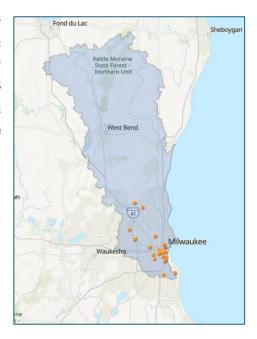


# Meat and Poultry Processing

## MILWAUKEE RIVER BASIN

The Milwaukee River Basin encompasses approximately 900 square miles, has 500 miles of perennial streams, and approximately 400 miles of intermittent or ephemeral streams. 433 river miles are on the EPA's impaired waters (Clean Water Action Section 303d) list. The Milwaukee River Basin includes the Milwaukee, Menomonee, and Kinnickinnic Rivers, which join together in downtown Milwaukee and flow into Lake Michigan. Approximately 80% of the Milwaukee River Basin is rural, and 20% is urban, and there are around 1 million people that live there. The vast majority of residents in the Basin get their drinking water from Lake Michigan and roughly one-third are on residential wells.



EPA has identified at least 22 potential Meat and Poultry Processing ("MPP") facilities in the Milwaukee River Basin, and they all appear to be discharging waste indirectly through municipal wastewater treatment facilities ("WWTPs"). In fact, many appear to be discharging to the Milwaukee Metropolitan Sewerage District ("MMSD"). In addition to MPP facilities, the Milwaukee River Basin has 12 Confined Animal Feeding Operations ("CAFOs"). Collectively, these facilities generate a staggering quantity of waste, much of which finds its way into the Milwaukee River Basin and associated waters, and are significant sources of pollution.

The Milwaukee River Basin currently has <u>3 EPA-approved TMDLs</u> (2018) for total suspended solids ("TSS"), total phosphorus ("TP"), and Pathogens in the form of *E. coli* and fecal coliform. Using the <u>2022 impaired waters list</u>, 370 river miles are impaired for TP, 117 miles are impaired for Chloride, and 108 miles are impaired for Pathogens.

#### **Indirect Dischargers to WWTPs**

Based on a map of indirectly discharging MPP facilities produced by EPA as part of the current ELG rulemaking and an electronic dataset from EPA, it appears that all 22 MPP facilities in the Milwaukee River Basin may be indirect dischargers through MMSD. See Appendix I for a list of Potential MPP facilities. Due to the nature of permitting for these facilities under the federal Clean Water Act, access to records for them is often limited. In this case, the pretreatment (Significant Industrial User) permits and Monitoring Reports for these facilities are not available online, nor is the Bi-Annual Pretreatment Compliance Report for MMSD. EPA has not established national pretreatment standards for indirectly discharging MPP facilities and, as a result, they are known to be significant contributors of pollutants to the nation's waters.

Of the indirect dischargers to the MMSD system, there are 3 MPP Significant Industrial Users ("SIUs") permitted by MMSD: Cargill Meat Solutions in Butler (one additional facility in Milwaukee is not permitted), Smithfield Package Meats in Cudahy, and Palermo Villa in the Menomonee Valley of Milwaukee. MMSD currently requires that these facilities report for hexane extractable materials (Oil and Grease) and pH. They also require facilities to report flow and biological oxygen demand, but this is only for pricing and not compliance purposes. These permits' terms are inadequate to monitor or control pollutants from these MPP SIU facilities. For example, the permits do not require monitoring for many pollutants of concern as identified in the Milwaukee River TMDLs, including TP, Chlorides, and Pathogens, nor do the permits include any limits for Ammonia-N, Total Nitrogen, TKN, or Nitrate-Nitrite, which are known as pollutants of concern with these facilities. In addition, there is no readily available information at all for the other indirect dischargers to the MMSD system.

#### MILWAUKEE METRO SEWERAGE DISTRICT

MMSD is a municipal WWTP that provides water reclamation and flood management services for about 1.1 million people in 28 communities in the Greater Milwaukee Area, covering approximately 423 square miles. MMSD operates about 300 miles of regional sewers, and receives sewage from 3,000 miles of municipal sewers, and an estimated 3,000 miles of private lateral sewers. MMSD operates two major sewer treatment plants: Jones Island Sewage Treatment Plant and South Shore Sewage Treatment Plant. Established by state law, MMSD is governed by eleven commissioners with taxing authority, with commissioners appointed by the City of Milwaukee and 28 customer communities. MMSD generally treats around 150 million gallons per day during dry weather but has the capacity to treat up to 630 million gallons per day. MMSD has had a deep tunnel system since 1994, with a storage capacity of 520 million gallons. Prior to the deep tunnel system, MMSD had around 50-60 sewage overflows per year, and they now average around 2.2 per year.

<u>permit</u> since January 1, 2021 (see below); with 3 quarters in significant non-compliance, including the last 2 quarters of 2023. The <u>April 1, 2019 NPDES Permit</u> for the WWTP contains permit limits that allow for very high discharges of Ammonia-N at South Shore (27 mg/l weekly average, monthly average, daily max) and no limit at all for the Jones Islands Treatment Plant. The permits do include limits for both plants on TP and TSS, but no TMDL limits for South Shore for Phosphorus or TSS, ostensibly because this plant discharges to Lake Michigan outside of the Milwaukee River Estuary. The NPDES permit also lacks any concentration limits at all for Metals, Chlorides, TKN, Nitrate-Nitrite, and Total Nitrogen at either plant.

SELECTED LIMITS FOR (Outfall) 001 – SOUTH SHORE EFFLUENT LAKE MICHIGAN – 113 MGD ANNUAL AVERAGE

Parameter	Limit	Limit Type	
		Daily Max	
Nitrogen, Ammonia	27 mg/L	Weekly Avg	
(NH3-N) Total		Monthly Avg	
	972 #/100 ml	Geometric Mean – Wkly	
Fecal Coliform	400 #/100 ml	Geometric Mean - Monthly	
E. coli	None		
Phosphorus, Total	1 mg/L	Monthly Avg	
(Conc.)	0.7 mg/L	6-Month Avg	
Phosphorus, Total	None		
(Loading TMDL)	None		
Total Suspended Solids	45 mg/L	Weekly Avg	
(Conc.)	30 mg/L	Monthly Avg	
Total Suspended Solids	None		
(Loading - TMDL)	None		
Total Nitrogen, Nitrate-	None		
Nitrite, or TKN	None		
Arsenic, Total	None		
Recoverable	None		
Cadmium, Total	None		
Recoverable	None		
Chromium, Total	None		
Recoverable	None		
Copper, Total	None		
Recoverable	INUITE		
Lead, Total Recoverable	None		
Nickel, Total	None		
Recoverable	None		
Zinc, Total Recoverable	None		

## SELECTED LIMITS FOR (Outfall) 002 – JONES ISLAND EFFLUENT MILWAUKEE OUTER HARBOR – 123 MGD ANNUAL AVERAGE

Parameter	Limit	Limit Type		
Nitrogen, Ammonia (NH3-N)	None	7.		
Total	None			
	972 #/100 ml	Geometric Mean – Wkly		
Fecal Coliform	400 #/100 ml	Geometric Mean - Monthly		
E. coli	None			
Phosphorus, Total	0.66 mg/L	Monthly Avg		
Phosphorus, Total (Loading - TMDL)	664 lbs/day	Monthly Avg - January, March, May, July, August, October, and December		
	735 lbs/day	Monthly Avg - Effective February		
	686 lbs/day	Monthly Avg - Effective April, June, September, and November		
Total Suspended Solids	45 mg/L	Weekly Avg		
Total Suspended Solids	30 mg/L	Monthly Avg		
	51,332 lbs/day	Weekly Avg - January, March, May, July, August, October, and December		
	56,832 lbs/day	Weekly Avg - Effective February		
Total Suspended Solids (Loading - TMDL)	53,043 lbs/day	Weekly Avg - Effective April, June, September, and November		
	30,195 lbs/day	Monthly Avg - January, March, May, July, August, October, and December		
	33,430 lbs/day	Monthly Avg - Effective February		
	31,202 lbs/day	Monthly Avg - Effective April, June, September, and November		
Total Nitrogen, Nitrate- Nitrite, or TKN	None			
Arsenic, Total Recoverable	None			
Cadmium, Total Recoverable	None			

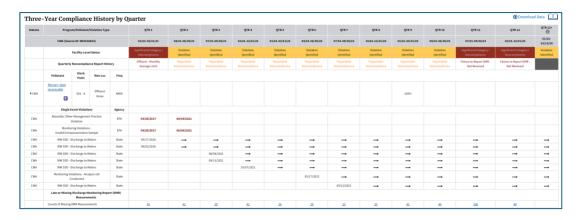
Chromium, Total	None	
Recoverable		
Copper, Total Recoverable	None	
Lead, Total Recoverable	None	
Nickel, Total Recoverable	None	
Zinc, Total Recoverable	None	

# SELECTED LIMITS FOR (Outfall) 003 - JONES ISLAND NCCW MILWAUKEE INNER HARBOR/KINNICKINNIC RIVER - 1.14 MGD ANNUAL AVERAGE

Parameter	Limit	Limit Type
Nitrogen, Ammonia (NH3-N)	None	
Total	None	
Fecal Coliform	None	
E. coli	None	
Phosphorus, Total	None	
Phosphorus, Total (Loading -	None	
TMDL)		
Total Suspended Solids	None	
Total Suspended Solids	None	
(Loading - TMDL)	None	
Total Nitrogen, Nitrate-	None	
Nitrite, or TKN	None	
Arsenic, Total Recoverable	None	
Cadmium, Total Recoverable	None	
Chromium, Total	None	
Recoverable	None	
Copper, Total Recoverable	None	
Lead, Total Recoverable	None	
Nickel, Total Recoverable	None	
Zinc, Total Recoverable	None	

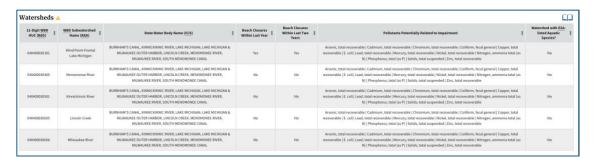
This outfall is for non-contact cooling water, so not likely to contain MPP pollutants of concern.

<u>ECHO</u> Noncompliance since at least January 1, 2021, Significant Noncompliance in 3 Quarters:

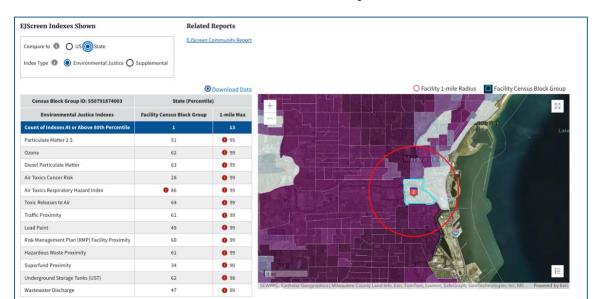


According to the ECHO database, there are also significant numbers of missing Discharge Monitoring Reports (DMRs) from the MMSD since 2021. In the last quarter of 2023, from October 1 to December 31, 2023, there were 48 missing DMRs, including for Temperature, Phosphorus, Flow, Chlorine, and Ammonia-N. In the third quarter of 2023, from July 1 to August 30, there were 198 missing DMRs, including Phosphorus, E. coli, BOD, pH, Copper, Chlorine, Fecal Coliform, Nickel, Mercury, Zinc, Flow, Ammonia-N, Chromium, Temperature, TSS, Lead, Arsenic, and Cadmium. There could be significant issues with the permitted SIUs discharging to MMSD, but the lack of DMRs essentially prevents evaluation of the extent of the impact. However, Wisconsin DNR made a substantial compliance determination for MMSD in 2017, where its discharge was linked as a source of impairment to several subwatersheds within the Milwaukee River Basin, including Lake Michigan.

#### 2017 Wisconsin Substantial Compliance Determination

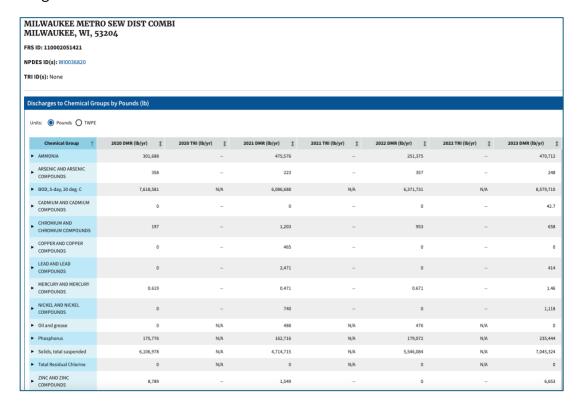


There are 12 U.S. and 13 <u>State Environmental Justice (EJ) Indexes</u> or census block groups above the 80<sup>th</sup> percentile for pollution (see Indexes below). Communities within 1 mile of Jones Island are considered to be in the 99<sup>th</sup> percentile for wastewater discharges.

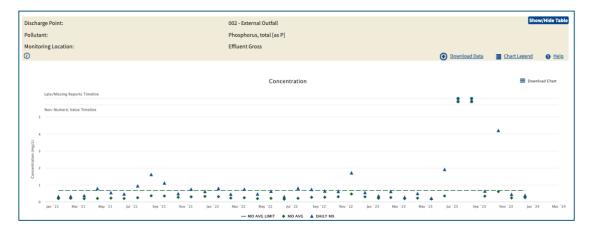


#### EJ Screen Indexes for MMSD Jones Island Facility/Downtown Milwaukee

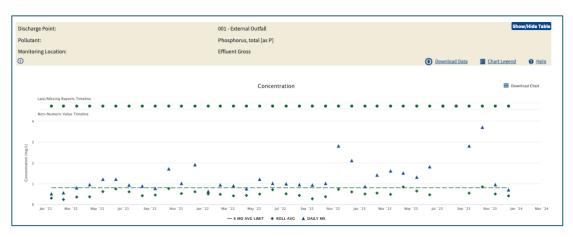
It's important to note that MMSD also treats sewage for 28 other municipalities, some of which contain EJ census tracts, but the vast majority of treated effluent is discharged to the Greater Milwaukee area. Despite all of the missing DMR data that has been submitted, ECHO DMR and TRI Multi-Year Loading Reports still show very high concentrations and loading of Ammonia-N, TSS, Phosphorus, and BOD to Lake Michigan.



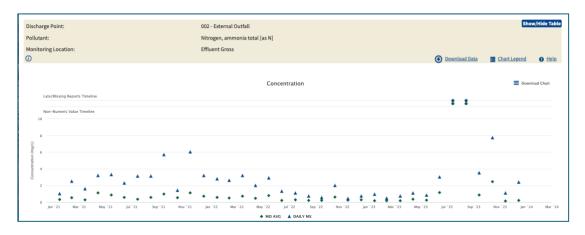
### MMSD Jones Island Outfall Phosphorus Concentrations:



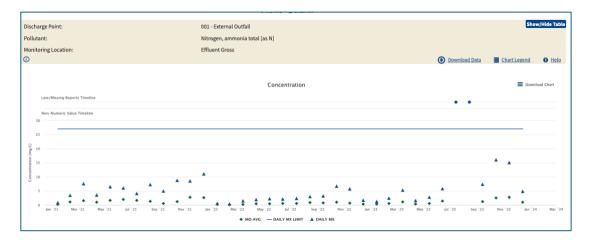
#### MMSD South Shore Outfall Phosphorus Concentrations:



#### MMSD Jones Island Outfall Ammonia-N Concentrations:



#### MMSD South Shore Outfall Ammonia-N Concentrations:



#### **Significant Industrial Users**

We do not have compliance reports for any of the 3 permitted SIUs for MMSD and have not had time to conduct public information requests responsive to the MPP federal rulemaking. We also do not know which sewage treatment plant is receiving waste from these 3 SIU facilities.

Upon inquiry, MMSD stated that the 3 Industrial User Permits are monitored according to federal regulations and that, for the 3 permitted SIUs, the primary pollutant of concern for regulatory purposes is hexane extractable materials, which generally measures the amount of grease that could clog sewers. Further, MMSD indicated the SIUs are monitored only to verify compliance with oil/grease (HEM) and pH, but not at the frequency that would be required to determine loadings. MMSD stated in an email that none of the 3 facilities were found to be in significant noncompliance from 2019-2023 for effluent violations (of HEM or pH), but that the Cargill facility was found to be in significant noncompliance last year for late reporting issues. Many of the pollutants of concern with MPPs are not included in MMSD's pretreatment permits. And while a meat packing category does exist, there are no meat packing categorical pretreatment standards that apply to these facilities on the state or federal level.

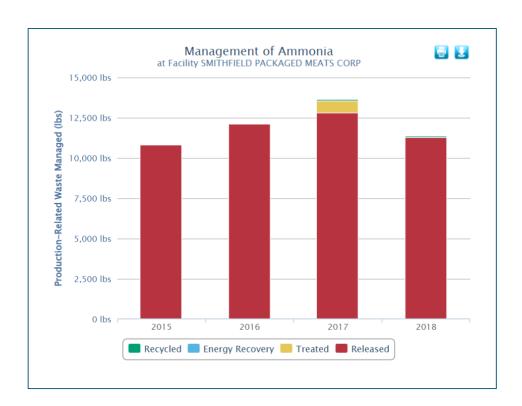
#### **Cargill Meat Solutions**

MMSD provided us with a copy of the pretreatment permit<sup>2</sup> for the Cargill facility in New Berlin. According to this permit (Wastewater Discharge Permit 1.04, September 27, 2021), Cargill is required to sample once from January 1 to June 30 and once from July 1 to December 31 for pH (which is never to exceed 5) and Hexane Extractable Materials (HEM for oil and grease; not to exceed 300 mg/L). The facility is permitted

to discharge a selection of heavy metals in its process wastewater that is sent to the WWTP (Outfall 3.0), including Zinc (8 mg/L), Arsenic (0.6 mg/L), Chromium (64 mg/L), Cadmium (1.5 mg/L), Copper (6 mg/L), Cyanide (2.9 mg/L), Lead (2.0 mg/L), Molybdenum (12 mg/L), Nickel (4 mg/L), and Silver (5.8 mg/L). Cargill's pretreatment permit does not contain limits on Ammonia, TSS, BOD, COD, TKN, Total Phosphorus, Chlorides, or Pathogens that would be expected as part of process wastewater for MPPs. It is our understanding that the other major indirect dischargers, including Smithfield and Palermo Villa, have essentially the same pretreatment limits.

#### **Smithfield Packaged Meats**

Smithfield Packaged Meats did submit a historic Toxic Release Inventory to EPA (2015-2018), which is available for <u>Ammonia</u>, and shows very high levels were released.



#### Conclusion

In conclusion, neither the NPDES permit for MMSD nor the pretreatment permits for MPP facilities contain adequate limits to protect our waters from pollutants like TP, Nitrogen, and TSS, two of which the Milwaukee River Basin has TMDLs to address. While the 3 permitted MPP facilities discharging to MMSD do not have any significant

violations (for HEM or pH), they are not required to treat for nor monitor most pollutants of concern associated with MPP facilities. EPA estimates that these facilities are the primary source of nutrients in industrial wastewater, and also contribute significant levels of TSS and Chlorides, which affect most of our waters in the Milwaukee River Basin.

We are also concerned that the majority of the MPP facilities identified by EPA are not permitted, including Campbell Soup Supply, Usingers Sausage, Klements Sausage, and others. These facilities are likely a significant source of pollutants to the MMSD system, some of which are treated and others of which are merely diluted.

This situation illustrates the need for national pretreatment standards to prevent these problems, which can arise when municipalities that lack adequate wastewater treatment plants agree to take the waste produced by MPP facilities to spur economic development without mandating protective pretreatment requirements, and when state regulators issue NPDES permits for the WWTP that are not protective of water quality given the pollutant loads that the WWTP must handle. MMSD is a massive and complex system and is funded better than many smaller rural and urban systems. Undoubtedly, the deep tunnel allows for many pollutants, such as Ammonia, to be broken down, converted to other forms of Nitrogen, and diluted as the waste travels through the vast sewage conveyance system. However, MMSD's own data shows that their two WWTPs have had difficulty meeting nutrient standards in the last several years, and these issues are likely to increase with climate change impacts from extreme, wet weather events that strain our older infrastructure.

These examples illustrate the importance of EPA rejecting its preferred option — Option 1— in the current MPP Effluent Limit Guidelines rulemaking. Option 1 would require only 22 percent of slaughterhouses and rendering plants (845 of 3,879) that discharge to waterways directly or indirectly through municipal WWTPs to use some form of modern pollution-control technology, which would only cut discharges of nitrogen by 10 percent (or 9 million pounds a year) and phosphorus by 37 percent (or 8 million pounds). Additionally, for the 3,708 slaughterhouses and rendering plants that discharge indirectly by sending their wastewater to municipal treatment plants, such as in Milwaukee, Option 1 would not set any limits to control nitrogen and phosphorus pollution and would only control oil and grease, total suspended solids, and biochemical oxygen demand from about 719 facilities across the country. This would likely add TSS and BOD as regulated pollutants to the 3 SIUs that discharge to the MMSD system, but that would have limited impact.

EPA's most protective option—Option 3—would place nitrogen and phosphorus limits on 133 direct dischargers and would also limit nitrogen, phosphorus, and other harmful pollution from roughly 1,485 facilities that indirectly discharge through municipal sewage treatment plants. In total, EPA estimates that this option would reduce pollution from 42 percent (1,620) of the plants and cut the total amount of nitrogen pollution from the industry by 83 percent (or 76 million pounds annually) and phosphorus pollution by 94 percent (or 20 million pounds). This would have a significant positive impact to the Milwaukee River Basin and nearshore Lake Michigan.

Adoption of protective pretreatment standards for indirect dischargers is imperative in order to protect the nation's waters, including the Milwaukee River Basin. Option 3 provides the strongest water pollution control standards of the proposed options, but it must also be modified in various ways outlined by Waterkeeper Alliance, Waterkeeper groups, and other partners in detailed comments, which are being submitted to EPA, to fully address Clean Water Act requirements and properly address environmental justice impacts.

Appendix I - List of Potential MPP Facilities from EPA Data (Direct, Indirect, and "Non-Discharging")

Facility	Latitude	Longitude
American Pasteurization Co LLC	43.071044	-88.050946
American Pasteurization Company		
CoManufacturing	43.07073	-88.05186
Badger Boiled Ham Co., Inc.	43.002982	-87.95857
Bay View Packing Co.	43.035033	-87.937063
Campbell Soup Supply Co., LLC	42.951986	-87.919141
Cargill Meat Solutions Corporation	43.102179	-88.076064
Cargill Meat Solutions Corporation	43.030391	-87.930617
Country Maid, Inc.	43.009852	-87.909189
Fred Usinger, Inc.	43.027113	-87.909159
Fred Usinger, Inc.	43.04346	-87.914414
Gahn Meat Company, Inc.	43.07956	-87.957289
Garden Fresh Foods, Inc.	43.023758	-87.926685
Han Yang Inc	43.016842	-87.964911
Kettle Range Meat Co. LLC	43.043584	-87.982143
Klement's Sausage Company, Inc.	42.996444	-87.912256
Klement's Sausage Company, Inc.	43.0024076	-87.9075899
Lindsay Foods, Inc.	43.022591	-87.941044
Malone's Fine Sausage, Inc.	43.052686	-87.914723
Midwest Refrigerated Milwaukee, Inc.	43.1759	-88.0154
Midwest Refrigerated Milwaukee, Inc.	43.192192	-88.05155
Palermo Villa, Inc.	43.011184	-87.921524
Smithfield Package Meats Corp.	42.956931	-87.865874

#### **Endnotes**

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<sup>&</sup>lt;sup>1</sup> NPDES Permit Fact Sheet for NPDES Permit No. WI-0036820-04-0 Milwaukee Metro Sewer District Combined. **Exhibit 1** 

<sup>&</sup>lt;sup>2</sup> MMSD, Wastewater Discharge Permit 1.04 for Cargill Meat Solution – Butler, 4700 N. 132<sup>nd</sup> Street, Butler, WI (Sept. 17, 2021). **Exhibit 2**