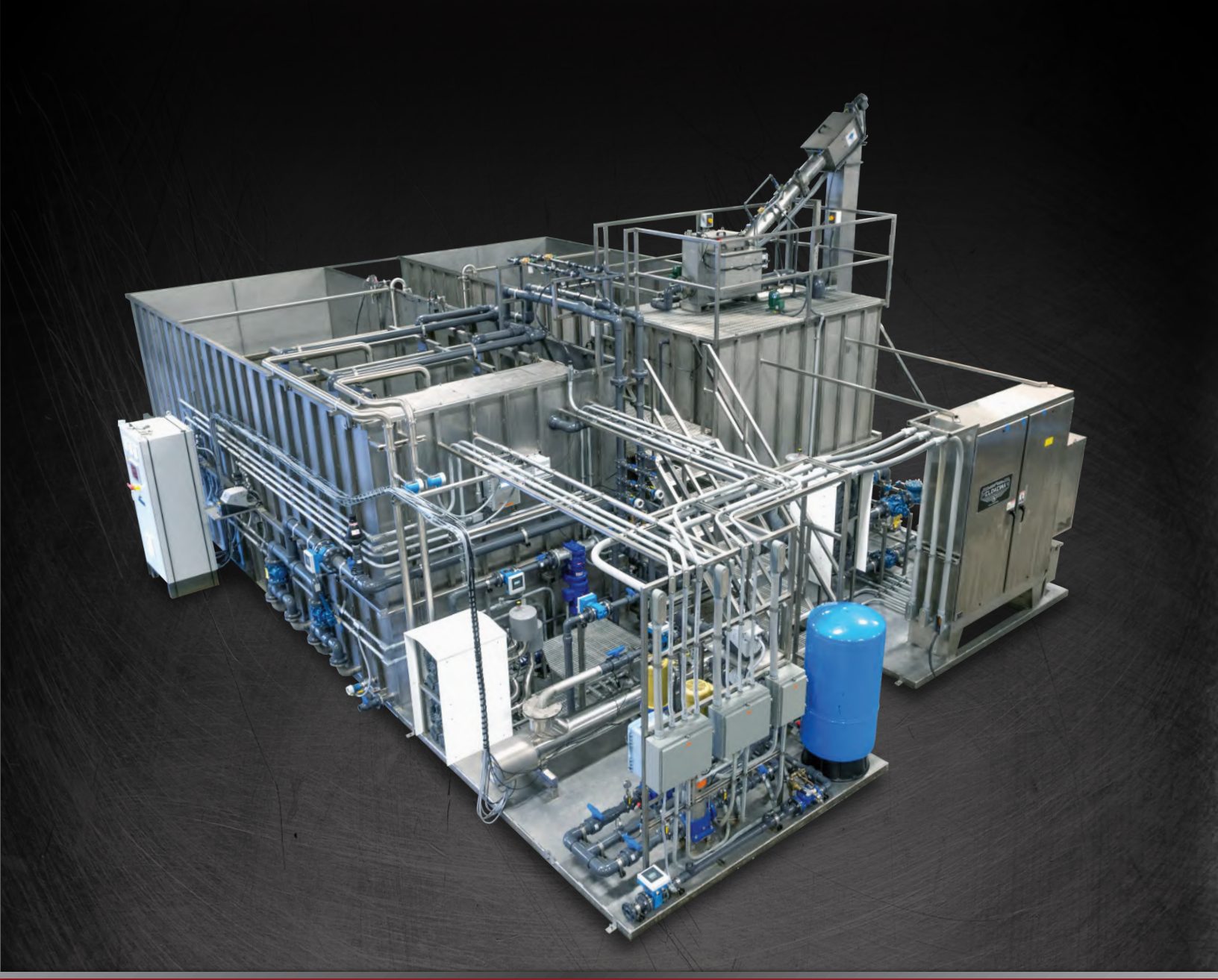


CASE STUDY:

THE PRESERVE AT MILLERTON LAKE

50,000 GPD MEMPAC™- M
Madera County, CA

CLOACINA

CLOACINA.COM | 888.483.8469

DESIGN PARAMETERS

MODEL SUPPLIED: MEMPAC-M50

INFLUENT PARAMETERS

INFLUENT TYPE	*MUNICIPAL*
AVERAGE DAILY FLOW	*50,000 GPD*
BIOCHEMICAL OXYGEN DEMAND	*400 MG/L*
TOTAL SUSPENDED SOLIDS	*350 MG/L*
TOTAL KJELDAHL NITROGEN	*55 MG/L*

EFFLUENT QUALITY

BIOCHEMICAL OXYGEN DEMAND	*<10 MG/L*
TOTAL SUSPENDED SOLIDS	*<10 MG/L*
TOTAL NITROGEN	*<10 MG/L*

PROJECT TEAM

INSTALLATION

FLUID RESOURCE MANAGEMENT
805.597.7100
fluidresourcemanagement.com

ENGINEERING

MKN & ASSOCIATES
805.904.6530
mknassociates.us

SALES REP

JBI WATER & WASTEWATER
916.933.5500
jbiwater.com

CLIENT REP

ENNIS CONSULTING
559.709.4888
ennisconsulting.com

PROJECT DETAILS

OVERVIEW

The Preserve at Millerton Lake is a new master-planned community one mile northwest of the town of Friant in rural Madera County, California. Cloacina designed and fabricated a 50,000 Gallon Per Day (GPD) immersed Membrane Bioreactor (MBR) wastewater treatment plant to service The Preserve's Phase I which consists of 243 dwelling units.

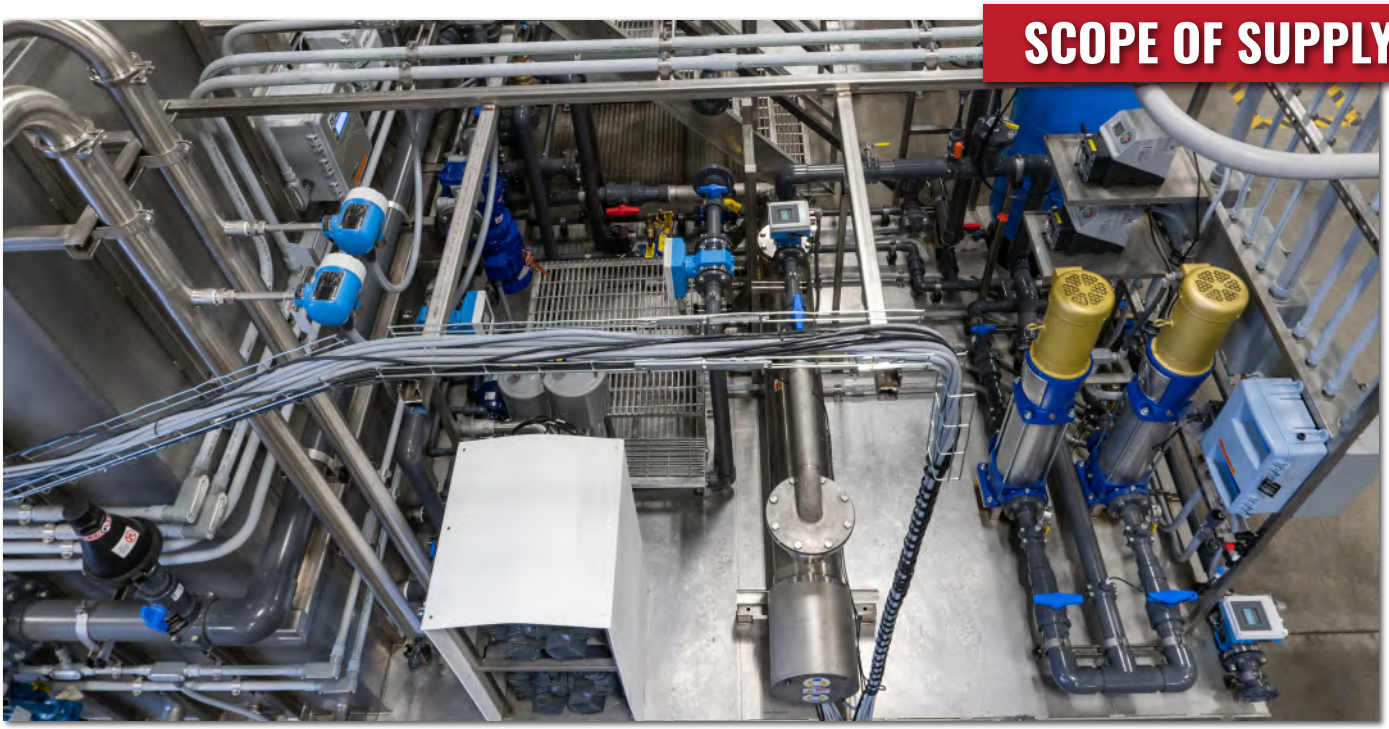
The wastewater treatment plant includes fine screening, equalization, activated sludge treatment with an anoxic zone, ultrafiltration, ultraviolet (UV) light disinfection, post-UV chlorine dosing and sludge storage.

The disinfected tertiary recycled water meets Title 22 Requirements for unrestricted irrigation. Reclaimed water will be used for irrigation of landscaping around the development and for plant utility water.

This system has the ability to start-up at 95% turndown in order to grow with the development and the automatic diversion of effluent to emergency storage in case of effluent criteria violation or plant failure.

The Cloacina equipment will be integrated into a facility designed to accept additional, similar package plants for a build-out capacity of 250,000 GPD.

For project videos, additional photos and more information, visit cloacina.com/millerton



CLOACINA SUPPLIED THE FOLLOWING FOR THIS PROJECT:

SERVICES: *Coordination with the Client's engineer to ensure integration of the plant into their facility and start-up, commissioning and training*

EQUIPMENT: *Process tanks, influent screen, process pumps and blowers, instrumentation and controls panel*

LIFT STATION: *Prefabricated Fiber Reinforced Polymer (FRP) wet well with HOMA submersible pumps*

INTEGRATION: *Controls panel including Schneider motors control and Allen-Bradley Micro870 PLCs. DAQFactory HMI platform and programming by Cloacina.*

HEADWORKS: *OR-TEC Model OSC-2T 2mm tank screw screen with compactor*

SECONDARY TREATMENT/ACTIVATED SLUDGE: *FPZ blowers, OTT aeration diffusers, HOMA anoxic submersible mixers and Xylem Goulds FAS pumps*

CLARIFICATION: *Immersed flat sheet membrane with ultra-filtration*

INSTRUMENTATION: *Endress + Hauser*

SLUDGE HANDLING: *12,000 gallon aerated sludge tank for hold and haul, upgradeable to Cloacina's DRYPAC™ Aerated Sludge Handling System including dewatering press*