MONDOVI, WI

Buffalo County

Wastewater Treatment Plant Facility Plan

Mondovi, WI

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Executive Summary

The City of Mondovi operates a wastewater treatment plant (WWTP) with a capacity of 385,000 gallons per day and current flows average about 209,000 gallons per day (54% of design capacity). The plant serves mostly domestic wastewater with some commercial and light industrial wastewater customers. The City's only significant industrial input was SPF North America, LLC which produces dog and cat food products; however, after implementation of the City's industrial permitting and sewer surcharge system in 2006, SPF stopped discharging wastewater to the City. A second industry, Organic Choice LLC, ceased operations in Mondovi in 2013. The plant also provides treatment to holding tank wastes received from unsewered areas outside the City limits. The plant is not in ideal condition; however, does currently meet all Wisconsin Department of Natural Resources (WDNR) effluent limits. Even though current effluent limits are being met, there is now a new phosphorus effluent limit that will be phased in over the next several years. The current treatment capabilities at the WWTP will not be able to meet the phosphorus limit without additional tertiary treatment or by utilizing another acceptable alternative to meet the phosphorus requirement.

The collection system has excessive infiltration and borderline excessive inflow that should be addressed by the City. Inflow and infiltration is rainwater or groundwater that enters the collection system through cracked pipes or illicit cross connections. The higher cost of treating this extra water is absorbed by all the rate payers. The collection system should continue to be videotaped by doing a sub-section of piping every year. Inflow from basement drains and sump pumps needs to be addressed and enforced by the City.

Alternatives:

The facility plan uses a 20-year design period for alternatives that were examined for the WWTP.

One alternative would be to upgrade the existing plant to meet future loadings; however, this scenario is not feasible due to the location of the plant, existing footprint, and the poor condition of existing facilities. A second alternative calls for the construction of an oxidization ditch process WWTP with reactive sand filtration (RSF) tertiary treatment at a new location. The third alternative is to utilize a new activated sludge sequencing batch reactor (SBR) process WWTP with an advanced biological nutrient recovery (ABNR) tertiary treatment at a new location. The fourth and final alternative utilizes a modified oxidization ditch process known as a Bio-Loop with ABNR tertiary treatment. Alternatives two, three and four would include fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage and RV waste receiving and monitoring, a new bio-solids handling process, and a new outfall location. The other alternative considered is to do nothing; however, this is not pursued because of the condition of existing facilities at the WWTP and the location. Also, projected future loadings could not be treated with the existing state of the plant and phosphorus reduction would not meet the future WDNR limit.

The capital costs were calculated for the alternatives and a present worth analysis along with a decision matrix method was used to evaluate the alternatives.

Recommended Alternative:

The City of Mondovi has maintained their existing WWTP extremely well over the last 50+ years. This time frame is longer than the service life of some WWTPs; however, the continuation of operation at the existing location with the upgrades of existing equipment would not be feasible in order to reliably treat wastewater to acceptable standards and without avoiding social and environmental impacts. The recommended alternative is for the City to construct a new WWTP at a new location. The new WWTP would utilize a SBR activated sludge technology with fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, ABNR tertiary treatment for phosphorus removal and a new outfall location. Upgrades would also be included in the overall project scope which consist of slip-lining of sewer segments and utility improvement projects along with the construction of a new lift station and forcemain to convey wastewater to the new WWTP location.

Funding:

Potential funding options for the long-term improvements include working with Rural Development (RD), Community Development Block Grant (CDBG), WDNR Clean Water Fund (CWF) or a combination of agencies. RD has grant and loan funding where the loan funding is paid back over a 40-year period. CDBG provides grant money and will match $2 dollars to very $1 dollar of community match. Mondovi is eligible for CDBG's public facilities program. WDNR CWF provides some grant, but mostly loan money over a 20-year period. All programs have advantages and disadvantages. Applications for funding with USDA RD and CDBG have begun. The City has already been awarded a $1,000,000 grant from CDBG with an $500,000 applicant match.

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1.0 Introduction

1.1 Planning Objectives

The purpose of this Facility Plan is to provide a long-range planning document for the City of Mondovi that will guide the City through potential changes to the Wastewater Treatment Plant (WWTP) over the next 20 years, based on the design year 2039. The intent is to develop and evaluate viable alternatives for the upgrade of the existing WWTP or the potential construction of a new WWTP for the City of Mondovi.

This Facility Plan includes an evaluation of the existing facilities both in terms of pollutant loadings and a detailed accounting of equipment and building conditions. Using historical data and demographic projections, future design parameters are established upon which the alternative design concepts are based. A comparison of the alternatives is made to arrive at a cost-effective option that will meet the community's needs for the next 20 years. This Facility Plan take into account the following items: total resources; cost, including monetary costs; environmental and social considerations; and other non-monetary factors.

1.2 Planning Background

The City of Mondovi operates a WWTP with a capacity of 385,000 gallons per day and current flows average about 214,000 gallons per day (56% of design capacity). The plant serves mostly domestic wastewater with some commercial and light industrial wastewater customers. The City's only significant industrial input was SPF North America, LLC which produces dog and cat food products; however, after implementation of the City's industrial permitting and sewer surcharge system in 2006, SPF stopped discharging wastewater to the City. A second industry, Organic Choice LLC, ceased operations in Mondovi in 2013. The plant also provides treatment to holding tank wastes received from unsewered areas outside the City limits. The plant is not in ideal condition; however, does currently meet all Wisconsin Department of Natural Resources (WDNR) effluent limits. Even though current effluent limits are being met, there is now a new phosphorus effluent limit that will be phased in over the next several years. The current treatment capabilities at the WWTP will not be able to meet the phosphorus limit without additional tertiary treatment or by utilizing another acceptable alternative to meet the phosphorus requirement.

The City of Mondovi's Wisconsin Pollutant Discharge Elimination System (WPDES) permit was reissued on September 1st, 2018. The current permit expires on June 30, 2023. The WWTP has met the limits in the WPDES permit the majority of the time over the past several years; however, at times the facility has not been able to comply with permit limits. Flows and loadings are covered in Section 3. A copy of the WPDES Permit is included in **Appendix A**.

A 2018 Compliance Maintenance Annual Report (CMAR) was completed by the City to assess the performance of the WWTP, determine any collection or treatment needs and measure the level of compliance with WPDES permit requirements over a calendar year. The CMAR was a useful tool to improve operation and maintenance of the plant. The CMAR also assisted in

determining key components that needed to be addressed as far as plant operation, capacity, and treatment issues which will be discussed further in this report. A copy of the 2018 CMAR is included in **Appendix B**.

A 2017 Final Phosphorus Compliance Alternatives Evaluation was completed by the City to investigate alternatives that would allow the City to meet the future phosphorus limit proposed by WDNR. Based on the evaluation, it was concluded that the City apply for a Statewide Multi-Discharger Economic Variance (MDV) as a short-term compliance alternative. The evaluation also stated that growth cannot occur within the City without a new WWTP at a new location due to the WWTP's age, condition, and location. All of these aspects will be described further in this report. A copy of the 2017 Final Phosphorus Compliance Alternatives Evaluation is included in **Appendix C**.

2.0 Project Planning Area

2.1 Location and Map

The City of Mondovi is located in the northeast corner of Buffalo County just south of Eau Claire County, at the intersection of US Highway 10 and State Highway 37. The existing WWTP is located in the southwest corner of the City limits and on a site owned by the City where it discharges to the Buffalo River. In Figure 1 below, a map displaying the WWTP location within the City limits is displayed. The current sanitary sewer service area is within the current municipal boundary. A complete map of the Mondovi wastewater collection system is included in **Appendix D**. The collection system map also displays the proposed upgraded areas and extensions that will be described further in this report.

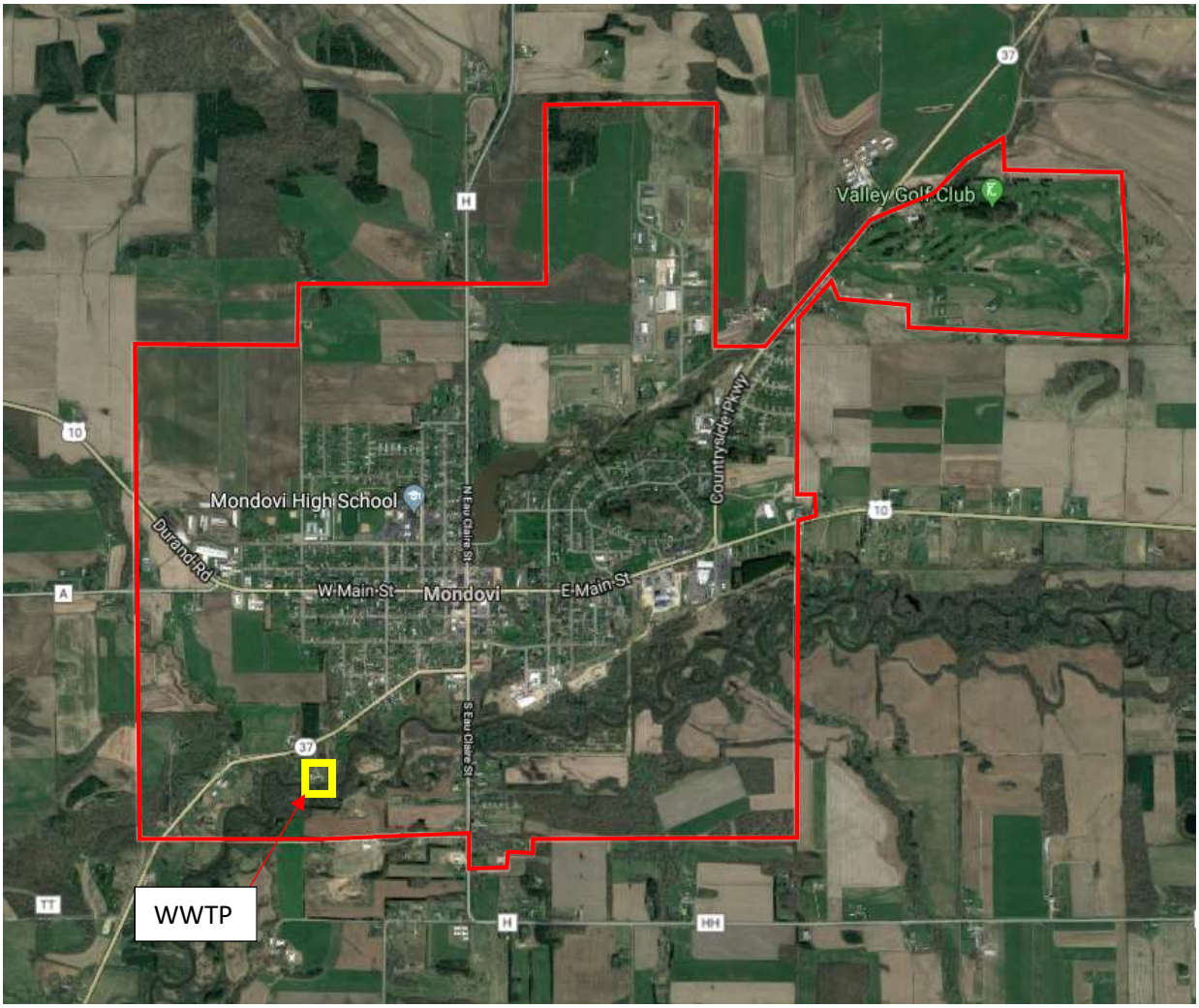

Figure 1 – City of Mondovi Limits with WWTP Location

The existing WWTP is located at 649 West Riverside Drive on an approximate 1.6 acre parcel. The WWTP site is adjacent to several residential buildings. Structures within a 500 foot radius setback distance include four residential homes. Figure 2 displays a 500 foot setback distance from the edge of the facility displayed in blue. The figure shows that the facility is not adequately separated from residential units if an expansion were to occur in the future. Besides being in close proximity to homes, the WWTP is also located in the 100 year floodplain and surrounded by wetlands. The parcel is encircled by a dike to minimize flooding threats; however, this aspect and the surrounding wetlands prohibit the possible expansion.

Figure 2 - WWTP location with 500-ft setback displayed in blue from the edge of the WWTP in orange

3.0 Background Information and Existing Conditions

3.1 Project History

A summary of key events related to the WWTP is provided below:

- 1970/1980's – WWTP placed into operation and modified
- 2006 – Chemical addition for phosphorus removal was added
- 2017 – Final Compliance Alternatives Plan
- 2018 – Compliance Maintenance Annual Report
- 2018/2019 – Facility Plan

3.2 Existing Facilities

3.2.1 WWTP Design

Mondovi's WWTP includes systems of varying ages, with certain components believed to be from the 1960's. The existing wastewater treatment process utilizes a Rotating Biological Contactor (RBC) process that includes chemical phosphorus removal. Influent flow first goes through a parshall flume for flow measurement and then to a screening and comminution process. A main lift station pumps the influent into a primary clarifier for the primary settling process and primary sludge is removed. The wastewater then flows through the RBC's where Ferric Chloride is added at the RBC effluent. Two clarifiers treat the process flow after chemical addition and chemical sludge is removed. The clarifiers allow solids to settle while the clear effluent is discharged to a chlorine contact tank which then discharges to the Buffalo River. The chlorination and dechlorination of the treated effluent is provided seasonally for disinfection. The primary and secondary sludge is pumped to the aerobic digester where the sludge is stored and periodically transported to the West Central Wisconsin Biosolids Facility (WCWBF). In Figure 3 below, a diagram detailing the processes currently in place is displayed.

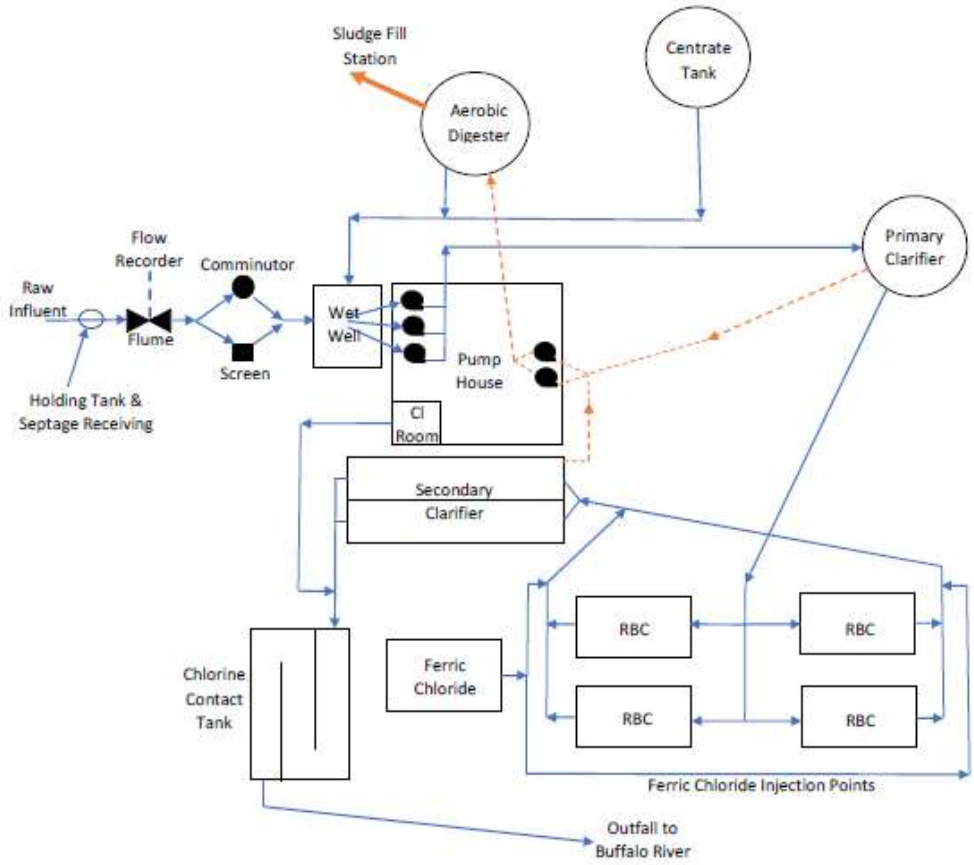

Figure 3 – City of Mondovi WWTP schematic

The design capacity of the existing plant is shown in **Table 1**.

Table 1 - Design Capacity of Existing Plant

Parameter	Design Capacity
Design Flow Capacity	385,000 Gallons Per Day (0.385 MGD)
Average BOD Loading	865 lbs/day

The City of Mondovi has a stable but slightly growing population and there are several commercial and light industrial wastewater producers in the City. The plant also reported that septage was received at the facility, but no affect was noticed on the plant performance. The current WWTP flows and loadings are detailed in **Table 2:**

Table 2 - Existing Flows & Loadings

Parameter	Existing Flows and Loadings
Annual Average Flow	0.214 mgd
Peak Week Flow	0.469 mgd
Peak Day Flow	0.6 mgd
Peak Hourly Flow	0.8 mgd (417 gpm)
Average BOD_5	486 lbs/day
Peak Month BOD_5	637 lbs/day
Peak Day BOD_5	651 lbs/day
Average TSS	400 lbs/day
Peak Month TSS	624 lbs/day
Peak Day TSS	1040 lbs/day
Average Total Phosphorus	12.3 lbs/day
Average TKN	105.5 lbs/day
Average Ammonia	69.5 lbs/day
*Based on testing from 2017 to 2019. TP, Ammonia, and TKN based on December 2018 sampling.	

3.2.2 Projected

The facility plan design year is 2039 based on a planning period of 20 years. The population projection which is covered in more detail in a later section calls for only minor fluctuations in the community's population over the next 20 years with a net gain of 33 population growth by the year 2040. Domestic flow and loading projections were determined by per capita flow amounts developed from existing flow conditions and typical per capita loading numbers. Commercial and institutional flows and loadings were developed from accepted design numbers based on the number of employees, hospital beds, students, etc. Another key aspect in the flow and loading projections was

the City's request for a septage receiving station at the WWTP. With limited amounts of land for septage haulers to spread wastes and because most WWTP around the Eau Claire and Buffalo County area cannot accept the high strength waste, there is potential for the City to use this as a revenue stream. Also, the City has stated they would like to make this receiving station accessible to RV's and camper trailers to provide outdoor recreation near the City. Therefore, septage waste was accounted for in the flow and loading calculations. The flow and loading design spreadsheet developed for the Mondovi WWTP future flow conditions is included in **Appendix E**.

The 2039 projected flows and loadings are summarized in **Table 3:**

Table 3 - Projected Flows & Loadings

Parameter	**Projected Flows and Loadings for Year 2039**
Annual Average Design Flow	0.300 mgd
Peak Week Flow	0.438 mgd
Peak Day Flow	0.584 mgd
Peak Hourly Flow	0.7 mgd (584 gpm)
Average BOD_5	1539 lbs/day
Peak Month BOD_5	2071 lbs/day
Peak Day BOD_5	2708 lbs/day
Average TSS	2091 lbs/day
Peak Month TSS	4030 lbs/day
Peak Day TSS	4685 lbs/day
Average Total-P	62.3 lbs/day
Average TKN	211 lbs/day
Average NH3	133 lbs/day
* Peak values were generated from multiplying the estimated future average values by the peaking factors for the existing flows and loadings	

Industrial Projections:

Mondovi's industrial park is located in the north east portion of the City. Currently, the WWTP only receives light industrial wastes. One of the larger industries that was accounted for was Marten Transport as this is listed as Mondovi's largest employer with 1000+ people. This industry does not necessarily use significant amounts of water for production so mostly domestic waste generated from employees and truck washing was calculated. The City has been coordinating with an industry that is planning to build a new plant in the community that would consist of pet food manufacturing. The new industry would not generate a significant amount of flow, but the wastewater strength of the new industrial user would significantly affect the waste stream being sent to the WWTP. On top of the two industries mentioned above, another 20,000 GPD and medium strength wastewater was accounted for to allow future commercial and

industrial expansion that could someday benefit the City. The projected flows and loadings are summarized in **Table 4**:

Table 4 – Projected Industrial Flows and Loadings

Industry	Flow (GPD)	BOD Loading (lbs/day)	TSS Loading (lbs/day)	Phosphorus (lbs/day)
Industry 1	6,186	120	329	19
Marten Transport	6500	55	65	3
Future Comm./Industry	20,000	22	26	1.2
* Industry 1 loadings are based on 2003 data from Industry 1's wastewater testing. Flow is based on 2017 numbers with a 10% increase.				

3.2.3 Effluent Limits

The City's current WPDES permit WI-0020591-10-0 was issued on September 1, 2018. A summary of the WPDES effluent limits are summarized in **Table 5** below. The current permit expires on June 30, 2023. The new permit includes Mondovi's Multi-Discharger Variance (MDV) requirements. A copy of the WPDES Permit is included in **Appendix A**.

Table 5 - Sampling Point (Outfall) 001 – EFFLUENT TO BUFFALO RIVER

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limits and Units**	**Sample Frequency**	**Sample Type**	**Notes**
$CBOD_5$	Monthly Avg	25 mg/L	3/Week	24-Hr Flow Prop Comp	
$CBOD_5$	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim limit effective through 9/30/2020. See the MDV/Phosphorus subsections and phosphorus schedules.
Phosphorus, Total	Monthly Avg	0.8 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim MDV effective through 10/01/2020. See the MDV/Phosphorus

					subsections and phosphorus schedules.
Phosphorus, Total		lbs/month	Monthly	Calculated	Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month.
Phosphorus, Total		lbs/yr	Annual	Calculated	Report the sum of the total monthly discharges for the calendar year on the Annual report form.
Chlorine, Total Residual	Daily Max	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept annually.
Chlorine, Total Residual	Monthly Avg	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept annually.
Chlorine, Total Residual	Weekly Avg	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept annually.
Fecal Coliform	Geometric Mean - Monthly	400 #/100mL	Weekly	Grab	Limit & monitoring apply May-Sept.
Fecal Coliform	Geometric Mean - Wkly	656 #/100mL	Weekly	Grab	Limit & monitoring apply May-Sept.
Copper, Total Recoverable	Daily Max	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Daily Max	0.17 lbs/day	Monthly	Calculated	
Copper, Total Recoverable	Monthly Avg	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Weekly Avg	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Acute WET		TU_a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below.
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below.

A request for new effluent limits was submitted to the WDNR. The effluent limit request is included in **Appendix F**. WDNR responded to the effluent limits request with the proposed future limits seen in **Table 6** below. The limits were made on a chemical-specific basis for a new discharge location into Harvey Creek with an annual average design flow of 0.300 MGD. The correspondence with WDNR can also be found in **Appendix F** with the effluent limits request.

Table 6 – Future Water Quality Based Effluent Limits Proposed for the new WWTP/Outfall Location

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
BOD_5						
May – October			22 mg/L 55.7 lbs/day	22 mg/L		
November – April			33 mg/L 82.3 lbs/day	30 mg/L		
TSS						
May – October			22 mg/L 55.7 lbs/day	22 mg/L		
November – April			33 mg/L 82.3 lbs/day	30 mg/L		
pH	9.0 s.u.	6.0 s.u.				
Ammonia Nitrogen						
April – May			16 mg/L	7.3 mg/L		1
June – September	Variable		18 mg/L	8.5 mg/L		
October – March			12 mg/L	5.7 mg/L		
Fecal Coliform May – September			**656#/100 mL** **geometric mean**	400#/100 mL geometric mean		2
Residual Chlorine May – September	38 μg/L		**38 μg/L**	**38 μg/L**		2
Phosphorus				0.171 mg/L	0.057 mg/L 0.14 lbs/day	

Footnotes:

1. The variable daily maximum ammonia nitrogen limit table corresponding to various effluent pH values may be included in the permit in place of the single limit. These limits apply year-round.

Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L
6.0 < pH ≤ 6.1	108	7.0 < pH ≤ 7.1	66	8.0 < pH ≤ 8.1	14
6.1 < pH ≤ 6.2	106	7.1 < pH ≤ 7.2	59	8.1 < pH ≤ 8.2	11
6.2 < pH ≤ 6.3	104	7.2 < pH ≤ 7.3	52	8.2 < pH ≤ 8.3	9.4
6.3 < pH ≤ 6.4	101	7.3 < pH ≤ 7.4	46	8.3 < pH ≤ 8.4	7.8
6.4 < pH ≤ 6.5	98	7.4 < pH ≤ 7.5	40	8.4 < pH ≤ 8.5	6.4
6.5 < pH ≤ 6.6	94	7.5 < pH ≤ 7.6	34	8.5 < pH ≤ 8.6	5.3
6.6 < pH ≤ 6.7	89	7.6 < pH ≤ 7.7	29	8.6 < pH ≤ 8.7	4.4
6.7 < pH ≤ 6.8	84	7.7 < pH ≤ 7.8	24	8.7 < pH ≤ 8.8	3.7

Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L
6.8 < pH ≤ 6.9	78	7.8 < pH ≤ 7.9	20	8.8 < pH ≤ 8.9	3.1
6.9 < pH ≤ 7.0	72	7.9 < pH ≤ 8.0	17	8.9 < pH ≤ 9.0	2.6

2. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7) are included in bold.
3. Monitoring in the fourth year of the permit term

3.2.4 Summary of Sanitary Sewer Collection System and I/I

Inflow and infiltration (I/I) is an important issue for wastewater systems. The collection of additional groundwater through direct connections (inflow) or cracks and leaks (infiltration) in piping/manholes can be a significant cost to the utility. If the utility is processing 20-50% more wastewater than what is billed to the customers, important funds are being spent on treating rainwater/groundwater(clearwater). Likewise, for new improvements, the amount of capital funds used for larger facilities to treat higher peak flows is often spent on infrastructure that is not utilized for large amounts of time.

The Mondovi wastewater collection system consists of 19.4-miles of sanitary sewers ranging between 6 to 18-inches. There are 3 lift stations and one WWTP in the utility system. Overall, the collection system meets the needs of the City; however, issues have come about from either old components, insufficient slopes of gravity mains, obstructions or the intrusion of roots. The collection system is not interconnected with any other system.

An I/I assessment was conducted for the City of Mondovi to determine the current clearwater loading to the WWTP. The first analysis conducted involved comparing precipitation data for Mondovi with the influent flowrates at the WWTP. In Figure 4, the relationship between high influent flows and large precipitation events can easily be distinguished. From the graph below, it can also be noted that there is also a significant amount of infiltration because of the downward trend of the influent flow in the low ground water months. The second analysis that was conducted involved verifying WDNR general indicator criteria for non-excessive I/I. The assessment concluded that the collection system does in fact have excessive infiltration and borderline excessive inflow that should be addressed by the City. The assessment document can be found in **Appendix G**.

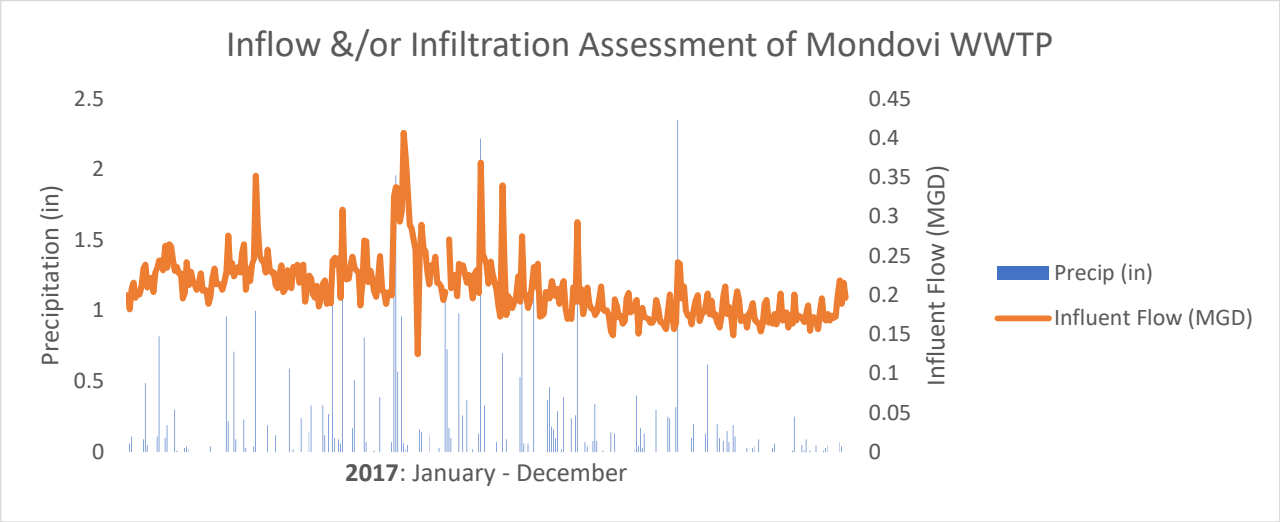

Figure 4 – Influent Flow at the Mondovi WWTP Compared to Precipitation Data for 2017

The higher cost of treating the extra water caused by I/I is absorbed by all the rate payers. The City does clean one quarter of the sanitary lines in the system every year; however, it is recommended that the City videotape a significant portion of the collection system each year to identify sources of I/I and prioritize pipe segments for replacement. New inflow sources are prohibited by ordinance and it is also recommended that current inflow from basement drains and sump pumps needs to be addressed and enforced by the City. At the beginning of the Facility Planning process the City did video tape portions of sanitary lines that were causing issues for the collection system. The City asked that these sanitary sewer lines be added to the Facility Plan scope because of the potential impact the I/I has on the WWTP. The documents from the sanitary line televising are included in **Appendix H**.

3.2.5 Conditions of Existing Facilities

Most of the existing facilities at the City of Mondovi's WWTP have either reached the end of their service life or are no longer seen as practical treatment techniques. In the following sections, figures displaying some of the existing facilities can be seen along with a description of existing facilities and ways in which certain components could be upgraded in the future when designing a new WWTP.

3.2.5.1 Headworks

In Figures 5 and 6 below components of the headworks can be seen. In Figure 5, the area for septage receiving is displayed. This is a component that should be upgraded to allow not only worker safety but also better flow and loading control so that septage haulers can be held accountable for the wastes discharged. Figure 6 displays the condition of the stairs leading to the wet well of the main lift station. The condition is extremely dangerous to worker safety.

Figure 5 - Headworks at WWTP

Figure 6 - Access to Wet well at the WWTP Main Lift Station

3.2.5.2 Control Building/Pumping Building

The components of the control building show significant signs of age. In Figures 8 and 9, the pumps located in the basement of the control building are displayed. Due to the age of the pumps, it is difficult for the operator to find some parts that are no longer being manufactured. The stairs to the basement displayed in Figure 10 are also a concern for worker safety and the laboratory displayed in Figure 11 is congested and out of date.

Figure 7 - WWTP Control Building

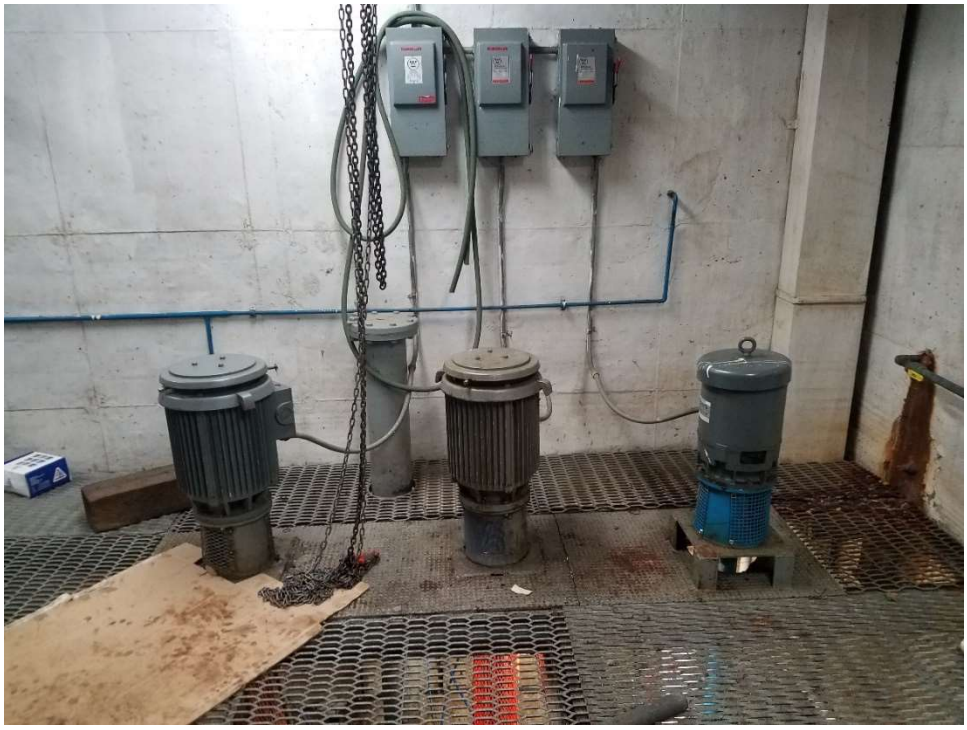

Figure 8 - WWTP Main Lift Station Pumps

Figure 9 - WWTP Sludge Pumps

Figure 10 - Main Access to Control Building and Stairs to the Pump Room Below Building

Figure 11 - Control Building Lab

3.2.5.3 Primary Clarifier

There are no major issues with the existing primary clarifier displayed in Figures 12, 13, and 14; however, it was noted that this structure seems to be towards the end of it's service life. A note for future design would be to place a dome over a new clarifier to help avoid issues with winter temperatures and avoid excessive rainfall entering the tank. One positive of the existing clarifier is it's hydraulic grade line elevation. After the main lift station pumps influent to the primary clarifier, the wastewater can gravity flow through the rest of the treatment process avoiding the need for more pumps.

Figure 12 - Primary Clarifier at WWTP

Figure 13 - East Side of Clarifier

Figure 14 - West Side of Clarifier

3.2.5.4 Rotating Biological Contactors

Some of the RBC units are currently functioning properly to meet the effluent limits; however, the RBC process would not necessarily handle large slug loads that may arise from future industrial expansion. Currently, a bearing is out on one of the trains and the operators are having a difficult time with the maintenance.

Figure 15 - RBC Units at the WWTP

Figure 16 - Effluent from North RBC Units

3.2.5.5 Secondary Clarifier

Much like the primary clarifier, the secondary clarifiers structures are at the end of their service life and one of the secondary clarifiers is out of service.

Figure 17 - Secondary Clarifiers at WWTP

Figure 18 - Secondary Clarifier Tank Not in Operation

3.2.5.6 Chemical Building (Ferric Chloride)

The chemical building is one of the newer components of the existing WWTP and is in relatively good condition. The chemical building was placed into operation in order to add ferric chloride prior to the secondary clarifiers in order to chemically remove phosphorus. The removal will not meet future phosphorus effluent limits; however, the chemical building layout at the existing building is a concept that could be used in a new WWTP prior to tertiary treatment for phosphorus removal.

Figure 19 - Ferric Chloride Day Tank and Pumps

Figure 20 - Ferric Chloride Bulk Tank

3.2.5.7 Chlorine Contact Tank

Chlorine is added for disinfection of the effluent wastewater during certain months of the year when there is a chance for recreation users of the Buffalo River to come into contact with the effluent. The structure itself is not failing and the concept does a good job of disinfection; however, for the future WWTP it is recommended that UV disinfection be used to replace the chlorine disinfection process. Not only is this a much more efficient process for disinfection, but it also prevents workers from being exposed to dangerous chemicals.

Figure 21 - Chlorine Contact Tank at WWTP

3.2.5.8 Aerobic Digester & Centrate Tank

Of all the structures at the existing WWTP, the aerobic digesters and centrate tank seem to be in the worst condition. For a new WWTP design, a much different bio-solids handling process will be analyzed to avoid large structures seen in the Figures below and to avoid having to truck bio-solids to WCWBF in order to reduce annual operating costs.

Figure 22 - Centrate Tank at the WWTP

Figure 23 - Aerobic Digester at the WWTP

Figure 24 - Door of the Aerobic Digester

Figure 25 - Blowers for the Aerobic Digester

3.2.5.9 Facility Infrastructure (Piping, Electrical, Concrete, Controls)

Due to the age of the WWTP, it is no surprise that a significant amount of the infrastructure is starting to fail. Crumbling concrete, aged pumping and blower equipment, rusting and leaking of process piping, deteriorating electrical equipment, and an obsolete controls system are the major issues with the infrastructure at the existing WWTP. The Figures below display images of the issues described.

Figure 26 – Leaking Yard Hydrant Near the Aerobic Digester

Figure 27 - Electrical Box Located Inside Aerobic Digester

Figure 28 - Piping and Concrete on the Roof of the Aerobic Digester

Figure 29 - Remote Monitoring System in Control Billing

Figure 30 - Control Panel at the WWTP

4.0 Need for Project

4.1 Effluent Limits

The current WWTP meets all effluent limits monitored by WDNR according to the 2017-2019 data analyzed; however, with larger projected loadings to accommodate residential and commercial expansion and industrial growth, the existing treatment process would not continue to meet the current effluent limits. Also, the most important driving factor is the future phosphorus limit of 0.057 mg/L that will be imposed by WDNR. With the existing treatment process at the WWTP, there would be no way of meeting this new stringent limit with the current phosphorus removal technique. Additional tertiary treatment would have to be added at either the existing plant or a completely new WWTP. Major upgrades will need to be completed in order for the Mondovi WWTP to meet future WDNR effluent limits.

4.2 Health, Sanitation, & Safety

The new plant design will need to address health and safety issues at the plant. With process design, it will be important to minimize health risk to the plant operators. An upgrade of the fine screen and grit removal process will include a sanitary disposal method that minimizes contact the operators will have with waste product. The upgrade to the biosolids system will include a potential use of sludge treatment with reed beds which would reduce the chemical addition process to minimize operator contact with the chemicals. This new process would also reduce the need to truck the sludge to WCWBF and minimize more human contact with hazardous

waste. The disinfection upgrade will look at possible Ultra-Violet (UV) disinfection to not only minimize operator contact with chemicals but also reduce the residual chlorine being discharged. The upgrade will also include the addition of an ABNR tertiary treatment system for phosphorus removal. This would mean the reduction of chemical usage for phosphorus removal. By reducing the amounts of chemicals stored and used at the facility, worker safety is improved significantly.

4.3 System O & M

Collection system operation and maintenance (O&M) consists of inspection, evaluation, preventative maintenance, and cleaning of sewer mains and laterals, manholes and lift stations to maintain flow and mitigate inflow and infiltration. O&M varies by the equipment type, condition, age and operating history with equipment identified as critical receiving maintenance at greater frequencies. It is recommended that the City update their Capacity, Management, Operation, and Maintenance (CMOM) plan as often as possible. This allows the City to keep track of vital information regarding the collection system, WWTP, equipment inventory and emergency response. By updating the CMOM on a yearly basis, O&M is planned out and documented and also it outlines future sanitary system upgrades.

Video inspection of the system is one of the best tools for assessing maintenance concerns of the collection system infrastructure. As previously stated, it is recommended that the City continue to televise portions of the collection system each year so that certain segments can be prioritized for future utility improvement projects.

4.4 Growth

The 2010 Census population for the City of Mondovi was 2,777 people (U.S. Census 2010). Projections are for the population to remain relatively stable with a slight fluctuation over the years resulting in a population growth of 1.2% by the year 2,040. Per NR 110.09(2)(j)(1), Regional Planning Commission population estimates must be used. Contact was made with the Mississippi River Regional Planning Commission (MRRPC) regarding their population estimate for the City of Mondovi. It was stated by the MRRPC that they utilize projections from the Wisconsin Department of Administration – Demographic Services Center. The projection trend is outlined in **Table 6** below:

Table 6 – City of Mondovi Municipal Projections 2010-2040

2010 Census	2015 Projection	2020 Projection	2025 Projection	2030 Projection	2035 Projection	2040 Projection
2,777	2,760	2,785	2,825	2,845	2,860	2,810

5.0 Alternatives Identification

Several alternatives have been considered for addressing the issues found at the WWTP. The assumptions used for developing the alternatives are as follows:

- Each alternative must include phosphorus reduction treatment to obtain the future WDNR limit.
- Each alternative includes a plan to expand loading capacity.
- Each alternative takes into consideration the addition of an industrial user.

One alternative would be to upgrade the existing plant to meet future loadings; however, this scenario is not feasible due to the location of the plant, existing footprint, and the poor condition of existing facilities. A second alternative calls for the construction of a new oxidization ditch activated sludge process WWTP at a new location. The third alternative is to utilize a new sequencing batch reactor (SBR) activated sludge process WWTP at a new location. The fourth alternative involves the construction of a new Bio-loop activated sludge process WWTP at a new location. Both alternative two, three and four would include fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, tertiary treatment for phosphorus removal and a new outfall location. The other alternative considered is to do nothing; however, this is not pursued because of the condition of existing facilities at the WWTP and the location. Also, projected future loadings could not be treated with the existing state of the plant and phosphorus reduction would not meet the future WDNR limit.

Water Quality Trading (WQT) and the Multi-Discharger Variance (MDV) are two methods to temporarily delay phosphorus treatment. WDNR has made these options available for communities to reduce phosphorus from runoff either within the municipality but more realistically outside of the municipality or to meet phosphorus limits at moderate but increasing strict levels during subsequent permit cycles. WQT has a low initial cost but can have much higher ongoing cost with the subsequent addition of an additional tertiary treatment like that of the filtration or membrane process. The City has already applied for a MDV permit which required the City to increase sewer rates to reach at least one percent of the median household income (MDI). The MDV for phosphorus was an effective tool for Mondovi to temporarily relieve the stringent phosphorus limits that will be put in place. An evaluation of economic criteria will be analyzed further in Section 6 and 7.

As previously stated in the Facility Plan, the existing location of the WWTP is not a feasible location for the upgrade of existing facilities or a new WWTP to be constructed. Therefore, three separate locations were analyzed throughout the City limits to determine a location that would be the best option for a new WWTP. Factors considered included the proximity to residential, commercial, or industrial structures and also how the new WWTP would connect with the existing wastewater collection system. The three alternative locations can be seen in Figure 31. Location 1 would be located just northwest of the existing WWTP. The benefits of this location are the level topography, buffer distance from residential, commercial, and industrial areas and the proximity to the existing WWTP so that the existing collection system could be conveyed to the new WWTP with a short forcemain. The negative of this location is that there is a substantial distance from the existing outfall location. Location 2 would be located just south and across the river from the existing

WWTP. The benefits of this location are the isolation because this is where the City landfill is located and the proximity to the original outfall location. The negative is that the majority of all the wastewater from the City would have to be rerouted and sent underneath the Buffalo River. Location 3 would be located on the northern end of the City limits near the industrial park. The benefits of this location are the isolation from residential areas but the proximity to industrial users which would benefit the City in case there was a substantial amount of industrial expansion in the industrial park. The negative of this location is the amount of work and money it would cost for a forcemain that would convey wastewater from the south end of the City to the north and also the piping that would be needed to discharge the effluent wastewater to a body of water. Based on the most practical engineering judgement and also the City's input, it was concluded that Location 1 should be used for the alternative's analysis process.

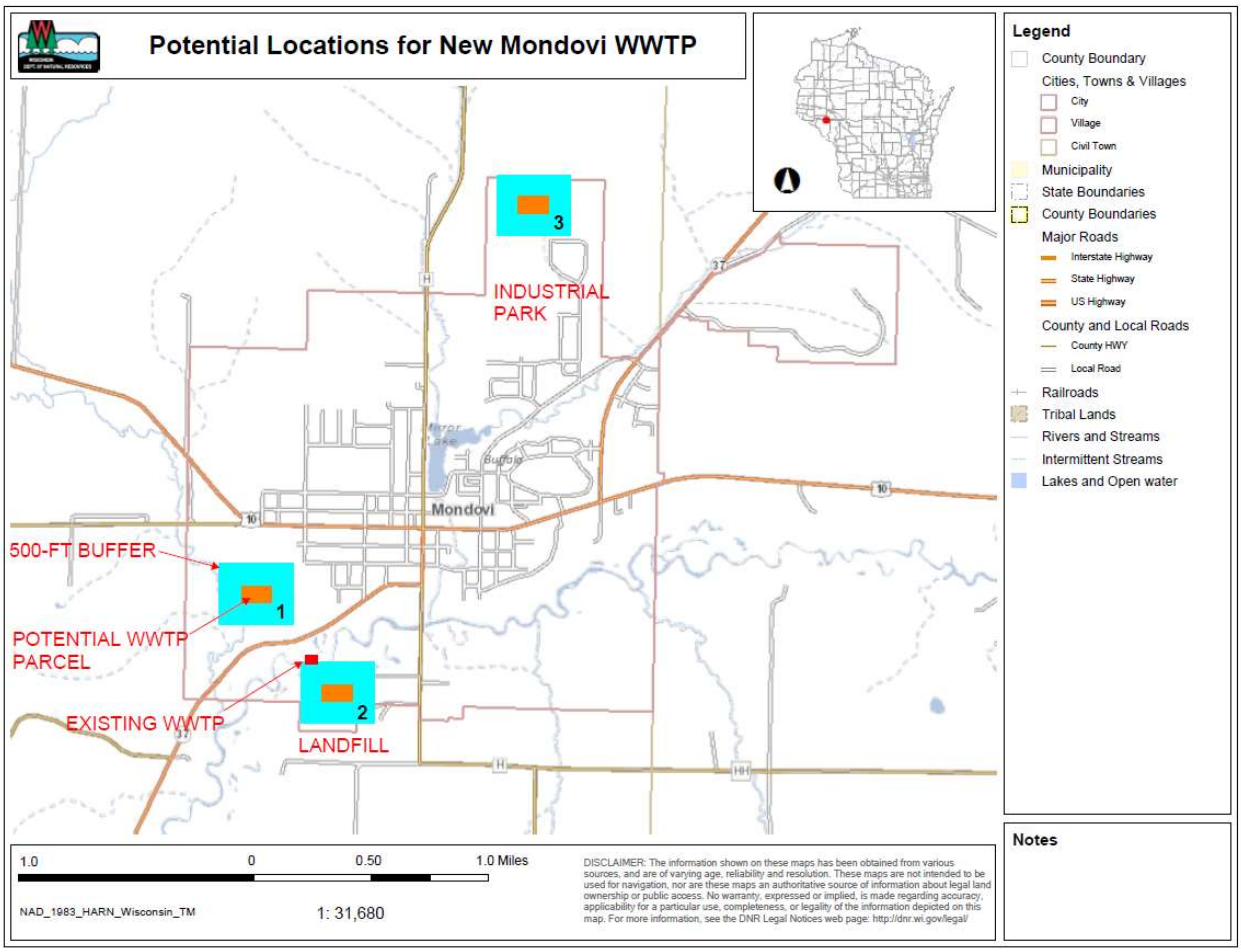

Figure 31 - Alternative Locations for New Mondovi WWTP

5.1 Alternative 1 – Existing WWTP Upgrades

This alternative was not pursued because of the existing WWTP's location as previously mentioned. The WWTP is surrounded by wetlands and a flood dike so the site has no room for expansion. Also, it has been stated by City officials that flood waters still infiltrate the dikes in high water situations. Due to this reason and also the state of the existing facilities as described in Section 3.2.5, it was concluded that this alternative would not be feasible.

5.2 Alternative 2 - New Oxidization Ditch WWTP with RSF Tertiary Treatment at New Location

This alternative includes fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, reactive sand filtration (RSF) tertiary treatment for phosphorus removal and a new outfall location.

The advantage of the oxidization ditch technology is that it can handle variable flows and loadings along with the ease of operation as compared to other technologies. The fact that an oxidization ditch system can handle variations is a benefit that allows for future expansion and allows the WWTP to handle industrial slug loadings. The disadvantage of the oxidization ditch technology is the larger footprint due to the oxidization ditch basins and the clarifiers. The advantage of the RSF technology is a smaller footprint and ease of operability. The disadvantage of this technology is the increase in sludge production meaning larger solids handling components at the WWTP and the continued use of chemicals for phosphorus removal. The design summary for the proposed oxidization ditch process and RSF tertiary treatment for this alternative can be found in **Appendix I**.

5.3 Alternative 3 - New SBR WWTP with ABNR Tertiary Treatment at New Location

This alternative includes fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, advanced biological nutrient recovery (ABNR) tertiary treatment for phosphorus removal and a new outfall location.

The advantage of this alternative is that the SBR treatment process could take place in a single/dual reactor tank and clarifiers would not be required. Therefore, the process would have a much smaller footprint than other technologies. The disadvantage of this process is the high operating cost due to more mechanical equipment and the operating complexity of the system. The advantage of the ABNR process is that chemicals would no longer have to be used, there is a potential revenue stream from the produced algae bi-product, and the entire process is extremely sustainable. The disadvantage of the process is the larger footprint, complexity of operability, and a larger initial investment. The design summary for the proposed SBR process and ABNR tertiary treatment for this alternative can be found in **Appendix J**.

5.4 Alternative 4 – New Bio-loop WWTP with ABNR Tertiary Treatment at New Location

This alternative includes fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, advanced biological nutrient recovery (ABNR) tertiary treatment for phosphorus removal and a new outfall location.

The Bio-Loop process is rather similar to an oxidization ditch type technology. The advantage of the bio-loop technology is that it can handle variable flows and loadings. The fact that a bio-loop system can handle variations is a benefit that allows for future expansion and allows the WWTP

to handle industrial slug loadings. The disadvantage of this process as compared to Alternative 3 is a larger footprint; however, the advantage as compared to Alternative 2 is a smaller ditch footprint to allow for a sorter Hydraulic Residence Time (HRT) that would allow the effluent from secondary treatment to meet the influent feed criteria of the ABNR process. Again, as previously stated, the advantage of the ABNR process is that chemicals would no longer have to be used, there is a potential revenue stream from the produced algae bi-product, and the entire process is extremely sustainable. The disadvantage of the ABNR process is the larger footprint, complexity of operability, and a larger initial investment. The design summary for the proposed Bio-loop process and ABNR tertiary treatment for this alternative can be found in **Appendix K.**

6.0 Alternative Analysis

6.1 Phasing of Improvements

The first step in the WWTP improvement project was for the City of Mondovi to apply for various funding options such as Rural Development (RD) and Community Development Block Grant (CDBG) which involved submitting applications along with a Preliminary Engineering Report (PER) and an Environmental Report (ER). The City has already been awarded a $1,000,000 CDBG grant with $500,000 applicant match for the utility extension to the new WWTP location. The City is currently finalizing a funding application to USDA RD. The next step will be to develop the plans and specifications for the proposed WWTP utility extension project and WWTP project and then have final plans and specifications to WDNR for the WWTP utility extension project by November of 2019 and final plans and specifications to WDNR for the WWTP project by May of 2020. Then construction of the utility upgrades needed for moving the WWTP location (i.e. access street, watermain extension, forcemain and sanitary) would begin in May of 2020 and construction of the new WWTP to meet water quality based effluent limits will begin in Fall of 2020. Construction of the WWTP upgrades would be complete and the WWTP shall be up in running by Spring of 2022.

During the time period between developing the plans and specifications and the final completion of the project, it is recommended that wastewater collection system upgrades take place. This would involve televising sanitary sewer segments to check for I/I, slip-lining certain sections of sanitary sewer pipe, and also entire utility improvement projects. Therefore, a certain amount of cost was allotted to collection system improvements in the Capital Cost Present Worth Summary seen in Section 7.

6.2 Energy Reduction

Energy reduction is a key component of any WWTP improvement. Motors used in the main process will utilize variable frequency drive (VFD) technology to reduce wasted energy when the motor is not operating a full load. Energy efficient LED lighting will be used in the design of the new plant facilities. The new SCADA control system will utilize process instrumentation to automatically adjust the energy supplied to various processes to match the required energy of each process. Solar energy panels may be utilized where plant area allows a solar array to utilized energy from the sun to supplement the plant's electrical loads. The use of reed beds for

sludge treatment would greatly reduce the energy costs needed for digestion of solid waste at the new WWTP.

6.3 Economic Analysis

The alternatives were evaluated using cost information prepared for each option. Present worth analysis is used to more accurately compare cost items that have shorter life expectancies and operation and maintenance cost items.

6.4 Nonmonetary Analysis

Each of the alternatives was also evaluated for environmental and social considerations. Since the existing WWTP does not have the appropriate buffer zone to residential property, the social considerations are increased for the update of the existing WWTP alternative. Of the three alternatives being considered, the alternative of updating the existing WWTP has the largest social impact on the community and the three other alternatives involving the construction of a new WWTP at a new location would have the same social impact that would be substantially less.

6.5 Environmental Impact

The existing WWTP is located in a flood plain and surrounded by wetlands; therefore, alternative one would have the largest environmental impact. The proposed new WWTP locations are not in the floodplain or located in wetlands. Also, buffer distances from residential and commercial properties are maintained. During construction, best management practices will be utilized to limit construction sediment runoff.

The SBR WWTP has the largest energy consumption of the three alternatives.

The alternatives include energy reduction components such as Variable Frequency Drives, LED lighting and the potential for solar energy panels. The SBR and modified oxidization ditch WWTP utilize an ABNR process that reduces the need for chemical phosphorus removal, utilizes the suns UV rays in a greenhouse setting to perform the tertiary treatment process, and provides beneficial reuse of the algae bi-product.

The ER that was completed for the funding applications is included in **Appendix L**.

7.0 Alternatives Selection

The alternatives were evaluated using cost information prepared for each option. The cost estimates are included in **Appendix M**. All cost figures are in 2019 dollars and are based on preliminary flow volumes and loadings. A comparison of capital costs does not adequately compare the alternatives from a financial basis. A more complete cost analysis includes considering operation, maintenance and salvage costs for a life cycle cost analysis to calculate a present worth value. Present worth value is calculated by taking the long-term costs and including an interest adjustment to account for the time value of money. The interest rate of 3.625% that is used is determined by WDNR. A

summary of the capital costs and present worth costs is summarized in **Table 7**. The present worth analysis is included in **Appendix N.**

Table 7 – Capital Cost Present Worth Summary

Alternative	WWTP, Utility Extension & Collection System Improvements Capital Cost	Total Present Worth
1	Not Pursued	Not Pursued
2	$18,192,000	$26,374,500
3	$18,256,000	$26,358,000
4	$21,875,000	$28,650,000

The City of Mondovi also evaluated the alternatives by using a decision matrix. The decision matrix takes into account capital costs, present worth value, environmental concerns and social concerns. The decision matrix for this project is shown in **Table 8**.

Table 8 – Decision Matrix

Mondovi WWTP Alternatives 1 = Not Desirable 2 = Neutral 3 = Desirable				
	Upgraded WWTP	**Ox Ditch w/RSF Treatment**	**SBR w/ABNR Treatment**	**Bio-loop w/ABNR Treatment**
Capital Cost	1	3	2	1
Present Worth Value	1	2	3	1
Environmental Concerns	1	2	3	3
Social Concerns (Impact on Public)	1	2	2	2
Total	**4**	**9**	**10**	**7**

8.0 Proposed Project (Recommended Alternative)

Based on the information in the Alternatives Selection Section above, the recommended alternative is a new WWTP at a new location utilizing a SBR activated sludge technology. As previously stated, this alternative would include fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, ABNR tertiary treatment for phosphorus removal and a new outfall location.

The advantage of this alternative is the smaller basin footprint and the ease of operation for the WWTP operators that have many other public works responsibilities for the City of Mondovi and also the variable flows and loadings that this technology can handle over the 20 year planning period. This alternative gives the City of Mondovi a technology that can handle future residential, commercial, and industrial expansion and offers the City reliability over the service life of the new WWTP. The tertiary treatment process included with this alternative provides the lowest present worth value because of the decrease in annual costs due to reduced chemical usage, smaller sized

solids handling components, and a potential revenue stream from the algae bi-product. The SBR and ABNR process is also scalable which allows expandability if future flows were to greatly increase past the 20 year projections in the future.

This alternative also includes upgrades to the City's wastewater collection system to reduce I/I at the source and to invest in the City's sanitary sewer infrastructure so that the collection system can operate for many years to come. An addition to the collection system will be a new lift station and forcemain which will convey wastewater from the manhole that currently discharges to the existing WWTP on State Highway 37 to the new WWTP location. A preliminary site map of the project area which includes the utility extension and WWTP locations can be seen in **Appendix O**. On this site map is another proposed City project. The City is looking to develop an industrial park adjacent to the new WWTP location area; therefore, industrial park utility upgrades can also be seen on the site map. Also included in the Appendix is a WWTP site map that includes the proposed layout and footprint of the different WWTP components.

9.0 Public Hearing

The facility plan required an advertised public hearing. The first public hearing meeting date was Tuesday September 18th, 2018. At the public hearing, the City council and residents asked that a new activated sludge WWTP be constructed at Alternative Location 1 and that the City should move forward with obtaining project funding through RD. The City immediately started the application process for RD after the public hearing; however, it was not until after the first public hearing that the City elected to utilize the ABNR tertiary treatment process in the alternative analysis. Upon further preliminary engineering and analysis, a second public hearing was held on January 22nd, 2019. At this public hearing, the ABNR tertiary treatment process was introduced to the City council and residents along with the updated alternatives analysis. A final public hearing was held on September 10th, 2019 before submitting the finalized facility plan. In this public hearing, the final proposed alternative was outlined further and the construction budgets and funding sources for all components were explained. The City Council approved the submittal of the Facility Plan to WDNR. The public hearing notices, sign in sheet and summary are located in **Appendix P**.

10.0 Conclusion

The City of Mondovi has maintained their existing WWTP extremely well over the last 50+ years. This time frame is longer than the service life of some WWTPs; however, the continuation of operation at the existing location with the upgrades of existing equipment would not be feasible in order to reliably treat wastewater to acceptable standards and without avoiding social and environmental impacts. The recommended alternative is for the City to construct a new WWTP at a new location. The new WWTP would utilize a SBR technology with fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, ABNR tertiary treatment for phosphorus removal and a new outfall location. Upgrades would also be included in the overall project scope which consist of slip-lining of sewer segments and utility improvement projects along with the construction of a new lift station and forcemain to convey wastewater to the new WWTP location. The City will be working with Rural Development and Wisconsin CDBG to obtain funds that will aid the City in the WWTP, WWTP utility extension and collection system upgrade construction projects.

Table of Appendices

Appendix A

WPDES Permit

WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

City of Mondovi

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
649 W. Riverside Ave., Mondovi, WI
to
the Buffalo River, located in the Buffalo River Watershed of the Buffalo-Trempealeau River Basin in Buffalo County

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Lacey Hillman
Wastewater Field Supervisor

August 20, 2018
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - September 01, 2018 **EXPIRATION DATE - June 30, 2023**

TABLE OF CONTENTS

1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
701	Representative influent samples shall be collected after the comminutor, but prior to the primary clarifier.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - INFLUENT AFTER COMMINUTOR

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Continuous	Continuous	
BOD_5, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
$CBOD_5$		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	

2 Surface Water Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Representative effluent samples (other than those for chlorine and fecal coliform) shall be collected before the chlorine contact chamber; those for chlorine and fecal coliform shall be collected after the chlorine contact chamber and dechlorination.

2.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point (Outfall) 001 - EFFLUENT TO BUFFALO RIVER

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
$CBOD_5$	Monthly Avg	25 mg/L	3/Week	24-Hr Flow Prop Comp	
$CBOD_5$	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim limit effective through 9/30/2020. See the MDV/Phosphorus subsections and phosphorus schedules.
Phosphorus, Total	Monthly Avg	0.8 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim MDV effective through 10/01/2020. See the MDV/Phosphorus subsections and phosphorus schedules.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Total		lbs/month	Monthly	Calculated	Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month.
Phosphorus, Total		lbs/yr	Annual	Calculated	Report the sum of the total monthly discharges for the calendar year on the Annual report form.
Chlorine, Total Residual	Daily Max	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept
Chlorine, Total Residual	Monthly Avg	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept
Chlorine, Total Residual	Weekly Avg	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	Weekly	Grab	Limit & monitoring apply May-Sept
Fecal Coliform	Geometric Mean - Wkly	656 #/100 ml	Weekly	Grab	Limit & monitoring apply May-Sept
Copper, Total Recoverable	Daily Max	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Daily Max	0.17 lbs/day	Monthly	Calculated	
Copper, Total Recoverable	Monthly Avg	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Weekly Avg	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Acute WET		TU_a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below

2.2.1.1 Annual Average Design Flow

The annual average design flow of the permittee's wastewater treatment facility is 0.385 MGD.

2.2.1.2 MDV (Multi-Discharger Variance) Requirements

Optimization: The permittee shall continue to optimize performance to control phosphorus discharges in accordance with s. 283.16(6), Wis. Stats. See the Schedules section for optimization requirements.

Watershed Provisions: The permittee is required to implement watershed measures to reduce the amount of phosphorus entering the receiving water. The permittee has selected the following approved watershed measure.

Payment to County for Phosphorus Reduction: The permittee shall make payments for phosphorus reduction to the county or counties approved by the Department per s. 283.16(8), Wis. Stats. The permittee shall make a total payment by March 1 of each year in the amount equal to the per pound amount of $52.02 times the number of pounds by which the effluent phosphorus discharged during the previous year exceeded the permittee's target value or $640,000, whichever is less. The target value is 0.2 mg/L per s. 283.16(1)(h), Wis. Stats., and is applicable during the months that the MDV is in effect. The MDV is in effect year-round. Refer to the Schedules section for the scheduled annual requirements.

Annual Payment Calculation: The annual payment is equal to the phosphorus load that exceeds the target value multiplied by $52.02 per pound. Use the steps shown below to calculate the annual payment. In addition, the Department shall send a statement to the permittee specifying total payment due to the participating counties each year in accordance with the Schedules section.

Annual Payment = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound
Calculation Steps:
●Calculate pounds of phosphorus discharged for each month that the MDV is in effect:

Monthly Phosphorus Load (lbs/month) = Total Monthly Flow (MG) × Monthly Avg. TP effluent conc. (mg/L) × 8.34

●Sum the lbs/month discharged for the months that the MDV is in effect to calculate the annual phosphorus load:

Annual Phosphorus Load (lbs/year) = ∑ [Monthly Phosphorus Load (lbs/month)]

●Calculate the Target Load (lbs/month) for each month that the MDV is in effect.
Target Value = 0.2 mg/L:
Monthly Target Load (lbs/month) = Total Monthly Flow (MG) × 0.2 mg/L × 8.34

●Sum the lbs/month for the months that the MDV is in effect to calculate the Annual Target Load:

Annual Target Load (lbs/year) = ∑ [Monthly Target Load (lbs/month)]

●Calculate the annual payment:
Annual Payment ($) = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound

2.2.1.3 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Buffalo River

Instream Waste Concentration (IWC): 5%

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 30, 10, 3, 1% (if the IWC ≤30%) and any additional selected by the permittee.

Acute and Chronic WET Testing Frequency: Acute and Chronic tests shall be conducted in the following quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.

- 4th quarter (Oct-Dec) 2020
- 2nd quarter (April-June) 2022

WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in 2nd quarter (April-June) 2024.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 20 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90 day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3 Land Application Requirements

3.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
002	As long as sludge is shipped to the West Central Wisconsin Biosolids Facility (WCWBF) for disposal, representative sludge samples shall be collected once per year and monitored for List 1. Sludge samples shall be collected prior to hauling and test results shall be reported on Form 3400-49 "Waste Characteristics Report". Hauled sludge reports shall be submitted on Form 3400-52 "Other Methods of Disposal or Distribution Report" following each year that sludge is hauled.

3.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 002 - SLUDGE TO WCWBF

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Annual	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Annual	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Annual	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Annual	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Annual	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Annual	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Annual	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Annual	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Annual	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Annual	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Annual	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Annual	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Annual	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Annual	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Annual	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Annual	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Annual	Composite	

4 Schedules

4.1 Phosphorus Schedule - Continued Optimization

The permittee is required to optimize performance to control phosphorus discharges per the following schedule.

Required Action	Due Date
Optimization: The permittee shall continue to implement the optimization plan as previously approved to optimize performance to control phosphorus discharges. Submit a progress report on optimizing removal of phosphorus by the Due Date.	06/30/2019
Progress Report #2: Submit a progress report on optimizing removal of phosphorus.	06/30/2020
Progress Report #3: Submit a progress report on optimizing removal of phosphorus.	06/30/2021
Progress Report #4: Submit a progress report on optimizing removal of phosphorus.	06/30/2022
Progress Report #5: Submit a progress report on optimizing removal of phosphorus.	06/30/2023

4.2 Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L)

This compliance schedule requires the permittee to achieve compliance with the specified MDV interim effluent limit in accordance with s. 283.16(6), Wis. Stats., by the due date.

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent discharges of phosphorus with conclusions regarding compliance.	12/31/2018
Action Plan: Submit an action plan for complying with the specified interim effluent limit. If construction is required, include plans and specifications with the submittal.	06/30/2019
Initiate Actions: Initiate actions identified in the plan.	03/31/2020
Complete Actions: Complete actions identified in the plan and achieve compliance with the specified interim effluent limit.	10/01/2020

4.3 Phosphorus Payment per Pound to County

The permittee is required to make annual payments for phosphorus reductions to the participating county or counties in accordance with s. 283.16(8), Wis. Stats, and the following schedule. The price per pound will be set at the time of permit reissuance and will apply for the duration of the permit.

Required Action	Due Date
Annual Verification of Phosphorus Payment to County: The permittee shall make a total payment to the participating county or counties approved by the Department by March 1 of each calendar year. The amount due is equal to the following: [(lbs of phosphorus discharged minus the permittee's target value) times ($52.02 per pound)] or $640,000, whichever is less. See the payment calculation steps in the Surface Water section. The permittee shall submit Form 3200-151 to the Department by March 1 of each calendar year indicating total amount remitted to the participating counties to verify that the correct payment was made. The first payment verification form is due by the specified Due Date.	03/01/2019

Note: The applicable Target Value is 0.2 mg/L as defined by s. 283.16(1)(h), Wis. Stats. The "per pound" value is $50.00 adjusted for CPI.	
Annual Verification of Payment #2: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2020
Annual Verification of Payment #3: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2021
Annual Verification of Payment #4: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2022
Annual Verification of Payment #5: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2023
Continued Coverage: If the permittee intends to seek a renewed variance, an application for the MDV (Multi Discharger Variance) shall be submitted as part of the application for permit reissuance in accordance with s. 283.16(4)(b), Wis. Stats.	
Annual Verification of Payment After Permit Expiration: In the event that this permit is not reissued prior to the expiration date, the permittee shall continue to submit Form 3200-151 to the Department indicating total amount remitted to the participating counties by March 1 each year.	

5 Standard Requirements

NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2).

5.1 Reporting and Monitoring Requirements

5.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

5.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

5.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

5.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

5.1.5 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted and certified by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

The CMAR shall be certified electronically by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The certification verifies that the electronic report is true, accurate and complete.

5.1.6 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

5.1.7 Other Information

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 correct information to the Department.

5.1.8 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

5.2 System Operating Requirements

5.2.1 Noncompliance Reporting

Sanitary sewer overflows and sewage treatment facility overflows shall be reported according to the 'Sanitary Sewer Overflows and Sewage Treatment Facility Overflows' section of this permit.

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill**. **To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

5.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

5.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-555, Wis. Adm. Code.

5.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

5.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- which create a fire or explosion hazard in the treatment work;
- which will cause corrosive structural damage to the treatment work;
- solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;
- wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and
- changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

5.2.6 Bypass

This condition applies only to bypassing at a sewage treatment facility that is not a scheduled bypass, approved blending as a specific condition of this permit, a sewage treatment facility overflow or a controlled diversion as provided in the sections titled ‘Scheduled Bypass’, ‘Blending’ (if approved), ‘SSO’s and Sewage Treatment Facility Overflows’ and ‘Controlled Diversions’ of this permit. Any other bypass at the sewage treatment facility is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the Noncompliance Reporting section of this permit.

5.2.7 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the ‘Controlled Diversions’ section of this permit,

the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for bypassing specified in the above section titled 'Bypass' are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

5.2.8 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation. Sewage treatment facilities that have multiple treatment units to treat variable or seasonal loading conditions may shut down redundant treatment units when necessary for efficient operation. The following requirements shall be met during controlled diversions:

- Effluent from the sewage treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion does not include blending as defined in s. NR 210.03(2e), Wis. Adm. Code, and as may only be approved under s. NR 210.12. A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in sewage treatment facility records and such records shall be available to the department on request.

5.2.9 Ammonia Limit Not Needed - Continue to Optimize Removal of Ammonia

Applying the procedures in s. NR 106.05, Wis. Adm. Code, to ammonia data that is representative of the current operations of the wastewater treatment plant resulted in a determination that ammonia effluent limits are not necessary in this permit. Pursuant to NR 106.33, throughout the term of this permit, the wastewater treatment plant shall continue to be operated in a manner that optimizes the removal of ammonia within the design capabilities of the wastewater treatment plant.

5.2.10 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

5.2.11 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

5.3 Sewage Collection Systems

5.3.1 Sanitary Sewage Overflows and Sewage Treatment Facility Overflows

5.3.1.1 Overflows Prohibited

Any overflow or discharge of wastewater from the sewage collection system or at the sewage treatment facility, other than from permitted outfalls, is prohibited. The permittee shall provide information on whether any of the following conditions existed when an overflow occurred:

- The sanitary sewer overflow or sewage treatment facility overflow was unavoidable to prevent loss of life, personal injury or severe property damage;
- There were no feasible alternatives to the sanitary sewer overflow or sewage treatment facility overflow such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or preventative maintenance activities;
- The sanitary sewer overflow or the sewage treatment facility overflow was caused by unusual or severe weather related conditions such as large or successive precipitation events, snowmelt, saturated soil conditions, or severe weather occurring in the area served by the sewage collection system or sewage treatment facility; and
- The sanitary sewer overflow or the sewage treatment facility overflow was unintentional, temporary, and caused by an accident or other factors beyond the reasonable control of the permittee.

5.3.1.2 Permittee Response to Overflows

Whenever a sanitary sewer overflow or sewage treatment facility overflow occurs, the permittee shall take all feasible steps to control or limit the volume of untreated or partially treated wastewater discharged, and terminate the discharge as soon as practicable. Remedial actions, including those in NR 210.21 (3), Wis. Adm. Code, shall be implemented consistent with an emergency response plan developed under the CMOM program.

5.3.1.3 Permittee Reporting

Permittees shall report all sanitary sewer overflows and sewage treatment overflows as follows:

- The permittee shall notify the department by telephone, fax or email as soon as practicable, but no later than 24 hours from the time the permittee becomes aware of the overflow;
- The permittee shall, no later than five days from the time the permittee becomes aware of the overflow, provide to the department the information identified in this paragraph using department form number 3400-184. If an overflow lasts for more than five days, an initial report shall be submitted within 5 days as required in this paragraph and an updated report submitted following cessation of the overflow. At a minimum, the following information shall be included in the report:

  ◦The date and location of the overflow;
  ◦The surface water to which the discharge occurred, if any;
  ◦The duration of the overflow and an estimate of the volume of the overflow;
  ◦A description of the sewer system or treatment facility component from which the discharge occurred such as manhole, lift station, constructed overflow pipe, or crack or other opening in a pipe;
  ◦The estimated date and time when the overflow began and stopped or will be stopped;
  ◦The cause or suspected cause of the overflow including, if appropriate, precipitation, runoff conditions, areas of flooding, soil moisture and other relevant information;
  ◦Steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
  ◦A description of the actual or potential for human exposure and contact with the wastewater from the overflow;

◦Steps taken or planned to mitigate the impacts of the overflow and a schedule of major milestones for those steps;
◦To the extent known at the time of reporting, the number and location of building backups caused by excessive flow or other hydraulic constraints in the sewage collection system that occurred concurrently with the sanitary sewer overflow and that were within the same area of the sewage collection system as the sanitary sewer overflow; and
◦The reason the overflow occurred or explanation of other contributing circumstances that resulted in the overflow event. This includes any information available including whether the overflow was unavoidable to prevent loss of life, personal injury, or severe property damage and whether there were feasible alternatives to the overflow.

NOTE: A copy of form 3400-184 for reporting sanitary sewer overflows and sewage treatment facility overflows may be obtained from the department or accessed on the department's web site at http://dnr.wi.gov/topic/wastewater/SSOreport.html. As indicated on the form, additional information may be submitted to supplement the information required by the form.

- The permittee shall identify each specific location and each day on which a sanitary sewer overflow or sewage treatment facility overflow occurs as a discrete sanitary sewer overflow or sewage treatment facility overflow occurrence. An occurrence may be more than one day if the circumstances causing the sanitary sewer overflow or sewage treatment facility overflow results in a discharge duration of greater than 24 hours. If there is a stop and restart of the overflow at the same location within 24 hours and the overflow is caused by the same circumstance, it may be reported as one occurrence. Sanitary sewer overflow occurrences at a specific location that are separated by more than 24 hours shall be reported as separate occurrences; and
- A permittee that is required to submit wastewater discharge monitoring reports under NR 205.07 (1) (r) shall also report all sanitary sewer overflows and sewage treatment facility overflows on that report.

5.3.1.4 Public Notification

The permittee shall notify the public of any sanitary sewer and sewage treatment facility overflows consistent with its emergency response plan required under the CMOM (Capacity, Management, Operation and Maintenance) section of this permit and s. NR 210.23 (4) (f), Wis. Adm. Code. Such public notification shall occur promptly following any overflow event using the most effective and efficient communications available in the community. At minimum, a daily newspaper of general circulation in the county(s) and municipality whose waters may be affected by the overflow shall be notified by written or electronic communication.

5.3.2 Capacity, Management, Operation and Maintenance (CMOM) Program

- The permittee shall have written documentation of the Capacity, Management, Operation and Maintenance (CMOM) program components in accordance with s. NR 210.23(4), Wis. Adm. Code. Such documentation shall be available for Department review upon request. The Department may request that the permittee provide this documentation or prepare a summary of the permittee's CMOM program at the time of application for reissuance of the WPDES permit.
- The permittee shall implement a CMOM program in accordance with s. NR 210.23, Wis. Adm. Code.
- The permittee shall at least annually conduct a self-audit of activities conducted under the permittee's CMOM program to ensure CMOM components are being implemented as necessary to meet the general standards of s. NR 210.23(3), Wis. Adm. Code.

5.3.3 Sewer Cleaning Debris and Materials

All debris and material removed from cleaning sanitary sewers shall be managed to prevent nuisances, run-off, ground infiltration or prohibited discharges.

- Debris and solid waste shall be dewatered, dried and then disposed of at a licensed solid waste facility.
- Liquid waste from the cleaning and dewatering operations shall be collected and disposed of at a permitted wastewater treatment facility.
- Combination waste including liquid waste along with debris and solid waste may be disposed of at a licensed solid waste facility or wastewater treatment facility willing to accept the waste.

5.4 Surface Water Requirements

5.4.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

5.4.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

5.4.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. 'Cold Shock' means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

5.4.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

5.4.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.

b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

5.4.6 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD_5 and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

5.4.7 Fecal Coliforms

The weekly and monthly limit(s) for fecal coliforms shall be expressed as a geometric mean.

5.4.8 Seasonal Disinfection

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitation for fecal coliforms apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

5.4.9 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)

Test methods for total residual chlorine, approved in ch. NR 219 - Table B, Wis. Adm. Code, normally achieve a limit of detection of about 20 to 50 micrograms per liter and a limit of quantitation of about 100 micrograms per liter. Reporting of test results and compliance with effluent limitations for chlorine residual and total residual halogens shall be as follows:

- Sample results which show no detectable levels are in compliance with the limit. These test results shall be reported on Wastewater Discharge Monitoring Report Forms as "< 100 µg/L". (Note: 0.1 mg/L converts to 100 µg/L)

- Samples showing detectable traces of chlorine are in compliance if measured at less than 100 µg/L, unless there is a consistent pattern of detectable values in this range. These values shall also be reported on Wastewater Discharge Monitoring Report Forms as "<100 µg/L." The facility operating staff shall record actual readings on logs maintained at the plant, shall take action to determine the reliability of detected results (such as re-sampling and/or calculating dosages), and shall adjust the chemical feed system if necessary to reduce the chances of detects.

- Samples showing detectable levels greater than 100 µg/L shall be considered as exceedances, and shall be reported as measured.

- To calculate average or mass discharge values, a "0" (zero) may be substituted for any test result less than 100 µg/L. Calculated values shall then be compared directly to the average or mass limitations to determine compliance.

5.4.10 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition" (PUB-WT-797*, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

5.4.11 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;

- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including some or all of the following actions:

  (a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
  (b) Identify the compound(s) causing toxicity
  (c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
  (d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)

- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;

- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

5.4.12 Reopener Clause

Pursuant to s. 283.15(11), Wis. Stat. and 40 CFR 131.20, the Department may modify or revoke and reissue this permit if, through the triennial standard review process, the Department determines that the terms and conditions of this permit need to be updated to reflect the highest attainable condition of the receiving water.

5.5 Land Application Requirements

5.5.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

5.5.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

5.5.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

5.5.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year of analysis.

Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg.

All results shall be reported on a dry weight basis.

5.5.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:
Water Extractable Phosphorus (% of Total P) =

[Water Extractable Phosphorus (mg/kg, dry wt) ÷ Total Phosphorus (mg/kg, dry wt)] x 100

5.5.6 Annual Land Application Report

Land Application Report Form 3400-55 shall be submitted electronically by January 31, each year whether or not non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

5.5.7 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive or municipal officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

5.5.8 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (l), Wis. Adm. Code.

5.5.9 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

5.5.10 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

5.5.11 Sludge Hauling

The permittee is required to submit Form 3400-52 to the Department. If sludge is hauled to another facility, information shall include the quantity of sludge hauled, the name, address, phone number, contact person, and permit number of the receiving facility. Form 3400-52 shall be submitted annually by January 31 each year whether or not sludge is hauled.

6 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Phosphorus Schedule - Continued Optimization -Optimization	June 30, 2019	7
Phosphorus Schedule - Continued Optimization -Progress Report #2	June 30, 2020	7
Phosphorus Schedule - Continued Optimization -Progress Report #3	June 30, 2021	7
Phosphorus Schedule - Continued Optimization -Progress Report #4	June 30, 2022	7
Phosphorus Schedule - Continued Optimization -Progress Report #5	June 30, 2023	7
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Report on Effluent Discharges	December 31, 2018	7
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Action Plan	June 30, 2019	7
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Initiate Actions	March 31, 2020	7
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Complete Actions	October 1, 2020	7
Phosphorus Payment per Pound to County -Annual Verification of Phosphorus Payment to County	March 1, 2019	7
Phosphorus Payment per Pound to County -Annual Verification of Payment #2	March 1, 2020	8
Phosphorus Payment per Pound to County -Annual Verification of Payment #3	March 1, 2021	8
Phosphorus Payment per Pound to County -Annual Verification of Payment #4	March 1, 2022	8
Phosphorus Payment per Pound to County -Annual Verification of Payment #5	March 1, 2023	8
Phosphorus Payment per Pound to County -Continued Coverage	See Permit	8
Phosphorus Payment per Pound to County -Annual Verification of Payment After Permit Expiration	See Permit	8
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	10
General Sludge Management Form 3400-48	prior to any significant sludge management changes	19
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	19
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional	20

	quality sludge is land applied	
Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	20
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	9

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to: West Central Region, 1300 W. Clairemont Ave., Eau Claire, WI 54701

Appendix B

2018 CMAR

Compliance Maintenance Annual Report

Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Influent Flow and Loading

1. Monthly Average Flows and (C)BOD Loadings

1.1 Verify the following monthly flows and (C)BOD loadings to your facility.

Influent No. 701	Influent Monthly Average Flow, MGD	x	Influent Monthly Average (C)BOD Concentration mg/L	x	8.34	=	Influent Monthly Average (C)BOD Loading, lbs/day
January	0.2230	x	258	x	8.34	=	480
February	0.2143	x	273	x	8.34	=	487
March	0.2213	x	297	x	8.34	=	547
April	0.2198	x	263	x	8.34	=	483
May	0.1866	x	345	x	8.34	=	536
June	0.1936	x	317	x	8.34	=	513
July	0.1695	x	355	x	8.34	=	502
August	0.1712	x	330	x	8.34	=	472
September	0.2106	x	291	x	8.34	=	511
October	0.2016	x	270	x	8.34	=	454
November	0.1927	x	285	x	8.34	=	458
December	0.1882	x	309	x	8.34	=	485

2. Maximum Monthly Design Flow and Design (C)BOD Loading

2.1 Verify the design flow and loading for your facility.

Design	Design Factor	x	%	=	% of Design
Max Month Design Flow, MGD	.38	x	90	=	0.342
		x	100	=	.38
Design (C)BOD, lbs/day	850	x	90	=	765
		x	100	=	850

2.2 Verify the number of times the flow and (C)BOD exceeded 90% or 100% of design, points earned, and score:

	Months of Influent	Number of times flow was greater than 90% of	Number of times flow was greater than 100% of	Number of times (C)BOD was greater than 90% of design	Number of times (C)BOD was greater than 100% of design
January	1	0	0	0	0
February	1	0	0	0	0
March	1	0	0	0	0
April	1	0	0	0	0
May	1	0	0	0	0
June	1	0	0	0	0
July	1	0	0	0	0
August	1	0	0	0	0
September	1	0	0	0	0
October	1	0	0	0	0
November	1	0	0	0	0
December	1	0	0	0	0
Points per each		2	1	3	2
Exceedances		0	0	0	0
Points		0	0	0	0
Total Number of Points					**0**

0

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Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

3. Flow Meter

3.1 Was the influent flow meter calibrated in the last year?

● Yes Enter last calibration date (MM/DD/YYYY) 03/15/2018

o No

If No, please explain:

4. Sewer Use Ordinance

4.1 Did your community have a sewer use ordinance that limited or prohibited the discharge of excessive conventional pollutants ((C)BOD, SS, or pH) or toxic substances to the sewer from industries, commercial users, hauled waste, or residences?

● Yes

o No

If No, please explain:

4.2 Was it necessary to enforce the ordinance?

o Yes

● No

If Yes, please explain:

5. Septage Receiving

5.1 Did you have requests to receive septage at your facility?

Septic Tanks	Holding Tanks	Grease Traps
● Yes	● Yes	o Yes
o No	o No	● No

5.2 Did you receive septage at your faclity? If yes, indicate volume in gallons.

Septic Tanks

● Yes 339,700 gallons

o No

Holding Tanks

● Yes 64,900 gallons

o No

Grease Traps

o Yes gallons

● No

5.2.1 If yes to any of the above, please explain if plant performance is affected when receiving any of these wastes.

plant was not affected

6. Pretreatment

6.1 Did your facility experience operational problems, permit violations, biosolids quality concerns, or hazardous situations in the sewer system or treatment plant that were attributable to commercial or industrial discharges in the last year?

o Yes

● No

If yes, describe the situation and your community's response.

6.2 Did your facility accept hauled industrial wastes, landfill leachate, etc.?

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o Yes
● No

If yes, describe the types of wastes received and any procedures or other restrictions that were in place to protect the facility from the discharge of hauled industrial wastes.

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Effluent Quality and Plant Performance (BOD/CBOD)

1. Effluent (C)BOD Results

1.1 Verify the following monthly average effluent values, exceedances, and points for BOD or CBOD

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit > 10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance
January	25	22.5	2	1	0	0
February	25	22.5	7	1	0	0
March	25	22.5	4	1	0	0
April	25	22.5	4	1	0	0
May	25	22.5	4	1	0	0
June	25	22.5	2	1	0	0
July	25	22.5	3	1	0	0
August	25	22.5	2	1	0	0
September	25	22.5	2	1	0	0
October	25	22.5	2	1	0	0
November	25	22.5	2	1	0	0
December	25	22.5	3	1	0	0
* Equals limit if limit is <= 10						
Months of discharge/yr				12		
Points per each exceedance with 12 months of discharge					7	3
Exceedances					0	0
Points					0	0
Total number of points						**0**

0

NOTE: For systems that discharge intermittently to state waters, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge. Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is 12/6 = 2.0

1.2 If any violations occurred, what action was taken to regain compliance?

2. Flow Meter Calibration

2.1 Was the effluent flow meter calibrated in the last year?

o Yes Enter last calibration date (MM/DD/YYYY)

● No

If No, please explain:

N/A

3. Treatment Problems

3.1 What problems, if any, were experienced over the last year that threatened treatment?

no problems

4. Other Monitoring and Limits

4.1 At any time in the past year was there an exceedance of a permit limit for any other pollutants such as chlorides, pH, residual chlorine, fecal coliform, or metals?

o Yes

● No

If Yes, please explain:

4.2 At any time in the past year was there a failure of an effluent acute or chronic whole effluent toxicity (WET) test?

- o Yes
- ● No

If Yes, please explain:

4.3 If the biomonitoring (WET) test did not pass, were steps taken to identify and/or reduce source(s) of toxicity?

- o Yes
- o No
- ● N/A

Please explain unless not applicable:

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Effluent Quality and Plant Performance (Total Suspended Solids)

1. Effluent Total Suspended Solids Results

1.1 Verify the following monthly average effluent values, exceedances, and points for TSS:

Outfall No. 001	Monthly Average Limit (mg/L)	90% of Permit Limit >10 (mg/L)	Effluent Monthly Average (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance	90% Permit Limit Exceedance	
January	30	27	18	1	0	0	
February	30	27	13	1	0	0	
March	30	27	16	1	0	0	
April	30	27	14	1	0	0	
May	30	27	15	1	0	0	
June	30	27	15	1	0	0	
July	30	27	13	1	0	0	
August	30	27	14	1	0	0	
September	30	27	16	1	0	0	
October	30	27	19	1	0	0	
November	30	27	19	1	0	0	**0**
December	30	27	18	1	0	0	
* Equals limit if limit is <= 10							
Months of Discharge/yr				12			
Points per each exceedance with 12 months of discharge:					**7**	**3**	
Exceedances					0	0	
Points					0	0	
Total Number of Points						**0**	

NOTE: For systems that discharge intermittently to state waters, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.

Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is 12/6 = 2.0

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Effluent Quality and Plant Performance (Phosphorus)

1. Effluent Phosphorus Results

1.1 Verify the following monthly average effluent values, exceedances, and points for Phosphorus

Outfall No. 001	Monthly Average phosphorus Limit (mg/L)	Effluent Monthly Average phosphorus (mg/L)	Months of Discharge with a Limit	Permit Limit Exceedance
January	1	0.447	1	0
February	1	0.566	1	0
March	1	0.601	1	0
April	1	0.537	1	0
May	1	0.484	1	0
June	1	0.484	1	0
July	1	0.792	1	0
August	1	0.763	1	0
September	1	0.588	1	0
October	1	0.646	1	0
November	1	0.737	1	0
December	1	0.735	1	0
Months of Discharge/yr			12	
Points per each exceedance with 12 months of discharge:				**10**
Exceedances				0
Total Number of Points				**0**

0

NOTE: For systems that discharge intermittently to waters of the state, the points per monthly exceedance for this section shall be based upon a multiplication factor of 12 months divided by the number of months of discharge.

Example: For a wastewater facility discharging only 6 months of the year, the multiplication factor is 12/6 = 2.0

1.2 If any violations occurred, what action was taken to regain compliance?

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Biosolids Quality and Management

1. Biosolids Use/Disposal

1.1 How did you use or dispose of your biosolids? (Check all that apply)

- ☐ Land applied under your permit
- ☐ Publicly Distributed Exceptional Quality Biosolids
- ☒ Hauled to another permitted facility
- ☐ Landfilled
- ☐ Incinerated
- ☐ Other

NOTE: If you did not remove biosolids from your system, please describe your system type such as lagoons, reed beds, recirculating sand filters, etc.

1.1.1 If you checked Other, please describe:

2. Land Application Site

2.1 Last Year's Approved and Active Land Application Sites

2.1.1 How many acres did you have?

137 acres

2.1.2 How many acres did you use?

acres

2.2 If you did not have enough acres for your land application needs, what action was taken?

2.3 Did you overapply nitrogen on any of your approved land application sites you used last year? **0**

- o Yes (30 points)
- ● No

2.4 Have all the sites you used last year for land application been soil tested in the previous 4 years?

- o Yes
- o No (10 points)
- ● N/A

3. Biosolids Metals

Number of biosolids outfalls in your WPDES permit:

3.1 For each outfall tested, verify the biosolids metal quality values for your facility during the last calendar year.

Outfall No. 002 - SLUDGE TO WCWBF

Parameter	80% of Limit	H.Q. Limit	Ceiling Limit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	80% Value	High Quality	Ceiling
Arsenic		41	75											3.6			0	0
Cadmium		39	85											<2.8			0	0
Copper		1500	4300											487			0	0
Lead		300	840											37.7			0	0
Mercury		17	57											1.5			0	0
Molybdenum	60		75											15.4		0		0
Nickel	336		420											24		0		0
Selenium	80		100											4.6		0		0
Zinc		2800	7500											1190			0	0

3.1.1 Number of times any of the metals exceeded the high quality limits OR 80% of the limit for molybdenum, nickel, or selenium = 0

Exceedence Points

- ● 0 (0 Points)

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Last Updated: 5/13/2019 Reporting For: **2018**

o 1-2 (10 Points)
o > 2 (15 Points)

3.1.2 If you exceeded the high quality limits, did you cumulatively track the metals loading at each land application site? (check applicable box)
o Yes
o No (10 points)
● N/A - Did not exceed limits or no HQ limit applies (0 points)
o N/A - Did not land apply biosolids until limit was met (0 points)

3.1.3 Number of times any of the metals exceeded the ceiling limits = 0
Exceedence Points
● 0 (0 Points)
o 1 (10 Points)
o > 1 (15 Points)

0

3.1.4 Were biosolids land applied which exceeded the ceiling limit?
o Yes (20 Points)
● No (0 Points)

3.1.5 If any metal limit (high quality or ceiling) was exceeded at any time, what action was taken? Has the source of the metals been identified?

4. Pathogen Control (per outfall):
4.1 Verify the following information. If any information is incorrect, use the Report Issue button under the Options header in the left-side menu.

Outfall Number:	
Biosolids Class:	
Bacteria Type and Limit:	
Sample Dates:	-
Density:	
Sample Concentration Amount:	
Requirement Met:	No
Land Applied:	No
Process:	
Process Description:	

0

4.2 If exceeded Class B limit or did not meet the process criteria at the time of land application.
4.2.1 Was the limit exceeded or the process criteria not met at the time of land application?
o Yes (40 Points)
● No

If yes, what action was taken?

5. Vector Attraction Reduction (per outfall):
5.1 Verify the following information. If any of the information is incorrect, use the Report Issue button under the Options header in the left-side menu.

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Outfall Number:	
Method Date:	
Option Used To Satisfy Requirement:	
Requirement Met:	No
Land Applied:	No
Limit (if applicable):	
Results (if applicable):	

0

5.2 Was the limit exceeded or the process criteria not met at the time of land application?

- o Yes (40 Points)
- ● No

If yes, what action was taken?

6. Biosolids Storage

6.1 How many days of actual, current biosolids storage capacity did your wastewater treatment facility have either on-site or off-site?

- ● >= 180 days (0 Points)
- o 150 - 179 days (10 Points)
- o 120 - 149 days (20 Points)
- o 90 - 119 days (30 Points)
- o < 90 days (40 Points)
- o N/A (0 Points)

0

6.2 If you checked N/A above, explain why.

7. Issues

7.1 Describe any outstanding biosolids issues with treatment, use or overall management:

n/a

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

Compliance Maintenance Annual Report

Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Staffing and Preventative Maintenance (All Treatment Plants)

1. Plant Staffing

1.1 Was your wastewater treatment plant adequately staffed last year?

- ● Yes
- o No

If No, please explain:

Could use more help/staff for:

1.2 Did your wastewater staff have adequate time to properly operate and maintain the plant and fulfill all wastewater management tasks including recordkeeping?

- ● Yes
- o No

If No, please explain:

2. Preventative Maintenance

2.1 Did your plant have a documented AND implemented plan for preventative maintenance on major equipment items?

- ● Yes (Continue with question 2) ☐☐
- o No (40 points)☐☐

If No, please explain, then go to question 3:

2.2 Did this preventative maintenance program depict frequency of intervals, types of lubrication, and other tasks necessary for each piece of equipment?

- ● Yes
- o No (10 points)

2.3 Were these preventative maintenance tasks, as well as major equipment repairs, recorded and filed so future maintenance problems can be assessed properly?

- ● Yes
  - ● Paper file system
  - o Computer system
  - o Both paper and computer system
- o No (10 points)

0

3. O&M Manual

3.1 Does your plant have a detailed O&M and Manufacturer Equipment Manuals that can be used as a reference when needed?

- ● Yes
- o No

4. Overall Maintenance /Repairs

4.1 Rate the overall maintenance of your wastewater plant.

- o Excellent
- o Very good
- ● Good
- o Fair
- o Poor

Describe your rating:

Plant is getting old

Compliance Maintenance Annual Report

Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019

Reporting For: **2018**

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

Compliance Maintenance Annual Report

Mondovi Wastewater Treatment Facility

Last Updated: 5/13/2019 Reporting For: **2018**

Operator Certification and Education

1. Operator-In-Charge

1.1 Did you have a designated operator-in-charge during the report year?

- ● Yes (0 points)
- o No (20 points)

Name: RANDALL K GRUBER

Certification No: 32263

0

2. Certification Requirements

2.1 In accordance with Chapter NR 114.56 and 114.57, Wisconsin Administrative Code, what level and subclass(es) were required for the operator-in-charge (OIC) to operate the wastewater treatment plant and what level and subclass(es) were held by the operator-in-charge?

Sub Class	SubClass Description	WWTP	OIC		
		Basic	OIT	Basic	Advanced
A1	Suspended Growth Processes				
A2	Attached Growth Processes	X		X	
A3	Recirculating Media Filters				
A4	Ponds, Lagoons and Natural				
A5	Anaerobic Treatment Of Liquid				
B	Solids Separation	X		X	
C	Biological Solids/Sludges	X		X	
P	Total Phosphorus	X		X	
N	Total Nitrogen				
D	Disinfection	X		X	
L	Laboratory	X		X	
U	Unique Treatment Systems				
SS	Sanitary Sewage Collection	X	NA	NA	NA

2.2 Was the operator-in-charge certified at the appropriate level and subclass(es) to operate this plant? (Note: Certification in subclass SS, N and A5 not required in 2018; subclass SS is basic level only.)

- ● Yes (0 points)
- o No (20 points)

0

3. Succession Planning

3.1 In the event of the loss of your designated operator-in-charge, did you have a contingency plan to ensure the continued proper operation and maintenance of the plant that includes one or more of the following options (check all that apply)?

- ☒ One or more additional certified operators on staff
- ☐ An arrangement with another certified operator
- ☒ An arrangement with another community with a certified operator
- ☐ An operator on staff who has an operator-in-training certificate for your plant and is expected to be certified within one year
- ☐ A consultant to serve as your certified operator
- ☐ None of the above (20 points)

If "None of the above" is selected, please explain:

0

4. Continuing Education Credits

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4.1 If you had a designated operator-in-charge, was the operator-in-charge earning Continuing Education Credits at the following rates? OIT and Basic Certification: ● Averaging 6 or more CECs per year. o Averaging less than 6 CECs per year. Advanced Certification: o Averaging 8 or more CECs per year. o Averaging less than 8 CECs per year.	

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Financial Management

1. Provider of Financial Information

Name: Dawn Moy

Telephone: 715-926-3866 (XXX) XXX-XXXX

E-Mail Address (optional):

2. Treatment Works Operating Revenues

2.1 Are User Charges or other revenues sufficient to cover O&M expenses for your wastewater treatment plant AND/OR collection system ?

- ● Yes (0 points) ☐☐
- o No (40 points)

If No, please explain:

2.2 When was the User Charge System or other revenue source(s) last reviewed and/or revised?

Year: 2018

- ● 0-2 years ago (0 points) ☐☐
- o 3 or more years ago (20 points)☐☐
- o N/A (private facility)

2.3 Did you have a special account (e.g., CWFP required segregated Replacement Fund, etc.) or financial resources available for repairing or replacing equipment for your wastewater treatment plant and/or collection system?

- ● Yes (0 points)
- o No (40 points)

0

REPLACEMENT FUNDS [PUBLIC MUNICIPAL FACILITIES SHALL COMPLETE QUESTION 3]

3. Equipment Replacement Funds

3.1 When was the Equipment Replacement Fund last reviewed and/or revised?

Year: 2017

- ● 1-2 years ago (0 points)☐☐
- o 3 or more years ago (20 points)☐☐
- o N/A

If N/A, please explain:

3.2 Equipment Replacement Fund Activity

3.2.1 Ending Balance Reported on Last Year's CMAR	$	173,518.55
3.2.2 Adjustments - if necessary (e.g. earned interest, audit correction, withdrawal of excess funds, increase making up previous shortfall, etc.)	$	0.00
3.2.3 Adjusted January 1st Beginning Balance	$	173,518.55
3.2.4 Additions to Fund (e.g. portion of User Fee, earned interest, etc.) +	$	3,122.52

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3.2.5 Subtractions from Fund (e.g., equipment replacement, major repairs - use description box 3.2.6.1 below*) - $ 1,809.66

3.2.6 Ending Balance as of December 31st for CMAR Reporting Year $ 174,831.41

All Sources: This ending balance should include all Equipment Replacement Funds whether held in a bank account(s), certificate(s) of deposit, etc.

3.2.6.1 Indicate adjustments, equipment purchases, and/or major repairs from 3.2.5 above.

RBC Chain

3.3 What amount should be in your Replacement Fund? $ 193,217.89

Please note: If you had a CWFP loan, this amount was originally based on the Financial Assistance Agreement (FAA) and should be regularly updated as needed. Further calculation instructions and an example can be found by clicking the SectionInstructions link under Info header in the left-side menu.

3.3.1 Is the December 31 Ending Balance in your Replacement Fund above, (#3.2.6) equal to, or greater than the amount that should be in it (#3.3)?

- o Yes
- ● No

If No, please explain.

Transfer Deposit of $18,400.00 made to the City Replacement fund in 2019 to bring the balance equal to or greater than #3.3.

0

4. Future Planning

4.1 During the next ten years, will you be involved in formal planning for upgrading, rehabilitating, or new construction of your treatment facility or collection system?

- ● Yes - If Yes, please provide major project information, if not already listed below.☐☐
- o No

Project #	Project Description	Estimated Cost	Approximate Construction Year
1	Planning For a New WWTP.	7000000	2022

5. Financial Management General Comments

ENERGY EFFICIENCY AND USE

6. Collection System

6.1 Energy Usage

6.1.1 Enter the monthly energy usage from the different energy sources:

COLLECTION SYSTEM PUMPAGE: Total Power Consumed

Number of Municipally Owned Pump/Lift Stations: 3

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	Electricity Consumed (kWh)	Natural Gas Consumed (therms)
January	1,899	
February	2,061	
March	2,117	
April	1,543	
May	788	
June	606	
July	576	
August	478	
September	594	
October	635	
November	561	
December	618	
Total	**12,476**	**0**
Average	**1,040**	**0**

6.1.2 Comments:

6.2 Energy Related Processes and Equipment

6.2.1 Indicate equipment and practices utilized at your pump/lift stations (Check all that apply):

- ☒ Comminution or Screening
- ☐ Extended Shaft Pumps
- ☐ Flow Metering and Recording
- ☐ Pneumatic Pumping
- ☐ SCADA System
- ☒ Self-Priming Pumps
- ☒ Submersible Pumps
- ☐ Variable Speed Drives
- ☐ Other:

6.2.2 Comments:

6.3 Has an Energy Study been performed for your pump/lift stations?

- ● No
- ○ Yes

Year:

By Whom:

Describe and Comment:

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6.4 Future Energy Related Equipment

6.4.1 What energy efficient equipment or practices do you have planned for the future for your pump/lift stations?

n/a

7. Treatment Facility

7.1 Energy Usage

7.1.1 Enter the monthly energy usage from the different energy sources:

TREATMENT PLANT: Total Power Consumed/Month

	Electricity Consumed (kWh)	Total Influent Flow (MG)	Electricity Consumed/ Flow (kWh/MG)	Total Influent BOD (1000 lbs)	Electricity Consumed/ Total Influent BOD (kWh/1000lbs)	Natural Gas Consumed (therms)
January	45,240	6.91	6,547	14.88	3,040	340
February	40,600	6.00	6,767	13.64	2,977	305
March	39,920	6.86	5,819	16.96	2,354	251
April	37,520	6.59	5,693	14.49	2,589	172
May	33,240	5.78	5,751	16.62	2,000	18
June	30,000	5.81	5,164	15.39	1,949	38
July	35,240	5.25	6,712	15.56	2,265	4
August	32,450	5.31	6,111	14.63	2,218	1
September	36,880	6.32	5,835	15.33	2,406	19
October	37,360	6.25	5,978	14.07	2,655	130
November	32,680	5.78	5,654	13.74	2,378	272
December	42,640	5.83	7,314	15.04	2,835	294
Total	**443,770**	**72.69**		**180.35**		**1,844**
Average	**36,981**	**6.06**	**6,112**	**15.03**	**2,472**	**154**

7.1.2 Comments:

7.2 Energy Related Processes and Equipment

7.2.1 Indicate equipment and practices utilized at your treatment facility (Check all that apply):

- ☒ Aerobic Digestion
- ☐ Anaerobic Digestion
- ☒ Biological Phosphorus Removal
- ☐ Coarse Bubble Diffusers
- ☐ Dissolved O2 Monitoring and Aeration Control
- ☐ Effluent Pumping
- ☐ Fine Bubble Diffusers
- ☐ Influent Pumping
- ☐ Mechanical Sludge Processing
- ☐ Nitrification
- ☐ SCADA System
- ☐ UV Disinfection
- ☐ Variable Speed Drives
- ☐ Other:

7.2.2 Comments:

7.3 Future Energy Related Equipment

7.3.1 What energy efficient equipment or practices do you have planned for the future for your treatment facility?

8. Biogas Generation

8.1 Do you generate/produce biogas at your facility?

- ● No
- ○ Yes

If Yes, how is the biogas used (Check all that apply):

- ☐ Flared Off
- ☐ Building Heat
- ☐ Process Heat
- ☐ Generate Electricity
- ☐ Other:

9. Energy Efficiency Study

9.1 Has an Energy Study been performed for your treatment facility?

- ○ No
- ● Yes
  - ☒ Entire facility
    - Year: 2015
    - By Whom: seimans
    - Describe and Comment: Did not seem needed at this time
  - ☐ Part of the facility
    - Year:
    - By Whom:
    - Describe and Comment:

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Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Sanitary Sewer Collection Systems

1. Capacity, Management, Operation, and Maintenance (CMOM) Program

1.1 Do you have a CMOM program that is being implemented?

● Yes
o No

If No, explain:

1.2 Do you have a CMOM program that contains all the applicable components and items according to Wisc. Adm Code NR 210.23 (4)?

● Yes
o No (30 points)
o N/A

If No or N/A, explain:

1.3 Does your CMOM program contain the following components and items? (check the components and items that apply)

☒ Goals [NR 210.23 (4)(a)]

Describe the major goals you had for your collection system last year:

televised 10% of sewer mains, had 25% of sewer mains cleaned. Marked maps with problem spots.

Did you accomplish them?

● Yes
o No

If No, explain:

☐ Organization [NR 210.23 (4) (b)]☐☐

Does this chapter of your CMOM include:

☒ Organizational structure and positions (eg. organizational chart and position descriptions)
☒ Internal and external lines of communication responsibilities
☒ Person(s) responsible for reporting overflow events to the department and the public

☐ Legal Authority [NR 210.23 (4) (c)]

What is the legally binding document that regulates the use of your sewer system?

Sewer use ordinance

If you have a Sewer Use Ordinance or other similar document, when was it last reviewed and revised? (MM/DD/YYYY) 03/05/2005

Does your sewer use ordinance or other legally binding document address the following:

☐ Private property inflow and infiltration
☒ New sewer and building sewer design, construction, installation, testing and inspection
☒ Rehabilitated sewer and lift station installation, testing and inspection
☐ Sewage flows satellite system and large private users are monitored and controlled, as necessary
☒ Fat, oil and grease control
☒ Enforcement procedures for sewer use non-compliance

☐ Operation and Maintenance [NR 210.23 (4) (d)]

Does your operation and maintenance program and equipment include the following:

☒ Equipment and replacement part inventories
☒ Up-to-date sewer system map

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Mondovi Wastewater Treatment Facility

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☐A management system (computer database and/or file system) for collection system information for O&M activities, investigation and rehabilitation
☒ A description of routine operation and maintenance activities (see question 2 below)
☐ Capacity assessment program
☒ Basement back assessment and correction
☒ Regular O&M training

☐ Design and Performance Provisions [NR 210.23 (4) (e)]☐☐
What standards and procedures are established for the design, construction, and inspection of the sewer collection system, including building sewers and interceptor sewers on private property?
☒ State Plumbing Code, DNR NR 110 Standards and/or local Municipal Code Requirements
☐ Construction, Inspection, and Testing
☐ Others:

☐ Overflow Emergency Response Plan [NR 210.23 (4) (f)]☐☐ **0**
Does your emergency response capability include:
☒ Responsible personnel communication procedures
☒ Response order, timing and clean-up
☒ Public notification protocols
☒ Training
☒ Emergency operation protocols and implementation procedures

☐ Annual Self-Auditing of your CMOM Program [NR 210.23 (5)]☐☐

☐ Special Studies Last Year (check only those that apply):
☐ Infiltration/Inflow (I/I) Analysis
☐ Sewer System Evaluation Survey (SSES)
☒ Sewer Evaluation and Capacity Managment Plan (SECAP)
☐ Lift Station Evaluation Report
☐ Others:

2. Operation and Maintenance
2.1 Did your sanitary sewer collection system maintenance program include the following maintenance activities? Complete all that apply and indicate the amount maintained.

Cleaning	25	% of system/year
Root removal	25	% of system/year
Flow monitoring	0	% of system/year
Smoke testing	0	% of system/year
Sewer line televising	10	% of system/year
Manhole inspections	25	% of system/year
Lift station O&M	2	# per L.S./year
Manhole rehabilitation	1	% of manholes rehabbed
Mainline rehabilitation	1	% of sewer lines rehabbed
Private sewer inspections	0	% of system/year

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Private sewer I/I removal	0	% of private services
River or water crossings	0	% of pipe crossings evaluated or maintained

Please include additional comments about your sanitary sewer collection system below:

3. Performance Indicators

3.1 Provide the following collection system and flow information for the past year.

48	Total actual amount of precipitation last year in inches
32	Annual average precipitation (for your location)
19	Miles of sanitary sewer
3	Number of lift stations
1	Number of lift station failures
1	Number of sewer pipe failures
2	Number of basement backup occurrences
2	Number of complaints
225	Average daily flow in MGD (if available)
	Peak monthly flow in MGD (if available)
	Peak hourly flow in MGD (if available)

3.2 Performance ratios for the past year:

0.33	Lift station failures (failures/year)
0.05	Sewer pipe failures (pipe failures/sewer mile/yr)
0.00	Sanitary sewer overflows (number/sewer mile/yr)
0.11	Basement backups (number/sewer mile)
0.11	Complaints (number/sewer mile)
0.0	Peaking factor ratio (Peak Monthly:Annual Daily Avg)
0.0	Peaking factor ratio (Peak Hourly:Annual Daily Avg)

4. Overflows

LIST OF SANITARY SEWER (SSO) AND TREATMENT FACILITY (TFO) OFERFLOWS REPORTED **			
Date	Location	Cause	Estimated Volume (MG)
None reported			

** If there were any SSOs or TFOs that are not listed above, please contact the DNR and stop work on this section until corrected.

5. Infiltration / Inflow (I/I)

5.1 Was infiltration/inflow (I/I) significant in your community last year?

o Yes

● No

If Yes, please describe:

5.2 Has infiltration/inflow and resultant high flows affected performance or created problems in your collection system, lift stations, or treatment plant at any time in the past year?

o Yes

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- No

If Yes, please describe:

5.3 Explain any infiltration/inflow (I/I) changes this year from previous years:

none

5.4 What is being done to address infiltration/inflow in your collection system?

manhole re-hab

Total Points Generated	0
Score (100 - Total Points Generated)	100
Section Grade	**A**

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Grading Summary

WPDES No: 0020591

SECTIONS	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Influent	A	4	3	12
BOD/CBOD	A	4	10	40
TSS	A	4	5	20
Phosphorus	A	4	3	12
Biosolids	A	4	5	20
Staffing/PM	A	4	1	4
OpCert	A	4	1	4
Financial	A	4	1	4
Collection	A	4	3	12
TOTALS			**32**	**128**
GRADE POINT AVERAGE (GPA) = 4.00				

Notes:
A = Voluntary Range (Response Optional)
B = Voluntary Range (Response Optional)
C = Recommendation Range (Response Required)
D = Action Range (Response Required)
F = Action Range (Response Required)

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Resolution or Owner's Statement

Name of Governing Body or Owner:

Date of Resolution or Action Taken:

Resolution Number:

Date of Submittal:

ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER RELATING TO SPECIFIC CMAR SECTIONS (Optional for grade A or B. Required for grade C, D, or F):

Influent Flow and Loadings: Grade = A

Effluent Quality: BOD: Grade = A

Effluent Quality: TSS: Grade = A

Effluent Quality: Phosphorus: Grade = A

Biosolids Quality and Management: Grade = A

Staffing: Grade = A

Operator Certification: Grade = A

Financial Management: Grade = A

Collection Systems: Grade = A
(Regardless of grade, response required for Collection Systems if SSOs were reported)

ACTIONS SET FORTH BY THE GOVERNING BODY OR OWNER RELATING TO THE OVERALL GRADE POINT AVERAGE AND ANY GENERAL COMMENTS
(Optional for G.P.A. greater than or equal to 3.00, required for G.P.A. less than 3.00)
G.P.A. = 4.00

Appendix C

Final Phosphorus Compliance Alternatives Plan

Evaluation Report

Final Phosphorus Compliance Alternatives Evaluation

City of Mondovi, Buffalo County, WI

MONDO 143175 | September 14, 2017

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Evaluation Report

Evaluation Report
City of Mondovi, Buffalo County, WI

Prepared for:
City of Mondovi
Mondovi, Wisconsin

Prepared by:
Short Elliott Hendrickson Inc.
10 North Bridge Street
Chippewa Falls, WI 54729-2550
715.720.6200

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Evaluation Report

Final Phosphorus Compliance Alternatives Evaluation

Prepared for City of Mondovi

1 Introduction

The purpose of this evaluation is to address alternatives the City of Mondovi may utilize to meet the new wastewater effluent phosphorus requirement/limit. A 20-year present worth analysis was prepared for each of the feasible compliance alternatives. Currently, the phosphorus limit is 1.0 mg/L with the final calculated water quality based effluent limitation for phosphorus at 0.075 mg/L. A copy of the WPDES Permit including phosphorus effluent limits and compliance schedule, is included as Appendix A. This report is being submitted to meet the Final Compliance Alternatives Plan compliance item.

The following compliance alternatives are evaluated in this report:

- Optimization of the Existing WWTP
- Existing WWTP modifications
- Adaptive Management
- Water Quality Trading
- Alternate Discharge Location
- Land Disposal of Effluent
- Individual Economic Variance
- Statewide Multi-user Variance (Act 378)

1.1 Existing WWTP and Operations

The City of Mondovi's WWTP is a Rotating Biological Contactor (RBC) plant that accepts mostly domestic waste, with some commercial and light industrial wastewater. The City's only significant industrial user, SPF North America, LLC, produces dog and cat food products. Following implementation of the City's industrial permitting and sewer surcharge system in 2006, SPF ceased discharge of process wastewater to the City and began storing wastewater for off-site disposal. Process wastewater from SPF has not been discharged to the City for about 10 years. Organic Choice LLC, a milk products receiving operation, ceased operations in Mondovi in 2013.

The Mondovi WWTP has a design flow capacity of 0.385 MGD. Current flows average about 0.24 MGD, or about 65 percent of design capacity.

The plant includes components of varying ages, with some tankage believed to be from the 1960's and the last major modifications in the 1980's when the Trickling Filtration process was

abandoned and the RBC's were constructed. Chemical addition for phosphorus removal was added in 2006. A centrate storage tank was also added when the City elected to send sludge to the West Central Wisconsin Biosolids Facility (WCWBF) for processing and disposal. Treatment processes at the Mondovi WWTP include flow measurement, comminution, raw wastewater pumping, primary settling, RBC secondary treatment, secondary settling, and disinfection. Ferric Chloride is added at the RBC effluent and chemical sludge is removed in the secondary settling tank. Chlorination/dechlorination of treated effluent is provided seasonally. Final effluent is discharged to the Buffalo River. Primary and secondary sludge is stored in the aerobic digester (sludge tank) and periodically hauled to the WCWBF for disposal. Centrate is returned from the WCWRBF to the centrate storage tank, and is returned to the plant influent at a low, controlled rate.

Although much of the plant is old, it is well maintained and provides effluent BOD, SS and phosphorus in compliance with the WPDES permit limits of 25 mg/l, 30 mg/l and 1.0 mg/l respectively. The City's 2015 CMAR report scored all A's, with a perfect 4.0 Grade Point Average.

The average daily flow for the baseline year 2013/2014, as included in the Phosphorus Optimization Report Worksheet, was 0.240 MGD. Results of testing of influent phosphorus in 2013/2014 averaged approximately 6.4 mg/l. The average effluent phosphorus concentration for the baseline year was 0.47 mg/l, or 343 lbs/year. Currently, approximately 30 gallons of ferric chloride are added per day to the treatment process. The currently achievable effluent phosphorus concentration used to determine the costs for compliance option evaluation was 0.47 mg/L.

2 Optimization of the Existing WWTP

2.1 Introduction

This item addresses how the existing WWTP's phosphorus treatment can be optimized. Such optimization efforts may include source reduction from industrial users, switching the type of chemical added, and improving treatment process efficiency where phosphorus would be removed.

A Phosphorus Optimization Report Worksheet was submitted to the WDNR in 2014. This worksheet identified areas within the system where phosphorus might be minimized or eliminated. The full worksheet is included as Appendix B.

2.2 Feasibility

The City of Mondovi does not have any significant wet industrial users. Commercial and minor industrial users were evaluated for possible phosphorus reductions. If the contributors are able to decrease or eliminate their phosphorus discharge, this will decrease the influent phosphorus to the WWTP, and may provide some reduction in effluent phosphorus levels. With the upcoming low phosphorus effluent limit of 0.075 mg/l, industrial dischargers were assessed to determine if their processes and chemicals contributed to the influent phosphorus loading. MSDS sheets collected for truck wash products used at Martin Transport did not identify any high phosphorus content cleaners

An evaluation of centrate returned from the Regional Biosolids Facility indicates that phosphorus in the centrate is normally near domestic concentrations (less than 10 mg/l), but occasionally can

be as high as 60 mg/l. Centrate returned to the plant via semi-tanker is stored in the centrate tank, then returned to the plant at an average rate of about 2,300 gallons per day or approximately 2 percent of the phosphorus load to the plant. This low centrate return rate results in a minimal impact on the overall phosphorous concentration and is not a source for significant phosphorous reduction potential.

Another minimization item included in the Worksheet included testing the sludge tank supernatant return to determine if it was a source of significant phosphorus loading. The tests revealed that the supernatant is relatively low in phosphorous (6.37 mg/l) which is similar to domestic strength, and is not a significant added phosphorus load.

Reduction of phosphorus to the 0.075 mg/L limit is not feasible with the current treatment plant, even with it operating at its highest efficiency level. Chemical addition offers diminishing returns after a point and will not be able to reach the very low limit of 0.075 mg/L.

2.3 Cost Analysis

Since this is not a feasible option to reach the WPDES limit of 0.075 mg/L, no cost analysis was performed.

3 Existing WWTP Modifications

3.1 Introduction

The current treatment plant will not be able to meet the 0.075 mg/l phosphorus limit without tertiary treatment. A second stage chemical addition and tertiary solids removal system is assumed to be required to comply with the 0.075 mg/l limit.

3.2 Feasibility

The Mondovi WWTP is located on a small site with limited space for tertiary treatment. Depending on final hydraulics, a pump station may be required to utilize the current WWTP site for tertiary treatment. Adding tertiary treatment may be viable, but a more in-depth investigation will need to be conducted.

3.3 Cost Analysis

An estimate of the capital and O&M cost of tertiary phosphorus treatment was made using the estimates prepared by the Wisconsin DNR/DOA in the document “Addendum to Economic Impact Analysis-Statewide Economic Impacts April 24, 2015” prepared in conjunction with the Act 378 variance submittals to EPA. This document assembled estimated capital and O&M costs to comply with the new phosphorus requirements for each Wisconsin municipality. For Mondovi, the estimated capital cost for compliance is $3,390,918. Additional O&M costs for compliance are estimated as $74,140/yr. The 20 year present worth cost of additional phosphorus compliance is $4,345,966. See Appendix C for present worth calculations.

4 Adaptive Management

4.1 Introduction

Adaptive Management allows point sources with strict effluent phosphorus limits to reduce the overall phosphorus pollution in the watershed so that water quality standards in the stream are met. The point source helps implement projects that will reduce the phosphorus loading to the body of water and bring it into compliance. Adaptive management may be the choice of point sources when the discharge body of water is already very close to being in compliance. For example, a stream with a current phosphorus concentration of 0.076 mg/L would be an ideal candidate for adaptive management, as the point source needs to only bring the concentration of the stream down by 0.001 mg/L. The headwaters of many streams and rivers are often better choices for adaptive management than further downstream.

The DNR has developed guidance manuals describing the Adaptive Management compliance option. To be eligible for adaptive management, the point source needs to be in a nonpoint source dominated watershed, a watershed with an approved TMDL, or a watershed where nonpoint sources must be controlled to meet water quality goals. Other requirements include: the receiving water must exceed the applicable phosphorus criteria; the point source must be able to meet an interim limit of 0.6 mg/L; and the point source must be willing to work with partners within the watershed to improve water quality.

4.2 Feasibility

The Harvey Creek – Buffalo River watershed in the Mondovi area is shown on the map in Appendix D. Phosphorus contribution estimates made by the DNR using the PRESTO modeling program indicate the watershed is nonpoint source dominated (point 1 percent: nonpoint 99 percent). This point to non-point ratio would qualify Mondovi administratively to consider Adaptive Management as a compliance option. The current WWTP is also able to meet the adaptive management effluent limit of 0.6 mg/L as seen on the Optimization Plan. However, the Buffalo River was reported to have a Total Phosphorus concentration of about 0.25 mg/l as included in the DNR Water Quality-Based Effluent Limitations memo of November 20, 2012. This is approximately 3.3 times the 0.075 mg/l stream standard.

4.3 Cost Analysis

Due to the receiving water's high phosphorus concentration and high contribution from non-point sources, adaptive management would require comprehensive control of many dispersed non-point phosphorous sources and is not considered a feasible alternative. Cost estimates for adaptive management were not prepared.

5 Water Quality Trading

5.1 Introduction

Water Quality Trading allows a point source to offset their phosphorus load by arranging with another party to achieve less costly pollutant reduction with the same or greater water quality benefit. This may include trading with another point source in the watershed, or may involve trading with non-point sources such as the agricultural community to control phosphorus associated with agricultural runoff or field erosion. This is often accomplished by funding best

management practices (BMP) on farm fields in an adjacent portion of the watershed. Credits are generated by the BMPs and must be used in the same calendar year by the credit user. Stormwater runoff control may also be used in pollutant trading.

The DNR has developed guidance manuals describing the Water Quality Trading compliance option. Trading with the agricultural community would be the most likely trading option for Mondovi, considering the predominant land use in the watershed is agricultural. Generally steep slopes in this watershed results in high erodibility potential of cultivated lands. The predominately agricultural land use in the Mondovi area would result in more widespread opportunities for locating potential trading partners, but the current use of erosion control practices may result in a lower mass of phosphorus removed per project.

Trade ratios are used to account for uncertainty when analyzing the phosphorus removed by the chosen BMP. Five different uncertainties are used to determine the final trade ratio; Delivery (distance between the credit generator and the credit user), Downstream (accounts for impacts if the credit generator is downstream from the credit user), Equivalency (accounts for the different form of a pollutant), Uncertainty (modeling inaccuracies), and Habitat Adjustment (if the practice also benefits certain habitats, a lower trade ratio is used).

The best value BMPs in terms of cost per pound of phosphorus removed are likely those that are located in the same 12 digit local Hydrogeologic Unit Code (HUC-12) as the WWTP. Mondovi's HUC-12 Watershed is attached as Appendix E. By choosing a site within the HUC-12, Delivery and Downstream factors are 0. Equivalency for Phosphorus is 0. A common BMP, filter strip, has an uncertainty factor of 2, but doesn't allow for any Habitat Adjustment. The final trade ratio will be 2:1 meaning 2 pounds of Phosphorus must be removed by the filter strip for every 1 pound over the limit that the point source discharges. The minimum trade ratio for point to nonpoint sources is 1.2:1.

Due to the convergence of multiple HUC-12's within the City limits, as seen on Appendix E, the DNR may also allow trades in the HUC-12's listed as 070400030106 and 070400030107 with no additional trade ratio penalty.

5.2 Feasibility

Water quality trading is a potentially feasible option for the City of Mondovi. Assuming an average 2:1 trade ratio, Mondovi will need to find projects that remove at least 577 pounds of phosphorus per year to meet the DNR trading guidelines. A safety factor (assumed at an additional 10 percent) should also be included to remove more phosphorus than the minimum needed, since BMPs may fail to be installed properly or not at all during a certain year. The point source takes all responsibility for ensuring the BMPs are installed correctly and functioning as they should. Mondovi would therefore need to locate trading credits that total about 635 pounds of phosphorus per year.

As discussed in the Adaptive Management alternative, the point to non-point phosphorus ratio in the Buffalo River at Mondovi is 1:99. With 99 percent of the watershed phosphorous coming from non-point sources, non-point trading is likely the best opportunity for finding willing trading partners.

5.3 Cost Analysis

The cost per pound of phosphorus removed by trading varies with the type of trade and individual site specific factors. Based on recent correspondence with the Buffalo County Land Conservation and Management Department, Buffalo County is willing to work with communities interested in pollutant trading, but has not done any large scale projects. Based on previous correspondence with other land conservation departments that have implemented larger scale projects (though not specifically targeting phosphorus reduction) using stream buffers, wetland restoration, and groundwater scrapes, the cost per pound of phosphorus removed ranged from $80 to $159. For purposes of this evaluation, $100/lb was used to calculate the cost of trading for Mondovi.

Total trading cost, based on the 635 pounds of trades needed as described above at a cost of $100/lb, would be $63,500 per year. The total 20 year present worth value of the water quality trading alternative is estimated as $817,131. See Appendix F for the present worth calculations.

6 Alternate Discharge Location

6.1 Introduction

Discharging effluent to an alternate discharge location may result in less restrictive effluent requirements, including phosphorus. If a high flowrate stream can be located that already meets the target water quality standard, then dilution calculations are used to determine how much additional phosphorus can be discharged and still result in the standard being met in the stream. Another option is sending wastewater to another community or having another community send its wastewater to Mondovi.

6.2 Feasibility

No streams within a reasonable piping distance would likely be found in the Mondovi area that would result in a less stringent phosphorus discharge limits for the City. The predominately agricultural land use in the region would be expected to result in high phosphorus levels in any stream with larger drainage areas and higher flows. Smaller groundwater-fed streams may have better water quality, but would have insufficient flow for dilution. The Chippewa River at Durand, about 16 miles to the west, is borderline in meeting the large stream water quality criteria of 0.1 mg/l, but is too far away to be a cost effective disposal alternative. Based on the regions hydrogeological conditions, changing to a different discharge location is not considered feasible.

The nearest communities to Mondovi that might be considered for joint treatment are Durand (16 miles west), and Eleva (10 miles east). Neither of these communities would be economically feasible to consider joint treatment.

6.3 Cost Analysis

Since an alternate discharge location or joint treatment with another community are not feasible compliance options, no cost analysis was performed.

7 Land Disposal of Effluent

7.1 Introduction

Land disposal of effluent involves eliminating the discharge to the surface water and discharging instead to a disposal system that promotes effluent infiltration into the ground. The effluent percolates thru the soil to the groundwater system. Since phosphorus does not impact groundwater like it does surface waters, the phosphorus discharge requirement is eliminated. However, since nitrogen is a groundwater contaminant that is present in wastewater, discharges to land disposal systems have total nitrogen discharge limits as well as other constituent discharge limits as may be necessary to protect the groundwater.

Two basic types of land disposal systems are commonly used in Wisconsin. Spray irrigation ("slow rate land disposal) on crops utilizes the nitrogen uptake capability of the crop to limit the amount of nitrogen that reaches the groundwater.

Rapid infiltration systems, or seepage cells, utilize higher permeability soils without vegetative cover. Since there is no vegetation to take up the nitrogen, a total nitrogen discharge limit of 10 mg/l to seepage cells is applied.

7.2 Feasibility

A slow rate spay irrigation system would require large amounts of land, a significant piping system, and storage for at least 180 days during late fall, winter and early spring when crops are not growing and irrigation equipment is susceptible to freezing. Storage for 270 days is often used to provide additional ability to store effluent during wetter years when marketable crops may not withstand additional water. Effluent storage ponds require an impermeable liner. Considering the storage requirements and large land needs for disposal, spray irrigation would likely be more expensive than seepage cells.

A seepage cell land disposal system would require additional treatment to remove nitrogen to 10 mg/l prior to discharge to the seepage system. Nitrogen removal from wastewater is most commonly done using the biological processes of nitrification (converting ammonia and organic nitrogen to nitrates) followed by denitrification, which releases the nitrogen to the atmosphere. To meet treatment requirements prior to seepage cell land disposal, modifications would need to be added to include a nitrification-denitrification operation. For nitrogen removal, a tertiary nitrification/denitrification system would be added to the end of the treatment process before discharging to seepage cells. Due to the tight space at the current treatment plant, there is not room for a tertiary nitrification/denitrification system or seepage cells. Property adjacent to the plant are not suitable for expansion nor seepage cells. Pumping of effluent and additional land acquisition would needed for tertiary nitrification/denitrification and seepage cells for this alternative.

Approximately 15 acres of land is estimated to be needed for the seepage cell option. Additional land to meet Wisconsin Administrative Code requirements for a 500' setback from residential areas would also be needed. Soils within about a 2 mile radius of the existing WWTP were analyzed for soil suitability and in general, sites with suitable soils could be located for the seepage cell land disposal option. Site specific investigations of these areas would need to be conducted in further detail before this compliance option is deemed viable.

7.3 Cost Analysis

Cost estimates were prepared for the addition of tertiary nitrification/denitrification and land disposal of effluent in seepage cells. The estimated capital cost of a tertiary nitrification/denitrification system for nitrogen removal and construction of a seepage cell effluent disposal system is $2,846,000.

Annual O&M costs would be reduced from the current operating costs since chemical addition for phosphorus removal would be eliminated and sludge accumulation/removal would be lower without chemical precipitation. O&M costs related to the chlorination/dechlorination system would also be eliminated since the City would no longer need to disinfect. Some added O&M costs would be associated with the pumping station for delivery of effluent to a new site and the tertiary nitrification/denitrification. The seepage cell land disposal system would also have added O&M costs associated with it, including groundwater quality monitoring costs. Net annual costs are estimated to be $18,000 lower for the seepage cell land disposal system as compared to current operating costs.

The 20 year total present worth of this compliance option is $2,614,372. See Appendix G for the estimate and present worth calculations. If the land disposal option is selected, additional site specific soil and groundwater investigations would be required prior to DNR approval.

8 Individual Economic Variance

8.1 Introduction

An economic variance to water quality standards may be granted if the impact of complying with the standard causes “widespread adverse social and economic impacts”. EPA guidance documents for economic variances identify preliminary and secondary screeners in assessing the “widespread adverse social and economic impacts” of complying with the standard. The preliminary screener for public entities is the impact complying with the water quality standard will have on sewer user charges, using the post-compliance user charge expressed as a percent of median household income (MHI). For user charges between 1 and 2 percent of the MHI, the impacts are expected to be “mid-range”. EPA guidance indicates that user charges that exceed 2 percent of the MHI “may place an unreasonable financial burden on many of the households”. Secondary indicators related to debt, socioeconomic and financial management data are also assessed to determine overall impact.

8.2 Feasibility

The DNR has developed a Phosphorus Variance Application Form (Form 3200-143) for municipalities. A copy of the form is included in Appendix H. The form includes general information about the WWTP, operation and users of the system. The form directs municipalities to the EPA economic worksheets to determine if the community may be eligible for an individual variance. A draft of the completed EPA economic worksheets related to preliminary screener methods and the Substantial Impacts Matrix for Mondovi are also included in Appendix H. This Matrix indicates whether a community may be eligible or not. A check mark indicates that the potential project will likely not cause substantial impacts. An ‘X’ indicates that the project will likely cause substantial impacts, while a ‘?’ is up for determination by the EPA.

Based on these worksheets, Mondovi's average secondary indicators falls into the Mid-range category. The user charge, after implementing the lowest present worth alternative after disregarding variance options, increases Mondovi's rates to 1.16 percent of the MHI. With the post compliance user charge of between 1.0 and 2.0 percent of the MHI, Mondovi falls into a '?' category on the Substantial Impacts Matrix, which means that the City may or may not be eligible for an individual economic variance.

All correspondence with the DNR indicates that unless a community in the '?' category that Mondovi falls into is very close to 2 percent of the MHI, their variance will be rejected.

For reference, Table 1 shows what user rates would be at different percentages of the MHI.

Table 1 – Summary of User Charge Rates

Percent of MHI[1]	Average Annual Costs Per User	Average Monthly Costs Per User
0.74%	$318.13	$26.51
1.0%	$429.91	$35.83
1.16%	$497.41	$41.45
2.0%	$859.82	$71.65

[1]Mondovi's Community Median Household Income is $42,991.

8.3 Cost Analysis

If an individual economic variance were granted, no additional capital or O&M costs would be incurred, but it is highly unlikely one would be granted.

9 Statewide (multi-discharger) Economic Variance Act 378

9.1 Introduction

Act 378 is an approved statewide variance predicated on the presumption that other phosphorous compliance options are not economically feasible. The permit holder has up to 4 permit terms (20 years) to comply with the water quality based effluent limit. Each permit term, the permittee will need to meet a specific declining limit (0.8 mg/L, 0.6 mg/L, 0.5 mg/L, 0.075 mg/L) and also pay $50/lb for every pound discharged above 0.2 mg/L. The $50/lb payment is made to the County to find and implement BMPs that will reduce the phosphorus in the watershed.

If a more economical solution is found during the four permit terms, the variance will no longer be valid. WWTPs that are utilizing this compliance option would need to switch to the new solution to remain in compliance with the permit. If no solution is found before the four permit cycles are up, the State will reevaluate if another statewide variance is warranted.

Municipalities with sewer use charges expressed as a percent of the MHI between 1 and 2 percent need to meet 3 secondary indicators of financial hardship on a county level. Communities with sewer use charges over 2 percent of the MHI need to meet 2 indicators of financial hardship on the county level. This differs from the individual economic variance as these indicators are evaluated on a county-wide, not a community-wide, level.

9.2 Feasibility

The existing treatment plant will likely be able to meet all of the staged permit limits except for the final 0.075 mg/l limit with minimal changes to the treatment system. This staged permit limit schedule gives municipalities more time to evaluate options and for new technology to emerge or current technology to become more affordable.

Mondovi's current sewer user charges are at 0.74 percent of the MHI. With the cost of the lowest phosphorus compliance alternative, not including variances as a compliance option, Mondovi's sewer user charges will raise to 1.16 percent of the MHI and would need 3 economic hardship indicators at the county-wide level to qualify for the variance. Buffalo County has enough indicators for the City to qualify for the MDV.

See Table 1 for summary of the user rates at different percentages of the MHI.

9.3 Cost Analysis

Based on the lowest phosphorus compliance alternative (disregarding variances) costs as presented in this report, Mondovi's sewer user charge would fall between 1 and 2 percent of the MHI following compliance with the phosphorous standard. The lowest present worth compliance alternative that would be able to meet the 0.075 mg/l requirement is water quality trading which would raise the sewer user charge from 0.74 percent to 1.16 percent of the MHI. Since Buffalo County has 5 economic hardship indicators, which is more than needed for sewer user charge rates are between 1 and 2 percent of the MHI, the statewide MDV variance would be an option for the City.

Costs associated with the Act 378 Variance include a $50/lb charge for phosphorus above the 0.2 mg/l level that the City would not be able to remove. Based on an optimized WWTP effluent phosphorus level currently achievable of 0.47 mg/l, Mondovi would need to make the $50/lb payment for an annual total of 197 lb/yr, or a total annual payment of $9,863/yr. The 20 year present worth value of this alternative is $126,919. See Appendix I for the present worth calculations.

10 Recommendation

A summary of compliance alternative costs is included in Table 2.

Table 2 – Summary of Costs

Compliance Option	Capital Cost	Additional Annual O&M Costs	Total Present Worth
Optimization of the Existing WWTP	N/A	N/A	N/A
Existing WWTP Modifications (Tertiary Treatment)	$3,390,918	$74,140	$4,344,966
Adaptive Management	N/A	N/A	N/A
Water Quality Trading	$0	$63,500	$817,131
Alternate Discharge Location	N/A	N/A	N/A
Land Disposal of Effluent	$2,846,000	-$18,000[1]	$2,614,372
Individual Economic Variance	$0	$0	$0
Statewide(multi-discharger) Economic Variance(Act 378)	$0	$9,863	$126,919

[1]Annual O&M costs reduced from current O&M due to elimination of chemical addition for phosphorus removal, reduced chemical sludge for disposal and elimination of disinfection requirements.

Based on Table 1, the Individual Economic Variance has the lowest present worth as a phosphorus compliance alternative. This variance would defer compliance while the viability and details of other potential compliance options becomes better known. From unofficial correspondence with the WDNR, it is highly unlikely Mondovi would receive an individual economic variance unless their sewer user rates were much closer to 2 percent of the MHI.

The next lowest present worth option after an individual economic variance is the multi-discharger variance. If an individual economic variance is not granted, then the multi-discharger variance may be a viable, albeit, short-term, compliance alternative.

Based on indications from the DNR, it is not recommended that Mondovi apply for the individual economic variance. Instead, it is recommended that Mondovi apply for the MDV variance as a short-term compliance alternative. The age, condition, and location of the existing WWTP is such that growth within the City cannot occur unless a new WWTP at a new location is constructed. A facility plan would need to be prepared for meeting Mondovi's treatment need that will include tertiary treatment to permanently achieve the 0.075 mg/L phosphorus limit.

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Appendix A

WPDES Permit

WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

City of Mondovi

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
24A Riverside Dr., Mondovi, WI
to
the Buffalo River, located in the Buffalo River Watershed of the Buffalo-Trempealeau River Basin in Buffalo County

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Paul LaLiberte
Wastewater Field Supervisor

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - July 01, 2013 **EXPIRATION DATE - June 30, 2018**

TABLE OF CONTENTS

1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
701	Representative influent samples shall be collected after the comminutor, but prior to the primary clarifier.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 701 - INFLUENT AFTER COMMINUTOR

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Continuous	Continuous	
BOD_5, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total		mg/L	3/Week	24-Hr Flow Prop Comp	

2 Surface Water Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Representative effluent samples (other than those for chlorine and fecal coliform) shall be collected before the chlorine contact chamber; those for chlorine and fecal coliform shall be collected after the chlorine contact chamber and dechlorination.

2.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point (Outfall) 001 - EFFLUENT TO BUFFALO RIVER

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
$CBOD_5$	Monthly Avg	25 mg/L	3/Week	24-Hr Flow Prop Comp	
$CBOD_5$	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	Interim limit effective throughout this permit term. Final phosphorus limits of 0.075 mg/L (6 month average) and 0.225 mg/L (monthly average) become effective during the next permit term. See footnote 2.2.1.2 below.
Chlorine, Total Residual	Daily Max	38 mg/L	Daily	Grab	Limit & monitoring apply May-Sept annually
Fecal Coliform	Geometric Mean	400 #/100 ml	Weekly	Grab	Limit & monitoring apply May-Sept annually
Copper, Total Recoverable	Daily Max	36 µg/L	Monthly	24-Hr Flow Prop Comp	See footnote 2.2.1.3 below

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Copper, Total Recoverable	Daily Max	0.17 lbs/day	Monthly	Calculated	See footnote 2.2.1.3 below
Hardness, Total as $CaCO_3$		mg/L	Quarterly	24-Hr Flow Prop Comp	See footnote 2.2.1.3 below
Acute WET		TU_a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See footnote 2.2.1.4 below

2.2.1.1 Average Annual Design Flow

The average annual design flow of the permittee's wastewater treatment facility is 0.385 MGD.

2.2.1.2 Phosphorus Water Quality Based Effluent Limitations

See the Schedules section of this permit for more information on phosphorus effluent limitations.

The final water quality based effluent limits for phosphorus are 0.075 mg/L 6-Month Average and 0.225 mg/L Monthly Average unless:

(A.) As part of the application for the next reissuance, or prior to filing the application, the permittee submits either: 1.) a watershed adaptive management plan and a completed Watershed Adaptive Management Request Form 3200-139; or 2.) an application for water quality trading; or 3.) an application for a variance; or 4.) new information or additional data that supports a recalculation of the numeric limitation; and

(B) The Department modifies, revokes and reissues, or reissues the permit to incorporate a revised limitation before the expiration of the compliance schedule*.

If Adaptive Management or Water Quality Trading is approved as part of the permit application for the next reissuance or as part of an application for a modification or revocation and reissuance, the plan and specification submittal, construction, and final effective dates for compliance with the total phosphorus WQBEL may change in the reissued or modified permit. In addition, the numeric value of the water quality based effluent limit may change based on new information (e.g. a TMDL) or additional data. If a variance is approved for the next reissuance, interim limits and conditions will be imposed in the reissued permit in accordance with s. 283.15, Stats., and applicable regulations. A permittee may apply for a variance to the phosphorus WQBEL at the next reissuance even if the permittee did not apply for a phosphorus variance as part of this permit reissuance.

If a water quality based effluent limit has taken effect in a permit, any increase in the limit is subject to s. NR 102.05(1) and ch. NR 207 Wis. Adm. Code.

When a six-month average effluent limit is specified for Total Phosphorus the applicable averaging periods are May through October and November through April.

*Note: The Department will prioritize reissuances and revocations, modifications, and reissuances of permits to allow permittees the opportunity to implement adaptive management or nutrient trading in a timely and effective manner.

2.2.1.3 Copper & Harness Monitoring

The quarterly sample for hardness shall be collected concurrently with a monthly copper sample

2.2.1.4 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Buffalo River

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 30, 10, 3, 1% (if the IWC $\leq$30%) or 100, 75, 50, 25, 12.5% (if the IWC >30%) and any additional selected by the permittee.

WET Testing Frequency: Acute WET tests are required during the following quarters.

- 3rd quarter (July-Sept) 2013
- 1st quarter (Jan-March) 2016

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The original Discharge Monitoring Report (DMR) form and one copy shall be sent to the contact and location provided on the DMR by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: If $LC_{50} \geq 100$, then $TU_a = 1.0$. If LC_{50} is < 100, then $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Relative Toxic Unit - Chronic (rTU_c) is greater than 1.0 for either species. The rTU_c shall be calculated as follows: If $IC_{25} \geq$ IWC, then $rTU_c = 1.0$. If $IC_{25} <$ IWC, then $rTU_c =$ IWC $\div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90 day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

3 Land Application Requirements

3.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
002	As long as sludge is shipped to the West Central Wisconsin Biosolids Facility (WCWBF) for disposal, representative sludge samples shall be collected once per year and monitored for List 1. Sludge samples shall be collected prior to hauling and test results shall be reported on Form 3400-49 "Waste Characteristics Report". Hauled sludge reports shall be submitted on Form 3400-52 "Other Methods of Disposal or Distribution Report" following each year that sludge is hauled.

3.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 002 - SLUDGE TO WCWBF

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Once	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Once	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Once	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Once	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Once	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Once	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Once	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Once	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Once	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Once	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Once	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Once	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Once	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Once	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Once	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Once	Composite	

3.2.1.1 List 1

List 1 **TOTAL SOLIDS AND METALS** See the Monitoring Requirements and Limitations table above for monitoring frequency and limitations for the List 1 parameters
Solids, Total (percent)
Arsenic, mg/kg (dry weight)
Cadmium, mg/kg (dry weight)
Copper, mg/kg (dry weight)
Lead, mg/kg (dry weight)
Mercury, mg/kg (dry weight)
Molybdenum, mg/kg (dry weight)
Nickel, mg/kg (dry weight)
Selenium, mg/kg (dry weight)
Zinc, mg/kg (dry weight)

4 Schedules

4.1 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

The permittee shall comply with the WQBELs for Phosphorus as specified. No later than 30 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification requirement.

Required Action	Date Due
Operational Evaluation Report: The permittee shall prepare and submit to the Department for approval an operational evaluation report. The report shall include an evaluation of collected effluent data, possible source reduction measures, operational improvements or other minor facility modifications that will optimize reductions in phosphorus discharges from the treatment plant during the period prior to complying with final phosphorus WQBELs and, where possible, enable compliance with final phosphorus WQBELs by 06/30/2017. The report shall provide a plan and schedule for implementation of the measures, improvements, and modifications as soon as possible, but not later than 06/30/2017 and state whether the measures, improvements, and modifications will enable compliance with final phosphorus WQBELs. Regardless of whether they are expected to result in compliance, the permittee shall implement the measures, improvements, and modifications in accordance with the plan and schedule specified in the operational evaluation report. If the operational evaluation report concludes that the facility can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements, and minor facility modifications, the permittee shall comply with the final phosphorus WQBEL by 06/30/2017 and is not required to comply with the milestones identified below for years 3 through 9 of this compliance schedule ('Preliminary Compliance Alternatives Plan', 'Final Compliance Alternatives Plan', 'Treatment Plant Upgrade to Meet WQBELs','Final Plans and Specifications, 'Complete Construction, 'Achieve Compliance').	06/30/2014
Study of Feasible Alternatives: If the Operational Evaluation Report concludes that the permittee cannot achieve final phosphorus WQBELs with source reduction measures, operational improvements and other minor facility modifications, the permittee shall initiate a study of feasible alternatives for meeting final phosphorus WQBELs and comply with the remaining required actions of this schedule of compliance. If the Department disagrees with the conclusion of the report, and determines that the permittee can achieve final phosphorus WQBELs using the existing treatment system with only source reduction measures, operational improvements, and minor facility modifications, the Department may reopen and modify the permit to include an implementation schedule for achieving the final phosphorus WQBELs sooner than 06/30/2022.	06/30/2014
Compliance Alternatives, Source Reduction, Improvements and Modifications Status: The permittee shall submit a 'Compliance Alternatives, Source Reduction, Operational Improvements and Minor Facility Modification' status report to the Department. The report shall provide an update on the permittee's: (1) progress implementing source reduction measures, operational improvements, and minor facility modifications to optimize reductions in phosphorus discharges and, to the extent that such measures, improvements, and modifications will not enable compliance with the WQBELs, (2) status evaluating feasible alternatives for meeting phosphorus WQBELs.	06/30/2015
Preliminary Compliance Alternatives Plan: The permittee shall submit a preliminary compliance alternatives plan to the Department. If the plan concludes upgrading of the permittee’s wastewater treatment facility is necessary to achieve final phosphorus WQBELs, the submittal shall include a preliminary engineering design	06/30/2016

report. If the plan concludes Adaptive Management will be used, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 without the Adaptive Management Plan. If water quality trading will be undertaken, the plan must state that trading will be pursued.	
Final Compliance Alternatives Plan: The permittee shall submit a final compliance alternatives plan to the Department. If the plan concludes upgrading of the permittee's wastewater treatment is necessary to meet final phosphorus WQBELs, the submittal shall include a final engineering design report addressing the treatment plant upgrades, and a facility plan if required pursuant to ch. NR 110, Wis. Adm. Code. If the plan concludes Adaptive Management will be implemented, the submittal shall include a completed Watershed Adaptive Management Request Form 3200-139 and an engineering report addressing any treatment system upgrades necessary to meet interim limits pursuant to s. NR 217.18, Wis. Adm. Code. If the plan concludes water quality trading will be used, the submittal shall identify potential trading partners. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	06/30/2017
Progress Report on Plans & Specifications: Submit progress report regarding the progress of preparing final plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	06/30/2018
Final Plans and Specifications: Unless the permit has been modified, revoked and reissued, or reissued to include Adaptive Management or Water Quality Trading measures or to include a revised schedule based on factors in s. NR 217.17, Wis. Adm. Code, the permittee shall submit final construction plans to the Department for approval pursuant to s. 281.41, Stats., specifying treatment plant upgrades that must be constructed to achieve compliance with final phosphorus WQBELs, and a schedule for completing construction of the upgrades by the complete construction date specified below. (Note: Permit modification, revocation and reissuance, and reissuance are subject to s. 283.53(2), Stats.) Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	06/30/2019
Treatment Plant Upgrade to Meet WQBELs: The permittee shall initiate construction of the upgrades. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41. Stats. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	09/30/2019
Construction Upgrade Progress Report #1: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	09/30/2020
Construction Upgrage Progress Report #2: The permittee shall submit a progress report on construction upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	09/30/2021
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface	05/31/2022

Water section of this permit.	
Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs. Note: See 'Alternative Approaches to Phosphorus WQBEL Compliance' in the Surface Water section of this permit.	06/30/2022

5 Standard Requirements

NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2).

5.1 Reporting and Monitoring Requirements

5.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

5.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

5.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

5.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

5.1.5 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

A separate CMAR certification document, that is not part of the electronic report form, shall be mailed to the Department at the time of electronic submittal of the CMAR. The CMAR certification shall be signed and submitted by an authorized representative of the permittee. The certification shall be submitted by mail. The certification shall verify the electronic report is complete, accurate and contains information from the owner's treatment works.

5.1.6 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

5.1.7 Other Information

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 correct information to the Department.

5.2 System Operating Requirements

5.2.1 Noncompliance Notification

- The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:
  - any noncompliance which may endanger health or the environment;
  - any violation of an effluent limitation resulting from an unanticipated bypass;
  - any violation of an effluent limitation resulting from an upset; and
  - any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

- A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at **1-800-943-0003**

5.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

5.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-536, Wis. Adm. Code.

5.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

5.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- which create a fire or explosion hazard in the treatment work;
- which will cause corrosive structural damage to the treatment work;
- solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;
- wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and

- changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

5.2.6 Unscheduled Bypassing

Any unscheduled bypass or overflow of wastewater at the treatment works or from the collection system is prohibited, and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats., unless all of the following occur:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
- 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 back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance.
- The permittee notifies the department of the unscheduled bypass or overflow. The permittee shall notify the department within 24 hours of initiation of the bypass or overflow occurrence by telephone, voicemail, fax or e-mail. Within 5 days of conclusion of the bypass or overflow occurrence, the permittee shall submit to the department in writing, all of the following information:
  - Reason the bypass or overflow occurred, or explanation of other contributing circumstances that resulted in the overflow event. If the overflow or bypass is associated with wet weather, provide data on the amount and duration of the rainfall or snow melt for each separate event.
  - Date the bypass or overflow occurred.
  - Location where the bypass or overflow occurred.
  - Duration of the bypass or overflow and estimated wastewater volume discharged.
  - Steps taken or the proposed corrective action planned to prevent similar future occurrences.
  - Any other information the permittee believes is relevant.

5.2.7 Scheduled Bypassing

Any construction or normal maintenance which results in a bypass of wastewater is prohibited unless authorized by the Department in writing. If the Department determines that there is significant public interest in the proposed action, the Department may schedule a public hearing or notice a proposal to approve the bypass. Each request shall specify the following minimum information:

- Proposed date of bypass.
- Estimated duration of the bypass.
- Alternatives to bypassing.
- Measures to mitigate environmental harm caused by the bypass.
- Estimated volume of the bypass.

5.2.8 Ammonia Limit Not Needed - Continue to Optimize Removal of Ammonia

Applying the procedures in s. NR 106.05, Wis. Adm. Code, to ammonia data that is representative of the current operations of the wastewater treatment plant resulted in a determination that ammonia effluent limits are not necessary in this permit. Pursuant to NR 106.33, throughout the term of this permit, the wastewater treatment plant shall continue to be operated in a manner that optimizes the removal of ammonia within the design capabilities of the wastewater treatment plant.

5.2.9 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater

treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

5.3 Surface Water Requirements

5.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

5.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

5.3.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. 'Cold Shock' means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

5.3.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

5.3.5 Percent Removal

During any 30 consecutive days, the average effluent concentrations of BOD_5 and of total suspended solids shall not exceed 15% of the average influent concentrations, respectively. This requirement does not apply to removal of total suspended solids if the permittee operates a lagoon system and has received a variance for suspended solids granted under NR 210.07(2), Wis. Adm. Code.

5.3.6 Fecal Coliforms

The limit for fecal coliforms shall be expressed as a monthly geometric mean.

5.3.7 Seasonal Disinfection

Disinfection shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitation for fecal coliforms apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

5.3.8 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)

Test methods for total residual chlorine, approved in ch. NR 219 - Table B, Wis. Adm. Code, normally achieve a limit of detection of about 20 to 50 micrograms per liter and a limit of quantitation of about 100 micrograms per liter. Reporting of test results and compliance with effluent limitations for chlorine residual and total residual halogens shall be as follows:

- Sample results which show no detectable levels are in compliance with the limit. These test results shall be reported on Wastewater Discharge Monitoring Report Forms as "< 100 µg/L". (Note: 0.1 mg/L converts to 100 µg/L)

- Samples showing detectable traces of chlorine are in compliance if measured at less than 100 µg/L, unless there is a consistent pattern of detectable values in this range. These values shall also be reported on Wastewater Discharge Monitoring Report Forms as "<100 µg/L." The facility operating staff shall record actual readings on logs maintained at the plant, shall take action to determine the reliability of detected results (such as re-sampling and/or calculating dosages), and shall adjust the chemical feed system if necessary to reduce the chances of detects.

- Samples showing detectable levels greater than 100 µg/L shall be considered as exceedances, and shall be reported as measured.

- To calculate average or mass discharge values, a "0" (zero) may be substituted for any test result less than 100 µg/L. Calculated values shall then be compared directly to the average or mass limitations to determine compliance.

5.3.9 Whole Effluent Toxicity (WET) Monitoring Requirements

In order to determine the potential impact of the discharge on aquatic organisms, static-renewal toxicity tests shall be performed on the effluent in accordance with the procedures specified in the *"State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition" (PUB-WT-797*, November 2004) as required by NR 219.04, Table A, Wis. Adm. Code). All of the WET tests required in this permit, including any required retests, shall be conducted on the *Ceriodaphnia dubia* and fathead minnow species. Receiving water samples shall not be collected from any point in contact with the permittee's mixing zone and every attempt shall be made to avoid contact with any other discharge's mixing zone.

5.3.10 Whole Effluent Toxicity (WET) Identification and Reduction

Within 60 days of a retest which showed positive results, the permittee shall submit a written report to the Biomonitoring Coordinator, Bureau of Watershed Management, 101 S. Webster St., PO Box 7921, Madison, WI 53707-7921, which details the following:

- A description of actions the permittee has taken or will take to remove toxicity and to prevent the recurrence of toxicity;

- A description of toxicity reduction evaluation (TRE) investigations that have been or will be done to identify potential sources of toxicity, including some or all of the following actions:

  (a) Evaluate the performance of the treatment system to identify deficiencies contributing to effluent toxicity (e.g., operational problems, chemical additives, incomplete treatment)
  (b) Identify the compound(s) causing toxicity
  (c) Trace the compound(s) causing toxicity to their sources (e.g., industrial, commercial, domestic)
  (d) Evaluate, select, and implement methods or technologies to control effluent toxicity (e.g., in-plant or pretreatment controls, source reduction or removal)

- Where corrective actions including a TRE have not been completed, an expeditious schedule under which corrective actions will be implemented;

- If no actions have been taken, the reason for not taking action.

The permittee may also request approval from the Department to postpone additional retests in order to investigate the source(s) of toxicity. Postponed retests must be completed after toxicity is believed to have been removed.

5.4 Land Application Requirements

5.4.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

5.4.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

5.4.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

5.4.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Report Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year of analysis. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

5.4.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:
Water Extractable Phosphorus (% of Total P) =
[Water Extractable Phosphorus (mg/kg, dry wt) ÷ Total Phosphorus (mg/kg, dry wt)] x 100

5.4.6 Annual Land Application Report

The Annual Land Application Report Form 3400-55 shall be submitted electronically by January 31 each year whether or not non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

5.4.7 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31 each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

5.4.8 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (l), Wis. Adm. Code.

5.4.9 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

5.4.10 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

5.4.11 Sludge Hauling

If sludge is hauled to another facility, the permittee is required to submit Form 3400-52 to the Department. Information shall include the quantity of sludge hauled, the name, address, phone number, contact person, and permit number of the receiving facility. Form 3400-52 shall be submitted annually by January 31 following each year sludge is hauled.

6 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Operational Evaluation Report	June 30, 2014	7
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Study of Feasible Alternatives	June 30, 2014	7
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Compliance Alternatives, Source Reduction, Improvements and Modifications Status	June 30, 2015	7
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Preliminary Compliance Alternatives Plan	June 30, 2016	7
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Compliance Alternatives Plan	June 30, 2017	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Progress Report on Plans & Specifications	June 30, 2018	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Final Plans and Specifications	June 30, 2019	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Treatment Plant Upgrade to Meet WQBELs	September 30, 2019	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrade Progress Report #1	September 30, 2020	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Construction Upgrage Progress Report #2	September 30, 2021	8
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Complete Construction	May 31, 2022	9
Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus - Achieve Compliance	June 30, 2022	9
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	11
General Sludge Management Form 3400-48	prior to any significant sludge management changes	16
Characteristic Report Form 3400-49 and Lab Report	by January 31 following each year of analysis	17
The Annual Land Application Report Form 3400-55	by January 31 each year whether or not non-exceptional quality sludge is land applied	17

electronically the Other Methods of Disposal or Distribution Report Form 3400-52	by January 31 each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	17
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	10

Report forms shall be submitted to the address printed on the report form. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to: West Central Region - BRF, 910 Hwy 54 E, Black River Falls, WI 54615

Appendix B

Phosphorus Optimization Worksheet

PHOSPHORUS OPTIMIZATION REPORT WORKSHEET

Facility Name: Mondovi Wastewater Treatment Facility

WPDES Permit #: WI-0020591-09-0

PART I - BACKGROUND INFORMATION

(A) Briefly describe wastewater treatment facility processes and operations and the means of treating phosphorus, including any chemicals used. Attach a flow schematic which shows the point(s) of chemical addition for TP control. Include both liquid and solids treatment trains.

See attached WWTP Process Flow Diagram

Treatment includes primary settling, rotating biological contactor (RBC) secondary treatment, secondary settling and seasonal effluent disinfection. Ferric Chloride is added to the RBC effluent and settled in the secondary clarifier. Primary and secondary sludge is pumped to the sludge storage tank for periodic hauling to the western Wisconsin regional biosolids facility (WWRBF)at Ellsworth. Supernatant from the sludge tank and centrate returned from the WWRBF are returned to the plant influent.

(B) Baseline Year: 2013/2014

Month	Influent Avg. Flow (MGD)	Influent Avg. TP Concentration (mg/l)	Influent TP Mass (lb/day)	Effluent Avg. Flow (MGD)	Effluent Avg. TP Concentration (mg/l)	Effluent TP Mass (lb/day)
January 2014	0.1563	4.70	6.1	0.1563	0.62	0.8
February 2014	0.4855	2.22	9.0	0.4855	0.22	0.9
March 2014	0.6469	0.61	3.3	0.6469	0.28	1.5
April 2014	0.2533	6.94	14.7	0.2533	0.45	0.9
May 2014	0.1704	6.12	8.7	0.1704	0.24	0.3
June 2013	0.1989	7.34	12.2	0.1989	0.40	0.7
July 2013	0.1617	8.89	12.0	0.1617	0.42	0.6
August 2013	0.1555	9.13	11.8	0.1555	0.50	0.6
September 2013	0.1612	9.14	12.3	0.1612	0.63	0.8
October 2013	0.1503	7.01	8.8	0.1503	0.73	0.9
November 2013	0.1602	9.11	12.2	0.1602	0.62	0.8
December 2013	0.1485	5.62	7.0	0.1485	0.56	0.7
Avg	0.240	6.40	9.83	0.240	0.47	0.81

(C) Possible Contributors: For municipalities, list all possible industries, other commercial buildings and hauled in wastes that could be introducing phosphorus into the collection system.

Name Source	Type of Process	Already Contacted?	If so, possible contributor?
Martin Transport	Truck Wash	No	yes
SPF	Animal Feed	No	yes
Mondovi Car Wash	Carwash	No	yes

Possible Contributors: For industrials list processes that could be introducing phosphorus into the collection system.

Type of Process	Chemicals used?	Product containing P?

Water Supply: What are the phosphorus levels within your water supply? Does the water utility add phosphorus for corrosion control or iron and manganese sequestration?

Not Applicable-polyphosphate is not added to the water supply

PART 2 - OPTIMIZATION ACTION PLANS

List the items that will address to reduce the phosphorus in the effluent and provide a schedule for accomplishing each item. Note that all items must be completed by no later than 3 years after the date of permit reissuance. For each optimization action fill out a separate plan sheet.

Optimization Action: (example: Address Phosphorus from Industries)

See attached Phosphorus Optimization Action Plan

Briefly describe optimization action plan: (example: determine contributors of phosphorus throughout the sewer area and work with them to reduce the incoming phosphorus. Parts of the plan include meeting with the industries, etc.)

See attached Phosphorus Optimization Action Plan

Anticipated Time Frame for Optimization Action Plan:

Main Item to Complete	Date Start	Date Complete
See attached Phosphorus Optimization Action Plan		

Overall Optimization Action Plan Time Frame: 11 months

Overall Completion Date: 6/30/2015

Outcome hoping for:

Reduce Phosphorus to 0.5 mg/l or less to assess compliance options..

Anticipated reduction and/or comments:

To be determined by the evaluation.

PART 3 - OPTIMIZATION APPROVAL

Facility Name: Mondovi WWTP **WPDES Permit#:** WI-002059-09-0

Name and Contact Information of Person Preparing Report:

Name: Paul Gont, PE **E-mail Address:** pgont@sehinc.com

Telephone #: 715.720.6252

OPTIMIATION ACTION PLANS

Please provide a summary of the proposed action items and projected completion dates. The completion dates should be developed to enable the incorporation of the action items into the Preliminary Facilities Plan that is required in the WPDES Permit Phosphorus Compliance Schedule.

INSERT OPTIMIZATION ITEMS (TITLE FROM EACH SHEET)

Action Item	Proposed Date of Completion
See attached Phosphorus Optimization Action Plan	

For DNR use only

☐ **Complete**

☐ **Not Complete**

☐ **Request more information?**

Comments:

Submitted for Approval by: _____ **(signed)** **Date of Submittal:** _____

_____ **(printed)**

Authorized Permit Representative

Approved by: _____ **Date of Approval:** _____

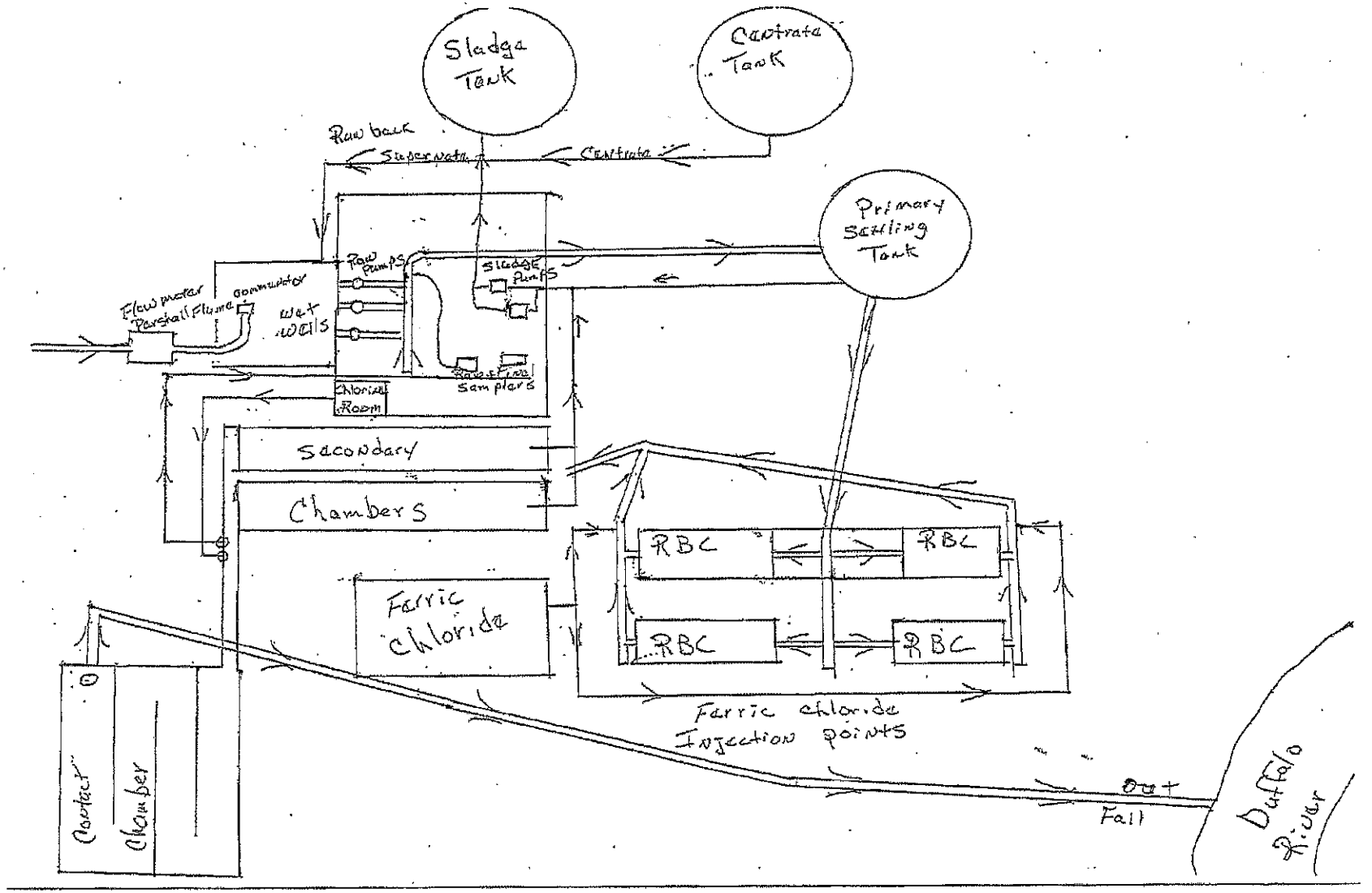
DNR Wastewater Engineer or Designee

Mondovi WWTP

Phosphorus Optimization Action Plan

June 2014

Item #	Item	Action Plan	Start Date	End Date	Time Frame	Anticipated Outcome
1	Centrate Return-Phosphorus assessment	Evaluate phosphorus levels in Centrate from the Biosolids Facility prior to return to influent channel	7/31/2014	10/31/2015	3 months	Assess significance of Centrate on phosphorus load that may be treated separately prior to return to the WWTP
2	Supernatant Return-Phosphorus assessment	Evaluate phosphorus levels in from the supernatant fron the sludge tank prior to return to influent channel	7/31/2014	10/31/2014	3 months	Assess significance of Supernatant on phosphorus load that may be treated separately prior to return to the WWTP
3	Centrate and supernatant phosphorus reduction	If appropriate from above assessments, proceed with actions (chemical feed to sidestreams, etc)to evaluate phosphorus reduction potential	11/1/2014	6/30/2015	8 months	Optimize chemical effectiveness and/or reduce effluent total phosphorus
4	Evaluate Industrial Source Reduction	Evaluate Industrial Chemicals & Processes for possible source reduction of Phosphorus.	7/31/2014	12/31/2014	5 months	Identify and evaluate viable industrial source reduction options
5	Implement Industrial Source Reduction	Change Chemicals or Processes per evaluation to reduce phosphorus	1/1/2015	6/30/2015	6 months	Implement viable industrial source reduction options



MONDOVI WWTP

Appendix C

Existing WWTP Modifications – Estimate and Present Worth Analysis

City of Mondovi
Existing WWTP Modifications
Present Worth Analysis
9/13/2017

PW interest Rate	4.63%
PW factor initial cost:	1.00
PW factor annual cost for 20 yrs:	12.8682

Capital Cost	Cost	PW Factor	Present Worth
Item			
Capital Improvements	***$ 3,390,918***	***1.00***	***$ 3,390,918***

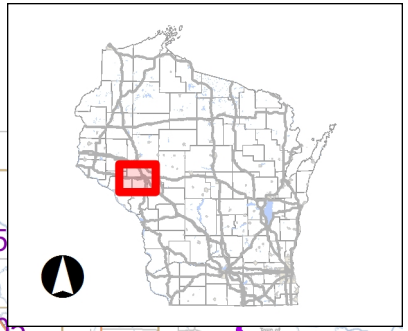
Annual Costs			
Item	Cost	PW Factor	Present Worth
Annual Costs	***$ 74,140***	***12.8682***	***$ 954,048***

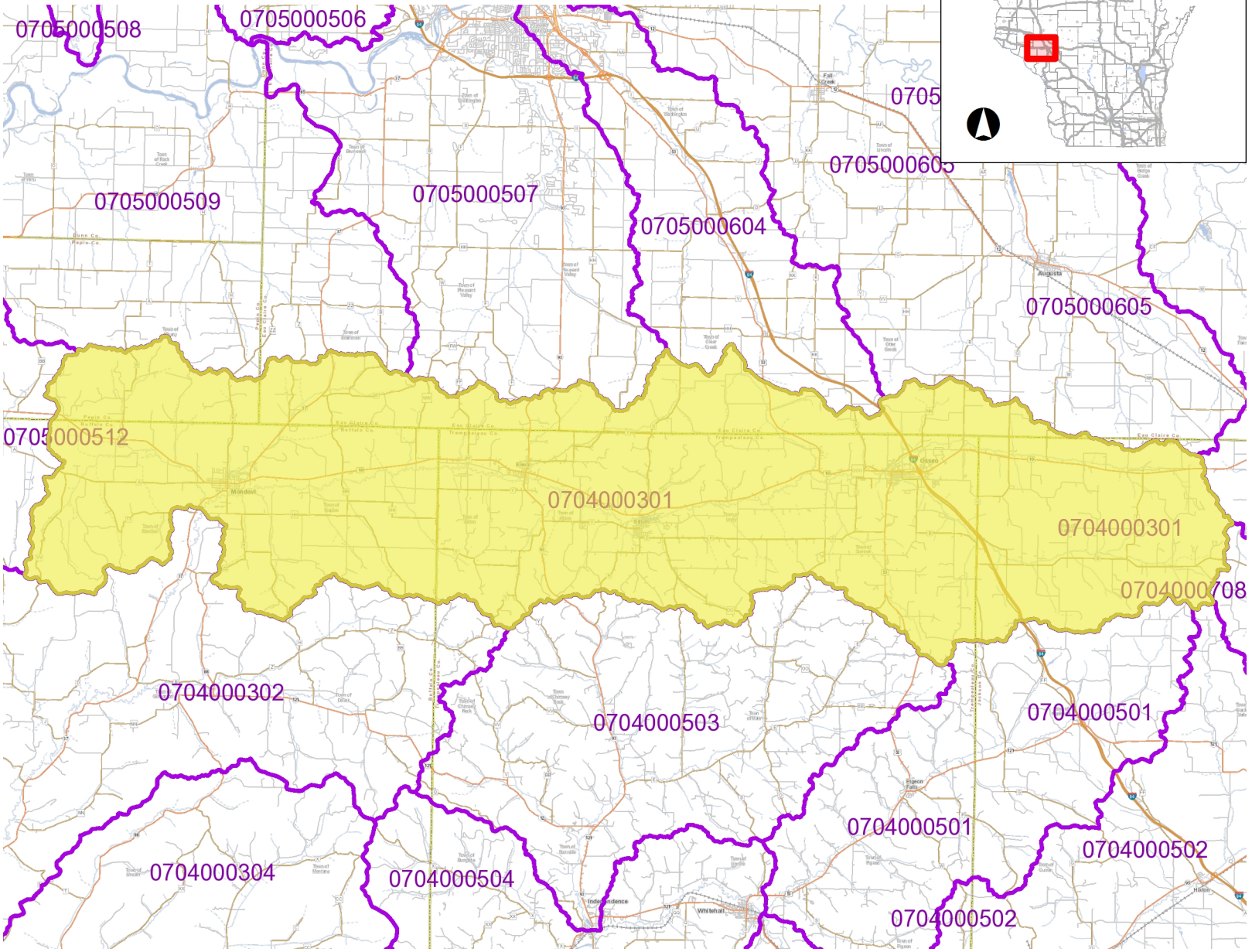
TOTAL 20 YR PRESENT WORTH **$ 4,344,966**

Appendix D

Harvey Creek – Buffalo River Watershed Map

Surface Water Data Viewer Map





Legend

- 10-digit HUCs (Watersheds)
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

Notes

9.9 0 4.93 9.9 Miles

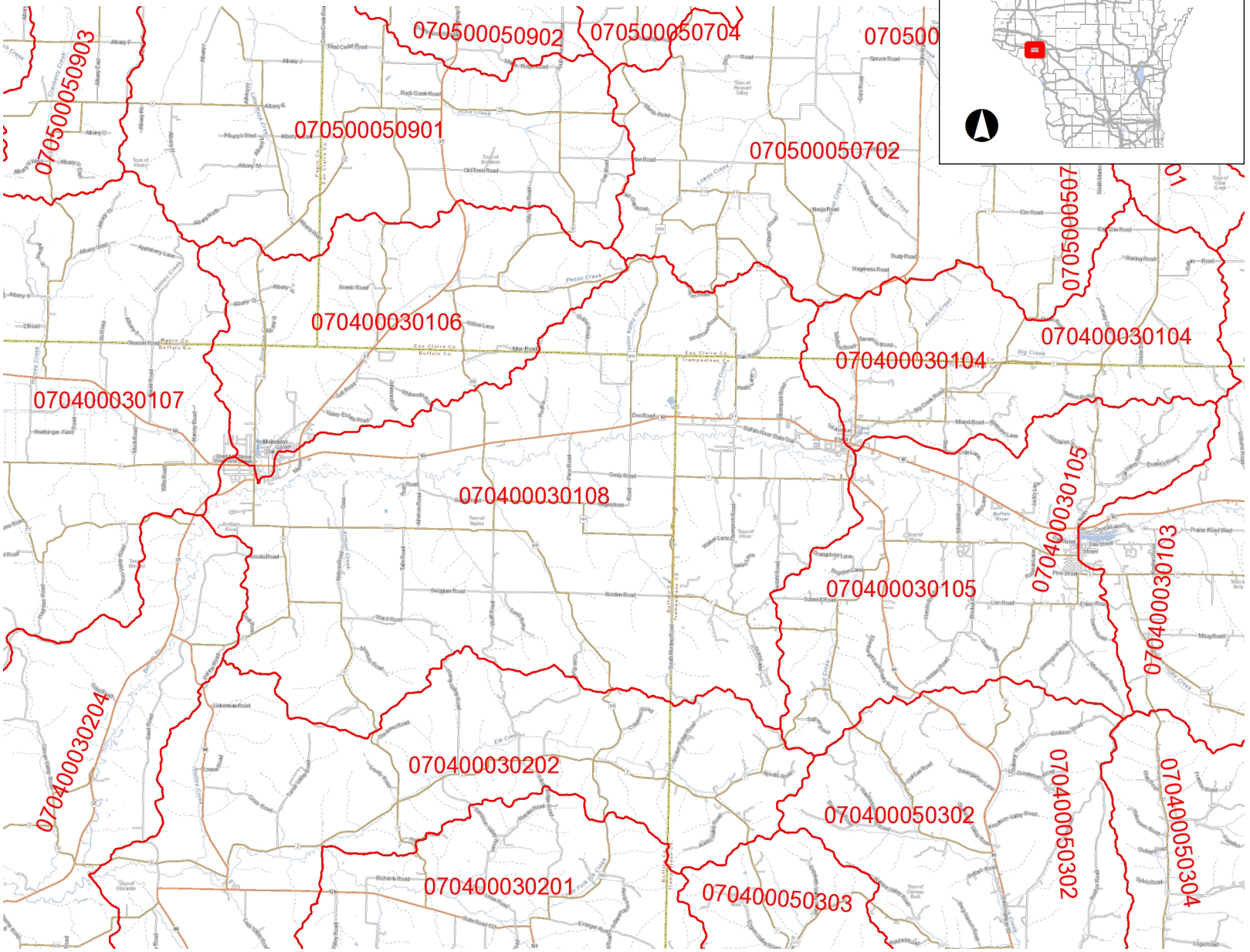
NAD_1983_HARN_Wisconsin_TM

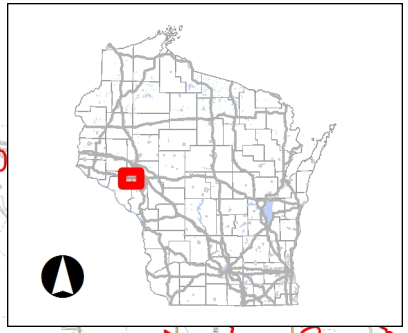
1: 312,449

Appendix E

Watershed HUC-12 Delineation

Surface Water Data Viewer Map





Legend

- 12-digit HUCs (Subwatersheds)
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

Notes

4.9 0 2.47 4.9 Miles

NAD_1983_HARN_Wisconsin_TM

1: 156,225

Appendix F

Water Quality Trading Present Worth Analysis

City of Mondovi
Water Quality Trading
Present Worth Analysis
9/13/2017

PW interest Rate	4.63%
PW factor initial cost:	1.00
PW factor annual cost for 20 yrs:	12.8682

Capital Cost	Cost	PW Factor	Present Worth
Item			
Capital Improvements	***$ -***	***1.00***	***$ -***

Annual Costs

Item	Cost	PW Factor	Present Worth
Trade Cost (635 lb/year at $100/lb)	$ 63,500		
Subtotatl	***$ 63,500***	***12.8682***	***$ 817,131***

TOTAL 20 YR PRESENT WORTH **$ 817,131**

Appendix G

Land Disposal Estimate and Present Worth Analysis

City of Mondovi
Land Disposal
Cost Estimate
9/13/2017

Land Disposal		
Nitrification/Denitrification System	$	436,000
Pump Station - Effluent	$	150,000
Process Piping	$	500,000
Land Acquisition	$	400,000
Earthwork	$	181,500
Electrical Costs	$	130,000
Monitoring Wells	$	15,000
Site Restoration	$	20,000
Subtotal	**$**	**1,832,500**
Contractor Mobilization/GC (7%)	$	125,000
Contractor O&P (15%)	$	267,000
Contingency (10%)	$	217,500
	$	**2,442,000**
Design Engineering (10%)	$	178,000
Construction Engineering(10%)	$	178,000
Legal and Admin (2%)	$	48,000
Estimated Project Total	**$**	**2,846,000**

City of Mondovi
Land Disposal
Present Worth Analysis
9/13/2017

PW interest Rate	4.63%
PW factor initial cost:	1.00
PW factor annual cost for 20 yrs:	12.8682

Capital Cost	Cost	PW Factor	Present Worth
Item			
Land Disposal	***$ 2,846,000***	***1.00***	***$ 2,846,000***

Annual Costs

Item	Cost	PW Factor	Present Worth	
Chemicals for Phosphorus Removal	$ (26,000)	12.8682	$ (334,573)	Deduct
Sludge Costs for Phosphorus	$ (25,000)	12.8682	$ (321,705)	Deduct
Chlorination	$ (2,000)	12.8682	$ (25,736)	Deduct
Land Disposal O&M	$ 35,000	12.8682	$ 450,387	Addition (Monitoring Wells and Blower Costs
Subtotal	***$ (18,000)***	***12.8682***	***$ (231,628)***	

TOTAL 20 YR PRESENT WORTH **$ 2,614,372**

Appendix H

Draft Individual Economic Variance Worksheets

Worksheet E

Data Used in the Secondary Test

Please list the following values used in deter mining the Secondary Score. Potential sources of the data are indicated.

A. Data Collection

Data	Potential Source	Value
Direct Net Debt	Community Financial Statements Town, County or State Assessor's Office	$ 12,832 (1)
Overlapping Debt	Community Financial Statements Town, County or State Assesor's Office	$ 2,042,121 (2)
Market Value of Property	Community Financial Statements Town, County or State Assessor's Office	$ 135,556,500 (3)
Bond Rating	Standard and Poors or Moody's	N/A (4)
Community Unemployment Rate	1990 Census of Population Regional Data Centers	4.1 %(5)
National Unemployment Rate	Bureau of Labor Statistics (202) 606-6392	4.8 %(6)
Community Median Household Income	1990 Census of Population	$ 42,991 (7)
State Median Household Income	1990 Census of Population	$ 52,513 (8)
Property Tax Collection Rate	Community Financial Statements Town, County or State Assessor's Office	N/A %(9)
Property Tax Revenues	Community Financial Statements Town, County or State Assessor's Office	$ 1,230,286 (10)

Worksheet E, Continued

B. Calculation of Indicators

1. Overall Net Debt as a Percent of Full Market Value of Taxable Property

Overall Net Debt (Calculate: (1) + (2))	$ 2,054,953 (11)
Overall Net Debt as a Percent of Full Market Value of Taxable Property (Calculate: [(11)/(3)] x 100)	1.52 %(12)

2. Property Tax Revenues as a Percent of Full Market Value of Taxable Property

Property Tax Revenues as a Percent of Full Market Value of Taxable Property (Calculate: [(10)/(3)] x 100)	0.91 %(13)

Worksheet F

Calculating The Secondary Score

Please check the appropriate box in each row, and record the corresponding score in the final column. Then, sum the scores and compute the average. Remember, if one of the debt or socioeconomic indicators is not available, average the two financial management indicators and use this averaged value as a single indicator with the remaining indicators.

	Secondary Indicators			Score
Indicator	Weak*	Mid-Range**	Strong***	
Bond Rating Worsksheet E, (4)	Below BBB (S&P) Below Baa (Moody's) ☐	BBB (S&P) Baa (Moody's) ☐	Above BBB (S&P) or Baa (Moody's) ☐	N/A
Overall Net Debt as Percent of Full Market Value of Taxable Property Worksheet E, (12)	Above 5% ☐	2%-5% ☐	Below 2% X	3
Unemployment Worksheet E, (5)& (6)	Above National Average ☐	National Average X	Below National Average ☐	2
Median Household Income Worksheet E, (7) & (8)	Below State Median X	State Median ☐	Above State Median ☐	1
Property Tax Revenues as a Percent of Full Market Value of Taxable Property Worksheet E, (13)	Above 4% ☐	2%-4% ☐	Below 2% X	3
Property Tax Collection Rate Worksheet E, (9)	< 94% ☐	94% - 98% ☐	> 98% ☐	N/A

* Weak is a score of 1 point

** Mid-Range is a score of 2 points

*** Strong is a score of 3 points

SUM 9

AVERAGE 2.25

Table 2-2
Assessment of Substantial Impacts Matrix

Secondary Score		Municipal Preliminary Screener		
		Less than 1.0 Percent	Between 1.0 and 2.0 Percent	Greater than 2.0 Percent
Less than 1.5		?	X	X
Between 1.5 and 2.5		✓	?	X
Greater than 2.5		✓	✓	?

State of Wisconsin
Department of Natural Resources
Bureau of Watershed Management
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Phosphorus Variance Application for Municipal Facilities - s. 283.15, Wis. Stats.

Form 3200-143 (3/15)

Notice: Pursuant to s. 283.15, Wis. Stats, and ss. NR 200.21 and 200.22, Wis. Adm. Code, an owner of an existing permitted wastewater treatment system may apply for a variance to phosphorus water quality based effluent limits (WQBEL). This form should be completed and submitted to the Department to request a variance. Personally identifiable information collected will be used for administrative purposes and may be provided to requestors to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.]

Facility and Permit Information			Facility Contact Information		
WPDES Permit No. **WI-** | | | | | |			Contact Name		
Facility Name			Title		
Facility Street Address			Address		
City	State	ZIP Code	City	State	ZIP Code
Receiving Water			Phone Number	Fax Number	
Source of Water Supply	Average Discharge Flow Rate _____ MGD		Email Address		

Variance Request Deadlines

1. This variance is being requested at the time of application for permit reissuance ◯
2. This variance is being requested from a current WPDES Permit and, if approved, will require permit modification ◯

   Date of Current Permit Issuance _____

Variance Requirements

1. Phosphorus Water Quality Standard from which variance is sought: _____ mg/L

   Do you believe this limit could be achieved during the term of the permit? ◯ Yes ◯ No

2. Effluent level currently achievable: _____ mg/L

3. Variance Limit being requested: _____ mg/L

   Provide phosphorus monitoring data to support this request in accordance with NR 200.22(1)(e), Wis. Adm. Code.

4. If granted, would the variance limit result in increased phosphorus discharge to surface water from the effluent limit in the current permit? ◯ Yes ◯ No

   If yes, provide information to justify the increase in accordance with ch. NR 207, Wis. Adm. Code.

5. Does the requested variance limit pose any increased risk to human health and the environment? ◯ Yes ◯ No

   If yes, explain:

Facility Information (provide attachments as necessary)

1. Describe the wastewater treatment facility processes and operations and the means of treating phosphorus, including any chemicals used. Attach a flow schematic which shows the point(s) of chemical addition for total phosphorus (TP) control, including both liquid and solids treatment trains.

2. What are the phosphorus levels within your water supply? _____ mg/L

3. Does the water utility add phosphorus for corrosion control or for iron or manganese sequestration? ◯ Yes ◯ No

Facility Operation and Performance

1. **Current P Removal Capability** – If the facility is currently required by a WPDES permit to monitor effluent phosphorus (P), provide a summary of the influent and effluent annual average P concentrations for each of the past three (3) years. If permit required P data is not available, the applicant should provide any other P data that may be applicable and available. If no data is available, the Department may estimate the P effluent concentration based on data from other similar facilities.

2. **Facility Operation** – Provide a summary description of overall facility operation. If not a continuously discharging facility, describe storage procedures and the time periods when effluent discharge occurs.

3. **Sludge Management** – For facilities that monitor the treatment system sludge for phosphorus, provide the most recent three (3) years of sludge testing, along with volumes disposed of so as to perform an approximate mass balance of phosphorus entering and leaving the plant.

4. **Previous Studies** – Reference or attach any facility planning or evaluation study that evaluated facility performance capabilities (Note – Only include studies that are recent or otherwise applicable for the evaluation of the existing facility and current conditions).

Service Area Information – Provide the following information for each municipality included in the wastewater facility service area.

Municipality Name	Population Served	Customer Households Served	Median Household Income (MHI)

Non-Residential Customers:

Percent of wastewater flow attributed to commercial, industrial, large institutional and any other special customer category: _____%

Describe types of non-domestic wastewater contributions that constitute a significant pollutant contribution or that significantly affect the capabilities of the treatment facility (for example, large food processors, dairies, or industries with unique wastewater).

Alternatives

1. This variance is being sought in accordance with s. 283.15(4)(a)(1), Wis. Stats. (select all that apply)

- ☐ Naturally occurring pollutant concentrations prevent the attainment of the standard
- ☐ Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the standard, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating water conservation requirements
- ☐ Human caused conditions or sources of pollution prevent the attainment of the standard and cannot be remedied or would cause more environmental damage to correct than to leave in place
- ☐ Dams, diversions, or other types of hydrologic modifications preclude the attainment of the standard, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the standard
- ☐ Physical conditions related to the natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses
- ☐ The standard, as applied to the permittee, will cause substantial and widespread adverse social and economic impacts in the area where the permittee is located

2. What are the primary sources of phosphorus to your facility?

3. What feasible actions (e.g. pollution prevention or installation of treatment technology) have you taken and could you take to reduce phosphorus discharge levels to sufficiently meet, or make progress toward meeting, the water quality based effluent limit?

4. What types of waste materials or byproducts would be produced by these steps and what would be the ultimate means of disposal of those wastes?

5. What are the estimated costs of these actions? $ _____ Capital $ _____ Annual Operational

How do these costs compare with current treatment costs?

Affordability to Municipal Discharger and Wide Spread Economic Impact

The U.S. EPA Interim Economic Guidance for Water Quality Standards Workbook that discusses these considerations is available on the following site:

http://water.epa.gov/scitech/swguidance/standards/economics/

If you are applying for a variance based on substantial and widespread adverse social and economic impacts, please provide any information that is believed to be relevant as identified in the attached guidance document as well as other relevant information to support your variance request.

Variance Request and Certification

Based on the information provided, I believe that attainment of the applicable water quality standards for phosphorus are justified based on s. 283.15(4), Wis. Stats., in the area where this discharge is located. I understand that as a condition of the variance, the Department will impose initial limitations, interim limitations and source reduction measures in accordance with s. 283.15(5)(c), Wis. Stats.

I understand that these conditions will be included in the WPDES permit issued to this facility. I certify that the information provided is true, accurate, and complete.

Print or type name of individual submitting request*	Title

Signature of Official _____ _____

* must be an Authorized Representative for the treatment facility (Date Signed)

Appendix I

MDV Present Worth

City of Mondovi
State Wide Variance (MDV)
Present Worth Analysis
9/13/2017

PW interest Rate	4.63%
PW factor initial cost:	1.00
PW factor annual cost for 20 yrs:	12.8682

Capital Cost	Cost	PW Factor	Present Worth
Item			
Capital Improvements (none)	***$ -***	***1.00***	***$ -***

Annual Costs				
Item	Cost		PW Factor	Present Worth
Trade Cost (197 lb/year at $50/lb)	$	9,863		
Subtotatl	***$***	***9,863***	***12.8682***	***$ 126,919***

TOTAL 20 YR PRESENT WORTH **$ 126,919**

Building a Better World for All of Us®

Sustainable buildings, sound infrastructure, safe transportation systems, clean water, renewable energy and a balanced environment. Building a Better World for All of Us communicates a companywide commitment to act in the best interests of our clients and the world around us.

We're confident in our ability to balance these requirements.

SEH

Appendix D

Mondovi Wastewater Collection System Map

Lift Station 1

Lift Station 3

Sanitary Replacement Segments Outlined in Blue

Proposed WWTP

Sanitary Lining Segments Outlined in Magenta

Proposed New STH 37 Lift Station

Lift Station 2

Existing WWTP

SCALE IN FEET
0 400 800

CITY OF MONDOVI, WISCONSIN
SANITARY SEWER MAP

REVISION DATE OCTOBER 2014

Appendix E

Mondovi Future Flows and Loadings Spreadsheet

Mondovi Wastewater Treatment Plant
Future Design Conditions Population: 2835 <-- Avg of projected 2035 and 2040 US Census Population Projections

Projected Wastewater Flow to Year 2038:

Village Domestic (Pop. X 80 gpcd)	226800	GPD
Major Commercial:		
Countryside Cooperative	650	GPD
Mondovi Market	500	GPD
Tractor Central	500	GPD
Alliance Bank	300	GPD
Other	5000	GPD
Major Industry:		
Marten Transport	6500	GPD
Proposed Industry	6186	GPD
Healthcare:		
Prevea Health	750	GPD
American Lutheran Homes, Inc	1000	GPD
Homeplace LLC	2000	GPD
Midwest Dental Care	2500	GPD
Public Schools (1,000 Students x 15 gal/student/d)	15,000	GPD
Sewage/Grease Receiving	10000	GPD
Future Commercial/Industrial	20000	GPD
Total WW Design Flow (without I/I) :	297686	

Projected Wastewater Loadings to Year 2038:

	BOD (lb/day)	TSS (lb/day)	Total P (lb/day)	TKN (lb/day)	NH3 (lb/day)	FOG(lb/day)
Village Domestic	453.6	425.25	14.175	62.37	70.875	212.625
Major Commercial:						
Countryside Cooperative	11	10	0.25	1.6	0.95	3.75
Mondovi Market	11	10	0.25	1.6	0.95	3.75
Tractor Central	11	10	0.25	1.6	0.95	3.75
Alliance Bank	6.6	6	0.15	0.96	0.57	2.25
Other	44	40	1	6.4	3.8	37.5
Major Industry:						
Marten Transport	55	65	3	10	5	11
Proposed Industry	301.6	103.2	32.2	41.5	2.3	100.0
Healthcare:						
Prevea Health	8.25	9.75	0.45	1.5	0.825	1.65
American Lutheran Homes, Inc	1.1	1.3	0.06	0.2	0.11	0.22
Homeplace LLC	2.2	2.6	0.12	0.4	0.22	0.44
Midwest Dental Care	1.1	1.3	0.06	0.2	0.11	0.22
Public Schools (1000 students)	110	130	5	20	11	22
Sewage/Grease Receiving	500.4	1251	4.17	58.38	33.36	8.34
Future Commercial/Industrial	22	26	1.2	4	2.2	4.4

	BOD (lb/day)	TSS (lb/day)	Total P (lb/day)	TKN (lb/day)	NH3 (lb/day)	FOG(lb/day)
Total WW Design Loadings:	1538.8	2091.4	62.3	210.7	133.2	411.9
Design Concentrations (mg/L)	619.8	842.4	25.1	84.9	53.6	165.9

Appendix F

Effluent Limits Request

General Information:

Name

City of Mondovi Wastewater Treatment Plant (WWTP)
649 W. Riverside Ave, Mondovi, WI

Contact Information

Randy Gruber
Public Works Director
City of Mondovi
156 S Franklin St
Mondovi, WI 54755
Phone: (715) 495-2803

County

Buffalo

WPDES Permit Number

WI-0020591-10-0

Design Flows & Loadings

Table 1. Mondovi WWTP Design Flows & Loadings referenced from WPDES Permit & CMAR

Parameter	Design Flows and Loadings
Annual Average Design Flow	385,000 GPD (0.385 MGD)
Average COD	865 lbs/day

Current Flows & Loadings

Table 2. Current Flows & Loadings at the Mondovi WWTP

Parameter	Current Flows and Loadings
Annual Average Flow	0.209 mgd
Peak Week Flow	0.318 mgd
Peak Day Flow	0.407 mgd
Peak Hourly Flow	0.5 mgd (417 gpm)
Average BOD_5	453 lbs/day
Peak Month BOD_5	584 lbs/day
Peak Day BOD_5	784 lbs/day
Average TSS	401 lbs/day
Peak Month TSS	622 lbs/day
Peak Day TSS	746 lbs/day
Average Total	12.3 lbs/day
Average TKN	105.5 lbs/day
Average Ammonia	69.5 lbs/day
*Based on testing from January to December 2017. TP, Ammonia, and TKN based on December 2018 sampling.	

Current Limits

The City's current WPDES permit WI-0020591-10-0 was issued on September 1, 2018. A summary of the WPDES effluent limits are summarized in Table 3 below. The current permit expires on June 30, 2023.

Table 3. The Current Effluent Limitations for the Mondovi WWTP

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limits and Units**	**Sample Frequency**	**Sample Type**	**Notes**
$CBOD_5$	Monthly Avg	25 mg/L	3/Week	24-Hr Flow Prop Comp	
$CBOD_5$	Weekly Avg	40 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Monthly Avg	30 mg/L	3/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Weekly Avg	45 mg/L	3/Week	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Daily	Grab	
pH Field	Daily Min	6.0 su	Daily	Grab	
Phosphorus, Total	Monthly Avg	1.0 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim limit effective through 9/30/2020. See the MDV/Phosphorus subsections and phosphorus schedules.
Phosphorus, Total	Monthly Avg	0.8 mg/L	3/Week	24-Hr Flow Prop Comp	This is an interim MDV effective through 10/01/2020. See the MDV/Phosphorus subsections and phosphorus schedules.
Phosphorus, Total		lbs/month	Monthly	Calculated	Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month.
Phosphorus, Total		lbs/yr	Annual	Calculated	Report the sum of the total monthly discharges for the calendar year on the Annual report form.
Chlorine, Total Residual	Daily Max	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept annually.
Chlorine, Total Residual	Monthly Avg	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept annually.

Chlorine, Total Residual	Weekly Avg	38 µg/L	Daily	Grab	Limit & monitoring apply May-Sept annually.
Fecal Coliform	Geometric Mean - Monthly	400 #/100mL	Weekly	Grab	Limit & monitoring apply May-Sept.
Fecal Coliform	Geometric Mean - Wkly	656 #/100mL	Weekly	Grab	Limit & monitoring apply May-Sept.
Copper, Total Recoverable	Daily Max	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Daily Max	0.17 lbs/day	Monthly	Calculated	
Copper, Total Recoverable	Monthly Avg	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Copper, Total Recoverable	Weekly Avg	36 µg/L	Monthly	24-Hr Flow Prop Comp	
Acute WET		TU_a	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below.
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET subsection below.

Proposal for a New Discharge

The average annual design flow of the wastewater treatment facility is 0.385 MGD and the location ofthe current discharge can be seen in the following section. The City has typical domestic and commercial flows for a municipality of its size. Future projections estimate that the existing flows will not increase above the existing WPDES permit annual average design flow; however, due to the potential for a new industrial user relocating to Mondovi and also to allow capacity for additional commercial and industrial growth within the City, the wastewater strengths are projected to increase. Therefore, the City is requesting that larger design loadings be analyzed in the facility planning process.

Proposed Discharge Location:

Based on the Facility Planning process, the City is requesting a change in the current discharge location. The location ofthe existing and proposed WWTP and outfall locations are displayed in Figure 1 below. Clear effluent is currently discharged to the Buffalo River; however, based on the recommended location for a new WWTP, a new discharge location to Harvey Creek is proposed. The Facility Plan will outline the proposed WWTP in more detail.

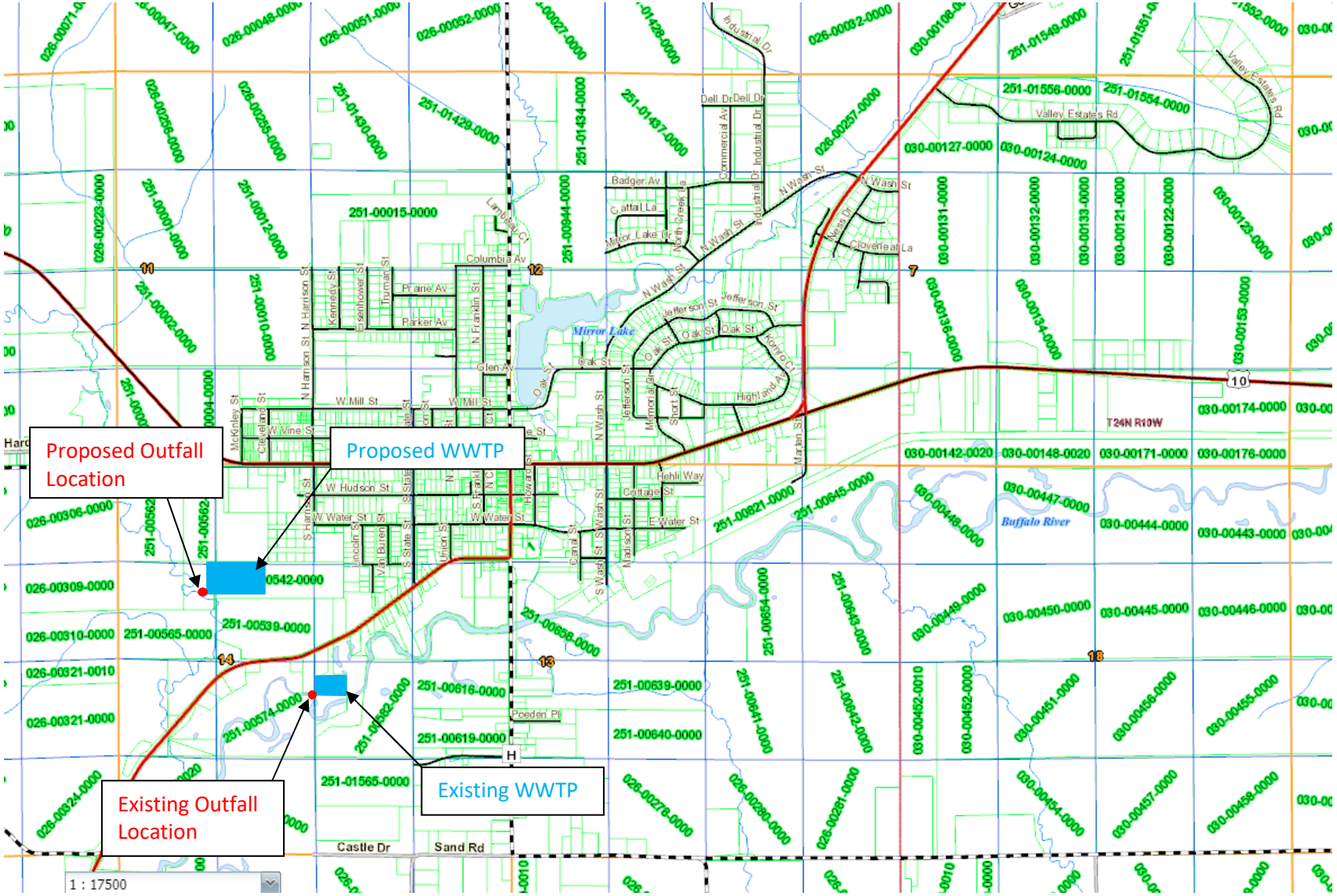


Figure 1. Locations of the Existing and Proposed Mondovi WWTP and Outfall Locations

Proposed Facility Design Flows:

The facility plan design year is 2038 based on a planning period of 20 years. The population projection which is covered in more detail in a later section calls for only minor fluctuations in the community's population over the next 20 years with a net gain of 33 population growth by the year 2040. Domestic flow and loading projections were determined by per capita flow amounts developed from existing flow conditions and typical per capita loading numbers. Commercial and institutional flows and loadings were developed from accepted design numbers based on the number of employees, hospital beds, students, etc. Mondovi's industrial park is located on the north east portion of the City. Currently, the WWTP only receives light industrial wastes. One of the larger industries that was accounted for was Marten Transport as this is listed as Mondovi's largest employer with 1000+ people. This industry does not necessarily use significant amounts of water for production so mostly domestic waste generated from employees and truck washing was calculated. The City has been coordinating with an industry that is planning to build a new plant in the community that would consist of pet food manufacturing. The new industry would not generate a significant amount of flow, but the wastewater strength of the new industrial user would significantly affect the waste stream being sent to the WWTP. On top of the two industries mentioned above, another 20,000 GPD and typical medium strength wastewater were accounted for to allow future commercial and industrial expansion that could someday benefit the City. Another key aspect in the flow and loading projections was the City's request for a septage receiving station at the WWTP. With limited amounts of land for septage haulers to spread wastes and because most WWTP around the Eau Claire and Buffalo County area cannot accept the high strength waste, there is potential for the City to use this as a revenue stream. Therefore, septage waste was accounted for in the flow and loading calculations. The 2038 projected flows and loadings are summarized in Table 4 below. The flow and loading design spreadsheet developed for the Mondovi WWTP future flow conditions is included in Appendix A.

Table 4. Proposed Future Flows and Loadings

Parameter	**Projected Flows and Loadings for Year 2039**
Annual Average Design Flow	0.300 mgd
Peak Week Flow	0.438 mgd
Peak Day Flow	0.584 mgd
Peak Hourly Flow	0.7 mgd (584 gpm)
Average BOD_5	1539 lbs/day
Peak Month BOD_5	2071 lbs/day
Peak Day BOD_5	2708 lbs/day
Average TSS	2091 lbs/day
Peak Month TSS	4030 lbs/day
Peak Day TSS	4685 lbs/day
Average Total-P	62.3 lb/day
Average TKN	211 lb/day
Average NH3	133 lb/day
* Peak values were generated from multiplying the estimated future average values by the peaking factors for the existing flows and loadings	

The 2010 Census population for the City of Mondovi was 2,777 people (U.S. Census 2010). Projections are for the population to remain relatively stable with a slight fluctuation over the years resulting in a population growth of 1.2% by the year 2,040. The projection trend is outlined in Table 5 below (taken from the Wisconsin Department of Administration, Demographic Services Center):

Table 5. City of Mondovi Municipal Projections

2010 Census	2015 Projection	2020 Projection	2025 Projection	2030 Projection	2035 Projection	2040 Projection
2,777	2,760	2,785	2,825	2,845	2,860	2,810

The Mondovi wastewater collection system consists of 9.4-miles of sanitary sewers ranging between 6 to 15-inches. There are 3 lift stations and one WWTP in the utility system. A map of the sewer service area is included in Appendix B.

Potential Effluent Discharge Options

Discharge will stay as a continuous discharge.

Effluent Limits Request

Appendix A - Future Wastewater Flow and Loading Estimates for the City of Mondovi

Mondovi Wastewater Treatment Plant
Future Design Conditions

Population: 2835 <-- Avg of projected 2035 and 2040 US Census Population Projections

Projected Wastewater Flow to Year 2038:

Village Domestic (Pop. X 80 gpcd)	226800 GPD
Major Commercial:	
Countryside Cooperative	650 GPD
Mondovi Market	500 GPD
Tractor Central	500 GPD
Alliance Bank	300 GPD
Other	5000 GPD
Major Industry:	
Marten Transport	6500 GPD
Proposed Industry	6186 GPD
Healthcare:	
Prevea Health	750 GPD
American Lutheran Homes, Inc	1000 GPD
Homeplace LLC	2000 GPD
Midwest Dental Care	2500 GPD
Public Schools (1,000 Students x 15 gal/student/d)	15,000 GPD
Sewage/Grease Receiving	10000 GPD
Future Commercial/Industrial	20000 GPD
Total WW Design Flow (without I/I) :	297686

Projected Wastewater Loadings to Year 2038:

	BOD (lb/day)	TSS (lb/day)	Total P (lb/day)	TKN (lb/day)	NH3 (lb/day)	FOG(lb/day)
Village Domestic	453.6	425.25	14.175	62.37	70.875	212.625
Major Commercial:						
Countryside Cooperative	11	10	0.25	1.6	0.95	3.75
Mondovi Market	11	10	0.25	1.6	0.95	3.75
Tractor Central	11	10	0.25	1.6	0.95	3.75
Alliance Bank	6.6	6	0.15	0.96	0.57	2.25
Other	44	40	1	6.4	3.8	37.5
Major Industry:						
Marten Transport	55	65	3	10	5	11
Proposed Industry	301.6	103.2	32.2	41.5	2.3	100.0
Healthcare:						
Prevea Health	8.25	9.75	0.45	1.5	0.825	1.65
American Lutheran Homes, Inc	1.1	1.3	0.06	0.2	0.11	0.22
Homeplace LLC	2.2	2.6	0.12	0.4	0.22	0.44
Midwest Dental Care	1.1	1.3	0.06	0.2	0.11	0.22
Public Schools (1000 students)	110	130	5	20	11	22
Sewage/Grease Receiving	500.4	1251	4.17	58.38	33.36	8.34
Future Commercial/Industrial	22	26	1.2	4	2.2	4.4
	BOD (lb/day)	TSS (lb/day)	Total P (lb/day)	TKN (lb/day)	NH3 (lb/day)	FOG(lb/day)
Total WW Design Loadings:	1538.8	2091.4	62.3	210.7	133.2	411.9
Design Concentrations (mg/L)	619.8	842.4	25.1	84.9	53.6	165.9

Effluent Limits Request

Appendix B – Mondovi Wastewater Collection System

Alex Jaromin

From: Bellovary, Christopher W - DNR <Christopher.Bellovary@wisconsin.gov>
Sent: Tuesday, August 27, 2019 1:21 PM
To: Alex Jaromin
Subject: Updated Water Quality-Based Effluent Limitations for the Mondovi Wastewater Treatment Facility for Facility Planning; WPDES Permit No. WI-0020591

Good afternoon Mr. Jaromin,

Please see the following charts, which are provided in response to your request for an evaluation of the water quality-based effluent limitations (WQBELs) for facility planning for the Mondovi Wastewater Treatment Facility in Buffalo County. The proposed outfall location for the Facility is Harvey Creek, located in the Lower Buffalo River Watershed in the Buffalo-Trempealeau River Basin.

The following WQBELS were made on a chemical-specific basis for a new discharge with an annual average design flow of 0.300 MGD:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Footnotes
BOD_5						
May – October			22 mg/L 55.7 lbs/day	22 mg/L		
November – April			33 mg/L 82.3 lbs/day	30 mg/L		
TSS						
May – October			22 mg/L 55.7 lbs/day	22 mg/L		
November – April			33 mg/L 82.3 lbs/day	30 mg/L		
pH	9.0 s.u.	6.0 s.u.				
Ammonia Nitrogen						
April – May			16 mg/L	7.3 mg/L		1
June – September	Variable		18 mg/L	8.5 mg/L		
October – March			12 mg/L	5.7 mg/L		
Fecal Coliform May – September			**656#/100 mL** **geometric mean**	400#/100 mL geometric mean		2
Residual Chlorine May – September	38 µg/L		**38 µg/L**	**38 µg/L**		2
Phosphorus				0.171 mg/L	0.057 mg/L 0.14 lbs/day	

Footnotes:

1. The variable daily maximum ammonia nitrogen limit table corresponding to various effluent pH values may be included in the permit in place of the single limit. These limits apply year-round.

Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L
6.0 < pH ≤ 6.1	108	7.0 < pH ≤ 7.1	66	8.0 < pH ≤ 8.1	14

Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L	Effluent pH s.u.	Limit mg/L
6.1 < pH ≤ 6.2	106	7.1 < pH ≤ 7.2	59	8.1 < pH ≤ 8.2	11
6.2 < pH ≤ 6.3	104	7.2 < pH ≤ 7.3	52	8.2 < pH ≤ 8.3	9.4
6.3 < pH ≤ 6.4	101	7.3 < pH ≤ 7.4	46	8.3 < pH ≤ 8.4	7.8
6.4 < pH ≤ 6.5	98	7.4 < pH ≤ 7.5	40	8.4 < pH ≤ 8.5	6.4
6.5 < pH ≤ 6.6	94	7.5 < pH ≤ 7.6	34	8.5 < pH ≤ 8.6	5.3
6.6 < pH ≤ 6.7	89	7.6 < pH ≤ 7.7	29	8.6 < pH ≤ 8.7	4.4
6.7 < pH ≤ 6.8	84	7.7 < pH ≤ 7.8	24	8.7 < pH ≤ 8.8	3.7
6.8 < pH ≤ 6.9	78	7.8 < pH ≤ 7.9	20	8.8 < pH ≤ 8.9	3.1
6.9 < pH ≤ 7.0	72	7.9 < pH ≤ 8.0	17	8.9 < pH ≤ 9.0	2.6

2. Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7) are included in bold.
3. Monitoring in the fourth year of the permit term

If you have any questions, please let me know. Thank you.

Christopher Bellovary
Wastewater Engineer – Water Quality Bureau
Wisconsin Department of Natural Resources

Phone: (608) 267-7625
Christopher.Bellovary@Wisconsin.gov

From: Bellovary, Christopher W - DNR
Sent: Friday, August 9, 2019 11:34 AM
To: 'Alex Jaromin' <ajaromin@cbssquaredinc.com>
Subject: RE: Mondovi WWTP Effluent Limits Request
Importance: Low

Alex,

I finally got through to the limits coordinator. The hang-up was getting his supervisor's approval, so I spoke to her about it and hope to have something to you soon. Sorry about the delay.

Christopher Bellovary
Wastewater Engineer – Water Quality Bureau
Wisconsin Department of Natural Resources

Phone: (608) 267-7625
Christopher.Bellovary@Wisconsin.gov

From: Alex Jaromin <ajaromin@cbssquaredinc.com>
Sent: Monday, July 29, 2019 10:48 AM
To: Bellovary, Christopher W - DNR <Christopher.Bellovary@wisconsin.gov>
Subject: RE: Mondovi WWTP Effluent Limits Request

Good Morning Chris,

Just touching base on the limits memo. Would the proposed new limits for Mondovi based on the effluent limits request be releasable this week?

Thanks,

Alex Jaromin
Staff Engineer
CBS Squared, Inc.
Cell: 608.343.8018

From: Bellovary, Christopher W - DNR <Christopher.Bellovary@wisconsin.gov>
Sent: Tuesday, July 16, 2019 4:18 PM
To: Alex Jaromin <ajaromin@cbssquaredinc.com>
Subject: RE: Mondovi WWTP Effluent Limits Request

Alex,

Ben prepared a draft limits memo on April 25, but it needs to be reviewed, which did not occur. Ben is working on making that happen, and will let me know when we can provide those limits. I expect they should be releasable before the close of this business week.

My apologies Alex. I thought Ben had already provided that information, and I should have verified that assumption.

Christopher Bellovary
Wastewater Engineer – Water Quality Bureau
Wisconsin Department of Natural Resources

Phone: (608) 267-7625
Christopher.Bellovary@Wisconsin.gov

From: Alex Jaromin <ajaromin@cbssquaredinc.com>
Sent: Tuesday, July 16, 2019 2:16 PM
To: Bellovary, Christopher W - DNR <Christopher.Bellovary@wisconsin.gov>
Cc: Hartenbower, Benjamin P - DNR <Benjamin.Hartenbower@wisconsin.gov>
Subject: RE: Mondovi WWTP Effluent Limits Request

Good Afternoon Chris,

Just wanted to touch base on Mondovi. Would it be possible to get an estimate of what the newer more stringent limits would be at some point in the near future?

Thanks,

Alex Jaromin
Staff Engineer
CBS Squared, Inc.

Cell: 608.343.8018

From: Bellovary, Christopher W - DNR <Christopher.Bellovary@wisconsin.gov>
Sent: Wednesday, April 24, 2019 10:46 AM
To: Alex Jaromin <ajaromin@cbssquaredinc.com>
Cc: Hartenbower, Benjamin P - DNR <Benjamin.Hartenbower@wisconsin.gov>
Subject: RE: Mondovi WWTP Effluent Limits Request

Good morning Alex,

I was speaking with the Limits Calculator earlier this morning about how an outfall on Harvey Creek will have more stringent limits than an outfall on the Buffalo River. To avoid surprises at the end, we thought it was worth checking to make sure you were aware of that.

Thank you Alex.

- Chris

Christopher Bellovary
Wastewater Engineer – Water Quality Bureau
Wisconsin Department of Natural Resources

Phone: (608) 267-7625
Christopher.Bellovary@Wisconsin.gov

Appendix G

Inflow & Infiltration Assessment

General Indicator Criteria for Non-Excessive Inflow and/or Infiltration:

a. Per Capita Flow Rates

Non-Excessive Infiltration

- Per Capita Flow rates during dry weather and concurrent high GW conditions **≤ 120 gpcd**

Non-Excessive Inflow

- Maximum daily flow during a storm **≤ 275 gpcd**

Mondovi Population = 2,634 people

The per capita flow rate criteria assumes:

- 70 gpcd domestic
- 10 gpcd commercial/industry
- 40 gpcd non-excessive INFILTRATION -**or-** 155 gpcd non-excessive INFLOW

Therefore:

Non-Excessive Infiltration Criteria for Mondovi

- Per Capita Flow rates during dry weather and concurrent high GW conditions **≤ 40 gpcd**

Non-Excessive Inflow Criteria for Mondovi

- Maximum daily flow during a storm **≤ 155 gpcd**

Infiltration Analysis:

For the per capita flow estimate, the flowrates during months with high groundwater and dry weather months with no storm events were analyzed (early summer). The flowrate calculated for this time period was approximately **221,000 gpd**. By dividing this flowrate by the Mondovi population, the corresponding per capita flowrate is **84 gpcd**. This is more than the Non-Excessive Infiltration Criteria calculated above meaning infiltration is excessive for the City of Mondovi.

Inflow Analysis:

For the per capita flow estimate, the maximum daily average flows during heavy rainfall events were analyzed. The flowrate calculated for this time period was approximately **407,000 gpd**. By dividing this flowrate by the Mondovi population, the corresponding per capita flowrate is approximately **155 gpcd**. This is equal to the Non-Excessive Inflow Criteria above meaning inflow is non-excessive for the City of Mondovi but it is still a potential issue the City should address.

b. The ratio of Peak Hourly Flow to Average Daily Flow is seen below:

500,000 gpd / 209,000 gpd = 2.4 < 5

c. In talking to the Mondovi Director of Public Works and other Village staff, no sanitary sewer basement backups, sanitary sewer system overflow occurrences, or treatment facility upsets have occurred during wet weather events.

The City will continue to check for illicit connections when doing utility work, videotape portions of the collection system each year for visual inspection, and the City recently video taped a large portion of sanitary sewer that it plans to include in the scope of the Facility Plan for the wastewater treatment plant.

Appendix H

Sanitary Line Televising Report

Upstream MH	Downstream MH	Size	Material	Total Length	City
Unknown	207-A	8	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Driveway	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180319	11:42	29.5

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 207-A
0.0	MWL	Water Level	5			
7.0	TF	Tap, Factory Made		2		
21.1	MMC	Material Change				cast iron pipe
29.5	MSA	Survey Abandoned				cant fit camera through

Waste Systems Cleaning INC

715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
Unknown	207-A	8	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Driveway	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180319	11:42	29.5

Additional Information

MMC - Material Change @ 21.1 ft. cast iron pipe

Upstream MH	Downstream MH	Size	Material	Total Length	City
207	205	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180319	10:19	219.8

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
219.8	AMH	Access Point - Manhole				207
218.4	MMC	Material Change				concrete
199.2	TB	Tap, Break-in / Hammer		10		
175.0	TFC	Tap, Factory Made: Capped		10		
172.5	TFC	Tap, Factory Made: Capped		2		
167.4	CC	Crack Circumferential		11 to 2		
167.2	TB	Tap, Break-in / Hammer		2		
114.2	TB	Tap, Break-in / Hammer		2		
95.1	TFC	Tap, Factory Made: Capped		2		
87.6	TF	Tap, Factory Made		10		
30.1	TF	Tap, Factory Made		10		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 205

Upstream MH	Downstream MH	Size	Material	Total Length	City
207-A	207	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180319	10:32	219.5

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
219.5	AMH	Access Point - Manhole				207-A
155.2	TF	Tap, Factory Made		2		
140.4	TFC	Tap, Factory Made: Capped		10		
92.1	TBI	Tap, Break-in / Hammer: Intruding		10		
31.4	CL	Crack Longitudinal		12		
27.4	TBI	Tap, Break-in / Hammer: Intruding		2		
22.5	TFC	Tap, Factory Made: Capped		10		
22.2	TB	Tap, Break-in / Hammer		10		
20.7	TFC	Tap, Factory Made: Capped		2		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 207

Generated on Monday, 4/2/2018 at 12:28 PM by the PipeTech® TV inspection system.

Waste Systems Cleaning INC
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
205-A	205	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180319	10:41	296.8

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
296.8	AMH	Access Point - Manhole				205-A
255.3	CL	Crack Longitudinal		12		
240.2	TF	Tap, Factory Made		2		
234.4	H	Hole in Pipe		10 to 2		Patched
230.0	CS	Crack Spiral		9 to 3		
227.6	CS	Crack Spiral		9 to 12		
227.5	TFC	Tap, Factory Made: Capped		10		
205.3	CL	Crack Longitudinal		12		
202.8	TF	Tap, Factory Made		10		roots in service
197.4	CS	Crack Spiral		7 to 12		
192.4	CS	Crack Spiral		9 to 4		
187.0	CS	Crack Spiral		8 to 4		
173.5	CS	Crack Spiral		11 to 1	F01	
167.5	CS	Crack Spiral		10 to 12	S01	
157.5	TF	Tap, Factory Made		2		possibly capped
152.6	CS	Crack Spiral		9 to 12		
151.0	CL	Crack Longitudinal		12		
135.0	CS	Crack Spiral		10 to 2		
130.6	CL	Crack Longitudinal		12		
127.6	CS	Crack Spiral		9 to 11		
120.0	TBI	Tap, Break-in / Hammer: Intruding		10		
117.8	TB	Tap, Break-in / Hammer		2		
115.0	CS	Crack Spiral		11 to 2		
105.5	B	Pipe Broken		10 to 1		
82.4	TFC	Tap, Factory Made: Capped		10		
60.0	TF	Tap, Factory Made		2		
42.3	CS	Crack Spiral		11 to 2		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 205

Waste Systems Cleaning INC
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
205	205-A	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	10:41	296.8

Additional Information

B - Pipe Broken @ 105.5 ft.

H - Hole in Pipe @ 234.4 ft. Patched

Waste Systems Cleaning INC
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
206	205-A	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180319	11:02	280.1

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
280.1	AMH	Access Point - Manhole				206
236.5	TBI	Tap, Break-in / Hammer: Intruding		2		
234.1	TB	Tap, Break-in / Hammer		10		
221.5	TFC	Tap, Factory Made: Capped		2		
204.2	TFC	Tap, Factory Made: Capped		10		
149.1	TFC	Tap, Factory Made: Capped		10		
124.5	CS	Crack Spiral		9 to 3		
116.4	TFC	Tap, Factory Made: Capped		2		
98.9	CS	Crack Spiral		8 to 12		
98.7	TFC	Tap, Factory Made: Capped		10		
63.5	TF	Tap, Factory Made		2		
51.6	CL	Crack Longitudinal		11		
49.1	CL	Crack Longitudinal		3		
46.5	TFC	Tap, Factory Made: Capped		2		
44.1	TB	Tap, Break-in / Hammer		10		
9.0	TFC	Tap, Factory Made: Capped		10		
3.9	TF	Tap, Factory Made		2		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 205-A

A

Waste Systems Cleaning INC

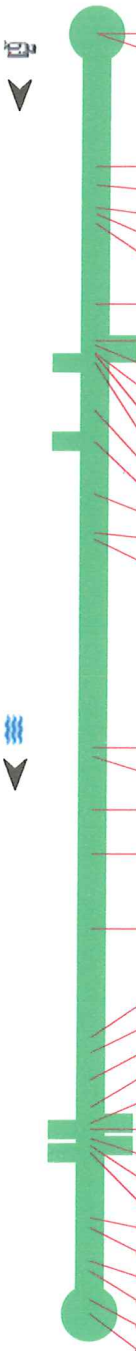
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
205	176	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	11:14	425.1

Additional Information



Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 205
0.0	MWL	Water Level	5			
44.2	CS	Crack Spiral		9 to 1		
50.3	CS	Crack Spiral		12 to 2		
57.7	JSM	Joint Separated (open): Medium				dirt is coming through seperation
59.9	CL	Crack Longitudinal		10		
63.0	CS	Crack Spiral		9 to 2		
90.0	MWLS	Water Level: Sag	25		S01	
102.2	MWLS	Water Level: Sag	10		F01	
103.5	TFC	Tap, Factory Made: Capped		10		
106.1	TB	Tap, Break-in / Hammer		11		
106.6	CS	Crack Spiral		12 to 5		
109.3	TB	Tap, Break-in / Hammer		2		
125.2	CL	Crack Longitudinal		12		
135.5	TFC	Tap, Factory Made: Capped		2		
152.9	CS	Crack Spiral		6 to 9		
165.8	CL	Crack Longitudinal		12		
168.0	RFJ	Roots, Fine: Joint		2 to 9		
237.1	CS	Crack Spiral		10 to 2		
240.1	CL	Crack Longitudinal		11		
257.8	CS	Crack Spiral		3 to 8		
272.4	CS	Crack Spiral		7 to 11		
297.3	CS	Crack Spiral		12 to 3		
333.4	CS	Crack Spiral		6 to 10		
338.4	FS	Fracture Spiral		8 to 4		
347.4	FS	Fracture Spiral		1 to 4		
356.7	CL	Crack Longitudinal		9		
361.8	TFC	Tap, Factory Made: Capped		10		
363.9	TFC	Tap, Factory Made: Capped		2		
366.9	CL	Crack Longitudinal		9		
369.3	TBI	Tap, Break-in / Hammer: Intruding		10		
371.6	TBI	Tap, Break-in / Hammer: Intruding		2		
393.2	CS	Crack Spiral		2 to 5		
396.5	CS	Crack Spiral		7 to 11		
407.5	CS	Crack Spiral		8 to 11		
410.9	CS	Crack Spiral		10 to 3		
420.5	CL	Crack Longitudinal		11		
425.1	AMH	Access Point - Manhole				176

Upstream MH	Downstream MH	Size	Material	Total Length	City
205	176	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	11:14	425.1

Additional Information

JSM - Joint Separated (open): Medium @ 57.7 ft. dirt is coming through seperation

FS - Fracture Spiral @ 338.4 ft.

FS - Fracture Spiral @ 347.4 ft.

B

Waste Systems Cleaning INC

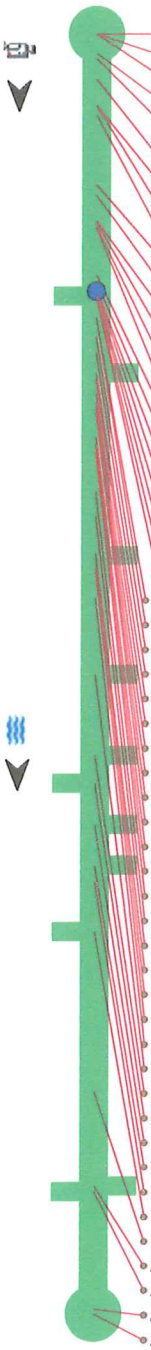
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
166-A	166	8	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	11:58	470.7

Additional Information



Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 166-A
0.0	MWL	Water Level	5			
0.0	FS	Fracture Spiral		6 to 10		
7.0	CS	Crack Spiral		6 to 9		
9.1	CM	Crack Multiple		12 to 12	S01	
16.6	CM	Crack Multiple		12 to 12	F01	
26.4	CL	Crack Longitudinal		12		
26.4	CL	Crack Longitudinal		3		
29.8	CM	Crack Multiple		12 to 12	S02	
55.5	CM	Crack Multiple		12 to 12	F02	
59.3	MGO	General Observation				joint chipped
68.7	HSV	Hole in Pipe: Soil Visible		12		
69.3	H	Hole in Pipe		12		patched
70.8	CL	Crack Longitudinal		11		
71.2	CM	Crack Multiple		12 to 12	S03	
88.4	H	Hole in Pipe		12		patched
91.1	H	Hole in Pipe		12		patched
93.3	CM	Crack Multiple		12 to 12	F03	
93.3	H	Hole in Pipe		11 to 1		
94.8	TF	Tap, Factory Made		12		Lateral full of roots
94.8	CL	Crack Longitudinal		12		
96.4	TF	Tap, Factory Made		2		roots in lateral Possible hole
96.4	CM	Crack Multiple		12 to 12	S04	
104.2	CM	Crack Multiple		12 to 12	F04	
104.2	CL	Crack Longitudinal		3		
111.4	CM	Crack Multiple		12 to 12	S05	
117.1	CM	Crack Multiple		12 to 12	F05	
124.8	TFC	Tap, Factory Made: Capped		10		
127.0	CL	Crack Longitudinal		2		
132.5	CM	Crack Multiple		12 to 12	S06	
135.8	HSV	Hole in Pipe: Soil Visible		11 to 1		
138.2	HSV	Hole in Pipe: Soil Visible		10 to 2		
138.4	CM	Crack Multiple		12 to 12	F06	
148.1	CL	Crack Longitudinal		11		
151.1	HSV	Hole in Pipe: Soil Visible		12 to 1		
153.4	CM	Crack Multiple		12 to 12	S07	
168.6	CM	Crack Multiple		12 to 12	F07	
177.2	CM	Crack Multiple		12 to 12	S08	
191.0	CM	Crack Multiple		12 to 12	F08	
192.0	TFC	Tap, Factory Made: Capped		10		
196.9	CM	Crack Multiple		12 to 12	S09	
207.3	CM	Crack Multiple		12 to 12	F09	
235.6	TF	Tap, Factory Made		10		
265.3	TFC	Tap, Factory Made: Capped		10		
275.7	TF	Tap, Factory Made		2		
290.8	TF	Tap, Factory Made		10		
305.8	TF	Tap, Factory Made		10		full of debris
311.8	CS	Crack Spiral		2 to 7		
330.1	TF	Tap, Factory Made		2		
388.8	MGO	General Observation				spawling
423.8	TF	Tap, Factory Made		10		
425.7	TF	Tap, Factory Made		2		full of debris
469.0	MMC	Material Change				concrete
470.7	AMH	Access Point - Manhole				166

Upstream MH	Downstream MH	Size	Material	Total Length	City
166-A	166	8	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	11:58	470.7

Additional Information

HSV - Hole in Pipe: Soil Visible @ 68.7 ft.

H - Hole in Pipe @ 69.3 ft. patched

H - Hole in Pipe @ 93.3 ft.

HSV - Hole in Pipe: Soil Visible @ 135.8 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
166-A	166	8	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	11:58	470.7

Additional Information

HSV - Hole in Pipe: Soil Visible @ 138.2 ft.

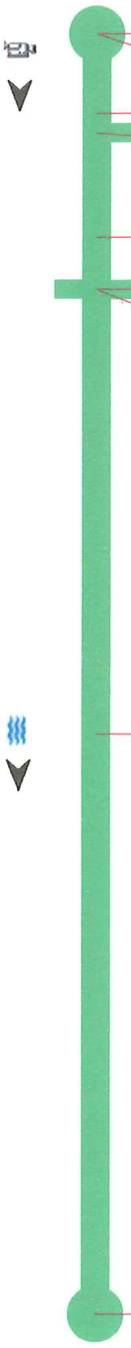
HSV - Hole in Pipe: Soil Visible @ 151.1 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
164	163	8	Polyvinyl Chloride		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Vine St to Hwy 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	13:49	342.4

Additional Information



Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 164
0.0	MWL	Water Level	5			
21.3	MMC	Material Change				clay pipe
26.5	TFC	Tap, Factory Made: Capped		10		
54.4	RFJ	Roots, Fine: Joint		11 to 10	S01	
68.3	TF	Tap, Factory Made		2		
68.5	TB	Tap, Break-in / Hammer		10		
187.2	RFJ	Roots, Fine: Joint		12	F01	
342.4	AMH	Access Point - Manhole				163

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Upstream MH	Downstream MH	Size	Material	Total Length	City
166	163	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180319	12:46	288.2

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 166
0.0	MWL	Water Level	5			
8.7	CL	Crack Longitudinal		2		
12.2	MWLS	Water Level: Sag	25			
26.2	CC	Crack Circumferential		7 to 12		
50.4	TFC	Tap, Factory Made: Capped		10		
54.9	TB	Tap, Break-in / Hammer		10		
97.1	TF	Tap, Factory Made		2		
113.5	CL	Crack Longitudinal		12		
117.1	TF	Tap, Factory Made		10		
123.1	CC	Crack Circumferential		7 to 10		
125.5	TBI	Tap, Break-in / Hammer: Intruding		10		
161.1	TFC	Tap, Factory Made: Capped		2		
216.3	CL	Crack Longitudinal		1		
218.3	TF	Tap, Factory Made		2		
219.7	TB	Tap, Break-in / Hammer		10		
221.9	TFC	Tap, Factory Made: Capped		2		
234.0	TFC	Tap, Factory Made: Capped		2		
278.6	CL	Crack Longitudinal		9		
286.4	TF	Tap, Factory Made		12		
288.2	AMH	Access Point - Manhole				163

Waste Systems Cleaning INC

Upstream MH	Downstream MH	Size	Material	Total Length	City
185-A	185	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	10:36	156.3

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
156.3	AMH	Access Point - Manhole				185-A
149.8	TF	Tap, Factory Made		2		
84.3	TF	Tap, Factory Made		2		
0.0	MWL	Water Level		10		
0.0	AMH	Access Point - Manhole				

Starting Manhole: 185

Upstream MH	Downstream MH	Size	Material	Total Length	City
185	185-B	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180321	10:49	301.9

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 185
0.0	MWL	Water Level	5			
90.0	MWLS	Water Level: Sag	25			
192.3	TF	Tap, Factory Made		1		
208.7	TFC	Tap, Factory Made: Capped		12		
219.7	MWLS	Water Level: Sag	25			
226.5	TF	Tap, Factory Made		11		
301.9	AMH	Access Point - Manhole				185-B

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Upstream MH	Downstream MH	Size	Material	Total Length	City
185-B	185-C	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180321	10:58	300.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 185-B
0.0	MWL	Water Level	5			
22.9	CS	Crack Spiral		1 to 10		
23.9	TF	Tap, Factory Made		12		
35.7	TF	Tap, Factory Made		12		
124.5	MWLS	Water Level: Sag	25			
130.6	MWLS	Water Level: Sag	25			sag ends
193.3	RBL	Roots, Ball: Lateral	65	11 to 1		
194.0	TF	Tap, Factory Made		12		
195.0	RFJ	Roots, Fine: Joint		11 to 1		
196.7	TF	Tap, Factory Made		12		
238.4	TF	Tap, Factory Made		12		
256.2	TF	Tap, Factory Made		12		
279.8	TF	Tap, Factory Made		12		
291.7	TF	Tap, Factory Made		12		
300.4	AMH	Access Point - Manhole				185-C

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Upstream MH	Downstream MH	Size	Material	Total Length	City
185-B	185-C	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180321	10:58	300.4

Additional Information

RBL - Roots, Ball: Lateral @ 193.3 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
185-C	184	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Highway 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180321	11:21	296.3

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 185-C
0.0	MWL	Water Level	10			
65.3	MWLS	Water Level: Sag	25		S01	
76.7	MWLS	Water Level: Sag	5		F01	sag ends
93.5	MMC	Material Change				pvc pipe
98.5	TF	Tap, Factory Made		12		
102.7	TF	Tap, Factory Made		12		
103.4	MMC	Material Change				concrete pipe
144.0	TF	Tap, Factory Made		12		
146.9	TF	Tap, Factory Made		12		
224.5	TF	Tap, Factory Made		12		
226.6	CL	Crack Longitudinal		12		
227.5	TF	Tap, Factory Made		12		
250.9	CL	Crack Longitudinal		12		
296.3	AMH	Access Point - Manhole				184

Upstream MH	Downstream MH	Size	Material	Total Length	City
184	184-A	10	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Harrison St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	11:58	134.7

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
134.7	AMH	Access Point - Manhole				184-A
105.4	MWLS	Water Level: Sag	5		F01	
105.0	MMC	Material Change				cast iron pipe
90.8	MWLS	Water Level: Sag	25		S01	
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 184

Upstream MH	Downstream MH	Size	Material	Total Length	City
184-A	182	10	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Harrison St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	11:36	300.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
300.4	AMH	Access Point - Manhole				184-A
294.1	TF	Tap, Factory Made		1		
270.5	TF	Tap, Factory Made		10		
180.4	TBI	Tap, Break-in / Hammer: Intruding		1		
147.9	TF	Tap, Factory Made		10		
109.0	TF	Tap, Factory Made		10		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 182

Generated on Wednesday, 3/21/2018 at 11:58 AM by the PipeTech® TV inspection system.

Upstream MH	Downstream MH	Size	Material	Total Length	City
182	181	10	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Harrison St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180321	12:07	388.6

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 182
0.0	MWL	Water Level	10			
139.2	RFJ	Roots, Fine: Joint		11 to 5	S01	
187.4	RFJ	Roots, Fine: Joint		12	F01	
236.9	TF	Tap, Factory Made		2		
371.3	MWLS	Water Level: Sag	25		S02	
388.6	MWLS	Water Level: Sag	5		F02	sag ends
388.6	AMH	Access Point - Manhole				181

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Upstream MH	Downstream MH	Size	Material	Total Length	City
182	181	10	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Harrison St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180321	12:07	388.6

Additional Information

MWLS - Water Level: Sag @ 371.3 ft.

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Upstream MH	Downstream MH	Size	Material	Total Length	City
181	177	10	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	12:26	293.1

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
293.1	AMH	Access Point - Manhole				181
225.6	TB	Tap, Break-in / Hammer		2		
173.9	TB	Tap, Break-in / Hammer		10		
144.5	TF	Tap, Factory Made		2		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				177

Upstream MH	Downstream MH	Size	Material	Total Length	City
181	181-A	10	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	13:16	349.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
349.4	AMH	Access Point - Manhole				181
336.1	MWLS	Water Level: Sag	25		S02	
289.3	CC	Crack Circumferential		12 to 12		
284.1	TF	Tap, Factory Made		2		
275.0	TF	Tap, Factory Made		10		
272.1	CC	Crack Circumferential		12 to 12		
269.1	MWLS	Water Level: Sag	10		F01	
253.8	TF	Tap, Factory Made		10		
244.2	MWLS	Water Level: Sag	25		S01	
203.7	TF	Tap, Factory Made		2		
195.0	TF	Tap, Factory Made		2		
136.8	TF	Tap, Factory Made		10		
99.1	TF	Tap, Factory Made		2		
24.4	RFJ	Roots, Fine: Joint		10		
14.9	TF	Tap, Factory Made		10		
9.1	TF	Tap, Factory Made		2		roots on ring of servoce
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 181-A

Waste Systems Cleaning INC
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Upstream MH	Downstream MH	Size	Material	Total Length	City
183	176	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	13:29	295.2

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
295.2	AMH	Access Point - Manhole				183
268.2	TF	Tap, Factory Made		2		
263.2	TF	Tap, Factory Made		10		roots in lateral
260.0	MGO	General Observation				pipe chipped
198.7	TFC	Tap, Factory Made: Capped		10		
198.7	TB	Tap, Break-in / Hammer		1		
193.4	TB	Tap, Break-in / Hammer		10		
184.0	TFC	Tap, Factory Made: Capped		2		
157.0	CS	Crack Spiral		11 to 1		
132.2	CS	Crack Spiral		10 to 12		
132.2	TB	Tap, Break-in / Hammer		11		
119.9	TF	Tap, Factory Made		2		
109.2	TFC	Tap, Factory Made: Capped		2		
102.3	CS	Crack Spiral		8 to 12		
22.5	TBI	Tap, Break-in / Hammer: Intruding		10		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 176

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Waste Systems Cleaning INC

Upstream MH	Downstream MH	Size	Material	Total Length	City
Dead End	183	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	13:57	305.2

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
305.2	MSA	Survey Abandoned				Deadend
291.2	TB	Tap, Break-in / Hammer		10		
242.4	TFC	Tap, Factory Made: Capped		10		
240.3	TB	Tap, Break-in / Hammer		2		
236.3	MMC	Material Change				clay pipe
231.3	MMC	Material Change				pvc pipe
224.5	TB	Tap, Break-in / Hammer		10		
198.6	TFC	Tap, Factory Made: Capped		10		
191.6	TBI	Tap, Break-in / Hammer: Intruding		2		
189.3	TFC	Tap, Factory Made: Capped		2		
162.2	CS	Crack Spiral		9 to 3		
162.2	TF	Tap, Factory Made		10		
153.0	MMC	Material Change				clay pipe
149.0	TB	Tap, Break-in / Hammer		2		
148.3	MMC	Material Change				pvc pipe
79.4	TFC	Tap, Factory Made: Capped		10		
62.4	CS	Crack Spiral		12 to 4		
62.4	TF	Tap, Factory Made		2		
12.1	TF	Tap, Factory Made		10		full of roots possibly capped
8.5	CL	Crack Longitudinal		12		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 183

Upstream MH	Downstream MH	Size	Material	Total Length	City
Dead End	183	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	13:57	305.2

Additional Information

MSA - Survey Abandoned @ 305.2 ft. Deadend

Waste Systems Cleaning INC

Upstream MH	Downstream MH	Size	Material	Total Length	City
175	176	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	14:10	354.6

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
354.6	AMH	Access Point - Manhole				175
351.2	HVV	Hole in Pipe: Void Visible		12 to 4		
348.4	TF	Tap, Factory Made		2		roots in lateral
340.5	TFC	Tap, Factory Made: Capped		10		
322.5	TB	Tap, Break-in / Hammer		10		
281.0	TFC	Tap, Factory Made: Capped		10		
275.7	TB	Tap, Break-in / Hammer		10		
231.1	TB	Tap, Break-in / Hammer		10		
227.0	TF	Tap, Factory Made		2		full of roots
207.5	TFC	Tap, Factory Made: Capped		10		
166.9	TB	Tap, Break-in / Hammer		12		
148.0	TFC	Tap, Factory Made: Capped		2		
147.7	TBI	Tap, Break-in / Hammer: Intruding		10		
136.1	TFC	Tap, Factory Made: Capped		10		
76.3	TB	Tap, Break-in / Hammer		10		
75.2	TB	Tap, Break-in / Hammer		1		
64.6	TFC	Tap, Factory Made: Capped		10		
54.4	TFC	Tap, Factory Made: Capped		2		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 176

C

Waste Systems Cleaning INC

715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
175	176	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180321	14:10	354.6

Additional Information

HVV - Hole in Pipe: Void Visible @ 351.2 ft.

Generated on Wednesday, 3/21/2018 at 02:26 PM by the PipeTech® TV inspection system.

Upstream MH	Downstream MH	Size	Material	Total Length	City
174	175	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	07:26	356.2

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 174
0.0	MWL	Water Level	0			
29.9	CS	Crack Spiral		2 to 3		
42.3	CS	Crack Spiral		2 to 5		
66.2	CM	Crack Multiple		7 to 2		
67.7	TB	Tap, Break-in / Hammer		10		
70.5	TFC	Tap, Factory Made: Capped		10		
123.1	TBI	Tap, Break-in / Hammer: Intruding		10		
124.6	TB	Tap, Break-in / Hammer		2		
147.4	TFC	Tap, Factory Made: Capped		2		
175.8	B	Pipe Broken		4 to 6		
209.3	TFC	Tap, Factory Made: Capped		2		
221.8	TFC	Tap, Factory Made: Capped		10		
231.8	TB	Tap, Break-in / Hammer		2		
235.0	CS	Crack Spiral		7 to 8		
286.3	TFC	Tap, Factory Made: Capped		2		
296.7	CS	Crack Spiral		6 to 12		
301.3	TFC	Tap, Factory Made: Capped		10		
319.0	CL	Crack Longitudinal		2		
331.9	TB	Tap, Break-in / Hammer		2		
356.2	AMH	Access Point - Manhole				175

Upstream MH	Downstream MH	Size	Material	Total Length	City
174	175	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hudson St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	07:26	356.2

Additional Information

B - Pipe Broken @ 175.8 ft.

CS - Crack Spiral @ 296.7 ft.

Waste Systems Cleaning INC
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Upstream MH	Downstream MH	Size	Material	Total Length	City
176	177	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Through Yards	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	07:46	393.7

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 176
0.0	MWL	Water Level	5			
7.2	MMC	Material Change				pvc pipe
14.8	MMC	Material Change				clay pipe
34.1	CS	Crack Spiral		10 to 2		
70.4	TB	Tap, Break-in / Hammer		10		
96.0	CL	Crack Longitudinal		12		
98.3	TFC	Tap, Factory Made: Capped		2		
104.3	CL	Crack Longitudinal		12		
113.5	CS	Crack Spiral		11 to 2		
152.5	CS	Crack Spiral		10 to 1		
167.6	CS	Crack Spiral		8 to 11		
170.4	CC	Crack Circumferential		8 to 12		
244.1	RMJ	Roots, Medium, Joint	45	12 to 5		
253.7	RFJ	Roots, Fine: Joint		4 to 5		
271.8	CS	Crack Spiral		8 to 1		
298.9	CS	Crack Spiral		10 to 1		
354.3	RFL	Roots, Fine: Lateral		8 to 10		
356.4	TB	Tap, Break-in / Hammer		10		roots in lateral
380.9	RFJ	Roots, Fine: Joint		1		
393.7	AMH	Access Point - Manhole				177

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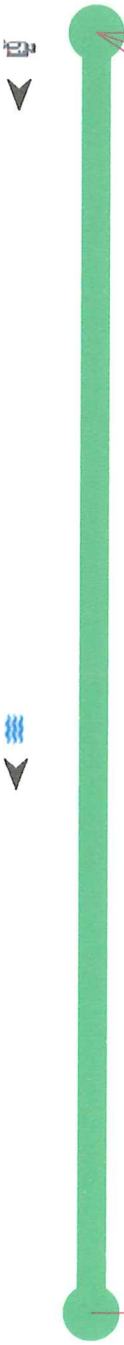
Upstream MH	Downstream MH	Size	Material	Total Length	City
177	177-A	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Lincoln St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	08:12	25.7

Additional Information



Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 177
0.0	MWL	Water Level	5			
0.0	CM	Crack Multiple		12 to 12		
25.7	AMH	Access Point - Manhole				177-A

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Upstream MH	Downstream MH	Size	Material	Total Length	City
177	177-A	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Lincoln St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	08:12	25.7

Additional Information

CM - Crack Multiple @ 0.0 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
177-A	178-A	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Lincoln St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	08:19	247.1

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 177-A
0.0	MWL	Water Level	5			
36.7	TFC	Tap, Factory Made: Capped		2		
48.2	TB	Tap, Break-in / Hammer		10		
54.0	TFC	Tap, Factory Made: Capped		10		
106.5	TFC	Tap, Factory Made: Capped		2		
112.5	TB	Tap, Break-in / Hammer		10		
128.9	TB	Tap, Break-in / Hammer		2		
128.9	MGO	General Observation				Patch
131.4	TB	Tap, Break-in / Hammer		2		
138.2	TFC	Tap, Factory Made: Capped		10		
185.6	TFC	Tap, Factory Made: Capped		2		
195.6	TFC	Tap, Factory Made: Capped		10		
234.6	TB	Tap, Break-in / Hammer		2		
237.9	TFC	Tap, Factory Made: Capped		2		
242.1	CL	Crack Longitudinal		12		
247.1	AMH	Access Point - Manhole				178-A

Waste Systems Cleaning INC

Upstream MH	Downstream MH	Size	Material	Total Length	City
178-A	178	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Lincoln St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	08:30	228.8

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 178-A
0.0	MWL	Water Level	5			
19.1	TBI	Tap, Break-in / Hammer: Intruding		10		
29.0	TFC	Tap, Factory Made: Capped		10		
48.8	TB	Tap, Break-in / Hammer		10		
66.3	RFJ	Roots, Fine: Joint		2 to 5		
68.8	TB	Tap, Break-in / Hammer		1		
78.9	TFC	Tap, Factory Made: Capped		10		
87.3	TFC	Tap, Factory Made: Capped		2		
143.8	TFC	Tap, Factory Made: Capped		10		
145.2	TB	Tap, Break-in / Hammer		10		
145.2	TB	Tap, Break-in / Hammer		2		
160.9	TFC	Tap, Factory Made: Capped		2		
211.2	TBI	Tap, Break-in / Hammer: Intruding		2		
228.8	MSA	Survey Abandoned				Cant go any further

Upstream MH	Downstream MH	Size	Material	Total Length	City
178-A	178	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Lincoln St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180323	08:41	49.1

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
49.1	MSA	Survey Abandoned				finished
49.1	TB	Tap, Break-in / Hammer		10		
24.0	TFC	Tap, Factory Made: Capped		10		
0.0	MWL	Water Level		10		
0.0	AMH	Access Point - Manhole				Starting Manhole: 178

Upstream MH	Downstream MH	Size	Material	Total Length	City
178	179	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Lincoln St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	09:02	147.6

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 178
0.0	MWL	Water Level	10			
17.8	CL	Crack Longitudinal		12		
55.8	CL	Crack Longitudinal		12	S01	
66.2	CL	Crack Longitudinal		12	F01	
67.9	TB	Tap, Break-in / Hammer		2		
92.1	TB	Tap, Break-in / Hammer		10		
92.8	TFC	Tap, Factory Made: Capped		10		
104.4	CL	Crack Longitudinal		12	S02	
144.4	CL	Crack Longitudinal		12	F02	
147.6	AMH	Access Point - Manhole				179

Upstream MH	Downstream MH	Size	Material	Total Length	City
179	179-A	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Garfield St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	09:13	221

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 179
0.0	MWL	Water Level	5			
0.0	CL	Crack Longitudinal		12	S01	
60.0	RFJ	Roots, Fine: Joint		4 to 5		
60.8	RML	Roots, Medium: Lateral	25	11 to 1		
62.5	TF	Tap, Factory Made		12		
85.8	TFC	Tap, Factory Made: Capped		10		
92.5	CL	Crack Longitudinal		12	F01	
100.0	TFC	Tap, Factory Made: Capped		2		
111.3	RFJ	Roots, Fine: Joint		4 to 5		
130.9	CL	Crack Longitudinal		12		
169.5	RFJ	Roots, Fine: Joint		2		
177.5	RFJ	Roots, Fine: Joint		10		
187.5	TB	Tap, Break-in / Hammer		10		
187.5	TFC	Tap, Factory Made: Capped		2		
189.8	CL	Crack Longitudinal		12		
197.0	TB	Tap, Break-in / Hammer		2		
197.2	TB	Tap, Break-in / Hammer		10		
221.0	AMH	Access Point - Manhole				179-A

Waste Systems Cleaning INC

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Upstream MH	Downstream MH	Size	Material	Total Length	City
179	179-A	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Garfield St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	09:13	221

Additional Information

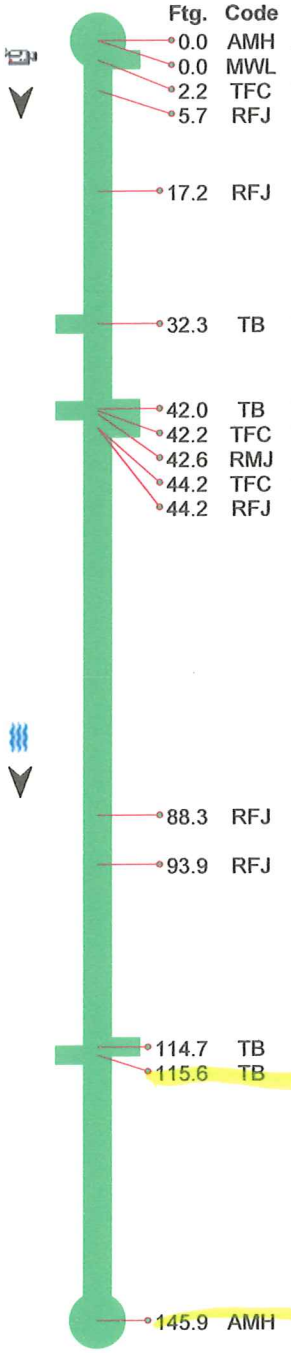
Waste Systems Cleaning INC
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
179-A	180	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Garfield St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	10:12	145.9

Additional Information



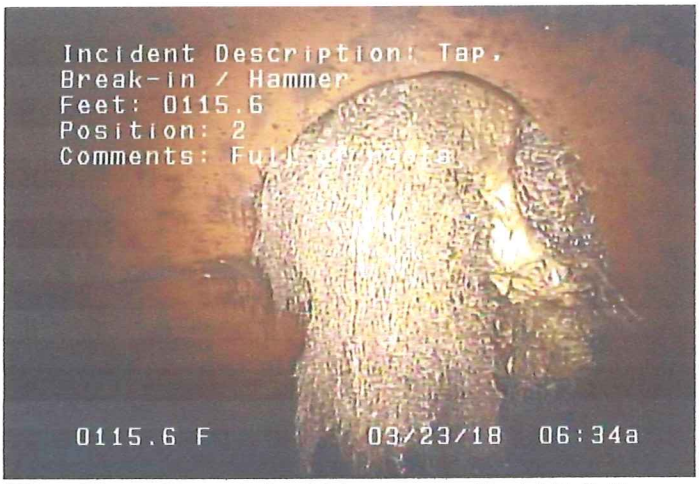
Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 179-A
0.0	MWL	Water Level	5			
2.2	TFC	Tap, Factory Made: Capped		10		
5.7	RFJ	Roots, Fine: Joint		10		
17.2	RFJ	Roots, Fine: Joint		4		
32.3	TB	Tap, Break-in / Hammer		2		
42.0	TB	Tap, Break-in / Hammer		10		
42.2	TFC	Tap, Factory Made: Capped		2		
42.6	RMJ	Roots, Medium, Joint	10	4 to 5		
44.2	TFC	Tap, Factory Made: Capped		10		
44.2	RFJ	Roots, Fine: Joint		7 to 10		
88.3	RFJ	Roots, Fine: Joint		7		
93.9	RFJ	Roots, Fine: Joint		4 to 6		
114.7	TB	Tap, Break-in / Hammer		10		roots around service
115.6	TB	Tap, Break-in / Hammer		2		Full of roots
145.9	AMH	Access Point - Manhole				180 Extremely offset

Upstream MH	Downstream MH	Size	Material	Total Length	City
179-A	180	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Garfield St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	10:12	145.9

Additional Information



TB - Tap, Break-in / Hammer @ 115.6 ft.
Full of roots

AMH - Access Point - Manhole @ 145.9 ft.
180 Extremely offset

Upstream MH	Downstream MH	Size	Material	Total Length	City
180	4	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Garfield St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	10:20	276

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 180
0.0	MWL	Water Level	5			
68.4	CM	Crack Multiple		12 to 12		
104.0	RFJ	Roots, Fine: Joint		12 to 3		
169.8	TFC	Tap, Factory Made: Capped		10		
206.1	H	Hole in Pipe		1 to 2		possible lateral. full of roots
259.0	RFJ	Roots, Fine: Joint		3 to 10	S01	
276.0	AMH	Access Point - Manhole				4

Waste Systems Cleaning INC

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Upstream MH	Downstream MH	Size	Material	Total Length	City
180	4	15	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Garfield St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	10:20	276

Additional Information

H - Hole in Pipe @ 206.1 ft. possible lateral. full of roots

Waste Systems Cleaning INC
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Upstream MH	Downstream MH	Size	Material	Total Length	City
144	142	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180323	12:02	196.1

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
196.1	AMH	Access Point - Manhole				144
177.2	TB	Tap, Break-in / Hammer		10		
127.5	TFC	Tap, Factory Made: Capped		10		
126.7	TB	Tap, Break-in / Hammer		2		
76.9	TFC	Tap, Factory Made: Capped		12		
60.8	TBI	Tap, Break-in / Hammer: Intruding		10		
7.7	RFJ	Roots, Fine: Joint		11		
6.0	TF	Tap, Factory Made		10		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 142

Generated on Friday, 3/23/2018 at 12:10 PM by the PipeTech® TV inspection system.

Waste Systems Cleaning INC
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
143	142	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180323	11:15	110.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
110.4	MSA	Survey Abandoned				Massive hole in Pipe
110.4	HVV	Hole in Pipe: Void Visible		12 to 12		
110.2	HVV	Hole in Pipe: Void Visible		12 to 12		
110.2	TBI	Tap, Break-in / Hammer: Intruding		2		
109.5	TFC	Tap, Factory Made: Capped		12		
72.8	TF	Tap, Factory Made		10		
20.3	TFC	Tap, Factory Made: Capped		12		
4.0	RFJ	Roots, Fine: Joint		10 to 2	S01	
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 142

E

Waste Systems Cleaning INC

715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
143	142	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180323	11:15	110.4

Additional Information

HVV - Hole in Pipe: Void Visible @ 110.2 ft.

HVV - Hole in Pipe: Void Visible @ 110.4 ft.

MSA - Survey Abandoned @ 110.4 ft. Massive hole in Pipe

Waste Systems Cleaning INC
715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
143	142	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	12:36	134

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 143
0.0	MWL	Water Level	0			
5.0	TF	Tap, Factory Made		10		
24.1	RFJ	Roots, Fine: Joint		2	S01	
30.7	RFJ	Roots, Fine: Joint		12	F01	
76.4	TF	Tap, Factory Made		10		
79.3	TFC	Tap, Factory Made: Capped		12		
133.4	HVV	Hole in Pipe: Void Visible		12 to 12		
133.4	TBI	Tap, Break-in / Hammer: Intruding		10		
134.0	HVV	Hole in Pipe: Void Visible		12 to 12		
134.0	MSA	Survey Abandoned				Void in pipe

Generated on Friday, 3/23/2018 at 12:51 PM by the PipeTech® TV inspection system.

F

Waste Systems Cleaning INC

715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
143	142	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Water St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	12:36	134

Additional Information

HVV - Hole in Pipe: Void Visible @ 133.4 ft.

TBI - Tap, Break-in / Hammer: Intruding @ 133.4 ft.

HVV - Hole in Pipe: Void Visible @ 134.0 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
142	141-A	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Van Buren	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	12:10	265.5

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 142
0.0	MWL	Water Level	5			
10.5	RFJ	Roots, Fine: Joint		12	S01	
68.8	TF	Tap, Factory Made		12		
122.5	TF	Tap, Factory Made		12		
131.2	TF	Tap, Factory Made		1		
173.5	TF	Tap, Factory Made		12		
191.4	TF	Tap, Factory Made		12		
236.1	TF	Tap, Factory Made		12		
238.9	TF	Tap, Factory Made		12		
265.5	RFJ	Roots, Fine: Joint		12	F01	
265.5	AMH	Access Point - Manhole				141-A

Upstream MH	Downstream MH	Size	Material	Total Length	City
141-A	141	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Van Buren	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	12:26	259.7

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 141-A
0.0	MWL	Water Level	5			
1.4	RFJ	Roots, Fine: Joint		10 to 2	S01	
13.7	RMJ	Roots, Medium, Joint	10	7 to 9		
54.2	TF	Tap, Factory Made		12		
90.3	B	Pipe Broken		4 to 8		
106.4	TF	Tap, Factory Made		2		
108.0	TF	Tap, Factory Made		1		
126.1	TF	Tap, Factory Made		12		
133.8	RFJ	Roots, Fine: Joint		12	F01	
210.0	TF	Tap, Factory Made		12		
259.7	AMH	Access Point - Manhole				141

715-533-2262

Waste Systems Cleaning INC

Upstream MH	Downstream MH	Size	Material	Total Length	City
141-A	141	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Van Buren	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	12:26	259.7

Additional Information

B - Pipe Broken @ 90.3 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
141	140	8	Concrete Pipe (non-reinforced)		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Gilman St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180323	12:51	347.8

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 141
0.0	MWL	Water Level	5			
2.0	TF	Tap, Factory Made		12		
69.3	TF	Tap, Factory Made		12		
87.2	TF	Tap, Factory Made		12		full of debris
99.9	CC	Crack Circumferential		4 to 8		
114.0	TF	Tap, Factory Made		12		
167.8	TF	Tap, Factory Made		12		
173.9	TF	Tap, Factory Made		12		full of debris
255.4	CC	Crack Circumferential		4 to 10		
347.8	AMH	Access Point - Manhole				140

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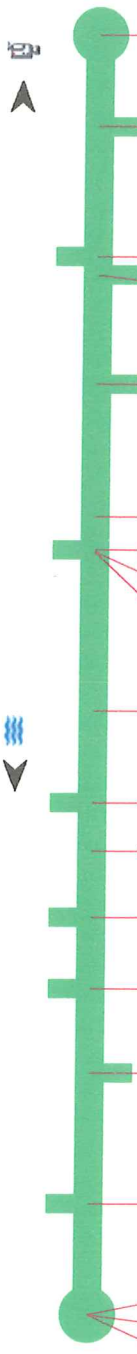
Upstream MH	Downstream MH	Size	Material	Total Length	City
163	162	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hwy 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180328	11:18	280.6

Additional Information



Ftg.	Code	Description	Pct.	Position	Cont.	Comment
280.6	AMH	Access Point - Manhole				163
260.5	TFC	Tap, Factory Made: Capped		2		
232.0	TFC	Tap, Factory Made: Capped		10		
228.0	TF	Tap, Factory Made		2		
204.0	TB	Tap, Break-in / Hammer		2		
175.0	CM	Crack Multiple		8 to 4		
167.7	TF	Tap, Factory Made		10		
167.3	BVV	Pipe Broken: Void Visible		8 to 12		large void
167.3	HVV	Hole in Pipe: Void Visible		8 to 11		large void
132.4	CL	Crack Longitudinal		12		
112.3	TB	Tap, Break-in / Hammer		10		
101.7	CS	Crack Spiral		10 to 2		
87.2	TFC	Tap, Factory Made: Capped		10		
71.5	TB	Tap, Break-in / Hammer		10		
53.0	TF	Tap, Factory Made		2		
24.4	TB	Tap, Break-in / Hammer		10		
0.0	CL	Crack Longitudinal		1		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 162

Generated on Wednesday, 3/28/2018 at 11:35 AM by the PipeTech® TV inspection system.

G

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715-533-2262

Upstream MH	Downstream MH	Size	Material	Total Length	City
163	162	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hwy 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180328	11:18	280.6

Additional Information

HVV - Hole in Pipe: Void Visible @ 167.3 ft. large void

BVV - Pipe Broken: Void Visible @ 167.3 ft. large void

Generated on Wednesday, 3/28/2018 at 11:35 AM by the PipeTech® TV inspection system.

Upstream MH	Downstream MH	Size	Material	Total Length	City
162	146	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hwy 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	11:35	360.9

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 162
0.0	MWL	Water Level	5			
22.9	CL	Crack Longitudinal		3		
34.2	CS	Crack Spiral		9 to 1		
44.7	CL	Crack Longitudinal		1		
52.8	CL	Crack Longitudinal		8		
65.1	TF	Tap, Factory Made		2		
72.9	CM	Crack Multiple		7 to 12		
94.9	TFC	Tap, Factory Made: Capped		10		
97.4	TB	Tap, Break-in / Hammer		10		
118.0	CS	Crack Spiral		11 to 12		
121.6	CM	Crack Multiple		8 to 2	S01	
123.8	CL	Crack Longitudinal		10		
139.3	TB	Tap, Break-in / Hammer		10		
144.1	TB	Tap, Break-in / Hammer		2		
176.9	TF	Tap, Factory Made		10		
203.9	CM	Crack Multiple		12 to 12	F01	
209.3	TFC	Tap, Factory Made: Capped		2		
211.9	CC	Crack Circumferential		1 to 7		
219.1	TF	Tap, Factory Made		10		
224.0	TBI	Tap, Break-in / Hammer: Intruding		10		
224.8	CL	Crack Longitudinal		11		
262.1	CL	Crack Longitudinal		2		
264.2	CS	Crack Spiral		12 to 3		
266.2	TFC	Tap, Factory Made: Capped		10		
266.2	CL	Crack Longitudinal		8	S02	
266.2	CL	Crack Longitudinal		3		
300.6	TFC	Tap, Factory Made: Capped		2		
342.4	CL	Crack Longitudinal		11	F02	
347.5	CM	Crack Multiple		11 to 3		
360.9	AMH	Access Point - Manhole				146

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Upstream MH	Downstream MH	Size	Material	Total Length	City
146	123	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hwy 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	11:51	357.3

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 146
0.0	MWL	Water Level	5			
4.3	CL	Crack Longitudinal		1		
9.1	CL	Crack Longitudinal		2		
16.7	CL	Crack Longitudinal		11		
63.5	CS	Crack Spiral		6 to 10		
90.4	TB	Tap, Break-in / Hammer		2		
130.5	TF	Tap, Factory Made		10		
130.5	TB	Tap, Break-in / Hammer		10		
130.5	CM	Crack Multiple		12 to 12		
143.8	TB	Tap, Break-in / Hammer		10		
156.7	TFC	Tap, Factory Made: Capped		10		
169.8	TF	Tap, Factory Made		1		large crack in lateral
190.0	CS	Crack Spiral		2 to 4		
198.7	TF	Tap, Factory Made		10		Lateral Offset
211.4	TB	Tap, Break-in / Hammer		1		
211.9	CL	Crack Longitudinal		2		
212.1	CL	Crack Longitudinal		12		
228.0	TF	Tap, Factory Made		10		
267.0	TF	Tap, Factory Made		10		
270.9	TB	Tap, Break-in / Hammer		10		
285.2	CL	Crack Longitudinal		11		
286.9	CL	Crack Longitudinal		10		
312.1	TF	Tap, Factory Made		10		Offset Lateral with sand and rock infiltration
357.3	AMH	Access Point - Manhole				123

Upstream MH	Downstream MH	Size	Material	Total Length	City
146	123	12	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	Hwy 10	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	11:51	357.3

Additional Information

TF - Tap, Factory Made @ 198.7 ft. Lateral Offset

TF - Tap, Factory Made @ 312.1 ft. Offset Lateral with sand and rock infiltration

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Upstream MH	Downstream MH	Size	Material	Total Length	City
124	123	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	N eau claire st	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	12:06	344.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 124
0.0	MWL	Water Level	5			
0.0	HSV	Hole in Pipe: Soil Visible		9 to 11		
2.0	B	Pipe Broken		7 to 8		
18.7	CM	Crack Multiple		8 to 3		
24.6	CM	Crack Multiple		9 to 1		
34.7	HSV	Hole in Pipe: Soil Visible		11 to 12		cause by hammer tap
34.8	TB	Tap, Break-in / Hammer		10		
34.8	CS	Crack Spiral		10 to 1		
36.7	TFC	Tap, Factory Made: Capped		10		
42.6	CL	Crack Longitudinal		12		
52.9	CL	Crack Longitudinal		12		
56.7	TFC	Tap, Factory Made: Capped		2		
58.2	CM	Crack Multiple		7 to 11		
60.3	TB	Tap, Break-in / Hammer		10		
60.5	CM	Crack Multiple		7 to 12		
62.6	CS	Crack Spiral		7 to 10		
71.5	CS	Crack Spiral		11 to 3		
77.3	CS	Crack Spiral		10 to 2		
78.9	CM	Crack Multiple		9 to 12		
83.2	CS	Crack Spiral		12 to 5		
85.1	CL	Crack Longitudinal		1		
87.7	CS	Crack Spiral		7 to 10		
91.1	CL	Crack Longitudinal		8		
94.0	CS	Crack Spiral		12 to 4		
105.4	MMC	Material Change				pvc pipe
108.8	TF	Tap, Factory Made		10		
110.3	MMC	Material Change				clay pipe
124.0	TFC	Tap, Factory Made: Capped		12		
127.9	TF	Tap, Factory Made		2		
140.1	TF	Tap, Factory Made		2		
148.6	CL	Crack Longitudinal		2		
153.3	CS	Crack Spiral		7 to 10		
154.3	TF	Tap, Factory Made		10		
156.7	CS	Crack Spiral		12 to 4		
157.2	BSV	Pipe Broken: Soil Visible		11 to 3		
181.1	CL	Crack Longitudinal		1		
195.1	TF	Tap, Factory Made		10		
218.0	CS	Crack Spiral		7 to 10		
223.2	TF	Tap, Factory Made		2		offset sand and rock infiltration
223.2	CS	Crack Spiral		4 to 8		
239.6	TFC	Tap, Factory Made: Capped		2		
239.6	CL	Crack Longitudinal		2		
244.1	CL	Crack Longitudinal		8		
260.7	CL	Crack Longitudinal		9		
264.2	CL	Crack Longitudinal		11		
286.2	TF	Tap, Factory Made		10		
300.3	TB	Tap, Break-in / Hammer		2		
300.3	MWLS	Water Level: Sag	25		S01	
301.8	MGO	General Observation				Patched hole
305.1	HVV	Hole in Pipe: Void Visible		11 to 1		
318.6	MWLS	Water Level: Sag	5		F01	sag ends
320.8	CS	Crack Spiral		11 to 3		
327.7	CS	Crack Spiral		9 to 12		
330.6	B	Pipe Broken		4 to 8		
343.6	HSV	Hole in Pipe: Soil Visible		10 to 4		

Upstream MH	Downstream MH	Size	Material	Total Length	City
124	123	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	N eau claire st	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	12:06	344.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
343.6	HVV	Hole in Pipe: Void Visible		12 to 4		
343.6	HVV	Hole in Pipe: Void Visible		10 to 4		
344.4	AMH	Access Point - Manhole				123

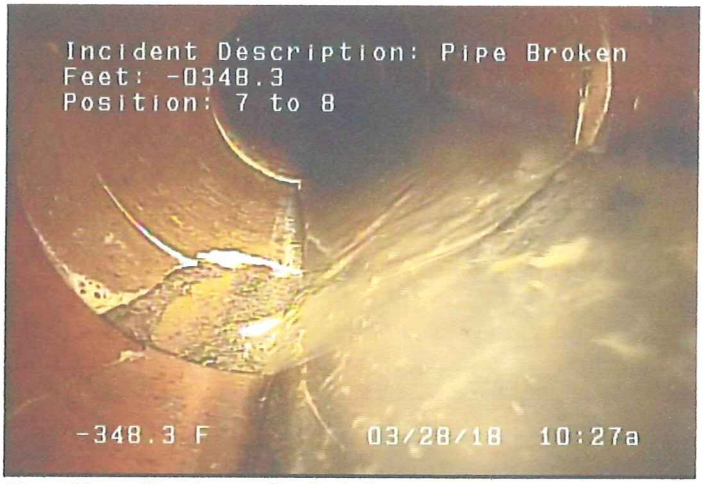
Upstream MH	Downstream MH	Size	Material	Total Length	City
124	123	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	N eau claire st	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	12:06	344.4

Additional Information

HSV - Hole in Pipe: Soil Visible @ 0.0 ft.



B - Pipe Broken @ 2.0 ft.

HSV - Hole in Pipe: Soil Visible @ 34.7 ft. cause by hammer tap

B - Pipe Broken @ 330.6 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
124	123	10	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	N eau claire st	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	12:06	344.4

Additional Information

HVV - Hole in Pipe: Void Visible @ 343.6 ft.

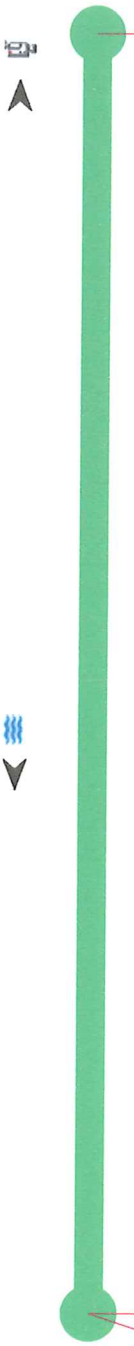
HVV - Hole in Pipe: Void Visible @ 343.6 ft.

Upstream MH	Downstream MH	Size	Material	Total Length	City
122	122-A	12	Polyvinyl Chloride		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180328	13:11	30.9

Additional Information



Ftg.	Code	Description	Pct.	Position	Cont.	Comment
30.9	AMH	Access Point - Manhole				122
0.0	MWL	Water Level				
0.0	AMH	Access Point - Manhole				

5

Starting Manhole: 122-A

Upstream MH	Downstream MH	Size	Material	Total Length	City
123-B	122	12	Polyvinyl Chloride		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180328	13:27	202.8

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
202.8	AMH	Access Point - Manhole				123-B
193.8	TF	Tap, Factory Made		10		
192.1	TF	Tap, Factory Made		2		
182.2	TF	Tap, Factory Made		10		
173.5	TF	Tap, Factory Made		10		
172.9	TF	Tap, Factory Made		2		
160.2	TB	Tap, Break-in / Hammer		2		
135.2	TB	Tap, Break-in / Hammer		10		
133.3	TB	Tap, Break-in / Hammer		2		
118.8	TF	Tap, Factory Made		10		
117.4	TF	Tap, Factory Made		2		
98.2	TB	Tap, Break-in / Hammer		10		
96.8	TF	Tap, Factory Made		2		
81.2	TF	Tap, Factory Made		10		
77.0	TB	Tap, Break-in / Hammer		2		
34.7	TF	Tap, Factory Made		2		
0.0	MWL	Water Level	10			
0.0	AMH	Access Point - Manhole				Starting Manhole: 122

Upstream MH	Downstream MH	Size	Material	Total Length	City
123-A	123-B	12	Polyvinyl Chloride		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Upstream	Maintenance Related	Dry	20180328	13:36	160.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
160.4	AMH	Access Point - Manhole				123-A
137.4	TF	Tap, Factory Made		10		
133.0	TF	Tap, Factory Made		2		
131.1	TF	Tap, Factory Made		2		
112.2	TF	Tap, Factory Made		10		
94.0	TF	Tap, Factory Made		2		
77.2	TF	Tap, Factory Made		10		
64.7	TF	Tap, Factory Made		2		
62.9	TF	Tap, Factory Made		2		
54.8	TF	Tap, Factory Made		10		
44.9	TF	Tap, Factory Made		10		
31.2	TF	Tap, Factory Made		2		
13.1	TF	Tap, Factory Made		10		
0.0	MWL	Water Level	5			
0.0	AMH	Access Point - Manhole				Starting Manhole: 123-B

Upstream MH	Downstream MH	Size	Material	Total Length	City
122-A	122-B	18	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	13:55	171.4

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 122-A
0.0	MWL	Water Level	5			
29.6	TF	Tap, Factory Made		1		roots in service
61.6	TB	Tap, Break-in / Hammer		2		
70.4	TF	Tap, Factory Made		10		
80.3	TB	Tap, Break-in / Hammer		2		roots growing around service
93.0	RFJ	Roots, Fine: Joint		3 to 5		
104.7	TF	Tap, Factory Made		2		
116.7	TF	Tap, Factory Made		10		
154.7	TF	Tap, Factory Made		2		
158.8	TBI	Tap, Break-in / Hammer: Intruding		10		
171.4	AMH	Access Point - Manhole				122-B

Upstream MH	Downstream MH	Size	Material	Total Length	City
122-B	121	18	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	14:11	194.5

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 122-B
0.0	MWL	Water Level	5			
11.5	TFC	Tap, Factory Made: Capped		10		
55.0	TB	Tap, Break-in / Hammer		2		
63.9	CL	Crack Longitudinal		12	S01	
69.8	TFC	Tap, Factory Made: Capped		2		
76.6	CL	Crack Longitudinal		12	F01	
87.7	TF	Tap, Factory Made		10		roots growing out of service
125.1	TFC	Tap, Factory Made: Capped		2		
194.5	AMH	Access Point - Manhole				121

Upstream MH	Downstream MH	Size	Material	Total Length	City
121	121-B	18	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	14:17	225.7

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 121
0.0	MWL	Water Level	5			
33.5	CM	Crack Multiple		11 to 12	S01	
91.7	TF	Tap, Factory Made		10		
120.0	CM	Crack Multiple		12 to 12	F01	
181.6	TB	Tap, Break-in / Hammer		2		
225.7	AMH	Access Point - Manhole				121-B

Upstream MH	Downstream MH	Size	Material	Total Length	City
121-B	9	18	Vitrified Clay Pipe		Mondovi

Surveyor's Name	Certificate Number	Street Address	Location Details
Chris	43234	S Eau Claire St	

Direction	Purpose	Weather	Date	Time	Length Surveyed
Downstream	Maintenance Related	Dry	20180328	14:46	229.1

Additional Information

Ftg.	Code	Description	Pct.	Position	Cont.	Comment
0.0	AMH	Access Point - Manhole				Starting Manhole: 121-B
0.0	MWL	Water Level	5			
7.0	TF	Tap, Factory Made		10		
7.7	CS	Crack Spiral		7 to 12		
59.0	TFC	Tap, Factory Made: Capped		2		
76.0	CS	Crack Spiral		1 to 4		
77.8	CS	Crack Spiral		10 to 3		
105.1	TF	Tap, Factory Made		2		
148.0	TFC	Tap, Factory Made: Capped		2		
182.7	TB	Tap, Break-in / Hammer		2		
208.4	CL	Crack Longitudinal		12		
212.7	CL	Crack Longitudinal		9		
229.1	AMH	Access Point - Manhole				9

Appendix I

Oxidization Ditch & RSF Design Summary

Design Summary

Design Basis

The A2C™ Carrousel system described in this proposal has been designed to treat an influent wastewater flow of **0.30 MGD** with the following wastewater characteristics, in a flow sheet with no primary clarification.

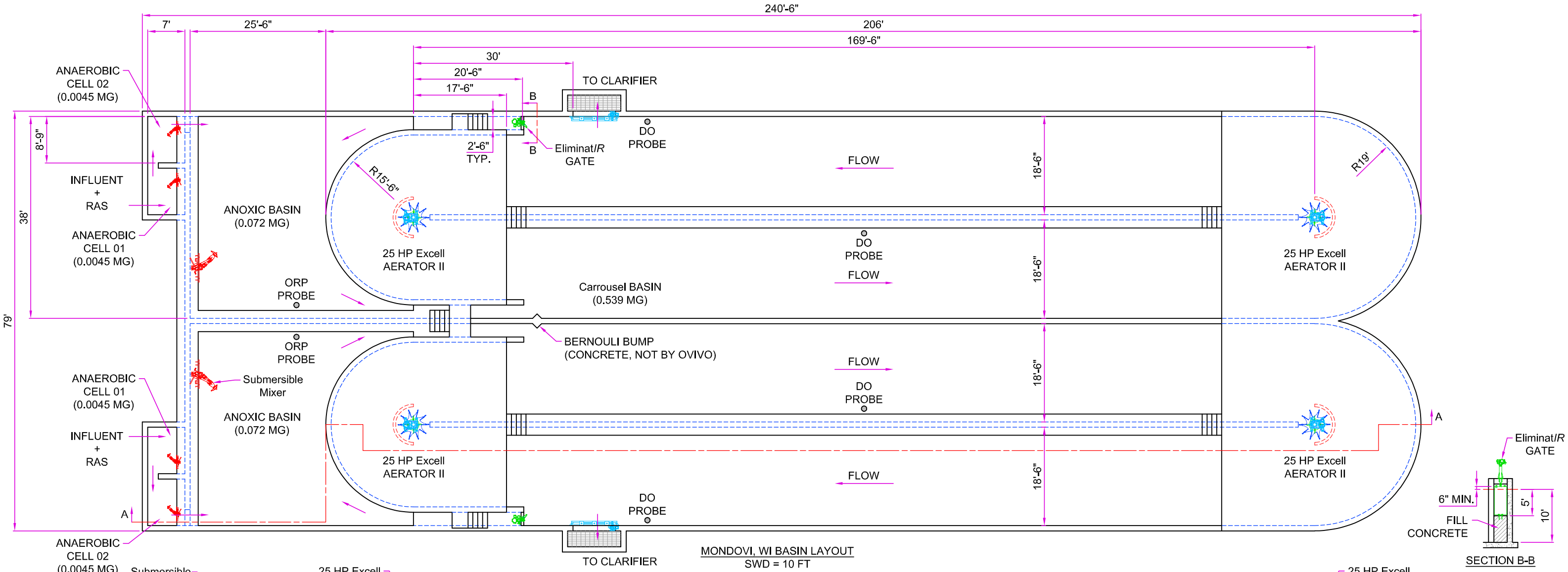
Parameter	Influent	Effluent	Notes
Flow (MGD)	0.30	-	
BOD – Biochemical Oxygen Demand (mg/L)	715	10	
TSS – Total Suspended Solids (mg/L)	924	10	
TKN – Total Kjeldahl Nitrogen (mg/L)	100	3.0	
NH_3-N – Ammonia Nitrogen (mg/L)	-	1.0	
NO_3-N – Nitrate Nitrogen (mg/L)	-	3.0	
TN – Total Nitrogen (mg/L)	-	6.0	Includes est. refractory Org-N
TP – Total Phosphorus (mg/L)	30	1.0	May require chemical polishing and effluent filtration

Design Criteria

Design Parameter	Design Value
Process SRT – Nitrification (days)	20.0
Minimum Wastewater Temperature (°C)	9.0
Maximum Wastewater Temperature (°C)	25.0
MLSS Concentration (mg/L)	4,000
Net Yield (lb TSS/lb $BOD_{removed}$)	1.02
Oxygen Coefficient	
lb O_2 / lb $BOD_{removed}$	1.28
lb O_2 / lb $N_{oxidized}$	4.60
Alpha (α)	0.90
Beta (β)	0.97
Elevation (feet above sea level)	804
Design Standard Oxygen Transfer Rate (lbs O2/motorHP/Hr)	3.60

Aeration Power Requirement **= 54 HP without accounting for denitrification**
= 46 HP with denitrification credit

Aeration Power Proposed **= 4 units at 25 HP each = 100 HP Total**



A2C™

Volumes	Anaerobic Basin	First Anoxic Basin	Carrousel® Basin
Volume Per Train	0.009 MG	0.072 MG	0.539 MG
No Trains	2 ea	2 ea	2 ea
Total Volume	0.019 MG	0.143 MG	1.078 MG

Concrete	Outer Wall Thickness	Inner Wall Thickness	Floor Slab Thickness	Footings	Bridges and Covers
Size of Component	12 inches	12 inches	12 inches	2.0 feet by 3.5 feet	12 inches
Concrete Volumes	204 CY	141 CY	317 CY	181 CY	94 CY
		Concrete volumes are per basin		Total Per Basin	938 CY

Design Basis		
Parameters	Unit	Value
Influent		
BODi	mg/L	714.9
TSSi	mg/L	923.6
TKNi	mg/L	100.1
TPi	mg/L	30.4
Effluent		
BODe	mg/L	10.0
TSSe	mg/L	10.0
NO3-Ne	mg/L	3.0
NH3e	mg/L	1.0
TNe	mg/L	3.0
TPe	mg/L	1.0

Operating Conditions		
Min. Temperature	^{0}C	9.0
Max. Temperature	^{0}C	25.0
SRT	days	20.0
MLSS	mg/L	4,000
Power required w/o denit credit	HP	54
Power required w/ denit credit	HP	46
Installed Power	HP	100

D — THIRD ANGLE PROJECTION

OVIVO — Worldwide Experts in Water Treatment

MONDOVI, WI WWTP
BASIN LAYOUT
-

REF. FROM:	-	DO NOT SCALE PRINTS
DATE (mm/dd/yyyy)	01/15/2019	WORKMANSHIP STANDARD ES0001 APPLIES

INITIAL RELEASE	-	-	-	--/--	A	DRAWN	JSM	ORIGINAL S.O.	DWG. NO.	-	SHEET 1 OF 1	REV -
REVISION	EN/ECO	BY	CHECK'D	DATE		CHECK'D	MAC	-				

Calculations for Biological Basins

1. DESIGN CONDITIONS

Design Parameter	Design Value	Design Effluent	Notes
Flow (MGD)	0.300	-	
BOD – Biochemical Oxygen Demand (mg/L)	715	10	
TSS – Total Suspended Solids (mg/L)	924	10	
TKN – Total Kjeldahl Nitrogen (mg/L)	100	3.0	
NH_3-N – Ammonia Nitrogen (mg/L)	-	1.0	
NO_3-N – Nitrate Nitrogen (mg/L)	-	3.0	
TN – Total Nitrogen (mg/L)	-	6.0	Includes estimated refractory organic nitrogen
TP – Total Phosphorus (mg/L)	30	1.0	May require chemical polishing and effluent filtration

2. DESIGN ASSUMPTIONS

Design Parameter	Design Value
Process SRT – Nitrification (days)	20.0
Minimum Wastewater Temperature (°C)	9.0
Maximum Wastewater Temperature (°C)	25.0
MLSS Concentration (mg/L)	4,000
Net Yield (lb TSS/lb $BOD_{removed}$)	1.02
Oxygen Coefficient	
lb O_2 / lb $BOD_{removed}$	1.28
lb O_2 / lb $N_{oxidized}$	4.60
Alpha (α)	0.90
Beta (β)	0.97
Elevation (feet above sea level)	804

3. PROCESS CALCULATIONS

a. AERATION VOLUME

BOD Removal $= Q \times (BOD_{in} - BOD_{eff}) \times 8.34$

$= 0.300 \times (714.9 - 10) \times 8.34$

$= 1{,}764 \ {}^{\text{lbs BOD}}/_{\text{day}}$

Sludge Production $= Y \times Q \times (BOD_{in} - BOD_{eff}) \times 8.34$

$= 1.02 \times 0.300 \times (714.9 - 10) \times 8.34$

$= 1{,}799 \ {}^{\text{lbs TSS}}/_{\text{day}}$

System Mass $= SRT \times Y \times Q \times (BOD_{in} - BOD_{eff}) \times 8.34$

$= 20.0 \times 1.02 \times 0.300 \times (714.9 - 10) \times 8.34$

$= 35{,}979$ lbs TSS

Carrousel Volume $= \dfrac{SRT \times Y \times Q \times (BOD_{in} - BOD_{eff})}{MLSS}$

$= \dfrac{20.0 \times 1.02 \times 0.300 \times (714.9 - 10)}{4{,}000}$

$= 1.078$ M. G. (Two trains, each with 0.539 MG aerobic vol.)

BOD loading per kft3 aer. vol. $= \dfrac{Q \times BOD_{in} \times 8.34 \times 7.481 \times 1{,}000}{\text{Carrousel Volume} \times 10{,}00{,}000}$

$= \dfrac{0.3 \times 714.9 \times 8.34 \times 7.481 \times 1000}{1.078 \times 1000000}$

$= 12.41$ lbs BOD/kft3/day

b. AERATION POWER

Nitrogen Synthesis $= 4.8\%$ of WAS

$= 34.8\ {}^{mg}/_{L}$

Nitrogen Oxidized (N_{ox}) $= TKN_{in} - TKN_{eff} - N_{assimilation}$

$= 100 - 3.0 - 34.8$

$= 62.3\ {}^{mg}/_{L}$

$= 156\ {}^{lbs \cdot N}/_{day}$

Actual Oxygen Requirement @ $1.28\ {}^{lbs\ O_2}/_{lbs\ BOD_{removed}}$ & $4.60\ {}^{lbs\ O_2}/_{lbs\ N_{oxidized}}$

AOR $= (1.28 \times 1{,}764) + (4.60 \times 156)$

$= 2{,}975\ {}^{lbs\ O_2}/_{day}$

STD O_2 Requirement $= AOR \times \frac{9.02}{\alpha \times (\beta \times C_{SW} - C_0)} \times 1.024^{(20-TMAX)}$

$\alpha = 0.90 \quad \beta = 0.97 \quad C_0 = 2.0$

C_{SW} at 25.0°C and 804 feet elevation $= 7.93\ {}^{mg}/_{L}\ O_2$

SOR $= 2{,}975 \times \frac{9.02}{0.90 \times (0.97 \times 7.93 - 2.0)} \times 1.024^{(20-25.0)}$

$= 4{,}648\ {}^{lbs\ O_2}/_{day}$

Power Required $= \frac{4{,}648}{3.60 \times 24}$

$= 54$ HP 4 @ 25.0 HP = 100 HP Installed

Denitrification Credit @ 2.86 $^{\text{lbs } O_2}/_{\text{lbs } NO_3\text{-}N_{reduced}}$

lbs NO_3-$N_{reduced}$ $= (TKN_{in} - TKN_{eff} - N_{assimilation} - NO_3\text{-}N_{eff}) \times Q \times 8.34$

$= (100 - 3.0 - 34.8 - 3.0) \times 0.300 \times 8.34$

$= 148\ ^{\text{lbs}}/_{\text{day}}$

O_2Credit $= 2.86 \times (\text{lbs } NO_3 - N_{reduced})$

$= 424\ ^{\text{lbs } O_2}/_{\text{day}}$

SOR Credit $= O_2\text{Credit} \times \frac{9.02}{\alpha(\beta \times C_{SW} - C_0)} \times 1.024^{(20-TMAX)}$

$= \frac{663}{3.60 \times 24}$

Horsepower Credit $= (8\ HP)$

c. ANOXIC VOLUME (A^2C)

NO_3-N Reduced in Carrousel Basin $\left({}^{mg}/_{L}\right) =$ Not Considered

$\left({}^{lbs}/_{day}\right) =$ Not Considered

Active Biomass $= 2800\ {}^{mg\ VSS}/_{L}$

Specific Denitrification Rate SDNR $= 0.0427\ {}^{gNO_3\text{-}N}/_{gVSS \cdot day}$

$$\text{lb } NO_3\text{-}N_{\text{reduced in Anoxic Basin}} = [NO_{OX} - (N_{\text{reduced in Carrousel}}) \times \frac{{}^{IR}/_{Q}}{(1 + {}^{IR}/_{Q} + {}^{Q_{RAS}}/_{Q})}$$

$$= (156 - 0) \times \frac{19.0}{1 + 19.0 + 0.75}$$

$$= 143\ {}^{lbs}/_{day}$$

$$\text{Anoxic Volume} = \frac{\text{lb } NO_3\text{-}N_{reduced}}{SDNR \times MLVSS \times 8.34}$$

$$= \frac{143}{0.0427 \times 2800 \times 8.34}$$

$= 0.143$ M. G. (Two trains, each with 0.072 MG anox. vol.)

d. ANAEROBIC VOLUME (A^2C)

$$\text{Anaerobic Volume} = \frac{\text{HDT} \times \text{Q}}{24} \qquad \text{(HDT in hours; Q in MGD)}$$

$$= \frac{1.5 \times 0.300}{24}$$

$$= 0.019 \text{ M. G. (Four Cells, each with 0.0045 MG anaer. vol.)}$$

$$\text{NO}_3\text{-N}_{\text{Removed from RAS}} = (^{\text{Q}_{\text{RAS}}}/_{\text{Q}}) \times \text{NO}_3\text{-N}_{\text{eff}} \times 8.34$$

$$= 0.75 \times 0.300 \times 3.0 \times 8.34$$

$$= 6.00 \ ^{\text{lbs}}/_{\text{day}}$$

$$\text{BOD loading per kft3 total vol.} = \frac{\text{Q} \times \text{BOD}_{\text{in}} \times 8.34 \times 7.481 \times 1{,}000}{\text{Total Volume} \times 10{,}00{,}000}$$

$$= \frac{0.3 \times 714.9 \times 8.34 \times 7.481 \times 1000}{(1.078 + 0.143 + 0.019) \times 1000000}$$

$$= 10.79 \text{ lbs BOD/kft3/day}$$

Project Overview

A Blue PRO® Wastewater Treatment system is proposed for Mondovi, WI. The proposed system design would consist of the following processes and technologies:

- Blue PRO continuous backwash up-flow sand filtration system with ferric dosing system for phosphorus removal and filtration.

System Design Parameters

		Influent	Effluent
Design Average Daily Flow (ADF)	MGD		0.300
Peak Day Flow (PDF)	MGD		0.584
Peak Hour Flow (PHF)	MGD		0.700
Duty Filtration Area	ft^2	115.5	
Filter Flux at ADF/PDF/PHF	gpm/ft^2	2.1/3.8/4.5	
Alkalinity	mg/L	50 to 150	
pH		6 to 7.5	
Total Suspended Solids (TSS)	mg/l	15	
Total Phosphorus	mg/L	1	0.075
SNRP	mg/L	< 0.015	< 0.015

- This design was computed at 48-inches hydraulic head. Other head profiles can be considered.
- The alkalinity and pH envelope is required for design conditions for the chemical regime described.
- The design provides a total of 4 filter cells, including 3 duty filters cells and 1 duty-standby filter cell.

FENCE

REED BEDS

AEROBIC DIGESTER

PUMP BUILDING

SPLITTER BOX

CLARIFIERS

OXIDIZATION DITCH

RSF TERTIARY TREATMENT

STORMWATER POND

MAIN LIFT STATION

OFFICE/LAB

EFFLUENT MANHOLE AND SAMPLER

HEADWORKS BUILDING

INFLUENT SAMPLING MANHOLE

GARAGE

ENGINEERS - SURVEYORS - ARCHITECTS

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DRAWN BY:	AHJ
DATE:	
DESIGNED BY:	
HORIZ. SCALE:	1" = 60'
VERT. SCALE:	
PROJECT NO.	

REVISIONS	
DATE:	AUTHOR:

MONDOVI, WI
BUFFALO COUNTY

WWTP SITE MAP

SHEET

P:\MONDO\18001 WWTP Facility Plan\5.0 Drawings and c3d\Prelim Ind Park Layout_OX_AHJ

Appendix J

SBR & ABNR Design Summary

DESIGN PROPOSAL

Mondovi WI Sanitaire #29264-19A

		Year 20		Year 1	
Operating Mode					
Normal Cycle Flow	MGD	0.30		0.20	
Max Normal Cycle Flow	MGD	0.58		0.39	
Minimum Cycle Flow	MGD	0.78		0.52	
		mg/l	lb/day	mg/l	lb/day
BOD_5 (20°C)		793	1985	350	584
Suspended Solids		1295	3241	373	622
TKN		84	210	64	107
Total Phosphorus		25	62	8	13
Max Wastewater Temperature	°C	20		20	
Min Wastewater Temperature	°C	8		8	
Ambient Air Temperature	°F	20 - 90		20 - 90	
Site Elevation	ft	804		804	

*** - Maximum 30 day period mass flow**

Table B: ICEAS® EFFLUENT QUALITY (MONTHLY AVERAGE)

BOD_5 (20°C)	mg/l	20	20
Suspended Solids	mg/l	20	20
NH_3-N	mg/l	8	8
Total Phosphorus*	mg/l	1.0	1.0

*Chemical Addition Required per Table C

Table C: ICEAS PROCESS DESIGN CRITERIA

Operating Basins		3	2
Operating Top Water Level	ft	18.00	18.00
F / M	BOD5/DAY/MLSS	0.046	0.051
SVI (after 30 minutes settling)	ml/g	150	150
MLSS at Bottom Water Level	mg/l	5,460	2,148
Waste Sludge Produced (Approx.)	lb/day	2,256	493
Volume of Sludge Produced (Approx., 0.85% solids)	GPD	31,800	7,150
Normal Decant Rate	GPM	541	541
Peak Decant Rate	GPM	722	722
Hydraulic Retention Time	Days	3.33	3.33
Sludge Age	Days	18.9	21.7
Alkalinity	mg/l	109	252
Chemical Dosage (as Alum)	mg/l		21.65

Bold, italicized text indicate assumptions made by Sanitaire

Cycle Timing

		Year 20		Year 1	
		Normal	Min	Normal	Min
Air-On	min	144	108	144	108
Air-Off	min	24	18	24	18
Settle	min	48	36	48	36
Decant	min	72	54	72	54
Total	min	288	216	288	216

Table D: KEY ICEAS DESIGN DETAILS

Top Water Level	ft	18.00
Basin Width (Inside)	ft	30.0
Basin Length (Inside)	ft	87.0
Bottom Water Level	ft	16.48

ICEAS EQUIPMENT(Base Design)				Motor HP	No. Req.
Decanter Mechanism	4	' Weir length			3
Decanter Drive Unit				1/4	3
ICEAS Blower	620	SCFM	8.7 PSIG	50	3
ICEAS Fine Bubble Aeration System	392	Disc Diffusers/Basin			3
Air Control Valve	6	"			3
Waste Sludge Pump	110	GPM		2.4	3
Submersible Mixer				8.1	3
ICEAS Controls					1

ICEAS POWER REQUIREMENTS	Max Month		**(At Average Aeration Depth)**			Kwh/Day
Decant Drive Unit	0.2	BHP	3 run	@	6 Hrs/day	2.7
ICEAS Air Blowers	36.1	BHP	1 run*	@	24 Hrs/day	646.3
ICEAS Air Blowers	36.1	BHP	1 run**	@	12 Hrs/day	323.2
Waste Sludge Pump	1.9	BHP	3 run	@	1.6 Hrs/day	6.9
Submersible Mixer	4.7	BHP	3 run	@	2 Hrs/day	20.9
					KWH/DAY	1,000.0
				AVERAGE	KWH/HR	41.67

* Shared ICEAS Blowers (Alternating Between Basins 1 & 2)

** Dedicated ICEAS Blower (Basin 3)

DESIGN BASIS SUMMARY

To provide full visibility and transparency, below is a summary of the design basis used to generate the initial estimate. Please note that if any of our inputs are in error, we can revise the design basis and provide an update to you.

Influent Water Quality

Parameter	Units	Scenario I	Scenario II
Flow	MGD	0.30	0.30
Total Phosphorus (TP)	mg/L	1.0	4.0

Effluent Water Quality

Parameter	Units	Scenario I	Scenario II
Flow	MGD	0.30	0.30
TP	mg/L	X<0.04	X<0.04

Price Estimate, Footprint & Biomass

Description	Scenario I	Scenario II
ABNR Equipment[1]	$2,311,524	$4,907,935
Total System Footprint (ft^2)	4,120	9,820
Greenhouse Footprint (ft^2)	2,910	8,379
Biomass Production (tons/day)	0.097	0.40
Estimated Annual Gross Revenue ($/yr)[2]	$35,273-$70,547	$144,932-$289,864

[1]This estimate is for the cost of ABNR equipment and for the installation of all improvements located within, and including, the greenhouse structure. This estimate does NOT account for construction and installation associated with implementation of out of scope items. Relatively speaking, ABNR is considered light construction and therefore install costs should be estimated by Customer's consulting engineer.
[2]A range of estimated customer gross revenue is between $1,000 and $2,000 per dry weight ton were used in the above estimate. CLEARAS provides biomass market services to optimize the co-product value which includes: marketing, sales, logistics, characterization and validation, QA/QC and other general administration.

Consumables Forecast

Category	Units	Scenario I	Scenario II
Power Consumption[1]	kWh/day	426	2,343
Sodium Hypochlorite[2]	gal/day	2.45	2.45
Citric Acid[3]	gal/day	1.10	1.10
Carbon Source[4]	lbs./day	430	1,765

[1]Energy estimates only represent equipment supplied by CWR.
[2]Typical cost for Sodium Hypochlorite is $2.00 per gallon.
[3]Typical cost for Citric Acid is $5.00 per gallon.
[4]Industrial grade carbon can be purchased at a cost of $0.06 per pound. However, if there are digesters onsite, or at nearby facilities, carbon can be recycled into the ABNR system thus minimizing cost.

FENCE

AEROBIC DIGESTER

REED BEDS

PUMP BUILDING

STORMWATER POND

ABNR TERTIARY TREATMENT

SBR TANKS

MAIN LIFT STATION

OFFICE/LAB

HEADWORKS BUILDING

EFFLUENT MANHOLE AND SAMPLER

GARAGE

INFLUENT SAMPLING MANHOLE

FORCEMAIN

N

0 30 60

SCALE, FEET

cbs²

ENGINEERS - SURVEYORS - ARCHITECTS

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DATE:			
DESIGNED BY:			
HORIZ. SCALE:	1" = 60'		
VERT. SCALE:			
PROJECT NO.			

MONDOVI, WI
BUFFALO COUNTY

WWTP ENLARGED SITE MAP

SHEET

P:\MONDO\18001 WWTP Facility Plan\5.0 Drawings and c3d\Prelim Ind Park Layout_Rev3

Appendix K

Bio-loop & ABNR Design Summary

Bioloop® Design Proposal - NIT Process

Mondovi Sanitaire #A29264-19A

Table A: INFLUENT WASTEWATER CHARACTERISTICS AND SITE CONDITIONS

Number of Parallel Process Trains	3	
	Per Process Train	Total for all trains
Average Annual Flow	0.10 MGD	0.30 MGD
Maximum Month Influent Flow	0.10 MGD	0.30 MGD
Peak Hourly Flow	0.26 MGD	0.78 MGD
BOD_5 (20°C)	793 mg/l	
BOD_5 (20°C)	661 lb/d	
Suspended Solids	1,295 mg/l	
TKN	84 mg/l	
Total Phosphorus	25 mg/l	
Max Wastewater Temperature	20 °C	
Min Wastewater Temperature	8 °C	
Ambient Air Temperature	20 - 90 °F	
Site Elevation	804 ft	

Table B: BIOLOOP® NIT PROCESS EFFLUENT QUALITY (MONTHLY AVERAGE)

BOD_5 (20°C)	20 mg/l
Suspended Solids	20 mg/l
NH_3-N	>8 mg/l

Table C: BIOLOOP® NIT PROCESS DESIGN CRITERIA

F / M	0.122 lb BOD5/ lb MLSS / day
SVI (after 30 minutes settling)	150 ml/g
Mixed Liquor Suspended Solids (MLSS) concentration	4,000 mg/l
Waste Sludge Produced (Approx.)	842 lb/d
Volume of Sludge Produced (Approx. 0.80% solids)	12,622 gpd
Aerated Hydraulic Retention Time	38.89 Hrs
Sludge Age	6.4 Days
Alkalinity	46 mg/l
RAS Pumping Rate	100% of Maximum Month Flow

Table D: BIOLOOP® NIT PROCESS BASIN DESIGN DETAILS (PER TRAIN)

	Ditch 1
Basin Quantity	1
Volume/Basin (MG)	0.162
Basin Length (ft) - *	36.0
Basin Width (ft)	12.0
Basin Depth (ft)	16.0

* - For oxidation ditches, basin length above is straight section length for Side by Side Ditch Type (see ref. drawing)

BIOLOOP® NIT PROCESS EQUIPMENT

				Ditch 1				
Mixer Quantity / Basin				1				
Mixer Motor Hp				10.7				
Fine Bubble Diffuser Quantity / Basin / Train				112				
Blower scfm / Basin / Train				198				
Blowers (PD type)	2	Duty	+	1	Standby blowers, each with	20.0	Hp motor	
Airflow Modulating Control Valve / Basin				1				
OSCAR Controls and Instruments								

BIOLOOP® NIT AERATION/MIXING POWER REQUIREMENTS (TOTAL FOR ALL TRAINS)

Kwh/Day

			Oxidation Ditches operated in Series			
			Ditch 1			
Basin Quantity			3			
Mixer Quantity / Basin			1			
Mixer Operating Hp			6.8			364
Blowers Operating Hp	2	at	17.7	BHP		635
					Total	998

DESIGN BASIS SUMMARY

To provide full visibility and transparency, below is a summary of the design basis used to generate the initial estimate. Please note that if any of our inputs are in error, we can revise the design basis and provide an update to you.

Influent Water Quality

Parameter	Units	Scenario I	Scenario II
Flow	MGD	0.30	0.30
Total Phosphorus (TP)	mg/L	1.0	4.0

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Parameter	Units	Scenario I	Scenario II
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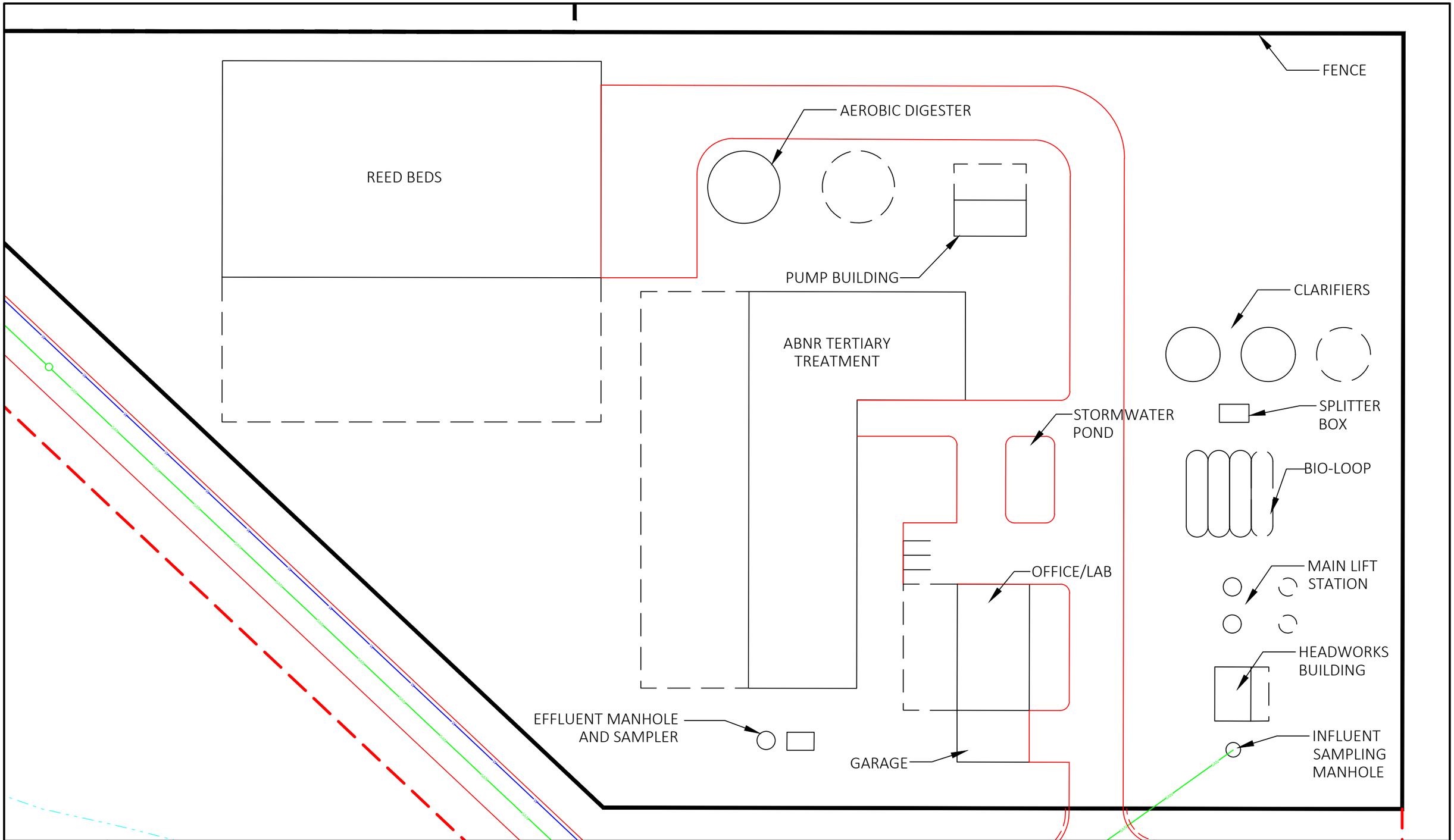

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	DATE:	AUTHOR:

MONDOVI, WI
BUFFALO COUNTY

WWTP SITE MAP

SHEET

P:\MONDO\18001 WWTP Facility Plan\5.0 Drawings and c3d\Prelim Ind Park Layout_BLP_AHJ

Appendix L

Environmental Review

CITY OF MONDOVI

Buffalo County

Environmental Report

USDA – Rural Development

July 18th, 2019

Prepared by:
CBS Squared, Inc.
770 Technology Way
Chippewa Falls, WI 54729
715.861.5228

MONDO 18001

Table of Contents

List of Exhibits

1.0 Purpose and need of the Proposal

1.1 Project Description

The City of Mondovi is located in the northern portion of Buffalo County, at the intersection of US Highway 10 (USH 10) and State Highway 37 (STH 37), as shown on the General Location Map in **Exhibit A.** The City has a population of approximately 2,777 people (U.S. Census 2010). The Mondovi Wastewater Treatment Plant is owned and operated by the City of Mondovi, and provides sanitary treatment for residential, industrial, and commercial wastes within the City.

The proposed project would include the relocation and construction of a new Mondovi Wastewater Treatment Plant (WWTP), construction of a new lift station at the access road to the existing WWTP on STH 37, an upgrade to the collection system, the potential construction of a new anaerobic digester (Digester) adjacent to the new WWTP, and the construction of utilities for a new industrial park on the west side of the City where the WWTP and Digester will be located.

See **Exhibit B** for a preliminary project site map for the new WWTP infrastructure, Digester and potential industrial park utilities. See **Exhibit C** for a wastewater collection system map displaying existing utilities and proposed upgrades.

1.2 Purpose and Need of the Proposal

There are two main reasons for the need for a new WWTP at a new location in the City of Mondovi. The first reason relates to the current location of the plant and the second reason corresponds to future Wisconsin Department of Natural Resources (WDNR) effluent limits.

The current WWTP is located in the floodplain adjacent to the Buffalo River and is surrounded by wetlands currently defined by the WDNR. The WWTP is also located within 500 ft of residential homes which is against current WDNR code.

The current treatment process at the plant meets all WDNR effluent limits defined in the City's current WPDES permit; however, the future phosphorus limit of 0.075 mg/L would not be possible to attain without additional tertiary treatment.

A new industrial park is needed because the city's existing 131-acre industrial park is full with the exception of five (5) lots with a total of 7.5 acres and an additional 40 acres that are undevelopable due to steep slope topography. An existing food manufacturer in the city needing additional space for its operations is another factor that is driving the demand for this new industrial park. The demand for a new industrial park also relates to the need for a Digester. The digester would accept food wastes from industry in the City and also provide a source of animal waste disposal for local farmers who currently land spread. The proposed west industrial park overall size can be seen in Exhibit B.

Another component of the construction of the new Mondovi Industrial Park is the upgrades to County Highway A (CTH A) and the installation of new utilities to extend from US Highway 10 (USH 10) to approximately 4,000-ft to the west. This upgrade would ensure that CTH A could handle the increased truck traffic due to the new industrial park and also extend utilities to the west end of the industrial park.

Collection system upgrades will be implemented to reduce the excessive infiltration and borderline excessive inflow. Cracked pipes also have a threat for exfiltration meaning that untreated wastewater can exit the sanitary pipes causing a major health risk. Another health risk is the potential for sanitary sewer backups and overflows due to the condition of the sewer segments.

Additionally, a new lift station and forcemain will be constructed near the manhole that currently discharges to the existing WWTP location in order to convey the wastewater to the new WWTP location. This will be referred to as the STH 37 lift station.

2.0 Alternatives Selected for Proposed Action

Several alternatives for ensuring future treatment and conveyance of wastewater flows and loadings and also to install new infrastructure in the City of Mondovi were identified and evaluated. The following components were selected for this project:

2.1 Relocation and Construction of a New WWTP

The new WWTP will include building a sequencing batch reactor (SBR) activated sludge process which will include fine screen and grit removal, controls linked to SCADA, energy savings initiatives, UV disinfection, septage receiving and monitoring, a new bio-solids handling process, tertiary treatment for phosphorus removal and a new outfall location. These upgrades will allow for future expansion and be able to handle projected future flows. The STH 37 lift station and the City's water and sanitary utility system will be upgraded in order to re-route utilities to the new WWTP to the north of STH 37.

2.2 Upgrade to the Wastewater Collection System

The collection system upgrades will include lining and replacement of priority sanitary sewer segments throughout the City to reduce inflow and infiltration (I/I) received at the WWTP and invest in the sanitary sewer infrastructure to extend the useful life. It would also include the upgrade of aging manholes throughout the City and the addition of chimney seals on all manholes to prevent infiltration. This component would also include the upgrade to an existing lift station and GIS mapping upgrades.

2.3 Industrial Park Utility Upgrade

To provide utilities and access to the new industrial park on Mondovi's west side, roadway with curb, gutter, and storm sewer will need to be added to the City's current

infrastructure along with water and sanitary utilities. The roadway will connect to State Highway 37 and travel north to the County Highway A (CTH A). The upgrades would also include a regional storm pond and upgrades to CTH A.

Upon the development of the new industrial park, the potential Digester could be constructed to accept industrial food waste and animal manure from nearby farms. The effluent from the Digester would be piped to a pivot irrigation system where a cleaner effluent would be land spread and the produced biogas from the Digester would be sold to adjacent industries. The Digester would be owned and operated by the City but waste agreements would first be finalized with costumers of the Digester.

3.0 Affected Environment/Environmental Consequences

This section describes the project area, the environmental resources within the project area, and the environmental effects or consequences of the project. Proposed mitigation measures to avoid or minimize any adverse effects caused by the project are also identified.

3.1 Land Use/Important Farmland/Formally Classified Lands

3.1.1 Land Use

The proposed wastewater improvement projects are located within the City of Mondovi municipal limits. The large project area includes either work in current right-of-way or cultivated fields. The majority of proposed project land is zoned (A) Agriculture. It is planned to have all new utilities either on City owned property or within the right-of-way. The City is currently in land negotiations with the current landowners of the proposed project sites.

<u>WWTP Relocation & Upgrade</u>

See **Exhibit B** for project location map.

<u>Lift Station Upgrade</u>

See **Exhibit B** for a project location map.

<u>Wastewater Collection System Upgrade</u>

See **Exhibit B** for a project location map.

<u>Industrial Park Utility Upgrade</u>

See **Exhibit B** for a project location map.

3.1.2 Important Farmland

The National Resources Conversation Service (NRCS) web soil survey maps http://websoilsurvey.sc.egov.usda.gov/app/ were reviewed to determine the soil types that are found in the project area. The database search results are attached as **Exhibit D** Web Soil Survey Map. Some soils in the project area are considered prime farmland. See **Exhibit E** for the Farmland Classification Map and Data.

There was correspondence with NRCS to determine what needed to be done because project areas are located in land classified as prime farmland and it was stated that because the prime farmland is located in the municipal limits no actions were needed. Therefore, the Farmland Protection Policy Act (FPPA) providing for the protection of important farmland does not apply.

3.2 Formally Classified Lands

This project does not involve any property that have been designated as "formally classified lands".

3.3 Floodplains

3.3.1 Affected Environment

The most relevant floodplain map for the project area is included as **Exhibit F**. Project components are located on land areas that are outside the floodplain.

3.3.2 Environmental Consequences

The WDNR Surface Water Data Viewer https://dnrmaps.wi.gov/H5/?Viewer=SWDV was reviewed to determine the location of the existing 100-year floodplain. Based on this review none of the proposed construction would occur in the floodplain. The WDNR Surface Water Data Viewer indicated that this was an area of minimal flood hazard. See **Exhibit E** for Floodplain Map outlining the areas of the 100-year floodplain throughout the City of Mondovi and the corresponding locations of the projects.

3.3.3 Mitigation

Because the proposed project construction will not be within the existing 100-year floodplain and will not impede or redirect flood flows, no mitigation measures are necessary. The construction of the new STH 37 lift station will be constructed in a portion of the 500-year floodplain. See second page of **Exhibit E** displaying the location of the proposed new lift station. Measures will be taken

to verify the lift station is flood proof. This would be accomplished by setting the tanks rim elevations higher than flood stage per WDNR code requirements.

3.4 Wetlands

3.4.1 Affected Environment

The most relevant Wetlands Map for the project area is included as **Exhibit G.** There appears to be some wetland areas along CTH A and near the proposed WWTP Location.

3.4.2 Environmental Consequences

Wetlands are important environmental features that provide numerous beneficial services for people and also fish and wildlife. Some of the benefits include protecting and improving water quality, providing fish and wildlife habitats, storing floodwaters and maintaining surface water flow during dry periods. Because wetlands provide such an important benefit to the ecosystem, it is vital to ensure that disturbance does not occur in wetlands during construction projects. It is also important to verify that construction stormwater runoff does not enter wetlands because this can degrade the overall quality of the wetlands. The WDNR Surface Water Data Viewer Map indicates that there are wetland and maximum extent wetland indicators near the project area at the proposed WWTP location. There are maximum extent wetland indicators within the roadway and utility improvements proposed along CTH A on the North side of the project area.

3.4.3 Mitigation

Directional boring will be used along the utility route to avoid any disturbance of wetlands that may be located in the utility corridor area. The roadway work along CTH A and site work for the WWTP will not affect any wetlands. During construction, WDNR erosion control best management practices (BMP's) with be utilized to avoid any construction runoff discharging to wetlands adjacent to the construction sites. All proper WDNR permitting will be in place before construction takes place to verify that all mitigation practices meet WDNR standards. During final design and permitting, wetland delineation may be used to further avoid any minor wetlands.

3.5 Cultural Resources – Historical Properties

3.5.1 Affected Environment

The project area includes cultivated fields, portions of state and county highway right-of-way, areas adjacent to private residences, and the existing wastewater treatment plant location.

3.5.2 Environmental Consequences

The Mississippi Valley Archaeological Center conducted a comprehensive site search using the Wisconsin Historic Preservation Database's (WHPD) Archaeological Reports Inventory (ARI), Archaeological Site Inventory (ASI), and Architecture and History Inventory (AHI), which are all maintained by the Wisconsin Historical Society. The WHPD does not show any previously recorded archaeological sites or previously surveyed historic structures lying within the project area. See **Exhibit H** for the Mississippi Valley Archaeological Center's Archaeological and Historical Sites Review.

3.5.3 Mitigation

Because the proposed project will not impact any identified historical structures or any known archaeological sites, no mitigation measures are necessary.

3.6 Biological Resources – Threatened and Endangered Species

3.6.1 Affected Environment

The proposed improvement projects are located within the City of Mondovi municipal limits. The majority of the project area that includes "greenfield" design is cultivated fields with some wooded area. Greenfield references construction in newly disturbed areas.

3.6.2 Environmental Consequences

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. Therefore, an Information for Planning and Consultation (IPaC) review was conducted to determine the potential presence of threatened or endangered resources. It was concluded that there were no critical habitats in the project location; however, a total of two threatened species were listed as being potentially affected by the project. Those two species were the Northern Long-eared Bat (Myotis septentrionalis) and the Eastern Massasuga rattlesnake (Sistrurus catenatus).

See **Exhibit I** for an IPaC report prepared using USFWS data. A state database was also analyzed for an Endangered Resources and Preliminary Assessment. This can also be found in **Exhibit I**.

The northern long-eared bat may inhabit the project area in early spring through mid-fall. They may roost in cavities, underneath bark, in crevices, or in the hollows of both live and dead trees. The project does have trees and of the sizes that could be used by northern long-eared bat during roost. Some trees will be removed during construction. Because this project may affect the threatened Northern long-eared bat, consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information provided in the IPaC review, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Massasaugas are small snakes with thick bodies, heart-shaped heads and vertical pupils. The average length of an adult is about 2 feet. Adult massasaugas are gray or light brown with large, light-edged chocolate brown blotches on the back and smaller blotches on the sides. The snake's belly is marbled dark gray or black and there is a narrow, white stripe on its head. Its tail has several dark brown rings and is tipped by gray-yellow horny rattles. Massasaugas live in wet areas including wet prairies, marshes and low areas along rivers and lakes. In many areas massasaugas also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows. Unlike other rattlesnakes, massasaugas hibernate alone. Lack of management and improper timing of management are threats to massasaugas. The snake's habitat needs vegetation control such as prescribed fire and mowing to prevent invasion of shrubs, trees and non-native plants. Woody plant invasion is reducing the amount of available habitat in some areas. Where land is managed to prevent woody invasion, snakes may be killed by prescribed fire and mowing when it happens after snakes emerge from hibernation.

3.6.3 Mitigation

None of the trees that are to be removed are currently known to be maternity roost trees (FWS Horton, A pers. Comm.) for the northern long-eared bat. Only trees directly impacting the construction of the utility extension and access road to the WWTP will be removed. All trees to be removed will be removed outside of the northern long-eared bat summer maternity season (June 1st – July 31st) to avoid direct impacts to the species.

The majority of the project area will either be wooded or cultivated fields which are habitats that the eastern massasuga rattlesnake is not commonly found. In

areas where erosion mat will be utilized for erosion control practice, a biodegradable erosion mat will be used to avoid entangling the species. Clearing of any low-lying shrubs or vegetation will be avoided in early spring to avoid killing any massasugas when they are emerging from hibernation.

3.7 Water Quality Issues

3.7.1 Affected Environment

There is a nearby stream running parallel with the proposed new road and WWTP as well as crossing under a bridge on CTH A where roadway and utility upgrades will occur.

3.7.2 Environmental Consequences

During construction, there is a potential for water quality degradation from erosion runoff during construction activities.

3.7.3 Mitigation

The project will include mitigation activities to reduce and prevent water quality degradation caused by temporary construction. The project plans and specifications will include erosion control measures such as silt fencing and erosion bales to reduce sediment from leaving the construction site and impacting surface water. Erosion control measures will be required to be installed before construction activities can begin. The contractor will be required to inspect and maintain erosion control devices. WDNR Best Practices for Construction, Notice of Intent and erosion control maintenance procedures will be followed by the contractor during the project.

3.8 Coastal Resources

3.8.1 Affected Environment

This project site does not contain any coastal resources.

3.8.2 Environmental Consequences

The National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management's website was consulted to determine whether or not the project is within the boundaries of a coastal zone management area (CZMA). Wisconsin's CZMA is the 15 counties that front Lake Superior, Lake Michigan, or Green Bay. The proposed project is located in Buffalo County, which is not one of the 15 counties fronting these water bodies.

3.8.3 Mitigation

Because the proposed project will not impact any coastal resources, no mitigation measures are necessary.

3.9 Socio-Economic Issues/Environmental Justice

3.9.1 Affected Environment

The median household income (MHI), based on 2013-2017 American Communities Survey 5-Year Estimates data, is at $46,453, with 14.5% below poverty level. The City of Mondovi is located in Buffalo County.

3.9.2 Environmental Consequences

This proposed project is intended to provide a higher flow capacity treatment for the City's wastewater and to meet new environmental regulations. Rather than having an adverse impact on the City of Mondovi, the proposed project would have positive socio-economic and environmental justice implications by improving the quality of the City's wastewater treatment and water quality downstream.

3.9.3 Mitigation

Because the proposed project will have no adverse socio-economic and environmental justice implications, no mitigation measures are necessary.

3.10 Miscellaneous Issues

3.10.1 Air Quality

There are no anticipated effects on air quality from construction activities or operation of the proposed project. The types of construction activities and amount of equipment used during construction are minimal compared to normal equipment operation in and around the City. Construction activities will have a negligible impact on air quality.

3.10.2 Noise

Construction activities will include equipment that generates noise levels that are similar to other activities that occur in and around the project area; such as, industry operation and trucking. The contractor will be required to limit construction activities from 7:00 a.m. to 7:00 p.m. A majority of this project area is a significant distance from residential properties.

3.10.3 Contaminated Lands

The WDNR Remediation and Redevelopment (RR) website was reviewed on March 11, 2019, for contaminated lands in the project area. One "open site" was located toward the east side of Mondovi at Marten Transport LTD. This site is a distance from the proposed project location. The database search results are attached as **Exhibit J**.

4.0 Summary of Mitigation

Potentially Impacted Resources:	**Mitigation Measures:**
Farmland Classification	No mitigation
Formally Classified Land	No mitigation
Floodplains	Flood proofing lift station vaults and construction of other utilities outside floodplain
Wetlands	Directional drilling to avoid disturbance. WDNR erosion control standards will be followed and all proper permitting will be obtained.
Historic Properties	No mitigation
Visual Aesthetics	No mitigation
Threatened or Endangered Species	Northern Long-eared Bat: Avoiding the clearing of excess trees and avoiding the clearing of trees between Jun 1st and July 31st. Eastern Massasuga Rattlesnake: Avoiding the clearing of shrubs and low-lying vegetation during early spring.
Vegetation	No mitigation
Water Quality Issues	WDNR erosion control standards will be followed. Silt fences, erosion bails will be implemented to limit sediment leaving the construction site
Soils	No mitigation
Air Pollution	No mitigation
Transportation	No mitigation
Noise	The contractor will be required to limit construction activities from 7:00 a.m. to 7:00 p.m.
Monitoring	No mitigation

5.0 Correspondence

State/Federal Agency:	**Type of correspondence:**
MVAC	Historical literature review and archeological information
US Fish & Wildlife Service	Threatened and Endangered Species Review.
Wisconsin DNR	Surface Water Data Viewer
Wisconsin DNR	Remediation and Redevelopment Map

6.0 Exhibits

See attached Exhibits.

7.0 List of Preparers

Jon Strand, PE

Project Manager

CBS Squared Inc

Areas of Input:

Report writing of all sections. Final review and editing.

Alex Jaromin

Staff Engineer

CBS Squared Inc

Areas of Input:

Report writing of all sections. Created all exhibits. Final review and editing.

Jody Strand

Administrative Assistant

CBS Squared Inc

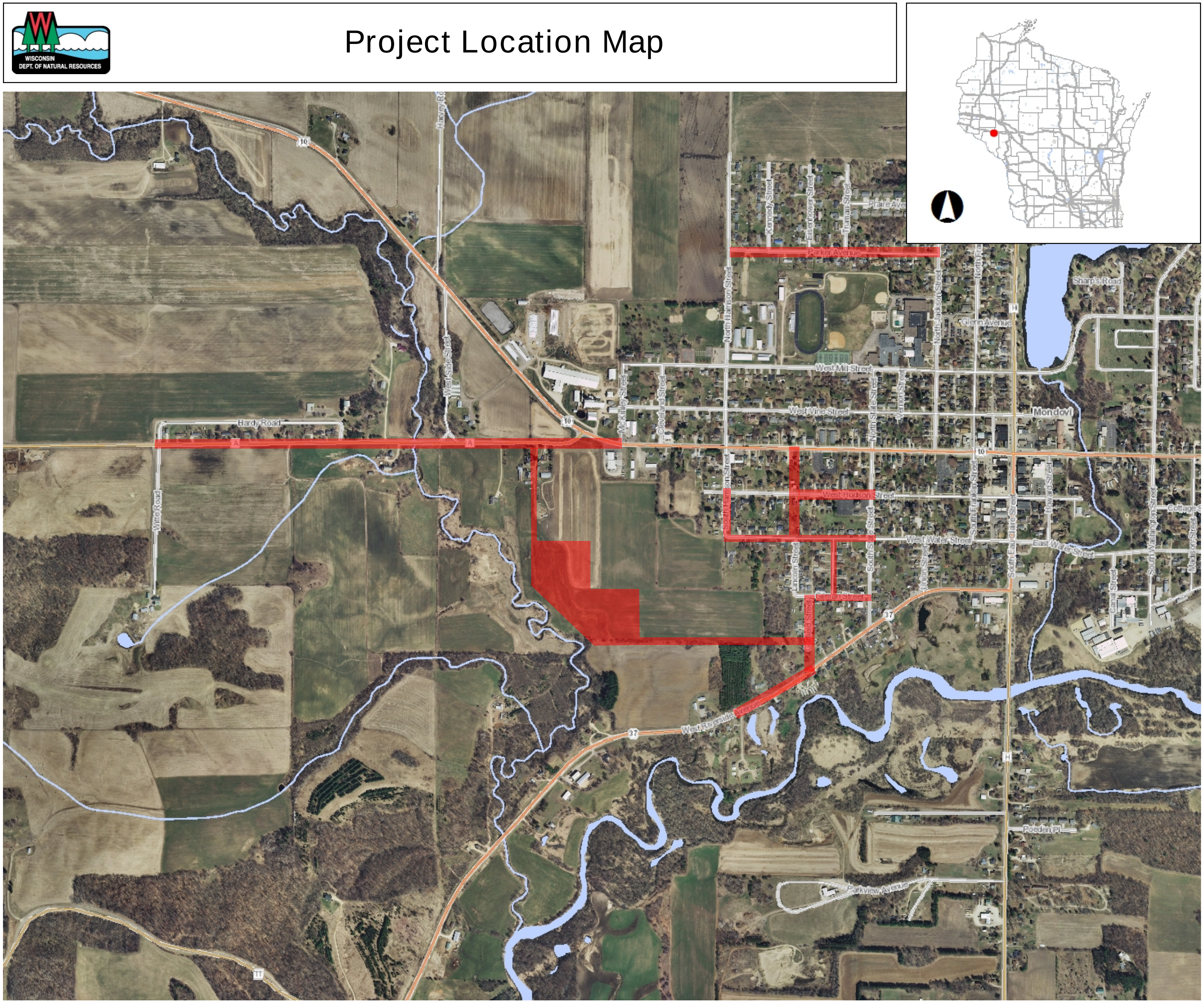
Areas of Input:

Correspondence with MVAC on obtaining the historical literature review. Final review, editing and packaging of the report.

Environmental Report

Exhibit A – General Location Map

Project Location Map



Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water
- Index to EN_Image_Basemap_Leaf_Off

Notes

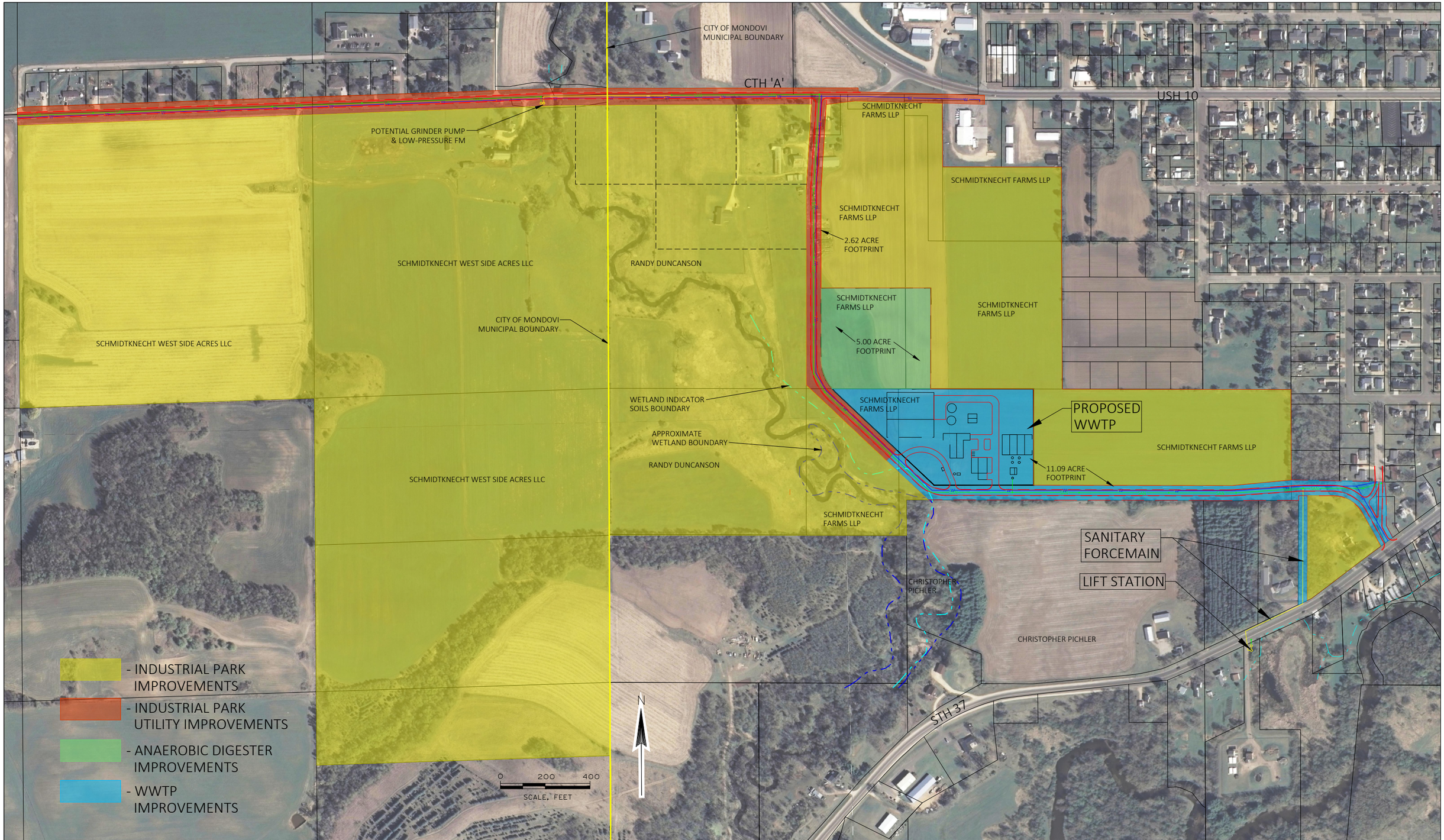
0.5 0 0.25 0.5 Miles

NAD_1983_HARN_Wisconsin_TM

1: 15,840

Environmental Report

Exhibit B – Preliminary Project Site Map



ENGINEERS - SURVEYORS - ARCHITECTS

770 Technology Way
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www.cbssquaredinc.com

DRAWN BY:	RJH
DATE:	
DESIGNED BY:	
HORIZ. SCALE:	1" = 400'
VERT. SCALE:	
PROJECT NO.	

REVISIONS

DATE:	AUTHOR:
06/10/19	RJH
06/28/19	RJH
07/03/19	RJH

MONDOVI, WI
BUFFALO COUNTY

PRELIMINARY INDUSTRIAL PARK & WWTP SITE MAP ALTERNATE 3

SHEET

P:\MONDO\18001 WWTP Facility\5.0 Drawings and c3d\Prelim Ind Park Layout_Rev6

Environmental Report

Exhibit C – Mondovi Wastewater Collection System Map

Lift Station 1

Lift Station 3

Sanitary Replacement Segments Outlined in Blue

Proposed WWTP

Sanitary Lining Segments Outlined in Magenta

Proposed New STH 37 Lift Station

Lift Station 2

Existing WWTP

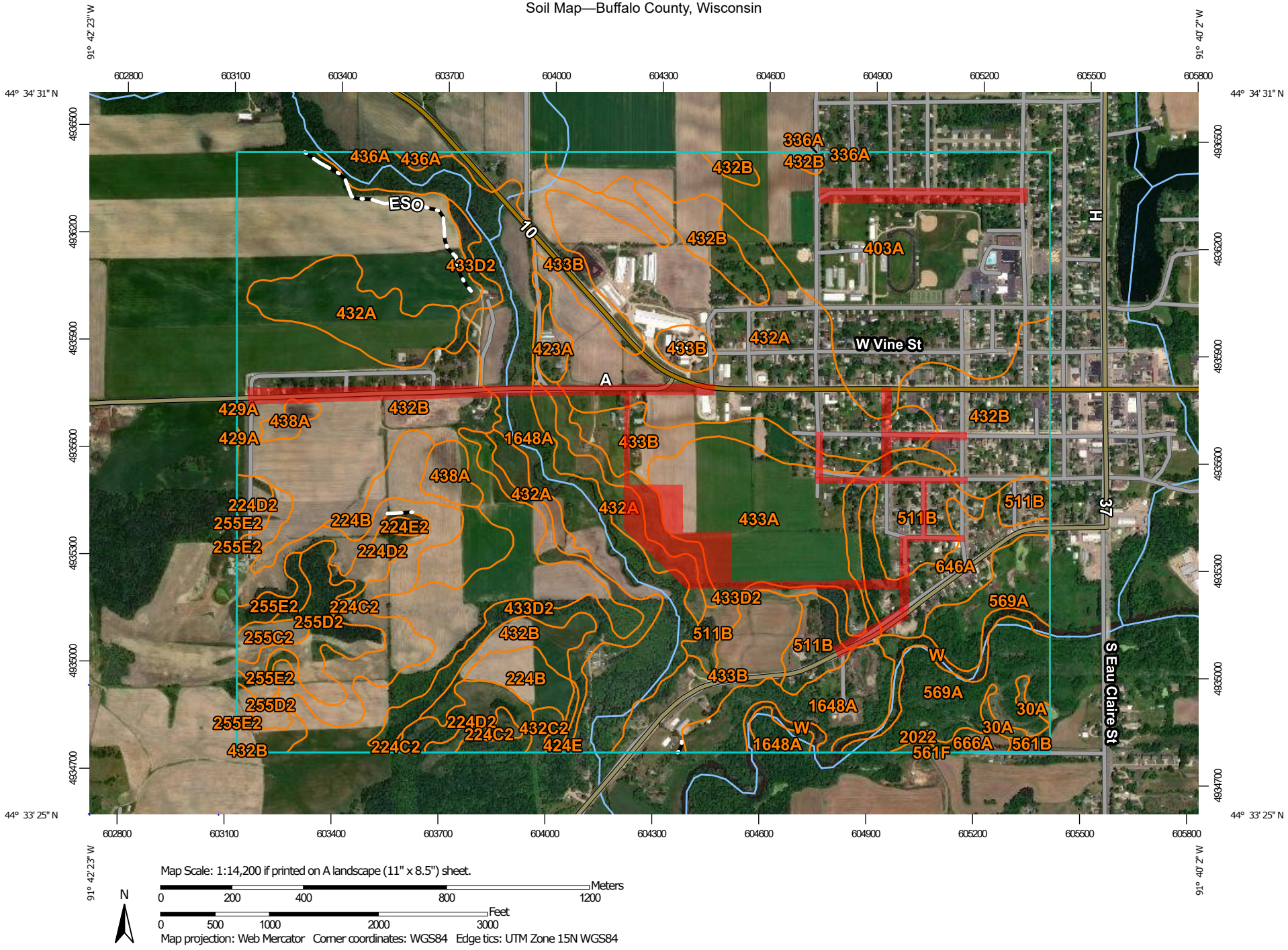
SCALE IN FEET
0 400 800

CITY OF MONDOVI, WISCONSIN
SANITARY SEWER MAP

REVISION DATE OCTOBER 2014

Environmental Report

Exhibit D – Web Soil Survey Map



Map Scale: 1:14,200 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Buffalo County, Wisconsin
Survey Area Data: Version 12, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 5, 2015—Sep 28, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
30A	Adder muck, 0 to 1 percent slopes, frequently flooded	2.4	0.3%
224B	Elevasil sandy loam, 2 to 6 percent slopes	24.2	2.5%
224C2	Elevasil sandy loam, 6 to 12 percent slopes, moderately eroded	39.3	4.1%
224D2	Elevasil sandy loam, 12 to 20 percent slopes, moderately eroded	19.4	2.0%
224E2	Elevasil sandy loam, 20 to 30 percent slopes, moderately eroded	0.9	0.1%
255C2	Urne fine sandy loam, 6 to 12 percent slopes, moderately eroded	3.8	0.4%
255D2	Urne fine sandy loam, 12 to 20 percent slopes, moderately eroded	16.4	1.7%
255E2	Urne fine sandy loam, 20 to 30 percent slopes, moderately eroded	6.2	0.6%
336A	Toddville silt loam, 0 to 3 percent slopes	0.2	0.0%
403A	Dakota silt loam, 0 to 3 percent slopes	125.4	13.2%
423A	Meridian silt loam, 0 to 3 percent slopes	3.2	0.3%
424E	Merit silt loam, 20 to 45 percent slopes	1.3	0.1%
429A	Lows loam, 0 to 2 percent slopes, rarely flooded	0.2	0.0%
432A	Kevilar sandy loam, 0 to 3 percent slopes	135.8	14.3%
432B	Kevilar sandy loam, 2 to 6 percent slopes	206.5	21.7%
432C2	Kevilar sandy loam, 6 to 12 percent slopes, moderately eroded	2.0	0.2%
433A	Forkhorn sandy loam, 0 to 3 percent slopes	46.6	4.9%
433B	Forkhorn sandy loam, 2 to 6 percent slopes	62.3	6.6%
433D2	Forkhorn sandy loam, 12 to 20 percent slopes, moderately eroded	45.9	4.8%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
436A	Rusktown sandy loam, 0 to 3 percent slopes	1.5	0.2%
438A	Hoopeston sandy loam, 0 to 3 percent slopes	7.9	0.8%
511B	Plainfield loamy sand, river valley, 1 to 6 percent slopes	31.9	3.4%
561B	Tarr sand, 1 to 6 percent slopes	1.4	0.1%
561F	Tarr sand, 15 to 60 percent slopes	0.0	0.0%
569A	Newlang muck, 0 to 2 percent slopes, occasionally flooded	39.8	4.2%
646A	Dunnbot fine sandy loam, 0 to 3 percent slopes, occasionally flooded	20.8	2.2%
666A	Absco loamy sand, 0 to 3 percent slopes, occasionally flooded	2.7	0.3%
1648A	Northbend-Ettrick silt loams, 0 to 3 percent slopes, frequently flooded	92.2	9.7%
2022	Pits, siliceous sand	0.9	0.1%
W	Water	9.1	1.0%
Totals for Area of Interest		**950.1**	**100.0%**

Environmental Report

Exhibit E – Farmland Classification Map and Data

Map Scale: 1:3,920 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

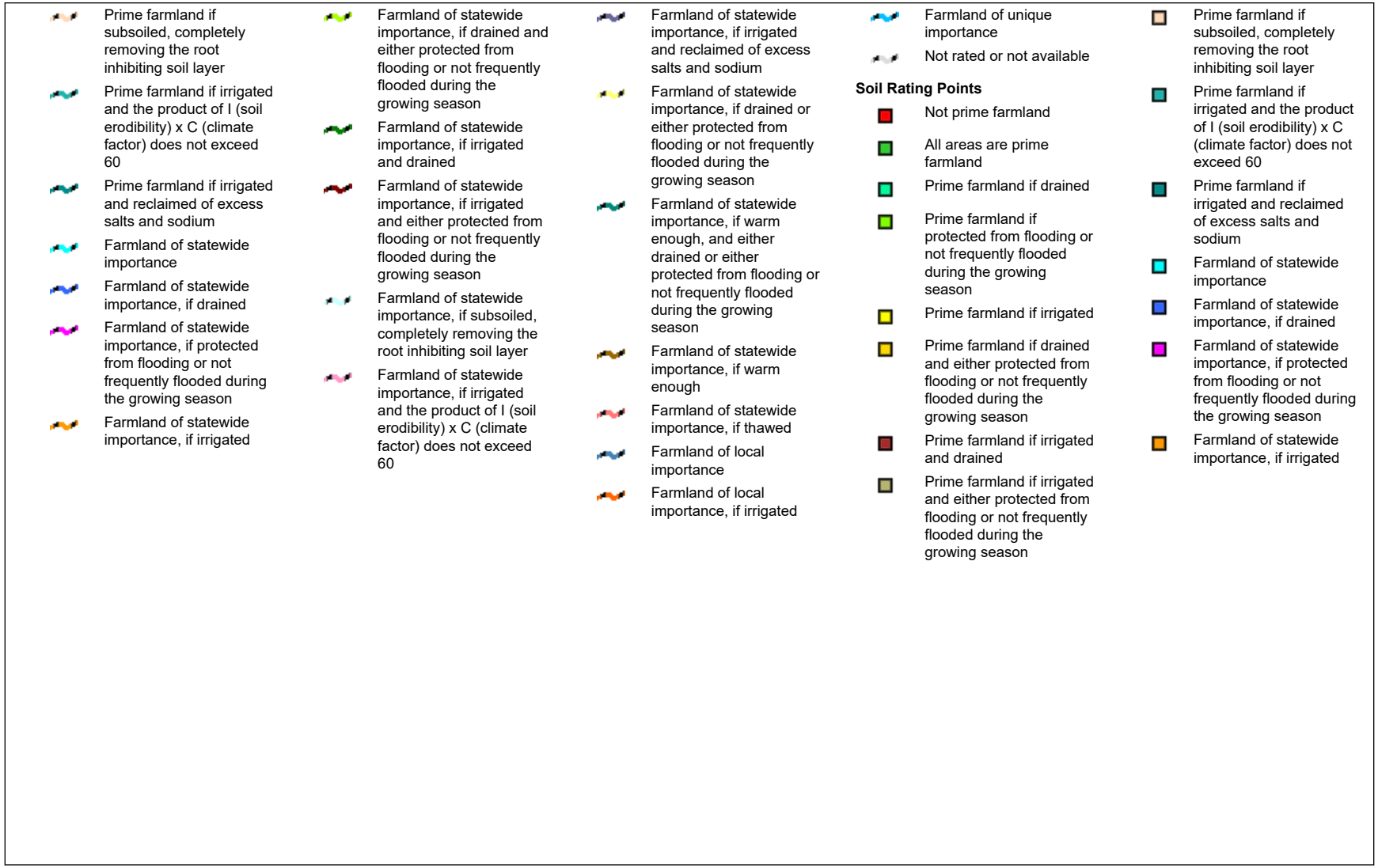
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Buffalo County, Wisconsin
Survey Area Data: Version 12, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 5, 2015—Sep 28, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
432A	Kevilar sandy loam, 0 to 3 percent slopes	All areas are prime farmland	0.7	9.1%
433A	Forkhorn sandy loam, 0 to 3 percent slopes	All areas are prime farmland	4.0	49.0%
433D2	Forkhorn sandy loam, 12 to 20 percent slopes, moderately eroded	Not prime farmland	2.1	26.4%
511B	Plainfield loamy sand, river valley, 1 to 6 percent slopes	Not prime farmland	0.3	4.0%
646A	Dunnbot fine sandy loam, 0 to 3 percent slopes, occasionally flooded	All areas are prime farmland	0.9	11.4%
Totals for Area of Interest			**8.1**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

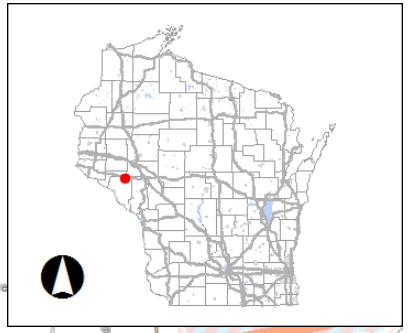
Aggregation Method: No Aggregation Necessary

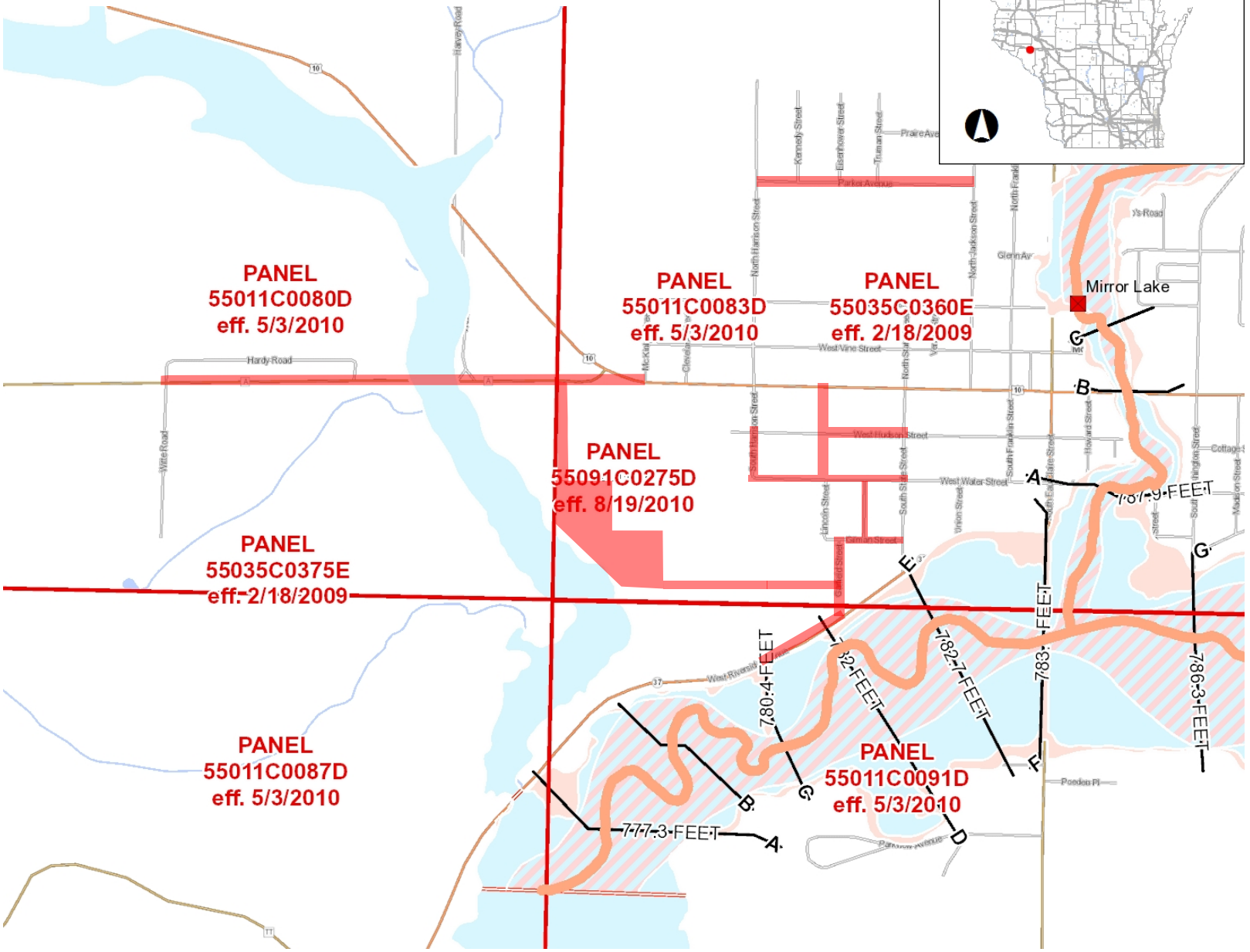
Tie-break Rule: Lower

Environmental Report

Exhibit F – Floodplain Map

Floodplain Map





Legend

- Dams
  - Dams with FERC License
  - Dams
- Record Flood Levels
- Floodplain Analysis Lines
  - Other
  - Flood Insurance Study
  - Letter of Map Revision
  - Case By Case Analysis
  - Bridge
- Floodplain Analysis Points
  - Other
  - Flood Insurance Study
  - Letter of Map Revision
  - Case By Case Analysis
  - Bridge
- Cross Sections
- Floodplains
  - Flood Fringe
  - Floodway
- FIRM Panels
- Cross-Sections
- Flood Hazard Boundaries
  - Other Boundaries
  - Limit Lines
  - SFHA / Flood Zone Boundary
- Flood Hazard Zones
  - 1% Annual Chance Flood Hazard
  - Regulatory Floodway
  - Special Floodway
  - Area of Undetermined Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Future Conditions 1% Annual Chance Flood Hazard

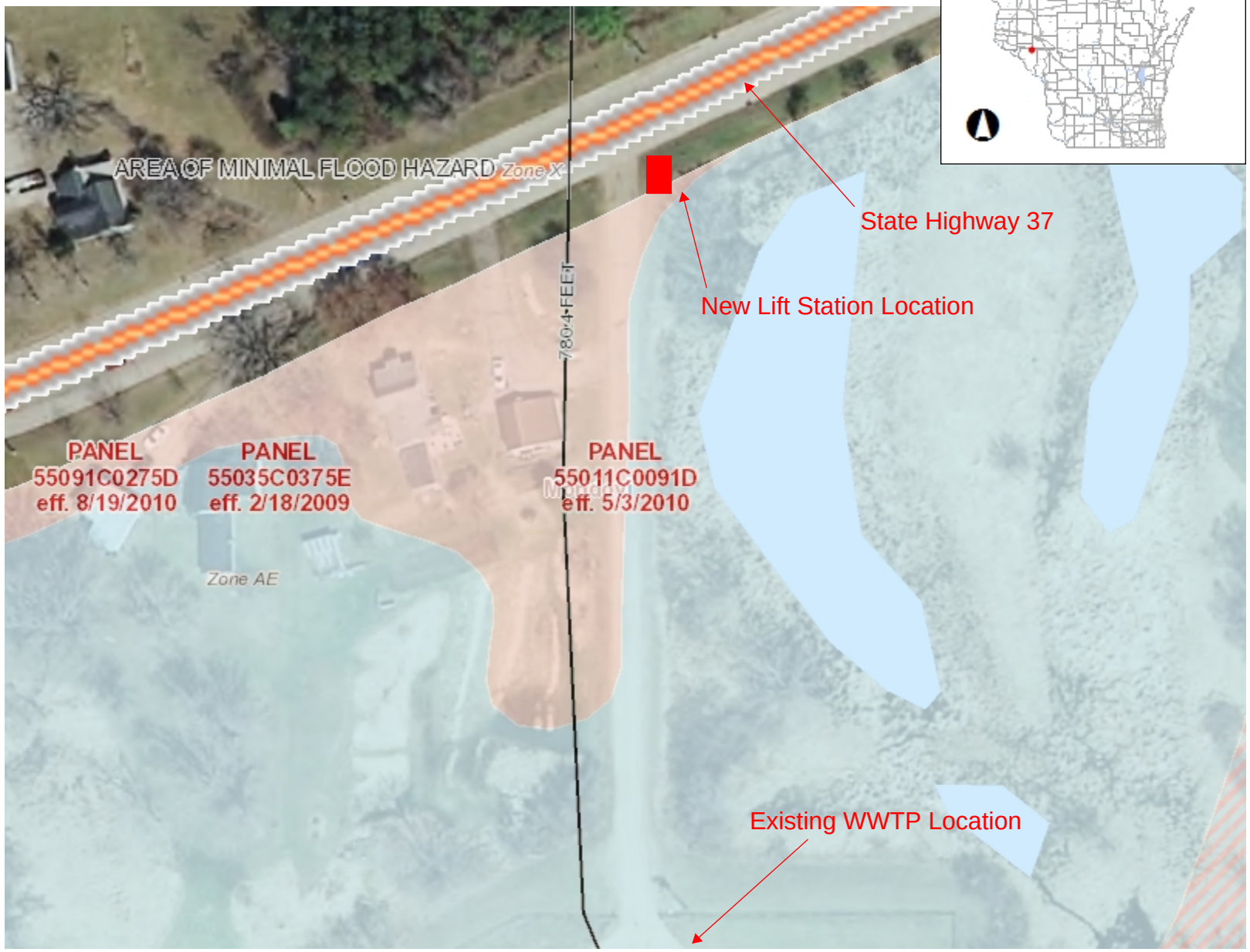
Notes

0.5 0 0.25 0.5 Miles

NAD_1983_HARN_Wisconsin_TM

1: 15,840

Mondovi Floodplain Map



Legend

- FIRM Panels
- Cross-Sections
- Flood Hazard Boundaries
  - Other Boundaries
  - Limit Lines
  - SFHA / Flood Zone Boundary
- Flood Hazard Zones
  - 1% Annual Chance Flood Hazard
  - Regulatory Floodway
  - Special Floodway
  - Area of Undetermined Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Future Conditions 1% Annual Chance Flood Hazard
  - Area with Reduced Risk Due to Levee
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

Notes

0.0 0 0.02 0.0 Miles

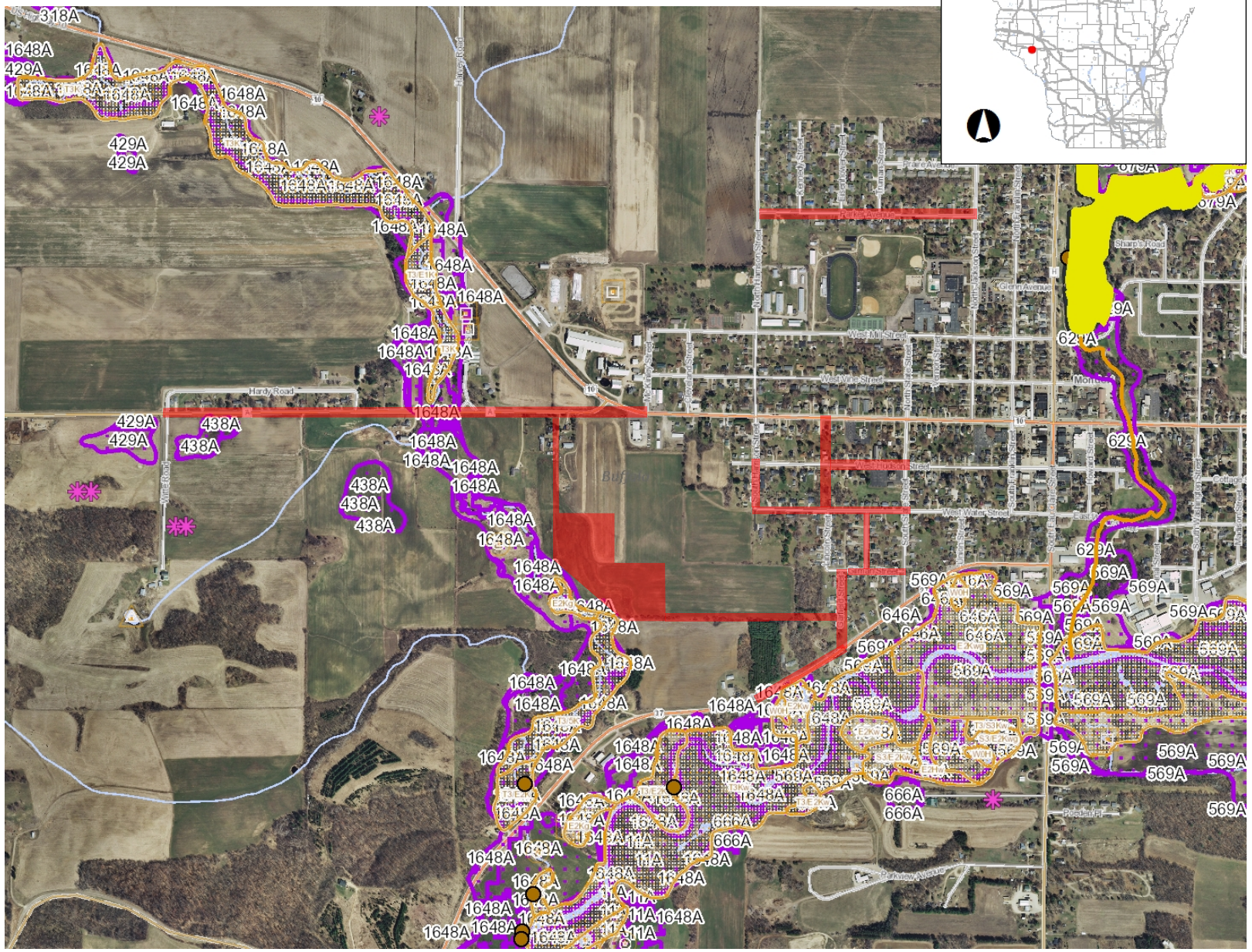
NAD_1983_HARN_Wisconsin_TM

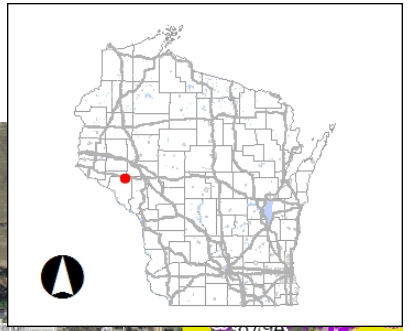
1: 990

Environmental Report

Exhibit G – WDNR Surface Water Data Viewer Wetland Map

Project Location Map - Wetland Locations





Legend

- PNW-ASNRI Sensitive Areas of Lakes
- PNW-ASNRI Wild and Scenic Rivers
- PNW-ASNRI Outstanding and Exceptional Streams
- PNW-ASNRI Trout Streams
- PNW-ASNRI Wild Rice Streams
- PNW-ASNRI Outstanding and Exceptional Lakes
- PNW-ASNRI Special Area Management Plan Streams
- PNW-ASNRI Special Wetlands Inventory Study Streams
- PNW-ASNRI Coastal Wisconsin Wetlands Streams
- PNW-ASNRI Special Area Management Plan Areas
- PNW-ASNRI Special Wetlands Inventory Study Areas
- PNW-ASNRI Coastal Wisconsin Wetlands Areas
- PNW-ASNRI Wild Rice Areas
- PNW-ASNRI Trout Spring Ponds
- PNW-ASNRI State Natural Areas
- PNW-PRF Other Public Rights Features
- PNW Musky Streams
- PNW Sturgeon Streams
- PNW Musky Areas
- PNW Sturgeon Areas
- PNW Walleye Areas

Notes

0.5 0 0.25 0.5 Miles

NAD_1983_HARN_Wisconsin_TM

1: 15,840

Environmental Report

Exhibit H – Wisconsin Historic and Archeological Database Results

May 4, 2019

MVAC Short Report Series: 2019-20

Submitted to:
Jody Strand
CBS Squared, Inc.
770 Technology Way
Chippewa Falls, WI 54729

Submitted by:
Jean Dowiasch
Senior Research Archaeologist
Mississippi Valley Archaeology Center
1725 State Street
La Crosse, WI 54601

Re: Mondovi Literature Review, Buffalo County, Wisconsin

Dear Ms. Strand:

This letter serves as a literature review conducted by the Mississippi Valley Archaeology Center (MVAC) for proposed improvements associated with a new Wastewater Treatment Plant (WWTP) in the City of Mondovi, Buffalo County, Wisconsin (Figure 1). The proposed project is to construct a new WWTP at a new location, construct an anaerobic digester at a location adjacent to the new WWTP site, extend current City utilities to the new WWTP location, upgrade the City wastewater collection system, and construct infrastructure for a new industrial park on the west side of the City where the new WWTP and digester would be located (Figure 2). The majority of the project is located in the City of Mondovi, with a small portion west of the City involving upgrades to the County Road. This literature review covers Sections 1, 10, 11, 12, 13, 14, and 15 in T24N-R11W and Sections 6 and 7 in T24N-10W in Buffalo County.

A comprehensive site search was conducted using the Wisconsin Historic Preservation Database's (WHPD) Archaeological Reports Inventory (ARI), Archaeological Site Inventory (ASI), and Architecture and History Inventory (AHI), which are all maintained by the Wisconsin Historical Society. The WHPD contains those archaeological sites, previous surveys, and surveyed structures which have been reported to the Wisconsin Historical Society. It is possible that additional cultural materials which have not yet been recovered or reported may exist within the property.

Cultural Context

Native American occupation of the upper Mississippi River Valley, including what is now Wisconsin, began around the end of the Pleistocene epoch, when groups of hunter-gatherers moved into the region after the retreat of the last glaciers. Archaeologists have established a basic chronology of Native American traditions in the region (Green et al. 1986, Birmingham et al. 1998, Theler and Boszhardt 2003):

Paleoindian	12,000 - 10,000 B.P. (Before Present)
Archaic	10,000 - 2,500 B.P.
Woodland	2,500 - 1,000 B.P.
Oneota	1,000 - 350 B.P.
Early Historic	350 - 150 B.P.
Late Historic	150 - modern era

These traditions are defined by patterns of material culture and by relative and chronometric dating. They are distinguished by differences in settlement and subsistence patterns; changes in styles

and functions of stone tools; the appearance of pottery and subsequent changes in types and design motifs; and the construction and changing forms and functions of earthen mounds.

Environmental Setting

The proposed improvement project is located within the Mondovi municipal limits, with a small portion in the Town of Mondovi. The project is in the Driftless Area, in Wisconsin's Western Upland geographic province (Martin 1965). The project area lies north and south of the Buffalo River, with Peeso Creek entering the project area from the northeast and Harvey Creek running along the western boundary. The Buffalo River joins the Mississippi River 19.5 miles southwest of Mondovi, north of Alma.

Early vegetation in the project area consisted of oak savanna including bur and white oak, and bluestem (Cottam and Loucks 1965). A 1939 air photo indicates the municipal boundaries were more limited; since then subdivisions have developed in multiple areas of the city, with limited expansion south of the Buffalo River. The city limits have been expanded to include the golf course to the northeast (Figure 3).

Literature Review Results

Archaeology

The ASI indicates there are 21 sites within one mile of the project area, two of which lie WITHIN the Mondovi city limits (Figure 4, Appendix A: Table 1). The two sites within the project area include Oak Park Cemetery (BBF-0033) and Riverside Cemetery (BBF-0034), both listed as Historic Euro-American sites. Oak Park Cemetery is located at 239 N. Washington Street, in the southwest corner of the Oak Street/N. Washington intersection. The site is listed as an active, uncatalogued burial site. Riverside Cemetery is located south of USH 10, approximately 600 feet east of its intersection with STH 37. The Historic Euro-American cemetery is divided into three parts: Sacred Heart (east), City Cemetery (central) and the Lutheran Cemetery (west); collectively knows as Riverside Cemetery. The site is listed as an active, uncatalogued cemetery. Both cemeteries are protected under Wis. Stats 157.70, and consultation with the Wisconsin Historical Society is required prior to any work within the site boundaries (WHPD 2019).

Prehistoric sites of known cultural affiliation within one mile of the project area include 1 Archaic campsite/village, 2 Archaic/Woodland campsite/villages, 2 Woodland campsites, and 1 Woodland mound/burial site. Prehistoric sites of unknown affiliation include 8 campsite/villages, 1 isolated find, 1 lithic scatter, and 1 isolated find with a Historic Indian site. Historic Euro-American sites include 1 cemetery/burial and 1 HCM concentration (WHPD 2019).

Previous Archaeological Investigations

One archaeological survey was conducted in the project area, with four additional investigations undertaken within one mile of the project area. In 1987, a Phase I survey was conducted for a proposed bridge replacement over Harvey Creek by CTH A, at the west end of the project area. No cultural resources were recovered (87-0778) [WHPD 2019].

In 1986, surface survey for the proposed relocation of the STH 37 bridge over Peeso Creek recovered no cultural resources. A total of 0.25 acres were surveyed to the northeast of the current Mondovi project area (86-0101). In 1996, a Phase I survey was conducted for intersection improvements and a bridge replacement along STH 37, northeast of the project area. Three archaeological sites were found, with no additional investigations recommended (96-5015). Three locations on the Denk property were investigated in 2011. The farm lies south of STH 37, approximately one mile northeast of the current project. No cultural materials were recovered, and no additional investigations were recommended (11-0436). In 2014, a Phase I archaeological survey of the proposed Mondovi Tap and Substation was

conducted in the southwest corner of the CTH TT/STH 37 intersection. No cultural materials were recovered (14-1228) [WHPD 2019].

Architecture and History

The Wisconsin Architecture and History Inventory (AHI) indicates there are 43 historic buildings/structures listed within the Mondovi city limits, with two additional structures reported within one mile (Figure 5, Appendix A: Table 2). These structures include 20 houses, 16 commercial buildings, 3 churches, 2 schools, and 2 statutes. None of the structures were listed as eligible for, or listed on, the National Register of Historic Places; however, the structures may not have been evaluated for eligibility at the time of survey. The AHI was utilized to collect information on historic buildings, structures, sites, objects, and historic districts along the project area. Inclusion in the inventory does not necessarily mean the object has a special status. The AHI is not a comprehensive list of all old Wisconsin buildings and structures.

Summary

Proposed improvements for a new Wastewater Treatment Plant (WWTP), anaerobic digester, and associated upgrades in the City of Mondovi lie within the municipal limits, and a small portion west of the City involving upgrades to the County Road. The project is located in Sections 1, 10, 11, 12, 13, 14, and 15 in T24N-R11W and Sections 6 and 7 in T24N-10W in Buffalo County. A comprehensive literature review was conducted using the Wisconsin Historic Preservation Database (WHPD). As a result of the literature search, it was determined that two previously recorded archaeological sites are located in the project area, both of which are Historic Euro-American cemeteries. Nineteen previously recorded archaeological sites are located within one mile of the project area. Forty-three previously surveyed historic structures lie within the proposed project limits, none of which are listed on the National Register of Historic Places. Five archaeological surveys have been conducted within one mile of the improvement projects, one of which was located in the current project area. No sites were discovered as a result of the survey within the project boundaries.

References

Birmingham, Robert A., Carol I. Mason and James B. Stoltman
1998 Wisconsin Archaeology. *The Wisconsin Archeologist* 78(1-2).

Cottam, G. and O.L. Loucks
1965 *Early Vegetation in Wisconsin*, a map compiled for the Geological and Natural History Survey. Madison: University of Wisconsin – Extension.

Green, William, James B. Stoltman and Thomas Kehoe
1986 Introduction to Wisconsin Archaeology: Background for Cultural Resources Planning. *The Wisconsin Archeologist* 67(3-4).

Martin, Lawrence
1965 *The Physical Geography of Wisconsin*. University of Wisconsin Press, Madison.

Theler, James L. and Robert F. Boszhardt
2003 *Twelve Millenia: Archaeology of the Upper Mississippi River Valley.* University of Iowa Press, Iowa.

Wisconsin Historic Aerial Image Finder
2019 *Mondovi Aerial Photograph*. Electronic document accessed May 2019: http://maps.sco.wisc.edu/WHAIFinder/#.

Wisconsin Historic Preservation Database
2019 *Archaeological Reports Inventory, Archaeological Site Inventory, and Architecture and History Inventory.* Wisconsin Historical Society, Madison.

Appendix A

Archaeological Sites, Architecture and History Sites Within one mile of the Mondovi project area

Table 1. Previously recorded archaeological sites within one mile of the Mondovi Wastewater Treatment Plant Project and Associated Work.

Site #	Site Name	Site Type	Culture	TRS
47Bf-137	Heck 2	campsite/village	unknown prehistoric	2411W-4
47Bf-138	Loomis 1	campsite/village	unknown prehistoric	2411W-10
47Bf-139	Loomis 2	campsite/village	Archaic, M. Woodland	2411W-10
47Bf-140	Loomis 3	campsite/village	unknown prehistoric	2411W-9
47Bf-141	Loomis 4	campsite/village	unknown prehistoric	2411W-9
47Bf-142	Loomis 5	campsite/village	unknown prehistoric	2411W-9
47Bf-143	Loomis 6	campsite/village	Late Woodland	2411W-9
47Bf-144	Loomis 7	campsite/village	Woodland	2411W-9
47Bf-163	Peeso Creek	isolated find	unknown prehistoric	2410W-6
47Bf-177	Heck III	campsite/village	unknown prehistoric	2411W-4
47Bf-186	BF-G	campsite/village	unknown prehistoric	2411W-4
47Bf-199	Buffalo Soujah	lithic scatter	unknown prehistoric	2410W-7
BBF-0033	Oak Park Cemetery	cemetery/burial	Historic Euro-American	2411W-12
BBF-0034	Riverside Cemetery	cemetery/burial	Historic Euro-American	2411W-24
BBF-0035	Waste Family Cemetery	cemetery/burial	Historic Euro-American	2411W-24
47Ec-67	Hugging Boy	HCM concentration	Historic Euro-American	2510W-32
47Ec-68	Pig Wilbur	isolated find	unknown prehistoric, Historic Indian	2510W-32
47Ec-69	Angel Girl	campsite/village	L. Archaic, L. Woodland	2510W-32
47Ec-70	Andress View	campsite/village	Late Archaic	2510W-32
47Ec-71	Nutting Stone Site	campsite/village	unknown prehistoric	2510W-31
47Ec-72/BEC-0041	Andress Mound Group	mounds- conical	Late Woodland	2510W-32

Table 2. Previously recorded historic structures within one mile of the Mondovi project area.

Wisconsin Architecture and History Inventory
State Historic Preservation Office

Home | Search | Recent Properties

43 properties found where:
County = Buffalo
Municipality = Mondovi

Refine Search

	AHI Number	Historic Name	Street Address	County	Municipality	Civil Town
	2583		314 COLUMBIA AVE	Buffalo	Mondovi	
	2584		126 S EAU CLAIRE ST	Buffalo	Mondovi	
	2585	UNION BLOCK	122 EAU CLAIRE ST	Buffalo	Mondovi	
	2586		141 S EAU CLAIRE ST	Buffalo	Mondovi	
	2587	CONGREGATIONAL CHURCH	253 EAU CLAIRE ST	Buffalo	Mondovi	
	2588		278 S EAU CLAIRE ST	Buffalo	Mondovi	
	2589		353 EAU CLAIRE ST	Buffalo	Mondovi	
	2590		405 EAU CLAIRE ST	Buffalo	Mondovi	
	2591		557 EAU CLAIRE ST	Buffalo	Mondovi	
	2592		671 EAU CLAIRE ST	Buffalo	Mondovi	
	2593	OPERA HOUSE	103 S EAU CLAIRE ST	Buffalo	Mondovi	
	2594		119 S EAU CLAIRE ST	Buffalo	Mondovi	
	2595		129 S EAU CLAIRE ST	Buffalo	Mondovi	
	2596	HERALD BLOCK	131-9 S EAU CLAIRE ST	Buffalo	Mondovi	
	2597		162 S EAU CLAIRE S	Buffalo	Mondovi	
	2598		201 S EAU CLAIRE ST	Buffalo	Mondovi	
	2599	CANAR BROTHERS BUILDING	202 S EAU CLAIRE ST	Buffalo	Mondovi	
	2600	LOCKWOOD BLOCK	207-9 S EAU CLAIRE ST	Buffalo	Mondovi	
	2601		210 S EAU CLAIRE ST	Buffalo	Mondovi	
	2602			Buffalo	Mondovi	

Wisconsin Architecture and History Inventory
State Historic Preservation Office

Home | Search | Recent Properties

43 properties found where:
County = Buffalo
Municipality = Mondovi

Refine Search

	AHI Number	Historic Name	Street Address	County	Municipality	Civil Town
	2603	FIRST METHODIST EPISCOPAL CHURCH	NE CNR EAU CLAIRE ST AND VINE ST	Buffalo	Mondovi	
	2604		153 FRANKLIN ST	Buffalo	Mondovi	
	2605		261 FRANKLIN ST	Buffalo	Mondovi	
	2606		455 FRANKLIN ST	Buffalo	Mondovi	
	2607		540 FRANKLIN ST	Buffalo	Mondovi	
	2608		E SIDE FRANKLIN ST 50 FT S OF GLEN ST	Buffalo	Mondovi	
	2609		E SIDE FRANKLIN ST, 70 FT N OF HUDSON	Buffalo	Mondovi	
	2610		E SIDE HOWARD ST	Buffalo	Mondovi	
	2611		676 HUDSON ST	Buffalo	Mondovi	
	2612		N CNR HUDSON ST AND STATE ST	Buffalo	Mondovi	
	2613		SW CNR HUDSON ST AND STATE ST	Buffalo	Mondovi	
	2614		259 JACKSON ST	Buffalo	Mondovi	
	2615		267 JACKSON ST	Buffalo	Mondovi	
	2616		225 E MAIN ST	Buffalo	Mondovi	
	2617		312 E MAIN ST	Buffalo	Mondovi	
	2618		S SIDE MAIN ST, 100 FT W OF MADISON ST	Buffalo	Mondovi	
	2619		N SIDE E MAIN, 0.25 MI E OF EAU CLAIRE ST	Buffalo	Mondovi	
	2620		155 WASHINGTON ST	Buffalo	Mondovi	
	2621		162 WASHINGTON ST	Buffalo	Mondovi	
	2622		WASHINGTON ST	Buffalo	Mondovi	

Wisconsin Architecture and History Inventory
State Historic Preservation Office

Home | Search | Recent Properties

43 properties found where:
County = Buffalo
Municipality = Mondovi

Refine Search

	AHI Number	Historic Name	Street Address	County	Municipality	Civil Town
	2623		315 WATER ST	Buffalo	Mondovi	
	46613		MIRROR LAKE PARK	Buffalo	Mondovi	
	46617		W HUDSON ST	Buffalo	Mondovi	

43 properties found | You are viewing page **3** of **3** <<First <Prev

2622		121 N Eau Claire St, W SIDE EAU CLAIRE ST, 100 FT N OF MAIN ST		

43 properties found | You are viewing page **1** of **3** Next > Last >>

2485	E side Holmes Creek Rd. 0.5 mi N of USH 10	Buffalo	Mondovi
2491	W side CTH H, 1 mi S of County Line	Buffalo	Mondovi

Figures

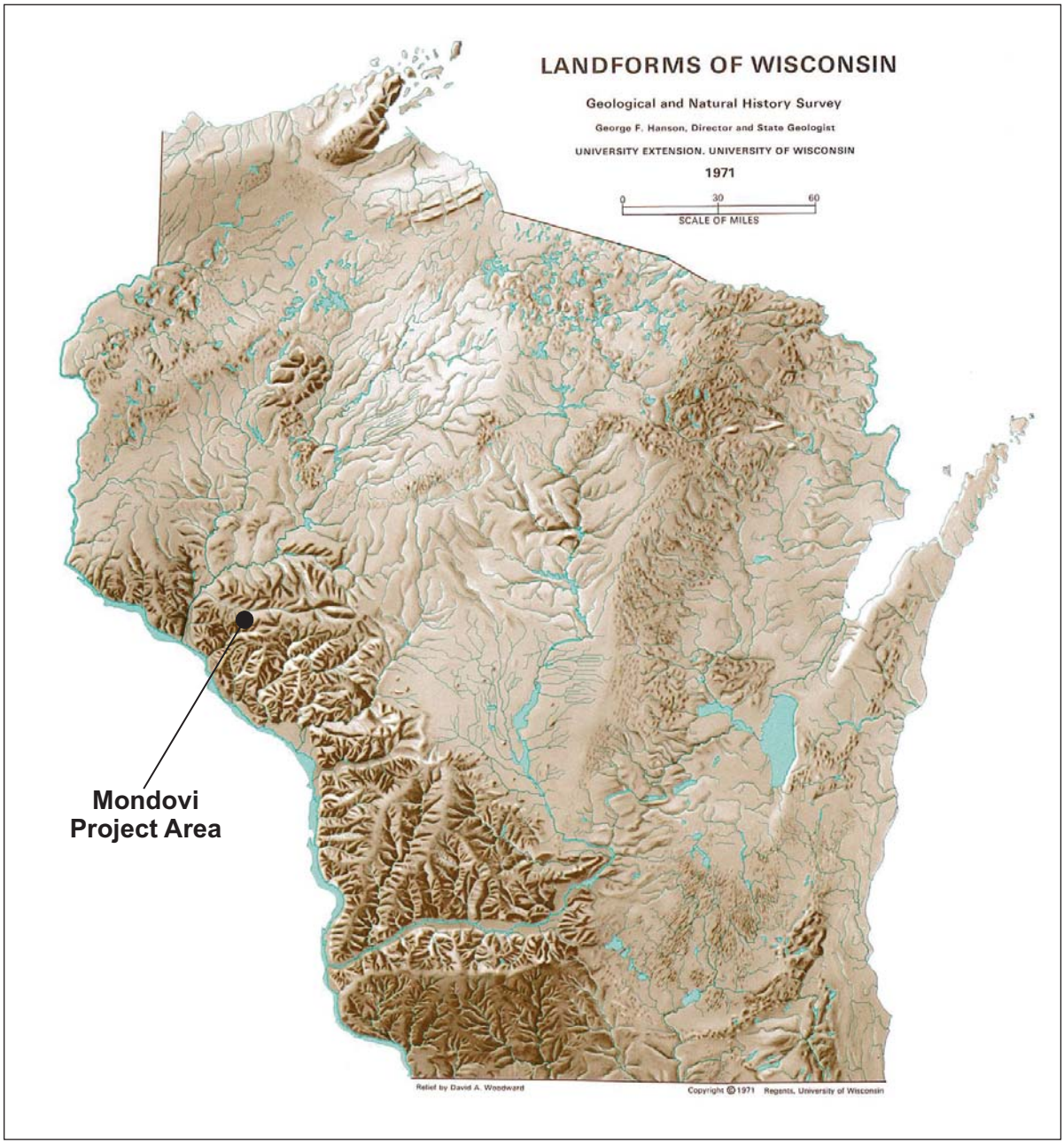


Figure 1. Project location in the State of Wisconsin.

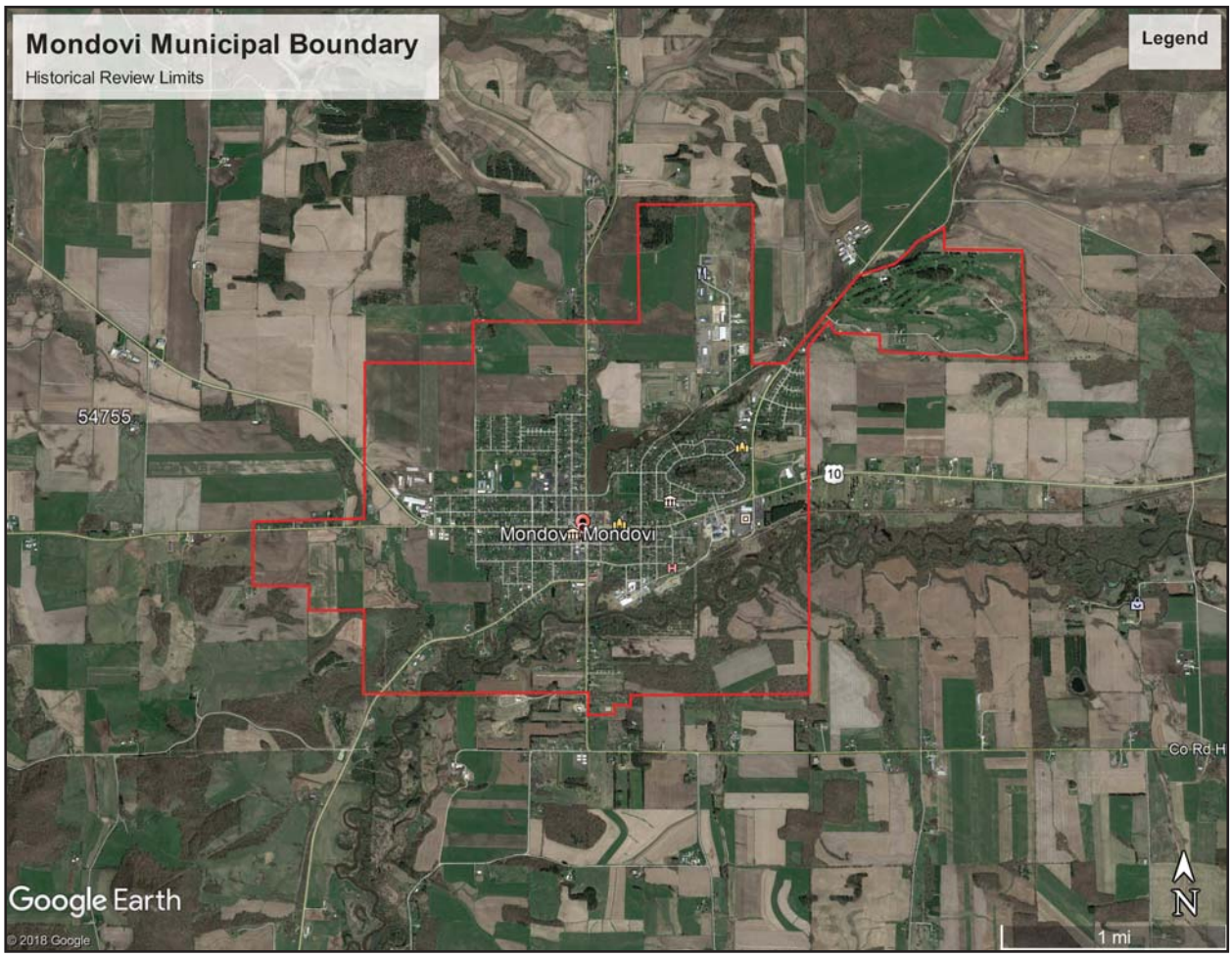


Figure 2. Project location in the City of Mondovi, Buffalo County. Provided by CBS Squared, Inc.

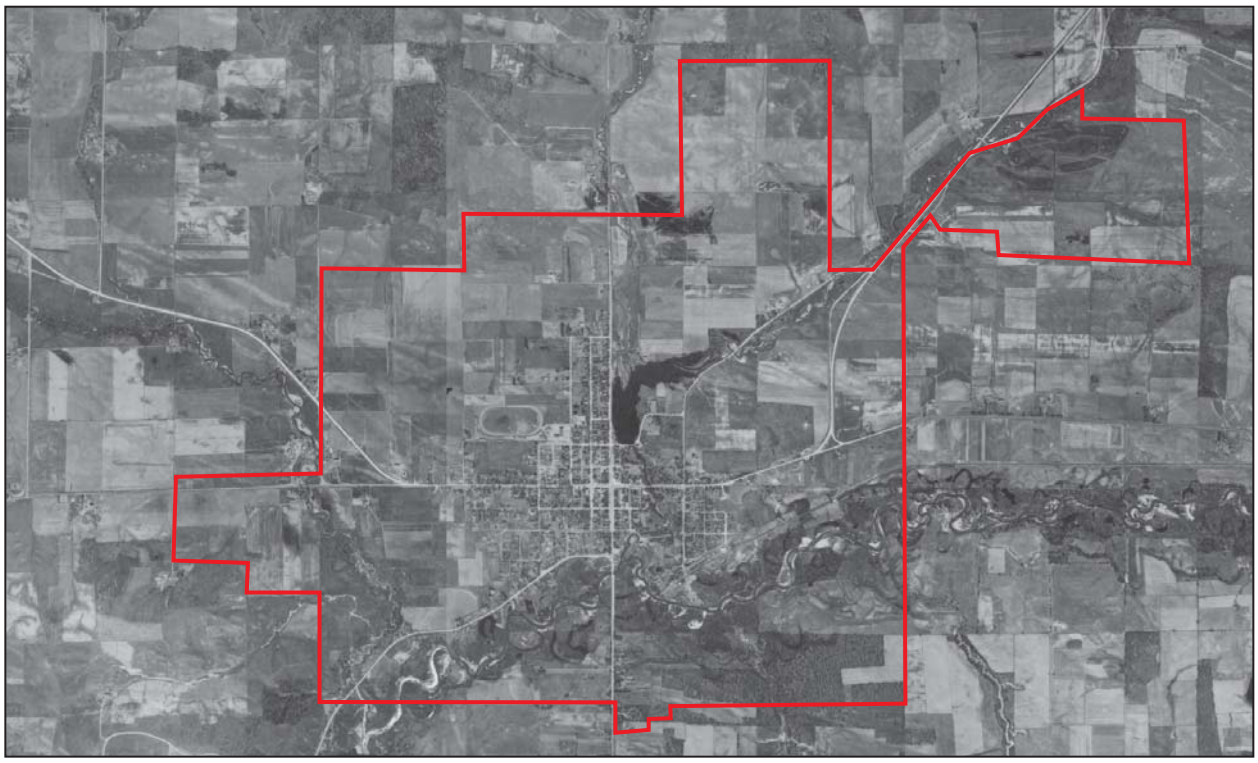


Figure 3. 1939 air photo of the Mondovi Wasterwater Treatment Plant project area (WHAIFinder 2019).

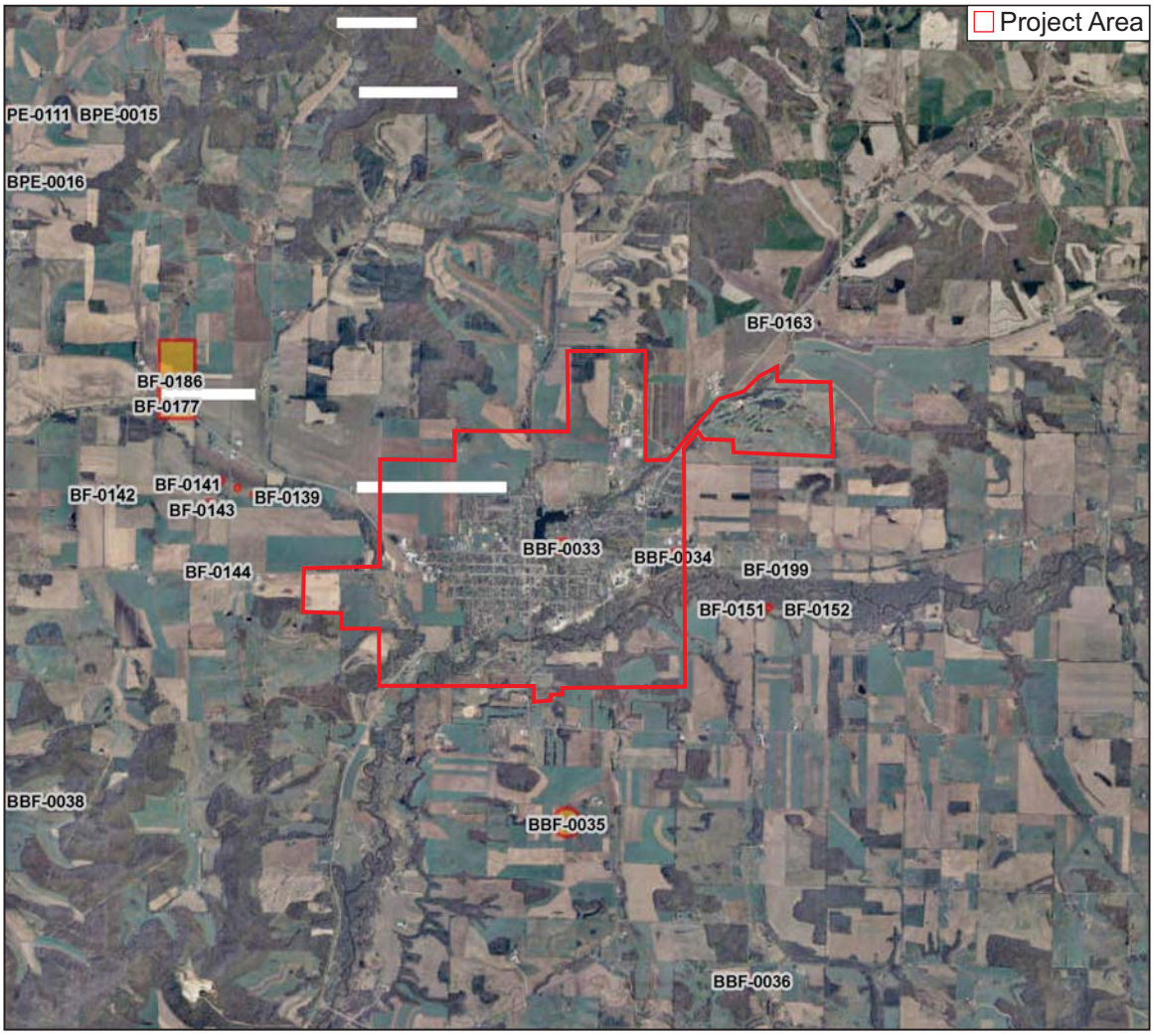


Figure 4. Previously recorded archaeological sites in and adjacent to the project area. WHPD 2019, Mondovi 7.5' USGS topographic map.

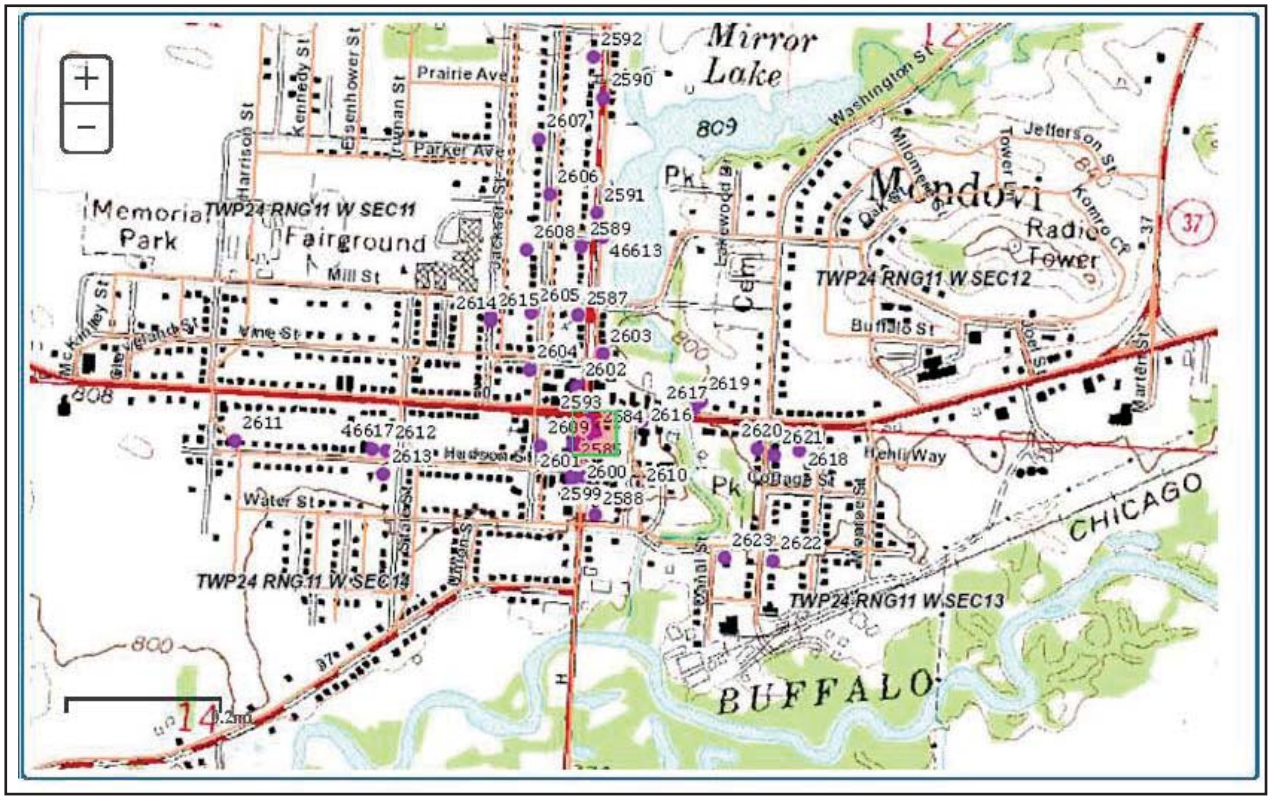


Figure 5. Architecture and History Inventory properties in Mondovi, WI. WHPD 2019.

Environmental Report

Exhibit I -

Federally Listed Threatened, Endangered Species; WDNR Endangered Resources Preliminary Review

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
Phone: (920) 866-1717 Fax: (920) 866-1710

In Reply Refer To:
Consultation Code: 03E17000-2019-SLI-1407
Event Code: 03E17000-2019-E-03574
Project Name: Mondovi WWTP Upgrade

July 15, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project "may affect" listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height (*e.g.*, communication towers)**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act *(*16 U.S.C. 703 *et seq*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
(920) 866-1717

Project Summary

Consultation Code: 03E17000-2019-SLI-1407

Event Code: 03E17000-2019-E-03574

Project Name: Mondovi WWTP Upgrade

Project Type: WASTEWATER FACILITY

Project Description: The project consists of the construction of a new wastewater treatment plant (WWTP) for the City of Mondovi. The project also includes the extension of sanitary and water utilities to the new site along with a new access road. The access road and utility construction would start in Spring of 2020 with the ground breaking for the WWTP site to start in Fall 2020.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.56264157320885N91.67772914418488W

Counties: Buffalo, WI

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2202	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
Phone: (920) 866-1717 Fax: (920) 866-1710

In Reply Refer To:
Consultation Code: 03E17000-2019-TA-1407
Event Code: 03E17000-2019-E-03585
Project Name: Mondovi WWTP Upgrade

July 15, 2019

Subject: Verification letter for the 'Mondovi WWTP Upgrade' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Alex Jaromin:

The U.S. Fish and Wildlife Service (Service) received on July 15, 2019 your effects determination for the 'Mondovi WWTP Upgrade' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"[1] prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Eastern Massasauga (=rattlesnake), *Sistrurus catenatus* (Threatened)

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Mondovi WWTP Upgrade

2. Description

The following description was provided for the project 'Mondovi WWTP Upgrade':

> The project consists of the construction of a new wastewater treatment plant (WWTP) for the City of Mondovi. The project also includes the extension of sanitary and water utilities to the new site along with a new access road. The access road and utility construction would start in Spring of 2020 with the ground breaking for the WWTP site to start in Fall 2020.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.56264157320885N91.67772914418488W

Determination Key Result

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")

   No

3. Will your activity purposefully **Take** northern long-eared bats?

   No

4. Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

   Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

7. Will the action involve Tree Removal?
   Yes

8. Will the action only remove hazardous trees for the protection of human life or property?
   No

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?
   No

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?
    No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

1

2. If known, estimated acres of forest conversion from April 1 to October 31

1

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?
0

Endangered Resources Preliminary Assessment

Created on **4/17/2019**. This report is good for one year after the created date.

Results

Further actions recommended. You are encouraged to request a full Endangered Resources Review, although it is not required. If an ER Review is requested for this project, it would provide recommended (voluntary) actions that could be taken during the course of the project.

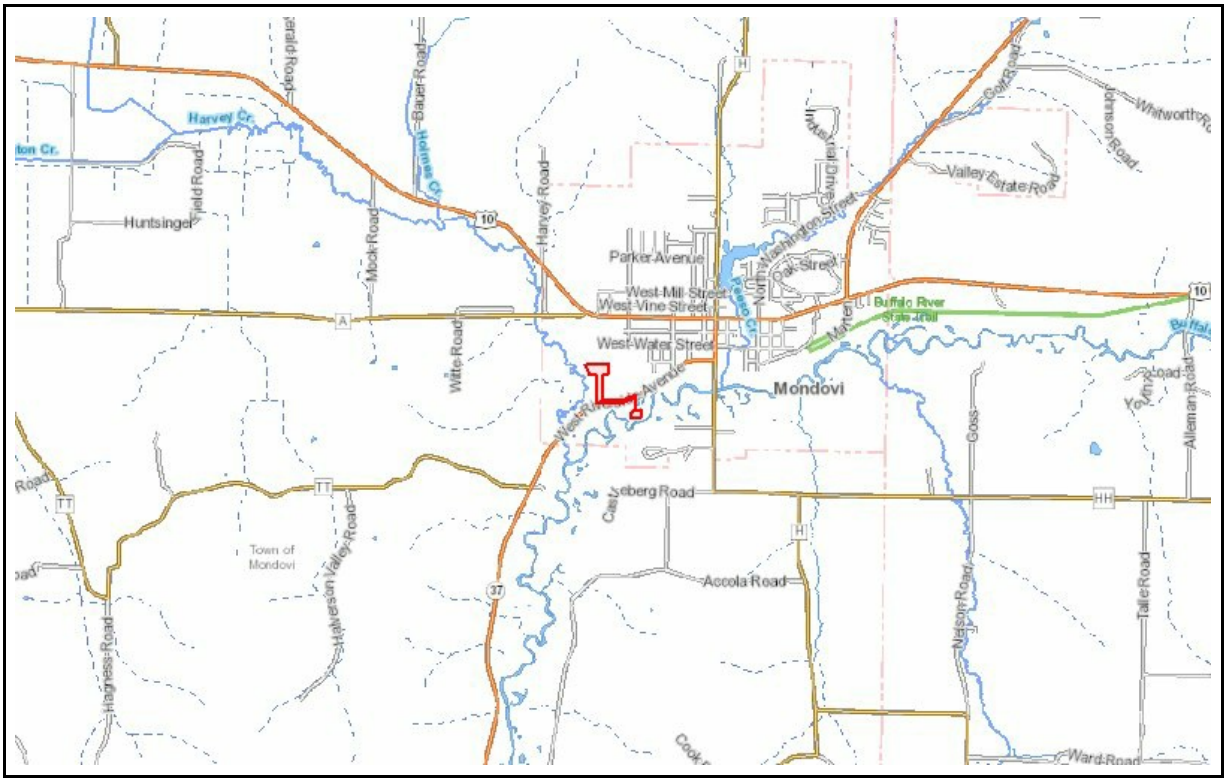
Project Information

Landowner name	City of Mondovi
Project address	State Hwy 37
Project description	WWTP Upgrade

Project Questions

Does the project involve a public property?	Yes
Is there any federal involvement with the project?	Yes
Is the project a utility, agricultural, forestry or bulk sampling (associated with mining) project?	Yes
Is the project property in Managed Forest Law or Managed Forest Tax Law?	No

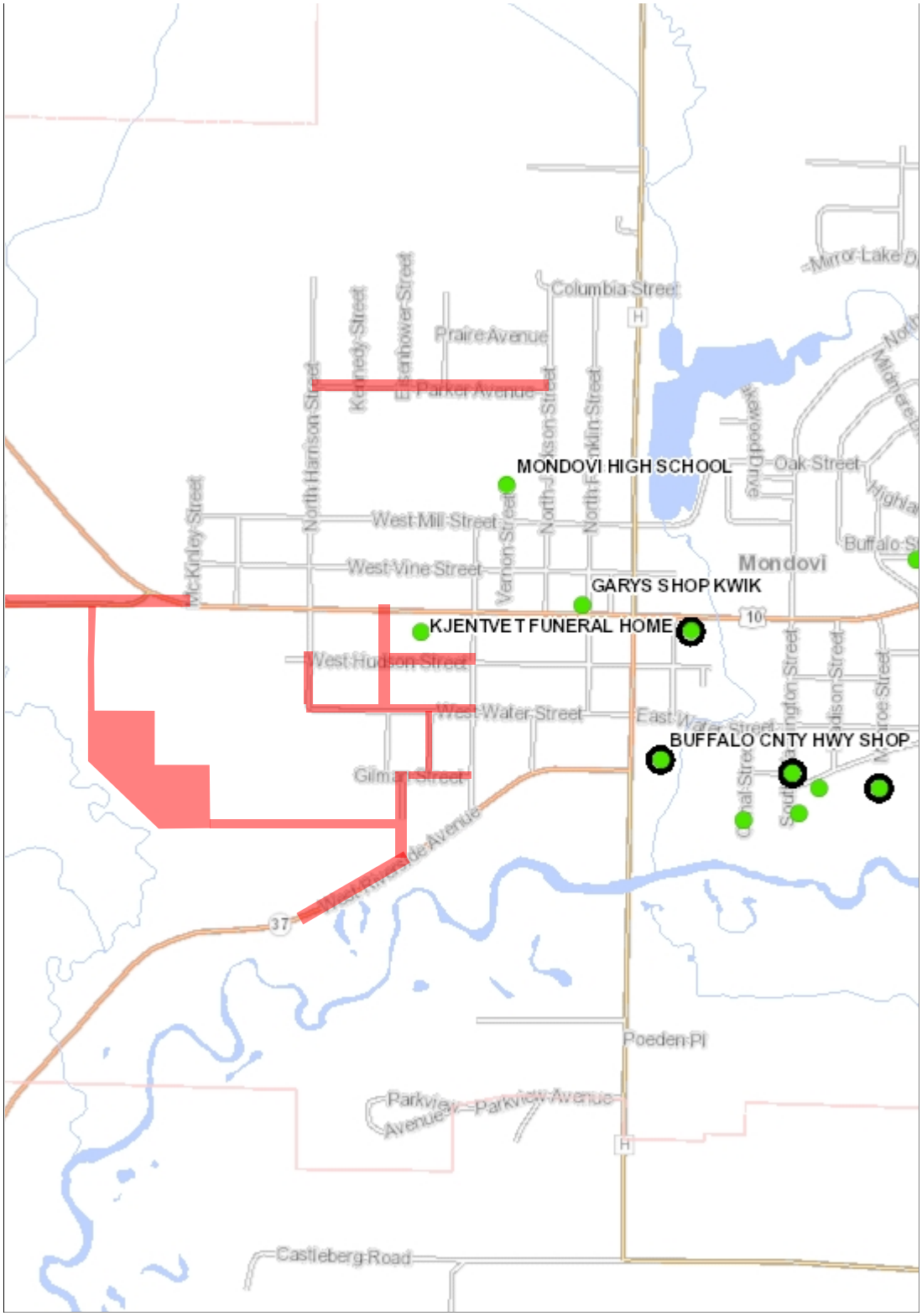
Project Area Maps



Environmental Report

Exhibit J - WDNR Remediation and Redevelopment Map for Contaminated Lands

Mondovi Remediation and Redevelopment Map



Legend

- Open Site
- Closed Site
- Continuing Obligations Apply
- Facility-wide Site

0.5 0 Distance / 2 0.5 Miles

1: 15,840

NAD_1983_HARN_Wisconsin_TM

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made aregarding accuracy, applicability for a particular use, completemenss, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/org/legal/

Note: Not all sites are mapped.

Notes

Appendix M

Alternative Capital Cost Estimate

Mondovi WWTP
Cost Estimate

Oxidation Ditch Alternative w/Reactive Sand Filtration	Unit	Quantity	Unit Price	Cost
Buildings (Admin/Lab, Garage, Headworks, Pump Building)	LS	1	$800,000.00	$800,000.00
WWTP Main Lift Station	LS	1	$250,000.00	$250,000.00
Fine Screen System	LS	1	$90,000.00	$90,000.00
Grit Removal System	LS	1	$130,000.00	$130,000.00
Headworks Install	LS	1	$60,000.00	$60,000.00
Activated Sludge Basin Installation	LS	1	$200,000.00	$200,000.00
Activated Sludge Basin & Anerobic/Anoxic Equip	LS	1	$870,000.00	$870,000.00
Activated Sludge Basin Concrete	CY	984	$800.00	$787,200.00
Energy Reduction Initiative	LS	1	$50,000.00	$50,000.00
Filtration for Phos Reduction (Equipment, Concrete, Install)	LS	1	$2,650,000.00	$2,650,000.00
SCADA Controls and Instrumentation	LS	1	$500,000.00	$500,000.00
Electrical	LS	1	$700,000.00	$700,000.00
Clarifiers (Includes Concrete, Equipment, Install, Cover)	Each	2	$390,000.00	$780,000.00
Process Piping	LS	1	$425,000.00	$425,000.00
Pumping	LS	1	$145,000.00	$145,000.00
Aerobic Digester (Concrete, Equipment, Blowers, Install)	LS	1	$460,000.00	$460,000.00
UV Disinfection Install	LS	1	$25,000.00	$25,000.00
UV Disinfection	LS	1	$60,000.00	$60,000.00
Septage Receiving	LS	1	$120,000.00	$120,000.00
Reed Beds	LS	1	$400,000.00	$400,000.00
Outfall	LS	1	$20,000.00	$20,000.00
Emergency Generator	LS	1	$130,000.00	$130,000.00
Potable Water	LS	1	$18,000.00	$18,000.00
Earthwork	LS	1	$500,000.00	$500,000.00
Turf Establishment	SY	10,000	$5.00	$50,000.00
Asphalt Paving	Ton	800	$88.00	$70,400.00
Concrete Pavement	SY	1890	$ 57.00	$ 107,730.00
Concrete Subbase	CY	315	$25.00	$5,906.25
Contractor Mobilization	LS	1	$100,000.00	$100,000.00
Subtotal				$10,504,236.25
Contingency				$1,050,423.63
Construction Subtotal				$11,554,659.88
Engineering				$1,733,198.98
Soil Borings				$10,000.00
Wetland Delineation				$7,500.00
Funding Administration				$55,000.00
Legal				$39,000.00
Bonding & Financial Consultant				$70,000.00
Interim Interest				$1,116,683.00
Land Acquisition				$159,000.00
Project Total				**$14,586,041.86**

Mondovi WWTP
Cost Estimate

SBR Alternative/w ABNR

Buildings (Admin/Lab, Garage, Headworks, Chemical)	LS	1	$800,000.00	$800,000.00
WWTP Main Lift Station	LS	1	$250,000.00	$250,000.00
Fine Screen System	LS	1	$90,000.00	$90,000.00
Grit Removal System	LS	1	$130,000.00	$130,000.00
Headworks Install	LS	1	$60,000.00	$60,000.00
SBR (Equipment, Control & SCADA)	LS	1	$990,000.00	$990,000.00
SBR Concrete	CY	940	$800.00	$752,000.00
SBR Install	LS	1	$300,000.00	$300,000.00
Energy Reduction Initiative	LS	1	$50,000.00	$50,000.00
ABNR Process for Phos Reduction	LS	1	$3,376,769.78	$3,376,769.78
SCADA Controls and Instrumentation	LS	1	$500,000.00	$500,000.00
Electrical	LS	1	$700,000.00	$700,000.00
Process Piping	LS	1	$420,000.00	$420,000.00
Pumping	LS	1	$160,000.00	$160,000.00
Aerobic Digester (Concrete, Equipment, Blowers, Install)	LS	1	$450,000.00	$450,000.00
UV Disinfection Install	LS	1	$20,000.00	$20,000.00
UV Disinfection	LS	1	$35,000.00	$35,000.00
Septage Receiving	LS	1	$120,000.00	$120,000.00
Reed Beds	LS	1	$347,000.00	$347,000.00
Outfall	LS	1	$20,000.00	$20,000.00
Emergency Generator	LS	1	$130,000.00	$130,000.00
Earthwork	LS	1	$500,000.00	$500,000.00
Potable Water	LS	1	$18,000.00	$18,000.00
Turf Establishment	SY	10000	$5.00	$50,000.00
Asphalt Paving	Ton	800	$88.00	$70,400.00
Concrete Pavement	SY	1890	$ 57.00	$ 107,730.00
Concrete Subbase	CY	315	$25.00	$ 7,875.00
Contractor Mobilization	LS	1	$100,000.00	$100,000.00
Subtotal				$10,554,774.78
Contingency				$1,055,477.48
Construction Subtotal				$11,610,252.26
Engineering				$1,741,537.84
Soil Borings				$10,000.00
Wetland Delineation				$7,500.00
Funding Administration				$55,000.00
Legal				$39,000.00
Bonding & Financial Consultant				$70,000.00
Interim Interest				$1,116,683.00
Land Acquisition				$159,000.00
Project Total				**$14,649,973.09**

Mondovi WWTP
Cost Estimate

Bio-loop Alternative w/ABNR	Unit	Quantity	Unit Price	Cost
Buildings (Admin/Lab, Garage, Headworks, Pump Building)	LS	1	$800,000.00	$800,000.00
WWTP Main Lift Station	LS	1	$250,000.00	$250,000.00
Fine Screen System	LS	1	$90,000.00	$90,000.00
Grit Removal System	LS	1	$130,000.00	$130,000.00
Headworks Install	LS	1	$60,000.00	$60,000.00
Oxidization Ditch Installation	LS	1	$200,000.00	$200,000.00
Oxidization Ditch & Anerobic/Anoxic Equip	LS	1	$870,000.00	$870,000.00
Oxidation Ditch Concrete	CY	700	$800.00	$560,000.00
Energy Reduction Initiative	LS	1	$50,000.00	$50,000.00
ABNR Process for Phos Reduction (Equipment, Concrete, Install)	LS	1	$5,845,935.00	$5,845,935.00
SCADA Controls and Instrumentation	LS	1	$500,000.00	$500,000.00
Electrical	LS	1	$700,000.00	$700,000.00
Clarifiers (Includes Concrete, Equipment, Install, Cover)	Each	2	$390,000.00	$780,000.00
Process Piping	LS	1	$400,000.00	$400,000.00
Pumping	LS	1	$120,000.00	$120,000.00
Aerobic Digester (Concrete, Equipment, Blowers, Install)	LS	1	$410,000.00	$410,000.00
UV Disinfection Install	LS	1	$20,000.00	$20,000.00
UV Disinfection	LS	1	$35,000.00	$35,000.00
Septage Receiving	LS	1	$120,000.00	$120,000.00
Reed Beds	LS	1	$347,000.00	$347,000.00
Outfall	LS	1	$20,000.00	$20,000.00
Emergency Generator	LS	1	$130,000.00	$130,000.00
Potable Water	LS	1	$18,000.00	$18,000.00
Earthwork	LS	1	$500,000.00	$500,000.00
Turf Establishment	SY	10,000	$5.00	$50,000.00
Asphalt Paving	Ton	800	$88.00	$70,400.00
Concrete Pavement	SY	1890	$ 57.00	$ 107,730.00
Concrete Subbase	CY	315	$25.00	$5,906.25
Contractor Mobilization	LS	1	$100,000.00	$100,000.00
Subtotal				$13,289,971.25
Contingency				$1,328,997.13
Construction Subtotal				$14,618,968.38
Engineering				$2,192,845.26
Soil Borings				$10,000.00
Wetland Delineation				$7,500.00
Funding Administration				$55,000.00
Legal				$39,000.00
Bonding & Financial Consultant				$70,000.00
Interim Interest				$1,116,683.00
Land Acquisition				$159,000.00
Project Total				**$18,268,996.63**

Mondovi Collection System Improvements
Cost Estimate

Collection System Upgrades	Units	Quantity	Unit Cost	Cost
Sewer:				
8-in Lining	LF	2096	$ 35.00	$ 73,360.00
12-in Lining	LF	1347	$ 48.00	$ 64,656.00
15-in Lining	LF	1041	$ 52.00	$ 54,132.00
8-in Replacement	LF	2755	$ 212.00	$ 584,060.00
10-in Replacement	LF	2767	$ 218.00	$ 603,206.00
Manholes:				
Chimney Seals	EACH	255	$ 160.00	$ 40,800.00
Sealing/Rehab	VF	80	$ 300.00	$ 24,000.00
Replacement:				
4-ft Manhole	EACH	20	$ 2,550.00	$ 51,000.00
HMA	TON	215	$ 70.00	$ 15,076.92
3/4-in Agg (8in)	CY	222	$ 23.00	$ 5,095.38
Granular Borrow (1ft)	CY	329	$ 18.00	$ 5,926.15
Rep. Backfill	TON	277	$ 20.00	$ 5,538.46
Industrial Park Lift Station:				
Lift Station Pump	LS	1	$ 35,000.00	$ 35,000.00
Pump Rail Upgrade	LS	1	$ 4,000.00	$ 4,000.00
New Controls	LS	1	$ 17,500.00	$ 17,500.00
GIS Upgrade:				
Mapping System/Software	LS	1	$ 40,000.00	$ 40,000.00
Subtotal				$ 1,623,350.92
Contingency				$ 162,335.09
Construction Subtotal				$ 1,785,686.02
Engineering				$ 267,852.90
Soil Borings				$ 3,000.00
Funding Administration				$ 15,000.00
Legal				$ 3,000.00
Financial Consultant				$ 2,000.00

Collection System Upgrades Project Total = $ 2,076,538.92

City of Mondovi
WWTP Utility Extension
Project Cost

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Total Construction	Contingency	Total Const w/ Cont	CDBG $1,000,000	City
General Items										
01 45 00.01	Quality Control Testing	L.S.	1	$ 1,167.00	$1,167					
01 55 25.01	Maintenance of traffic	L.S.	1	$ 2,717.00	$2,717					
01 57 33.01	Application of Water	MGal	20	$ 13.33	$267					
01 58 13.01	Funding Project Signs	Each	1	$ 1,868.00	$1,868					
01 71 13.01	Mobilization	L.S.	1	$ 20,000.00	$20,000					
31 11 00.01	Clearing and Grubbing	Inch-dia	700	$ 21.33	$14,931					
31 23 33.01	Replacement Backfill	C.Y.	600	$ 16.66	$9,996					
31 25 10.01	Erosion Mat	S.Y.	7615	$ 2.00	$15,230					
31 25 10.02	Erosion Bales	Each	55	$ 7.67	$422					
31 25 10.03	Silt Fence	L.F.	6853	$ 1.92	$13,158					
32 92 12.01	Turf Establishment	S.Y.	12117	$ 3.63	$43,985					
Access Road										
General Items	31%									
01 45 00.01	*Quality Control Testing*	*L.S.*	*1*	$ 1,167.00	$362					
01 55 25.01	*Maintenance of traffic*	*L.S.*	*1*	$ 2,717.00	$842					
01 57 33.01	*Application of Water*	*MGal*	*20*	$ 13.33	$83					
01 58 13.01	*Project Signs*	*Each*	*1*	$ 1,868.00	$579					
01 71 13.01	*Mobilization*	*L.S.*	*1*	$ 20,000.00	$6,200					
31 11 00.01	*Clearing and Grubbing*	*Inch-dia*	*700*	$ 21.33	$4,629					
31 23 33.01	*Replacement Backfill*	*C.Y.*	*600*	$ 16.66	$3,099					
31 25 10.01	*Erosion Mat*	*S.Y.*	7615	$ 2.00	$4,721					
31 25 10.02	*Erosion Bales*	*Each*	55	$ 7.67	$131					
31 25 10.03	*Silt Fence*	*L.F.*	6853	$ 1.92	$4,079					
32 92 12.01	*Turf Establishment*	*S.Y.*	12117	$ 3.63	$13,635					
02 41 33.02	Relocate Sign	Each	2	$ 125.00	$250					
31 23 10.01	Common Excavation	C.Y.	9300	$ 8.00	$74,400					
31 23 10.03	Granular Borrow	C.Y.	2700	$ 13.10	$35,379					
31 23 50.01	Preparing Foundation	L.S.	1	$ 16,000.00	$16,000					
31 34 15.01	Geotextile Fabric	S.Y.	8000	$ 1.28	$10,267					
32 11 27.01	Crushed Aggregate Base Course	C.Y.	1800	$ 25.00	$45,000					
32 12 18.01	Hot Mix Asphalt Pavement	Ton	2100	$ 75.00	$157,500					
32 12 18.02	Adjust Manhole	Each	11	$ 161.67	$1,778					
32 12 18.03	Adjust Gate Valve Box	Each	5	$ 111.67	$558					
32 12 50.01	Saw Cutting	L.F.	80	$ 2.00	$160					
32 15 10.01	Aggregate Shouldering	C.Y.	107	$ 26.33	$2,818					
32 17 23.01	6-Inch White Stop Line	L.F.	24	$ 1.33	$32					
Street Total						$382,502	$ 38,250	$420,752	$120,048	$300,704

City of Mondovi
Wastewater Infrastructure Improvements
Mondovi, Buffalo County Wisconsin

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Total Construction	Contingency	Total Const w/ Cont	CDBG $1,000,000	City
Water Main Items										
General Items	18%									
01 45 00.01	*Quality Control Testing*	*L.S.*	*1*	$ 1,167.00	$210					
01 55 25.01	*Maintenance of traffic*	*L.S.*	*1*	$ 2,717.00	$489					
01 57 33.01	*Application of Water*	*MGal*	*20*	$ 13.33	$48					
01 58 13.01	*Project Signs*	*Each*	*1*	$ 1,868.00	$336					
01 71 13.01	*Mobilization*	*L.S.*	*1*	$ 20,000.00	$3,600					
31 11 00.01	*Clearing and Grubbing*	*Inch-dia*	*700*	$ 21.33	$2,688					
31 23 33.01	*Replacement Backfill*	*C.Y.*	*600*	$ 16.66	$1,799					
31 25 10.01	*Erosion Mat*	*S.Y.*	7615	$ 2.00	$2,741					
31 25 10.02	*Erosion Bales*	*Each*	55	$ 7.67	$76					
31 25 10.03	*Silt Fence*	*L.F.*	6853	$ 1.92	$2,368					
32 92 12.01	*Turf Establishment*	*S.Y.*	12117	$ 3.63	$7,917					
33 11 00.01	12-Inch DIP Water Main	L.F.	2600	$ 56.00	$145,600					
33 11 00.02	6-Inch DIP Water Main	L.F.	140	$ 37.88	$5,303					
33 11 00.03	Watermain Fittings	LB.	1,500	$ 5.00	$7,500					
33 11 00.04	8-Inch Gate Valve and Box	Each	7	$ 3,031.00	$21,217					
33 11 00.05	6-Inch Gate Valve and Box	Each	8	$ 1,078.75	$8,630					
33 11 00.06	Hydrant	Each	8	$ 3,425.00	$27,400					
33 11 00.07	8-Inch Service Valve and Box	Each	1	$ 1,618.00	$1,618					
33 11 00.08	12" x 8" Service Tee	LB.	125	$ 5.00	$625					
33 11 00.09	8-Inch Service Pipe	L.F.	20	$ 26.25	$525					
33 11 00.10	2-Inch Thick Insulation	S.F.	500	$ 1.44	$719					
33 11 00.11	Connecting of Water Main to Existing Water Main including 12" X 8" Tapping Sleeve and Valve	Each	1	$ 2,678.75	$2,679					
Water Main Total						$244,088	$ 24,409	$268,497	$268,497	
Sanitary Sewer										
General Items	50%									
01 45 00.01	*Quality Control Testing*	*L.S.*	*1*	$ 1,167.00	$584					
01 55 25.01	*Maintenance of traffic*	*L.S.*	*1*	$ 2,717.00	$1,359					
01 57 33.01	*Application of Water*	*MGal*	*20*	$ 13.33	$133					
01 58 13.01	*Project Signs*	*Each*	*1*	$ 1,868.00	$934					
01 71 13.01	*Mobilization*	*L.S.*	*1*	$ 20,000.00	$10,000					
31 11 00.01	*Clearing and Grubbing*	*Inch-dia*	*700*	$ 21.33	$7,466					
31 23 33.01	*Replacement Backfill*	*C.Y.*	*600*	$ 16.66	$4,998					
31 25 10.01	*Erosion Mat*	*S.Y.*	7615	$ 2.00	$7,615					
31 25 10.02	*Erosion Bales*	*Each*	55	$ 7.67	$211					
31 25 10.03	*Silt Fence*	*L.F.*	6853	$ 1.92	$6,579					
32 92 12.01	*Turf Establishment*	*S.Y.*	12117	$ 3.63	$21,992					
33 05 20.02	Horizontal Directional Drill 6-Inch HDPE Force Main	L.F.	60	$ 154.00	$9,240					
33 31 00.02	15-inch PVC Sanitary Sewer	L.F.	2400	$ 55.00	$132,000					
33 31 00.03	48-Inch Concrete Manhole	Each	8	$ 2,550.00	$20,400					
33 31 00.04	Connect to Existing Sanitary Sewer Manhole	Each	1	$ 645.00	$645					
33 31 00.07	Excess Manhole Depth	L.F.	60	$ 175.00	$10,500					
33 32 01.01	Wet Pit Sewage Pumping Station	Each	1	$ 275,000.00	$275,000					
33 34 00.01	6-inch DIP Sewage Force Main	L.F.	950	$ 32.00	$30,400					
33 34 00.02	Force Main Fittings	LB.	410	$ 5.00	$2,050					
Sanitary Sewer Total						$542,106	$ 54,211	$596,317	$596,317	

City of Mondovi
Wastewater Infrastructure Improvements
Mondovi, Buffalo County Wisconsin

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price	Total Construction	Contingency	Total Const w/ Cont	CDBG $1,000,000	City
Stormwater										
General Items 3	1%									
01 45 00.01	*Quality Control Testing*	*L.S.*	*1*	$ 1,167.00	$12					
01 55 25.01	*Maintenance of traffic*	*L.S.*	*1*	$ 2,717.00	$27					
01 57 33.01	*Application of Water*	*MGal*	*20*	$ 13.33	$3					
01 58 13.01	*Project Signs*	*Each*	*1*	$ 1,868.00	$19					
01 71 13.01	*Mobilization*	*L.S.*	*1*	$ 20,000.00	$200					
31 11 00.01	*Clearing and Grubbing*	*Inch-dia*	*700*	$ 21.33	$149					
31 23 33.01	*Replacement Backfill*	*C.Y.*	*600*	$ 16.66	$100					
31 25 10.01	*Erosion Mat*	*S.Y.*	7615	$ 2.00	$152					
31 25 10.02	*Erosion Bales*	*Each*	55	$ 7.67	$4					
31 25 10.03	*Silt Fence*	*L.F.*	6853	$ 1.92	$132					
32 92 12.01	*Turf Establishment*	*S.Y.*	12117	$ 3.63	$440					
31 37 00.01	Riprap	C.Y.	10	$ 44.00	$440					
31 37 00.02	Geotextile Filter	S.Y.	15	$ 3.33	$50					
33 42 20.01	18-Inch HDPE Pipe Culvert	L.F.	200	$ 40.67	$8,134					
33 42 20.02	18-Inch HDPE Apron & Wall	Each	10	$ 390.00	$3,900					
Stormwater Total						$13,762	$ 1,376	$15,138	$15,138	
Total of All Unit Price Bid Items - Construction					**$1,182,458**	**$1,182,458**	**$ 118,246**	**$ 1,300,704**	**$ 1,000,000**	**$ 300,704**
Other Costs										
	Total Engineering				$ 207,856			$ 207,856		$ 207,856
	Engineering - Project Design and Construction			$ 195,106						
	Engineering - Wetland Delineation			$ 3,000						
	Engineering - Archeological Study			$ 4,500						
	Engineering - Soil Borings			$ 5,250						
	Legal and Administration				$21,000			$ 21,000		$ 21,000
	CDBG Adminstration			$ 15,000				$ -		$ -
	Legal			$ 6,000				$ -		$ -
Total Project Costs								$ 1,529,560	$ 1,000,000	$ 529,560

Appendix N

Alternative Present Worth Analysis

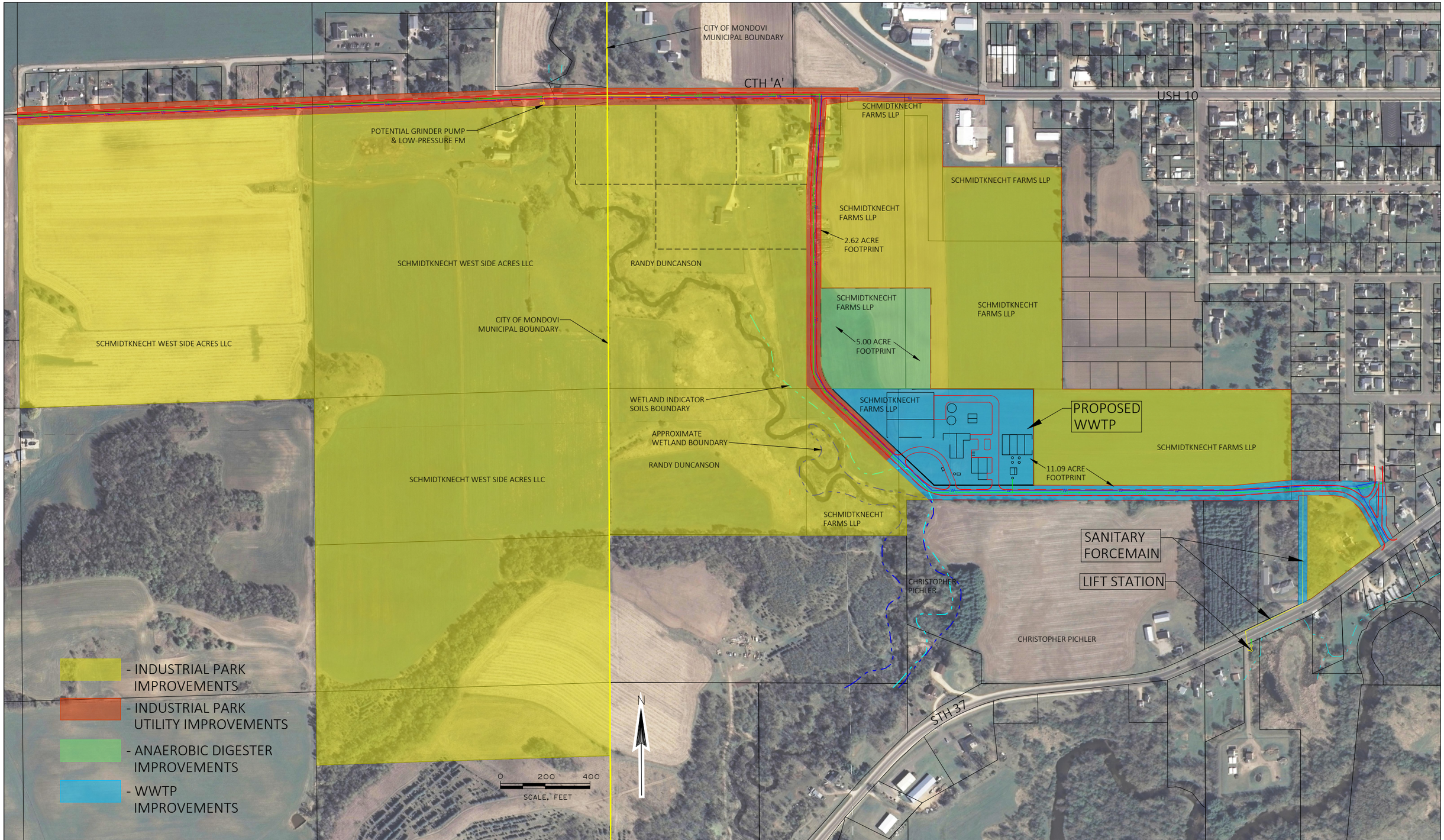
Mondovi WWTP
Mondovi, WI

WWTP Present Worth Analysis (**20 Year** Design Period, Discount Rate 3.625%)

Item	Ox Ditch/Sand Filter Option	Present Worth	SBR/ABNR Option	Present Worth	Bioloop/ABNR Option	Present Worth
Discount Rate	0.03625		0.03625		0.03625	
Design Period (yrs)	20		20		20	
WWTP Capital Cost	**$14,586,041.86**	$14,586,041.86	**$14,649,973.09**	$14,649,973.09	**$18,268,996.63**	$18,268,996.63
WWTP Utility Extension	**$1,529,560.00**	$1,529,560.00	**$1,529,560.00**	$1,529,560.00	**$1,529,560.00**	$1,529,560.00
Collection System Upgrades	**$2,076,539.00**	$2,076,539.00	**$2,076,539.00**	$2,076,539.00	**$2,076,539.00**	$2,076,539.00
O&M Present Worth	$587,378.00	$8,254,415.78	$581,652.00	$8,173,948.37	$487,207.00	$6,846,713.95
Salvage Value Present Worth	$80,000.00	-$72,000.00	$80,000.00	-$72,000.00	$80,000.00	-$72,000.00
Present Worth		**$26,374,556.63**		**$26,358,020.46**		**$28,649,809.58**

Appendix O

Proposed Project Site Map



ENGINEERS - SURVEYORS - ARCHITECTS

770 Technology Way
Chippewa Falls, WI 54729
Phone: 715.861.5226
www.cbssquaredinc.com

DRAWN BY:	RJH
DATE:	
DESIGNED BY:	
HORIZ. SCALE:	1" = 400'
VERT. SCALE:	
PROJECT NO.	

REVISIONS

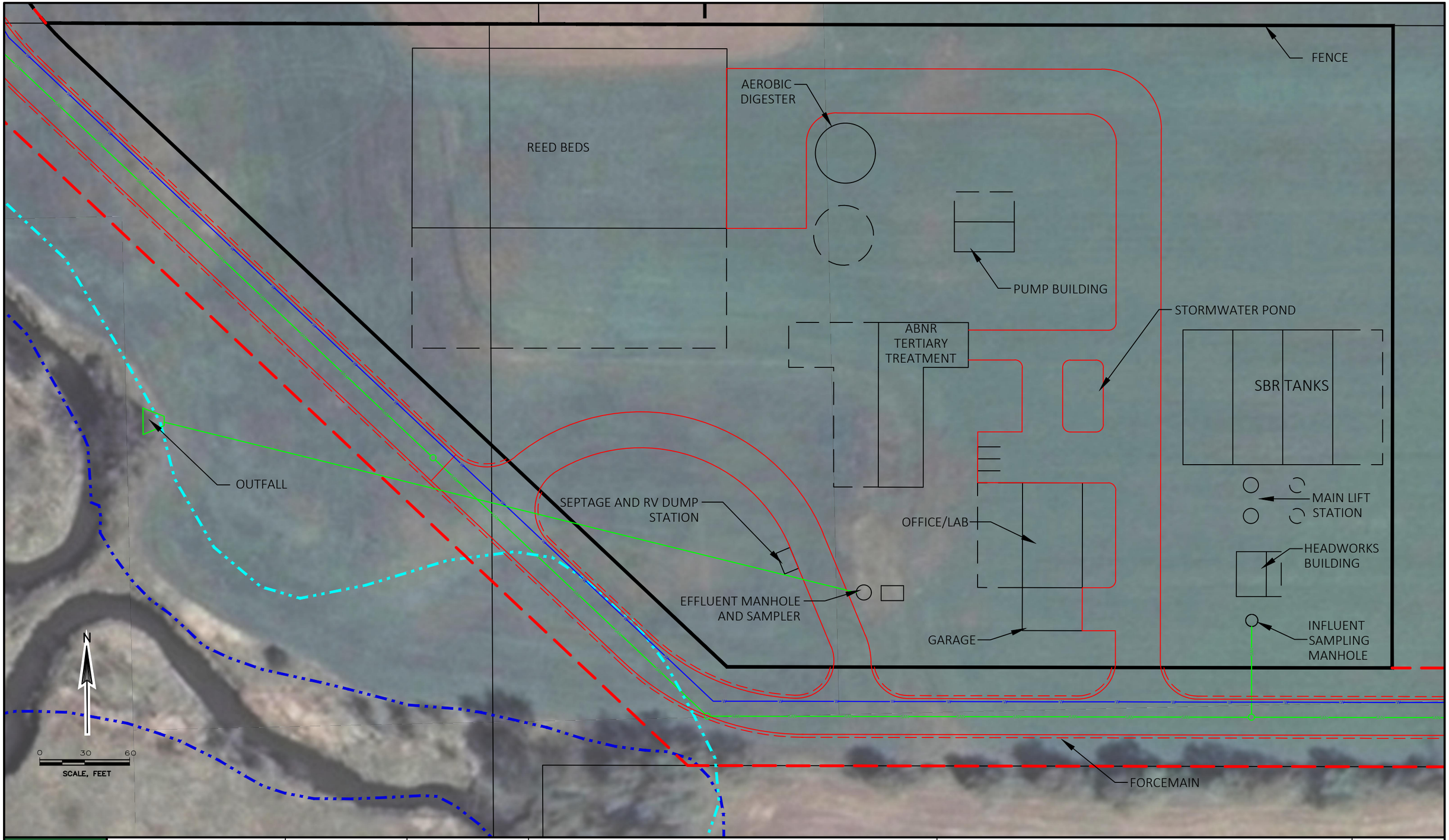
DATE:	AUTHOR:
06/10/19	RJH
06/28/19	RJH
07/03/19	RJH

MONDOVI, WI
BUFFALO COUNTY

PRELIMINARY INDUSTRIAL PARK & WWTP SITE MAP

SHEET

P:\MONDO\18001 WWTP Facility\5.0 Drawings and c3d\Prelim Ind Park Layout_Rev6



ENGINEERS - SURVEYORS - ARCHITECTS
770 Technology Way
Chippewa Falls, WI 54729
Phone: 715.861.5226
www.cbssquaredinc.com

DRAWN BY:	AHJ
DATE:	
DESIGNED BY:	
HORIZ. SCALE:	1" = 60'
VERT. SCALE:	
PROJECT NO.	

REVISIONS		
	DATE:	AUTHOR:

MONDOVI, WI
BUFFALO COUNTY

WWTP ENLARGED SITE MAP

SHEET

P:\MONDO\18001 WWTP Facility\5.0 Drawings and c3d\Prelim Ind Park Layout_Rev7

cbs²
ENGINEERS - SURVEYORS - ARCHITECTS
770 Technology Way
Chippewa Falls, WI 54729
Phone: 715.861.5226
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DRAWN BY:	AHJ
DATE:	
DESIGNED BY:	
HORIZ. SCALE:	1" = 60'
VERT. SCALE:	
PROJECT NO.	

REVISIONS		
	DATE:	AUTHOR:

MONDOVI, WI
BUFFALO COUNTY

LIFT STATION
ENLARGED SITE MAP

SHEET

P:\MONDO\18001 WWTP Facility\5.0 Drawings and c3d\Prelim Ind Park Layout_Rev7

Appendix P

Public Hearing Summary, Sign In Sheet and Public Notice

City of MONDOVI

156 S. Franklin St., Mondovi, WI 54755 Tel. 715-926-3866

CITY COUNCIL SPECIAL MEETING AND PUBLIC HEARING
AGENDA FINAL 2 OF 2

The Common Council of the City of Mondovi will be meeting for a special in City Hall Common Council Chambers, 156 S. Franklin St., Mondovi, Wisconsin on Tuesday, September 18, 2018.

All Agenda items are discussion topics and may be acted upon by Council and listed below is the proposed Agenda beginning at **6:30 P.M.**:

(a) Call meeting to order by Presiding Officer
(b) Pledge of Allegiance
(c) Roll Call
(d) Certification of Compliance with Open Meetings Law
(e) Citizen Comments
(f) CONSENT AGENDA:
  i. Accept the Agenda as Posted
(g) UNFINISHED BUSINESS FROM PREVIOUS MEETING(S) [For heading purposes only]:
  i. Swearing in of Ward II Councilmember Rita Brunkow
  ii. Appointment of Councilmember Brunkow to Committees:
    1. Finance Committee
    2. Planning Commission through 2019
    3. Zoning Board of Appeals through 2019
  iii. PUBLIC HEARING
    1. Open Public Hearing
    2. CBS Squared City of Mondovi's Waste Water Treatment Facilities Plan Presentation
    3. Public Input with regard to the City of Mondovi's Wastewater Treatment Facilities Plan
    4. Close Public Hearing
(h) NEW BUSINESS [For heading purposes only]:
  i. Resolution R-18-09-02 Stating the Appropriate Direction for the New Waste Water Treatment Plant
  ii. 600 block of W Main St Stormwater System repair
  iii. Determining date of Union Negotiations suggest September 25, 2018
(i) Reports of City Officers
(j) Communications and other business
(k) Adjournment

Mondovi WWTP Public Hearing
Sept 18

NAME (PRINT)	ADDRESS
Corey Goss	600 Buffalo St #25
Rita Brankow	250 S. Washington St
Darrell Bogenhalt	860 Jefferson St Mondovi
Brian Winnekins	Media - WRDN Radio
David Bonifas	Miss River Regional Plan Com
Beth Kraft	Mondovi Herald-News
Nancy Winberg	S11444 Maple Ridge Dr. Mondovi
Dwight Winberg	" same
Lynn D. Smith	548 W. Hudson St. Mondovi
Angie Risen	430 Parker Ave Mondovi
Brady Weiss	374 Minor Lake Dr.
David Schultz	201 S. Eau Claire St
Nathan M. Cook	223 Oak Street Mondovi WI
Virginia R Gunderson	540 N. Franklin St.
Bradley J. Hanson	131 S Eau Claire St #1, Mondovi
Jon Strang	770 Technology Way, Chippewa Falls, WI

City of MONDOVI

156 S. Franklin St., Mondovi, WI 54755 Tel. 715-926-3866

COUNCIL MINUTES – SPECIAL MEETING
SEPTEMBER 18, 2018

CALL TO ORDER:

Meeting was called to order at 6:30 P.M. by Mayor Weiss, presiding over the meeting at City Hall Council Chambers, 156 S. Franklin Street, Mondovi, WI.

ROLL CALL:

Council members present: Nelson, Schultz, Risen, Smith, and Gunderson. Absent was Bauer. Also present were City Administrator/Clerk Hanson and Mayor Weiss.

CERTIFICATION OF COMPLIANCE WITH OPEN MEETINGS LAW:

Hanson advised Council that the Mondovi Herald-News was provided the agenda notice, it was posted at public posting notice locations, and delivered to Councilmembers through their place of business or residence on Friday, August 31, 2018.

CITIZEN COMMENTS:

Brian Winnekins, owner of WRDN Radio in Durand, thanked the Council and the City for their support in allowing WRDN to broadcast on FM radio.

Mayor Weiss spoke about events he attended and was happy with local support of the community events.

ACCEPTED AGENDA:

Motion by Schultz and seconded by Smith to accept the agenda as posted. Motion carried.

UNFINISHED BUSINESS [for heading purposes only]:

1. SWEARING IN OF WARD II COUNCILMEMBER Rita Brunkow: Rita Brunkow sworn in to fill vacant Ward II seat on the council. Mayor Weiss requested Brunkow to be appointed to the following committees; finance, planning commission through 2019, and zoning board of appeals through 2019.
2. APPOINTMENT OF COUNCILMEMBER BRUNKOW TO COMMITTEES: Motion by Nelson and seconded by Risen to appoint Brunkow to the Finance Committee, and the Planning Commission and Zoning Board of Appeals with terms expiring in 2019. Motion carried.
3. PUBLIC HEARING: At 6:40 p.m. the public hearing opened with John Strand, Project Engineer with CBS Squared, giving a presentation on Mondovi's Wastewater Treatment Plant Project. Discussion on the location of the current plant not meeting the Department of Natural Resource's current requirements of flood plain boundaries. Discussed concerns of current plant's age and deteriorating structure and equipment. Department of Natural Resources requires waste treatment plants to dispose of water that is safe for recreational use. Existing plant scores low on the environmental and social concern. Infrastructure funding available for the construction of the plant through Rural Development that are being looked at by the City Clerk. Environmental screening process on land that is chosen for the site location is required by the Department of Natural Resources. Addressed resolution R-18-09-02 wording stating the "partnership" of ownership regarding the treatment plant.
4. PUBLIC INPUT REGARDING THE CITY OF MONDOVI'S WASTE WATER TREATMENT FACILITIES PLAN: No concerns from the public regarding the City of Mondovi's Wastewater Treatment Plant.
5. CLOSE PUBLIC HEARING: At 8:18 p.m. motion by Schultz and seconded by Brunkow to close the Public Hearing. Motion carried.

NEW BUSINESS [for heading purposes only]:

1. RESOLUTION R-18-09-02 STATING THE APPROPRIATE DIRECTION FOR THE NEW WASTE WATER TREATMENT PLANT: Motion by Smith and seconded by Nelson to accept Resolution R-18-09-02 with changes to the wording agreed upon after discussion. Motion carried with Brunkow voting no.
2. 600 BLOCK WEST MAIN STREET STORMWATER SYSTEM REPAIR: Motion by Schultz and seconded by Gunderson to accept a bid from RM Schlosser Excavating for $3,600 to repair the stormwater system on the 600 block of West Main Street. Motion carried.
3. DETERMINING DATE OF UNION NEGOTIATIONS: Adding Union Negotiations to the September 25, 2018 meeting agenda. No action.

REPORTS OF CITY OFFICERS:

Mr. Hanson reported conversation with Ed Mahlum regarding property at 147 W. Hudson Street. After discussion Mr. Mahlum purchased and donated the property to the City for a parking lot for the library. He also updated council that the audio and video security is currently up and running.

ADJOURNMENT:

At 8:55 p.m. motion by Risen and seconded by Schultz to adjourn. Motion carried.

_____

Bradley J. Hanson, City Administrator/Clerk
September 19, 2018

City of MONDOVI

156 S. Franklin St., Mondovi, WI 54755 Tel. 715-926-3866

CITY COUNCIL AGENDA FINAL 1 OF 1

The Common Council of the City of Mondovi will be meeting for their second meeting of the month in the City Hall Common Council Chambers, 156 S. Franklin St., Mondovi, Wisconsin on Tuesday, January 22, 2019.

Final subject matter on the Agenda is subject to change. The Final Agenda will be available by 5:00 p.m. on Monday, January 21, 2019.

All Agenda items are discussion topics and may be acted upon by Council and listed below is the proposed Agenda beginning at **6:30 P.M.**:

(a) Call meeting to order by Presiding Officer
(b) Pledge of Allegiance
(c) Roll Call
(d) Certification of Compliance with Open Meetings Law
(e) Citizen Comments
(f) CONSENT AGENDA:
  i. Accept the Agenda as Posted
  ii. Approval of Council Minutes from January 8, 2019
  iii. Committee Report(s) Approval:
    1. None for this meeting
  iv. Mondovi Activity Chart (MAC)
(g) Items removed from the Consent Agenda
(h) UNFINISHED BUSINESS FROM PREVIOUS MEETING(S) [For heading purposes only]:
  i. CBS Squared Waste Water Treatment Plant update status and presentation
  ii. Motion to rescind Council's previous motion Not to send the letter to owners of Peeso Creek Terrace privately held lots prior to January 1, 2018 made at the December 11, 2018 Council meeting
  iii. Motion to send the letter to owners of Peeso Creek Terrace to privately held lots prior to January 1, 2018 (only if motion to rescind is approved)
  iv. Public input regarding Common Councils potential direction with TIF 2 Repayment to the City of Mondovi's General Fund
  v. Resolution R-19-01-03 TIF 1 "Donor" District to transfer surplus to TIF 2 "Donee" District to repay the City's General Fund loan of nearly $1.9 million
  vi. Emergency Vehicle Operation and Control (EVOC) policy
  vii. Appoint Library Board and Park Board Members to fill vacancies
  viii. WIPFLi Agreement for 2018 Audit
  ix. Resolution R-19-01-04 a Resolution to Lift the Restrictions of the Open Container Ordinance, Section 9.01 Offenses Endangering Public Safety, Paragraph (5) Open Bottle, for the Mondovi Business Association's Annual Shamrock Shuffle on Thursday, March 14, 2019
  x. Animal Control Ordinance update and sub-committee established
(i) NEW BUSINESS [For heading purposes only]:
  i. Set joint meeting session date with School Board for 6:30 p.m. (Wednesday, **February 13** or 27, 2019)
  ii. Ordinance O-19-01-02 Fund Transfer Code repealed and recreated
  iii. Ordinance O-19-01-03 Council Meeting Order of Business Code repealed and recreated
(j) Reports of City Officers
(k) Approval of License Applications
  i. Operators Licenses
  ii. Class B Picnic Licenses
(l) Communications and other business

(m) Set next meeting date
(n) Adjourn into Closed Session pursuant to Wisconsin State Statutes 19.85 (1) (g) Regarding Bertrang v. City of Mondovi Attorney Update and direction
(o) Adjournment

City of MONDOVI
156 S. Franklin St., Mondovi, WI 54755 Tel. 715-926-3866

COUNCIL MINUTES
January 22, 2019

CALL TO ORDER:
Meeting was called to order at 6:30 p.m. by Mayor Brady Weiss, presiding over the meeting at City Hall Council Chambers, 156 S. Franklin Street, Mondovi, WI.

ROLL CALL:
Council members present: Nathan Nelson, David Schultz, Ginny Gunderson, Angie Risen, Lynn Smith, Greg Bauer, and Rita Brunkow arriving at 6:32 p.m. Also present were City Administrator/Clerk Hanson and Mayor Brady Weiss.

CERTIFICATION OF COMPLIANCE WITH OPEN MEETINGS LAW:
Hanson advised Council that the Mondovi Herald-News was provided the agenda notice on Friday, January 18, 2019. It was posted at public posting notice locations and delivered to Councilmembers through their place of business or residence also on Friday, January 18, 2019.

CITIZEN COMMENTS:
Gerry Goss was present to hear information on Peeso Creek Terrace and Dwight Winberg was present to voice concerns regarding the lots at Peeso Creek.

ACCEPTED AGENDA:
Motion by Nelson and seconded by Bauer to accept the consent agenda with the following changes made during discussion: January 8, 2019 minutes under accepted agenda to list the changes made during the discussion under the accepted agenda. MAC addition to add SPF's attendance at a future meeting in order to keep track of it. Motion carried.

ITEMS REMOVED FROM THE CONSENT AGENDA:
No items were removed from the Consent Agenda.

UNFINISHED BUSINESS [for heading purposes only]:
1. CBS SQUARED WASTE WATER TREATMENT PLANT UPDATE AND PRESENTATION: CBS Squared Engineer John Strand was present to update council and community on the Waste Water Treatment Plant (WWTP). Clearas Water Recovery representative Autumn Fisher presented a video explaining the process of removing nutrients from the water through algae use in a WWTP and harvesting it for other uses allowing for possible cost recovery for the facility. Strand explained the USDA financing program available for the plant. Grants are available along with 40-year financing with the USDA-RD. He explained the differences in Government versus private funding. He also explained the reason waste water rates will need to be increased to meet requirements for funding. Gerry Goss encouraged Council to reach out to local banks for their interest in financing the plant. Brunkow questioned whether the plant needs to be the size proposed and the cost associated with it. Strand explained the mandates with the Wisconsin Department of Natural Resources (WDNR) regarding the size of the plant allowing for future growth of a community. Brunkow would like information in writing before council is asked to take action on the plant. Hanson will supply the information requested. No action.
2. MOTION TO RESCIND COUNCIL'S PREVIOUS MOTION NOT TO SEND THE LETTER TO OWNERS OF PEESO CREEK TERRACE PRIVATELY HELD LOTS PRIOR TO JANUARY 1, 2018 MADE AT THE DECEMBER 11, 2018 COUNCIL MEETING: At 7:34 Mayor Weiss and Bauer excused themselves from the meeting. Smith discussed

the reason for considering rescinding this motion was due to failure to follow policy in the city code. The letter was drafted after a closed session meeting, and now in open session before closed session approval. Smith voiced concerns with the previous vote with the presence of individuals owning Peeso Creek lots at the dias. Smith stated the City attorney shared that Bauer and Weiss should not be involved in discussions regarding this issue. Julie Weiss commented on her feelings about the council's intentions of the Peeso Creek lots. She stated previous council members ok'd the purchase of more than one lot when they purchased them knowing only one house would be built. Discussion about the TIF district's main purpose was its benefits to the city through taxes paid on a housing development. Motion by Brunkow and seconded by Risen to rescind Council's previous motion to send the letter to owners of Peeso Creek Terrace privately held lots prior to January 1, 2018 made at the December 11, 2018 council meeting. Motion carried.

3. MOTION TO SEND THE LETTER TO OWNERS OF PEESO CREEK TERRACE TO PRIVATELY HELD LOTS PRIOR TO JANUARY 1, 2018 (ONLY IF MOTION TO RESCIND IS APPROVED): Motion by Risen and seconded by Brunkow not to send the letter to owners of Peeso Creek Terrace privately held lots prior to January 1, 2018 and from this day forward following the terms of the covenant. The purpose of the letter was to inform lot owners of the restrictions affiliated with the lot purchase. Smith read aloud the memo from the City Attorney to inform the public regarding information included in closed session; including restricted covenants that apply to Peeso Creek Terrace lots. Lot Covenants were recorded in 2006 at The Register of Deeds. City-owned lots have followed these covenants on the lots they have sold since taking ownership. Brunkow stated the Attorney mentioned too much time had lapsed to send the letter. She said we can't go back and fix it, furthermore, what would the point be. Gunderson and Smith both feel the public should be aware that there were covenants in place that were not followed. Schultz stated the city allowed the sale of two lots and they were aware that only one house was being built, and still gave building permits. Nelson stated council agreed to move forward in a past-meeting motion and the letter seems to be taking them backward. Gunderson felt it was important to note that the agreement (listing covenants) was signed by the purchasers stating the requirements of the lots. Motion carried with Smith voting no. At 8:07 Weiss and Bauer returned to the meeting.
4. PUBLIC INPUT REGARDING COMMON COUNCILS POTENTIAL DIRECTION WITH TIF 2 REPAYMENT TO THE CITY OF MONDOVI'S GENERAL FUND: No objections from public entities regarding Common Council's potential direction with TIF 2 repayment of nearly $1.9 million to the City of Mondovi's general fund. Rob Ganshow from WIPFLi was present to explain this repayment direction. No action.
5. RESOLUTION R-19-01-03 TIF 1 "DONOR" DISTRICT TO TRANSFER SURPLUS TO TIF 2 "DONEE" DISTRICT TO REPAY THE CITY'S GENERAL FUND LOAN OF NEARLY $1.9 MILLION: Motion by Nelson and seconded by Risen to approve Resolution R-19-01-03 TIF 1 "donor" district to transfer surplus to TIF 2 "donee" district to repay the city's general fund loan to assist in the repayment of the City's General Fund loan of $1,899,250. Motion carried.
6. EMERGENCY VEHICLE OPERATION AND CONTROL (EVOC) POLICY: Sergeant Tim Hollister was present to explain the Emergency Vehicle Operation and Control Policy. State statutes allows first responders to use lights and sirens to respond to the garage in the case of an emergency within the city limits. Hanson will look into whether personal vehicles would be covered by city insurance if an emergency responder had a collision during their response. Motion by Schultz and seconded by Gunderson to review the Emergency Vehicle Operation and Control Policy with changes at the February meeting. Motion carried.
7. APPOINT LIBRARY BOARD AND PARK BOARD MEMBERS TO FILL VACANCIES: Mayor Weiss recommended the approval of Heidi Weber to the Library Board upon her acceptance. Motion by Schultz and seconded by Bauer to accept Mayor Weiss' appointment of Heidi Weber to the Library Board upon her acceptance. Motion passed with Gunderson abstaining. Weiss noting there is a vacancy on the Park Board. Anyone interested should notify City Hall.
8. WIPFLI AGREEMENT FOR 2018 AUDIT: Hanson reported costs of three agencies for the 2018 Audit recommending WIPFLi for the 2018 Audit. Motion by Gunderson and seconded by Nelson to accept WIPFLi's agreement for the 2018 audit. Motion carried.

9. RESOLUTION R-19-01-04 A RESOLUTION TO LIFT THE RESTRICTIONS OF THE OPEN CONTAINER ORDINANCE, SECTION 9.01 OFFENSES ENDANGERING PUBLIC SAFETY, PARAGRAPH (5) OPEN BOTTLE, FOR THE MONDOVI BUSINESS ASSOCIATION'S ANNUAL SHAMROCK SHUFFLE ON THURSDAY, MARCH 14, 2019: Motion by Nelson and seconded by Risen to accept Resolution R-19-01-04 lifting the restrictions of the open container ordinance, section 9.01 offenses endangering public safety, paragraph (5) open bottle, for the Mondovi Business Association's annual Shamrock Shuffle on Thursday, March 14, 2019. Motion carried.
10. ANIMAL CONTROL ORDINANCE UPDATE AND SUB-COMMITTEE ESTABLISHED: Hanson updated Council on the animal control ordinance and sub-committee established thus far. He will publish notice in paper for citizen input and Council will act on it in March. No action.

NEW BUSINESS [for heading purposes only]:

1. SET JOINT MEETING SESSION DATE WITH SCHOOL BOARD FOR 6:30 P.M. WEDNESDAY, FEBRUARY 13, OR 27, 2019: Motion by Bauer and seconded by Risen to set the date for the joint session meeting with the school board for February 27, 2019 at 6:30 p.m. located in the IMC at the High School. Motion carried
2. ORDINANACE O-19-01-02 FUND TRANSFER CODE REPEALED AND RECREATED: Motion by Nelson and seconded by Bauer to accept Ordinance O-19-01-02 fund transfer code repealed and recreated. The City Treasurer and/or City Administrator will explain to the Finance Committee the reason for the proposed transfer of funds, and the Finance Committee adopts a motion that includes a recommendation to the Common Council regarding Council action on the proposed fund transfer. Motion carried.
3. ORDINANCE O-19-01-03 COUNCIL MEETING ORDER OF BUSINESS CODE REPEALED AND RECREATED: Motion by Smith and seconded by Nelson to accept Ordinance O-19-01-03 Council meeting order of business code repealed and recreated to allow changing the agenda order during meetings if needed. Motion carried.

REPORTS OF CITY OFFICERS:

Hanson noted Joel Street has a possible waste water line issue. Park Board Meeting is January 23, 2019; Personnel Meeting will be early February; Utility Meeting is January 31, 2019; Planning and Zoning Meeting February 21, 2019; He also said that property tax numbers were correct as stated in the City's article in the Mondovi Herald regarding the property tax increases.

Weiss will contact Durand Sanitation regarding contract. He will also meet with the police department regarding issues that have arose.

APPROVAL OF LICENSE APPLICATIONS:

1. OPERATOR'S LICENSE APPROVAL: No license applications.
2. PICNIC LICENSES: No picnic license applications.

COMMUNICATIONS AND OTHER BUSINESS:

Smith resigned from City Council effective January 23, 2019 as she no longer resides in the City of Mondovi.

SET NEXT MEETING DATE:

Next regular meeting of the Common Council will be held on February 12, 2019 at 6:30 p.m.

ADJOURN INTO CLOSED SESSION PURSUANT TO WISCONSIN STATE STATUTES 19.85 (1) (G) REGARDING BERTRANG V. CITY OF MONDOVI ATTORNEY UPDATE AND DIRECTION: Motion by Nelson and seconded by Bauer to adjourn into closed session pursuant to Wisconsin State Statutes 19.85 (1) (G) regarding Bertrang V. City of Mondovi attorney update and direction. Motion carried.

RETURN TO OPEN SESSION: At 10:20 returned to open session.

ACTION ON CLOSED SESSION: Motion by Schultz and seconded by Nelson to approve action in closed session. Motion carried.

ADJOURNMENT:

Motion by Risen and seconded by Bauer to adjourn at 10:25 p.m. Motion carried.

Bradley J. Hanson, City Administrator/Clerk
January 24, 2019

City of MONDOVI

156 S. Franklin St., Mondovi, WI 54755 Tel. 715-926-3866

NOTICE OF PUBLIC MEETING

In Accordance with the provisions of Section 19.84, 1975 Wisconsin Statutes:

CITY COUNCIL AGENDA FINAL 1 OF 1

The Common Council of the City of Mondovi will be meeting for their second meeting of the month in the Council Chambers at City Hall, 156 S. Franklin St, Mondovi, Wisconsin on Tuesday, September 10, 2019.

Final subject matter on the Agenda is subject to change. The Final Agenda will be available by 5:00 p.m. on Monday, September 9, 2019. All Agenda items are discussion topics and may be acted upon by Council and listed below is the proposed Agenda beginning at **6:30 P.M.:**

(a) Call meeting to order by Presiding Officer
(b) Pledge of Allegiance
(c) Roll Call
(d) Certification of Compliance with Open Meetings Law
(e) Citizen Comments
(f) CONSENT AGENDA:
  i. Accept the Agenda as Posted
  ii. Approve Common Council Minutes for August 27, 2019
  iii. Committee Report(s) Approval:
    1. Library Board Meeting August 6, 2019
    2. CDBG Residential Rehabilitation Committee September 4, 2019
    3. September 9, 2019 Finance Committee Report, additional accounts payable received after the meeting and recommendations of the committee
  iv. Mondovi Activity Chart (MAC)
(g) Items removed from the Consent Agenda
(h) REGULAR AGENDA:
  i. Valley Estates Plat, or parts thereof, de-annexation or detachment from the City jurisdiction consideration and City Attorney Information
  ii. Hilltop property (between the Heike and Joel Additions to the City of Mondovi) access information
  iii. CBS Squared Waste Water Treatment Plant (WWTP) and Industrial Park approvals to include, but not limited to:
    1. Geotechnical Approval
    2. Wetland Delineation
    3. Archeological Study
    4. Relocation Plan
    5. FINAL Public Hearing regarding the City's application for a Community Development Block Grant (CDBG) for the WWTP
    6. Emergency Repair work at the WWTP
  iv. Resolutions for Council consideration:
    1. R-19-09-01 Declaring a Waste Water Treatment Plant (WWTP) Repair Emergency
    2. R-19-09-02 Adopt 2020 Waste Water Rate Increase in Preparation for the New Waste Water
    3. R-19-09-03 Adopt Fee Schedule and Its Implementation Rates
  v. Stormwater Issue at the Mondovi School buildings at Jackson Street and Ayres & Associates Study Proposal
  vi. Elections voting location

vii. 2020 US Census information
viii. Forensic Audit Insurance Status
ix. Ordinance for Council consideration:
1. O-19-09-01 To repeal and recreate section 1.05 Compensation (1) (a) Mayor's Monthly Salary of the City of Mondovi Municipal Code to clarify with current city pay practice and/or state law.

(i) Reports of Mayor and Appointed Officials
(j) Approval of License Applications
i. Operator/Bar Tender/Server License Application Renewals
1. Shannon K. Johnson, Valley Golf
2. Jenny M. Draughon, Hansen's IGA
3. Micah P. Kautzman, Buzz's Bar & Grill
ii. Picnic Licenses
(k) Communications and other business
(l) Set next meeting date
(m) Adjournment

SIGNED: _____
Bradley J. Hanson, City Administrator/Clerk
Posted to Public Posting Locations on Friday, September 6, 2019 @ 1:00 p.m.

Copies Delivered to City Public Posting Locations of:

Mondovi City Hall Bulletin Board	Mondovi Post Office
Mondovi Public Library	Mondovi Herald-News
Mondovi Police Station	

PERSONS WITH DISABILITIES: *If you require special accommodations in order to attend this meeting, please contact City Hall at 715.926.3866 or adminrecep@mondovi.com at least 24 hours prior to meeting time.*

MONDOVI WWTP PUBLIC HEARING

9-10-19

NAME	ADDRESS
Jason L. Weiss	125 S. Eau Claire St Apt 1 Mondovi WI
Greg Bauer	354 Mirror Lake Dr Mondovi WI
Angie Risen	430 Parker Ave Mondovi, WI
Brody Weiss	374 Mirror Lake Dr.
Bradley [illegible]	232 S WASHINGTON ST
Dwight Schutz	201 S. Eau Claire St
Nathan Nelson	223 Oak Street
Virginia R Gunderson	540 N. Franklin St.
Duey Bauer	150 Madison St.

City of MONDOVI

156 S. Franklin St., Mondovi, WI 54755 Tel. 715-926-3866

COUNCIL MINUTES
September 10, 2019

CALL TO ORDER:

Meeting was called to order at 6:30 p.m. by Mayor Weiss, presiding over the meeting at City Hall Council Chambers, 156 S. Franklin St., Mondovi, WI.

ROLL CALL AND PLEDGE OF ALLEGIANCE:

Council members present were David Schultz, Gary Stanton, Nathan Nelson, Angie Risen, Ginny Gunderson, Greg Bauer, and Duey Bauer. Also present were Mayor Brady Weiss and City Administrator/Clerk Bradley Hanson.

CERTIFICATION OF COMPLIANCE WITH OPEN MEETINGS LAW:

Hanson advised Council that the Mondovi Herald-News was provided the agenda notice on Friday, August 30, 2019. It was posted at public posting notice locations and delivered to Councilmembers through their place of business or residence on Friday, September 6, 2019.

CITIZEN COMMENTS:

No citizen comments.

CONSENT AGENDA:

i. Accept the Agenda as Posted
ii. Approve Common Council Minutes for August 27, 2019
iii. Committee Report(s) Approval:
   1. Library Board Meeting August 6, 2019
   2. CDBG Residential Rehabilitation Committee September 4, 2019
   3. September 9, 2019 Finance Committee Report, additional accounts payable received after the meeting and recommendations of the committee
iv. Mondovi Activity Chart (MAC)

Motion by Risen and seconded by Stanton to accept the consent agenda with additional vouchers payable and payroll checks #46089-46099 and manual checks #2019079-2019080 totaling $108,583.07 added to Finance Report after the Finance meeting making the new voucher's payable total $322,445.85. Motion carried.

ITEMS REMOVED FROM THE CONSENT AGENDA:

No items removed from the consent agenda.

REGULAR AGENDA

1. VALLEY ESTATES PLAT, OR PARTS THEREOF, DE-ANNEXATION OR DETACHMENT FROM THE CITY JURISDICTION CONSIDERATION AND CITY ATTORNEY INFORMATION: Valley Estates Residents were present to discuss the process of detachment from the City jurisdiction. Residents made it known that they are engaging the legal process for detachment from the City and getting a war chest and attorney and just want to be let go. A former developer was present to explain how the annexation into the City came to be. No action.

   Council recessed at 7:24 p.m. and reconvened at 7:27 p.m.
2. HILLTOP PROPERTY (BETWEEN THE HEIKE AND JOEL ADDITIONS TO THE CITY OF MONDOVI) ACCESS INFORMATION: Information discussed on the access of the property between the Heike and Joel additions to the City of Mondovi explaining the property and vacating of roads to that property. No action.

3. CBS SQUARED WASTE WATER TREATMENT PLANT (WWTP) AND INDURSTRIAL PARK APPROVALS TO INCLUDE, BUT NOT LIMITED TO:
   i. Geotechnical Approval – Motion by Schultz and seconded by G. Bauer to approve the Geotechnical Engineering Services with Professional Services Industries (PSI) of Chippewa Falls, WI. Motion carried.
   ii. Wetland Delineation – Motion by Gunderson and seconded by Risen to approve hiring Ingraham Technical Services for the Wetland Delineation. Motion carried.
   iii. Archeological Study – Motion by G. Bauer and seconded by Nelson to hire TRC Environmental Corporation (TRC) of Brookfield, WI for the Archeological Study. Motion carried.
   iv. Relocation Plan – Motion by Schultz and seconded by Nelson directing the City Administrator to work with the City Attorney to work on the Relocation Plan. Motion carried.
   v. Final Public Hearing regarding the City's application for a Community Development Block Grant (CDBG) for the WWTP – At 7:41 p.m. the final Public Hearing regarding the City's application for a Community Development Block Grant (CDBG) was opened for the WWTP. CBS Squared Jon Strand presented information on the current WWTP and its deterioration and need for a new plant. He explained costs associated with the treatment process and the facility plan. Motion by Schultz and seconded by Nelson to close the Public Meeting at 7:58 p.m. Motion by Nelson and seconded by Gunderson to send the facility plan to the Department of Natural Resources (DNR) for their review and approval. Motion carried.
   vi. Emergency repair work at the WWTP – Hanson reported emergency repair work needed at the current waste water treatment plant for a pipe that has busted and needs to be repaired.
4. **RESOLUTIONS FOR COUNCIL CONSIDERATION**:
   i. RESOLUTION R-19-09-01 DECLARING A WASTE WATER TREATMENT PLANT (WWTP) REPAIR EMERGENCY: Motion by Gunderson and seconded by Schultz to approve Resolution R-19-09-01 declaring a Waste Water Treatment Plant (WWTP) repair emergency. Motion carried.
   ii. RESOLUTION R-19-09-02 ADOPT 2020 WASTE WATER RATE INCREASE IN PREPARATION FOR THE NEW WASTE WATER TREATMENT PLANT: Motion by Schultz and seconded by G. Bauer to approve Resolution R-19-09-02 to adopt 2020 waste water rate increase in preparation for the new Waste Water Treatment Plant. Motion carried.
   iii. RESOLUTION R-19-09-03 TO ADOPT FEE SCHEDULE AND ITS IMPLEMENTATION RATES: Motion by Nelson and seconded by D. Bauer to approve Resolution R-19-09-03 to adopt fee schedule and its implementation rates. Motion carried.
5. STORMWATER ISSUE AT THE MONDOVI SCHOOL BUILDINGS ON JACKSON STREET, AND AYRES & ASSOCIATES STUDY PROPOSAL: During construction at Mondovi School it has become apparent the storm water drains cannot keep up with the amount of water that is coming off the school buildings and parking area. The pipes were installed many years ago when the building was not so large. Ayres & Associates studied the area discovering the pipes are over capacity. Motion by Gunderson and seconded by Schultz to give City Administrator Hanson to communicate with the School District on the water issue. Motion carried.
6. ELECTIONS VOTING LOCATION: Hanson informed Council election voting location may possibly move to the Marten Center for 2020 elections. No action.
7. 2020 US CENSUS INFORMATION: Mayor Weiss notified Council that the US Census will be in the area in 2020. Employment opportunities are possible with the Census company; more information can be obtained at City Hall. No action.
8. FORENSIC AUDIT INSURANCE STATUS: The insurance claim has been denied from the Forensic Audit. Motion by Schultz and seconded by Gunderson to continue to try and settle with the Hanover Insurance Company. Motion carried.
9. **ORDINANCE FOR COUNCIL CONSIDERATION:**
   i. O-19-09-01 TO REPEAL AND RECREATE SECTION 1.05 COMPENSATION (1) (A) MAYOR'S MONTHLY SALARY OF THE CITY OF MONDOVI MUNICIPAL CODE TO CLARIFY WITH CURRENT CITY PAY PRACTICE AND/OR STATE LAW: Motion by Schultz and seconded by G. Bauer to accept Ordinance 0-19-09-01 to

repeal and recreate section 1.05 compensation (1) (a) Mayor's monthly salary of the City of Mondovi Municipal Code to clarify with current city pay practice and/or state law. Motion carried.

REPORTS OF MAYOR AND APPOINTED OFFICERS:

Mayor reported meeting with Brennen Company with gate repairs on the dam. A diver was able to make the repair to the dam gate and the water level has continued its draw down.

Hanson advised that Aptiv has advised there is no commitment for the intern to become an employee of the City. Employment can end anytime with no reimbursement requirements. Conventional rate case will be in 2020. Ron Kind met with Residents at the American Legion. Concerns from citizens and City Hall regarding Frontier Communications and their lack of service to the community.

APPROVAL OF LICENSE APPLICATIONS:

i. OPERATOR'S LICENSE APPROVAL:
   1. Shannon K. Johnson – Valley Golf
   2. Jenny M. Draughon – Hansen's IGA
   3. Micah P. Kautzman – Buzz's Bar & Grill

Motion by Nelson and seconded by Stanton to approve the above listed operator's licenses. Motion carried.

ii. CLASS B PICNIC LICENSE APPROVAL:
No picnic license applications.

COMMUNICATIONS AND OTHER BUSINESS:

Gunderson shared the development of a Capital Improvement Campaign for the Library Building Fund.

Stanton reported on the homes in Clear Lake, IA that he and Gunderson traveled to see with Hanson. He was impressed by their design and their price tag. They are energy free and run on solar panels. Future discussion of these homes for possible marketing of lots in Peeso Creek.

SET NEXT MEETING DATE:

Next meeting of the Common Council will be September 24, 2019 at 6:30 p.m. in Council Chambers.
Personnel Committee will meet September 17, 2019 at 6:00 p.m. in Council Chambers.
Joint Review Board also will meet September 17, 2019 at 5:00 p.m. in Council Chambers.

ADJOURNMENT:

Motion by Risen and seconded by D. Bauer to adjourn at 8:48 p.m. Motion carried.

Bradley J. Hanson, City Administrator/Clerk
September 11, 2019