



# CASE STUDY: VINEYARD

10,000 GPD MEMPAC™-I  
San Luis Obispo, CA





# DESIGN PARAMETERS

MODEL SUPPLIED: **MEMPAC-I**

## INFLUENT PARAMETERS

<b>AVERAGE DAILY FLOW</b>	10,000 GPD
<b>BIOCHEMICAL OXYGEN DEMAND</b>	8,000 MG/L
<b>TOTAL SUSPENDED SOLIDS</b>	600 MG/L
<b>INFLUENT TYPE</b>	WINERY PROCESS WASTEWATER

## EFFLUENT QUALITY

<b>BIOCHEMICAL OXYGEN DEMAND</b>	< 10 MG/L
<b>TOTAL SUSPENDED SOLIDS</b>	< 10 MG/L

# PROJECT TEAM

## INSTALLATION CONTRACTOR

**FLUID RESOURCE MANAGEMENT**  
Robin Ransford  
805.597.7100 • [frm-ops.com](http://frm-ops.com)

## ENGINEER

**WALLACE GROUP**  
Rob Miller  
805.544.4011 • [wallacegroup.us](http://wallacegroup.us)

## PROJECT DETAILS



# OVERVIEW

Cloacina provided a complete pretreatment system for the property owner who leases the facility to a winery client

The system was delivered in two complete trains

The MEMPAC-I was installed and ready to receive process waste in 14 business days

Cloacina provided the winery staff with an Operations and Maintenance Manual (OMM), operator checklists, draft reporting documents, Standard Operating Procedures (SOP) and on-site training

The MBR effluent quality exceeded the discharge requirements to such a degree that the Client is considering utilizing the treated effluent as supplemental irrigation water on a public sports field adjacent to the vineyard

The client has a permit with the Regional Water Quality Control Board (RWQCB) for irrigating on-site landscaping with the treated effluent to limit discharge to the sanitary sewer



For project videos, additional photos and more information, visit [cloacina.com/10k-vineyard](http://cloacina.com/10k-vineyard)





# CLOACINA SUPPLIED THE FOLLOWING FOR THIS PROJECT:

**LIFT STATION:** Package fiberglass duplex pump station which included: slide rails, pump bases, pumps, level transducer, redundant floats, valve vault, isolation valves, aluminum lid and two locking hatches

**HEADWORKS:** Influent flow meter, self-cleaning auger screen, grit trap and automated pH adjustment system with sensor, pump and controls

**PRIMARY TREATMENT:** Roughing filter, fixed media, two-zone distribution header with auto valve, aeration header, auto aeration valves and aeration feed valve

**SECONDARY TREATMENT:** Fine bubble aeration diffusers, aeration blower, auto air valve, dissolved oxygen sensor and air lift RAS pump

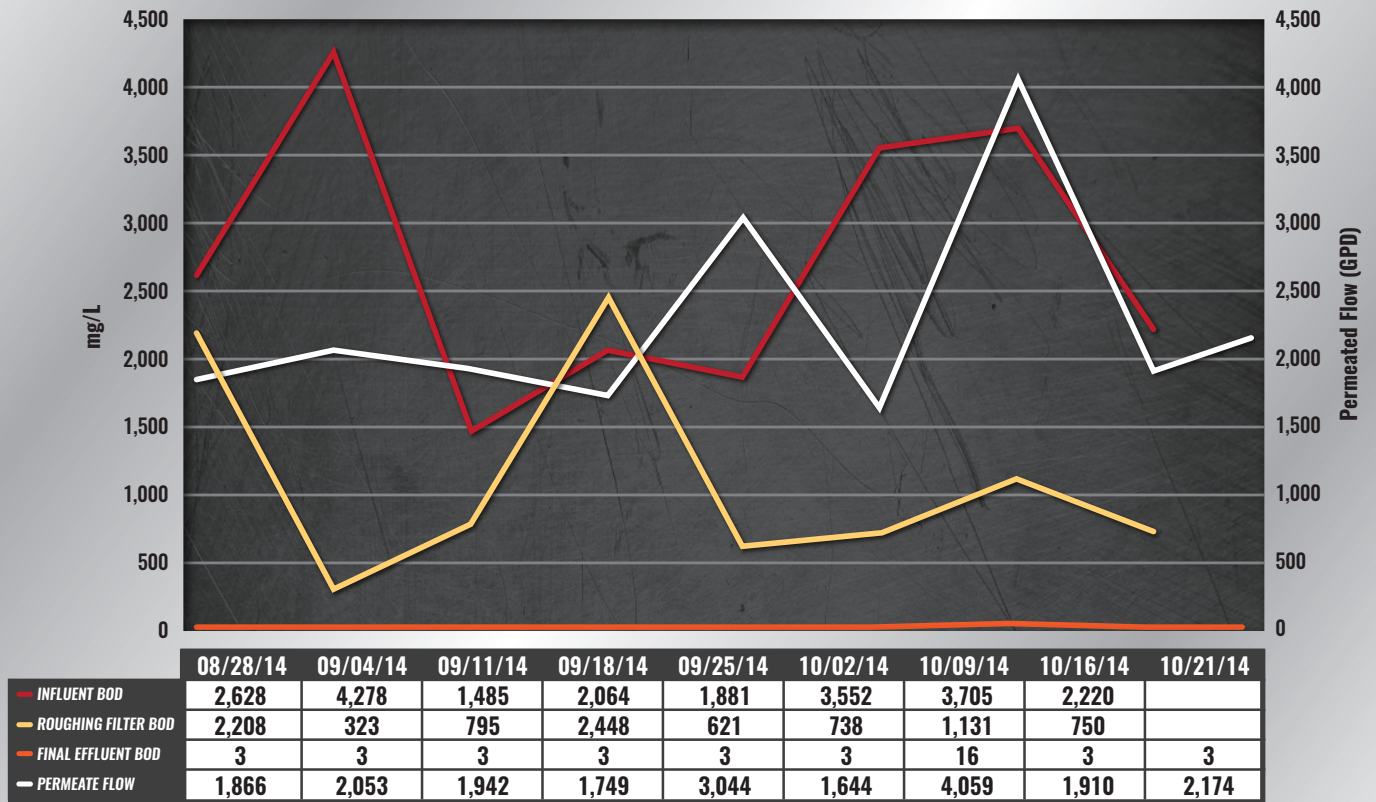
**CLARIFICATION:** Flat sheet membrane, level transducer, air supply valve, auto permeate valve, permeate flow meter, CFM meter, online MLSS meter, clean-in-place pump, effluent pump, a effluent flow meter and sludge wasting pump

**CONTROLS:** Stainless steel MCC panel, touch screen controls computer and controls program

**ADDITIONAL:** Aluminum stairs and catwalk, self-cleaning system for pH, DO and MLSS probes and HD security camera

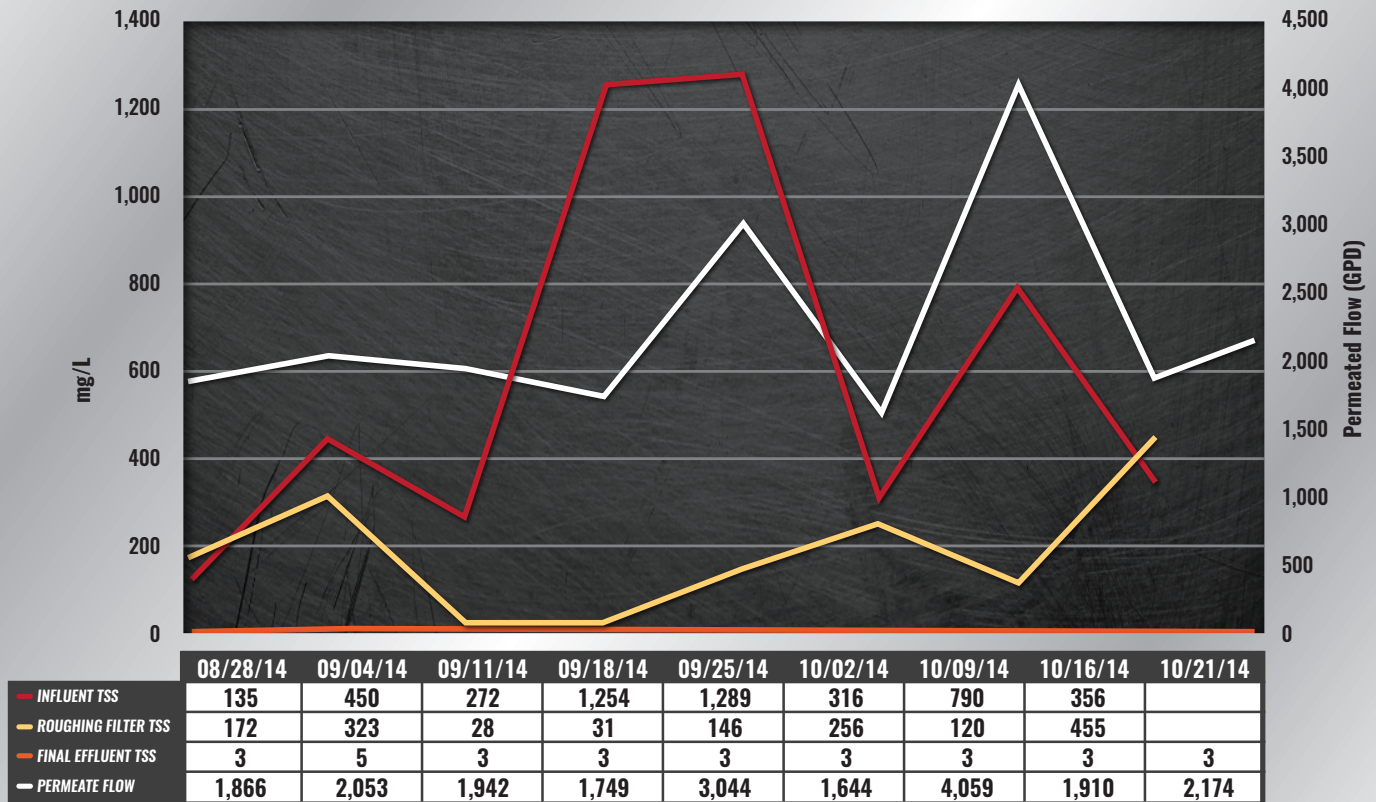


## 2016 HARVEST - BOD



Graph illustrates Biochemical Oxygen Demand (BOD) reduction within the MEMPAC-I from system start-up through 2014 harvest

## 2016 HARVEST - TSS



Graph illustrates Total Suspended Solids (TSS) reduction by the MEMPAC-I from system start-up through 2014 harvest