WINERY WASTEWATER TREATMENT

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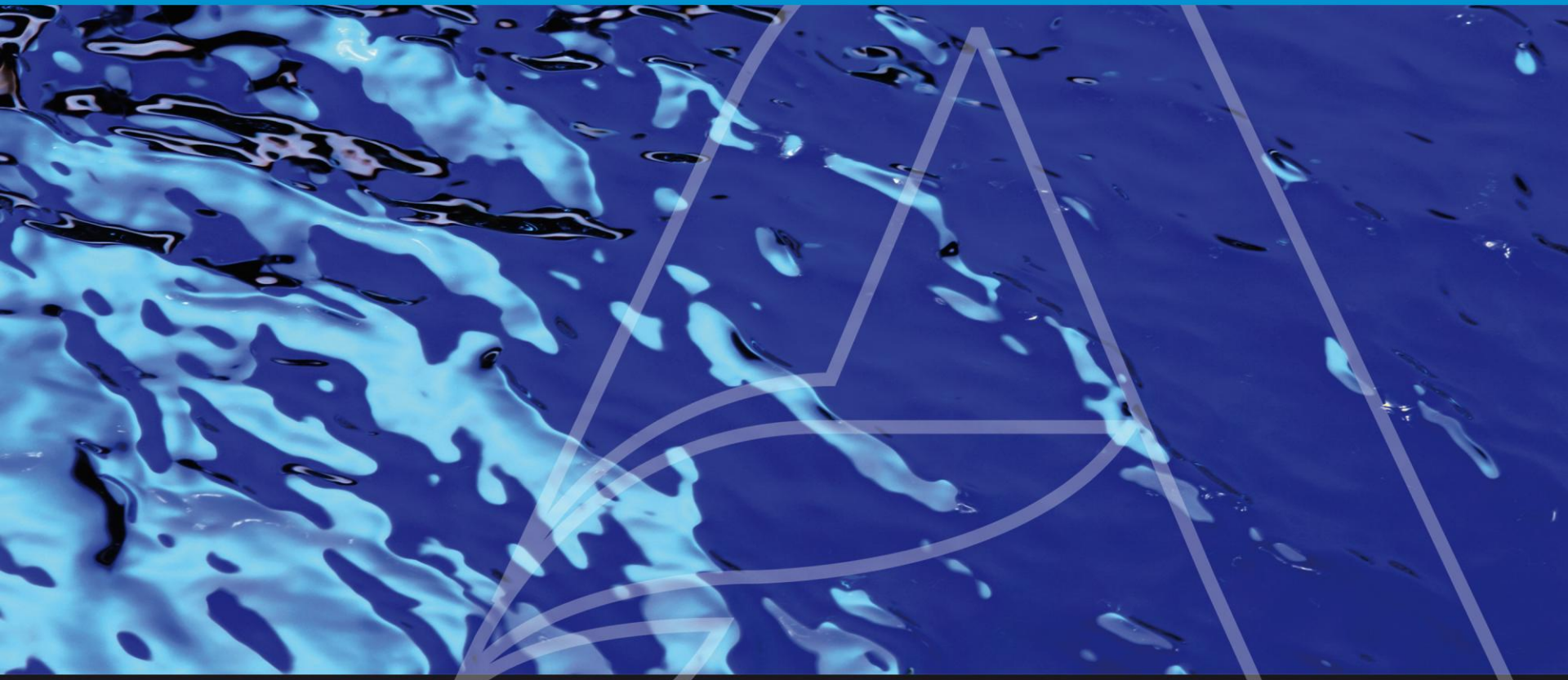
WATER TREATMENTS BY ANDAR



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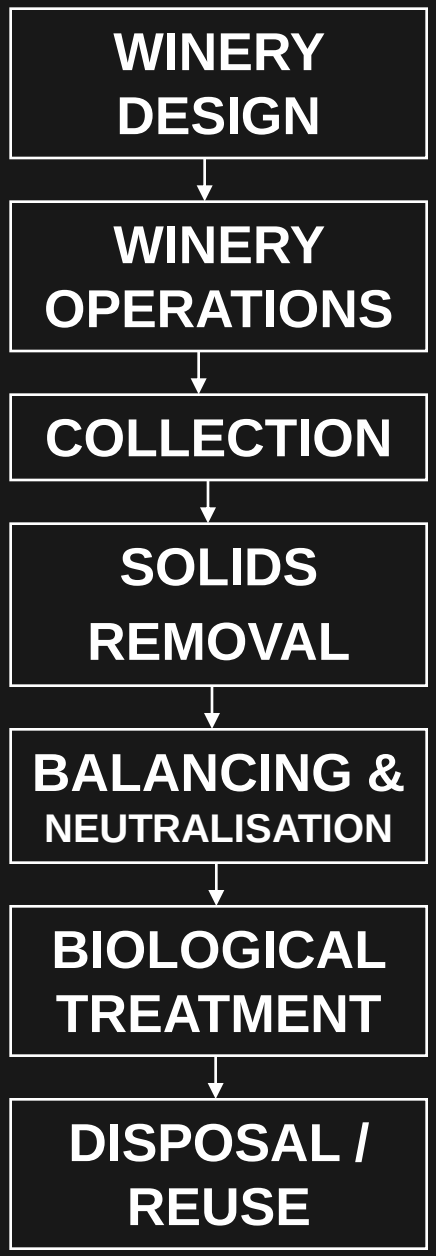

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WINERY DESIGN

INTEGRATION OF WASTEWATER TREATMENT AND REUSE SYSTEMS WITH WINERY DESIGN

HIGH-PRESSURE / LOW-FLOW WASH DOWN HOSES

SEPARATION OF STORMWATER AND RAW WASTEWATER

DOUBLE BASKET SCREENS IN SLOT DRAINS

SEPARATION OF LEES FROM WASTEWATER AT SOURCE

UTILISING ‘PIG’ CLEANING SYSTEMS

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WINERY OPERATIONS

DO NOT USE A HOSE AS A BROOM

AVOID WASHING SOLIDS DOWN DRAIN

MINIMISE USE OF CAUSTIC SODA

RECOVERY AND REUSE OF CAUSTIC SODA SOLUTIONS

INDIVIDUAL ACCOUNTABILITY FOR WASTEWATER SYSTEMS

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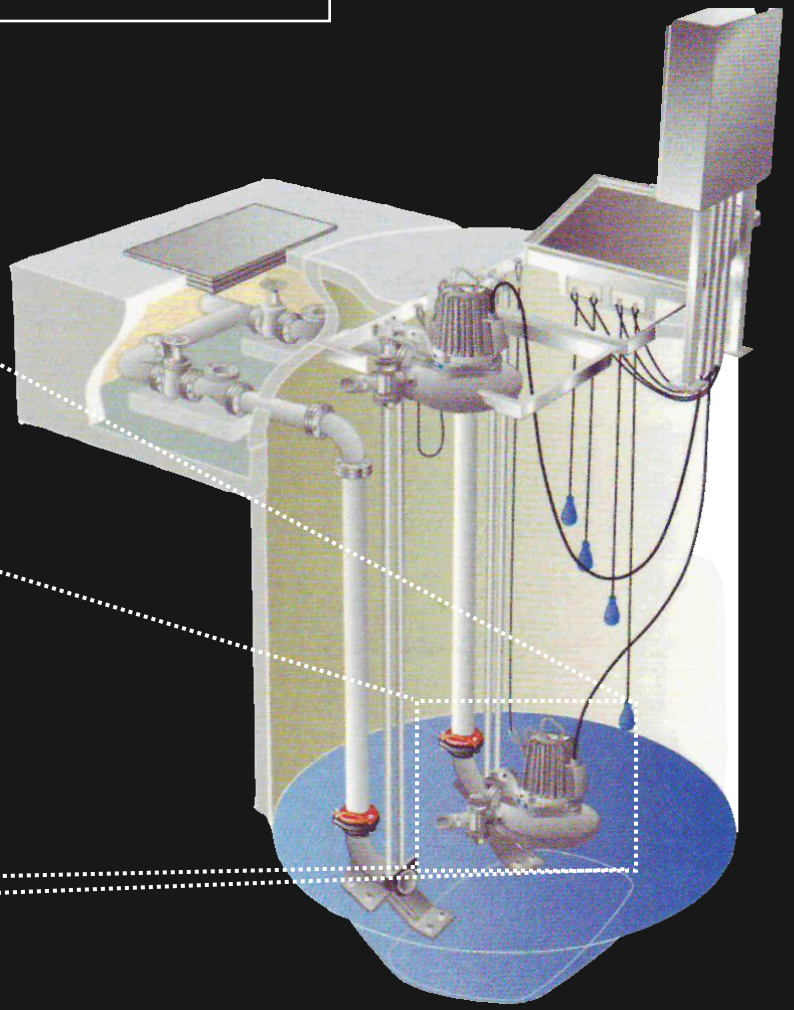
WASTEWATER COLLECTION



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SOLIDS REMOVAL

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BALANCING AND NEUTRALISATION

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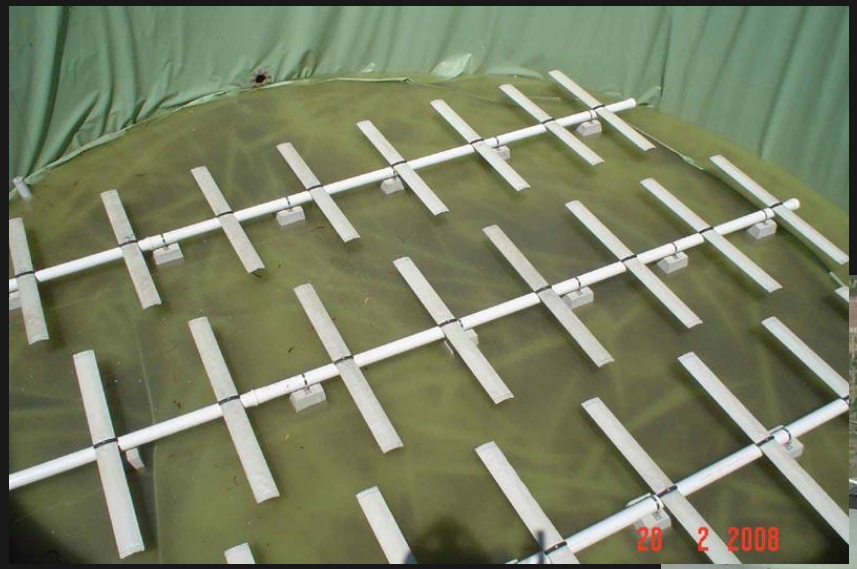
BIOLOGICAL TREATMENT



$$BOD + OXYGEN \rightarrow CO_2 + H_2O$$

WASTEWATER BOD = 5,000g/m^3

EFFLUENT PRODUCTION = 100m^3/DAY

THEREFORE HAVE 500 Kg/DAY OF BOD

AERATOR GIVES = 50g OXYGEN / m^3 AIR

THEREFORE NEED 420m^3 PER HOUR OF AIR

ALWAYS UNDER PREDICTS

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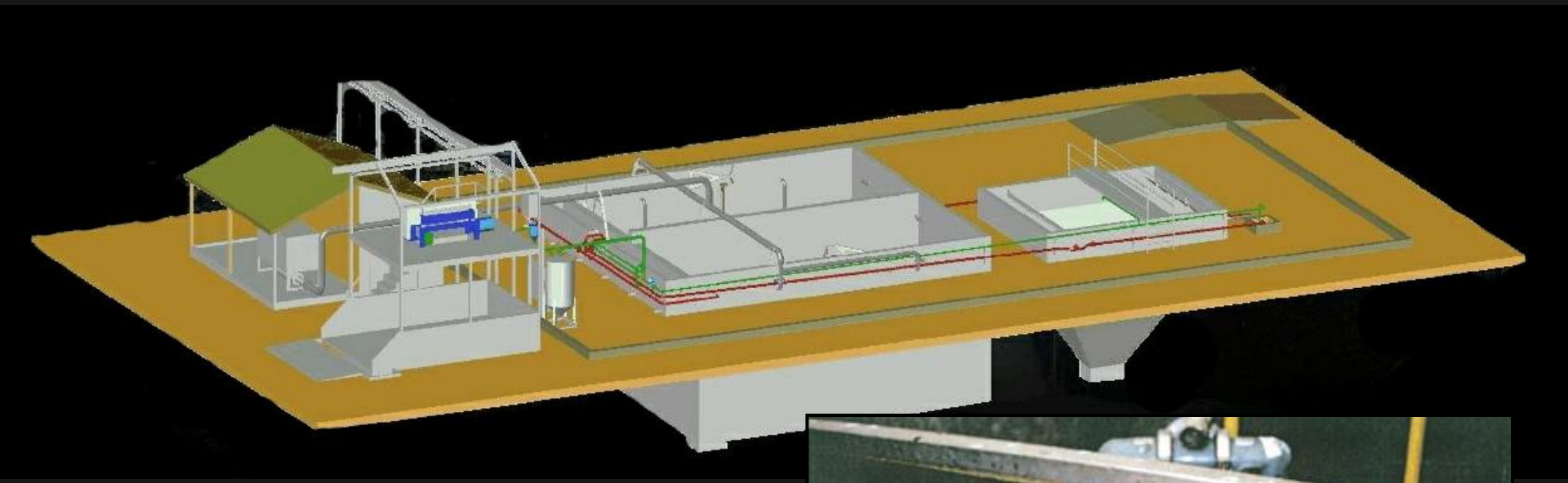

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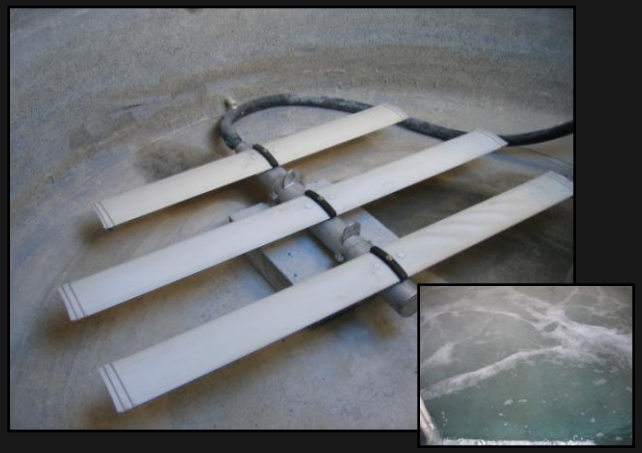

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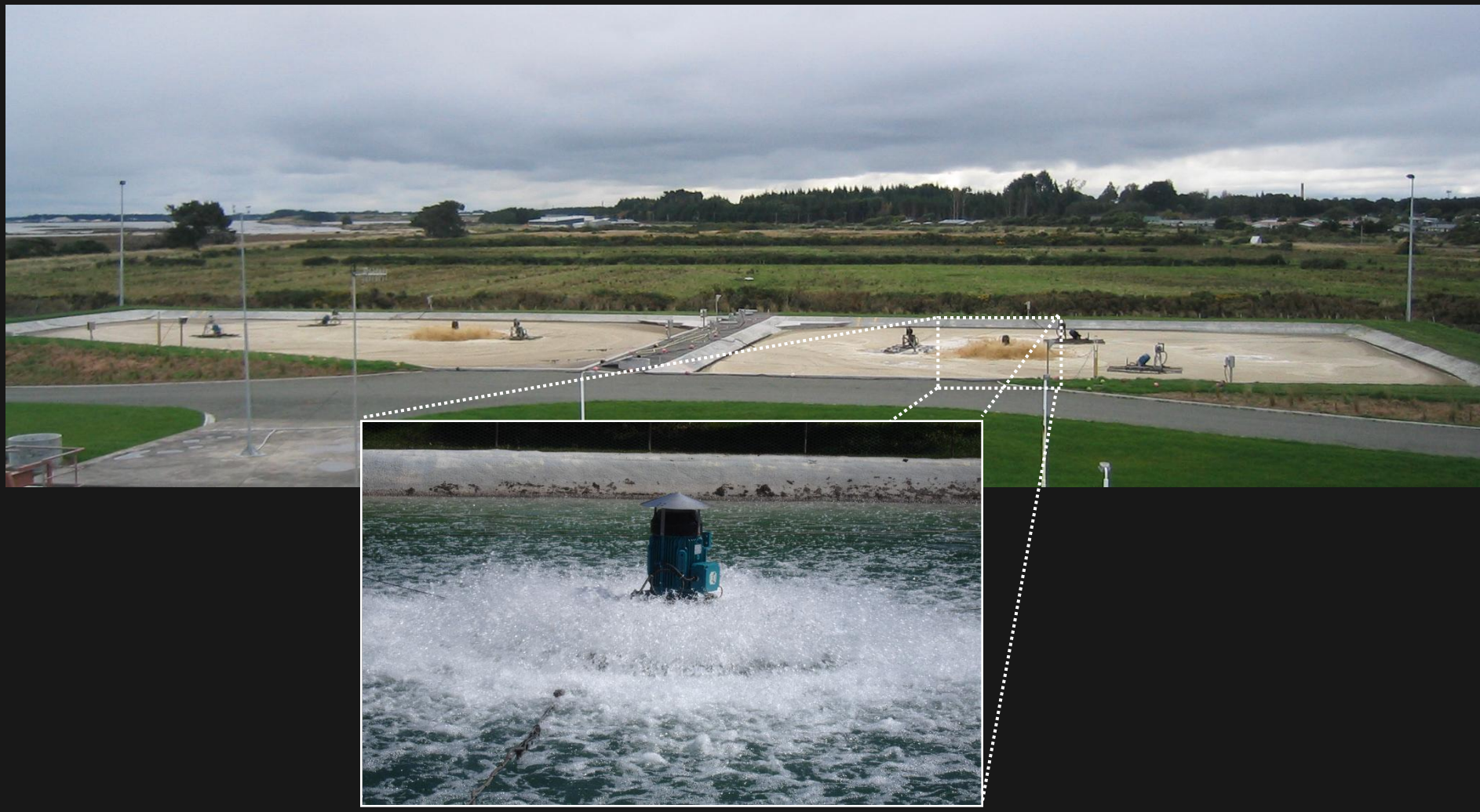

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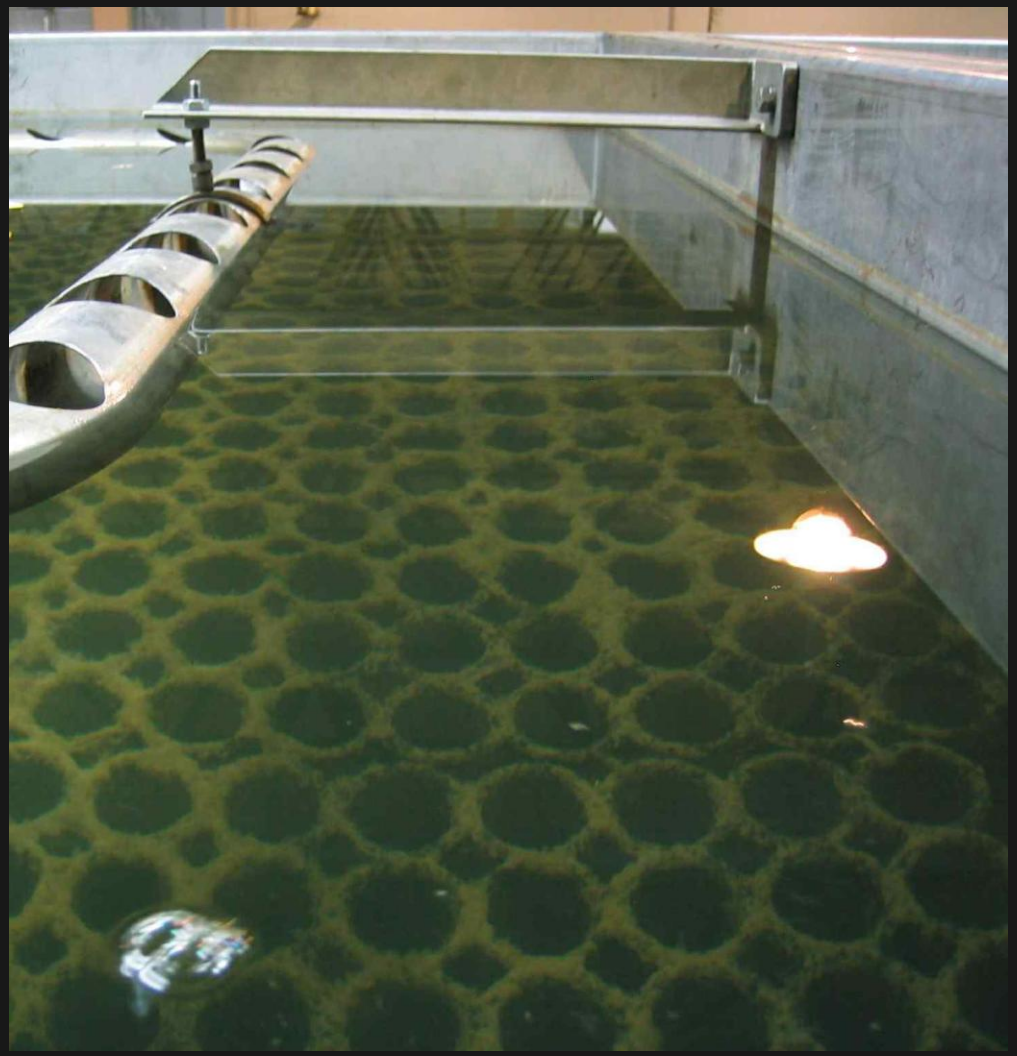

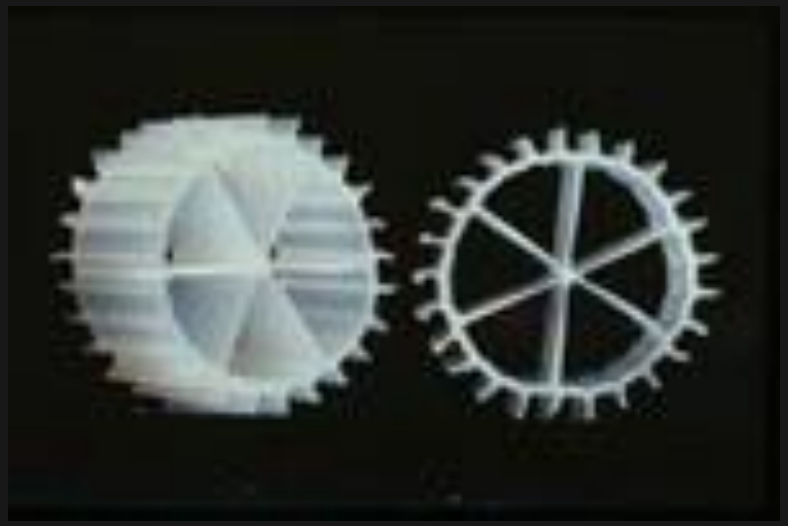

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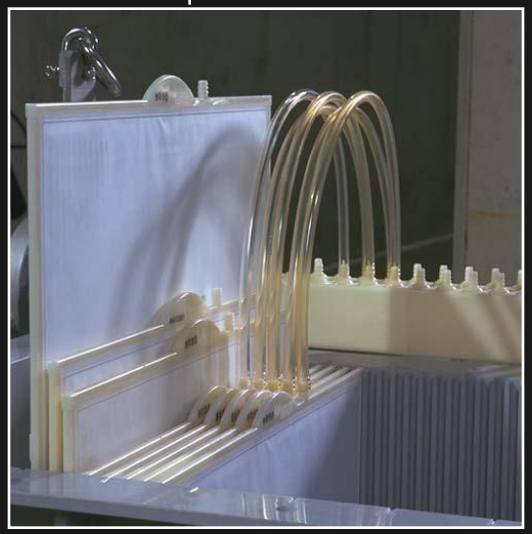

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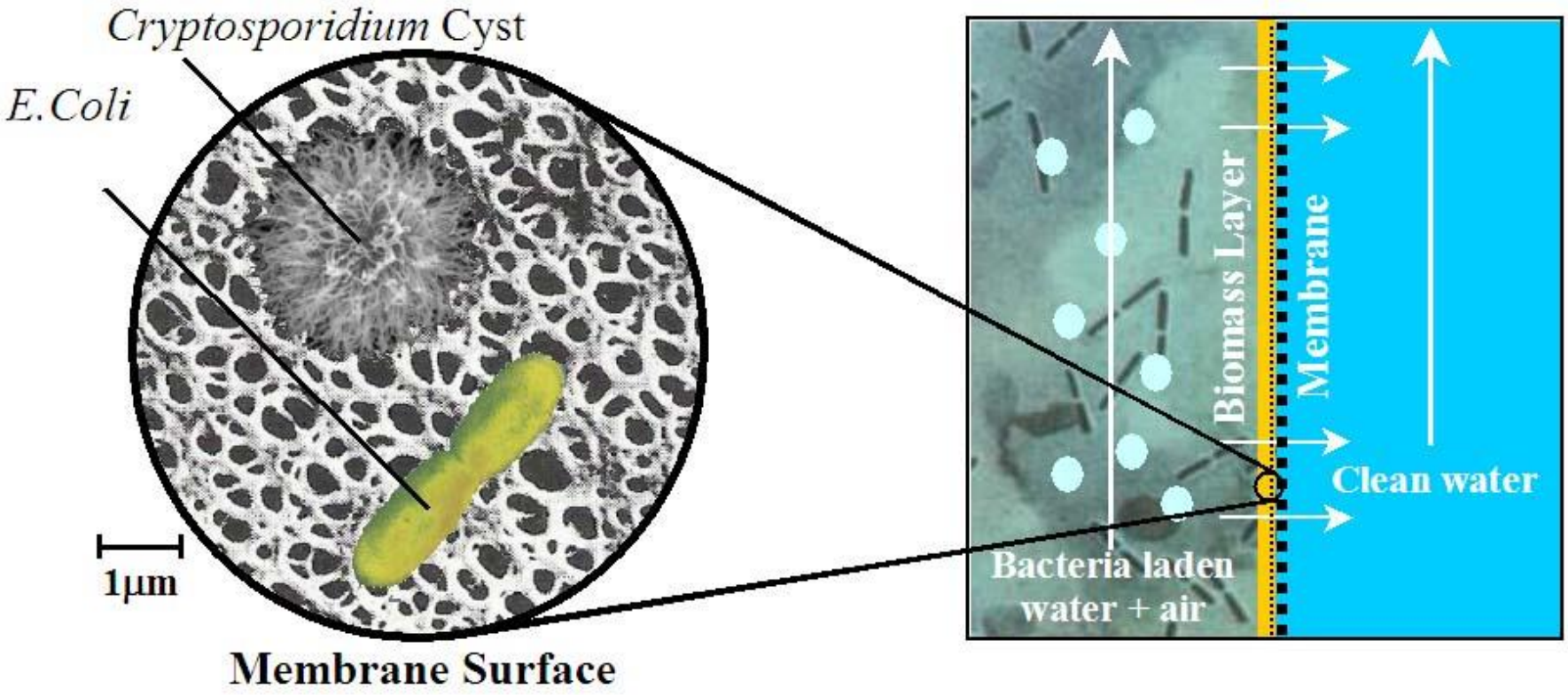
BIOLOGICAL TREATMENT

Operation of Microfiltration Membrane



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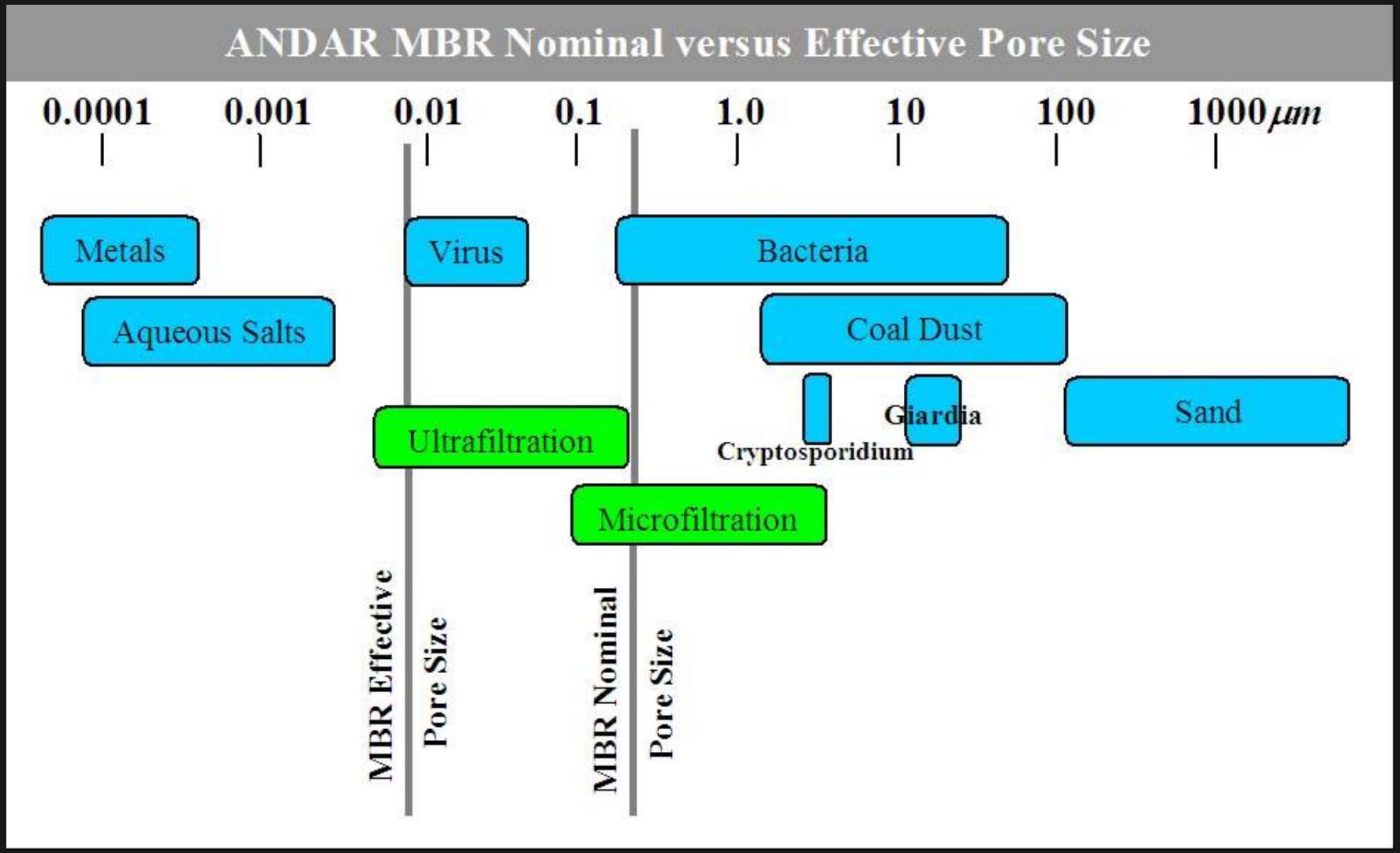

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BIOLOGICAL TREATMENT

Typical Treated Effluent Quality for Domestic Sewage

BOD_5	< 9 mg/L
Total Nitrogen	< 9 mg/L
Suspended Solids	< 5 mg/L
Total Coliforms	< 1 CFU / 100mL

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WASTEWATER DISPOSAL & REUSE

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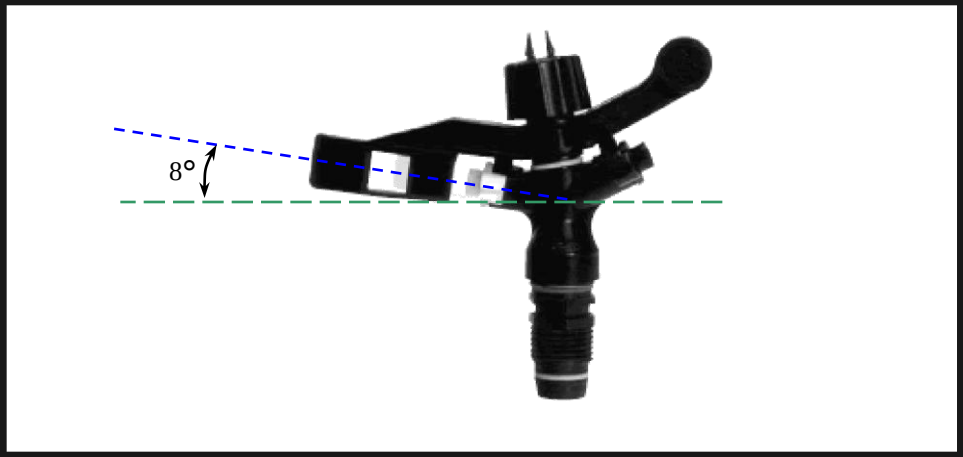
WASTEWATER DISPOSAL & REUSE



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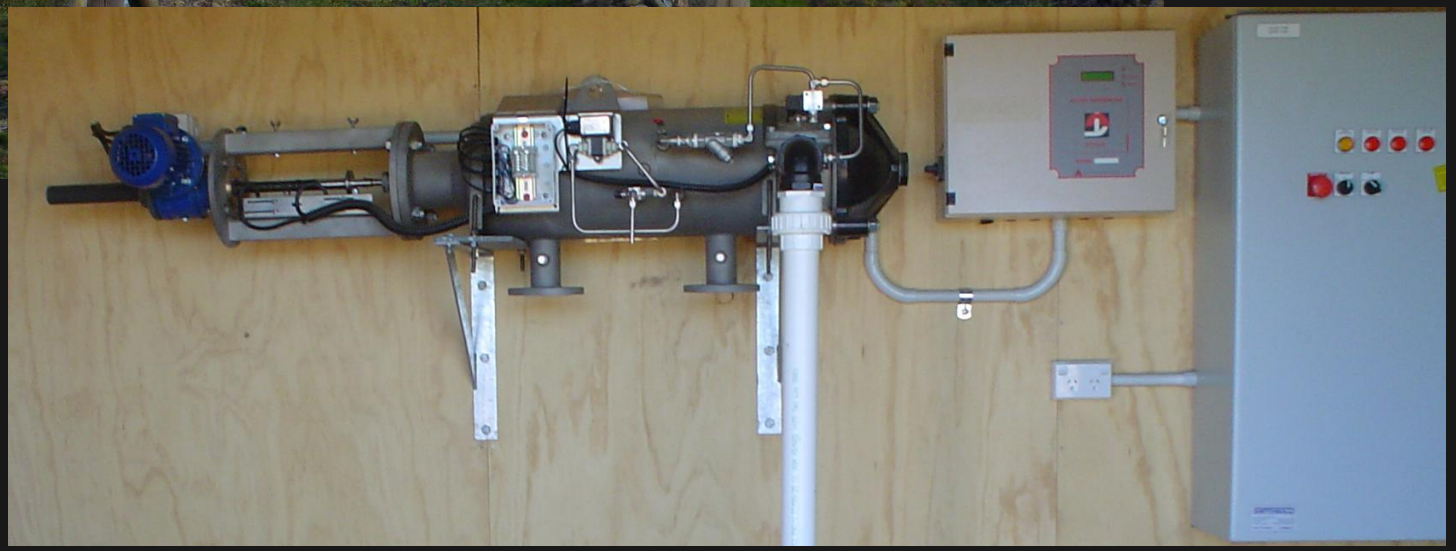
WASTEWATER DISPOSAL & REUSE



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WASTEWATER DISPOSAL & REUSE

CROP	POTASSIUM UPTAKE
GRAPES	85 – 110 kg/Ha.yr
TREES (Pine)	90 – 110 kg/Ha.yr
LUCERNE	170 – 208 kg/Ha.yr
GRASS / CLOVER	300 – 450 kg/Ha.yr

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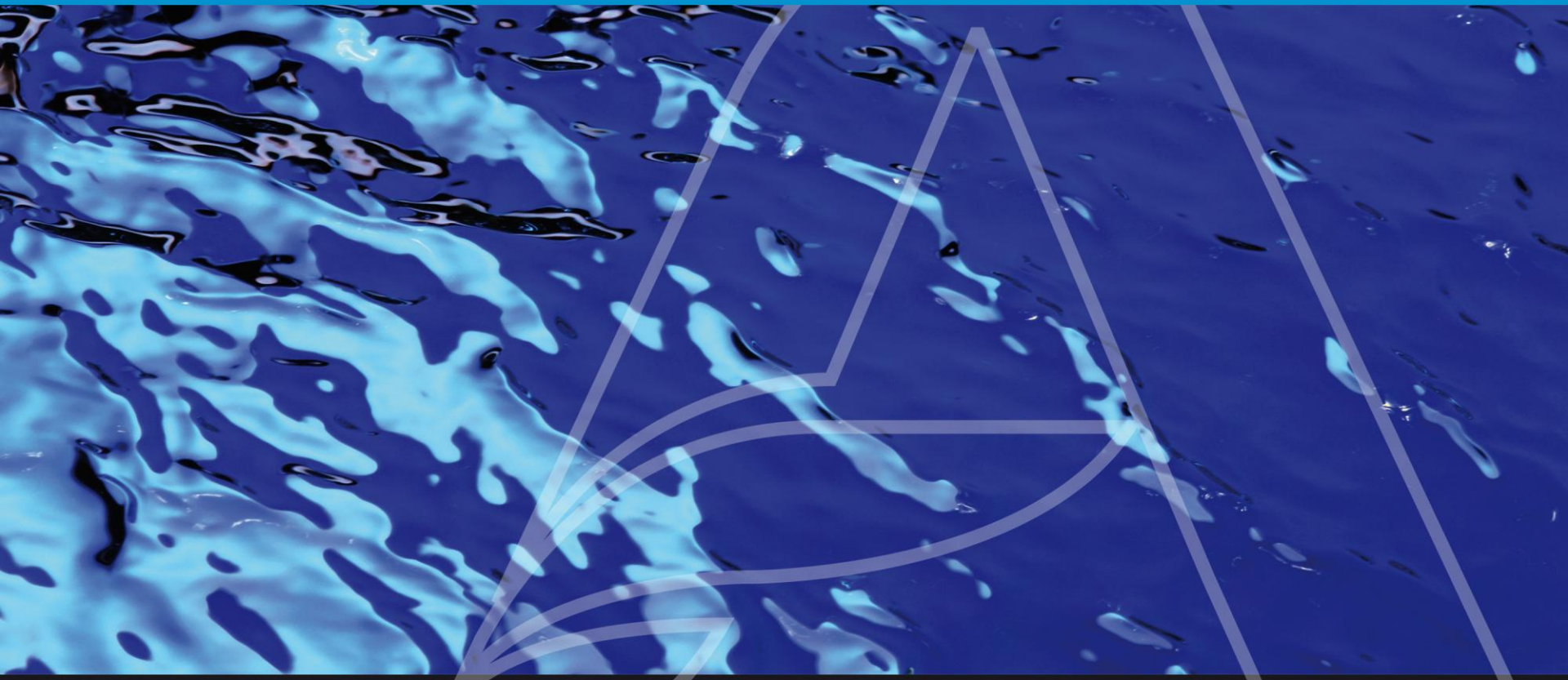

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