WATERGATE ENVIRONMENTAL TECHNOLOGIES

Who We Are:

Watergate Environmental Technologies (WET) is an SBA-certified Economically Disadvantaged Women Owned Small Business (EDWOSB) specializing in energy and cost-saving solutions for wastewater treatment processes.

What We Do:

WET specializes in maximizing the environmental and economic efficiency of aeration systems in wastewater treatment.

Example of an aeration tank

How:

MAPPING SERVICES

- Services provided by industry experts
- Assesses the health of aeration diffusers
- Provides recommendations for diffuser maintenance or replacement
- Identifies opportunities for aeration system optimization
- Provides a snapshot in time of the overall health of aeration system

Example - WET Experts mapping an aeration basin

TOGA™ - Telemetry Off-Gas Analysis

- Permanent or mobile equipment custom designed to continuously monitor off-gas
- Provides real-time data and operational recommendations
- Secure dashboard accessed via online portal and mobile app
- Recommendations maximize health and efficiency of aeration basins
- Reduces peak energy demand up to 15 - 20%

Example - TOGA System Installation

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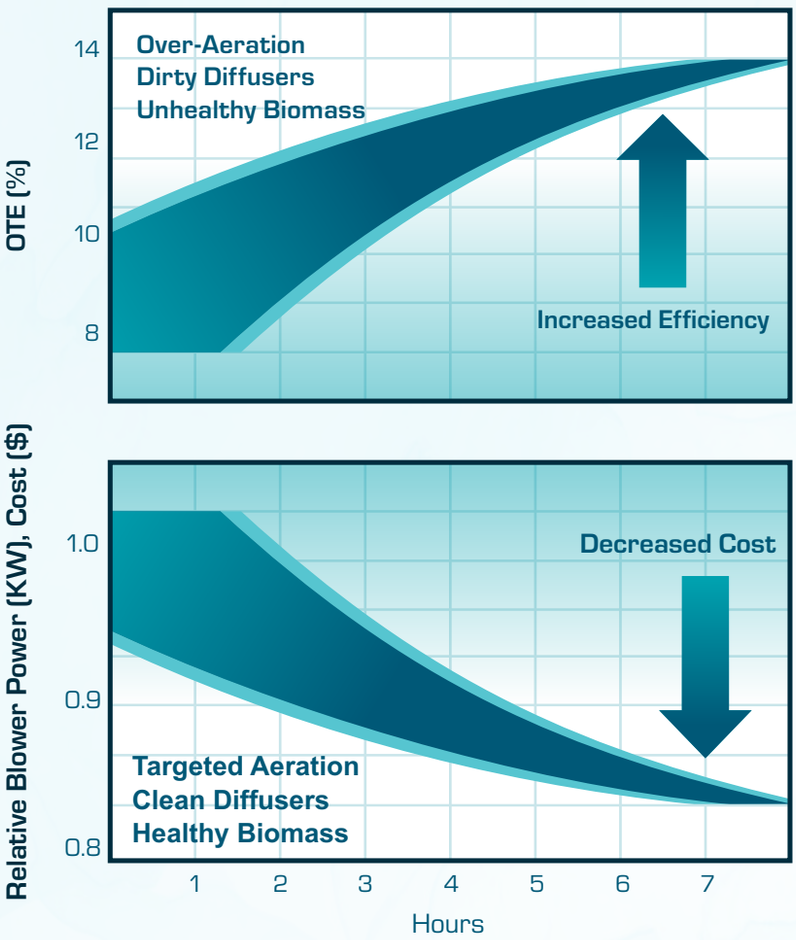
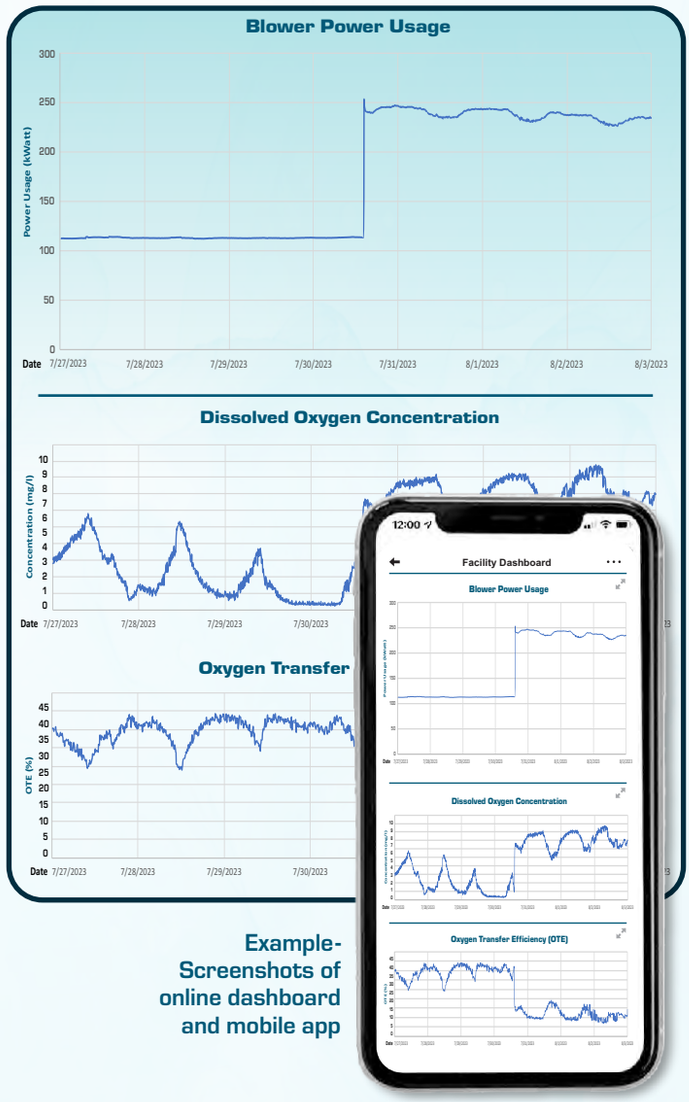
Measurements:



- Knowing the **Oxygen Transfer Efficiency (OTE)** and **Oxygen Uptake Rate (OUR)** of the biological activity in the basins are key to understanding the efficient operation of the aeration process and health of the bio-mass.
- Monitoring the **Dissolved Oxygen (DO)** concentration, and temperature of the aerated water, along with the analysis of the **Off-Gas** coming off the aerated basins (off-gas) provides a greater understanding and insight into the operation of the aeration process.
- TOGA combines this information with the real-time electrical usage of the aeration blowers, and shows the actual cost of over-aeration in **kilowatt hours** (kw/h) **and dollars** ($).



Example- Screenshots of online dashboard and mobile app

Results:

By following the recommendations, results will show WWTP's:

- Reduce peak energy demand
- Increase blower efficiency
- Reduce expenses/costs
- Reduce GHG emissions

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