What EGLE Reviews vs. What the Saline Data Center Actually Consumes

The Oracle/OpenAI facility's indirect water footprint exceeds EGLE's permit trigger by a factor of 2,000, but falls outside the regulatory framework entirely.

74 billion gallons per year of indirect water withdrawal through DTE's grid vs. 36.5 million gallons per year that triggers EGLE's Water Withdrawal Assessment Tool.

Ratio: the indirect footprint is ~2,027× the EGLE WWAT threshold. No permit, no review, no public notice.

Side-by-Side Comparison

Water Metric	EGLE Permit Threshold	Saline Facility Direct (On-Site)	Saline Facility Indirect (Grid)	Ratio: Indirect ÷ Trigger
Annual water withdrawal	36.5 M gal/yr[1]	3.7–7.3 M gal/yr[2]	74,000 M gal/yr[3]	2,027×
Daily water withdrawal	100,000 GPD	10,000–20,000 GPD	~203 M GPD	2,027×
Annual water consumed (evaporated)	Not assessed	Minimal[4]	4,300 M gal/yr[5]	—
Triggers EGLE WWAT review?	≥100,000 GPD	No (below threshold)	Not in scope	—
Requires water withdrawal permit?	≥2M GPD	No	Not in scope	—
Cumulative watershed demand assessed?	No mechanism	No	No	—
Drought/climate vulnerability modeled?	No	No	No	—
Public notice and comment period?	Yes (if triggered)	No (not triggered)	No (not in scope)	—

1. EGLE WWAT trigger: 100,000 GPD × 365 = 36.5 million gal/yr.
2. Developer claims 10,000–20,000 GPD for closed-loop cooling (Planet Detroit, Dec. 2025).
3. Indirect withdrawal: 1,383 MW × 8,760 hr × 0.85 load factor = 10.3M MWh/yr × 7,200 gal/MWh (RFCM eGRID) = ~74B gal/yr.
4. Closed-loop system returns cooling water; minimal evaporative loss on site.
5. Indirect consumption: 10.3M MWh/yr × 420 gal/MWh (RFCM evaporative loss at thermal power plants) = ~4.3B gal/yr.

How the Indirect Footprint Was Calculated

The Sadberry Singer scoring engine (dc_impact_model_v3.R) calculates indirect water using EPA eGRID subregion-level water withdrawal and consumption factors derived from NREL, USGS, and Great Lakes Commission data. RFCM (Michigan/MISO Zone 7) has the highest water withdrawal factor of any major continental U.S. grid subregion (7,200 gal/MWh) because DTE Electric and Consumers Energy operate coal and nuclear plants with once-through Great Lakes cooling that withdraw enormous volumes but return most of the water (warmed). The consumption factor (420 gal/MWh) represents the fraction lost to evaporation at cooling towers and not returned. Both figures are declining as DTE retires coal plants (44% withdrawal reduction since 2005), but remain substantially higher than western grids.[6,7]

Recommended Legislative Action

- Amend HB 5594–5596 to require data-center-specific water stress reviews that account for indirect water footprint through grid electricity, not just direct on-site withdrawal. The WWAT's 100,000 GPD trigger is structurally blind to the largest water impact these facilities create.
- Require indirect water disclosure as a condition of data center permitting. Developers should report both direct WUE and the eGRID-derived indirect water footprint of their grid electricity, using the Sadberry Singer framework or equivalent methodology.
- Direct EGLE to publish grid water factors for Michigan's electricity generation so that cumulative watershed impacts from large-load customers can be evaluated before contracts are approved by the MPSC.

Sources

6. DTE Energy 2024 Sustainability Report. https://www.dteenergy.com/content/dam/dteenergy/deg/website/common/dte-impact-and-news/our-impact/2024ESGReport.pdf
7. EPA eGRID 2022 Summary Data (RFCM subregion). https://www.epa.gov/egrid/summary-data
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9. Great Lakes Commission, Integrating Energy and Water Resources (GLEW). https://www.glc.org/wp-content/uploads/2016/10/GLEW-Phase-I-Report-FINAL-2011-11.pdf