



Item #12

DATE May 13, 2015
TO GCTD Board of Directors
FROM Robert Lurie, Director of Fleet and Facilities
SUBJECT **Receive and File Report on Water Conservation Measures at GCTD**

I. Executive Summary

All of California is currently facing a record long drought. In order to reduce the amount of water used at our facility, Gold Coast Transit District (GCTD) maintenance staff has implemented several water saving measures. These measures have mainly targeted the water used for cleaning our buses and irrigating our grounds. They include the following:

- Reduced frequency of washing buses.
- Elimination of reverse osmosis water for washing relief and supervisor vehicles.
- Elimination of reverse osmosis water in final rinse arch of bus wash.
- Replacing bus wash sprayer nozzles.
- Decreased duration of vehicle chassis wash program.
- Reduced landscape irrigation.
- Installation of low flow sprinkler nozzles.

The above measures have produced immediate water savings with minimal effort and cost.

We are currently researching other methods of conserving water at our facility. We are mindful of the need to balance water savings vs. cost of improvements, given the short duration of time we will be remaining at this facility.

II. Background Information

GCTD washes a fleet of 54 transit buses and approximately 24 relief vehicles. Bus exteriors are primarily washed by driving them through a stationary bus wash designed for transit vehicles. Relief vehicles are mainly washed by hand. In addition to the bus wash, GCTD utilizes an undercarriage chassis wash for cleaning the underside of our buses. The water used in these cleaning processes is significant, especially for full size transit buses. The bus wash systems utilizes a combination of water source technologies including fresh water, soft water, reverse osmosis (R/O) water, and recycled water. Over the past year

GOLD COAST TRANSIT DISTRICT

we have taken the following steps to reduce the amount of water used to clean our buses:

- Reduced frequency of bus washing. Buses were previously washed three times per week. Over the course of the last year, we have reduced the frequency to once per week. The water saved from this step is significant, as the bus wash can use up to 60 gallons of water (recycled, soft, and R/O) per bus.
- Elimination of reverse osmosis water for vehicle wash. Our bus wash uses reverse osmosis water in the final rinse to eliminate hard water spots on bus finishes and glass. Our maintenance staff also used R/O water to clean support vehicles. Reverse osmosis water requires up to 5 gallons of fresh or softened water to make one gallon of R/O water. Based on this ratio, the bus wash can consume 2,700 gallons of fresh water to rinse our bus fleet. To conserve the fresh water used to process the R/O water, we have stopped using R/O water in the bus wash and for washing support vehicles. This step will save over 2,000 gallons of water per fleet rinse cycle. Eliminating R/O water will affect the quality of the final rinse and we will continue to monitor our fleet to ensure that vehicle appearance does not suffer.
- Replacement of bus wash spray nozzles. There are a total of 49 spray nozzles in the bus wash. Each nozzle is rated to flow one to two gallons of water per minute. As the nozzles age, the flow rate increases and the spray pattern degrades. As of this writing, GCTD maintenance staff has ordered new spray nozzles for the bus wash and is experimenting with reduced flow nozzles to save water.
- Reprogram vehicle chassis wash. The chassis wash is used to clean the undercarriage of our full size buses. This wash system can use up to 250 gallons of fresh water per bus to clean the entire underside of a 40 foot bus. Each bus chassis is cleaned once per year. GCTD began using an abbreviated chassis wash program last year. The new program cleans areas under the engine and axles only, using less than half the water of the old program.

GCTD has taken steps to reduce the water used in irrigating our grounds. Although we do not have xeriscape landscaping, we do have well established plants and trees that should require less water to survive in drought conditions. At this time, some of our ground cover is receding and some of the plants and bushes, such as the Junipers along Garfield Ave. are showing the effects of lack of water. As with any garden, we will need to continually assess the health of our plants. We have taken the following steps to reduce water used in irrigation:

- Installation of low flow sprinkler heads. Low flow irrigation sprinklers heads were purchased under a rebate program through the City of Oxnard water department. These low flow sprinkler heads utilize less water than conventional sprinkler heads.
- Reduced ground watering schedule. In the past, GCTD has watered up to 5 landscape zones, three times per week. Based on ongoing water conservation, this schedule has been gradually reduced over the past several years. The current

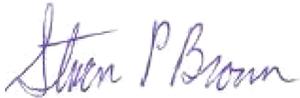
irrigation schedule waters 2 zones, along Garfield St. and E. Third St. twice a week. The duration of watering has also been reduced.

Water conservation will likely be with us well into the future. The above actions required minimal time and expense for the amounts of water saved. Future plans include training staff on water conservation and further reducing automobile wash schedules. We will also look at other ways to save water, such as low flow plumbing fixtures and valves, taking into account the time remaining at the current facility and the overall return on investment.

III. Recommended Action

It is recommended that the Board of Directors receive and file this report.

General Manager's Concurrence



Steven P. Brown