



Project Highlights

- Commissioned August, 2013
- Hollow Fiber MBR Retrofit Using Ovivo's OV-400 Flat Sheet Membrane Units
- Domestic WW, MBR Retrofit
- Permit(s); Discharge
- 10/NA/2 (TN/TP/Turbidity)
- Municipal \Rightarrow Surface Discharge
- MMF Capacity: 0.06 MGD
- 1 FTE (Full-Time Employee)

One System, Many Solutions...



“In one day this plant went from a borderline condition to having excess capacity and improved operations due to the installation of Ovivo's new membrane unit.”

Project Overview

System Type(s):	Ovivo [®] MBR
Previous Facility Type:	Hollow Fiber MBR
Owner:	Northumberland County, VA
Engineer:	Resource International
Contractor:	PCC
Operations:	Northumberland County, VA
Delivery Method:	Retrofit
Time To Retrofit:	1 week
Total Installed Project Cost:	\$86,000.00
Plant Contact Information:	Clifton Bowles no email available

Description

The Callao, VA WWTP was an existing hollow fiber MBR facility that had been in operation since 2006. Following several years of inadequate performance and intensive cleaning requirements, Northumberland County, VA approached Ovivo for a solution. Ovivo installed two flexible flat sheet membrane units, the OV-400, one in each MBR basin. The new units have provided instant capacity increase, and will be less susceptible to damage and sludge accumulation, which will result in less risk and easier operations for the owners.



Plant Design Information

Fine Screen Type:	Rotary Brush
Aperture or Slot Size:	2 mm
Supplemental Aeration Technology:	Fine Bubble, Tubes
MBR Blower Type:	Positive Displacement
Solids Management Data:	Aerated Sludge Holding Tank, Hauling
SCADA System:	iFix
Disinfection Method:	UV
# Process Stages:	3

MBR (Membrane Zone) Design

Filtration Mode:	Pumped
# of Reactors:	2
Submerged Membrane Unit (SMU):	OV400, Ovivo
# SMU:	2
Design Flux (MMF):	7.0 gfd
Minimum Temperature:	16°C
Peak Factor:	2.0
# of Maintenance Cleans:	4