



2021 Compliance Maintenance Annual Report

June 16, 2022

Madison Metropolitan Sewerage District



CMAR – Requirements

- Statute Ch. 283 – Pollution Discharge Elimination
- Implemented by NR 208
- WPDES Permit Requirement
- Approval of Resolution by Governing Body





department pursuant to ch. 283, Stats.

History: CR 04-022: cr. Register November 2004 No. 587, eff. 1-1-05; CR 12-027: cr. (1m) Register July 2013 No. 691, eff. 8-1-13.

NR 208.04 Compliance maintenance annual report.

(1) PURPOSE. The compliance maintenance annual report describes wastewater management activities, physical conditions and performance of the treatment works during the previous calendar year. It provides a treatment works owner and the department with an objective analysis to determine whether a more detailed evaluation of the treatment works shall be conducted and where attention should be focused. The owner and the department may use the CMAR to identify needs for future planning actions. In conjunction with a grading system, the CMAR shall establish when treatment works owners are required to initiate actions to prevent violations of WPDES permit effluent limits and conditions.

(2) SUBMITTAL, TIMING AND OTHER REQUIREMENTS. (a) *General.* All owners of treatment works shall submit the CMAR electronically on or before June 30 of each year. The owner shall register with the state of Wisconsin to submit electronic reports to the department. Owners of the treatment works or duly authorized

CMAR Purpose

Protect Public Health & Environment

Summarizes treatment plant performance and compliance with WPDES permit requirements

Communication Tool

Report is prepared by the District, approved by the Commission, and reviewed by WDNR

Identifies Areas in Need of Improvement

Grading system provides overview of strengths and areas requiring further attention





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The CMAR is not:

WWTP Specific

Same report is completed by all WWTPs across the state, regardless of size

Reporting New Data or Noncompliance Issues

CMAR summarizes all monthly reports and any permit violations that may have occurred in previous year

Punitive

Low grades are meant to prompt discussion and response actions



(5) **CONTENT.** The CMAR shall include an evaluation of the following sections and information, as it applies to a specific treatment works and as determined by the department under s. NR 208.05 (1):

- (a) Influent flow and loading.
- (b) Effluent quality and plant performance (BOD/CBOD).
- (c) Effluent quality and plant performance (total suspended solids-TSS).
- (d) Effluent quality and plant performance (ammonia-NH₃).
- (e) Effluent quality and plant performance (phosphorus-P).
- (f) Effluent quality and plant performance (total nitrogen-total N).
- (g) Groundwater quality.
- (h) Ponds and lagoon leakage.
- (i) Biosolids quality and management.
- (j) Staffing and preventative maintenance.
- (k) Operator certification and education.
- (L) Financial management.
- (m) Sanitary sewer collection systems.
- (n) Grading summary.
- (o) Resolution or owner statement.

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CMAR Content:

Grade Assigned to Each Section

A – F. Total of 148 points available. GPA calculated on a 4.0 scale

Quantitative

Effluent quality: CBOD, TSS, NH₃, TP

Energy efficiency and use at plant and pump stations

Qualitative

Is your plant adequately staffed? What are you doing to manage I/I? What major projects are planned for the next 10 years?



2021 CMAR Scorecard

A	Influent Flow and Loadings
A	Effluent Quality: BOD
A	Effluent Quality: TSS
A	Effluent Quality: Ammonia
A	Effluent Quality: Phosphorus
D	Biosolids Quality and Management
A	Staffing
A	Operator Certification
A	Financial Management
A	Collection Systems
3.59	Overall GPA

- 2021 CMAR Results

- “A” in 9/10 sections

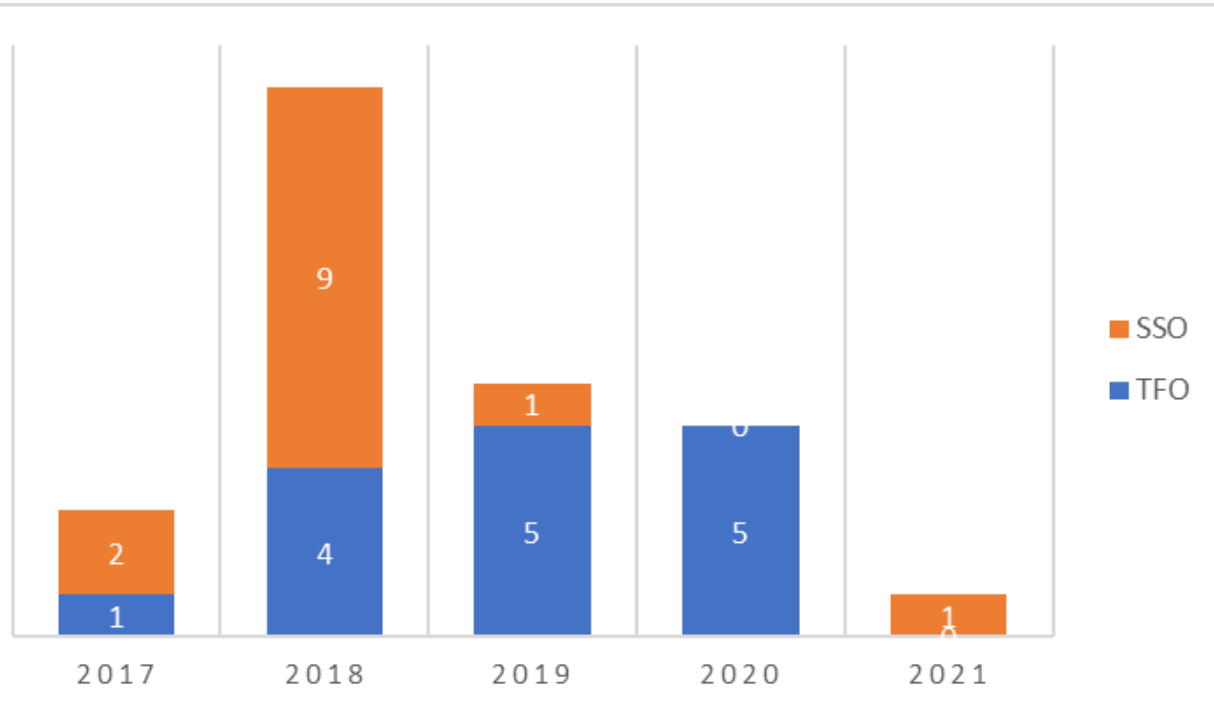
- Weighted score of 133/148

- 15 points deducted from biosolids nitrogen overapplication

- Raised grade in Effluent Quality: Ammonia from a “B” in 2020 to an “A”

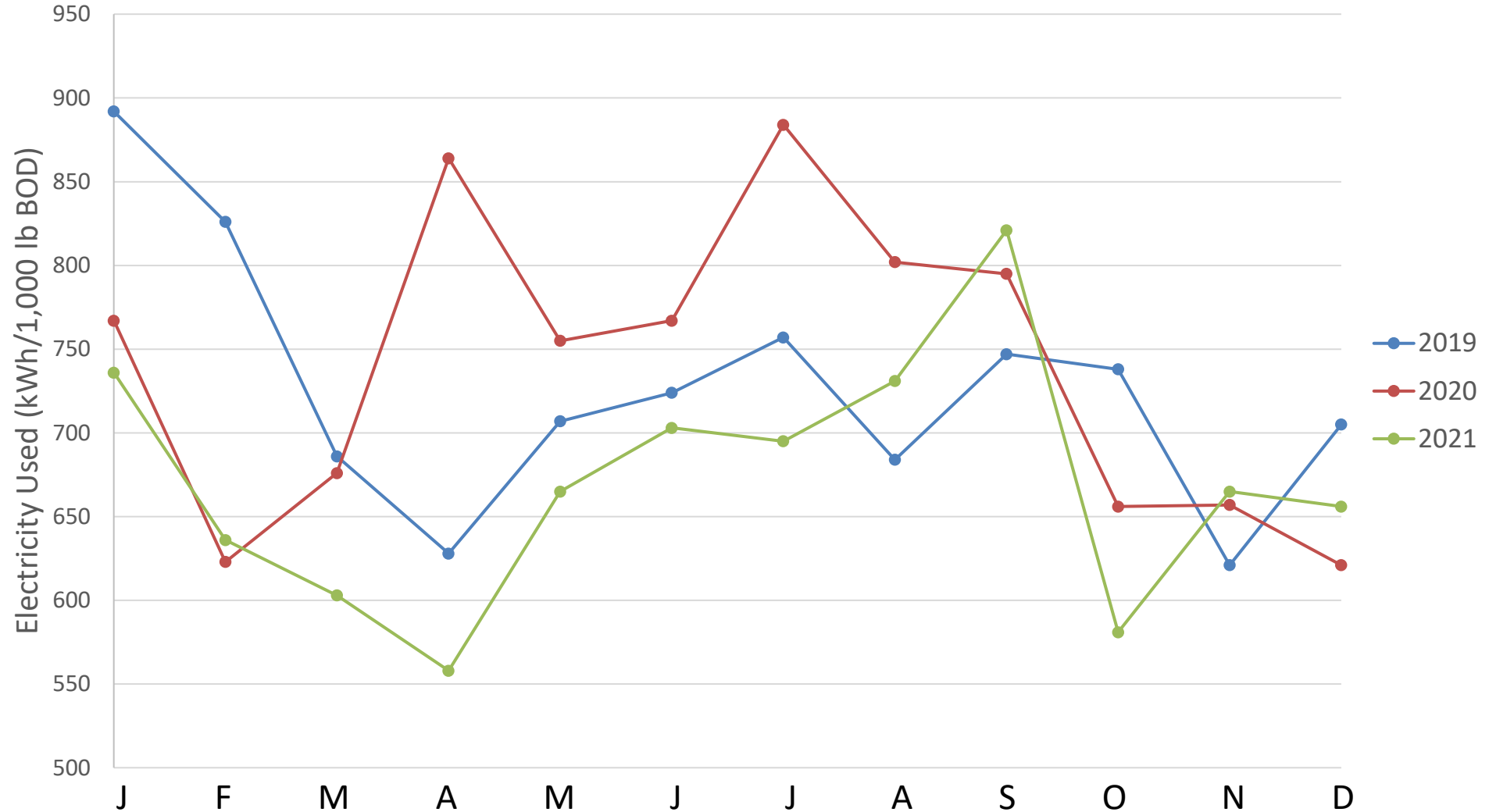
- Only one sanitary sewer overflow (SSO) and zero treatment facility overflows (TFO)

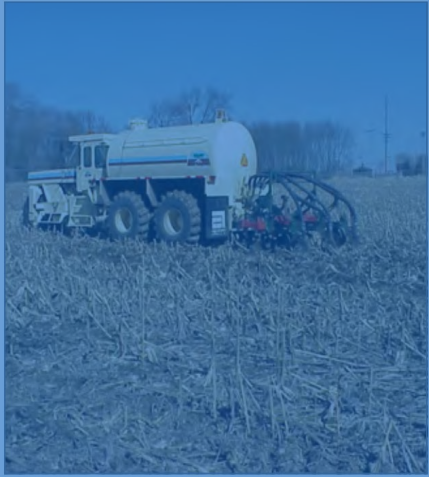
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Energy Efficiency at Treatment Plant

Electricity Consumed During Treatment (Purchased)





Biosolids Management:

Overapplication of Nitrogen

Nitrogen overapplied on 20 fields

Cumulative amount of nitrogen applied was <0.5% over the permitted quantity & impacted <5% of total acreage

Database Errors

Resulted in overapplication of 14 fields

QA/QC process now flags erroneous data outside expected application rate

Aging Applicator Equipment

Old applicators are not equipped with GPS and rely on human operator

Old equipment is being phased out

Sanitary Sewer Overflow:

Pump Station 7 Force Main Leak

Leak was discovered on Beltline in vicinity of road construction site

Overflow Response Actions

Appropriate agencies were contacted, force main was isolated, location of leak was discovered
Overflow was contained in construction site

Reoccurrence Prevention

Inspection of force main and installation of liner



CMAR – Conclusion

- Overall GPA: 3.59
- Resolution
 - Response actions required for grades below “B”
 - Biosolids Management
 - Replace aging equipment
 - Implement new QA/QC process for database review
 - Actions to prevent SSO recurrence
- Next steps: certification and submission by June 30, 2022



Thank you

