

## R.O. Membrane Replacement

<b>Category</b>	Non-concurrency
<b>CIP Rating Score</b>	49
<b>Project Number</b>	3045
<b>Location</b>	Countywide
<b>District</b>	Countywide
<b>Project Limits</b>	Tropical Farms and North Water Treatment Plants
<b>Related Projects</b>	
<b>Lead Dept/Division</b>	Utilities
<b>Year Project Initiated</b>	Approved during FY05 CIP Workshop



### DESCRIPTION

Replacement of the membranes on four existing reverse osmosis treatment trains at the Tropical Farms Water Treatment Plant in FY 19 and FY27. Replacement of the membranes on three existing reverse osmosis treatment trains at the North Water Treatment Plant in FY24.

### BACKGROUND

Regular replacement of the reverse osmosis treatment unit membranes is necessary to improve overall efficiency and reliability. Existing membranes at the North Water Treatment Plant are 2 years old and at Tropical Farms are approximately 10 years old. The normal life cycle ranges from 5 to 8 years per the Southeast Desalination Association guidelines.

### PROJECT ORIGATION

Infrastructure Needs

### JUSTIFICATION

Project will improve system reliability and continue current level of service. The existing membranes at the Tropical Farms Water Treatment Plant are beyond their 3-year warranty period, beyond the normal life cycle of 5 to 8 years, and are inefficient and more costly to operate. The rejection of newer membranes also produces better water quality. Regular replacement of the reverse osmosis treatment unit membranes is necessary to improve the overall efficiency and reliability.

Expenditures	Total	To Date		Funded					Unfunded
				FY19	FY20	FY21	FY22	FY23	FY24-FY28
Construction	3,025,000			1,150,000					1,875,000
<b>Expenditure Total</b>	<b>3,025,000</b>			<b>1,150,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,875,000</b>
Revenues	Total	To Date	Carryover	FY19	FY20	FY21	FY22	FY23	FY24-FY28
Utilities R&R	3,025,000			1,150,000					1,875,000
<b>Revenue Total</b>	<b>3,025,000</b>			<b>1,150,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,875,000</b>
<b>Total Unfunded</b>									<b>0</b>

### OPERATING BUDGET IMPACT

With newer membranes, reliability is increased and it is anticipated that electrical bills will decrease also.