



MAG 208

WATER QUALITY MANAGEMENT PLAN AMENDMENT

for the

**CENTRAL BUCKEYE WASTEWATER TREATMENT
PLANT ARIZONA POLLUTANT DISCHARGE
ELIMINATION SYSTEM PERMIT DISCHARGES**

to the

ROOSEVELT CANAL

and

BUCKEYE CANAL

BUCKEYE, ARIZONA

September 14, 2015

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- Letter of Sponsorship from the City of Buckeye
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- Letter of Financial Capability from the City's Finance Director

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1.0 INTRODUCTION

In accordance with Section 208 of the Clean Water Act, the Designated Planning Agency for Maricopa County, Arizona is the Maricopa Association of Governments (MAG). The City of Buckeye (City) is the Designated Management Agency for the Buckeye Municipal Planning Area (Exhibits 1 and 2).

The purpose of this application is to request an amendment to the MAG 208 Water Quality Management Plan for additional Arizona Pollutant Discharge Elimination System (AZPDES) permit discharge points from the Central Buckeye Wastewater Treatment Plant (Central Buckeye WWTP). The additional discharge points will enable Class A+ effluent to be discharged from the Central Buckeye WWTP to the Roosevelt Canal (also known as the Roosevelt Irrigation District Canal or RID Canal) and the Buckeye Canal (Exhibits 2, 3, 4 and 8). The purpose of this amendment is to allow discharge to the Roosevelt Canal, with a contingency discharge to the Buckeye Canal.

The Roosevelt Canal discharge point would be located near the City's Sundance Water Reclamation Facility (WRF) that will also discharge Class A+ effluent to the Roosevelt Canal. The discharge from the Sundance WRF effluent to the Roosevelt Canal is already identified in the MAG 208 Water Quality Management Plan. The contingency discharge to the Buckeye Canal would be located about ¼-mile south of Southern Avenue at Dean Road (Exhibit 8).

The Central Buckeye WWTP and Sundance WRF are owned and operated by the City. The Roosevelt Canal is owned and operated by Roosevelt Irrigation District (RID). RID delivers water to irrigated lands within its district. The Buckeye Canal is owned and operated by Buckeye Water Conservation and Drainage District (BWCCD). BWCCD delivers water to irrigated lands within its district.

The following letters are included in Appendix A:

- A letter of sponsorship from the City of Buckeye;
- A letter from the jurisdiction within three miles (Maricopa County), and,
- A letter of financial capability from the City's Finance Director.

1.1 Disposal and Reuse Sites

1.1.1 Existing Disposal and Reuse

The MAG 208 Water Quality Management Plan Point Source Update, approved by the MAG Regional Council on June 25, 2014, describes the method of effluent disposal for the Central Buckeye WWTP as follows:

Central Buckeye WWTP existing disposal and reuse:

The Central Buckeye WWTP currently discharges effluent into the Buckeye Water Conservation Drainage Ditch (BID) under an Arizona Pollutant Discharge Elimination System (AZPDES) permit. The effluent is used downstream for

irrigation of nonedible agricultural crops. The facility does not currently recharge. Direct reuse is to the Earl Edgar Park, with other possible sites dependent upon the construction of the facility reuse infrastructure to serve potential customers. Recharge would likely need to be performed off-site due to waterlogged conditions at the facility site (MAG, 2014).

Although this proposed amendment requests approval of additional AZPDES permit discharge points from the Central Buckeye WWTP, the methods of disposal currently identified for the Central Buckeye WWTP will continue to remain options. Currently, discharge occurs to a lateral of the Buckeye Canal, near the Central Buckeye WWTP. Discharge to a lateral of the Buckeye Canal will continue to be an option.

1.1.2 Proposed Additional Discharge Points

This application requests that the MAG 208 Water Quality Management Plan be amended to include the following additional methods of disposal and reuse for the Central Buckeye WWTP:

- Reuse for irrigation in the Roosevelt Irrigation District canal, through discharge into the canal at a location east of Dean Road and adjacent to the Sundance WRF (Exhibits 2 through 4). Class A+ effluent from the Central Buckeye WWTP and Sundance WRF can be combined at the additional discharge point (effluent from either plant or both can be discharged).
- As a contingency, discharge to the Buckeye Canal would occur at Dean Road, about ¼-mile south of Southern Avenue (see exhibit 8). The contingency discharge to the Buckeye Canal would be for irrigation of non-edible agricultural crops or landscape irrigation. Currently, discharge occurs to a lateral of the Buckeye Canal located near the Central Buckeye WWTP, and this discharge would continue to be an option.

Reuse will occur at the Sundance Golf Course. Reuse will also occur at the City of Buckeye's Sundance Park. The reclaimed water irrigation system has already been constructed to irrigate Sundance Park. In addition, reuse will occur at other sites including schools, other parks, and other landscaping areas in the future. Reuse at the other sites is dependent upon the construction of the facility reuse infrastructure to serve the potential customers.

Furthermore, recharge will also likely occur. A recharge feasibility study will be necessary to determine the hydrologic feasibility, recharge locations and recharge methods. However, recharge will likely occur north of the Roosevelt Canal.

1.1.3 Effluent Currently Discharged Without Benefit

The Sundance WRF and the Central Buckeye WWTP both produce A+ quality effluent, however only a portion of the effluent currently produced by these plants is used for direct reuse. About 700 acre-feet per year (228 million gallons) of the effluent combined from the plants is beneficially reused. The remainder of the effluent from the Sundance

WRF and Central Buckeye WWTP (about 1,500 acre-feet per year or 489 million gallons) is disposed of by discharging to the Buckeye Water Conservation and Drainage District canals. Buckeye Water Conservation and Drainage District receives the effluent from the City's wastewater treatment plants at no cost. The City is not currently receiving any benefit or recharge credits for discharging the effluent to the Buckeye Water Conservation and Drainage District canals.

1.1.4 Roosevelt Irrigation District Groundwater Savings Facility

Roosevelt Irrigation District (RID) has a Groundwater Savings Facility (GSF) that is permitted by the Arizona Department of Water Resources (ADWR) to accept up to 60,000 acre-feet of effluent annually into the Roosevelt Canal, and deliver it as a renewable water supply, called "in-lieu" water. The "in-lieu" water is delivered to recipients (such as a farmer to irrigate non-edible agricultural crops, the Buckeye Cemetery to irrigate turf, or City parks to irrigate turf) to replace groundwater pumping with the "in lieu" water. This creates a groundwater savings. Entities with a Water Storage permit may deliver effluent to the Roosevelt Canal and receive Long-Term Storage Credits (LTSCs) in return for the groundwater savings.

The City currently has a Water Storage permit for RID's GSF. The Water Storage permit allows the City to deliver up to 5,000 acre-feet (1,629 million gallons) of Class A+ effluent annually to the Roosevelt Canal and receive LTSCs in return for the effluent used by RID customers to reduce groundwater pumping.

The City plans to discharge Class A+ effluent into the Roosevelt Canal from the Central Buckeye WWTP and Sundance WRF. In return, the City will receive LTSCs which will be required to maintain a 100-year Assured Water Supply.

1.1.5 Construction of Effluent Transmission Main and Roosevelt Canal Discharge Point

A 12-inch transmission main will be constructed to convey the effluent from the Central Buckeye WWTP to the Sundance WRF (Exhibits 5 through 8), allowing the effluent to be discharged into the Roosevelt Canal (also known as the Roosevelt Irrigation District Canal or RID Canal). The transmission pipeline route trends north from the Central Buckeye WWTP for about 1,200 feet until it reaches Beloat Road, then east along Beloat Road to Dean Road, then north along Dean Road until it crosses beneath the Buckeye Canal, then it continues north until it crosses beneath the RID Canal, then east until it reaches the Sundance WRF. The effluent may then be discharged into the Roosevelt Canal or sent to various reuse locations. The transmission pipeline route is entirely within the City's Municipal Planning Area and portions are within the City's incorporated area. The 12-inch pipeline from the Central Buckeye WWTP and the pump station are designed to convey 1.2 MGD. In addition to discharging effluent into the RID Canal, the effluent will also be used to irrigate the Sundance Golf Course and Sundance Park (Exhibits 6 and 8). Turf areas at various schools may also be irrigated in the future (Exhibit 6). In the event that discharge to the Roosevelt Canal or reuse options are not available, a contingency discharge may occur to the Buckeye Canal at Dean Road, about ¼-mile south of Southern Avenue.

The City will construct, operate and maintain the effluent transmission main, discharge pipe and meter to the Roosevelt Canal. Construction of the reclaimed water line project was 62% complete as of July 16, 2015. Construction of the reclaimed water line is anticipated to be completed by December 31, 2015. The contract completion date is January 28, 2016.

1.1.6 Future Effluent Recharge

In December 2011 groundwater was measured at a depth of 3 feet below ground surface at the Central Buckeye WWTP. Consequently, effluent from the Central Buckeye WWTP cannot be recharged near the CBWWTF, due to the shallow groundwater conditions. Construction of the effluent transmission main to convey effluent from the Central Buckeye WWTP to the Sundance WRF will allow Class A+ effluent from the Central Buckeye WWTP and Sundance WRF to be potentially recharged at a location north of the Roosevelt Canal in the future. The depth to groundwater north of the Roosevelt Canal, near the Sundance WRF, is currently approximately 180 feet or more. Recharge methods and locations have not yet been selected, but the recharge methods could consist of vadose zone recharge wells, infiltration trenches, or percolation basins.

1.1.7 Central Buckeye Wastewater Service Area Population Estimate

The Central Buckeye Wastewater Service Area is primarily located in Regional Analysis Zone (RAZ) 278 and a portion of RAZ 279. The population projected in 2040 for RAZ 278 and 279 is 84,828 and 62,737, respectively (MAG Socioeconomic Projections, June 2013).

2.0 SUNDANCE WRF METHODS OF EFFLUENT DISPOSAL (NO CHANGES UNDER THIS 208 AMENDMENT)

The Sundance WRF will be connected to the proposed new AZPDES permit discharge from the Central Buckeye WWTP, but this MAG 208 Water Quality Management Plan amendment is not proposing any changes to the Sundance WRF or to the AZPDES permit discharge points from the Sundance WRF.

The MAG 208 Water Quality Management Plan Point Source Update, approved by the MAG Regional Council on June 25, 2014, describes the method of effluent disposal for the Sundance WRF as follows:

- Effluent is currently reused as irrigation for a golf course [Sundance golf course] (CMX, 2007). An effluent line also conveys flows to the Buckeye Canal. Effluent in excess of reuse demand is discharged to the Buckeye and/or Roosevelt Canals under AZPDES permits. Recharge may not be feasible onsite due to constrained site conditions. Potentially, recharge facilities could be constructed; however, further investigation may be needed into the groundwater conditions in the area (CMX, 2007).

2.1 Sundance WRF Capacity

The current capacity of the Sundance WRF is 3.5 MGD. After future expansions, the Sundance WWTP is anticipated to have an ultimate capacity of 13.9 MGD.

3.0 TWENTY-YEAR NEEDS

This project will allow about 1,500 acre-feet per year or 489 million gallons of Class A+ effluent that is currently discharged without benefit to the City to be beneficially reused (about 1,100 acre-feet of the effluent will be from the Central Buckeye WWTP and 400 acre-feet from the Sundance WRF). In return for the effluent that is discharged to the Roosevelt Canal, the City will receive LTSCs which will be required for the City to maintain a 100-year Assured Water Supply. Construction of the effluent transmission main will also allow effluent to be used to irrigate Sundance Park, and local school grounds. The effluent transmission main will also allow effluent from the Central Buckeye WWTP to be potentially recharged at a location north of the Roosevelt Canal in the future. The beneficial reuse and recharge of this effluent will conserve potable water supplies, which will be necessary to meet the needs of a growing population. In the event that discharge to the Roosevelt Canal or reuse options are not available, a contingency discharge may occur to the Buckeye Canal at Dean Road, about ¼-mile south of Southern Avenue. There will also be the option of discharging to a lateral of the Buckeye Canal, near the Central Buckeye WWTP.

Sundance Park has been issued a turf conservation allotment of 57.14 acre-feet per year by the Arizona Department of Water Resources. The park is currently irrigated using untreated groundwater pumped from a City of Buckeye well. The use of Class A+ effluent to irrigate the park, instead of groundwater, will conserve approximately 57 acre-feet or 18.6 million gallons of groundwater per year. As the park expands in the future, the effluent demands will grow and even more groundwater will be conserved by using effluent to irrigate the park.

The Central Buckeye Wastewater Service Area is primarily located in Regional Analysis Zone (RAZ) 278 and a portion of RAZ 279. The population projected in 2040 for RAZ 278 and 279 is 84,828 and 62,737, respectively (MAG Socioeconomic Projections, June 2013). The current design capacity of the Central Buckeye WWTP is 4.5 MGD. Future expansions will consist of multiple phases of construction, resulting in an ultimate capacity of 45.8 MGD. The Central Buckeye WWTP is located south of Beloit Road, between Miller and Apache Road. The address is 915 South 7th Street, Buckeye, Arizona 85326. The treatment process includes influent pumping, mechanically and manually cleaned bar screens, grit removal, secondary treatment, (Bardenpha process for nitrification/denitrification), secondary clarification, tertiary filtration and chlorination/dechlorination. The Central Buckeye WWTP treats domestic and commercial wastewater to Class A+ standards.

4.0 REGULATIONS

Permits from the following agencies are required to construct and operate the effluent transmission main, to discharge effluent to the Roosevelt and Buckeye Canals, and to use the effluent for landscape irrigation when it is not discharged to the Roosevelt or Buckeye Canals.

- Arizona Department of Environmental Quality: The Existing Arizona Pollutant Discharge Elimination System (AZPDES) permits will be modified for the Central Buckeye WWTP and the Sundance WRF. A Type 3 Reclaimed Water agent permit has been obtained to reuse the Class A+ effluent for landscape irrigation at Sundance Park, Sundance Golf Course, and other facilities. Storm water pollution prevention will be achieved through a storm water pollution prevention plan.
- Arizona Department of Water Resources: A Water Storage Permit has been obtained for the Roosevelt Irrigation District Groundwater Savings Facility.
- Maricopa County Environmental Services Department (MCESD) Approval to Construct (ATC) and Approval of Construction is required from MCESD. The City obtained the Certificate of Approval to Construct on January 29, 2015.
- Maricopa County Air Quality Department. The City obtained a Maricopa County dust control block permit. Dust control will be achieved using a water truck and trackout control.
- Maricopa County Department of Transportation: The City obtained a permit to construct the effluent pipeline in the Maricopa County right-of-way.

5.0 FINANCING

Financing to construct the reclaimed water line project was approved by the City Council. The project is being financed by a Water Infrastructure Finance Authority of Arizona (WIFA) loan with payback through reclaimed water rates and sewer rates. The approved cost of the project is \$6.6 million. The City's Finance Director has provided a letter of financial capability which is included in Appendix A.

6.0 IMPLEMENTABILITY

The City is committed to constructing, operating and maintaining the effluent transmission main, discharge pipes and meters. To attest to the City's commitment to constructing this project, construction of the reclaimed water line project was 62% complete as of July 16, 2015. Construction of the reclaimed water line is anticipated to be completed by December 31, 2015. The contract completion date is January 28, 2016.

The City is committed to completing this project because the project will have many benefits for the City including:

- Accruing LTSCs from discharging the Class A+ effluent to the Roosevelt Irrigation District Groundwater Savings Facility. The LTSCs will be necessary to maintain the City's 100-year Assured Water Supply.
- Allowing the City to use Class A+ effluent, instead of groundwater, to irrigate Sundance Park. This will conserve groundwater.
- Allowing the City to recharge Class A+ effluent north of the Roosevelt Canal in the future.
- Potentially allowing local schools to irrigate turf with Class A+ effluent, instead of potable water. This has the potential to conserve potable water and reduce water bills for the schools.

The implementation schedule for discharging Class A+ effluent from the Central Buckeye WWTP to the Roosevelt Canal will be dependent on approval of the MAG 208 amendment and modification of the AZPDES permit for the Central Buckeye WWTP.

Modification of the AZPDES permit for the Sundance WRF is required before Class A+ effluent from the Sundance WRF can be discharged to the Roosevelt Canal. Because discharge of Class A+ effluent from the Sundance WRF to the Roosevelt Canal is already identified in the 208 Plan, the discharge of Sundance WRF effluent to the Roosevelt Canal may begin before effluent from the Central Buckeye WWTP is discharged to the Roosevelt Canal.

Sundance Park may be irrigated with effluent before effluent from either the Sundance WRF or Central Buckeye WWTP is discharged to the Roosevelt Canal. It is anticipated that construction of the effluent transmission main will be completed by December 31, 2015. Therefore, Sundance Park could be irrigated by Class A+ effluent from the Sundance WRF and Central Buckeye WWTP by early 2016.

Local school districts will be responsible for acquiring Approvals to Construct (ATCs) and Approvals of Construction (AOCs) from the MCESD to begin using the Class A+ effluent to irrigate their turf areas. In the event that discharge to the Roosevelt Canal or reuse options are not available, a contingency discharge may occur to the Buckeye Canal at Dean Road, about ¼-mile south of Southern Avenue. There will also be the option of discharging to a lateral of the Buckeye Canal near the Central Buckeye WWTP.

7.0 PUBLIC PARTICIPATION

MAG and the City will follow the applicable procedures for public notification in processing this 208 Plan Amendment, including the following:

1. Submittal of a mailing list used to notify the public of the hearing for this 208 Plan amendment.
2. Thirty-day public notice of the availability of the documents for review prior to the public hearing.
3. Publication of a public notice posting the date, time, subject and location of the public hearing for this 208 Plan amendment.
4. Submittal of an affidavit of the publication of the public notice.
5. Submittal of a responsiveness summary for the public hearing.

8.0 CHECKLIST AND MAPS

Please refer to Appendix B for the 208 Amendment Checklist.

Exhibits 1 through 8 are attached to this application. Exhibits 1 through 8 consist of the following maps or figures:

- **Exhibit 1:** Buckeye 208 Plan Proposed Water Reclamation Facilities and Service Areas (CMX, 2007). This figure was originally labeled Figure 10 and was included in the Town of Buckeye's MAG 208 Water Quality Management Plan Comprehensive Amendment (CMX, October 12, 2007).
- **Exhibit 2:** Buckeye Effluent Pipeline. This figure shows the proposed additional discharge point into the Roosevelt (RID) Canal. The adjacent Sundance WRF is also shown.
- **Exhibit 3:** Discharge Point for Sundance Water Reclamation Facility and Central Buckeye Wastewater Treatment Plant. This figure consists of an aerial photograph which shows the Sundance WRF and the proposed additional discharge point into the RID Canal.
- **Exhibit 4:** Sundance Wastewater Service Area and Central Buckeye Wastewater Service Area. The figure shows the wastewater service areas of the Central Buckeye WWTP and Sundance WRF, along with the City's Municipal Planning Area Boundary.
- **Exhibit 5:** Existing Conditions Map. This figure shows the existing effluent pipeline from the Sundance WRF to the Buckeye Canal, and the existing effluent pipeline from the Sundance WRF to the Sundance Golf Course.
- **Exhibit 6:** Future Effluent Customers. This figure shows some of the locations where use of the Class A+ effluent has been requested, including Sundance Park and various schools with turf areas.

- **Exhibit 7:** Central Buckeye Wastewater Treatment Plant to Sundance Water Reclamation Facility Effluent Line Alignment. This figure shows the route of the 12-inch effluent transmission main from the Central Buckeye WWTP to the Sundance WRF.
- **Exhibit 8:** Effluent Discharge and Reuse Options Schematic, Central Buckeye WWTP and Sundance WRF. This diagram illustrates potential discharge and reuse options.

9.0 REFERENCES

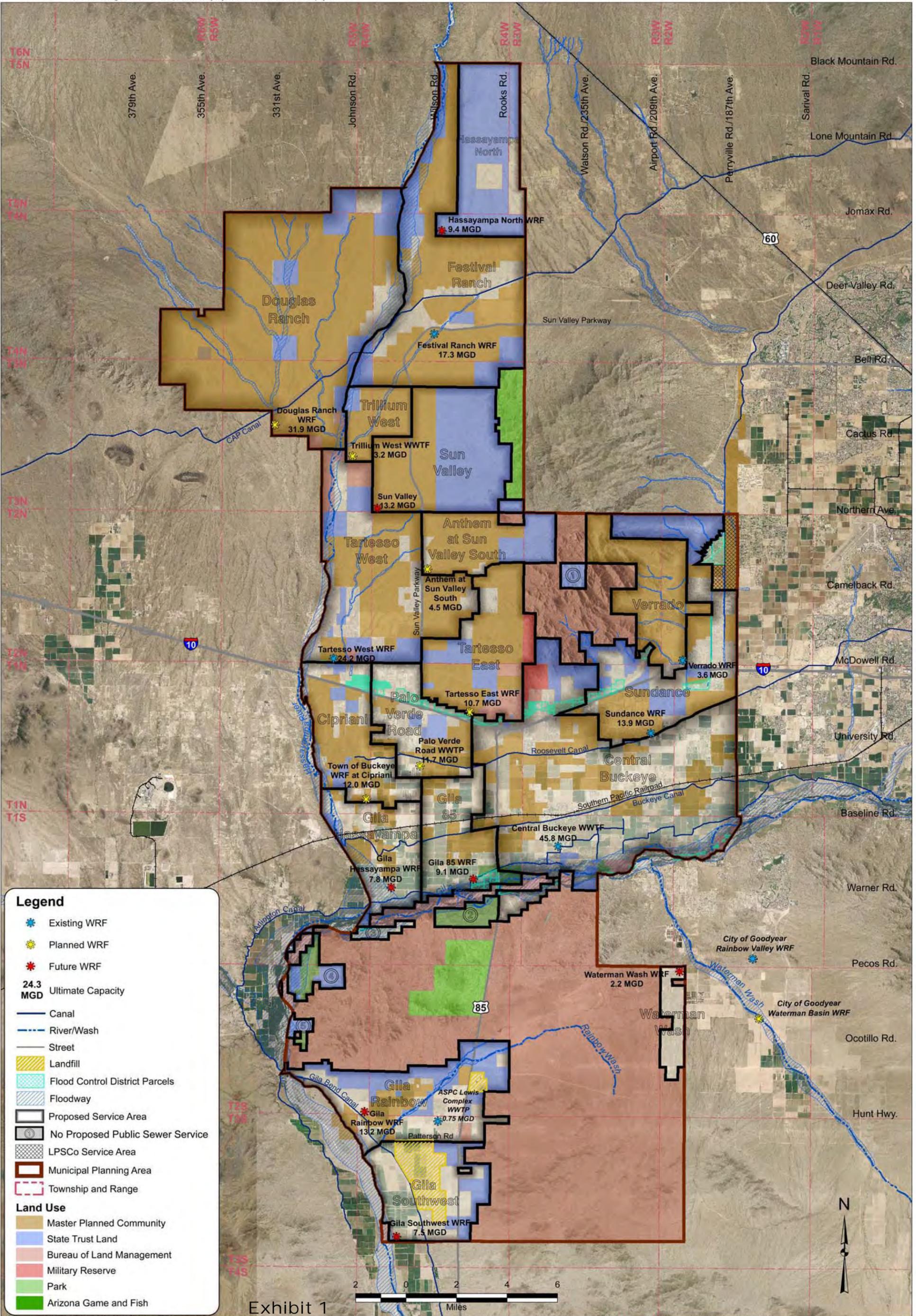
CMX, 2007, City of Buckeye, Arizona, Maricopa Association of Governments (MAG) 208 Water Quality Management Plan Comprehensive Amendment (approved by the MAG Regional Council), 89 pages, with tables, figures and appendices.

Maricopa Association of Governments (MAG), 2013, Socioeconomic Projections, June 2013, 115 pages, with tables, figures and appendices.

Maricopa Association of Governments (MAG), 2014, 208 Water Quality Management Plan Point Source Update, Approved by the MAG Regional Council on June 25, 2014, 251 pages, with tables, figures and appendices.

RBF Consulting, 2014, Design Concept Report, Central Buckeye WWTP to Sundance WRF, Prepared for City of Buckeye, Arizona, 34 pages, with tables, figures and appendices.

FIGURES (EXHIBITS)



Legend

- Existing WRF
- Planned WRF
- Future WRF
- 24.3 MGD** Ultimate Capacity
- Canal
- River/Wash
- Street
- Landfill
- Flood Control District Parcels
- Floodway
- Proposed Service Area
- No Proposed Public Sewer Service
- LPSCo Service Area
- Municipal Planning Area
- Township and Range

Land Use

- Master Planned Community
- State Trust Land
- Bureau of Land Management
- Military Reserve
- Park
- Arizona Game and Fish

Exhibit 1



FIG NO.	CMX PROJ: 7449	DATE: 07/02/07	SCALE 1:100,000
10	DESIGNED: SAL	DRAWN: BNM	APPROVED: SAL
SHT. 1 OF 1	REV.		

Buckeye 208 Plan

Buckeye, Arizona

Proposed Water Reclamation Facilities and Service Areas

CMX

7740 N. 16TH ST. STE. 100
PHOENIX, AZ 85020
PHONE: (602) 567-1900
FAX: (602) 567-1901
www.cmxinc.com

ENGINEERS - PLANNERS - LANDSCAPE - ARCHITECTS - SURVEYORS - CONSTRUCTION MANAGERS

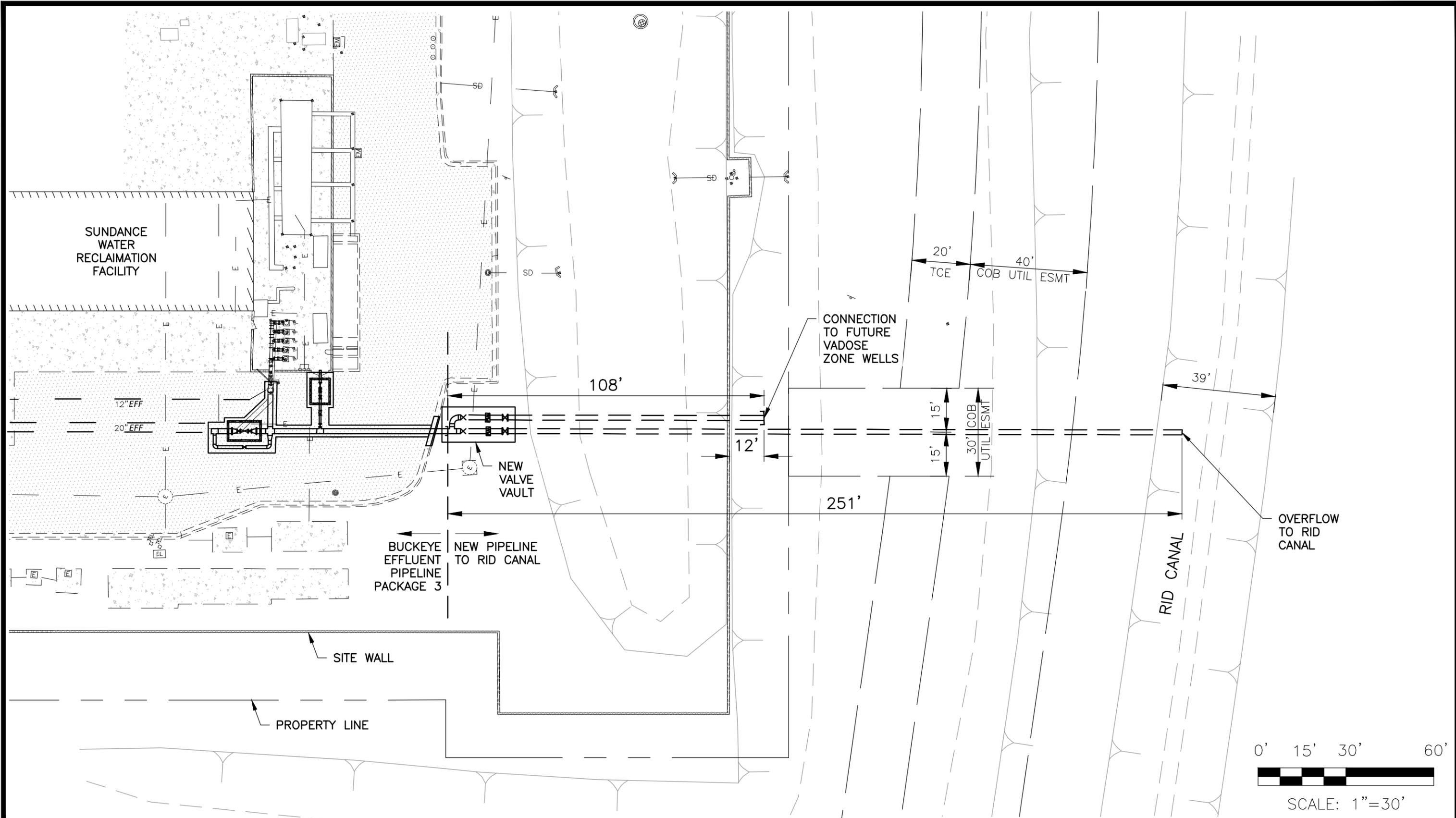
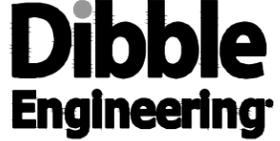
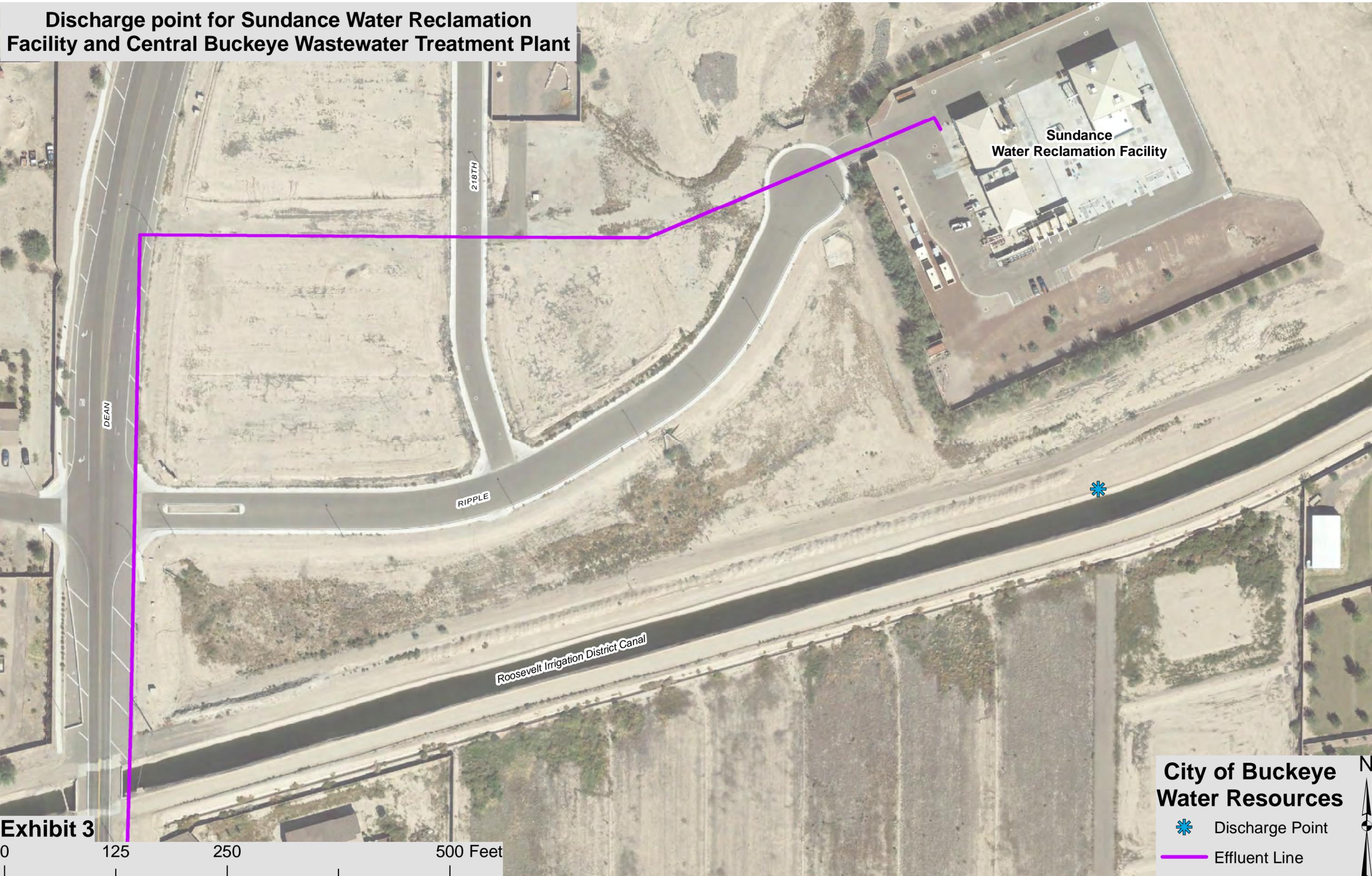


Exhibit 2

EXHIBIT: SWRF TO RID CONNECTION		BUCKEYE EFFLUENT PIPELINE	
SCALE: 1" = 30'			
DATE: 3/26/15			

Discharge point for Sundance Water Reclamation Facility and Central Buckeye Wastewater Treatment Plant



**Sundance
Water Reclamation Facility**

RIPPLE

218TH

DEAN

Roosevelt Irrigation District Canal

Exhibit 3

0 125 250 500 Feet

**City of Buckeye
Water Resources**

-  Discharge Point
-  Effluent Line



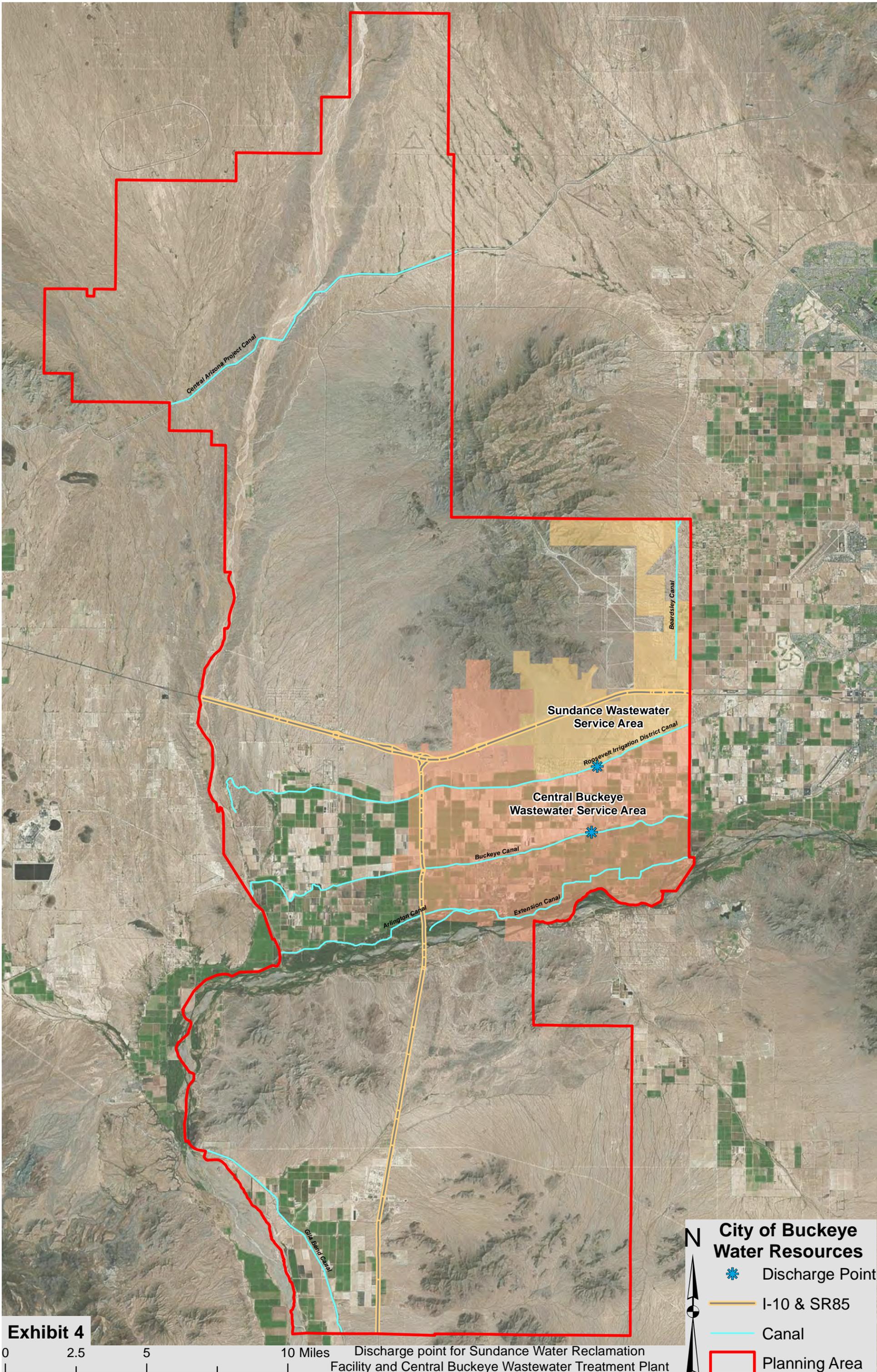


Exhibit 5 Existing Conditions Map

Legend



WRF

Existing Effluent Lines

Canals

Railroad



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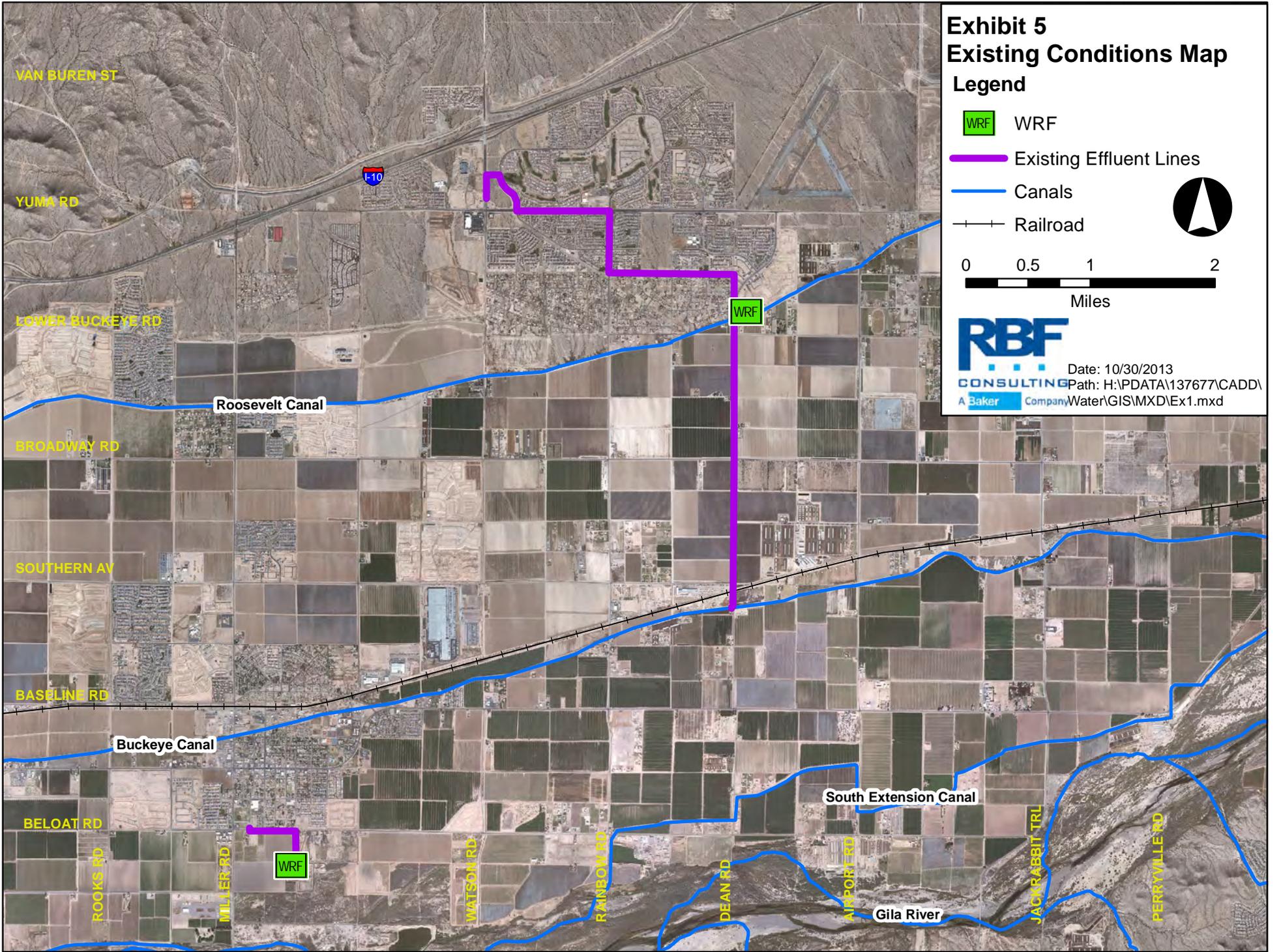


Exhibit 6 Future Effluent Customers

Legend

 WRF

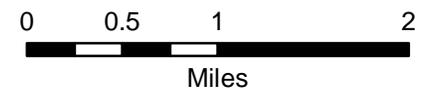


 Existing Effluent Lines

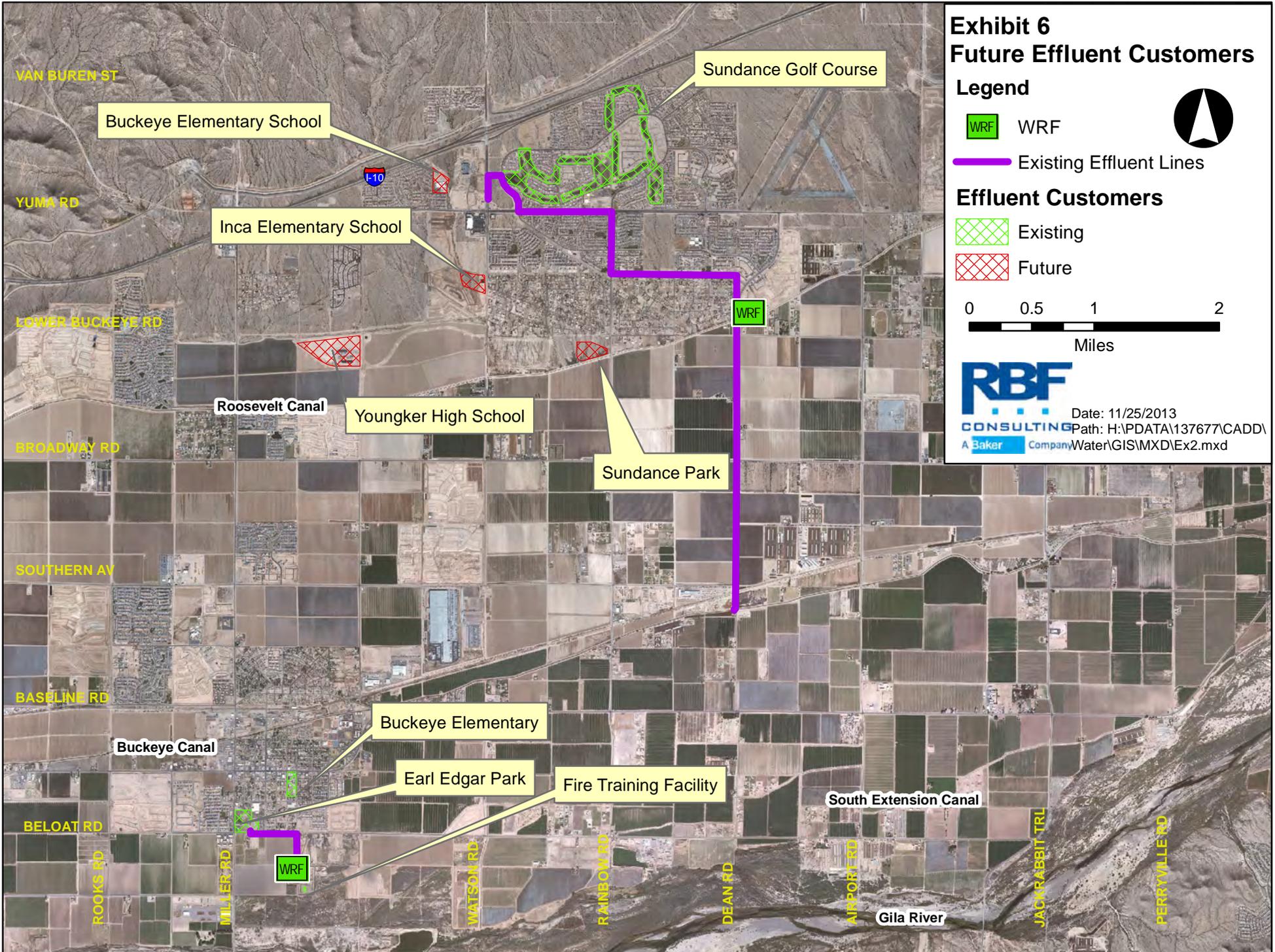
Effluent Customers

 Existing

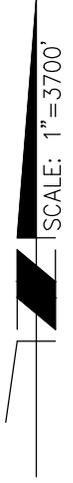
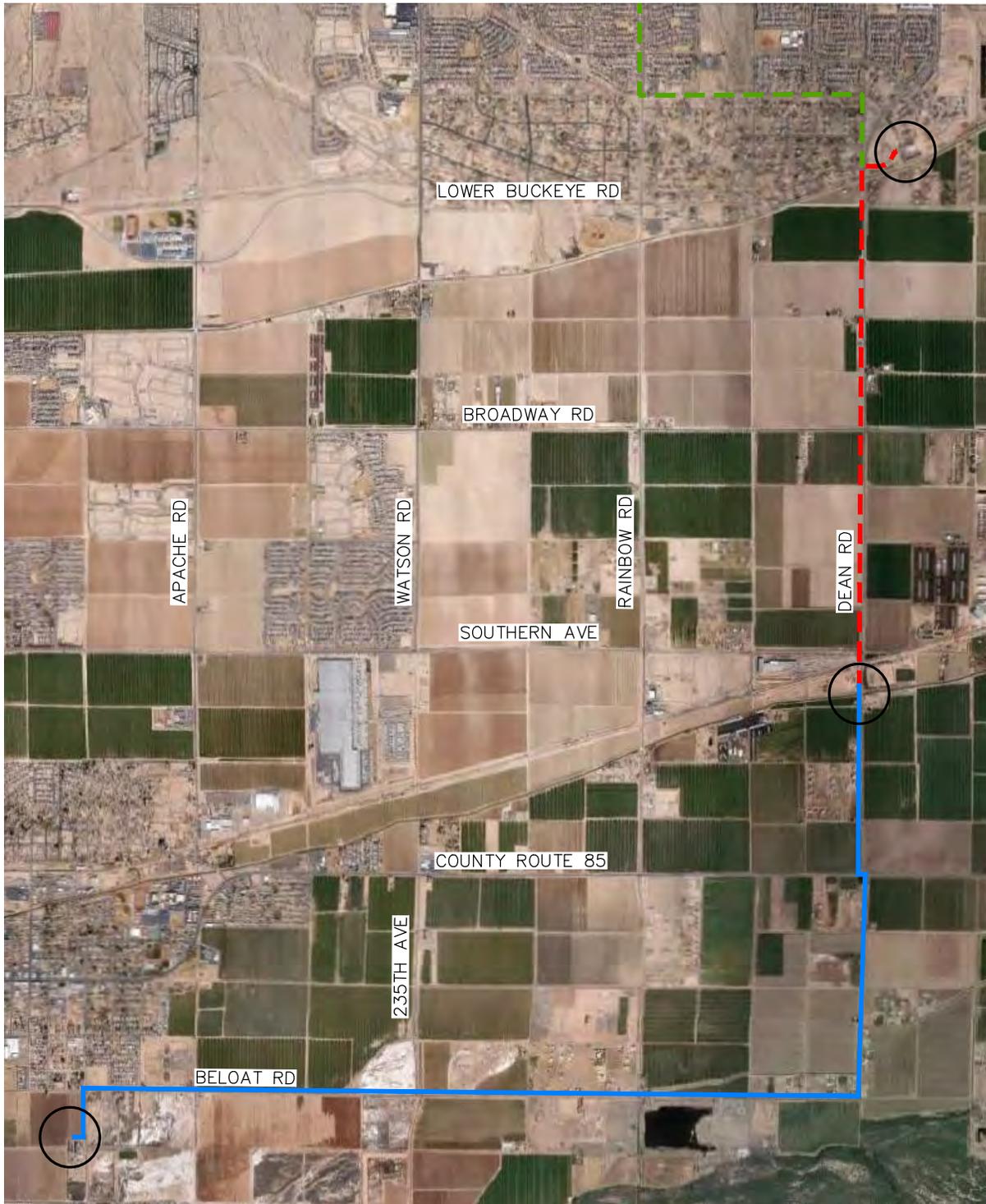
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Central Buckeye Wastewater Treatment Plant to
Sundance Water Reclamation Facility
EFFLUENT LINE ALIGNMENT



LEGEND

- PROPOSED ALTERNATIVE: 12" PVC-C-900
- - - EXISTING 20" EFFLUENT TRANSMISSION LINE
- - - EXISTING 12" EFFLUENT DISTRIBUTION LINE



PLANNING
DESIGN
CONSTRUCTION

EXHIBIT 7

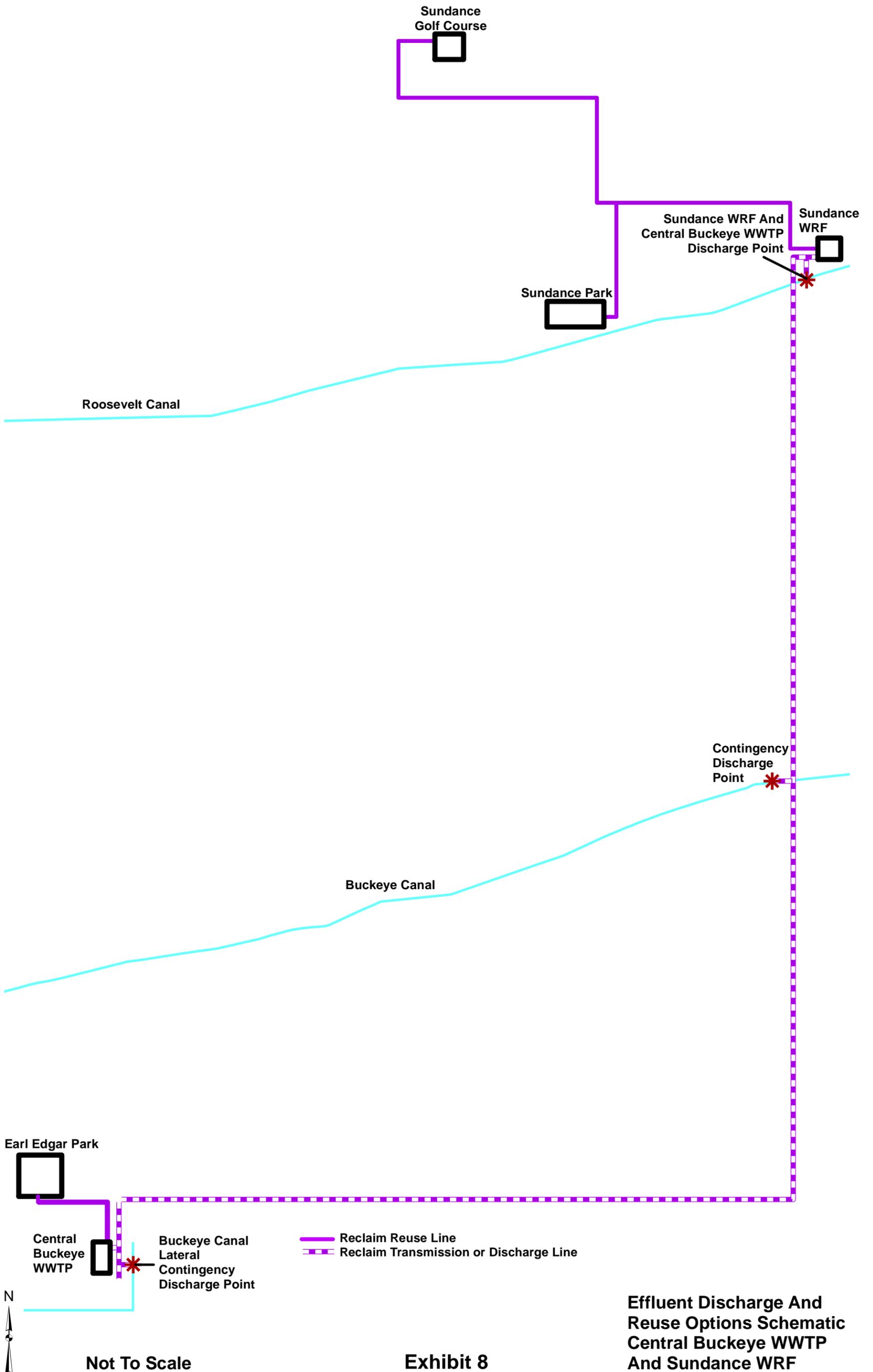


Exhibit 8

Effluent Discharge And Reuse Options Schematic Central Buckeye WWTP And Sundance WRF

APPENDIX A

LETTERS:

- **Letter of Sponsorship from the City of Buckeye**
- **Letter from the Jurisdiction Within Three Miles (Maricopa County)**
- **Letter of Financial Capability from the City's Finance Director**



September 14, 2015

Dennis Smith, Executive Director
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Subject: MAG 208 Amendment for City of Buckeye, Arizona

Dear Mr. Smith:

The City of Buckeye is submitting an application for a 208 Amendment to the MAG 208 Water Quality Management Plan. In accordance with the MAG 208 Water Quality Management Plan, we are officially requesting that you initiate the amendment process for the proposed additional Arizona Pollutant Discharge Elimination System (AZPDES) discharge points from the Central Buckeye Wastewater Treatment Plant (WWTP).

The proposed additional discharge points are to the Roosevelt Irrigation District Canal and Buckeye Canal. The primary discharge will be to the Roosevelt Canal. In the event that discharge to the Roosevelt Canal or reuse is not available, a contingency discharge may occur to the Buckeye Canal at Dean Road, about ¼-mile south of Southern Avenue. There will also be the option of discharging to a lateral of the Buckeye Canal, near the Central Buckeye WWTP.

We look forward to working with you and appreciate your assistance to facilitate the MAG approval process for this 208 Amendment.

Sincerely,

Stephen Cleveland
City Manager

cc: Julie Hoffman, MAG Environmental Planning Program Manager



Maricopa County

September 8, 2015

Dennis Smith, Executive Director
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Dear Mr. Smith:

Re: MAG 208 Areawide Water Quality Management Plan Amendment
Central Buckeye Wastewater Treatment Plant
Arizona Pollutant Discharge Elimination System Permit Discharges to the Roosevelt Canal and
Buckeye Canal

The City of Buckeye has submitted a proposed Plan Amendment to the MAG 208 Areawide Water Quality Management Plan dated July 30, 2015. The proposed Amendment is for additional Arizona Discharge Elimination System (AZPDES) discharge points from the Central Buckeye Wastewater Treatment Plant (WWTP).

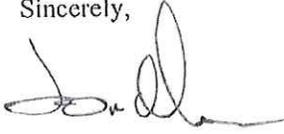
The proposed Amendment is to allow additional discharge points to the Roosevelt Irrigation District Canal and the Buckeye Canal. The primary discharge will be to the Roosevelt Canal. In the event that discharge to the Roosevelt Canal or reuse is not available, a contingency discharge may occur to the Buckeye Canal at Dean Road, about one-fourth mile south of Southern Avenue. There will also be the option of discharging to a lateral of the Buckeye Canal near the Central Buckeye WWTP.

The document was submitted to the Maricopa County for review because the project is located within three miles of unincorporated areas of Maricopa County.

The proposed Amendment complies with the MAG 208 review and approval process under the MAG 208 Areawide Water Quality Management Plan. The project is not in conflict with Maricopa County plans for the area and it is acceptable.

Please note that the Maricopa County Environmental Services Department has not reviewed, nor approved the design of the facilities as part of the 208 review. Any technical issues that remain will need to be resolved during the design phase of the project. Approval to Construct (ATC) and Approval of Construction (AOC) must be obtained from the Maricopa County Environmental Services Department prior to start of construction and startup, respectively, of all treatment, discharge, recharge, and reuse facilities, including all conveyance facilities and final end user facilities.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Manos', with a stylized flourish at the end.

Tom Manos
County Manager

cc: Mr. Stephen Cleveland, City Manager, City of Buckeye
Mr. Ron Whittler, Hydrologist, Water Resources Department, City of Buckeye
Ms. Julie Hoffman, Environmental Planning Program Manager, MAG
Kevin Chadwick, Maricopa County Environmental Services Department

May 27, 2015

Julie Hoffman, Environmental Planning Program Manager
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

**Subject: Financial Capability for Reclaimed Water Line from Central Buckeye Wastewater Treatment Plant to Roosevelt Canal
MAG 208 Water Quality Management Plan Amendment
City of Buckeye, Arizona**

Dear Ms. Hoffman:

The purpose of this letter is to provide assurance that the City of Buckeye (City) has the financial capability to construct, operate and maintain a reclaimed water line from the Central Buckeye Wastewater Treatment Plant (WWTP) to the Sundance Water Reclamation Facility (WRF), including a discharge pipe to the Roosevelt Canal. The City is the owner and operator of the Central Buckeye WWTP and the Sundance WRF. The City is currently constructing the reclaimed water line from the Central Buckeye WWTP to the Sundance WRF.

The project is being financed by a loan secured from the Water Infrastructure Finance Authority of Arizona (WIFA). Revenue from sewer and reclaimed water rates and fees will be used to repay the WIFA loan. Operation and maintenance of the reclaimed water line and discharge pipe to the Roosevelt Canal will also be funded by sewer and reclaimed water rates and fees.

Sincerely,



Larry D. Price
Finance Director

APPENDIX B
208 AMENDMENT CHECKLIST

208 AMENDMENT CHECKLIST
 ADDITIONAL DISCHARGE POINTS,
 CENTRAL BUCKEYE WASTEWATER TREATMENT PLANT
 Section 208 Clean Water Act, 40 CFR Part 130.6

REQUIREMENT	PROVIDE BRIEF SUMMARY OF HOW REQUIREMENTS ARE ADDRESSED	ADDRESSED ON PAGE:
<p><u>AUTHORITY</u></p> <p>Proposed Designated Management Agency (DMA) shall self-certify that it has the authorities required by Section 208(c)(2) of the Clean Water Act to implement the plan for its proposed planning and service areas. Self-certification shall be in the form of a legal opinion by the DMA or entity attorney.</p>	<p>The City of Buckeye is the Designated Management Agency for the Buckeye Municipal Planning Area.</p>	<p>Page 1</p>
<p><u>20-YEAR NEEDS</u></p> <p><i>{Clearly describe the existing wastewater treatment (WWT) facilities:}</i></p> <p>Describe existing WWT facilities.</p>	<p>This proposed amendment applies to the existing Central Buckeye Wastewater Treatment Plant which is described in the MAG 208 Water Quality Management Plan. The Central Buckeye Wastewater Treatment Plant treats domestic and commercial wastewater to Class A+ standards. The current design capacity is 4.5 MGD. The plant is located one mile south of Buckeye City Hall, at 915 South 7th Street, Buckeye, Arizona 85326.</p>	<p>Page 5 (Section 3.0).</p>

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<p>Show WWT certified and service areas for private utilities and sanitary district boundaries if appropriate.</p>	<p>There are no private sewer utilities or sanitary districts within the area of this proposed amendment. Please refer to attached Exhibit 1 (CMX, 2007) from the Town of Buckeye's MAG 208 Water Quality Management Plan Comprehensive Amendment (October 12, 2007), and Exhibit 4.</p>	<p>Exhibits 1 and 4</p>
<p><i>{Clearly describe alternatives and the recommended WWT plan:}</i></p> <p>Provide POPTAC population estimates (or COG-approved estimates only where POPTAC not available) over 20-year period.</p>	<p>The Central Buckeye Wastewater Service Area is primarily located in Regional Analysis Zone (RAZ) 278 and a portion of RAZ 279. The population projected in 2040 for RAZ 278 and 279 is 84,828 and 62,737, respectively (MAG Socioeconomic Projections, June 2013).</p>	<p>Page 5 (Section 3.0).</p>
<p>Provide wastewater flow estimates over the 20-year planning period.</p>	<p>Buildout capacity for the Central Buckeye WWTP is 45.8 MGD.</p>	<p>Page 5 (Section 3.0).</p>

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<p>Illustrate the WWT planning and service areas.</p>	<p>Please refer to attached Exhibit 1 (CMX, 2007) from the Town of Buckeye's MAG 208 Water Quality Management Plan Comprehensive Amendment (October 12, 2007), and Exhibit 4.</p>	<p>Exhibits 1 and 4</p>
<p>Describe the type and capacity of the recommended WWT Plant.</p>	<p>The current capacity of the Central Buckeye WWTP is 4.5 MGD. The Central Buckeye WWTP treats domestic and commercial wastewater to Class A+ standards. The treatment process includes influent pumping, mechanically and manually cleaned bar screens, grit removal, secondary treatment, (Bardenpha process for nitrification/denitrification), secondary clarification, tertiary filtration and chlorination/dechlorination.</p>	<p>Page 5 (Section 3.0).</p>
<p>Identify water quality problems, consider alternative control measures, and recommend solution for implementation.</p>	<p>No water quality issues are anticipated. Class A+ effluent is produced.</p>	<p>Not applicable</p>

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<p>If private WWT utilities with certificated areas are within the proposed regional service area, define who (municipal or private utility) serves what area and when. Identify whose sewer lines can be approved in what areas and when?</p>	<p>Private WWT utilities are not within the area of this proposed amendment. The City of Buckeye provides sewer service for this area.</p>	<p>Not applicable. Exhibits 1 and 4.</p>
<p>Describe method of effluent disposal and reuse sites (if appropriate).</p>	<p>Additional discharge: to Roosevelt Irrigation District Canal (Groundwater Savings Facility), east of Dean Road. The effluent will be reused for irrigation, to reduce groundwater pumping. As a contingency, discharge may occur to the Buckeye Water Conservation and Drainage District's Buckeye Canal at a location on Dean Road, about ¼-mile south of Southern Avenue.</p> <p>The effluent disposal options for the Central Buckeye WWTP continue to include reuse, recharge and discharge to the Buckeye Water Conservation and Drainage District lateral of the Buckeye Canal.</p>	<p>Pages 1 through 4 (Sections 1.1.1 through 1.1.6). Exhibits 2, 3, 4 and 8.</p>
<p>If Sanitary Districts are within a proposed planning or service area, describe who serves the Sanitary Districts and when.</p>	<p>There are no Sanitary Districts within the service area or the planning area.</p>	<p>Not applicable. Exhibits 1 and 4.</p>

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<p>Describe ownership of land proposed for plant sites and reuse areas.</p>	<p>The WWT plant sites are owned by the City of Buckeye. Land at the additional points of discharge is owned by Roosevelt Irrigation District and Buckeye Water Conservation and Drainage District. The additional reuse areas consist of irrigated lands within the Roosevelt Irrigation District (including the City of Buckeye Cemetery), and irrigated lands within the Buckeye Water Conservation and Drainage District.</p>	<p>Page 1 (Section 1.0), page 3 (Section 1.1.4), and page 5 (Section 3.0).</p>
<p>Address time frames in the development of the treatment works.</p>	<p>Construction of the reclaimed water line project is anticipated to be completed by December 31, 2015.</p>	<p>Page 6 (Section 6.0).</p>
<p>Address financial constraints in the development of the treatment works.</p>	<p>There are no financial constraints on the project proposed by this amendment.</p>	<p>Page 6 (Section 5.0).</p>

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<p>Describe how discharges will comply with EPA municipal and industrial stormwater discharge regulations (Section 405, CWA).</p>	<p>Storm water pollution prevention will be achieved through an ADEQ storm water pollution prevention plan. Please refer to the Town of Buckeye's MAG 208 Water Quality Management Plan Comprehensive Amendment (October 12, 2007).</p>	<p>Page 6 (Section 4.0).</p>
<p>Describe how open areas & recreational opportunities will result from improved water quality and how those will be used.</p>	<p>Effluent discharged to the Roosevelt Canal can be used to irrigate parks within the Roosevelt Irrigation District. Sundance Park will be irrigated with effluent that is not discharged to the Roosevelt Canal. As a contingency, effluent may be discharged to the Buckeye Canal and used to irrigate non-edible crops or landscaping.</p>	<p>Pages 2 and 3 (Sections 1.1.2 and 1.1.4), and page 5 (Section 3.0).</p>
<p>Describe potential use of lands associated with treatment works and increased access to water-based recreation, if applicable.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>
<p><u>REGULATIONS</u> Describe types of permits needed, including NPDES, APP and reuse.</p>	<p>The existing AZPDES permit will be modified for the Central Buckeye WWTP. The APP will be modified as required. A Type 3 Reclaimed Water Agent permit has been obtained.</p>	<p>Page 6 (Section 4.0).</p>

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Describe restrictions on NPDES permits, if needed, for discharge and sludge disposal.	No restrictions exist for the current AZPDES permits and no restrictions apply to the proposed amendment.	Not applicable.
Provide documentation of communication with ADEQ Permitting Section 30 to 60 days prior to public hearing regarding the need for specific permits.	The ADEQ Permitting Section called the City of Buckeye on January 12, 2015. ADEQ determined that the AZPDES permit for the Central Buckeye WWTP needs to be modified to add the discharge to the Roosevelt Canal.	
Describe pretreatment requirements and method of adherence to requirements (Section 208 (b)(2)(D), CWA).	The Central Buckeye WWTP pretreatment requirements consist of grit removal and screening. The pretreatment requirements are met using mechanically- and manually-cleaned bar screens, and TeaCup cyclone grit separators.	Page 5 (Section 3.0).
Identify, if appropriate, specific pollutants that will be produced from excavations and procedures that will protect ground and surface water quality (Section 208(b)(2)(K) and Section 304, CWA).	Not applicable.	Not applicable.

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Describe alternatives and recommendation in the disposition of sludge generated. (Section 405 CWA)	Sludge is dewatered and disposed of at an offsite, permitted landfill. Please refer to the Town of Buckeye's MAG 208 Water Quality Management Plan Comprehensive Amendment (October 12, 2007).	Not applicable for this amendment.
Define any nonpoint issues related to the proposed facility and outline procedures to control them.	Not applicable. Non-point discharges from the WWT plants are not anticipated.	Not applicable.
Describe process to handle all mining runoff, orphan sites and underground pollutants, if applicable.	Not applicable.	Not applicable.
If mining related, define where collection of pollutants has occurred, and what procedures are going to be initiated to contain contaminated areas.	Not applicable.	Not applicable.
If mining related, define what specialized procedures will be initiated for orphan sites, if applicable.	Not applicable.	Not applicable.
<u>CONSTRUCTION</u> Define construction priorities and time schedules for initiation and completion.	Construction of the reclaimed water line project was 62% complete as of July 16, 2015. The project is anticipated to be completed by December 31, 2015.	Page 6 (Section 6.0).

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<p>Identify agencies who will construct, operate and maintain the facilities and otherwise carry out the plan.</p>	<p>The City of Buckeye will construct, operate and maintain the facilities and carry out the plan.</p>	<p>Pages 6 and 7 (Section 6.0).</p>
<p>Identify construction activity-related sources of pollution and set forth procedures and methods to control, to the extent feasible, such sources.</p>	<p>Storm water pollution prevention is achieved through an ADEQ storm water pollution prevention plan. Dust control is achieved through a Maricopa County dust control block permit. Dust control is achieved using a water truck and trackout control.</p>	<p>Page 6 (Section 4.0).</p>
<p><u>FINANCING AND OTHER MEASURES NECESSARY TO CARRY OUT THE PLAN</u></p> <p>If plan proposes to take over certificated private utility, describe how, when and financing will be managed.</p>	<p>Not applicable. The plan is not proposing to take over a certified private utility.</p>	<p>Not applicable.</p>

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<p>Describe any significant measure necessary to carry out the plan, e.g., institutional, financial, economic, etc.</p>	<p>The reclaimed water line project is currently being constructed. Financing to construct the reclaimed water line project has been approved by the City Council. The project is being financed by a WIFA loan with repayment through sewer and reclaimed water rates and fees. Operation and maintenance will be funded by sewer and reclaimed water rates and fees.</p>	<p>Pages 6 and 7 (Sections 5.0 and 6.0).</p>
<p>Describe proposed method(s) of community financing.</p>	<p>Financing to construct the reclaimed water line project has been approved by the City Council. The project is being financed by a WIFA loan with repayment through sewer and reclaimed water rates and fees.</p>	<p>Page 6 (Section 5.0). Also see financial capability letter in Appendix A.</p>

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<p>Provide financial information to assure DMA has financial capability to operate and maintain wastewater system over its useful life.</p>	<p>Operation and maintenance of the reclaimed water line and additional discharge points will be funded by sewer and reclaimed water rates and fees.</p> <p>Please refer to the Town of Buckeye's MAG 208 Water Quality Management Plan Comprehensive Amendment (October 12, 2007) for funding to operate and maintain the wastewater treatment plants.</p>	<p>Page 6 (Section 5.0).</p> <p>Also see financial capability letter in Appendix A.</p>
<p>Provide a time line outlining period of time necessary for carrying out plan implementation.</p>	<p>Construction of the reclaimed water line project is anticipated to be completed by December 31, 2015.</p>	<p>Page 6 (Section 6.0).</p>

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<p>Provide financial information indicating the method and measures necessary to achieve project financing. (Section 201 CWA or Section 604 may apply.)</p>	<p>Financing to construct the reclaimed water line project has been approved by the City Council. The project is being financed by a WIFA loan with payback through reclaimed water and sewer rates.</p>	<p>Page 6 (Section 5.0). Also see financial capability letter in Appendix A.</p>
<p><u>IMPLEMENTABILITY</u></p> <p><i>Describe impacts and implementability of Plan:</i></p> <p>Describe impacts on existing wastewater (WW) facilities, e.g., Sanitary district, infrastructure/facilities and certificated areas.</p>	<p>Operation of the reclaimed water line and additional points of discharge is not expected to impact any adjacent municipalities, businesses, communities, sanitary districts or private wastewater providers with certified areas.</p>	<p>Page 6 (Section 6.0).</p>
<p>Describe how and when existing package plants will be connected to a regional system.</p>	<p>Not applicable.</p>	<p>Not applicable.</p>
<p>Describe the impact on communities and businesses affected by the plan.</p>	<p>Operation of the reclaimed water line and additional discharge points is not expected to impact any communities and businesses.</p>	<p>Not applicable.</p>

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<p>If a municipal wastewater (WWT) system is proposed, describe how WWT service will be provided until the municipal system is completed: i.e., will package plants and septic systems be allowed and under what circumstances. (Interim services).</p>	<p>Not applicable. The existing Central Buckeye WWTP and Sundance WRF will remain in operation during any future expansion.</p>	<p>Not applicable.</p>
<p><u>PUBLIC PARTICIPATION</u> Submit copy of mailing list used to notify the public of the public hearing on the 208 amendment. (40 CFR, Chapter 1, Part 25.5)</p>	<p>Public participation requirements will be satisfied through MAG.</p>	<p>Pages 7 and 8 (Section 7.0).</p>
<p>List location where documents are available for review at least 30 days before public hearing.</p>	<p>Public participation requirements will be satisfied through MAG.</p>	<p>Pages 7 and 8 (Section 7.0).</p>
<p>Submit copy of the public notice of the public hearing as well as an official affidavit of publication from the area newspaper. Clearly show the announcement appeared in the newspaper at least 45 days before the hearing.</p>	<p>Public participation requirements will be satisfied through MAG.</p>	<p>Pages 7 and 8 (Section 7.0).</p>
<p>Submit affidavit of publication for official newspaper publication.</p>	<p>Public participation requirements will be satisfied through MAG.</p>	<p>Pages 7 and 8 (Section 7.0).</p>

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Submit responsiveness summary for public hearing.	Public participation requirements will be satisfied through MAG.	Pages 7 and 8 (Section 7.0).
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