



# City Council Report

**Date:** December 12, 2016  
**To:** City Council  
**Through:** Kari Kent, Assistant City Manager  
**From:** Beth Huning, City Engineer  
Marc Ahlstrom Assistant City Engineer  
**Subject:** Greenfield Water Reclamation Plant (GWRP), Redundant Transformer  
City Project No. CP06260003  
District 6

## Strategic Initiatives



## Purpose and Recommendation

The purpose of this report is to request Council approval for execution of an agreement with the Salt River Project for designing and constructing a redundant transformer at the City of Mesa's Greenfield Water Reclamation Plant's (GWRP's) Electrical Substation (Refer to Exhibit "A" for the project location). The contract will be in the form of an additional Schedule 7 to the existing Customer-Owned Substation Facilities Services Agreement with Salt River Project Agricultural and Power District (Services Agreement).

Staff recommends that Council authorize the City Manager to execute this Schedule 7 on behalf of the City, which will authorize the expenditure of \$2,525,236 to have SRP design and construct a 28 mega-volt-amp (MVA) transformer at the GWRP.

## Background

The GWRP receives its power from the Salt River Project (SRP). Under a Customer-Owned Substation Facilities Services Agreement entered into on January 7, 2016, SRP provides maintenance, repair and emergency services to the City's electrical substation servicing the GWRP. This substation is fed by two 69 kV lines through a 28 mega-volt-amp (MVA) transformer. This transformer represents a single point of failure with no existing redundancy. In the event of a failure of this existing transformer, {00222375.1}

the plant would potentially be offline for an extended period of time. This plant is an “end of the line” wastewater treatment plant, and as such there are limited options for transferring the wastewater to another facility. This makes the reliability of the plant and its power supply of high importance to the City and its partners, the Town of Gilbert and Town of Queen Creek.

## **Discussion**

Two 69 kV lines provide power to the GWRP. When originally constructed, the plant’s emergency plan included utilizing SRP’s trailer-mounted 28 MVA transformer to provide power in an emergency failure of the existing transformer. However, the availability of the trailer-mounted transformer from SRP cannot be guaranteed. As such, the City approached SRP to improve the reliability of the substation by providing a redundant transformer to eliminate the potential single point of failure. Under the aforementioned agreement, SRP is able to install a second transformer to meet the redundancy requirements for the GWRP.

Community Impact – This project will improve reliability of the GWRP, which treats wastewater from Mesa, Gilbert and Queen Creek.

## **Alternatives**

The City Council could choose not to enter into this agreement. This is not recommended because it exposes the plant to a significant power outage in the event of a transformer failure, impacting the plant’s ability to treat wastewater.

## **Fiscal Impact**

The total fiscal impact of this agreement is \$2,525,236, which will be shared with the Partners in the GWRP as follows: Mesa: \$1,055,548; Gilbert: \$1,005,044; and Queen Creek: \$464,643. These capital costs are subject to potential reconciliation among the partners upon completion of various expansion projects at the GWRP.

Mesa’s portion of this project is funded by 2014 authorized Wastewater bonds.

## **Coordinated With**

The Water Resources Department and the towns of Gilbert and Queen Creek concur with this recommendation.

