



# Sun City

## Regional Water Reclamation Facility



### ***What goes around...***

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Water treatment and sewer treatment are two sides of the same coin.

EMWD sees sewage treatment as a way to convert a nuisance and an expense into a resource that extends water supplies in many ways.

By the 1920s, wastewater processing consisted of ***primary treatment***—a mechanical process involving settling, skimming off floating materials and removing sludge. By the end of World War II, it became apparent this wasn't enough.

What came next incorporated biological processes into a more advanced ***secondary treatment***. This advance in technology is based on what occurs in nature—after solids have dropped out, organisms consume remaining nutrients. Simply put, a treatment plant speeds up the natural water cycle

process.

During the late 1980s, even more advanced treatment—known as ***tertiary***—became feasible. This highest level of treatment removes bacteria and viruses and virtually all suspended solids. Water at this level can be used for most any purpose short of direct human consumption.

Every gallon of water that is used at least one more time means one more gallon of fresh water can be left in the ground. Or one less gallon needs to be imported through aqueducts from hundreds of miles away.

In Sun City, both local golf courses have been long-time users of tertiary-quality recycled water.

<b>Sun City</b> in millions of gallons/day (mgd)*	
Typical daily diversions:	2.4
Capacity:	3
Ultimate expansion:	15-21

\*All flows diverted to Perris Valley

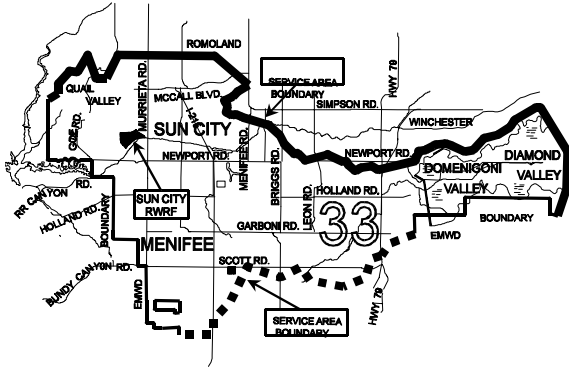
### ***In the beginning...***

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During the 1960s, the Del E. Webb Corp. announced it would develop its third major retirement community after having acquired large tracts of land in the Perris and Menifee valleys.

This became EMWD's first sewage project. Temporary oxidation ponds, built in 1964, were replaced by a permanent 1 mgd plant two years later. Expansions in 1987 brought that to 2 mgd, and then 3 mgd in 1991.

Located adjacent to Salt Creek on 123



acres, the Sun City regional facility redirects the wastewater from residents living within a 57-square mile service area and sends it to Perris for processing.

On-site storage capacity totals 187 million gallons of tertiary recycled water.



### ***Groundwater desalination***

Although this plant processes no wastewater on-site at this time, wastewater treatment could begin again in a few years. Good use is still made of the site:

Construction began in 2000 on a desalination facility to provide 3 mgd (3,360 acre-feet/year) of potable water.

The supply will come from groundwater wells having water quality ranging from 800 to 3,700 parts per million of Total Dissolved Solids (TDS). This is brackish water, which is too salty for domestic use.

And it will help EMWD become more self-sufficient and will improve the water quality of the local underground basins.

A brine line has already been built from the site downstream to Temescal Canyon for eventual disposal into a larger brine line that follows the Santa Ana River.

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