

IMET Corporation

Total Water Reuse

IMET SUSTAINABLE WASTEWATER RECOVERY AND RE-USE TECHNOLOGY

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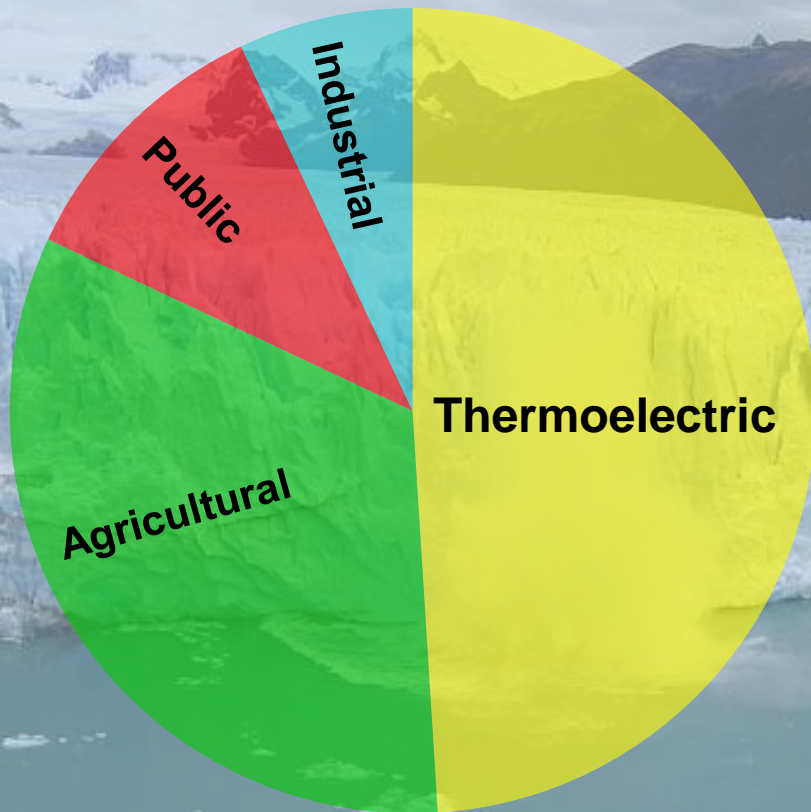
EUEC 2014

Phoenix Convention Center,
Phoenix, AZ
February 3-5, 2014

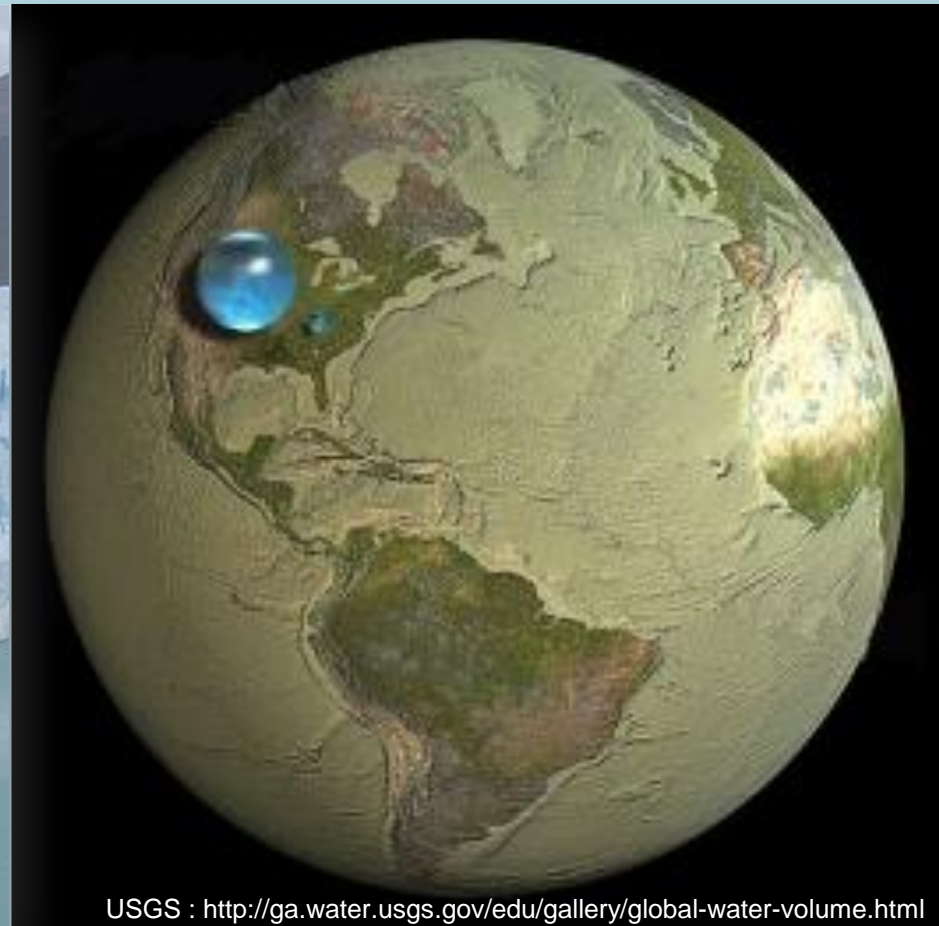


USA WATER/ENERGY FACTS

THERMOELECTRIC POWER USES NEARLY HALF OF ALL WATER USED



USGS 2005



USGS : <http://ga.water.usgs.gov/edu/gallery/global-water-volume.html>

USA WASTEWATER/ENERGY FACTS

WASTEWATER TREATMENT (WWT) IS A MAJOR ELECTRICAL ENERGY USER

- 1.5% of total electrical consumption⁽¹⁾
- WWTP uses 1200 kWhr/MG - national average⁽²⁾

(1) PG&E Company, WWTP Energy Baseline Study 2003

(2) Malcom Pirnie Report, <http://www.nywea.org/clearwaters/08-1-spring/03-Energy.pdf>

MAJOR COST SEGMENTS OF WASTEWATER TREATMENT PLANT

ELECTRICITY CONSTITUTES BETWEEN 25 AND 40 % OF THE BUDGET OF A TYPICAL WASTEWATER TREATMENT PLANT⁽¹⁾

- **Secondary treatment uses 30-60% of total WWTP energy consumption**
- **Nearly half of energy used in secondary treatment is for aeration⁽¹⁾**

SOLIDS HANDLING ACCOUNTS FOR NEARLY 30% OF WWT FACILITY COSTS⁽³⁾

(1) PG&E Company, WWTP Energy Baseline Study 2003

(2) Malcom Pirnie Report, <http://www.nywea.org/clearwaters/08-1-spring/03-Energy.pdf>

(3) Water Environment Research Foundation (WERF) 2008

IMET TECHNOLOGY DELIVERS

50% OR MORE ENERGY SAVINGS

- Significant reduction in aeration

MAJOR COST SAVINGS

- Minimal production of biosludge
- Simultaneous removal of carbon and nutrients in a continuous aerobic system



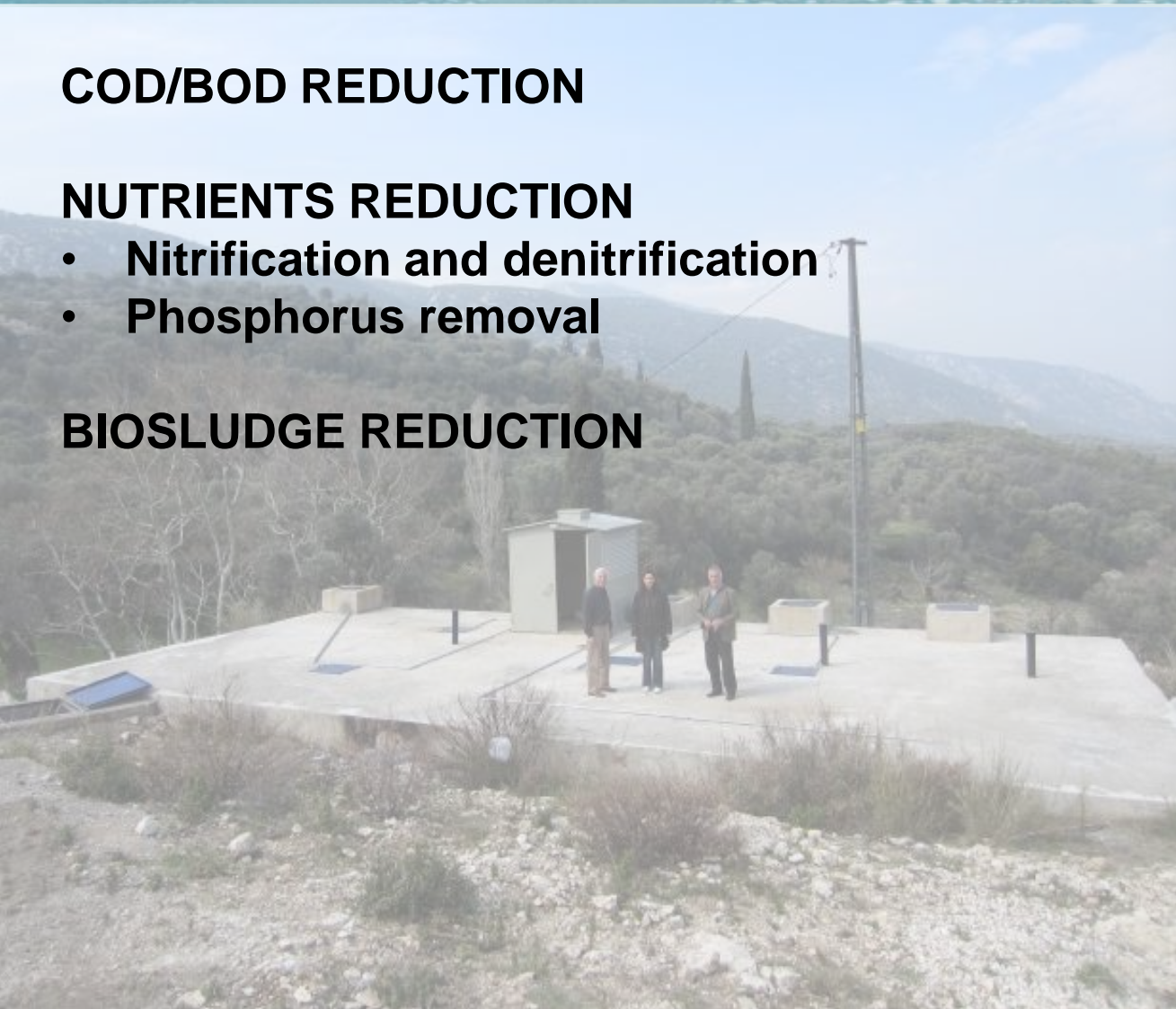
IMET TECHNOLOGY ENABLES

COD/BOD REDUCTION

NUTRIENTS REDUCTION

- Nitrification and denitrification
- Phosphorus removal

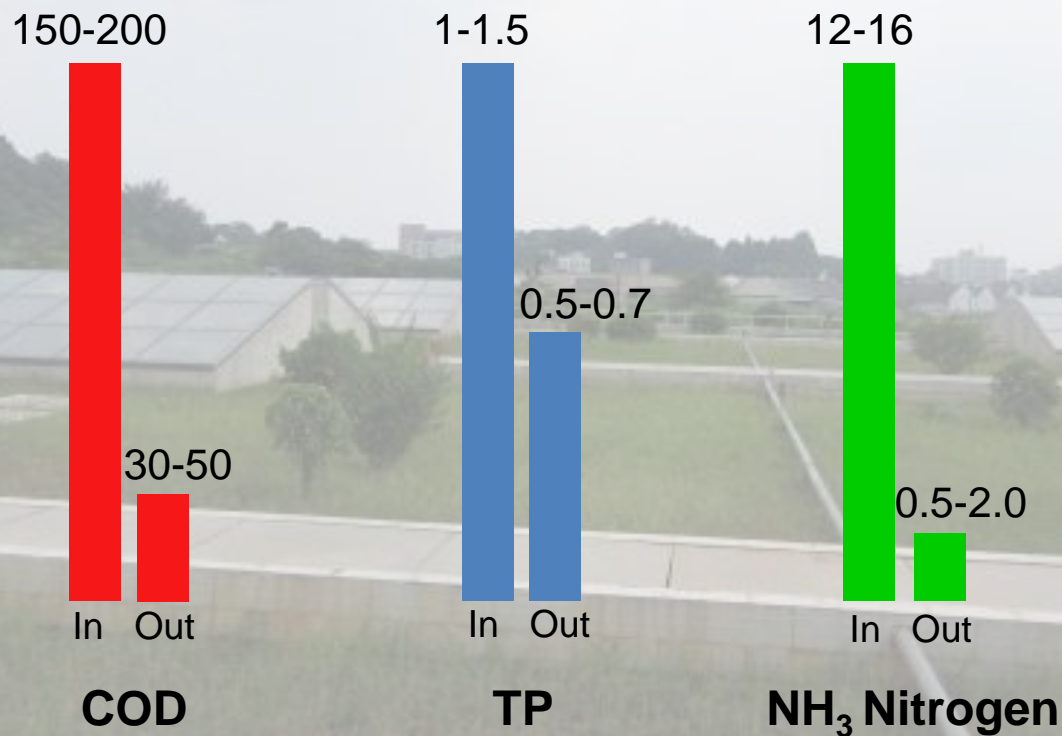
BIOSLUDGE REDUCTION



Guangzhou, China Pilot Study

Two Months Long

SOURCE: Wastewater – 75% municipal, 25% industrial

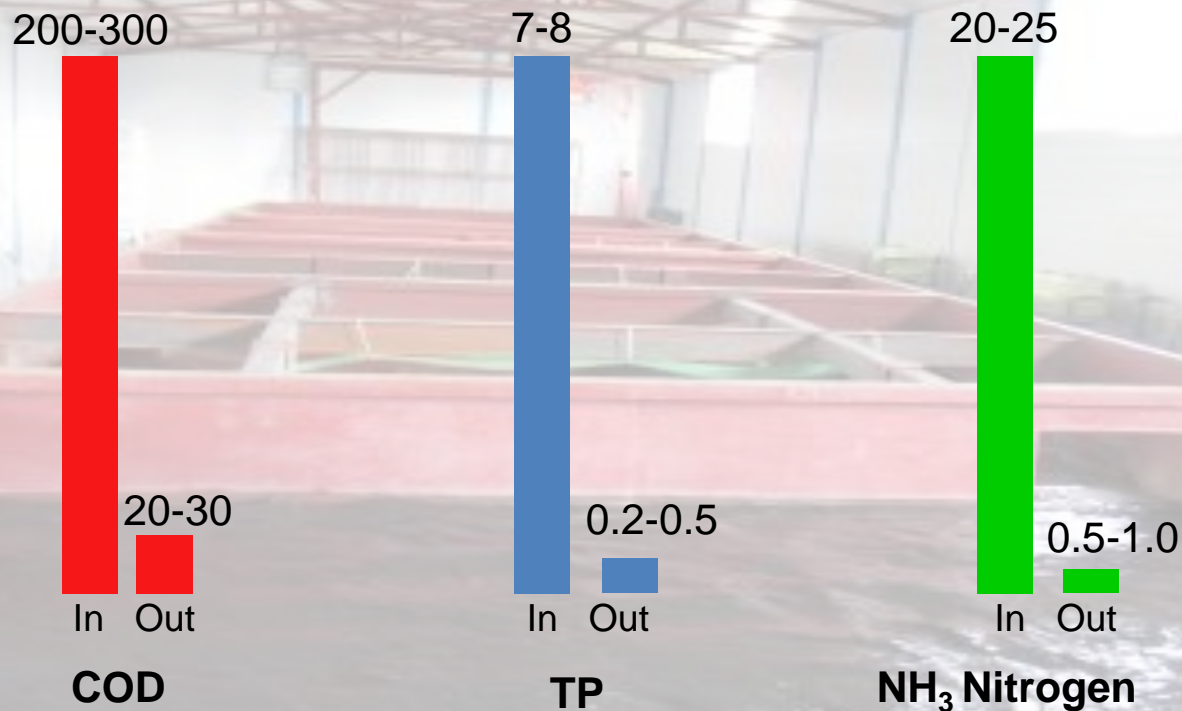


5 hours HRT in each tank – 3 tanks in series - Each tank is 10m³
More than 95% COD reduction in first tank
No reportable TSS in effluent

Guangzhou, China Pilot Study

Three Months Long

SOURCE: Wastewater from anaerobically digested biosludge



1.5-3.5% Solubilization

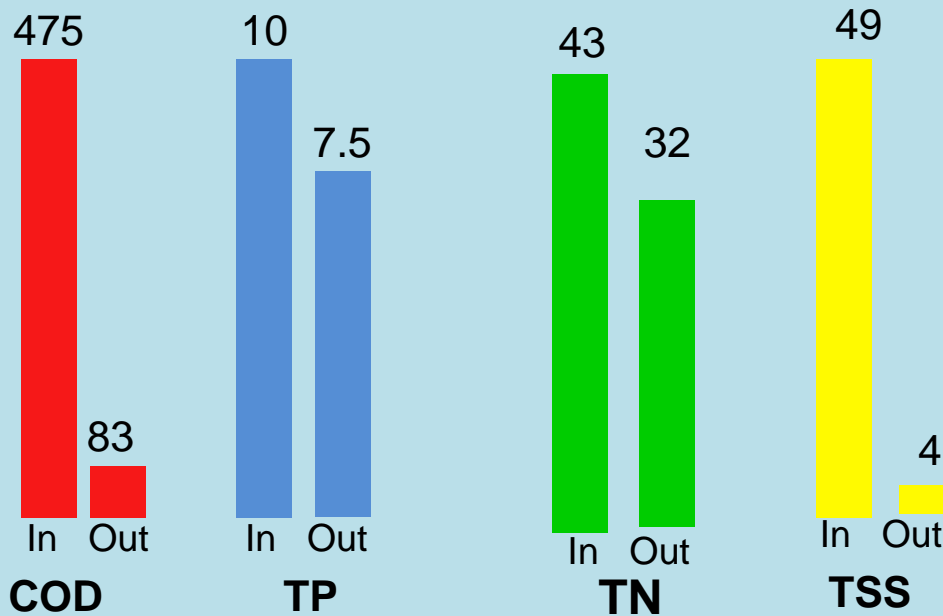
24 hours HRT in each tank – 3 tanks in series - Each tank is 10m³

All of reductions in the first tank

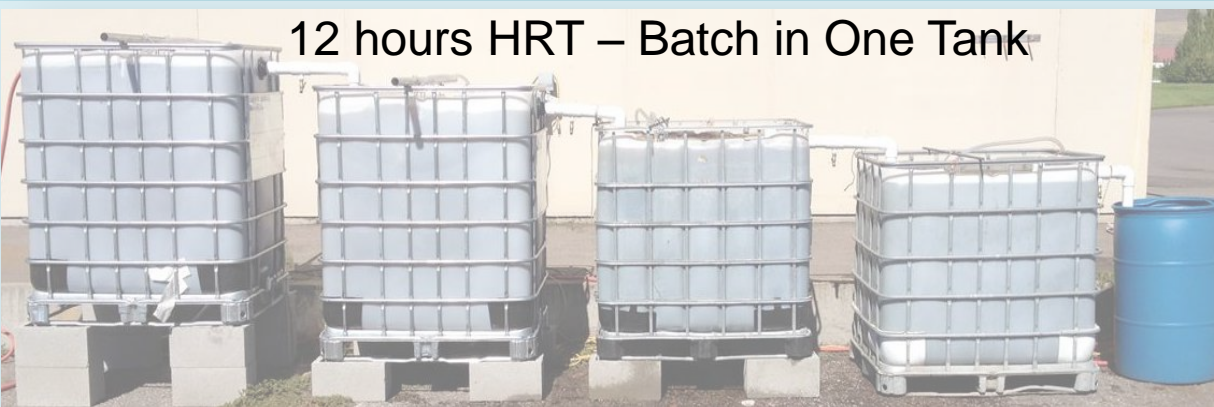
No reportable TSS in effluent

Missoula, Montana

SOURCE: Municipal wastewater from Primary



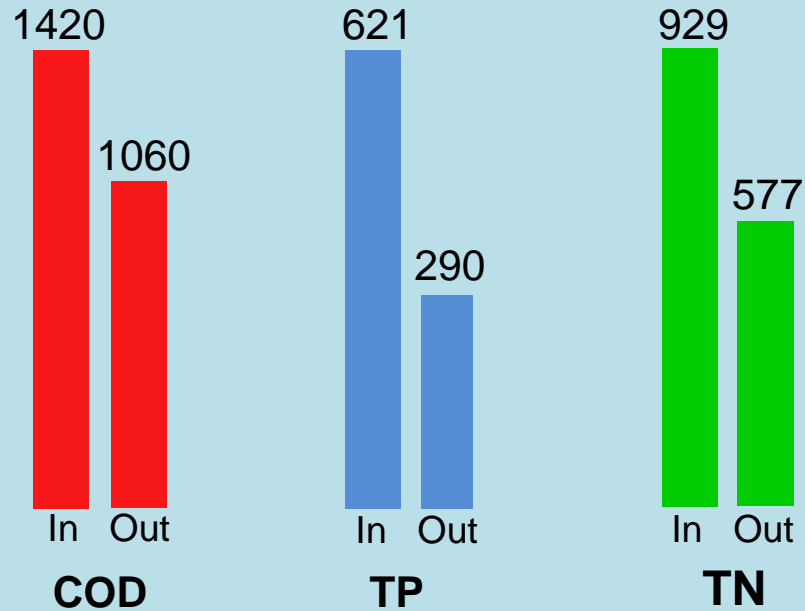
12 hours HRT – Batch in One Tank



Missoula, Montana

Two Months Long

SOURCE: Centrate from Anaerobic Digester



6 hours 45 minutes total HRT

Each tank is 1m³



IMET TECHNOLOGY

PATENTED TECHNOLOGY

- Highly diverse microorganisms
- High concentration (population) of microorganisms
- Significantly reduced air requirement
- Minimal biosludge production

IMET APPLICATIONS

ODOR AND GREASE ELIMINATION

FOG-CAUSED SEWER LINE BLOCKAGE REDUCTION

Pump stations

Hotel, resort, and restaurant grease interceptors

RETROFITTING

Small to large wastewater treatment plants

Community and residential septic systems



IMET – COMPANY INFORMATION

IMET CORPORATION

Founded: 1997

Located: Cleveland, Ohio

Employees: 7

MISSION

Reuse, Recycle and Recharge “Clean” Water