

Chandler Ocotillo Water Reclamation Facility  
Aquifer Protection Permit No. P-100140  
Place ID 686, LTF No. 71578  
Significant Amendment

**I. Introduction:**

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit (APP) for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards (AWQS) at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

**II. Facility Location:**

3333 South Old Price Road  
Chandler, Arizona 85248

**III. Facility Description:**

The City of Chandler is authorized to operate the Chandler Ocotillo Water Reclamation Facility (OWRF) with a maximum monthly average flow of 18 million gallons per day (mgd). The OWRF consists of two (2) treatment trains, the Membrane Bioreactor (MBR) treatment train and the Anoxic/Aerobic Basins (Conventional MLE) treatment train, with an influent pump station, a combined headworks (for the two treatment trains), three coarse screens and three fine screens. Influent wastewater may be diverted to either of the two (2) treatment train systems.

The influent pump station has the capability to divert the influent between two (2) Water Reclamation Facilities (WRFs): the OWRF under this permit (APP No. 100140), and the City of Chandler Airport WRF under APP No. 103170.

**Membrane Bioreactor System (MBR):** This treatment train has the capacity to collect and treat 6.6 mgd (monthly average of daily flow values). The MBR consists of two (2) bioreactors with anoxic and aeration zones, four (4) membrane filtration trains each with seven (7) cassettes, and a chlorine contact basin.

**Anoxic/Aerobic Basins System:** This treatment train has the capacity to collect and treat a maximum monthly average of 11.4 mgd (monthly average of daily flow values). The treatment train consists of two (2) trains of anoxic basins and aerobic basins, a flow splitter box, three (3) existing and one new clarifier, four (4) tertiary sand filters, and two (2) chlorine contact basins. Following chlorination, the effluent from the Anoxic/Aerobic Basins System is combined with the effluent from the MBR System.

The combined effluent may be used for beneficial purposes under a valid reclaimed water permit, recharged, or stored in the two (2) clay-lined effluent (East and West) storage basins. The effluent may be recharged at the City of Chandler Ocotillo Recharge and Recovery Facility under APP No. 105338 , the Chandler Regional Park Recharge Facility under APP No. 103145, and or Chandler Heights Recharge Facility under APP No. 105482 .

#### **IV. Amendment Description:**

The purpose of this amendment is to:

- Re-rating of the plant from 15.5 mgd to 18 mgd. The Anoxic/Aerobic Basins System was re-rated from 10 mgd to 11.4 mgd and MBR System was re-rated from 5.5 mgd to 6.6 mgd.
- Add a new clarifier was added to the Anoxic/Aerobic Basins System.

#### **V. Regulatory Status:**

The latest inspection dated April 17, 2018 indicates that the facility was found to be in compliance with the APP and Arizona rules and statutes.

#### **VI. Best Available Demonstrated Control Technology (BADCT):**

The OWRF has been designed, constructed, operates, and is maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

The treatment facility shall not exceed a maximum seepage rate of 550 gallons per day per acre for all containment structures within the treatment works.

#### **VII. Compliance with Aquifer Water Quality Standards (AWQS):**

The PMA will circumscribe the Anoxic/Aerobic Basins System and Membrane Bioreactor System. Disposal of effluent is performed at locations permitted under other APPs, stored in the two (2) clay-lined effluent (East and West) storage basins, for beneficial use under valid reclaimed water permits or recharged at the City of Chandler Ocotillo Recharge and Recovery Facility under APP No. 105338 , the Chandler Regional Park Recharge Facility under APP No. 103145, and or Chandler Heights Recharge Facility under APP No. 105482.

To ensure that site operations do not result in violation of Aquifer Water Quality Standards at the point of compliance representative samples of the combined effluent from the Anoxic/Aerobic Basins System and MBR System shall be collected downstream of the chlorine contact basins. Samples of the effluent will be analyzed daily for fecal coliform, monthly for total nitrogen, quarterly for metals, and semi-annually for organic compounds.

Inspection of the treatment plant components, pumps, and the effluent storage basin berm integrity and freeboard will be performed at least weekly.