Service (NPS), Bureau of Land Management (BLM), and/or US Geological Survey for details of a stream's location, surroundings, degree of wilderness or development, and accessibility.
- For rivers flowing through public land, consult the current plan and website for the respective State, Forest, BLM, Fish and Wildlife (FWS), NPS, area. Recent plans can be found on the Internet or search for Land and Resource Management Plans by Forest, NPS, FWS, or BLM District. Some rivers on the NRI have also been found eligible/suitable by the respective land managing agency. Wild and Scenic eligibility or suitability reports are often embedded in the Draft Environmental Impact Statement accompanying the RMP, and in appendices. Some exist as separate documents, done before or after the plans were completed.
- Search the Internet for the Watershed Assessment done by local watershed groups for that particular stream.
- Search the Internet by the river name for miscellaneous information.
- NOAA Fisheries Designated Critical Habitat and Essential Fish Habitat - Maps and GIS files of critical habitat designations can be found here: http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm. Essential Fish Habitat designated under the Magnuson Stevens Act for all federally managed species can be found here using the mapper tool: http://www.habitat.noaa.gov/protection/efh/habitatmapper.html and EFH text descriptions and GIS data inventory can be found here: http://www.habitat.noaa.gov/protection/efh/newlnv/index.html.
- State Wild and Scenic River Programs. Many states have their own wild and scenic river programs and have done further research for these rivers. Check with your State to see if they have a program and if the river of interest is on this list.
- American Rivers Outstanding Rivers List

Selected resources used for similar work in the State of Oregon are listed here.

- Check the NRI to see what ORVs are listed and to see if notes have been made there: http://www.nps.gov/ncrc/programs/rtca/nri/index.html as a good starting point. Identify the river values for the segment of interest and with a primary focus of further research on these values.
• Look at maps and aerals on arcgis online, *DeLorme Atlas*, Forest Service, BLM, and/or US Geological Survey for details of a stream's location, surroundings, degree of wilderness or development, and accessibility.

• See *Field Guide to Oregon Rivers* for narrative overviews, identification of qualities, and recreational details regarding many of the NRI Rivers. This accessible guide has synthesized information regarding geology, hydrology, fish, wildlife, recreation, and conservation—a virtual ORV list—from dozens of sources.

• Consult the Western Rivers Conservancy's *Great Rivers of the West* survey, which keys 37 sources of information to many of Oregon's NRI rivers and their natural values: [http://www.westernrivers.org/about/greatrivers/](http://www.westernrivers.org/about/greatrivers/)

• For rivers flowing through public land and found eligible for Wild and Scenic consideration by the Forest Service or BLM, consult the current plan for the respective Forest or BLM area. Recent plans can be found on the Internet or search for Land and Resource Management Plans by Forest or BLM District. Wild and Scenic eligibility or suitability reports are often embedded in the Draft Environmental Impact Statement accompanying the RMP, and in appendices. Some exist as separate documents, done before or after the plans were completed.

• Search the Internet for the Watershed Assessment done by the state-sponsored Watershed Council for that particular stream (for example, "Rogue River Watershed Council, watershed assessment," and search related sites). Such assessments typically contain data about the river, its values, and its problems.

• See the 2005 *Oregon Native Fish Status Report, Volume I, Species Management Unit Summaries* for information about native fish—listed by species, not by river.


• This article is only available in paper copy, but see the *Great Rivers of the West* survey by the Western Rivers Conservancy for summary information from the Huntington paper, keyed to particular rivers.

• For fishing, see *Fishing Oregon* by Jim Juskavitch and *Oregon River Maps & Fishing Guide* by Frank Amato Publications. Many web sites also address fishing—search by the name of the stream.

• For boating details, see *Soggy Sneakers: A Paddler's Guide to Oregon Rivers* as well as *Field Guide to Oregon Rivers*. American Whitewater and the Willamette Kayak and Canoe Club also sponsor web sites with boating information. For streams with extreme boating for expert kayakers, see [http://www.oregonkayaking.net](http://www.oregonkayaking.net).
• For wildlife species present in the area—if not for the specific stream corridor—see *Atlas of Oregon Wildlife* by Csuti et al., Oregon State University Press.

• For geology of the general region of a river, see *Roadside Geology of Oregon* by David D. Alt and Donald W. Hyndman, and *Geology of Oregon*, by Elizabeth and William Orr.

• Search the Internet by the river name for miscellaneous information.

• Oregon Scenic Waterways Program  

• Northwest Power and Conservation Council  
  After extensive study, the Northwest Power and Conservation Council adopted a list of streams for special protection from new hydropower development. For more information see [http://www.nwcouncil.org/fw/protectedareas/home/](http://www.nwcouncil.org/fw/protectedareas/home/)

• Oregon Department of Environmental Quality  
  The Clean Water Act also requires the state to prepare a Biennial Water Quality Status Assessment Report (305 (b) Report), which documents water quality problems listed by stream basin. The last EPA approved report as of 2015, with 2010 data, can be seen at [http://www.deq.state.or.us/wq/assessment/assessment.htm](http://www.deq.state.or.us/wq/assessment/assessment.htm)

• Call offices of the river’s Watershed Council, the district office of the Department of Fish and Wildlife. For public land rivers, contact the National Forest Supervisor’s offices, or the Bureau of Land Management’s district offices; see Appendix 6. County Planning agencies often have background information on natural systems and on registered historic landmarks that might relate to the river. Conservation organizations often have information, especially if they’ve had a river protection campaign for the stream.
Michigan Federal Project Review System

As of July 1, 2018, the State of Michigan and SEMCOG acting on behalf of the State, no longer participate in the clearinghouse review process for federal grants.

As a local government organization engaged in promoting intergovernmental coordination, we encourage applicants for federal financial assistance to coordinate with other governments and organizations impacted by their work.

For additional information
Ed Hug
SEMCOG, Review Coordinator
Phone: (313) 324-3335
March 19, 2019

Hubbell, Roth & Clark, Inc
105 W. Grand River
Howell, MI 48843

RE: Job# 20190125

Dear Sir/Madam,

This letter is in response to the above referenced project.

At this time we do not have any information concerning the presence of any Indian Traditional Cultural Properties, Sacred Sites or other Significant Properties to the projected project area(s). This is not to say that such a site may not exist, just that this office does not have any available information of the area(s) at this time.

This office would be willing to assist if in the future or during the construction there is an inadvertent discovery of Native American human remains or burial objects. Feel free to call my office if you have any questions or requests at 989-775-4751.

We thank you for including this Tribe in your plans.

Sincerely,

Sarah Jones
Tribal Historic Preservation Officer
Ziibiwing Center of Anishinabe Culture & Lifeways
Saginaw Chippewa Indian Tribe of Michigan
March 21, 2019

NESHAP Asbestos Program
Michigan Department of Environmental Quality
Air Quality Division

Regarding HRC Job No. 201901125:

1. Improvements of the existing Waste Water Treatment Plant facility and facility components - Test any suspect materials that may be disturbed as part of these facility improvements, for asbestos. This may require, at a minimum, a limited asbestos survey (inspection) by a qualified State of Michigan accredited asbestos inspector.

If any of the materials tested contain asbestos fibers greater than 1% (using test method EPA 600/R-93/116) the material is determined to be asbestos containing per the NESHAP. Depending upon the type of material and condition ( friable or non-friable), and the amount to be disturbed (thresholds) will determine next steps with the NESHAP regulations. I have attached a document for your review,” Understanding the NESHAP”.

Based on the letter provided, I have not been able to deduce if any asbestos survey was performed, or if any samples have been collected to determine the absence of asbestos in any suspect materials that may be disturbed during stated improvements. If they have, and there is no asbestos, I recommend as the project moves along, that a qualified individual with asbestos awareness be available to make periodic observations of the renovations to verify that no additional materials need to be sampled.

Additionally, The Michigan Department of Environmental Quality – Air Quality Division, will not confirm or prove a project, but will offer recommendations, suggestions and guidance, so that the stated project can adhere to the NESHAP regulations through its entirety.

Thanks,

Craig Dechy
NESHAP Inspector
517-749-2891
Dear Building Official(s):

The Michigan Department of Environmental Quality (MDEQ), Air Quality Division, Asbestos Program is providing this letter to building officials and municipalities to educate responsible persons in the federal regulations for renovations and demolitions.

The MDEQ has determined that a number of contractors and owners in Michigan have been involved in renovation and demolition projects that have not met the requirements of Title 40 of the Code of Federal Regulations, Part 61, Subpart M (National Emissions Standard for Hazardous Air Pollutants - NESHAP) and Rule 942 of Part 55, Air Pollution Control of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Note, before any renovation or demolition work begins on a regulated facility (a regulated facility is any commercial, industrial, or institutional building, and may include single family residential dwellings that are being demolished as part of a public or private project (an intentional burn of a structure for fire training purposes is considered a demolition and all asbestos containing materials must be removed prior to the training burn and notification submitted)), a thorough inspection of the facility must be performed to determine if asbestos containing materials are present. The thorough inspection must be performed by an accredited asbestos inspector. The results of this inspection will help in determining your next steps.

Asbestos removal projects (Planned Renovation) of any regulated facility that meet or exceed the 160 sq./ft., 260 ln./ft. or 35 cu./ft. (NESHAP) thresholds or 10 ln./ft., 15 sq./ft. (MIOSHA) thresholds, must be performed by a licensed asbestos abatement contractor and must have the proper 10-working day (NESHAP) and/or 10-calendar day (MIOSHA) notification(s) submitted to the appropriate agency or agencies, prior to any abatement work (planned renovation) commencing.

Demolition of any regulated facility requires a 10-working day notification to the MDEQ prior to demolition activities, whether or not asbestos is present.

For more information regarding the federal NESHAP regulations and how to submit the Notification of Intent to Renovate/Demolish form, please go to www.michigan.gov/air then select the asbestos/NESHAP tab at the bottom of the page. Once you tab onto this page you will find information regarding the NESHAP regulations and the Asbestos Notification System (ANS). The ANS is the system that contractors or owners will use to register and to fill out the appropriate notifications for their particular project. Please follow the online ANS directions on how to register an account and fill-out/submit the notification form.

Thank you for your interest in protecting the health and safety of residents in your community.

If you have any questions, please contact me for additional information.

Sincerely,

Craig Dechy
Environmental Quality Analyst
Air Quality Division
517-749-2891
Understanding the Asbestos NESHAP

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (U.S. EPA) to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. The U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP) under the authority of Section 112 of the CAA, and asbestos was one of the first hazardous air pollutants regulated. The Asbestos NESHAP was promulgated on April 6, 1973, and it was revised in 1990.

Asbestos was widely used in buildings for fireproofing, thermal and acoustical insulation, condensation control, and decoration. It was sprayed on beams and ceilings, used to cover piping and boilers, and sprayed onto ducts. Asbestos was used extensively until the 1970s when U.S. EPA banned certain applications.

The Asbestos NESHAP protects the public by minimizing the release of asbestos fibers during renovation and demolition activities. Accordingly, this regulation specifies work practices to be followed for demolitions and renovations of all structures, installations, and buildings.Privately owned residential dwellings or apartments that are demolished for urban renewal or as part of a public or commercial project would be covered under the NESHAP regulations. Residential dwellings containing four units or less under private control or ownership would not be subject to the NESHAP. In addition, the Asbestos NESHAP contains notification requirements for the owner of the building and/or the contractor. Both the owner and contractor(s) are liable for compliance with the Asbestos NESHAP requirements.

The purpose of this publication is to describe who is subject to the Asbestos NESHAP and to explain the requirements of this standard. A brief glossary is provided at the end of this document to assist in understanding some of the terms (appearing in **boldface** text) discussed in this fact sheet. This fact sheet is to be used only as a guide and is not a substitute for reading and understanding the final rule which is found in Title 40, Part 61, Subpart M of the Code of Federal Regulations (40 CFR Part 61). For a copy of the final rule, see the "Where to Get Additional Information” section on page 10.

**WHAT AGENCIES REGULATE ASBESTOS?**

There are three state agencies in Michigan that regulate asbestos: the Michigan Department of Environmental Quality (DEQ), the Michigan Department of Licensing and Regulatory Affairs (DLARA) and the Michigan Department of State Police (MSP). The DEQ is concerned about the release of asbestos fibers to the outer air and proper waste disposal, while DLARA focuses on worker protection during renovation and demolition activities, contractor licensing, and worker training.

- **Michigan Department of Environmental Quality (DEQ)**

  The U.S. EPA has delegated the Air Quality Division (AQD) of the DEQ with the authority to enforce the Asbestos NESHAP in Michigan. In addition, the state of Michigan has adopted the federal regulations into the Michigan Administrative Code (MAC), 1995 AACS R 336.1942 (Rule 942), which is in effect as of November 30, 2000 and revised September 11, 2008. A violation of the federal asbestos regulations is also a violation of the MAC. The AQD administers the asbestos NESHAP for the entire state: reviewing the notifications, inspecting demolitions and asbestos removals, and initiation enforcement actions when violations occur. Approximately 7000
Understanding the Asbestos NESHAP

notifications are received each year by this agency and are reviewed for completeness and timeliness. Inspections are made based on contractor history, areas of the state, and type of project. Inspections are also performed in response to complaints. The U.S. EPA can and does conduct independent inspections of NESHAP projects.

The Waste Management Division of the DEQ regulates disposal of asbestos.

- **Michigan Department of Licensing and Regulatory Affairs (DLARA)**
  The Occupational Health Division of DLARA implements the Asbestos Abatement Contractors Licensing Act, the Michigan Occupational Safety and Health Act (MIOSHA), the Asbestos Workers Accreditation Act, and the MIOSHA Asbestos Construction Standard. Some of the requirements in these acts and standards include work practices, training, and project notification. DLARA also licenses those who train asbestos removal workers about the regulations. For more information about the DLARA Asbestos Program, see the “Where to Get Additional Information” section on page 10.

- **Michigan Department of State Police (MSP)**
  The Hazardous Materials and Investigations Unit of the MSP is responsible for enforcing the U.S. Department of Transportation's (U.S.DOT) regulations regarding shipping and transporting of packaged materials by highway. Asbestos, transported for disposal as a hazardous material, is regulated under 49 CFR Parts 100-185. For more information, refer to the “Where to Get Additional Information” section on page 10.

**ASBESTOS NESHAP APPLICABILITY**

To determine applicability to the Asbestos NESHAP, three questions must be answered:

- Is the facility regulated by the NESHAP?
- Is the activity a demolition or a renovation?
- Does the amount of regulated asbestos-containing material (RACM) meet or exceed the thresholds?

**Is the Facility Regulated by the Asbestos NESHAP?**

A facility subject to the NESHAP can be any institutional, commercial, or industrial structure, installation, or building. Examples include, but are not limited to:

- Bridges;
- Tunnels;
- Docked ships;
- Military installations, including dependent housing;
- Chemical/power plant installations;
- Indoor shopping malls;
- School buildings in a school district;
- Post office buildings;
- Apartment buildings containing five or more dwelling units;
- Certain condominiums, cooperatives, and lofts;
- Dwellings which are part of an urban renewal project, highway construction, shopping mall, or other private development (which are not privately owned and held);
Understanding the Asbestos NESHAP

- Groups of residential buildings under control of the same owner/operator and part of the same renovation/demolition project (even if the buildings are not proximate to each other);
- Amusement parks or state fairgrounds;
- Jails or prisons;
- Nursing homes or homes for disabled persons;
- Parking garages;
- Farms;
- Churches, monasteries, convents, or rectories; and
- Residential dwellings intentionally burned for fire training, etc.

Some examples of facilities not subject to the Asbestos NESHAP include:

- Privately-owned homes, not demolished for urban renewal or as part of a public or commercial project;
- Privately-owned, multi-dwelling units with four or less dwelling units; and
- Mobile sources.

Is the Activity a Demolition or a Renovation?

A demolition is the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility. A renovation is altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component (excluding operations in which load-supporting structural members are wrecked or taken out). Table 1 lists some examples of demolition and renovation activities.

Table 1. Examples of Demolition and Renovation Activities

<table>
<thead>
<tr>
<th>Demolition</th>
<th>Renovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The wrecking or taking out of any load-supporting structural member or the intentional burning of any facility.</td>
<td>Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component, but excluding operations in which load-supporting structural members are wrecked or taken out.</td>
</tr>
<tr>
<td>• Wrecking or tearing down a portion of a structure that is load-supporting; or</td>
<td>• Scraping asbestos insulation off a ceiling;</td>
</tr>
<tr>
<td>• Wrecking or taking out building beams or load-supporting walls;</td>
<td>• Removing a boiler covered with friable asbestos from a building;</td>
</tr>
<tr>
<td>• Removing the structural steel supports of outdoor pipe racks;</td>
<td>• Removing pipe covered with friable asbestos from a pipe rack;</td>
</tr>
<tr>
<td>• Intentional burning, including intentional burning for fire training</td>
<td>• Gross removal of boiler asbestos insulation;</td>
</tr>
<tr>
<td>(this includes privately-owned, single-family dwellings);</td>
<td>• Glove bag stripping of asbestos pipe wrap;</td>
</tr>
<tr>
<td>• Renovating or remodeling a facility that includes wrecking or removing a</td>
<td>• Drilling through asbestos ceiling plaster to build a dropped ceiling;</td>
</tr>
<tr>
<td>load-supporting wall or component, etc.</td>
<td>• Removing soundproofing, ceiling tiles, or plaster containing asbestos;</td>
</tr>
<tr>
<td></td>
<td>• Removing vinyl asbestos floor tile or any asbestos-containing material that is normally nonfriable that is in poor condition (cracking, peeling, or showing other signs of deterioration). For example, it can be crumbled or pulverized by hand pressure; or</td>
</tr>
<tr>
<td></td>
<td>• Activities that will render nonfriable material friable, such as grinding, sanding, crumbling, pulverizing, sawing, or other abrasive action, etc.</td>
</tr>
</tbody>
</table>
**When Must an Asbestos Inspection and Detection Survey Be Completed?**
The Asbestos NESHAP requires that a thorough inspection be conducted prior to all renovations and all demolitions. A thorough inspection for asbestos is required no matter the age of the facility because all uses of asbestos are not banned. The inspection must be completed before the commencement of a subject renovation and/or demolition activity. The contractor performing the inspection must be listed on the joint DEQ/DLARA “Notification of Intent to Renovate/Demolish” form in section 14. Inspections utilizing just visual examination are not acceptable unless the building is made of only wood, glass or steel materials. Both contractors and their legal representatives, as well as owners and their legal representatives, are fully responsible for fulfilling the Asbestos NESHAP inspection requirements.

Although the Asbestos NESHAP does not specifically state that the person who does the inspection and conducts the site survey be trained in recognizing potential asbestos-containing material, the prerequisite of a trained survey inspector still may be a requirement under the Occupational Safety and Health Administration’s (OSHA) Asbestos Standards. The federal OSHA Asbestos Standard for Construction (29 CFR 1926.1101) and the OSHA Asbestos Standard for General Industry (29 CFR 1910.1001) are administered by the DLARA’s, MIOSHA program. Each standard requires that all public and commercial buildings constructed prior to 1981, where employees may enter, work, or contact building materials, must be inspected for asbestos-containing materials (ACM). This includes any houses, garages, apartments, etc. where employees work and may disturb asbestos. Additionally, all such vacant buildings scheduled for renovation or demolition must have an asbestos building survey completed prior to the start of the work.

Inspections under the OSHA standards must also adhere to the AHERA inspection protocol and be performed by a Michigan-accredited asbestos building inspector or a Certified Industrial Hygienist (CIH). The building survey must document the presence, location, and quantity of all “suspect” ACM. Laboratory analysis information should be a part of the building survey document and be kept by the building owner.

Once an asbestos building survey has confirmed or assumed the presence of ACM, all employees who work around, but do not disturb the ACM (i.e., persons conducting janitorial, building maintenance, and/or housekeeping activities) must receive, at a minimum, asbestos awareness training. Additionally, employees who may disturb ACM (i.e., persons working with any of the mechanical systems that have ACM) are required to have additional asbestos-related training. See the section entitled, “Where to Get Additional Information,” for further assistance with the standard’s inspection, licensing, and training requirements.

**Does the Amount of RACM Meet or Exceed the Thresholds?**
Thoroughly inspect the facility for asbestos, including Category I and Category II nonfriable asbestos-containing material (ACM). Determine if the combined amount of RACM is at or above the thresholds listed in Table 2. RACM includes:

- Friable asbestos material;
- Category I nonfriable ACM that has become friable;
- Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material during demolition or renovation.

To determine whether planned renovation operations involving individual nonscheduled renovation operations are subject, predict the combined additive amount of RACM to be removed during a calendar year of January 1 through December 31.
Table 2. Applicability Thresholds

<table>
<thead>
<tr>
<th>Location of Asbestos</th>
<th>Threshold Level of RACM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipes</td>
<td>80 linear meters (260 linear feet)</td>
</tr>
<tr>
<td>Other facility components</td>
<td>15 square meters (160 square feet)</td>
</tr>
<tr>
<td>Asbestos that is already off facility components where the length or area could not</td>
<td>1 cubic meter (35 cubic feet)</td>
</tr>
<tr>
<td>be measured previously.</td>
<td></td>
</tr>
</tbody>
</table>

Any demolition or renovation activity that meets or exceeds the applicability thresholds in Table 2 is subject to all the renovation/demolition requirements of the NESHAP. Demolition activities below the thresholds (even for facilities with no asbestos) are subject to the notification requirement. Figure 1 summarizes the process for determining applicability to the Asbestos NESHAP.

Figure 1. Flowchart for Determining Applicability to the Asbestos NESHAP
Understanding the Asbestos NESHAP

Examples of operations that are neither demolitions nor subject renovations and, therefore, not subject to the Asbestos NESHAP include:

- Renovation below the threshold levels unless it is above the threshold levels cumulatively in a calendar year (notification may be required by DLARA);
- Removal of nonfriable asbestos-containing material, as long as the material is not in poor condition and it remains nonfriable during all phases of removal, handling, and waste disposal;
- Asbestos encapsulation (notification may be required by DLARA); and
- Removal of interior, non-load supporting walls that are not associated with any regulated asbestos-containing material.

**ASBESTOS NESHAP ADVANCE NOTIFICATION REQUIREMENT**

An important aspect of the NESHAP is the advance notification requirement, which enables the AQD to ensure that all precautions are being taken to minimize asbestos emissions. Building owners or contractors must submit notifications for all subject demolitions and for subject renovations where the amount of RACM meets or exceeds the thresholds. Notifications should be entered online using our online Asbestos Notification System (ANS) found at [www.michigan.gov/air](http://www.michigan.gov/air) under “Asbestos NESHAP Program” at least ten working days prior to beginning regulated demolition or renovation activities. For planned renovation operations involving individual, nonscheduled operations, the notification is required at least ten working days before the beginning of the calendar year for which notice is being given. Notifications must be entered as early as possible, but not later than the following work day for ordered demolitions and for emergency renovation operations. An emergency renovation operation means that the renovation operation was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden.

The notification must include the following information:

- Date of notification (or date of revision);
- Type of notification (original, revised, canceled, annual);
- Type of operation (demolition or renovation);
- Scheduled starting and completion dates of asbestos removal work;
- Scheduled starting and completion dates of demolition or renovation;
- Abatement contractor information;
- Demolition contractor information (if project is a demolition);
- Facility owner information;
- Facility description including location;
- Disposal site information;
- Waste transporter information;
- Ordered demolition information (if project is an ordered demolition);
Understanding the Asbestos NESHAP

✓ Estimate of amount of RACM to be removed and amount of Category I and Category II nonfriable ACM that will not be removed before demolition;

✓ Project description, including surfaces asbestos will be removed from, removal method, and method of demolition;

✓ Engineering controls description;

✓ Procedure if unexpected asbestos is found;

✓ Procedure used to detect asbestos;

✓ Emergency renovation information (if project is an emergency renovation); and

✓ Certification that at least one trained person will supervise the asbestos stripping and removal.

Michigan’s “Notification of Intent to Renovate/Demolish” form should be used to fulfill the notification requirement using the online ANS. For the online link, along with guidelines on how to complete the form, see the “Where to Get Additional Information” section on page 10. U.S. Postal Service, commercial delivery service, or hand delivery (or revisions to notifications) is not recommended. Telefaxing notifications is not acceptable. It is not necessary to send copies of NESHAP notifications to the U.S. EPA for renovation or demolition activities in Michigan.

• Revising a Notification
A revised notification should be sent any time there is a change in any of the required information previously submitted. The NESHAP specifically requires a revision if the amount of asbestos reported changes by 20% (either a decreased amount or an increased amount). An increased amount refers to additional asbestos unexpectedly found while working on the specific project covered in the notification. If the scope of the project increases, a new notification is required. For example, removing asbestos from an area of the building not covered by the original notification would be considered a change in project scope.

• Revising Project Dates
If the project will begin on a date later than the date in the original notice (or latest revision), revise the notification no later than the previously scheduled start date. If the project will start earlier than the original start date (or latest revision), provide the new start date at least ten working days before beginning the project. Under no circumstances shall a NESHAP project begin on a date other than the date in the notification (or the latest revised notification).

If a project will be postponed indefinitely and a new start date cannot be predicted immediately submit a revised notification canceling the project. If the project is rescheduled, a new notification must be submitted at least ten working days prior to beginning the project. It is unacceptable to indefinitely postpone a project and then submit a revised start date less than ten working days before the project is to begin.

WORK PRACTICE STANDARDS
For a demolition project, the RACM is not required to be removed or stripped if any of the following criteria are met:

✓ It is Category I nonfriable ACM that is not in poor condition, is not friable, and has not been or will not be subjected to sanding, grinding, cutting or abrading. A licensed asbestos abatement contractor should be present during the demolition activities.

✓ It is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition.

✓ It was not accessible for testing and, therefore, was not discovered until after the demolition
Understanding the Asbestos NESHAP

began and as a result of the demolition cannot be safely removed.

✓ It is Category II nonfriable ACM with low probability of becoming crumbled, pulverized, or reduced to powder during demolition.

✓ For large facility components (reactor vessels, large tanks, steam generators, etc. but not beams): the component is removed, transported, stored, disposed of, or reused without disturbing or damaging the RACM; the component is encased in a leak-tight wrapping; and the leak-tight wrapping is properly labeled during loading, unloading, and storage.

If a facility is demolished by intentional burning (e.g., fire training), all ACM including Category I and Category II nonfriable ACM is regulated and must be removed before burning.

Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material. When stripping asbestos from a facility component while it remains in place in the facility, adequately wet the asbestos. After a facility component that is covered with asbestos is taken out of a facility, it shall be stripped or contained in leak-tight wrapping. When stripping, adequately wet the component or use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material.

The following requirements must be followed for RACM, including material that has been removed or stripped:

✓ Adequately wet the material and ensure that it remains adequately wet until collected and contained or treated in preparation for disposal;
✓ Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material; and
✓ Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections.

There are two situations for which the requirement for adequately wetting the material does not apply. The first case is when the temperature at the point of wetting is below 32°F. The temperature must be recorded at the beginning, middle, and end of each work day; and these records must be kept for two years. The second situation involves renovation operations where wetting would unavoidably damage equipment or present a safety hazard. For these operations, written approval must be obtained from DEQ (submit a request for a waiver for not wetting in writing to DEQ [address listed in “Where to Get Additional Information” section on page 10]), and the following emission control methods must be used:

(1) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material;

(2) A glove-bag system designed and operated to contain the particulate asbestos material; and

(3) Leak-tight wrapping to contain all RACM prior to dismantlement.

WASTE DISPOSAL

The Asbestos NESHAP specifies that no visible emissions can be discharged to the outside air from the collection, processing, transport, and disposal of asbestos-containing waste materials. After wetting, seal all asbestos-containing waste material in leak-tight containers. If the waste will not fit into containers, it must be placed in leak-tight wrapping. Label the containers or wrapped materials being taken away from the facility using warning labels specified by the Occupational Safety and Health Administration (OSHA) and the U.S. DOT. The label should include the name of the waste generator and the location at which the waste was generated. Asbestos-containing waste materials must be deposited as soon as practical to an appropriate waste disposal site. Vehicles used to transport asbestos-containing waste materials must be marked during the loading and unloading of waste. U.S. DOT regulations require the proper identification number of “NA2212” be placed on shipping papers and package marking.
Understanding the Asbestos NESHAP

Waste shipment records must be maintained by the owner or operator of a demolition/renovation operation. The following information is required on waste shipment records:

- Generator name, address, and telephone;
- Asbestos NESHAP program agency name and address;
- Quantity of asbestos-containing waste materials (cubic meters or cubic yards);
- A monitored emergency response telephone number for a person who is knowledgeable of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information, or who has immediate access to a person with such knowledge;
- Waste disposal site operator name and telephone;
- Disposal site name and physical location;
- Transport date;
- Transporter name, address, and telephone; and
- Certification.

Provide a copy of the waste shipment record to the disposal site owner or operator at the time of delivery. If a copy of the waste shipment record signed by the owner or operator of the waste disposal site is not received by the waste generator within 35 days, contact the transporter and disposal site to determine the status of the waste shipment. Notify the AQD in writing if a signed waste shipment record is not received from the waste disposal site within 45 days. Keep a copy of all waste shipment records, including the signed copy, for at least two years.

Under Part 115 of Michigan Public Act 451 of 1994, as amended, administered by DEQ, all asbestos-containing material regulated by any state or federal regulations must be disposed of at a Type II (municipal solid waste) landfill. Asbestos-containing material that is nonfriable AND is not in poor condition or will not become friable at any time can be disposed of in a Type III (construction and demolition) landfill. Contact your local DEQ District Office or the Environmental Assistance Center (800-662-9278) if you have waste disposal questions.

**TRAINING**

Training is required by three different federal and state agencies when it comes to the handling of asbestos, its removal, and the transportation of the material as a hazardous waste. The Asbestos NESHAP requires at least one trained supervisor to be present when asbestos-containing material is stripped, removed, disturbed, or otherwise handled. Evidence of this training must be posted and made available for inspection at the demolition or renovation site. In addition to training supervisors, the DLARA requires that asbestos workers receive training. For a list of certified trainers and/or for more information about DLARA training requirements, contact the DLARA Asbestos Program at 517-284-7680 or visit their website at [www.michigan.gov/asbestos](http://www.michigan.gov/asbestos). Finally, Hazmat employers are required to certify and document that Hazmat employees (as defined in 49 CFR 171.8) receive training in accordance with 49 CFR Part 172, Subpart H and Part 177. The training requirements would apply to any employee that transports asbestos, offers asbestos for transportation, prepares asbestos for transportation, or certifies a shipping paper or manifest for transportation. U.S. DOT training requirements cover such topics as general awareness/familiarization with 49 CFR Chapter I, Subchapter C; function-specific training for employees; safety methods and emergency response procedures; and security awareness training for risks associated with the transport of hazardous materials.
WHY COMPLY WITH THE ASBESTOS NESHAP
Compliance with the Asbestos NESHAP will reduce the public’s and workers’ exposure to asbestos and will keep facility owners and contractors operating within the law. Non-compliance with the NESHAP is a significant violation. The AQD attempts to reach a settlement with the owner and operator when violations of the Asbestos NESHAP occur. If a settlement acceptable to the U.S. EPA is not reached in a timely manner, the U.S. EPA may pursue enforcement action at the federal level. The U.S. EPA may decide to pursue an escalated enforcement action on its own. Violations of the NESHAP notification and work practice requirements may result in written warnings, administrative orders, civil penalties and/or criminal charges. Typically, violations are resolved with a consent order requiring the facility to pay a penalty and to comply with the regulations for all future demolitions or renovations. Some owners and operators who have knowingly violated the Asbestos NESHAP have been sentenced to prison terms.

WHERE TO GET ADDITIONAL INFORMATION
Additional information about asbestos is available on the Internet through the U.S. EPA’s homepage (www2.epa.gov/asbestos). In addition, the Asbestos NESHAP notification form, guidelines for completing the form and regulations are located at www.michigan.gov/air. Select “Asbestos NESHAP Program”. Questions about the federal OSHA standards or the state’s asbestos compliance and training requirements can be obtained by visiting the DLARA Asbestos Program’s web site at www.michigan.gov/asbestos. Questions related to the transportation of asbestos can be addressed by the U.S. Department of Transportation’s (U.S. DOT) Hazmat Information Center at 800-467-4922. You can also visit the U.S. DOT, Pipeline and Hazardous Materials Safety Administration's web site at http://hazmat.dot.gov.

• Government Agency Contacts:

Michigan Department of Environmental Quality
Air Quality Division – NESHAP Asbestos Program
PO Box 30260
Lansing, Michigan 48909-7760
Notifications & General Asbestos Questions:  517-284-6777

Michigan Department of Licensing and Regulatory Affairs
MIOSHA Asbestos Program
PO Box 30671
Lansing, Michigan 48909-8171
Main Line & General Asbestos Questions:  517-284-7680
Accreditation, Training, Contractor Licensing:  517-284-7698
Notifications:  517-284-7699

Michigan State Police
Commercial Vehicle Enforcement Division
Hazardous Materials Unit
PO Box 30634
Lansing, Michigan 48913-0635
517-284-3250

U.S. Environmental Protection Agency
Asbestos Program
77 W. Jackson Boulevard
Chicago, Illinois 60604
Asbestos Hotline:  1-800-368-5888
Environmental Hotline:  1-800-621-8431
Understanding the Asbestos NESHAP

ACRONYMS
ACM .................. Asbestos-Containing Material
AQD .................. Air Quality Division
CAA .................. Clean Air Act
C&E .................. Compliance and Enforcement
DEQ .................. Michigan Department of Environmental Quality
DLARA ............. Michigan Department of Licensing and Regulatory Affairs
NESHAP ........ National Emission Standards for Hazardous Air Pollutants
OSHA ............. Occupational Safety and Health Administration
PLM .............. Polarized Light Microscopy
RACM .............. Regulated Asbestos-Containing Material
U.S. DOT....... U.S. Department of Transportation
U.S. EPA......... U.S. Environmental Protection Agency

DEFINITIONS
This section contains a list of definitions from the Asbestos NESHAP. Not all of these terms are used in this fact sheet.

Active waste disposal site: Any disposal site other than an inactive site.

Adequately wet: Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophylite, and actinolite-tremolite.

Asbestos-containing materials: Any materials containing more than 1% asbestos.

Asbestos-containing waste materials: Mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the Asbestos NESHAP. This includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

Asbestos mill: Any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings: Any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices: Any waste material that contains asbestos and is collected by a pollution control device.

Category I nonfriable asbestos-containing material (ACM): Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos as determined using Polarized Light Microscopy.

Category II nonfriable ACM: Any material, excluding Category I nonfriable ACM, containing more than 1% asbestos as determined using Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Commercial asbestos: Any material containing asbestos that is extracted from ore and has value because of its asbestos content.

Cutting: To penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.
Understanding the Asbestos NESHAP

**Demolition:** The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

**Emergency renovation operation:** A renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

**Fabricating:** Any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

**Facility:** Any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to the Asbestos NESHAP is not excluded, regardless of its current use or function.

**Facility component:** Any part of a facility including equipment.

**Friable asbestos material:** Any material containing more than 1% asbestos as determined using Polarized Light Microscopy, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

**Fugitive source:** Any source of emissions not controlled by an air pollution control device.

**Glove bag:** A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations.

**Grinding:** To reduce to powder or small fragments and includes mechanical chipping or drilling.

**Hazmat employee:** Means a person who is employed by a hazmat employer and who, in the course of employment, directly affects hazardous materials transportation safety. This term includes an owner-operator of a motor vehicle which transports hazardous materials in commerce. This term includes an individual, including a self-employed individual, employed by a hazmat employer who, during the course of employment:

1. Loads, unloads, or handles hazardous materials;

2. Manufactures, tests, reconditions, repairs, modifies, marks, or otherwise represents containers, drums, or packagings as qualified for use in the transportation of hazardous materials;

3. Prepares hazardous materials for transportation;

4. Is responsible for safety of transporting hazardous materials; or

5. Operates a vehicle used to transport hazardous materials.

**Hazmat employer:** Means a person who uses one or more employees in connection with: transporting hazardous materials in commerce; causing hazardous materials to be transported or shipped in commerce; or representing, marking, certifying, selling, offering, manufacturing, reconditioning, testing, repairing, or modifying containers, drums, or packagings as qualified for use in the transportation of hazardous materials. This term includes an owner-operator of a motor vehicle used to transport hazardous materials.
Understanding the Asbestos NESHAP

vehicle which transports hazardous materials in commerce. This term also includes any department, agency, or instrumentality of the United States, a state, a political subdivision of a state, or an Indian tribe engaged in an activity described in the first sentence of this definition.

In poor condition: The binding or the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Inactive waste disposal site: Any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

Installation: Any building or structure or any group of buildings or structures at a single demolition or renovation site that is under the control of the same owner or operator (or owner or operator under common control).

Leak-tight: Solids or liquids cannot escape or spill out. It also means dust-tight.

Malfunction: Any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

Manufacturing: The combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

Natural barrier: A natural object that effectively precludes or deters access. Natural barriers include physical objects such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

Nonfriable asbestos-containing material: Any material containing more than 1% asbestos as determined using Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Nonscheduled renovation operation: A renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience but for which an exact date cannot be predicted.

Outside air: The air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

Owner or operator of a demolition or renovation activity: Any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Particulate asbestos material: Finely divided particles of asbestos or material containing asbestos.

Planned renovation operations: A renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual, nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Regulated asbestos-containing material (RACM): Any of the following: (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.
Understanding the Asbestos NESHAP

**Remove:** To take out RACM or facility components that contain or are covered with RACM from any facility.

**Renovation:** Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

**Resilient floor covering:** Asbestos-containing floor tile, including asphalt and vinyl floor tile and sheet vinyl floor covering containing more than 1% asbestos as determined using Polarized Light Microscopy.

**Roadways:** Surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

**Strip:** To take off RACM from any part of a facility or facility components.

** Structural member:** Any load-supporting member of a facility, such as beams and load supporting walls, or any nonload-supporting member, such as ceilings and nonload-supporting walls.

**Visible emissions:** Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

**Waste generator:** Any owner or operator of a source covered by the Asbestos NESHAP whose act or process produces asbestos-containing waste material.

**Waste shipment record:** The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

**Working day:** Monday through Friday including holidays that fall on any of the days Monday through Friday.
March 19, 2019

Mr. Michael Darga
Mr. Dan Royal
Hubbell, Roth & Clark Inc.
105 West Grand River Avenue
Howell, Michigan 48843

Dear Mr. Darga and Mr. Royal:

SUBJECT: Impact Review – Water System Improvement Program and Wastewater Treatment Plant Upgrades, City of Howell, Livingston County

The Department of Environmental Quality (DEQ), Remediation and Redevelopment Division (RRD), is in receipt of your Impact Review correspondence dated February 20 and 28, 2019. Your letters request the RRD to conduct a review to confirm that the above-referenced projects will not cause an impact to Part 201, Environmental Remediation, or Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).

Based upon review of the Project Plans, RRD cannot confirm that the above-referenced projects will not cause an impact to Part 201 or Part 213 of the NREPA. RRD review of the Project Plans have identified known Part 201 and Part 213 sites which may be associated with contamination present within or in the vicinity of the proposed project areas. Given this information, necessary precautions should be taken while work is being conducted in those areas of the proposed Project Plan as applicable to ensure appropriate due care measures pursuant to Section 20107a of the NREPA are taken. Any contaminated soil or groundwater generated during the project should also be managed and/or disposed of in accordance with all applicable federal, state, and local regulations.

If you have any questions regarding this matter, please contact me.

Sincerely,

David LaBrecque
Assistant District Supervisor
Lansing District Office
Remediation and Redevelopment Division
517-284-5123
labrecqued@michigan.gov

cc: Mr. Shea Charles, City of Howell
Mr. Erv Suida, City of Howell
Mr. Dennis Eagle, DEQ
Mr. Eric Pocan, DEQ
Ms. Emily Peabody, DEQ
Ms. Rebecca Taylor, DEQ
March 22, 2019

Dan Royal, P.E.
Hubbell, Roth, and Clark, Inc.
105 West Grand River Avenue
Howell, Michigan 48843

RE: City of Howell Wastewater Treatment Plant Upgrades

Dear Mr. Royal:

The Natural Resources Conservation Service (NRCS) under Part 523 of the Farmland Protection Policy Act has reviewed the proposed City of Howell Water System Improvement Project. This review was conducted with respect to the effect(s) that the proposal may have on prime and/or unique farmland. Since the proposed project involves improvements to existing facilities and no land conversions are expected, we have concluded that this proposal will have no negative impact on prime and/or unique farmland.

Should the scope of the project change to where expansion will occur, please resubmit the proposal for our review.

Sincerely,

[Signature]

GARRY LEE
State Conservationist

cc:
Albert Jones, Area Conservationist, NRCS, Flint, MI
Karry Trickey, District Conservationist, NRCS, Mason, MI

USDA is an equal opportunity provider, employer and lender.
Royal, Daniel

From: Dandridge, Tameka <tameka_dandridge@fws.gov>
Sent: Monday, April 1, 2019 10:43 AM
To: Royal, Daniel
Subject: Re: City of Howell WWTP SRF Project, ESA Section 7 Consultation

Follow Up Flag: Follow up
Flag Status: Flagged

This consultation is related to HRC Job No. 20190125.

On Mon, Apr 1, 2019 at 10:22 AM Dandridge, Tameka <tameka_dandridge@fws.gov> wrote:

Dear Mr. Royal:

I have reviewed your February 20, 2019 letter and noticed that you initiated and completed section 7 consultation online using IPaC and our section 7 consultation technical assistance websites. Using these websites, you determined that your project will have NO EFFECT on federally listed species. As such, section 7 consultation is complete.

We do not provide concurrence for NO EFFECT determinations, but recommend you document your effects determination in your records.

Thank you.

--
Tameka N. Dandridge
U.S. Fish and Wildlife Service
Michigan Field Office
2651 Coolidge Road
Suite 101
East Lansing, Michigan 48823
517-351-8315
tameka_dandridge@fws.gov
***My schedule: Mon-Thur: 8am-4:30 and Fri (telework): 7:30-4pm***
April 5, 2019

SONYA T BUTLER
SECTION CHIEF ALOCS
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
P O BOX 30817
LANING MI 48909

RE: ER19-547 Wastewater Treatment Plant Upgrades, Sec. 1, T2N, R4E, City of Howell, Livingston County (EPA)

Dear Mr. Butler:

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above. Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that no historic properties are affected within the area of potential effects of this undertaking.

This letter evidences the EPA's compliance with 36 CFR § 800.4 “Identification of historic properties,” and the fulfillment of the EPA's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.4(6)(1) “No historic properties affected.” If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.

We remind you that federal agency officials or their delegated authorities are required to involve the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties per 36 CFR § 800.2(d). The National Historic Preservation Act also requires that federal agencies consult with any Indian tribe and/or Tribal Historic Preservation Officer (THPO) that attach religious and cultural significance to historic properties that may be affected by the agency's undertakings per 36 CFR § 800.2(c)(2)(ii).

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking.

If you have any questions, please contact Brian Grennell, Cultural Resource Management Specialist, at 517-335-2721 or by email at GrennellB@michigan.gov. Please reference our project number in all communication with this office regarding this undertaking. Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,

Brian G. Grennell
Cultural Resource Management Specialist

for Brian D. Conway
State Historic Preservation Officer

BGG: SAT: lrp

Copy: Eric Pocan, MDEQ
Trevor Wagener,Hubbell, Roth & Clark, Inc.
Mr. Dan Royal, P.E.
Hubbell, Roth, & Clark, Inc.
105 West Grand River
Howell, MI 48843

Dear Mr. Royal:

SUBJECT: Notice of Proposed Wastewater Treatment Plant Improvements
City of Howell, Livingston County

This letter is in response to your request for comments on the proposed wastewater treatment plant (WWTP) improvement project. The project proposes to upgrade the Howell WWTP as described in the Project Plan and outlined in the review request. The project is located at the existing WWTP (T2N, R4E, Section 1), at 1191 S. Michigan Avenue, approximately three miles southeast of the Livingston County-Spencer J. Hardy Airport (OZW), Howell, Michigan. We have completed our review and the following is a summary of our findings:

The proposal is not within 5,000 feet of a general aviation airport serving piston-powered aircraft or 10,000 feet of an airport serving turbine powered aircraft. Therefore, considering the Federal Aviation Administration (FAA), Advisory Circular, 150/5200-33B, “Hazardous Wildlife Attractants On or Near Airports”, the project is unlikely to present a potential conflict with regards to wildlife proximity to the airport. However, the proposed project is within five miles of OZW and therefore, also within radius of impact to traffic patterns at the airport. Based on anticipated impacts of the project, the MDOT does not believe the project will increase wildlife hazards to aviation.

Also be advised, Federal Aviation Regulation (FAR) Part 77 requires that proposals to construct anything (including temporary construction equipment) which may obstruct the use of airspace by aircraft give notice to the FAA. The FAA has an online notice criteria tool that can be used to determine if notification is required. The Michigan Tall Structure Act requires these proposals to obtain a Tall Structure Permit from the Office of Aeronautics. If the proposed construction or alteration exceeds 199’ AGL or is in the vicinity of an airport (within 20,000’), a Michigan Tall Structure Permit may be required. If you have questions about the Michigan Tall Structure Act, please contact Hilary Hoose or Kelly Badra at MDOT_Tall_Structures@michigan.gov.
Thank you for providing information regarding the proposed WWTP improvement project. If you have any question or need additional information, please call or email at 517-335-9866 or houttemans@michigan.gov.

Sincerely,

Steve Houtteman
Aeronautics Environmental Specialist
Project Support Unit
MDOT - Office of Aeronautics

Attachments

cc:    Mark Johnson, Manager, Livingston County Airport
       Ernest Gubry, FAA-ADO
       Hilary Hoose, MDOT-AERO
Hello Dan,

Thanks you for the information.

Please note the Department of Environment, Great Lakes, and Energy regulates the floodplain based on existing elevations. Therefore if the existing grades are below the regulatory flood elevation(s) published by the FEMA, then a permit is required for any filling, grading, or occupation/construction under the State’s Floodplain Regulatory Authority found in Part 31, Water Resources Protection, of the NREPA, as amended.

Once survey information is obtained, if you have any questions, or concerns please let me know.

Sincerely, Donna

Donna Cervelli, P.E.
Floodplain Engineer
Lansing and Jackson District Offices
Water Resources Protection
517-243-6951

Donna,  

See the attached letter regarding an upcoming project at the Howell wastewater treatment plant. We are aware that the plant is adjacent to the floodplain in this area and will conduct a detailed survey prior to construction. If any of the work turns out to be located in the floodplain appropriate permitting procedures will be followed. If you have any questions or comments on this please let me know within the next 30-days so I can address them before submitting the SRF project plan.

Dan Royal, PE  
Staff Engineer  
Hubbell, Roth & Clark, Inc.  
Direct: (248) 454-6865  
Mobile: (248) 505-3243  
E-mail: droyal@HRCengr.com  
www.hrcengr.com
Hi Dan. There appears to be a misunderstanding within HRC on my role. My work responsibilities are specific to our municipal stormwater program. The best contacts for questions related to resource programming in Livingston County are as follows:

Wetland and inland lakes/streams permitting: Jeff Pierce, PierceJ2@michigan.gov or 517-416-4297
Floodplain permitting: Donna Cervelli, CERVELLID@michigan.gov, 517-243-6951

I copied my coworkers who have compliance oversight of wastewater facilities in our district and may be involved with the SRF review.

Thanks
Christe

Christe Alwin
Water Resources Division
Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Tel: 517-420-1501 | alwinc@michigan.gov
www.michigan.gov/stormwaterrunoff

I just wanted to follow up with you on the attached notice we sent you. If you have any comments or questions related to this project please let me know.

Dan Royal, PE
Staff Engineer
Hubbell, Roth & Clark, Inc.
Direct: (248) 454-6865
Mobile: (248) 505-3243
E-mail: droyal@HRCengr.com
www.hrcengr.com
Dan Royal, P.E.  April 23, 2019
Hubbell, Roth & Clark, Inc.
PO Box 824
Bloomfield Hills, MI 48303-0824

Re: Rare Species Review #2362 – City of Howell SRF WWTP Upgrades, Livingston County, MI (T2N, R4E Section 1).

Mr. Royal,

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, “a person shall not take, possess, transport, ...fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.

Several rare natural features have been documented within 1.5-miles from the project site. However, the occurrences are well away from project site and it is not likely that negative impacts will occur. This response reflects a desktop review of the database and MNFI cannot fully evaluate this project without visiting the area. MNFI offers several levels of Rare Species Reviews, including field surveys which I would be happy to discuss with you.

Sincerely,

Michael A. Sanders

Michael A. Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory
Comments for Rare Species Review #2362:

It is important to note that it is the applicant’s responsibility to comply with both state and federal threatened and endangered species legislation. Therefore, if a state listed species occurs at a project site, and you think you need an endangered species permit please contact: Casey Reitz, DNR-Wildlife Division, 517-284-6210, or ReitzC@michigan.gov. If a federally listed species is involved and, you think a permit is needed, please contact Carrie Tansy, Endangered Species Program, U.S. Fish and Wildlife Service, East Lansing office, 517-351-8375, or Carrie_Tansy@fws.gov.

Please consult MNFI’s Rare Species Explorer for additional information regarding the listed species.

Table 1: Occurrences threatened and endangered species within 1.5 miles of RSR #2362

<table>
<thead>
<tr>
<th>ELCAT</th>
<th>SNAME</th>
<th>SCOMNAME</th>
<th>USESA</th>
<th>SPROT</th>
<th>G_RANK</th>
<th>S_RANK</th>
<th>FIRSTOBS</th>
<th>LASTOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant</td>
<td>Cypripedium candidum</td>
<td>White lady slipper</td>
<td>T</td>
<td>G4</td>
<td>S2</td>
<td>1890</td>
<td>1890-06-14</td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td>Poa paludigena</td>
<td>Bog bluegrass</td>
<td>T</td>
<td>G3</td>
<td>S2</td>
<td>1890</td>
<td>1890-06-10</td>
<td></td>
</tr>
</tbody>
</table>

Of concern: No concerns. Records are Historic and well away from project area.

Table 2: Occurrences of special concern species & natural communities within 1.5 miles of RSR #2362

<table>
<thead>
<tr>
<th>ELCAT</th>
<th>SNAME</th>
<th>SCOMNAME</th>
<th>USESA</th>
<th>SPROT</th>
<th>G_RANK</th>
<th>S_RANK</th>
<th>FIRSTOBS</th>
<th>LASTOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal</td>
<td>Bombus auricomus</td>
<td>Black and gold bumble bee</td>
<td>SC</td>
<td>G4G5</td>
<td>SNR</td>
<td>2017-08-14</td>
<td>2017-08-14</td>
<td></td>
</tr>
</tbody>
</table>

Of concern: No concerns. Occurrence is well away from project area.

Special concern species and natural communities are not protected under endangered species legislation, but efforts should be taken to minimize any or all impacts. Species classified as special concern are species whose numbers are getting smaller in the state. If these species continue to decline they would be recommended for reclassification to threatened or endangered status.
Codes to accompany Tables:

State Protection Status Code Definitions (SPROT)
E: Endangered
T: Threatened
SC: Special concern

Federal Protection Status Code Definitions (USESA)
LE = listed endangered
LT = listed threatened
LELT = partly listed endangered and partly listed threatened
PDL = proposed delist
E(S/A) = endangered based on similarities/appearance
PS = partial status (federally listed in only part of its range)
C = species being considered for federal status

Global Heritage Status Rank Definitions (GRANK)
The priority assigned by NatureServe’s national office for data collection and protection based upon the element’s status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.
G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3: Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.
G4: Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5: Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
Q: Taxonomy uncertain

State Heritage Status Rank Definitions (SRANK)
The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element’s status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.
S1: Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.
S2: Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.
S3: Rare or uncommon in state (on the order of 21 to 100 occurrences). S4 = apparently secure in state, with many occurrences.
S5 = demonstrably secure in state and essentially ineradicable under present conditions. SX = apparently extirpated from state.
For projects involving Federal funding or a Federal agency authorization

The following information is provided to assist you with Section 7 compliance of the Federal Endangered Species Act (ESA). The ESA directs all Federal agencies “to work to conserve endangered and threatened species. Section 7 of the ESA, called "Interagency Cooperation," is the means by which Federal agencies ensure their actions, including those they authorize or fund, do not jeopardize the existence of any listed species.”

The project falls within the range of six (6) federally listed/proposed species which have been identified by the U.S. Fish and Wildlife Service (USFWS) to occur in Livingston County, Michigan:

**Federally Endangered**

**Indiana bat** - there appears to be suitable habitat within the 1.5-mile search buffer. Indiana bats (*Myotis sodalis*) are found only in the eastern United States and are typically confined to the southern three tiers of counties in Michigan. Indiana bats that summer in Michigan winter in caves in Indiana and Kentucky. This species forms colonies and forages in riparian and mature floodplain habitats. Nursery roost sites are usually located under loose bark or in hollows of trees near riparian habitat. Indiana bats typically avoid houses or other artificial structures and typically roost underneath loose bark of dead elm, maple and ash trees. Other dead trees used include oak, hickory and cottonwood. Foraging typically occurs over slow-moving, wooded streams and rivers as well as in the canopy of mature trees. Movements may also extend into the outer edge of the floodplain and to nearby solitary trees. A summer colony’s foraging area usually encompasses a stretch of stream over a half-mile in length. Upland areas isolated from floodplains and non-wooded streams are generally avoided.

*Management and Conservation:* the suggested seasonal tree cutting range for Indiana bat is between October 1 and March 31 (i.e., no cutting April 1-September 30). This applies throughout the Indiana bat range in Michigan.

**Poweshiek skipperling** – there does not appear to be suitable habitat within 1.5-miles of the project. In Michigan, the state and federally endangered poweshiek skipperling (*Oarisma poweshiek*) inhabits alkaline wetlands known as fens. This habitat is characterized by scattered tamaracks, poison sumac, and dogwood clones with a ground cover of sedges and other herbaceous species. The poweshiek skipper has a single generation each year. Egg laying is believed to occur on sedges and rushes. Eggs are laid sometime around early July; larvae (caterpillar stage) hibernate through the winter on the underside of the blade of grass on which they have been feeding on. In early April, they resume feeding. Adult flight dates occur late June through the first three weeks of July.

*Management and Conservation:* the primary threat to the continued survival of this species is habitat loss and modification. Many of the wetland complexes occupied currently have been altered or drained for agriculture or development. Wetland alteration also can lead to invasion by exotic plant species such as glossy buckthorn (*Rhamnus frangula*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), and the common reed (*Phragmites australis*). In addition, landscape-scale processes that may be important for maintaining suitable poweshiek habitat and/or creating new habitat, such as wildfires, fluctuations in hydrologic regimes, and flooding from beaver (*Castor canadensis*) activity, have been virtually eliminated or altered throughout the species' range. The widespread use of neonicotinoid pesticides could be a cause for the decline in this species as most sites are adjacent to, or downslope from, row crop agriculture.

**Snuffbox mussel** – there does not appear to be suitable habitat within 1.5-miles of the project. The state and federally endangered snuffbox mussel (*Epioblasma triquetra*) inhabit rivers and streams with cobble, gravel, or sand bottoms in
swift currents and usually is deeply buried in the substrate. Glochidia, the parasitic larval stage of the mussel, are released from May to mid-July. In Michigan, the only host fish known for snuffbox is the log perch (Percina caprodes). In other parts of their range the banded sculpin (Cottus carolinae) is also a known host. After completing the parasitic stage and reaching adulthood, snuffbox remain relatively sessile on the river bottom, living between 8-10 years. The best time to survey for snuffbox is April through September.

*Management and Conservation:* the snuffbox mussel is sensitive to river impoundment, siltation and disturbance, due to its requirement for clean, swift current and relative immobility as an adult. To maintain the current populations in Michigan, rivers need to be protected to reduce silt loading and run-off. Maintaining or establishing vegetated riparian buffers can aid in controlling many of the threats to mussels. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial. Because the life cycle of the snuffbox is inherently linked with that of the logperch in Michigan, conservation and management of this fish species is needed to ensure that of the snuffbox.

**Federally Threatened**

**Northern long-eared bat** - Northern long-eared bat (M. septentrionalis) numbers in the northeast US have declined up to 99 percent. Loss or degradation of summer habitat, wind turbines, disturbance to hibernacula, predation, and pesticides have contributed to declines in Northern long-eared bat populations. However, no other threat has been as severe to the decline as White-nose Syndrome (WNS). WNS is a fungus that thrives in the cold, damp conditions in caves and mines where bats hibernate. The disease is believed to disrupt the hibernation cycle by causing bats to repeatedly awake thereby depleting vital energy reserves. This species was federally listed in May 2015 primarily due to the threat from WNS.

Although no known hibernacula or roost trees have been documented within 1.5 miles of the project area, this activity occurs within the designated WNS zone (i.e., within 150 miles of positive counties/districts impacted by WNS). In addition, there appears to be suitable habitat within 1.5 miles of the project site. The USFWS has prepared a dichotomous key to help determine if this action may cause prohibited take of this bat. Please consult the USFWS Endangered Species Page for more information.

Also called northern bat or northern myotis, this bat is distinguished from other Myotis species by its long ears. In Michigan, northern long-eared bats hibernate in abandoned mines and caves in the Upper Peninsula; they also commonly hibernate in the Tippy Dam spillway in Manistee County. This species is a regional migrant with migratory distance largely determined by locations of suitable hibernacula sites.

Northern long-eared bats typically roost and forage in forested areas. During the summer, these bats roost singly or in colonies underneath bark, in cavities or in crevices of both living and dead trees. Roost trees are selected based on the suitability to retain bark or provide cavities or crevices. Common roost trees in southern Lower Michigan include species of ash, elm and maple. Foraging occurs primarily in areas along woodland edges, woodland clearings and over small woodland ponds. Moths, beetles and small flies are common food items. Like all temperate bats this species typically produces only 1-2 young per year.

*Management and Conservation:* when there are no known roost trees or hibernacula in the project area, we encourage you to conduct tree-cutting activities and prescribed burns in forested areas during October 1 through March 31 when possible, but you are not required by the ESA to do so. When that is not possible, we encourage you to remove trees prior to June 1 or after July 31, as that will help to protect young bats that may be in forested areas but are not yet able to fly.

**Eastern prairie fringed orchid** – there does not appear to be suitable habitat within 1.5-miles of the project site. The federal threatened and state endangered prairie fringed orchid (Platanthera leucophaea) occurs in two distinct habitats in Michigan - wet prairies and bogs. It thrives best in the lakeplain wet or wet-mesic prairies that border Saginaw Bay and Lake Erie. This species frequently persists in degraded prairie remnants, ditches, railroad rights-of-ways, fallow agricultural fields, and similar habitats where artificial disturbance creates a moist mineral surface conducive to
germination. Unlike many other *Platanthera* species, *P. leucophaea* is long-lived, with individuals documented to live more than 30 years. Flowering occurs during late June through early July. The white blossoms produce a heavy fragrance at dusk that attracts many moths, including the primary pollinators of *P. leucophaea*, hawkmoths (Lepidoptera: Sphingidae). Hawkmoths are likely co-adapted pollinators, since their tongues are long enough to reach the nectar that lies deep in the spur of the flower. Capsules mature in September, releasing hundreds of thousands of airborne seeds. Plants may not flower every year but frequently produce only a single leaf above ground, possibly even becoming dormant when conditions are unsuitable, such as the onset of drought.

*Management and Conservation*: this species requires the maintenance of natural hydrological cycles and open habitat. Activities such as shrub removal are likely to benefit the species, but other management such as prescribed fire is not well understood. Caution and proper monitoring should be employed if using prescribed fire in occupied habitat. Spring fires should be conducted prior to emergence (mid-April). Poaching is also a threat.

**Eastern massasauga rattlesnake (EMR)** - the project falls outside Tier 1 and Tier 2 EMR habitat as designated by the U.S. Fish & Wildlife Service (USFWS). For environmental screening purposes no coordination with the USFWS is needed. Michigan’s only venomous snake is found in a variety of wetland habitats including bogs, fens, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. Eastern massasaugas occur throughout the Lower Peninsula but are not found in the Upper Peninsula. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are better known from lowland coniferous forests, such as cedar swamps. These snakes normally overwinter in crayfish or small mammal burrows often close to the groundwater level and emerge in spring as water levels rise. During late spring, these snakes move into adjacent uplands they spend the warmer months foraging in shrubby fields and grasslands in search of mice and voles, their favorite food.

Often described as “shy and sluggish”, these snakes avoid human confrontation and are not prone to strike, preferring to leave the area when they are threatened. However, like any wild animal, they will protect themselves from anything they see as a potential predator. Their short fangs can easily puncture skin and they do possess potent venom. Like many snakes, the first human reaction may be to kill the snake, but it is important to remember that all snakes play vital roles in the ecosystem. Some may eat harmful insects. Others like the massasauga consider rodents a delicacy and help control their population. Snakes are also a part of a larger food web and can provide food to eagles, herons, and several mammals.

*Management and Conservation*: any sightings of these snakes should be reported to the Michigan Department of Natural Resources, Wildlife Division. If possible, a photo of the live snake is also recommended.

USFWS Section 7 Consultation Technical Assistance can be found at:

https://www.fws.gov/midwest/endangered/section7/index.html

The website offers step-by-step instructions to guide you through the Section 7 consultation process with prepared templates for documenting “no effect.” as well as requesting concurrence on "may affect, but not likely to adversely affect” determinations.

Please let us know if you have questions.

Mike Sanders
Environmental Review Specialist/Zoologist
Sander75@msu.edu
517-284-6215
Hi Dan,

Based on the letter and attached plans you provided it appears that the proposed work will be within the existing facility footprint and there is no planned filling, excavation, or construction with wetlands on the site. Based on that, no permit would be required under Part 303, Wetlands Protection, of the NREPA, 1994 PA 451, as amended.

You may still want to discuss the project with Donna Cervelli regarding potential floodplain impacts. Grade changes on the site that would impact the 100-year floodplain and floodway may require a permit under the Floodplain Regulatory Authority under Part 31.

Jeff Pierce  
Environmental Quality Analyst  
Water Resources Division, Lansing District Office  
Michigan Department of Environment, Great Lakes, and Energy  

517-416-4297 | piercej2@Michigan.gov  
Follow Us | Michigan.gov/EGLE

Jeff,

See the attached letter regarding an upcoming project at the Howell wastewater treatment plant. This project is not expected to have any impact on the quality or quantity of effluent discharged from the plant. If you have any questions or comments on this please let me know within the next 30-days so I can address them before submitting the SRF project plan.

Thank you,

Dan Royal, PE  
Staff Engineer  
Hubbell, Roth & Clark, Inc.  
Direct: (248) 454-6865  
Mobile: (248) 505-3243  
E-mail: droyal@HRCengr.com  
www.hrcengr.com
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Wetland and inland lakes/streams permitting: Jeff Pierce, PierceJ2@michigan.gov or 517-416-4297
Floodplain permitting: Donna Cervelli, CERVELLID@michigan.gov, 517-243-6951

I copied my coworkers who have compliance oversight of wastewater facilities in our district and may be involved with the SRF review.

Thanks
Christe

Christe Alwin
Water Resources Division
Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Tel: 517-420-1501 | alwinc@michigan.gov
www.michigan.gov/stormwaterrunoff
April 30, 2019

VIA E-MAIL

Mr. Dan Royal
Hubbell, Roth & Clark, Inc.
105 West Grand River
Howell, Michigan 48843

Dear Mr. Clark,

SUBJECT: Project Plan Impact Review, for the Wastewater Treatment Plant Upgrades, City of Howell, HRC Job No. 20190125

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD) has reviewed the Project Plan Impact Review, as referenced above, and submitted by Hubbell, Roth & Clark, Incorporated, on behalf of the City of Howell, on February 20, 2019. The request was for a review of potential impacts of the Project based on Part 111, Part 115, and Part 121 of Michigan’s Natural Resources and Environmental protection Act (NREPA), as amended. The proposed project involves replacement of portions of existing facilities, of the Howell Wastewater Treatment Plant.

The Impact Review indicated that there are no anticipated issues with Part 111, Part 115, or Part 121. It is worth noting that whether issues are anticipated or not, the demolition and construction must comply with the requirements of the NREPA. Based upon our review of the Impact Review, EGLE MMD offers the following comments for consideration:

**Disposal of Fluorescent Bulbs** – It was unclear if the bulbs from the old buildings and UV system will continue to be used, or if they will need to be disposed. Fluorescent bulbs and UV bulbs may contain hazardous levels of mercury vapor, and fail the Toxicity Characterization Leaching Procedure test for mercury. If waste bulbs are generated, then they are required to be managed under the Hazardous Waste or Universal Waste requirements of Part 111 and the federal Resource Conservation and Recovery Act of 1976, as amended.

1. **Mercury Thermostats, Monometers, etc.** – It was unclear what portions of the plant will be demolished, or if that portion of the plant been surveyed for other mercury containing items. The Impact Review document indicated that there are “none expected”. In most historic wastewater facilities, there are some old mercury devices.
There was an accidental release of mercury at the East Lansing Wastewater Treatment Facility Accident during facility maintenance, for example, and penalties were assessed for failing to report the release and failing to manage the waste in compliance with Part 111: https://www.lansingstatejournal.com/story/news/local/2015/03/05/east-lansing-admits-mercury-mistakes/24397719/.

Management, maintenance, and demolition team members are responsible for identifying and properly disposing of any mercury containing devices in accordance with Part 111.

2. **Friable Asbestos** – The Impact Review indicated that no asbestos materials are expected. Again, staff or contractors involved in the demolition must be trained to identify wastes containing asbestos, including insulation on piping, and provide the appropriate notification to EGLE, if asbestos material is going to be removed. You may use the “Search” button on our website to identify specific asbestos demolition notification requirements at www.michigan.gov/egle. There are both Part 115 and Title 40 of the Code of Federal Regulations, Part 63, National Emission Standards for Hazardous Air Pollutants, requirements that must be met, for asbestos containing material demolition.

3. **Operation and Maintenance Plan** – The Impact Review did not discuss changes required for the Operation and Maintenance of the new facility. The MMD recommends ensuring that the following issues are addressed:

   a. **Plan for Disposal of the UV (specialized fluorescent) Bulbs** – The new system includes UV Fluorescent light treatment, but there was no mention of the plans to properly manage the waste bulbs. There should be a plan for disposal in accordance with Part 111, hazardous waste requirements and/or universal waste requirements after the Expansion.

   b. **Solids Dewatering Upgrade** – This process should be designed to prevent releases under NREPA, and it was not addressed in the Impact Review.

   c. **Receiving Facility for Part 121 Wastes** - It was unclear if Part 121 wastes will be accepted at the facility.
      i. Manifesting?
      ii. Record Keeping?
      iii. There will be some wastewater hauled to the site from the city of Howell maintenance sewers. Where will that material be received, and where will the likely contaminated solids be managed/placed into a container for disposal?

Operation and Maintenance Plans (Item # 3 listed above) may be beyond the scope of this project, and we encourage consideration for managing the waste streams prior to construction.
Should you have any questions regarding this review, please contact Mr. Bryan Grochowski, Environmental Quality Analyst, Lansing District Office, Hazardous Waste Section, MMD, at 517-243-0499; GrochowskiB@michigan.gov; or EGLE, Lansing District Office MMD, P.O. Box 30242, Lansing, Michigan 48909-7741; or you may contact me.

Sincerely,

Jack Schinderle, Director
Materials Management Division
517-284-6551

cc: Ms. Elizabeth M. Browne, EGLE
Mr. Dennis Eagle, EGLE
Mr. Lawrence Bean, EGLE
Ms. Stephanie Kammer, EGLE
Mr. Charles Bennett, EGLE
Mr. Jim Arduin, EGLE
Mr. Duane Roskoskey, EGLE
Appendix H — Affidavit of Publication, Public Hearing

Transcripts and Attendance list
NOTICE OF PUBLIC HEARING

The City of Howell will hold a public hearing on the application to the Michigan Department of Environmental Quality for funding assistance through the Water Pollution Control Revolving Fund, better known as the State Revolving Fund (SRF) Program for the proposed Wastewater Treatment Plant Improvements project. The public hearing is being held for the purpose of receiving comments from interested persons.

The hearing will be held at 7:00 p.m. on Monday, June 10, 2019 during the City Council Regular Meeting at the City Hall Council Chambers, 611 East Grand River Avenue, Howell, Michigan, 48843.

The proposed Wastewater Treatment Plant Improvement Project description and details are organized into a comprehensive 20-year Project Plan. If the SRF application is successful, the construction project will include improvements to the existing primary tanks, final clarifiers and aeration tanks, construction of a new aeration tank and blower building, expansion of the UV disinfection system and headworks building, solids dewatering improvements including the construction of a new solids dewatering building, and general improvements to the infrastructure and facilities at the plant. All work will occur at the existing wastewater treatment plant site, located at 1191 South Michigan Avenue.

Impacts of the proposed project include:

**Noise:** Noise due to construction activities such as construction equipment, machinery, generators, compressors, etc. will be kept to a minimum, as practicable. The work hours will be maintained in accordance with local ordinances.

**Increased User Rates:** An increase in user rates will be necessary to fund these improvements. By choosing the replacement approach to address the needs at the plant and spreading out the costs over the entire district the rate increases have been minimized. The “Do Nothing” approach would increase the potential for water quality and environmental issues and require more costly construction in the future.

The total cost of the improvements is estimated to be $14.66 million. After cost sharing contributions from Marion Township and Pepsi Bottling Group, the remaining cost obligation to the City of Howell would be $7.13 million. The repayment of the SRF loan, if approved, will be apportioned to City sewer customers. The estimated user costs to finance the proposed project have been determined assuming SRF financing with a 2.0% interest rate (current SRF interest rate) and a 20-year debt retirement. The apportionment costs are based on an annual average over a 20-year period to provide an estimate of the average charge per user.

The approximate City of Howell user rate increase necessary to retire the debt incurred from the construction of the proposed project $7.83 per month for the average user.

Copies of the Wastewater Treatment Plant Improvements Draft Project Plan detailing the proposed project are available for review beginning on Friday, May 10, 2019 at:
City of Howell City Hall, 611 East Grand River Avenue, Howell, MI 48843
Howell Carnegie District Library, 314 West Grand River Avenue, Howell, MI 48843
CityofHowell.org (PDF version)

Written comments received before the hearing record is closed on June 10, 2019 will receive responses in the Final Project Plan. Written questions should be sent to:

Jane Cartwright, City Clerk, City of Howell, 611 East Grand River Avenue, MI 48843

In compliance with the Americans with Disabilities Act, individuals with a disability should feel free to contact the City of Howell at least seventy-two (72) hours in advance of the Public Hearing, if requesting accommodations.

Published May 10, 2019 in the Livingston Daily Press & Argus

Issued by: Jane Cartwright, City Clerk
Appendix I — PPL Scoring Form
Project Priority List (PPL) Scoring Data Form

Please complete the information requested below and indicate the page numbers or appendices in the project plan which verify the information provided. Enter “N/A” if information is not pertinent.

PROJECT APPLICANT: 

PROJECT LOCATION: 

---

1. Water Pollution Severity Data (0 to 500 points)

<table>
<thead>
<tr>
<th>Page</th>
<th>1. Pre-project conditions, including wastewater collection/treatment deficiencies and water quality problems currently occurring.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Post-project conditions, including proposed facilities and water quality improvements.</td>
</tr>
</tbody>
</table>

Does the existing facility (or facilities) being upgraded, expanded, or replaced by this project file either surface water or groundwater discharge monitoring reports?

- YES, Proceed to Section C  
- NO, Proceed to Section A or B

Note: If a project with either a surface water or groundwater discharge is also causing a nitrate problem in the groundwater (i.e., leaky lagoons), please be sure to complete Item B.5. Projects may receive points for both surface water and groundwater contamination.

A. Data on Existing Surface Water Discharge

<table>
<thead>
<tr>
<th>Page</th>
<th>1. Discharge type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous</td>
</tr>
<tr>
<td></td>
<td>Seasonal</td>
</tr>
<tr>
<td></td>
<td>Intermittent <em>(if CSO, or SSO, please complete Sections E and F below)</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Page</th>
<th>2. Flow. For facilities that discharge to regional treatment plants and do not file surface water discharge monitoring reports, provide the average daily metered flow <em>(identify whether units are MGD or MGY)</em></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Page</th>
<th>3. Identify Receiving Water and Type</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Page</th>
<th>4. Location <em>(town, range, and section)</em></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Page</th>
<th>5. Existing Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Untreated</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Combined Sewer Overflow</td>
</tr>
<tr>
<td></td>
<td>Tertiary</td>
</tr>
<tr>
<td></td>
<td>Primary <em>(including septic systems with direct surface water discharge)</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Page</th>
<th>6. Existing Disinfection Process:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Chlorination</td>
</tr>
<tr>
<td></td>
<td>Alternative Technology <em>(specify type)</em></td>
</tr>
</tbody>
</table>

B. Data on Existing Groundwater Discharge

<table>
<thead>
<tr>
<th>Page</th>
<th>1. Discharge Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous</td>
</tr>
<tr>
<td></td>
<td>Seasonal</td>
</tr>
<tr>
<td></td>
<td>Intermittent</td>
</tr>
</tbody>
</table>
2. **Flow.** For unsewered areas, flow should be calculated using a figure of 70 gpcd. For facilities that do not file groundwater discharge monitoring reports, provide the existing metered flow figure *(identify whether units are MGD or MGY)*

3. **Location (provide town, range, and section)*

4. **Existing Treatment**
   - [ ] Untreated
   - [ ] Primary (including septic with tile field)
   - [ ] Secondary

5. **Nitrate contamination of public or private wells caused by the discharge of effluent/waste from the treatment system or systems**
   - [ ] Public well(s) in vicinity contains nitrates > 10 mg/L (100 points)
   - [ ] Private well(s) in vicinity contains nitrates > 10 mg/L (75 points)
   - [ ] Monitoring well(s) in vicinity contains nitrates > 10 mg/L (50 points)*
   - [ ] No evidence of nitrate contamination in local wells

*Note: If only the total inorganic nitrogen (“TIN” ammonia + nitrite + nitrate) concentration is available, a separate sampling and nitrate analysis should be performed to document the nitrate concentration.*

**C. Information on Proposed Surface Water/Groundwater Discharge**

*(Attach additional pages if necessary: a copy of the effluent limits letter/permit table may suffice.)*

1. **Discharge Type:**
   - [ ] Continuous
   - [ ] Seasonal
   - [ ] Intermittent

2. **Average Design Flow (identify units as MGD or MGY)**

3. **Identify receiving water for a surface water discharge**

4. **Location (town, range, and section)**

5. **List Effluent Limits:**
   - Minimum Dissolved Oxygen
   - \( \text{CBOD}_5 \)
   - Ammonia
   - Phosphorus
   - Total Inorganic Nitrogen (TIN)
   - *(from Groundwater Permit)*

6. **Will the proposed facility address documented total residual chlorine (TRC) violations?**
   - [ ] YES, proceed to 7
   - [ ] NO

7. **Will the proposed disinfection improvements involve either dechlorination or an alternative disinfection technology (e.g. ultraviolet disinfection, ozonation) that eliminates the use of chlorine?**
   - [ ] YES
   - [ ] NO
D. Data on Existing (Pre-Project) CSO and SSO Discharges

Information must be provided for each outfall directly associated with the proposed correction project.

<table>
<thead>
<tr>
<th>Outfall #</th>
<th>Receiving Stream</th>
<th>Location* Town/Range/Section</th>
<th>Estimated Overflow Volume (MG) for 1-year, 1-hour storm event</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
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</tbody>
</table>

Outfall # | Estimated Overflow Duration (Hours) | Estimated Annual Overflow Volume (MG) | Tributary Residential Population |
001        |                                    |                                     |                                |
|           |                                    |                                     |                                |

* A map showing the discharge locations by number is highly preferable and can be attached to this sheet.

E. Data on Future (Post-Project) CSO and SSO Discharges

List each outfall from Section E. For outfalls which will cease to function as combined sewer outfalls upon the completion of this project, simply enter “Eliminated” under Receiving Stream. List any new outfalls (e.g., for a retention/treatment basin) created by this project and include its associated discharge data.

<table>
<thead>
<tr>
<th>Outfall #</th>
<th>Receiving Stream</th>
<th>Location* Town/Range/Section</th>
<th>Estimated Overflow Volume (MG) for 1-year, 1-hour storm event</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
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</tr>
</tbody>
</table>

Outfall # | Estimated Overflow Duration (Hours) | Estimated Annual Overflow Volume (MG) | Detention Time Prior to Discharge for 1-year, 1-hour storm event |
001        |                                    |                                     |                                                             |
|           |                                    |                                     |                                                             |

* A map showing the discharge locations by number is highly preferable and can be attached to this sheet.

Please attach additional pages if necessary.
2. Enforcement Actions (0 or 300 points)

Is the proposed project necessary for compliance with a fixed-date construction schedule established by an order, permit, or other document issued by the DEQ, or entered as part of an action brought by the state against a municipality?

☐ YES, Proceed to Item A  or  ☐ NO, Proceed to Section 3

page ______  A. Copy of the enforcement action, order, permit or other DEQ document.

3. Population Data (30 to 100 points)

page ______  A. Existing residential population to be served by the proposed project:

page ______  B. Existing population of the POTW service area:

4. Dilution Ratio (25 to 100 points)

The data for the dilution ratio scoring category is collected from several questions in the Water Quality Severity Data section of this document and information in DEQ files, therefore, no action is required from the applicant for the completion of this item of the PPL Scoring Data Form. The primary purpose of this section is to clarify and document the figures utilized in the dilution ratio calculation. Please note that for new collection system projects, the existing discharge is calculated by multiplying the residential population to be served by the proposed project by 70 gallons per capita per day (gpcd). For projects with existing Groundwater and NPDES permits, the Discharge Monitoring Report (DMR) data will be obtained by the DEQ staff. For projects that discharge to regional facilities and do not have individual discharge permits, the existing discharge will be based on the average daily metered flow.

The following information will be completed by DEQ staff:

The dilution ratio is ___________ and was calculated from ___________/_____________.

(Specify the units for both the numerator and denominator).

5. Failing On-Site Septic Systems (0 or 100 points)

Does the project propose to correct failing on-site septic systems that have no suitable replacement?

☐ YES, Proceed to Item A  or  ☐ NO, Proceed to Section 6

page ______  A. Documentation of site limitations that prevent septic system replacement.

6. Septage Receiving/Treatment Facilities (0 or 100 points)

Does the project propose to construct, upgrade, or expand a septage receiving or treatment facility?

☐ YES, Proceed to Item A  or  ☐ NO

page ______  A. Description of the proposed septage facility improvements.
HRC OFFICE LOCATIONS

- **Bloomfield Hills**
  555 Hulet Drive
  Bloomfield Hills, MI 48302
  (248) 454-6300 | Fax: (248) 454-6312

- **Detroit**
  Buhl Building, Suite 1650
  535 Griswold Street | Detroit, MI 48226
  (313) 965-3330

- **Howell**
  105 West Grand River
  Howell, MI 48843
  (517) 552-9199

- **Kalamazoo**
  834 King Highway, Suite 107
  Kalamazoo, MI 49001
  (269) 665-2005

- **Delhi Township**
  2101 Aurelius Road, Suite 2
  Holt, MI 48842
  (517) 694-7760

- **Grand Rapids**
  801 Broadway NW, Suite 215
  Grand Rapids, MI 49504
  (616) 454-4286

- **Jackson**
  401 S. Mechanic Street, Suite B
  Jackson, MI 49201
  (517) 292-1295

- **Lansing**
  215 South Washington Square
  Lansing, MI 48933
  (517) 292-1488